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WATER RESOURCES NEEDS AND THE PRESIDENT'S BUDGET PROPOSAL FOR THE ARMY CORPS OF ENGINEERS FOR FISCAL YEAR 2008

HEARING

BEFORE THE

SUBCOMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

OF THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

MARCH 15, 2007

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ONE HUNDRED TENTH CONGRESS
FIRST SESSION

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WATER RESOURCES NEEDS AND THE PRESIDENT'S BUDGET PROPOSAL FOR THE ARMY CORPS OF ENGINEERS FOR FISCAL YEAR 2008

THURSDAY, MARCH 15, 2007

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
SUBCOMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
Washington, DC.

The subcommittee met, pursuant to notice, at 10 o'clock a.m. in room 406, Dirksen Senate Office Building, the Hon. Max Baucus (chairman of the subcommittee) presiding.

Present: Senators Baucus, Isakson, Alexander, Boxer, Carper, Inhofe, Vitter, Voinovich, Whitehouse.

Also present: Senator Feingold.

STATEMENT OF HON. MAX BAUCUS, U.S. SENATOR FROM THE STATE OF MONTANA

Senator BAUCUS. Welcome to the first hearing of the Transportation and Infrastructure Subcommittee in particular. I especially welcome Senator Isakson, who is the new Ranking Republican Member of the subcommittee. Thank you very much for participating and being such a valuable member, Johnny.

In the book of Isaiah, God said: "I will pour water on the thirsty land and streams on the dry ground." I know he was thinking of the St. Mary water project in Montana when he said that.

[Laughter.]

Senator BAUCUS. In our vast country, water continues to bring life. Without our waters, our land would be indeed thirsty. Without our streams, our land would indeed be dry. My home State of Montana has 11,000 miles of blue ribbon trout streams. Montana is home to the mighty Missouri River and the beautiful Yellowstone River, which I might add is the longest remaining free-flowing river in the Country. Montana's Fort Peck Reservoir provides outstanding recreation for the eastern part of my State.

This morning, we will examine the management of America's water resources. The Army Corps of Engineers builds levees and floats barges. But we in Montana see the Corps as restorers of the ecosystem. We see the Corps as guardians of America's recreational assets.

We value the Corps' expertise and their partnership in many of our water resources projects. In 1986, Congress enacted the Water Resources Development Act, otherwise known as WRDA. Every 2

years since then, Congress received a WRDA bill from the Administration seeking authorization for water resources projects. This pattern of requests provided the Corps and local sponsors with a regular planning schedule for the development of needed water resources projects.

This Administration, however, has yet to request one updated WRDA. Why? Have all the water resources needs of the Country been met? No. I think that my colleagues, especially the Senator from Louisiana, would agree. His folks in Morganza have been waiting for a flood-control project for more than 6 years now.

No, there are scores of water resources projects waiting for authorization. Does the Administration thinks that WRDA costs too much? Perhaps it does think that. But investing in our water infrastructure is a cost that we cannot put off. Levees are crumbling and people are living in harm's way waiting for WRDA.

We need to keep one thing in mind about WRDA, and that is, it is an authorization bill. It is just the first step. Once Congress enacts WRDA, the appropriations process must begin. Appropriations bills need to make tough choices, with limited Federal dollars to choose among the programs that WRDA authorizes.

I expect that Mr. Woodley is going to tell us about all that today. I bet he wishes he had more money to do his job. But he has to set priorities. We here also need to set priorities. Our first priority is to authorize the long overdue projects in the WRDA bill this year. I hope that we can get the Administration's support to do that this year.

We passed the bill last year. Let's get it enacted this year. Let's do our part to ensure that the management of the waters to keep our land from thirst, let's do our part for the streams that meander across the ground, and let us do our part to ensure that our waters continue to bring life.

I would like to turn to the Ranking Member of the committee, Senator Jim Inhofe, for his statement. I know that Senator Feingold has a pressing schedule. We all have pressing schedules around here, unfortunately, as does Senator Inhofe. So Senator Inhofe, why don't you proceed?

[The prepared statement of Senator Baucus follows:]

STATEMENT OF HON. MAX BAUCUS, U.S. SENATOR FROM THE STATE OF MONTANA

Welcome to the first hearing of the Transportation and Infrastructure Subcommittee. In particular, I welcome Senator Isakson, who is the new Ranking Republican Member of the subcommittee this Congress.

In the book of Isaiah, God said: "I will pour water on the thirsty land, and streams on the dry ground." And in our vast Country, water continues to bring life. Without our waters, our land would indeed be thirsty. Without our streams, our land would indeed be dry.

My home State of Montana has 11,000 miles of blue ribbon trout streams. Montana is home to the mighty Missouri River and the beautiful Yellowstone River. The Yellowstone is the longest remaining free-flowing river in the country. And Montana's Fort Peck Reservoir provides outstanding recreation for the eastern part of my State.

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This Administration, however, has yet to request one update of WRDA.

Why? Have all the water resources needs of the country have been met?

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We need to keep one thing about WRDA in mind. It is an authorization bill. It is just the first step.

Once Congress enacts WRDA, the appropriations process must begin. Appropriations bills need to make tough choices with limited Federal dollars to choose among the programs that WRDA authorizes.

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We here need to set priorities, too.

Our first priority is to authorize the long overdue projects in a WRDA bill this year. I hope that we can get the Administration's support to do that this year.

We passed a bill last year. Let's get it enacted this year.

Let us do our part to ensure the management of the waters that keep our land from thirst. Let us do our part for the streams that meander across our ground. And let us do our part to ensure that our waters continue to bring life.

STATEMENT OF HON. JAMES INHOFE, U.S. SENATOR FROM THE STATE OF OKLAHOMA

Senator INHOFE. I thank you very much. I will be very brief. We have an Armed Services hearing that is taking place at this time, so I thank both you, Mr. Chairman, and you, Ranking Member Isakson, for allowing me to go first here.

I want to thank you. The comments you made, I agree with, Senator Baucus. There are a lot of partisan things in this committee, but one thing that is not partisan is I think we all agree we really need to do something about the WRDA bill. We need to get it out. We are overdue.

I want to say to you, General Strock, you have done a great job in a most difficult time. This may be your last hearing before us, and I just want to get on record saying you have done a great job, and I wish you the very best. While the Chief of Engineers will always have detractors, I believe General Strock has performed his duties very admirably.

Today's hearing is to look at the President's fiscal year 2008 budget request for the Corps of Engineers, as well as the Nation's water resources. Let me first say that everyone knows how long overdue the Water Resources Development Act is. That is why I appreciate so much your jumping right into it as the first thing of your tenure as Chairman of the subcommittee.

We made a lot of progress last year, but unfortunately we were unable to finalize the last few items during the conference. I continue to intend to work closely with all of you, and I have talked to Senator Boxer also, and she is in full agreement with what we are trying to do.

As far as the President's budget request in 2008, although I was pleased to see an increase over the request for 2007, this year's re-

quest is still significantly less than was enacted for 2007. As a fiscal conservative, I support the overall goal of reigning in Government spending, but I firmly believe that the two areas that are most important for Government to perform in are defense and infrastructure. Unfortunately, we don't focus enough time and attention to the dollars on the important issues.

An area that needs attention is recreation. I will bet many people are not aware of this, but the Corps of Engineers is actually the Nation's largest provider of outdoor recreation, larger than both the Park Service and the Forest Service. There are a lot of Corps lakes and reservoirs in Oklahoma, and we are not getting the funding for either their operations or maintenance of the existing facilities.

I do want to make one comment about the successes we have had in addressing the No. 1 most serious Superfund site in America, that is at Tar Creek in Oklahoma. I am not proud that my State is the home of the most devastating Superfund site, but finally after many years, we are doing something. General Strock, you have been there. You have worked with DOI, DOJ and all the others, the Indian tribes and the rest of them. That is on its way, and I just hope that we will be able to continue that, and your successor will be just as enthusiastic a supporter as you have been.

Thank you very much, Mr. Chairman.

[The prepared statement of Senator Inhofe follows:]

STATEMENT OF HON. JAMES M. INHOFE, U.S. SENATOR FROM THE STATE OF OKLAHOMA

Thank you Senator Baucus for holding this hearing. I'd first like to offer a special welcome to the current Chief of Engineers Lieutenant General Carl Strock, as this is likely the last time he will appear before our committee. General Strock will be retiring as soon as his successor is confirmed, which should be soon.

In July 2004, when he assumed command of the Corps, General Strock faced many challenges with respect to balancing the varied objectives of our Nation's water resources policies, as well as overseeing the Corps' substantial involvement in reconstruction efforts in Iraq and Afghanistan. The challenges only got more numerous and complex in the wake of Hurricanes Katrina and Rita.

While the Chief of Engineers will always have its detractors, I believe General Strock has performed his duties admirably and should be commended for his strong leadership during particularly difficult circumstances. Thank you, General Strock, for your dedication and service to the Nation. I wish you well in whatever endeavors you decide to pursue next.

Today's hearing is to look at the President's fiscal year 2008 budget request for the Corps of Engineers as well as the Nation's water resources needs more generally. Let me first say that everyone knows how long overdue the Water Resources Development Act is and how important the many project authorizations and policy improvements in the bill are to the country's economy, public safety and environment.

We made great progress last year, but, unfortunately, just weren't able to finalize the last few items during conference. I intend to continue working closely with Senators Boxer, Baucus and Isakson to build on the progress made last year in order to enact WRDA as soon as possible this year. I also am committed to getting us back to a biennial cycle by pushing for a WRDA 08 bill.

As far as the President's budget request for FY08, although I was pleased to see an increase over the request from FY07, this year's request is still significantly less than was enacted for FY07. As a fiscal conservative, I support the overall goal of reigning in government spending, but I firmly believe that the two things government should spend money on are defense and infrastructure.

Unfortunately, we do not focus enough time, attention or dollars on this important issue on a consistent basis, and therefore, the state of our infrastructure is deplorable. For example, in its "2005 Report Card for America's Infrastructure," the American Society of Civil Engineers estimated that fully half of all Corps-operated locks

on our inland waterways were functionally obsolete and that that number would increase to 80 percent by 2020.

In addition to adequately maintaining and updating the infrastructure we have, we need to make investments in new capability as well. The McKlellan-Kerr Arkansas River Navigation System in Oklahoma and Arkansas could function much more efficiently and productively if we proceed with deepening it to 12 feet from its current 9 foot depth.

Another area needing attention is recreation. I bet many people aren't aware of this, but the Corps of Engineers is actually the Nation's largest provider of outdoor recreation larger than both the Park Service and the Forest Service. We have a lot of Corps lakes and reservoirs in Oklahoma, but we're not getting the funding for either operations and maintenance of existing facilities or for developing new facilities.

The budget request again proposes a Corps recreation modernization initiative that would enable the Corps to use the collected user fees for maintaining and upgrading its facilities. We had language with the same intent in last year's WRDA bill, but we ran into scoring problems and had to remove it. I want to continue discussing this idea and hopefully, we can come up with a plan acceptable to everyone.

The other option we have is to further explore public-private partnerships as a means of providing better and more abundant recreation opportunities to our citizens. Last year's WRDA bill included a provision allowing the Corps to experiment with certain policies to see what options are available at Oklahoma's many lakes to maximize the recreation benefits of public-private partnerships.

Let me conclude by commending the Corps of Engineers for its work with other Federal and State agencies at the Tar Creek Superfund Site. I appreciate your visits to the area. As you are aware, we have encountered problems such as reprogramming of funds and authorization of funding to assist residents. However, I appreciate you and your staff working with my office to remedy those issues. I want to get your continued commitment to make the work at Tar Creek a top priority and to devote resources to continue the necessary work we are accomplishing.

Senator BAUCUS. Thank you, Senator, very, very much.

It is interesting, as you were talking about Oklahoma, it is clear that each State has some very pressing needs.

Senator INHOFE. Yes.

Senator BAUCUS. I appreciate your statement.

I would like now to turn to Senator Feingold. Senator Feingold is our first panel, but he has a hearing to attend to, and if the other Senators don't mind, we'll let him speak and then give our opening statements.

STATEMENT OF HON. RUSSELL D. FEINGOLD, U.S. SENATOR FROM THE STATE OF WISCONSIN

Senator FEINGOLD. Thank you, Mr. Chairman, very much. I always enjoy coming here. Chairperson Boxer was kind enough to respond very positively to my desire to testify before this subcommittee.

Thank you for inviting me to testify before you today on an issue which I have spent a lot of time on over the past 10 years. I recognize the tremendous importance of WRDA and the urgency, but I am also feeling that way about passing meaningful reform of the U.S. Army Corps of Engineers.

Seven years ago, my friend from Montana, the Chairman, Senator Baucus and former EPW Chairman, Senator Bob Smith committed to helping me move forward on Corps reform. Back then, I never would have guessed that enacting Corps reform would take longer than enacting campaign finance reform.

However, as Senator Inhofe indicated, we have made progress in this vital effort. In WRDA 2000, I agreed to a National Academy of Sciences study on independent review. We have received this study, along with many others, calling for reform. Then since 2001,

I have introduced seven reform bills with my colleagues, including Senators McCain and Ensign, and former Senators Daschle and Smith.

Last year, I was able to work with this committee, and in particular Senators Inhofe, Jeffords, Bond and Baucus, to include many key reforms in the WRDA bill that passed the Senate. We were also able to pass a much-needed independent review amendment on the Senate floor. I am especially appreciative of the work done by the co-sponsors of that amendment, Senators McCain, Carper, Lieberman, Collins, Snowe and former Senator Jeffords, in ensuring its passage.

I also want to thank the members of this committee, including Chairman Boxer, Chairman Baucus, and Senators Carper, Clinton, Lautenberg, Voinovich and Alexander, for supporting that independent review amendment.

As we look forward to a possible WRDA 2007, I would like to again remind my colleagues of the need for reform, and the minimum reforms that must be enacted. Since 1994, more than 30 major reports have been issued calling for reforming the Corps and/or pointing out stunning flaws in Corps projects and project studies. Rather than reading the names of those reports, I would ask that the full list of these reports be placed in the record.

Senator BAUCUS. Without objection.

[The referenced documents follow on page 83.]

Senator FEINGOLD. Just 1 year ago, the GAO issued a scathing report on the Corps' planning process. I also ask that the entire report, entitled Corps of Engineers: Observations on Planning and Project Management Processes for the Civil Works Program be placed in the record.

Senator BAUCUS. Without objection.

[The referenced document follows on page 91.]

Senator FEINGOLD. Unfortunately, neither the GAO nor any of a number of other expert reform witnesses were called to testify today, but the GAO found that recent Corps project studies "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 decisionmaking."

As the Nation bore witness in August 2005, the failing at the Corps has very real consequences. As we all know, Hurricane Katrina produced one of the most tragic and costly disasters in our Nation's history. But the problems caused by Katrina in New Orleans were largely the result of human, not natural, intervention.

Water resources projects authorized by Congress and planned by the Corps led to significant losses in Louisiana's coastal wetlands and were not available to help buffer Katrina's storm surge. An underused Corps-built navigation channel funneled and intensified that surge into New Orleans. The hurricane protection levees planned and built by the Corps encouraged the development of high-risk areas that suffered the brunt of Katrina's flooding. Now, it is tragically clear that the city's fate was sealed by the Corps' faulty design and engineering of the flood wall and levees that were supposed to protect the city.

All of this happened despite Congress sending a significant amount of money to Louisiana water projects. In the 5 years preceding Katrina, Louisiana water projects received $1.9 billion, far more than was received by any other State, but only a pittance went to bolstering the city's levees.

We can and must do better. The evidence supporting reform is overwhelming. The bill that Senator McCain and I introduced last month, S. 564, would correct the failings at the Corps and provide clear policy directives to ensure that Corps projects protect our communities and the environment, and make sound use of our scarce Federal resources.

My bill would institute the independent review language that passed the Senate last year as an amendment. That provision was carefully designed to ensure reliable and meaningful independent review of costly or controversial Corps projects. The provision establishes clear review triggers, ensures the independence of the review panels, and also responds to the National Academy of Sciences' caution that independent peer review panels must have the benefit of public comment on a draft Corps report if the panel's review is to be meaningful.

I would ask that a letter I recently received from Dr. Shabman, the Chair of the NAS study, be inserted in the record at this point.

Senator BAUCUS. Without objection.

[The referenced document follows on page 106.]

Senator FEINGOLD. The provision also establishes an outside safety assurance review for critical flood damage reduction projects. My bill would also modernize the principles and guidelines that form the basis for how Corps projects are planned. It would also improve the way Corps projects' impacts are mitigated. While mitigation requirements were put in place in WRDA in 1986, the loopholes still need to be closed and language strengthened to ensure proper mitigation when Corps projects damage the environment. Weaker versions of both of these reforms were in fact included in last year's bill that we passed in the Senate.

For the benefit of hard working taxpayers, my bill would also institute a system to prioritize projects so that those with the highest national interest are funded and completed on a timely schedule. During last year's WRDA debate, Chairman Baucus called for a robust program of independent peer review and project prioritization. I couldn't agree more. He pointed out that the Corps currently has a $58 billion project backlog and a $2 billion a year project budget, and at that pace, it would take the Corps roughly 30 years just to work through the backlog of projects.

We must come to grips with the need to manage the list of deserving projects so that we can complete projects on schedule and according to the greatest need and merit.

I appreciate the commitment I have from Chairman Boxer to work together to develop the mechanism to prioritize projects that would address her concerns with the prioritization provision in my bill. I have found it very easy to work with her on these kinds of issues, and I am hoping we can come together on that in the future.

It is essential that Congress come up with a way of determining how best to allocate scarce taxpayer dollars among water projects.

We have an historic opportunity to reform the beleaguered Corps and we must seize this chance. Just as we cannot afford to look the other way, we also cannot go weak on reform just to get a bill through. I would ask my friends sitting on this committee, I am sure you want to ensure that projects in your State are not the next national headline.

Just yesterday a New Orleans Times Picayune editorial, which I would like to insert for the record, admonished the House for sticking to its pre-Katrina reforms. We have a responsibility to our constituents to do better than that. We must enact meaningful reforms in this year's WRDA.

[The referenced document follows on page 107.]

I again thank the committee for letting me testify, and look forward to working with you. I do have to go to the Judiciary Committee at this time. I certainly appreciate being able to speak ahead of some of the other Senators, which I know is quite a courtesy.

Thank you, Mr. Chairman.

[The prepared statement of Senator Feingold follows:]

STATEMENT OF HON. RUSSELL FEINGOLD, U.S. SENATOR FROM THE STATE OF WISCONSIN

Chairman Baucus, Senator Isakson, distinguished colleagues, thank you for inviting me to testify before you today on an issue which I have spent a lot of time on over the past years: passing meaningful reform of the U.S. Army Corps of Engineers.

Seven years ago, my friend from Montana, Senator Baucus, and former EPW chairman Senator Bob Smith, committed to helping me move forward on Corps Reform. Back then I never would have guessed that enacting Corps reform would take longer than enacting campaign finance reform, however, we have made progress in this vital effort. In WRDA 2000, I agreed to a National Academy of Sciences study on independent review. We have received this study along with many others calling for reform. Since 2001, I have introduced seven reform bills with my colleagues, including Senators McCain and Ensign and former Senators Daschle and Smith.

And last year, I was also able to work with this Committee, and in particular Senators Inhofe, Jeffords, Bond, and Baucus, to include many key reforms in the WRDA bill that passed the Senate. We were also able to pass a much-needed independent review amendment on the Senate floor. I am especially appreciative of the work done by the cosponsors of that amendment, Senators McCain, Carper, Lieberman, Collins, Snowe, and former Senator Jeffords, in ensuring its passage. I also want to thank the members of this committee, including Chairman Boxer, Chairman Baucus, and Senators Carper, Clinton, Lautenberg, Voinovich, and Alexander, for supporting that independent peer review amendment.

As we look forward to a possible WRDA 2007, I would like to again remind my colleagues of the need for reform; and the minimum reforms that must be enacted.

Since 1994, more than 30 major reports have been issued calling for reforming the Corps and/or pointing out stunning flaws in Corps projects and project studies. These include, among others:

- Eleven studies from the National Academies of Sciences and Public Administration;
- Seven reports from the Government Accountability Office;
- Five major engineering studies, including an assessment by the American Society of Civil Engineers' and a study by the Corps itself;
- The Katrina investigation by the Senate Committee on Homeland Security and Governmental Affairs;
- An investigation by the Department of the Army Inspector General; and
- A report by the U.S. Commission on Ocean Policy.

I would like to ask that a full list of these reports be placed into the record.

Just 1 year ago, the GAO issued a scathing report on the Corps' planning process. I also ask that the entire report, entitled Corps of Engineers, Observations on Planning and Project Management Processes for the Civil Works Program, be placed in the record. Unfortunately, neither the GAO nor any of a number of other expert re-

form witnesses, were called to testify today. The GAO found that recent Corps project studies:

"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 decisionmaking."

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All of this happened despite Congress sending a significant amount of money to Louisiana water projects. In the 5 years preceding Katrina, Louisiana water projects received $1.9 billion—far more than was received by any other state—but only a pittance went to bolstering the city's levees.

We can—and must—do better. The evidence supporting reform is overwhelming. The bill that Senator McCain and I introduced last month, S. 564, would correct the failings at the Corps and provide clear policy directives to ensure that Corps projects protect our communities and the environment, and make sound use of our scarce Federal resources.

My bill would institute the independent review language that passed the Senate as an amendment last year. That provision was carefully designed to ensure reliable and meaningful independent review of costly or controversial Corps projects. The provision establishes clear review triggers, ensures the independence of the review panels, and responds to the National Academy of Sciences' caution that independent peer review panels must have the benefit of public comment on a draft Corps report if the panel's review is to be meaningful. I ask that a letter I recently received from Dr. Shabman, the Chair of the NAS study, be inserted in the record on this point. The provision also establishes an outside safety assurance review for critical flood damage reduction projects.

My bill would also modernize the Principles and Guidelines that form the basis for how Corps projects are planned. It would also improve the way Corps project impacts are mitigated—though mitigation requirements were put in place in WRDA 1986, loopholes need to be closed and language strengthened to ensure proper mitigation when Corps projects damage the environment. Weaker versions of both of these reforms were included in last year's Senate WRDA.

For the benefit of hard-working taxpayers, my bill would also institute a system to prioritize projects so that those of the highest national interest are funded and completed on a timely schedule. During last year's WRDA debate, Chairman Baucus called for "a robust program of independent peer review and project prioritization." I couldn't agree more. He pointed out that "The Corps currently has a $58 billion project backlog and a $2 billion a year project budget. At that pace it would take the Corps roughly 30 years just to work through the backlog of projects."

We must come to grips with the need to manage the list of deserving projects so that we can complete projects on schedule and according to the greatest need and merit. I appreciate the commitment I have from Chairman Boxer to work together to develop a mechanism to prioritize projects that would address her concerns with the prioritization provision in my bill. It is essential that Congress come up with a way of determining how best to allocate scarce taxpayer dollars among water projects.

We have an historic opportunity to reform the beleaguered Corps, and we must seize this chance. Just as we cannot afford to look the other way, we also cannot go weak on reform just to get a bill through. I ask my friends sitting on this Committee; don't you want to ensure that the projects in your state aren't the next national headline? Just yesterday a New Orleans Times Picayune editorial, which I would like to insert for the record, admonished the House for sticking to its pre-Katrina reforms. We have a responsibility to our constituents to do better than that. We must enact meaningful reforms in this year's WRDA.

I again thank the Committee for letting me testify, and I look forward to working with you throughout the Water Resources Development Act process.

Senator BAUCUS. Thank you, Senator.

I, for one, don't speak for the committee, but I, for one, deeply appreciate your very deep concern to help assure that taxpayers' dollars are spent carefully and appropriately. You have worked very hard on this subject. You have spent a lot of time and effort, and a lot of Senators agree with some of your precise ideas, and some don't totally agree with other precise ideas. But the main point here is that you are trying to focus on something that needs to be focused on. I, for one, appreciate your work.

Senator FEINGOLD. Thank you.

Senator BAUCUS. The Chairman of the committee, Senator Boxer, would like to say something.

Senator BOXER. Would you just wait about 3 minutes? I would ask unanimous consent to put my full statement in the record.

Senator BAUCUS. Without objection.

STATEMENT OF HON. BARBARA BOXER, U.S. SENATOR FROM THE STATE OF CALIFORNIA

Senator BOXER. I want to thank you, Senator Baucus, first of all, for chairing this hearing at my request. I am so fortunate to have you do this because you do have a few other duties that are very pressing at the moment, so thank you for that. Second, to the members who are here, because it just shows a great interest in what we are doing.

Senator Feingold, you and I have had many conversations, and I do look forward to working with you in the future on this. I wanted to reiterate for the committee what I said to you. I have also informed Senator Inhofe of this, as the Ranking Member, which is that we commit that the language that was in the Senate bill as it went through on peer review, which is part of your Corps reforms, about half of what you are trying to do, will be in the bill.

I would just implore you, and everyone is going to offer whatever amendments they want, and that is fine, once it gets to the floor. But we must work together on this because here is the thing: we haven't had a WRDA bill since 2000. I have my colleague here from Louisiana, and other colleagues, we have a tremendous backlog. As a matter of fact, Senator Baucus is very much ready, I think, I didn't hear his opening statement, to do much more than we were going to do in the first WRDA bill because we have this backlog. I have the record. We used to do WRDA bills, Mr. Chairman, every 1 to 2 years. So now we have gotten so backlogged, it is a real problem.

The only other thing I wanted to say while you were here, because I know you are on the Budget Committee, and I wanted my colleagues to hear this because I think this is great news for us, the Chairman's mark in the Budget Committee restores the funding to the Environmental Protection Agency in such a way that we will have full funding for the revolving fund for Superfund. I know Senator Voinovich particularly was concerned.

Last, I think you are so right about making sure we do the work well. I have had experiences with the Corps over many years, since 1982, even before that when I was a county supervisor. I love working with the Corps. As time goes on, they get more and more aware

of the environment and the need to proceed in ways that restores the environment, as well as takes care of the problem at hand.

I think we can work with them. I think that they understand, after Katrina. This committee went down to Louisiana with the leadership of Senators Vitter and Landrieu. We saw things that just stunned us on that point. We have to get this WRDA bill through, because much of the WRDA bill is focused on rebuilding New Orleans. This is essential.

So that is what I wanted to say. Many thanks to you, Mr. Chairman, for giving me this chance, and thank you, Senator.

Senator BAUCUS. Thank you very much, Senator.

Senator Isakson.

STATEMENT OF HON. JOHNNY ISAKSON, U.S. SENATOR FROM THE STATE OF GEORGIA

Senator ISAKSON. Thank you, Mr. Chairman. I have enjoyed working with you on many projects in the past, and look forward to working with you on this committee. I pledge to Chairman Boxer that I absolutely will do everything I can to help expedite and facilitate the WRDA bill and I associate myself with her remarks.

I would like to welcome Senator Mack Mattingly from Georgia, who is in the audience today, and Doug Marchand, who will testify later, who since 1994 has overseen the expansion of the Port of Savannah and the Port of Brunswick. I express my appreciation to the Corps of Engineers for the investment and the work they have done at both those facilities.

I particularly welcome General Strock, and tell you how much I appreciate all you have done and how much you will be missed. You have done an outstanding job.

Mr. Chairman, on Monday of this week at 2 o'clock p.m., the Governors of South Carolina and Georgia met on the banks of the Savannah River and held an historic press conference which announced a bi-State compact to propose the building of a new port in Jasper County, South Carolina to be jointly operated by the State of Georgia and the State of South Carolina.

Historically, the two States have been at odds over Jasper County on many issues, and they joined hands today and even offered to pay the financial cost of the feasibility studies necessary to move forward on that event. I would like to submit that entire agreement between Georgia and South Carolina for the record.

Senator BAUCUS. Without objection.

[The referenced document follows on page 109.]

Senator ISAKSON. Speaking of cooperation, Mr. Chairman, I am pleased to tell you that the Governors of Alabama and Georgia, you would think we were having a new civil war with all my testimony here, but the Governors of Alabama and Georgia have also worked together in the last 8 months to bring about a tri-State water compact in the Chattahoochee Basin. We have been in court for the better part of 17 years without a tri-State water agreement. It has hurt the States of Florida, Georgia and Alabama. The Corps was to begin early this year, has not yet, but I am going to encourage them to hurry up and facilitate the completion of the water control plan, which is the essential framework to formalize the tri-State water compact and make that in fact happen.

I also am looking forward to the testimony of the members of the Corps with regard to the fiscal year 2008 budget request, as to its sufficiency. In my personal judgment, it is probably insufficient to meet the challenges that we need. I hope they will make suggestions as to what we can do in the Senate and the Congress to improve that.

I again want to end where I began, with my sincere appreciation to the Corps of Engineers for the investment of capital and time in the State of Georgia and our resources. Our ports of Brunswick and Savannah are two of the great facilities on the East Coast of the United States. The proposal to build a third port jointly by Georgia and South Carolina is because those two ports have finite capabilities: Brunswick, Savannah and the Port of Charleston. The States have realized the importance of meeting the needs of the people of the United States of America and our commerce in the 21st century, and believe that facility to be an essential part of it.

I thank the Ports Authority representatives for attending today. I thank the Corps for their investment in Georgia. I look forward to hearing from the Corps with regard to the water control plan on the Chattahoochee River.

Thank you, Mr. Chairman.

Senator BAUCUS. Thanks very much, Senator.

According to our early bird procedure here, the Senators I have listed in order are Senator Alexander, Senator Inhofe, who has already spoken, Senator Carper, Senator Vitter, then Senator Voinovich.

So Senator, you are next.

STATEMENT OF HON. DAVID VITTER, U.S. SENATOR FROM THE STATE OF LOUISIANA

Senator VITTER. Thank you, Mr. Chairman, Madam Chairman, and Ranking Member Isakson. Thank you all for this very important hearing.

Obviously, I am enormously interested in all of these subjects. A lot of people on this committee and in the Senate are, but probably no one has more at stake than Senator Landrieu and myself, simply because of the nature of Louisiana, particularly post-Katrina.

It reminds me of after I had met with Don Powell, the President's Gulf Coast Recovery Coordinator, several times. I talked mostly about levees and Corps stuff. He said, after a couple of meetings, "Boy, you just have an absolute passion for levees." I said, "Well, it is actually pretty simple to understand. My family and I live behind one. That sort of builds passion."

I wanted to spend my opening statement focusing on two concerns about the proposed budget for the Corps this year, and then some comments about Corps reform, in which I am very, very interested.

First, on the budget, I am beginning to realize that former Congressman and Assistant Secretary of the Army Mike Parker was really a hero. He was forthright and honest about the budgetary constraints and the budgetary process forced upon the Corps. Nearly 8 months ago, I began receiving reports about the funding shortfalls related to the emergency restoration of the hurricane protection system in the New Orleans area post-Katrina. This is that im-

mediate emergency work that the President has clearly committed to, and that Congress has clearly committed to.

Over those 8 months, I identified at least $4 billion in additional funding needs to do that work that everybody has expressed complete commitment to. However, the recent budget request sent by the Administration to Congress only proposes to move around, not to increase, just to move around $1.3 billion. The request proposes no new funding for this emergency work, while the Corps and the Administration clearly admit to this enormous shortfall, which they are still trying to precisely quantify.

This is a real problem, and I strongly disagree with kicking the can down the road. We need to start solving this problem now, including in the context of the supplemental, because it will be difficult or impossible to solve if we simply kick the can down the road.

Second, very recent news reports about faulty pumps installed at the 17th Street Canal in New Orleans only confirms the concerns I expressed last summer regarding the capabilities of that pumping station and similar new pumping stations. These concerns were repeatedly debated by the Corps, but now we are expected to rely on these same faulty pumps and the pump manufacturer for flood protection in 2007.

I understand that the Corps has expended millions of extra dollars attempting to resolve this problem. I am hopeful that we are on a path to resolution in time for this hurricane season. But I simply want to restate my extreme concerns that I began expressing many, many months ago about this very issue.

Let me briefly move on to Corps reform. Certainly, I agree with that need absolutely, but like in most things, the devil is in the details. In developing thoughts for this topic, I remember the wisdom of Yogi Berra, who once said, "the future ain't what it used to be." Well, hopefully with regard to the Corps, that will be true and we can learn from past mistakes and make sure that that is true. Certainly, we need to learn from some incredibly painful lessons of Hurricane Katrina.

In this regard, I commend General Strock, who is here today, for coming forward a few months after Katrina and admitting to some key Corps errors with regard to New Orleans that were a big part of catastrophic flooding.

Every member of this panel has voiced support for some variation of Corps reform, but as I said, the devil is in the details. I have specific language which I put forward in WRDA last year, my Louisiana Water Resources Council language, that I think embodies four essential principles for Corps reform. Those principles are as follows.

First, independence. We must ensure that the peer review teams bring independent expertise to the table, not because we don't trust Federal engineers, but because the consequences of failure are far too great to rest on just a few shoulders narrowly, and we must reach out to all expertise that is available in the private sector and in academia.

Mr. Chairman, if I could just have a couple of additional minutes, and I will be brief.

Second, consistency. The application of peer review criteria to all Corps projects must be consistent. Each team must have a clear, consistent understanding of their role, the engineering standards, their goals, and the purpose of water resource projects.

Third, integration. Particularly in the case of Louisiana, this is a very important theme. This is one of the big lessons we have learned from Katrina. That is why I have called for one peer review entity known as the Louisiana Water Resources Council, to serve as the exclusive peer review team for all projects in our disaster areas of South Louisiana.

The IPET, the National Science Foundation, the American Society of Civil Engineers, other expert review teams, have all identified the inter-performance of projects or the lack thereof as a key issue in the failures of Katrina. Very often, fault points, points where things failed, is where one discrete project met another, and there was no integration between projects.

So for that reason, one peer review entity with a clear understanding of all projects in a region and how they need to integrate has to be in play, and has to comprehend the impact of related projects and the need for integration. Again, that is a very important theme and a very important lesson we learned from Katrina, and it must be built into peer review and Corps reform at least as it applies to Louisiana.

Fourth and finally, efficiency and timeliness. In working on projects in Louisiana for years, there are two descriptions that are included in any local sponsor's comments on a Corps project. One, it takes too long; two, it is too expensive. Those are related.

We must ensure that any Corps reform requirements occur concurrent with design, rather than at the end of the normal Corps design process so that that timeframe doesn't just expand and expand, and slow down and slow down. Water resource projects are designed to save lives, and so we can't delay an already long process. We need to in fact speed it up.

In closing, I would like to reemphasize the importance of getting this bill done with the Louisiana Water Resources Council Corps reform ideas in it as soon as possible. I appreciate everyone's commitment to doing that as soon as possible this year.

Thank you very much for the extra time.

[The prepared statement of Senator Vitter follows:]

SSTATEMENT OF HON. DAVID VITTER, U.S. SENATOR FROM THE STATE OF LOUISIANA

Chairman Baucus, Ranking Member Isakson, thank you for hosting this important hearing on the Fiscal Year 2008 budget request and the authorization needs of the U.S. Army Corps of Engineers in the Water Resources Development Act.

Two immediate concerns I have are in regard to the budgetary process and mismanagement related to the recovery work in New Orleans.

First, I am beginning to realize that former Congressman and Assistant Secretary of the Army Mike Parker was a hero. Congressman Parker was forthright and honest about the budgetary constraints and budgetary process forced upon the Corps.

Nearly 8 months ago, I began receiving reports about the funding shortfalls related to the restoration of the hurricane protection systems in the New Orleans area.

I identified over $4 billion in additional funding needs to restore our hurricane and flood protection system to authorized levels. However, the recent budget request sent to Congress proposed to reallocate $1.3 billion in existing funds from emergency work in New Orleans.

The request proposes no new funding for this emergency work. With hurricane forecasters predicting another active year, this decision is beyond ill-advised.

Second, recent news reports about faulty pumps installed at the 17th Street Canal in New Orleans only confirms the concerns I expressed last summer regarding the capabilities of the pumping stations on the canal. These concerns were repeatedly deemed unfounded by the Corps. Now we are expected to rely upon these same faulty pumps and the pump manufacturer for flood protection in 2007. I understand that the Corps has expended millions of extra dollars attempting to resolve this problem, but I remain very concerned about the command's ability to meet its targets for this hurricane season.

While I am confident that I could be here for hours going over other serious concerns about the water resources program—from OMB to the Army to the Corps' civil works program—I'll take a moment to focus on Corps reform.

In developing my thoughts for this topic, I remembered the wisdom of Yogi Berra. He once said "the future ain't what it used to be". In regard to the Corps of Engineers, I am hopeful that we can prove Yogi right. The future of the civil works program must not reflect the mistakes of the past.

We learned some incredibly painful lessons as a result of Hurricane Katrina. It took the loss of over 1,200 lives to bring attention to the concerns we have voiced in Louisiana regarding the integrity and performance of our hurricane protection system. We must apply these lessons not only to our recovery efforts in Louisiana, but to our protection systems and water resource projects nationwide.

I commend General Strock here today for coming forward and admitting that the Corps erred in New Orleans. I know that that wasn't an easy statement on your part, but it was the right thing to do and a courageous act. Thank you. I am confident that your efforts will help guide us in preventing future disasters and the loss of life.

Every member of this panel has voiced support for some variation of Corps reform. The devil is in the details and the details should not delay the passage of WRDA again. Seven years since enacting a WRDA bill is far too long.

Hundreds of Members of Congress and interests groups across the country have proposed various forms of Corps reform. Unfortunately, a number of these proposals are not truly based upon experience with Corps projects. As a representative of the 1,200 citizens that lost their lives during Hurricane Katrina and a representative of the state with the most intense civil works program in the world, I ask that you rely heavily upon the experiences of our State.

There are four essential principles that must be included in any version of Corps reform:

Independence: We must ensure that the peer review teams bring independent expertise to the table. Not because we do not trust the Federal engineers, but because the consequences of failure are far too great to rest upon the shoulders of any one engineer or agency. We also must reach out to all expertise that is available.

Consistency: The application of peer review criteria to all Corps projects must be consistent. Each team must have a clear, consistent understanding of their role, the engineering standards, their goals and the purpose of water resource projects.

Integration: In the case of Louisiana, I have called for one peer review entity, known as the Louisiana Water Resources Council, to serve as the exclusive peer review team for all projects in our disaster areas of south Louisiana. The IPET, National Science Foundation, American Society of Civil Engineers and other Hurricane Katrina expert review teams all identified the inter-performance of projects as key issue in the New Orleans area systems.

One peer review entity with a clear understanding of all projects in a region will be able to comprehend the impact of related projects and verify the integration of protection infrastructure to ensure that it truly operates as a system. I thank the committee and conferees for agreeing to this concept in last year's WRDA bill and in the conference committee. I understand that the House recently adopted my proposal in their version of WRDA recently introduced.

I urge you to consider this concept in other areas as well.

Efficiency and Timeliness: In working on projects in Louisiana for years, there are two descriptions that are included in any local sponsor's comments on a Corps project. (1) It takes too long; and (2) It is too expensive.

We must ensure that any Corps reform requirements occurs concurrent with design—without delay to the final recommendations or extraordinary expense. Water resource projects are designed to save lives. We cannot afford delays.

In closing, I'd like to reemphasize the importance of getting this WRDA bill done as soon as possible. There are dozens and dozens of vital projects across this country that cannot wait any longer.

I have heard some theorize that WRDA has been delayed for budgetary reasons. I would like to remind the Members here today that Hurricanes Katrina, Rita and Wilma have cost our taxpayers nearly $160 billion and counting. Less than $5 billion would have prevented virtually all damages in New Orleans.

A recent study commissioned by FEMA found that every $1 in mitigation measures provides $4 in benefits. If you are concerned about the budget as I am, it is clear that we must enact WRDA now.

For years I have complained about the lengthy Corps of Engineers' process. With 7 years since enacting a WRDA bill, some obstacles in the Congress are no better.

Senator BAUCUS. Thank you, Senator.

Next on our list is the great Senator from Tennessee, Lamar Alexander.

STATEMENT OF HON. LAMAR ALEXANDER, U.S. SENATOR FROM THE STATE OF TENNESSEE

Senator ALEXANDER. Thank you, Mr. Chairman. It is good to be here. General Strock, it is good to see you.

I have a couple of compliments for the Corps. One, I want to thank you for the job you have done on the Northwest Tennessee Port Project in Lake County, TN. You found a way to keep that on schedule, allocated funds to it for completion in September 2008.

That is one of the lowest-income counties in our State, and the port has a potential for tremendous ability to raise family incomes in that area. I compliment you for that.

Second, a lot of this happened well before I came to the Senate, but your focus on the safety concerns of the Chickamauga Lock in Chattanooga affects a whole region of our Country, not just the Chattanooga area, but several States. I very much appreciate the Corps' attention to that.

The only other comment I would make is I am concerned about the safety of the Wolf Creek and Center Hill dams. They are built above caves on an eroding limestone base. Of course, you recognize there are safety concerns there, and you have lowered the water levels. That in itself creates other problems as you make the repairs, which obviously have to be made, but it adds to the cost of electricity, changes the environment in the lake and in the rivers below it, adds to cooling costs down the river. All that needs to be done. There are important safety repairs.

Equally important is for the Corps to acknowledge that there are safety repairs and pay its appropriate amount of costs for that.

So I am glad you are working on it. I hope it can be done as soon as is possible, and that these safety repairs can be acknowledged and we can get the water levels back up to the place they need to be.

Thank you for your time, Mr. Chairman.

Senator BAUCUS. Thank you, Senator.

According to the early bird rule, Senator Carper, you are next.

STATEMENT OF HON. THOMAS R. CARPER, U.S. SENATOR FROM THE STATE OF DELAWARE

Senator CARPER. Thank you, Mr. Chairman.

Chickamauga Lock, is that it? Chickamauga Lock, all right. In fact, I played a piano concert down there one time. That is not what interfered with the strength of the dam, but——

[Laughter.]

Senator CARPER. Mr. Chairman, I want to thank you, and our new Ranking Member, Senator Isakson; Senator Boxer, our Chairman; and Senator Inhofe for scheduling this hearing, and for committing to mark up the Water Resources Development Act so early in this Congress. I think it is a good sign that we might just finally pass this important legislation after, as Senator Boxer and others have said, after 6 years of trying.

I want to echo the sentiments of some others who have said very nice things about General Strock as you prepare to head out for your next assignment. As we used to say in the Navy, fair winds and fallowing sea, and good luck to you and thanks for your good work.

Secretary Woodley, good to see you. On behalf of a lot of folks who live in Sussex County, the good work that you have done from end of our State to the other to help particularly our beach front communities, I just want to say a special thanks.

It is very important I think that we pass a bill that addresses the Nation's water resources needs, from wetlands to levees, and we need to make sure that we have enough funding to meet those needs.

In fact, Senator Voinovich and I have introduced, along with Senator Clinton and I think Senator Coleman, have introduced legislation to establish a commission to look at our Nation's infrastructure needs and how we can best address those needs. Congress created a similar commission I believe to study highways and transit as part of what we call SAFETEA-LU. As we will discuss today, our infrastructure needs go far beyond those.

I would invite our colleagues to join us in cosponsoring the legislation. It is called the National Infrastructure Improvement Act of 2007. It is S. 775.

I think we all agree that sufficient funding is a big part of the solution. We also need to make sure that our constituents have faith in the products that our Government, in this case the Army Corps of Engineers, provides. I visited in New Orleans a year or so ago, in April, and met with our two colleagues, Senator Landrieu and Senator Vitter, and held an oversight hearing with Senator Coburn. We saw some of the devastation caused by floodwalls that failed to do what they were designed to do.

I also participated in about another dozen or so oversight hearings on what went wrong. Many of you joined us in those hearings. One thing was perfectly clear, and that is that there were many warnings that were not heeded. I appreciate the Corps has acknowledged as much.

However, the problem has not gone away. At least according to the Associated Press last year, the Army Corps installed defective flood-control pumps despite warnings that the equipment just might fail during a storm. That, for me, was disheartening news. But even if there was a reason to go ahead with the pumps, for example some pumping is better than none, it is disappointing to learn about this from the media and not from the Corps itself.

I appreciate the fact that, Senator Baucus, you allowed Senator Feingold to speak to us earlier today about some of the reforms that we are considering for the Corps. Senator Feingold and Senator McCain have been tireless in fighting for Corps reforms to en-

sure that we all receive the best quality flood control, the best navigation, the best environmental restoration projects for our communities.

I am happy that the Senate approved Senator Feingold's and Senator McCain's amendment to require independent peer review of large Corps projects in WRDA last year. Further, I would like to express my appreciation to Senator Boxer and Senators Inhofe, Baucus, Isakson and others for agreeing to maintain that language in this year's WRDA bill.

Mr. Chairman, if I could, I would like to ask unanimous consent at this point on behalf of the Delaware Nature Society that joint testimony from members of the Corps Reform Network be included in the record of this hearing.

Senator BAUCUS. Without objection.

Senator CARPER. Thank you.

[The referenced document was not available at time of print.]

Senator CARPER. We all want to ensure that our Nation's water resource needs are met with the highest quality work possible, especially in States that rely heavily on the Corps, as we do in Delaware. As the New Orleans Times Picayune said yesterday, and this is a quote, "Any community that relies on a Corps-built projects deserves the assurance that the projects are well planned, designed and built, and making sure Americans who live beside those levees are safe ought to be the top priority for every Member of Congress." I agree.

Thank you.

Senator BAUCUS. Absolutely. Thank you, Senator.

Senator Voinovich.

STATEMENT OF HON. GEORGE VOINOVICH, U.S. SENATOR FROM THE STATE OF OHIO

Senator VOINOVICH. Thank you, Mr. Chairman, for holding this hearing.

I have been supportive of this WRDA legislation for a long time. As I mentioned to Senator Vitter, the last time we passed a WRDA bill, Mr. Chairman, is 1999 and 2000, when I had your job, and it was interesting that we got it through so quickly in those 2 years, and then haven't been able to get anything done since then.

America's infrastructure in waterway systems is the foundation of our economy. For too long, we have been ignoring our infrastructure. I am glad Senator Carper brought up our infrastructure legislation, and hopefully we can get it done and get a handle on what the infrastructure requirements are for the United States of America so the people of America know just how bad our infrastructure is, and start dealing with the problem forthrightly.

Our physical infrastructure is the critical piece to making America more competitive. As I already mentioned, those needs are overwhelming. With the deterioration of our locks and dams, flood-control projects, and navigation channels, we risk disruptions in waterborne commerce, decrease protection against floods, as we saw in Katrina, and other environmental damage.

Right now, our infrastructure is collapsing due to the insufficient funding. I am very disappointed the President's budget includes an 8.6 percent decrease for the overall Army Corps budget. It is in-

credible, and a larger reduction for construction budget, a 31.8 percent decrease. Think about it. Congress desperately needs to provide increased funding for the Corps, especially with a large backlog of unfunded projects.

When I arrived in the Senate, the backlog of unfunded Corps operations and maintenance projects was $250 million. Today, it is $1.2 billion. Despite these overwhelming needs, the Corps is currently able to function at only 50 percent capacity at the rate of funding proposed by this budget.

Can you believe this after Katrina? At the current low levels of construction appropriations, as I think somebody pointed out, it will take 25 years to complete the projects in the backlog without even considering additional project authorizations, and you know there are a bunch of them in this WRDA bill once it is passed.

We have been asking the Corps to do more with less. I am for trimming fat from the Federal budget and practicing fiscal discipline, but the Corps budget is not fat. It is the bread and butter of our economy and infrastructure. I believe we need a comprehensive priority system, and I am glad that you have agreed to put that priority system in reviewing the projects in our version of the WRDA legislation.

There is some good news from my end of the region of the United States, and that is the Corps has put money in for the Asian carp barriers. We are very grateful for that and we are going to make sure that we change the language so that it is fully funded by the Federal Government. It is a little piece of expenditure, but a big deal in terms of keeping an invasive species out of the Great Lakes that would demolish our fishery.

I am also concerned about the dredging in the Great Lakes. Throughout the Great Lakes, we have a significant dredging backlog. The Corps estimates that the backlog of Great Lakes dredging totals about 16 million cubic yards of sediment at commercial harbors. Addressing the backlog would take $192 million. Unfortunately, the inability to provide sufficient dredging resources to the Great Lakes has various serious impacts on our budget.

The bottom line is that because we haven't done the dredging that we were supposed to be doing, it is estimated that 75 percent of the cargoes that have been carried in the past years have been reduced in volume due to inadequate water depth at either loading or discharge ports, or in the connecting channels. The Midwest Environmental Resource Company reported that 1,000-foot vessels are losing as much as 18 inches of loaded draft, depending upon the route that they are going.

So in other words, because we are not doing the dredging, you are having a very bad impact on the economy of our region of the Country. I think it is outrageous, and I don't want to pick on one part of the Country versus another, but they treat the Great Lakes like a river system. Even with that, the Corps spent 52 cents per ton of cargo carried in the Great Lakes, and the Missouri River received $15 per ton of cargo that it carried. It is not right. It is not fair.

So I talked to General Berwick in the Cincinnati Great Lakes and Ohio Division about this, and I appreciate that the Division is

developing a 5-year plan to address the backlog of projects on the Great Lakes.

So I just want to say that it is important we get this legislation passed, Mr. Chairman, but it is also very important that we dramatize the fact that we are ignoring the infrastructure needs of the United States of America in just about every level that I can see, and one of the best examples is the Army Corps of Engineers.

[The prepared statement of Senator Voinovich follows:]

STATEMENT OF HON. GEORGE V. VOINOVICH, U.S. SENATOR FROM THE STATE OF OHIO

Mr. Chairman, thank you for holding this important hearing today. As you know, I have long been supportive of passing WRDA legislation, and it is my hope that this Congress will finally act on this. I am also pleased that we are holding this hearing today to discuss the Fiscal Year 2008 budget for the Army Corps of Engineers. This is an issue of great concern for me.

It has been 6 years since Congress last passed a Water Resources and Development reauthorization bill. The time has come to finally pass this important legislation.

America's infrastructure and waterways system is the foundation of our economy. For too long, we have been ignoring our infrastructure, but Katrina was a wake-up call for all of us. In the wake of this disaster, we saw firsthand the devastating impact of a weak infrastructure on our people and our economy. The more we continue to fail to fund our water infrastructure, the more we are putting our nation's competitiveness at risk in this global marketplace.

Our physical infrastructure is a critical piece to making America more competitive. Our infrastructure needs are overwhelming and being squeezed. We should be rebuilding an infrastructure of competitiveness so that future generations have at least the same opportunity to enjoy our standard of living and quality of life. If we continue to ignore the upkeep—the deterioration of our locks and dams, flood control projects, and navigation channels—we risk disruptions in waterborne commerce, decreased protection against floods as we saw in Katrina, and other environmental damage.

Right now, our infrastructure is collapsing due to insufficient funding. I am disappointed that the President's budget includes an 8.6 percent decease for the overall Army Corps budget—a larger reduction for Construction budget, 31.8 percent decrease. Congress desperately needs to provide increased funding for the Army Corps of Engineers, especially with the large backlog of unfunded Corps projects. When I arrived in the Senate in 1999, the backlog of unfunded Corps Operation and Maintenance projects was $250 million. Today, it is $1.2 billion.

Despite these overwhelming needs, the Corps is currently able to function only at 50 percent capacity at the rate of funding proposed by the budget. Can you believe this after the lesson we learned from Hurricane Katrina? At the current low levels of construction appropriations, it would take 25 years to complete the active projects in the backlog without even considering additional project authorizations that will be included in this WRDA, let alone future authorizing legislation.

We have been asking the Corps of Engineers to do more with less. I am all for trimming fat from the federal budget and practicing fiscal discipline, but the Corps of Engineers budget is not fat—it's the bread and butter of our economy and infrastructure.

I believe that we need a comprehensive prioritization system to ensure that Congress has the information it needs to direct limited federal resources to the most urgent projects. As we begin another debate on WRDA, it is my hope that we can include prioritization language in the bill. Without this language, we simply will continue to ignore our most critical infrastructure needs.

There is some good news in the FY2008 Army Corps of Engineers budget. I am pleased that the administration's FY2008 budget requests $8 million in funding for the Asian Carp Barriers and also includes proposed authorization language for the Corps. However, I am disappointed that this language does not make the project the full responsibility of the federal government. During WRDA negotiations last year, we crafted language that would have made this a full federal project, and it is my hope that as this Committee considers WRDA, we will again make it a full federal project. It is critical that these barriers be completed and operational in a timely manner in order to protect the Great Lakes from the spread of invasive species.

Another Corps issue I am concerned about is dredging in Great Lakes. Throughout the Great Lakes, there is a significant dredging backlog, and I believe that this backlog is in part, the result of Corps policies that unfairly address the Great Lakes. The Corps estimates that the backlog of Great Lakes dredging totals about 16 million cubic yards of sediment at commercial harbors, and addressing this backlog would cost about $192 million. Unfortunately, the inability to provide sufficient dredging resources to the Great Lakes has very serious impacts on business.

Last year, a U.S. Maritime Administration surveyed the lake carriers, ships that operate exclusively in the Great Lakes, and estimated that 75 percent of the cargoes they have carried in the past 5 years have been reduced in volume due to inadequate water depth at either loading or discharge ports or in the connecting channels. The Midwest Environmental Resource Company reported that its 1,000 foot vessels are losing as much as 18 inches of loaded draft depending on the route. When these vessels forfeit 18 inches of draft, they are leaving approximately 4,500 tons of coal at the dock which is as much as 6.5 percent of their carrying capacity on each trip.

While I understand that we are underfunding the nation's navigation infrastructure needs, the problem for the Great Lakes is also a result of the Corps' budget practices which rely on performance metrics that treat the Great Lakes like a river system which results in funding inequities. For example, the Corps spent about $0.52 per ton of cargo carried in the Great Lakes, but the Missouri River received about $15 per ton of cargo carried.

I have spoken with General Berwick in the Cincinnati Great Lakes and Ohio River Division Office about this situation, and while I appreciate that the division is developing a 5-year plan to address the backlog of projects in the Great Lakes, I would like Headquarters officials to understand that there is a problem and make a commitment to working to find performance metrics or some other process to better determine the funding needs of the Great Lakes.

The passage of another WRDA bill cannot be delayed any further. It is simply too important to our nation in terms of its benefits to our economy and environment and for the speedy recovery for the areas affected by Hurricane Katrina.

Senator BAUCUS. Thank you.

Now, we will get into our main event here. We are honored now to have before us the Hon. John Paul Woodley, Assistant Secretary of the Army. He will be accompanied by Lieutenant General Carl Strock, who is the Chief of Engineers with the U.S. Army Corps of Engineers.

Secretary Woodley, thank you very much for coming to testify before the committee. We ordinarily have a 5-minute rule here, but if you want to go a little beyond 5 minutes since you are the main event here, feel free to do so.

STATEMENT OF JOHN PAUL WOODLEY, JR., ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS) ACCOMPANIED BY: LIEUTENANT GENERAL CARL A. STROCK, CHIEF OF ENGINEERS, U.S. ARMY CORPS OF ENGINEERS

Mr. WOODLEY. Thank you, Senator. In fact, I will take less. I have a detailed written statement in the record.

I have with me today a piece of cloth. Those of you who have served, and I believe most have, will recognize this piece of cloth. It says, Hurricane Response, 2005–2006. This is a meritorious unit citation streamer awarded by the Army to the Headquarters of the U.S. Army Corps of Engineers. One thing it reminds us of is that in 2005 we thought that the hurricane season of 2004, in which four major storms struck the State of Florida, was a major hurricane response event. But these meritorious unit citations are very rarely given to a major command of the Army. They are ordinarily given to units of infantry, armor, or artillery for their actions in combat on the battlefield.

But this recognition has been given to the Headquarters, U.S. Army Corps of Engineers, primarily due to the leadership of Lieutenant General Carl Strock, who is here today for what we believe will be his last appearance before the committee prior to his retirement from active duty. I want to take my time here, having given a detailed statement for the record, to recognize that service and to say that because of the sacrifice and performance of duty by the people under his leadership and his command, this streamer has been awarded to the Headquarters of the U.S. Army Corps of Engineers.

So I think that it is incumbent upon all of us to take this opportunity to recognize that service, recognize that leadership—his and those of all the members of that command in responding to these events—and to express our deep appreciation for everything he has done as a leader in this context.

So thank you very much. That will conclude my remarks.

[The prepared statement of Mr. Woodley follows:]

STATEMENT OF HON. JOHN PAUL WOODLEY, JR., ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

Mr. Chairman and distinguished members of the subcommittee:

Thank you for the opportunity to testify before the subcommittee, and to present the President's Budget for the Civil Works program of the Army Corps of Engineers for Fiscal Year (FY) 2008.

OVERVIEW

The FY 2008 Budget for Army Civil Works provides funding for development and restoration of the Nation's water and related resources within the three main Civil Works program areas, namely, commercial navigation, flood and coastal storm damage reduction, and aquatic ecosystem restoration. The Budget also supports hydropower, recreation, environmental stewardship, and water supply services at existing water resources projects owned or operated by the Corps. Finally, the Budget provides for protection of the Nation's regulated waters and wetlands; cleanup of sites contaminated as a result of the Nation's early efforts to develop atomic weapons; and emergency preparedness. The budget does not fund work that should be the responsibility of non-Federal interests or other Federal agencies, such as wastewater treatment and municipal and industrial water treatment and distribution.

Total new discretionary funding in the FY 2008 Budget is $4.871 billion for FY 2008, the highest amount ever in a Civil Works budget. Within this total, we have allocated $2.471 billion to activities funded in the operation and maintenance (O&M) account. This is the highest funding level for operation and maintenance ever proposed in a President's budget or enacted by the Congress. It is 9 percent above the FY 2007 Budget level for the O&M account and $206 million above FY 2006 enacted, after accounting for the $296 million that the Budget has proposed to transfer in FY 2008 from construction to operation and maintenance.

The Budget also includes a FY 2007 recommendation to re-allocate up to $1.3 billion of emergency supplemental appropriations enacted in FY 2006. This would enable the Corps to use available, unobligated funds for measures that will provide a better overall level of protection for the New Orleans metropolitan area in the near-term. This proposal is discussed further below.

A 5-year budget development plan (FYDP) is under development and will be provided to the relevant Committees of Congress. The FYDP includes two scenarios or projections: one based on the President's proposed FY 2008 Budget; and one above that level based on the most recently enacted appropriations (FY 2006) at the time the budget was prepared. The projections are formula driven. They do not represent budget decisions or budget policy beyond FY 2008, but they can provide perspective on the Army Civil Works program and budget.

Enclosure 1 displays the current estimate for the distribution of new discretionary funding among eight appropriation accounts, eight program areas plus executive direction and management, and five sources including the general fund of the Treasury and trust funds. Enclosure 2 is a crosscut between appropriation accounts and program areas.

PERFORMANCE-BASED BUDGETING

The FY 2008 Budget reflects a performance-based approach to budgeting. Competing investment opportunities for studies, design, construction, and operation and maintenance were evaluated using multiple metrics. We used objective, performance criteria to guide the allocation of funds among construction projects (see below).

The Budget includes initiatives leading to the development of a more systematic, performance-based budget and improved asset management. For instance, to improve investment decisionmaking, the Budget funds the development of economic models for navigation and methods for evaluating the benefits of aquatic ecosystem restoration efforts. To help identify, evaluate, and establish priorities for the maintenance and rehabilitation of existing flood and storm damage reduction, commercial navigation, and hydropower assets, the Budget provides funding to develop asset management systems and risk-based condition indices. Finally, the Budget presents information for operation and maintenance activities by river basin and by mission area, setting the stage for improved management of Civil Works assets and more systematic budget development in future years.

The focus on Civil Works program 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, each program area has been assessed using the Program Assessment Rating Tool (PART). Summaries of all completed civil works program assessments can be found on the Administration's new website, *www.ExpectMore.gov*. Both the Civil Works Strategic Plan and the PART-based program evaluations are works in progress and will continue to be updated.

HIGHLIGHTS—WATER RESOURCES DEVELOPMENT ACCOUNTS

Studies and Design

The FY 2008 Budget provides $90 million for the Investigations account and $1 million for studies in the Mississippi River and Tributaries account. The Budget funds the 67 most promising studies and preconstruction engineering and design (PED) activities. Performance was assessed based on the likelihood in the near-term of meeting the construction guidelines discussed below. For instance, among the projects in PED, the projects with benefit-cost ratios of 3.0 to 1 or higher received funding.

Within the $90 million, $13 million is for the Louisiana Coastal Area study and science program for coastal wetlands restoration; $22 million is for other project-specific studies and design; $10 million is to continue the national inventory of flood and storm damage reduction projects; $17 million is for research and development; and $28 million is for other coordination, data collection, and study activities. Priorities within research and development include the Navigation Economic Technologies research program and the development of benefit evaluation methods for aquatic ecosystem restoration.

Construction

The Budget provides $1.523 billion in the Construction account and $108 million for construction projects in the Mississippi River and Tributaries account.

Many more construction projects have been authorized, initiated, and continued than can be constructed efficiently at any one time. The funding of projects with low economic and environmental returns and of projects that are not within Civil Works main mission areas has led to the postponement of benefits from the most worthy projects, and has significantly reduced overall program performance.

To remedy this situation and to achieve greater value to the Nation from the Civil Works construction program, the Budget focuses significant funding on the projects that yield the greatest return to the Nation, based upon objective performance criteria. The budget again proposes performance guidelines to allocate funds among construction projects. The most significant change is the inclusion of benefit-cost ratio (BCR) as a metric, rather than remaining benefit-remaining cost ratio. The BCR compares the total benefits to the total costs of a project at its inception, and provides a way to establish priorities among projects.

Under the guidelines, the Budget allocates funds among construction projects based primarily on these criteria: their BCR; their contribution to addressing a significant risk to human safety or to dam safety assurance, seepage control, or static instability correction concerns; and the extent to which they cost-effectively contribute to the restoration of nationally or regionally significant aquatic ecosystems that have become degraded as a result of Civil Works projects, or to a restoration effort for which the Corps is otherwise uniquely well-suited. The construction guidelines are provided in Enclosure 3.

The construction projects funded in the Budget include 6 national priorities; 11 dam safety assurance, seepage control, and static instability correction projects; and 41 other, high-performing projects. The budget also funds ongoing continuing contracts, but no new contracts, for 11 projects with BCRs between 1.5 to 1 and 3.0 to 1.

Operation and Maintenance

The Budget proposes $2.471 billion for the Operation and Maintenance account and $151 million for maintenance activities in the Mississippi River and Tributaries account. Even after adjusting for the reassignment of work, discussed below, this amount is the highest funding level for operation and maintenance ever proposed in a President's budget.

The Budget emphasizes performance of existing projects by focusing on the maintenance of key commercial navigation, flood and storm damage reduction, hydropower, and other facilities. The proposed funding would enable the Army Corps of Engineers to carry out priority maintenance, repairs, and rehabilitations, and priority initiatives such as the development of asset management systems.

The operation and maintenance program now includes four types of activities that were funded in the Construction program until last year. The Budget transfers responsibility and funding for these activities compliance with Biological Opinions at operating projects pursuant to the Endangered Species Act, rehabilitation of existing projects, use of maintenance dredging material, and replacement of sand due to the operation and maintenance of Federal navigation projects because they are integrally connected to the operation and maintenance of Corps projects. The reassignment to the Operation and Maintenance program is needed to improve accountability and oversight, reflect the full cost of operation and maintenance, and support an integrated funding strategy for existing projects. The Budget includes proposed appropriations language to cover funding for these activities in the Operation and Maintenance account.

The Budget proposes that Congress allocate operation and maintenance funding by river basin, rather than on a project-by-project basis. The justification materials present a current estimate for each basin of the distribution of proposed funding among the flood and coastal storm damage reduction, commercial navigation, hydropower, stewardship, recreation, and water supply program areas. Should operation and maintenance work be funded using this framework, managers in the field would be better able to adapt to uncertainties and better able to address emergencies as well as other changed conditions over the course of the fiscal year, consistent with congressional appropriations decisions. The Corps has displayed its current project-by-project estimates for the FY 2008 operation and maintenance program on its website.

HIGHLIGHTS—PROGRAM AREAS

The Army Civil Works program includes eight program areas, plus the oversight/executive direction and management function. The eight program areas are commercial navigation, flood and coastal storm damage reduction, environment, recreation, hydropower, water supply, emergency management, and the regulatory program. Budget proposals for the nine areas are discussed below.

Flood and Coastal Storm Damage Reduction, and Emergency Management

The FY 2008 Budget provides $1.384 billion for flood and coastal storm damage reduction, and $45 million for emergency management.

Among the 69 construction projects funded in the FY 2008 budget, 46 are for flood and coastal storm damage reduction, including 8 dam safety and seepage control projects and 34 projects that address a significant risk to human safety or have high benefit-cost ratios.

The Budget emphasizes natural disaster preparedness and flood and coastal storm damage prevention. Specifically, the Budget includes $40 million in the Flood Control and Coastal Emergencies account to fund preparedness for flood and coastal emergencies and other disasters. This is a 25 percent increase for preparedness activities compared to the FY 2007 Budget, and is needed to maintain and improve our ability to respond to disasters. The Budget also includes $20 million in multiple accounts to apply lessons learned from Hurricanes Katrina and Rita (including the 12 follow-on actions identified by the Chief of Engineers and stepped-up cooperation with Federal Emergency Management Agency programs for flood plains), $10 million to continue to inventory and assess flood and storm damage reduction projects across the Nation, and $10 million to continue to assess the safety of the Corps portfolio of dams (including improving ordinary, but essential, inspection procedures).

The Budget provides funding for all work currently planned to remedy the most serious (Action Class I and II) dam safety, seepage, and static instability problems at Corps dams. The planning, design, and construction of these projects are funded at the maximum amount that the Corps estimates that it can use efficiently and effectively.

The Budget continues to support Federal participation in initial construction, but not in re-nourishment, at beach nourishment projects that provide storm damage reduction or ecosystem restoration outputs.

Commercial Navigation

The FY 2008 Budget provides $2.009 billion for the commercial navigation program area.

The amount budgeted for inland waterway construction projects (replacements and expansions in the Construction Account, and rehabilitations in the Operation and Maintenance account) is about $418 million, the highest amount ever included in a President's budget. Half of the funding, or $209 million, would be derived from the Inland Waterways Trust Fund. The funding in the Inland Waterways Trust Fund will not be sufficient after FY 2008 to support this level of investment in our principal inland waterways.

The Administration is developing and will propose legislation to require the barges on the inland waterways to pay a user fee. The user fee will address the decline in the balance in the Inland Waterways Trust Fund, which affects the government's ability to finance a portion of the continuing Federal capital investment in these waterways. The legislation will be offered this spring for consideration by Congress.

The Budget focuses operation and maintenance funding on those waterway segments and commercial harbors that support high volumes of commercial traffic, with emphasis on the heavily-used Mississippi, Ohio, and Illinois waterways. The Budget also funds harbors that support significant commercial fishing, subsistence, public transportation, harbor of refuge, national security, or safety benefits.

The Budget continues the policy of funding beach replenishment, including periodic re-nourishment, where the operation and maintenance of Federal navigation projects is the reason for the sand loss on shorelines.

Environment

The FY 2008 Budget provides $514 million for the environment program area.

The Budget includes $274 million for aquatic ecosystem restoration, of which $162 million is for the Corps of Engineers share of the South Florida/Everglades restoration effort. Of this amount, $35 million is for the Modified Water Deliveries project, a key element of this effort that both the National Park Service and the Corps are funding. The Budget provides $23 million for the Upper Mississippi restoration program and $13 million for the Louisiana Coastal Area restoration effort and its science program. The costs of compliance with Biological Opinions at existing projects are not included in the above figures. The Budget includes these costs as part of the joint operation and maintenance costs of the affected projects and allocates these costs among the program areas served by the projects.

The Budget provides $110 million for environmental stewardship. Corps of Engineers-administered lands and waters cover 11 million acres, an area equal in size to the States of Vermont and New Hampshire. Funded activities include shoreline management, protection of natural resources, support for endangered species, continuation of mitigation activities, and protection of cultural and historic resources.

The Budget provides $130 million for the Formerly Utilized Sites Remedial Action Program (FUSRAP) to clean up contamination at sites resulting largely from the early atomic weapons program. This funding will enable continued progress toward completion of remedial actions at a number of sites.

Regulatory Program

The FY 2008 Budget provides $180 million to the Corps Regulatory Program to protect wetlands and other waters of the United States. This represents a $22 million increase over the FY 2006 enacted level of $158 million, and a $55 million increase since 2001. The funding will be used for permit processing, for enforcement and compliance actions and for jurisdictional determinations, including additional workload necessitated by the Supreme Court's Carabell and Rapanos decisions.

Investing in the Regulatory Program is a win-win proposition. The added funds will enable most public and private development to proceed with minimal delays, while ensuring that the aquatic environment is protected consistent with the Nation's water quality laws.

Recreation

The FY 2008 Budget provides $267 million for recreation operations and related maintenance.

To help finance recreation modernizations, the Budget includes an initiative based on a promising model now used by other major federal recreation providers such as the National Park Service and the Forest Service. The Administration is re-proposing legislation for the Corps to generate additional revenue to help upgrade and modernize the recreation facilities at the sites where this money is collected. Specifically, the legislation includes authority for the Corps to charge entrance fees and other types of user fees where appropriate, and to cooperate with non-Federal park authorities and districts. The Corps would keep collections above an annual baseline amount.

Hydropower

Hydropower is a renewable source of energy. The Civil Works program is the Nation's largest producer of hydroelectric energy, and provides three percent of the Nation's total energy needs.

The FY 2008 Budget provides $291 million for hydropower. This total includes $159 million for hydropower operation and maintenance costs, $43 million for the costs of replacements at four hydropower projects, and $89 million for the costs allocated to hydropower from multipurpose projects and programs. The replacement projects will help to reduce the forced outage rate, which is well above the industry average.

Water Supply

On average, Civil Works projects provide four billion gallons of water per day to meet the needs of municipal and commercial users across the country. The Budget includes $4 million for operation and maintenance costs allocable to water storage.

Executive Direction and Management

The FY 2008 budget provides $177 million for the Expenses account.

Within this amount, $171 million is for the management and executive direction expenses of the Army Corps of Engineers, both at its Headquarters and Major Subordinate Divisions, as well as support organizations such as the Humphreys Engineer Center Support Activity, the Institute for Water Resources, and the Finance Center.

In addition, the Budget proposes to consolidate funding for activities related to oversight and general administration of the Civil Works program within the Expenses account, including funding for the Office of the Assistant Secretary of the Army (Civil Works). Of the $177 million for the Expenses account, $6 million is for the Office of the Assistant Secretary of the Army (Civil Works), including some indirect and overhead costs that previously were centrally funded by the Army.

OTHER BUDGET HIGHLIGHTS

Protection of Greater New Orleans

The FY 2008 Budget also recommends, as part of an FY 2007 Supplemental appropriations package, enactment of a statutory provision to authorize the Secretary of the Army to reallocate up to $1.3 billion of the emergency supplemental appropriations that were provided in FY 2006, but that remain unobligated. The recommended statutory language would reallocate unobligated funds appropriated by Public Law 109–234 (the "fourth emergency supplemental appropriations act of 2006") to fund activities specified in Public Law 109-148 (the "third emergency supplemental act of 2006"), and would reallocate unobligated funds among certain activities specified in the third emergency supplemental appropriations act of 2006. Within the total amount that would be reallocated, $270 million would be reallocated from the Construction account to the Flood Control and Coastal Emergencies account.

The FY 2006 emergency supplemental appropriations were initially allocated based on "rough order of magnitude" estimates by the Corps of the amount of work that would be required to rebuild, complete, and raise the levees in New Orleans. Their estimate of the cost of the work necessary to accomplish these objectives is expected to increase greatly as a result of various engineering forensic investigations and assessments, a review of new storm surge data, increased material costs, and other factors. The earlier cost and schedule estimates have proven to be low, and actionable re-estimates will not be available until this summer. Without the re-allocation of the FY 2006 funds that were allocated in law, important work to increase the level of protection in some areas could not be completed in concert with similar work in other areas. The proposed re-allocation would enable the Corps to

best apply available funding to those measures that will increase in the near-term the overall level of protection for the New Orleans metropolitan area.

General Provisions

The Budget includes bill language to authorize continuation of limits on reprogramming with certain changes; replace the continuing contract authority of the Corps with multi-year contracting authority patterned after the authority available to other Federal agencies; and prohibit committing funds for ongoing contracts beyond the appropriated amounts available, including reprogramming.

The Budget also includes bill language to authorize the following: continuation of the national levee inventory and assessment; continuation of activities in Missouri River Basin to comply with the Endangered Species Act; completion of the two Chicago Sanitary and Ship Canal invasive species barriers in Illinois, subject to appropriate cost-sharing; and completion of the McAlpine Lock and Dam, Kentucky and Indiana, project.

WATER RESOURCES DEVELOPMENT ACT PROPOSAL

I am working with others in the Administration towards the goal of developing a legislative framework that will reflect the Administration's priorities for a Water Resources Development Act for your consideration. This proposal or a subsequent legislative proposal will support the Budget's recommendations for the Civil Works program as addressed in my testimony today.

In the coming weeks I hope to be able to make a proposal that will help accomplish the principles, policies, and practices that have proven to be successful in the past, and will seek to create incentives for their improvement. Working together, I believe the Administration and the Congress can make very substantial improvements in the Civil Works program, and I look forward to offering a proposal that I trust you will find helpful.

PRESIDENT'S MANAGEMENT AGENDA

The Army Civil Works program is pursuing five government-wide management initiatives, as are other Federal agencies, plus a sixth initiative on real property asset management. "Scorecards" for the Army Corps of Engineers and other Federal agencies can be found at *http://www.whitehouse.gov/results/agenda/scorecard.html*.

Under these initiatives, the Corps is improving its efficiency through recently completed public-private competitions. In addition, the Corps is undertaking two efforts (for Logistics Management and the Operation and Maintenance of Locks and Dams) to improve its performance through re-engineering of internal business processes, rather than through public-private competitions.

The Corps has also made great progress in working with the Office of the Department of Defense Inspector General on the FY 2006 audit. The Corps is continuing to work towards the goal of obtaining an unqualified opinion, on its accounts, and has been a leader within the Department of Defense in this area. The Corps is committed to addressing any concerns that may arise during the audit.

CONCLUSION

In developing this Budget, the Administration made explicit choices based on performance. The increase in O&M funding, transfer of activities from construction to O&M, emphasis on high-performing construction projects, and increase for preparedness for flood and hurricane emergencies and other natural disasters, for example, all reflect a performance-based approach.

At $4.871 billion, the FY 2008 Army Civil Works budget is the highest Civil Works budget in history. This Budget provides the resources for the Civil Works program to pursue investments that will yield good returns for the Nation in the future. The Budget represents the wise use of funding to advance worthy, mission-based objectives. I am proud to present it.

Thank you, Mr. Chairman and members of the Subcommittee, for this opportunity to testify on the President's Fiscal Year 2008 Budget for the Civil Works program of the Army Corps of Engineers.

ENCLOSURE 1
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS – CIVIL WORKS BUDGET, FY 2008

SUMMARY

Requested New Appropriations by Account:	
Investigations	90,000,000
Construction	1,523,000,000
Operation and Maintenance	2,471,000,000
Regulatory Program	180,000,000
Flood Control, Mississippi River and Tributaries	260,000,000
Expenses	177,000,000
Flood Control and Coastal Emergencies	40,000,000
Formerly Utilized Sites Remedial Action Program	130,000,000
TOTAL	4,871,000,000
Requested New Appropriations by Program Area:	
Commercial Navigation	2,009,000,000
(Inland and Intracoastal Waterways)	(1,052,000,000)
(Channels and Harbors)	(957,000,000)
Flood and Coastal Storm Damage Reduction	1,384,000,000
(Flood Damage Reduction)	(1,356,000,000)
(Coastal Storm Damage Reduction)	(28,000,000)
Environment	514,000,000
(Aquatic Ecosystem Restoration)	(274,000,000)
(FUSRAP)	(130,000,000)
(Stewardship)	(110,000,000)
Hydropower	291,000,000
Recreation	267,000,000
Water Supply	4,000,000
Emergency Management	45,000,000
(Flood Control and Coastal Emergencies)	(40,000,000)
(National Emergency Preparedness)	(5,000,000)
Regulatory Program	180,000,000
Executive Direction and Management	177,000,000
TOTAL	4,871,000,000
Sources of New Appropriations:	
General Fund	3,889,000,000
Harbor Maintenance Trust Fund	735,000,000
Inland Waterways Trust Fund	209,000,000
Special Recreation User Fees	37,000,000
Disposal Facilities User Fees	1,000,000
TOTAL	4,871,000,000
Additional New Resources:	
Rivers and Harbors Contributed Funds	445,000,000
Coastal Wetlands Restoration Trust Fund	81,000,000
Permanent Appropriations	9,000,000
TOTAL	535,000,000
Total New Program Funding	5,406,000,000

ENCLOSURE 2
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS – CIVIL WORKS BUDGET, FY 2008

CROSSCUT BETWEEN APPROPRIATION ACCOUNTS AND PROGRAM AREAS

	Navi-gation	Flood/ Storm	Recre-ation	Aq. Ec. Restor.	Stew-rdshp.	FUS-RAP	Hydro-Power	Water Supply	Emerg. Mgmt.	Regul. Prog.	Ovrsgt/ ED&M	TOT
Investigations	19	41		30								90
Construction	572	665		241			45					1523
Operation & Maint.	1383	475	251	1	106		246	4	5			2471
MR&T – I		1										1
MR&T – C	10	96		2								108
MR&T – M	25	106	16		4							151
FUSRAP						130						130
FC&CE									40			40
Regulatory										180		180
Expenses											177	177
TOTAL	2009	1384	267	274	110	130	291	4	45	180	177	4871

ENCLOSURE 3
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS – CIVIL WORKS BUDGET, FY 2008

CONSTRUCTION PERFORMANCE GUIDELINES

1. *Project rankings.* All ongoing specifically authorized construction projects, including projects funded in the Mississippi River and Tributaries account, will be assigned based upon their primary purpose to one of the main mission areas of the Corps (flood and storm damage reduction; commercial navigation; aquatic ecosystem restoration) or to hydropower. Flood and storm damage reduction, commercial navigation, and hydropower projects will be ranked by their total benefits divided by their total costs (BCR), calculated at a seven percent real discount rate. Aquatic ecosystem restoration projects will be ranked by the extent to which they cost-effectively contribute 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 a restoration effort for which the Corps is otherwise uniquely well-suited (e.g., because the solution requires complex alterations to the hydrology and hydraulics of a river system).

2. *Projects funded on the basis of their economic and environmental returns.* Ongoing flood and storm damage reduction, commercial navigation, and hydropower construction projects with a BCR of 1.5 or higher and ongoing aquatic ecosystem restoration construction projects that are cost-effective in contributing 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 a restoration effort for which the Corps is otherwise uniquely well-suited will receive at least the amount needed to pay estimated contractor earnings required under ongoing contracts and related costs. In allocating funds among these projects, priority will be given to those with the highest economic and environmental returns.

3. *Projects funded to address significant risk to human safety.* Flood and storm damage reduction projects that are funded to address significant risk to human safety will receive sufficient funding to support an uninterrupted effort during the budget year.

4. *Projects with low economic and environmental returns.* Ongoing flood and storm damage reduction, commercial navigation, and hydropower construction projects with a BCR below 1.5 will be considered for deferral, except for flood and storm damage reduction projects that are funded to

address significant risk to human safety. Likewise, ongoing aquatic ecosystem restoration construction projects that do not cost-effectively contribute to the restoration of a nationally or regionally significant aquatic ecosystem that has become degraded as a result of a civil works project, and do not cost-effectively address a problem for which the Corps is otherwise uniquely well-suited, will be considered for deferral.

5. *New starts and resumptions.* The budget could include funds to start up new construction projects, or to resume work on ongoing construction projects on which the Corps has not performed any physical work under a construction contract during the past three consecutive fiscal years, only if the project would be ranked that year in the top 20 percent of the ongoing construction projects in its mission area. The term "physical work under a construction contract" does not include activities related to project planning, engineering and design, relocation, or the acquisition of lands, easements, or rights-of-way. For non-structural flood damage reduction projects, construction begins in the first fiscal year in which the Corps acquires lands, easements, or rights-of-way primarily to relocate structures, or performs physical work under a construction contract for non-structural project-related measures. For aquatic ecosystem restoration projects, construction begins in the first fiscal year in which the Corps acquires lands, easements, or rights-of-way primarily to facilitate the restoration of degraded aquatic ecosystems including wetlands, riparian areas, and adjacent floodplains, or performs physical work under a construction contract to modify existing project facilities primarily to restore the aquatic ecosystem. For all other projects, construction begins in the first fiscal year in which the Corps performs physical work under a construction contract.

6. *Other cases.* Projects will receive the amount needed to ensure that they comply with treaties and with biological opinions pursuant to the Endangered Species Act, and meet authorized mitigation requirements. Dam safety assurance, seepage control, and static instability correction projects that are funded in the construction program will receive the maximum level of funding that the Corps can efficiently and effectively spend in each year.

[The prepared statement Lieutenant General Strocks follows:]

STATEMENT OF LIEUTENANT GENERAL CARL A. STROCK, CHIEF OF ENGINEERS, U.S. ARMY CORPS OF ENGINEERS

Mr. Chairman and distinguished members of the Subcommittee:

I am honored to be testifying before your subcommittee today, along with the Assistant Secretary of the Army (Civil Works), the Honorable John Paul Woodley, Jr., on the President's Fiscal Year 2008 (FY08) Budget for the United States Army Corps of Engineers' Civil Works Program.

My statement covers the following 3 topics:

- Summary of FY08 Program Budget,
- Construction Program, and,
- Value of the Civil Works Program to the Nation's Economy, and to the Nation's Defense

SUMMARY OF FY08 PROGRAM BUDGET

Introduction

The Fiscal Year 2008 Civil Works Budget is a performance-based budget, which reflects a focus on the projects and activities that provide the highest net economic and environmental returns on the Nation's investment or address significant risk to human safety. Direct Program funding totals $5.406 billion, consisting of discretionary funding of $4.871 billion and mandatory funding of $535 million. The Reimbursed Program funding is projected to involve an additional $2 billion to $3 billion.

Direct Program

The Budget reflects the Administration's commitment to continued sound development and management of the nation's water and related land resources. It proposes to give the Corps the flexibility and responsibility within each major watershed to use these funds to carry out priority maintenance, repairs, and rehabilitations. The Budget incorporates objective performance-based metrics for the construction program, funds the continued operation of commercial navigation and other water resource infrastructure, provides an increase in funding for the regulatory program to protect the Nation's waters and wetlands, and supports restoration of nationally and regionally significant aquatic ecosystems, with emphasis on the Florida Everglades and the Upper Mississippi River. It also would improve the quality of recreation services through stronger partnerships and modernization. Additionally, it emphasizes the need to fund emergency preparedness activities for the Corps as part of the regular budget process.

Reimbursed Program

Through the Interagency and Intergovernmental Services Program we help non-DOD Federal agencies, state, local, and tribal governments, and other countries with timely, cost-effective implementation of their programs, while maintaining and enhancing capabilities for execution of our Civil and Military Program missions. These customers rely on our extensive capabilities, experience, and successful track record. The work is principally technical oversight and management of engineering, environmental, and construction contracts performed by private sector firms, and is financed by the customers.

Currently, we provide reimbursable support for about 60 other Federal agencies and several state and local governments. Total reimbursement for such work in FY08 is projected to be $2.0 billion to $3.0 billion. The exact amount will depend on assignments received from the Federal Emergency Management Agency (FEMA) for hurricane disaster relief and from the Department of Homeland Security for border protection facilities.

CONSTRUCTION PROGRAM

The goal of the construction program is to produce as much value as possible for the Nation from available funds. The Budget furthers this objective by giving priority to the continued construction and completion of those water resources projects that will provide the best net returns on the nation's investment for each dollar invested (Federal plus non-Federal) in the Corps primary mission areas. The Budget also gives priority to projects that address a significant risk to human safety, notwithstanding their economic performance. Under these guidelines, the Corps allocated funding to 69 construction projects, including 6 national priority projects; 11 other dam safety assurance, seepage control, and static instability correction projects; and 52 other ongoing projects.

The Budget uses objective performance measures to establish priorities among projects, and through a change in Corps contracting practices to increase control over future costs. The measures proposed include the benefit-to-cost ratios 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 a significant risk to human safety. Resources are allocated based on Corps estimates to achieve the highest net economic and environmental returns and to address significant risk to human safety. This approach significantly improves the realization of benefits to the Nation from the Civil Works construction program and will improve overall program performance by bringing higher net benefits per dollar to the Nation sooner.

Maintenance Program

The facilities owned and operated by, or on behalf of, the Civil Works Program are aging. As stewards of this infrastructure, we are working to ensure that its key features continue to provide an appropriate level of service to the nation. Sustaining such service poses a technical challenge in some cases, and proper operation and maintenance also is becoming more expensive as this infrastructure ages.

The Operation and Maintenance (O&M) program for the FY08 Budget consists of $2.471 billion in the Operation and Maintenance account and $158 million under the Mississippi River and Tributaries program, with a focus on the maintenance of key commercial navigation, flood and storm damage reduction, hydropower, and other facilities. Specifically, the operation and maintenance program supports the operation, maintenance, repair and security of existing commercial navigation, flood and storm damage reduction, and hydropower works owned and operated by, or on behalf of, the Corps of Engineers, including administrative buildings and laboratories. Funds are also included in this program for national priority efforts in the Columbia River Basin and Missouri River Basin to support the continued operation of Corps of Engineers multi-purpose projects by meeting the requirements of the Endangered Species Act. Other work to be accomplished includes dredging, repair, aquatic plant control, removal of sunken vessels, monitoring of completed costal projects, and operation of structures and other facilities, as authorized in the various River and Harbor, Flood Control, and Water Resources Development Acts.

VALUE OF THE CIVIL WORKS PROGRAM TO THE NATION'S ECONOMY AND DEFENSE

We are privileged to be part of an organization that directly supports the President's priorities of winning the global war on terror, securing the homeland and contributing to the economy.

The National Welfare

The way in which we manage our water resources can improve the quality of our citizens' lives. It has affected where and how people live and influenced the development of this country. The country today seeks economic development as well as the protection of environmental values.

Domestically, USACE personnel from across the nation continue to respond to the call to help re-construct and improve the hurricane and storm damage reduction system for southeast Louisiana. The critical work they are doing will reduce the risk of future storms to people and communities in the region.

Over the past year, Corps dams, levees and reservoirs again provided billions of dollars in flood damage reduction and protected lives, homes and businesses in many parts of the nation following heavy rains.

Mr. Chairman, we will continue to work with you, this subcommittee, and other members of Congress on the ongoing study, and the authorization and funding proposed by the Administration, for modifications to the existing hurricane protection system for New Orleans. The Budget's recommendation, as part of an FY 2007 Supplemental appropriations package, to re-allocate up to $1.3 billion of emergency supplemental appropriations enacted in FY 2006 will enable the Corps to use available, unobligated funds for measures that will provide a better overall level of protection for the New Orleans metropolitan area in the near-term.

Research and Development

Civil Works Program research and development provides the nation with innovative engineering products, some of which can have applications in both civil and military infrastructure spheres. By creating products that improve the efficiency and competitiveness of the nation's engineering and construction industry and pro-

viding more cost-effective ways to operate and maintain infrastructure, Civil Works Program research and development contributes to the national economy.

The National Defense

Internationally, the U.S. Army Corps of Engineers continues to support the mission to help Iraq and Afghanistan build foundations for democracy, freedom and prosperity.

Many USACE civilians—each of whom is a volunteer—and Soldiers are providing engineering expertise, quality construction management, and program and project management in those nations. The often unsung efforts of these patriotic men and women contribute daily toward this nation's goals of restoring the economy, security and quality of life for all Iraqis and Afghanis.

In Iraq, the Gulf Region Division has overseen the initiation of more than 4,200 reconstruction projects valued in excess of $7.14 billion. Of those, more than 3,200 projects have been completed.

These projects provide employment and hope for the Iraqi people. They are visible signs of progress.

In Afghanistan, the Corps is spearheading a comprehensive infrastructure program for the Afghan national army, and is also aiding in important public infrastructure projects.

CONCLUSION

The Corps of Engineers is committed to staying at the leading edge of service to the Nation. In support of that, I have worked to transform our Civil Works Program. We're committed to change that ensures an open, transparent, and performance-based Civil Works Program.

Thank you, Mr. Chairman and Members of the Committee. This concludes my statement.

RESPONSES BY HON. JOHN PAUL WOODLEY AND LIEUTENANT GENERAL CARL A. STROCK TO ADDITIONAL QUESTIONS FROM SENATOR ALEXANDER

Question 1. I have heard that Wolf Creek and Center Hill Dams were built above caves and on an eroding limestone base, called karst, and I understand that this kind of geology when exposed to water permits seepage over time. Is that true? If so, how serious are the structural problems at these dams? Is there potential for failure of these dams upstream of Nashville?

Response. General Strock.—Although considered adequate in the 1940s, the foundation preparation of both Wolf Creek and Center Hill Dams was eventually discovered to be inadequate for the karst geology. The Corps (Nashville District) has closely monitored the serious foundation seepage since sinkholes first appeared at Wolf Creek in the late 1960s. From close monitoring of hundreds of foundation monitoring instruments placed throughout the dams in the early 1970s and in consideration of the extensive interim risk reduction measures currently in place, we have concluded imminent failure is unlikely at either project. These instruments indicate, however, that seepage is slowly increasing and continued erosion is occurring. The probability of ultimate failure is unacceptably high, particularly given the consequences of failure. Therefore, the Corps has implemented an aggressive risk management program designed to ensure the safety of the dams. This program includes increased inspection, monitoring, public awareness, emergency preparedness, pool reductions and accelerated design and construction of the remedial repairs. Until such time as permanent repairs are made, the dams are being characterized as unsafe.

Question 2. I understand that you have recently lowered water levels at Wolf Creek and Center Hill dams and that the reduction in water levels at the dams will result in an extra cost of $100 million a year in replacement of power costs. I also understand that repairs at Wolf Creek and Center Hill will take approximately 6 to 7 years. Is that true? Should or can anything be done to accelerate the repairs at Wolf Creek and Center Hill?

Response. General Strock.—The Corps has lowered Lake Cumberland (Wolf Creek Dam) to elevation 680, 43 feet below normal summer pool. Center Hill Dam is currently maintained about 10 to 15 feet lower than normal. This is entirely a risk management decision because it is impossible to predict, with certainty, the extent of the ongoing effects that continued seepage is having on the foundation. This is one more step in a monitoring process that has been ongoing for years. We constantly monitor and assess the condition of the dam and will take all necessary measures to ensure public safety. The Southeastern Power Administration esti-

mated the lowered pools would increase the cost of power $100 million per year due to the need to use fossil fuel as a replacement for lost hydropower.

The repairs for Wolf Creek and Center Hill will take 6 to 7 years, but our team is currently looking for options to expedite the construction with anticipation of reducing the total time required. The length of construction is not a function of funding, but a function of physically carrying out the design and construction. Repairing these dams is a high priority with the Administration and, to date, we have received all funds needed to progress at the fastest pace feasible.

Question 3. Are these repairs classified as safety repairs for flood control or project repairs for production of hydroelectric power? If the repairs are classified as safety related, does that affect the costs born by ratepayers? Do safety repairs result in a different cost share relationship between the Corps of Engineers and the power distributors?

Response. Mr. Woodley.—The Corps has two programs under which safety-related remediation above a certain cost threshold may be performed. These are the Dam Safety Assurance (DSA) program, carried out pursuant to section 1203 (a) of Public Law 99–662 (Water Resources Development Act of 1986), and the Major Rehabilitation program, carried out under the authority of the Chief of Engineers to maintain projects constructed by the Corps. Within the Major Rehabilitation program is a subset of activities called the Dam Safety-Related Major Rehabilitation (DS Major Rehab) program, which includes control of seepage and instability and is treated with the same priority as the DSA program. Funds are available in the Construction account's "Dam Safety and Seepage and Instability Corrections" line item for both the DSA program and the safety-related projects under the DS Major Rehab program to ensure that critical work is not delayed due to lack of funding. Wolf Creek Dam and Center Hill Dam currently are being remediated under the DS Major Rehab authority. The main differences between the two programs are the types of dam deficiencies they address and the cost-sharing terms. Since the 1986 enactment of section 1203, the Army has implemented the DSA authority for modifications to address new hydrologic or seismic data, although the authority also may be used to address changes in the state-of-the-art design or construction criteria deemed necessary for safety purposes. For modifications addressed under the DSA authority, fifteen percent of the modification cost is recovered from Non-Federal interests in accord with the cost sharing in effect at the time of initial project construction. For modifications addressed under the Major Rehabilitation program, including seepage and instability corrections under the DS Major Rehab program, 100 percent of the costs are assigned to project purposes and recovered from Non-Federal interests in accord with the cost sharing in effect at the time of initial project construction. For the Wolf Creek Dam project, for example, the share of costs assigned to hydropower is 55 percent. Since the modification is under the DS Major Rehab program, the amount to be recovered from non-Federal hydropower interests is $170 million. If the modification were carried out under the DSA program, the amount to be recovered from hydropower interests would be $25.5 million.

RESPONSES BY HON. JOHN PAUL WOODLEY AND LIEUTENANT GENERAL CARL A. STROCK TO ADDITIONAL QUESTIONS FROM SENATOR CARDIN

Question 1. Mr. Woodley, I have a very parochial issue that I'd like to raise with you. To some this may seem like a minor issue, but to the people affected, I can assure you that it is important indeed. The Town of Chesapeake City, Maryland, sits astride the Chesapeake and Delaware Canal, which is the shipping channel that connects Delaware Bay to the Chesapeake Bay. Originally, Chesapeake City had a drinking water line that ran under the C&D Canal. When the Corps of Engineers deepened and widened the Canal several decades ago, the Corps removed Chesapeake City's water line, essentially leaving the community with two separate water treatment and distribution systems. In the 1999 WRDA bill, Congress authorized the Corps to evaluate the town's claim of damage to its water supply system. The Philadelphia District Engineer determined in September 2003 that replacing the water line and making the system whole again was appropriate and he recommended that mitigation package. Since that time, Corps Headquarters has refused to compensate the Town pending "additional documentation to support its claim." Mr. Woodley, the Town of Chesapeake City has a population of 735 people. Some of the issues surrounding this issue go back decades, and the tiny town staff does not have the resources to undertake extensive additional research. You already have a District Engineer report that clearly determined the validity of the compensation. That report contains a statement from Corps Counsel that the report was fully reviewed and approved. Can I have your assurance that the Corps will waive

any additional requests for documentation and get on with making Chesapeake City's water system whole again?

Response. The specific issue at hand is not whether the Town of Chesapeake City deserved compensation for damages to its water system. As compensation, the Corps, at Federal expense, provided the town with a water tower and a modification to its distribution system. The issue raised with the 1999 authority is whether additional compensation is necessary. In January 2004, as part of the review process for the decision document under the 1999 authority, the Corps headquarters (HQUSACE) determined that the information provided in the report did not adequately support the recommendation that additional compensation is required. Recently, the Corps, the Town, and your staff have been working to bring this matter to closure. Information that has been provided by the Town is being used to address the outstanding HQUSACE review comments. I am hopeful that the information provided is sufficient to reach closure. Should the Corps provide the report to me for a decision, I assure you that I will act quickly on the recommendations.

Question 2. General Strock, what is the status of the feasibility study on the Mid-Chesapeake Bay Island Ecosystem Restoration Project? Specifically, I would like to know: Aside from questions which may arise during your considerations, do you have all information, reports necessary for processing a Chief's Report for the Mid-Bay Islands project? What procedural steps remain before the Corps can issue a Chief's Report? What is your current schedule for issuing a Chief's Report for the Mid-Bay Islands project, and if the project is reviewed by the Review Board on July 19th, can you issue a Chief's Report before Labor Day?

Response. Sir, we do not have sufficient information to process a Chief's Report at this time. The Corps of Engineers, Baltimore District, is currently addressing comments from our Headquarters and modifying the information included in its draft feasibility report. This revised information will be included in a presentation before the Corps of Engineers Civil Works review Board. Subject to approval by the Board, the feasibility report is distributed for a 30-day State and agency review. Once any comments are addressed, the final Chief's Report is prepared and signed. This process will likely take longer to produce a final report than by Labor Day; however, I am committed to ensuring that this process moves forward as expeditiously as practicable.

Question 3. One of the many lessons of Hurricane Katrina was the tremendous cost, both human and financial, associated with the failure to make timely investments in hurricane protection. More than two decades ago, local, state, and Federal officials reached an agreement to share in the costs of providing hurricane protection to the Town of Ocean City on Maryland's Atlantic Coast. The purpose of the Atlantic Coast of Maryland Hurricane Protection Project is not to protect a recreational beach, but to provide hurricane protection for the citizen's of Worcester County and the $3 billion in public and private infrastructure in the area. Since its completion in 1991, the project has repeatedly demonstrated its worth by preventing an estimated $230 million in damages from storms over the years. Without this project, the Federal government would have been faced with the financial responsibility of helping to rebuild Ocean City and its infrastructure after storms. Why does the Administration keep cutting funding for the annual surveys and periodic re-nourishment of this project, even though the project is not a recreational "beach" project?

Response. Mr. Woodley.—The Administration continues to support Federal participation in initial construction, but not in re-nourishment. The Administration's position is that such re-nourishment is more appropriately a non-Federal responsibility, except in the cases of projects authorized to mitigate the shoreline impacts of Federal navigation projects.

Question 4. State and local authorities made the initial financial investments in the project and executed agreements committing to a 47 percent non-federal share of the periodic nourishment costs in good faith and according to law, with the expectation that the Federal government would meet its commitment to the project. Don't you think that changing the rules at this time and terminating federal support is unfair to the State and local community?

Response. Mr. Woodley.—Funds available for the Civil Works program are limited, and re-nourishment at storm damage reductions is a low budget priority. This policy is applied uniformly to all projects in like circumstances.

RESPONSES BY HON. JOHN PAUL WOODLEY AND LIEUTENANT GENERAL CARL A. STROCK TO ADDITIONAL QUESTIONS FROM SENATOR BOND

Question 1. Questions during the hearing were raised to suggest that upstream lake levels are low. Is it not true that there currently is an historic drought in the basin and can you describe the extent of the drought?

Response. General Strock.—The Missouri River Basin is currently experiencing the 8th year of drought conditions, the worst drought since the Missouri River Mainstem Reservoir System (System) was filled in 1967. Total System storage reached a record low of 33.9 million acre-feet (MAF) on February 9, 2007. The three upper mainstem reservoirs, Fort Peck, Garrison, and Oahe, have experienced record low pool levels of 2196.2 mean sea level (msl), 1805.8 msl, and 1570.2 msl, respectively.

Question 2. Is the historic drought a reality that the Assistant Secretary may consider mentioning when discussing the current predicament faced by the entire basin?

Response. Mr. Woodley.—Yes, this historic drought is a reality based upon data I have seen, and I frequently mention the length and scope of the drought when discussing the current challenges faced by the entire Missouri River Basin.

Question 3. The Corps undertook a decade-plus long process to revise the Master Manual. Did the Corps not modify the manual to provide additional water for lake storage at the expense of traditional downstream needs deemed priorities by the 8th Circuit Court of Appeal in the case of Operation of the Missouri River System Litigation decided on August 6, 2005, which the Supreme Court refused to consider on appeal and issued that decision on April 24, 2006?

Response. General Strock.—The Corps is authorized to manage the water in the System for multiple project purposes including navigation, flood control, hydropower, fish and wildlife, water supply, irrigation, recreation, and water quality. The level of service to be provided to the various project purposes was the subject of intense study for more than 14 years during the Master Water Control Manual Review and Update (Review and Update) process. The Master Manual includes what are termed "drought conservation measures" designed to conserve water in the System during extended drought. The "drought conservation measures" include shortening the navigation season length and reducing releases to support navigation during extended droughts, and suspending navigation service when the volume of water stored in the System is below what is termed the "navigation preclude" level.

The Master Manual was revised in 2004 to include more stringent drought conservation measures. Since 2004, this has resulted in shorter navigation seasons and lower releases to support navigation as compared to what would have occurred under the provisions of the previous Master Manual. The shorter navigation seasons and lower releases have retained more water in the System since 2004 than would have been the case under the previous Master Manual.

The navigation preclude level in the previous Master Manual was set at 21 MAF. The 2004 Master Manual revision increased that level to 31 MAF. The water stored in the System has not fallen below the 31 MAF navigation preclude since the revision in 2004. Therefore, that change to the previous Master Manual has had no effect during the current drought.

The Master Manual was again revised in 2006 to include provisions for a 'spring pulse', as required by the 2003 Amended Biological Opinion for the Missouri River Mainstem System.

On June 21, 2004, the United States District Court for the District of Minnesota issued a decision in a series of consolidated cases by Basin states, tribes and stakeholders challenging the 2004 Revised Master Manual and the 2003 Amended Biological Opinion for the Missouri River Mainstem System. The District Court's decision by Judge Paul A. Magnuson upheld both the revised Master Manual and 2003 Amended Biological Opinion. On August 6, 2005 the United States Court of Appeals in a consolidated opinion affirmed Judge Magnuson's decision. Subsequent petitions for certiorari were denied by the United States Supreme Court.

Question 4. It was suggested that water releases exist to provide Missouri River navigation. While that is also true, can you please describe how releases are also provided to support endangered species protection, drinking water supply, hydro energy production, downstream energy production cooling capacity and Mississippi River navigation not only Missouri River navigation as suggested?

Response. General Strock.—Releases are made from the System to support numerous downstream economic uses and support environmental resources, including Federally listed species and the habitats they use. Along with navigation, economic uses include river recreation, municipal and industrial water supply (including cool-

ing water for thermal power plants), and irrigation. The availability of sufficient quantities of water to meet all of the authorized and required economic and environmental uses has been a significant challenge to manage during the current 8-year long drought. The resulting low water levels in the mainstem reservoirs and river stretches in between have led to concerns about the ability of thermal power plants to meet water quality standards for cooling water discharges to the river. Considerable investments have been made by several power plant operators to modify their intake structures so that they can function under low water conditions. System water releases are also managed to protect threatened and endangered bird species that nest primarily on river islands below the reservoirs during the summer months. The extent to which low water levels affects the pallid sturgeon is not well known, however, in accordance with a Biological Opinion developed by the U.S. Fish and Wildlife Service under certain hydrological conditions water is pulsed from System reservoirs to simulate a "spring rise" that would have occurred pre-impoundment condition. This action is thought to trigger the pallid sturgeon to mate and reproduce.

Question 5. Are these multiple uses a reality that the Assistant Secretary may consider mentioning when discussing the suggestion that lake levels should be maximized?

Response. General Strock.—Yes, the multiple uses are a reality and are included in discussions regarding reservoir levels because the System must be managed to serve the multiple project purposes as authorized by Congress.

Question 6. During this drought, is it true that significant reductions have imposed upon navigation, and that pain in not limited to recreational fishing tournaments?

Response. General Strock.—The extended drought has negatively impacted all project purposes throughout the Basin, with the exception of flood damage reduction, and likewise has affected many of the people that live and work in the Basin. There have been impacts to commercial and recreational navigation, water supply from both the river reaches and the reservoirs (including irrigation), hydropower, upstream fisheries and general recreation along river reaches and the reservoirs.

Question 7. During this drought, is it true that reductions have placed burdens on large urban downstream water supply and all other downstream needs?

Response. General Strock.—Considerable investments have been made by water supply entities in the lower river to modify their intake structures to function during the low water conditions that exist during a drought. Water supply entities in St. Joseph, Missouri and in both Kansas City, Missouri and Kansas City, Kansas have modified their intakes to ensure operation at lower river levels.

RESPONSES BY HON. JOHN PAUL WOODLEY AND LIEUTENANT GENERAL CARL A. STROCK TO ADDITIONAL QUESTIONS FROM SENATOR INHOFE

Question 1. General Strock, we heard some comments at the hearing explaining a belief that we must legislatively "reform" the Army Corps of Engineers. Could you please describe any internal changes that have already been taking place at the Corps during your tenure as Chief?

Response. General Strock.—The Corps has taken significant internal steps to improve our processes and products. What follows is a brief description of some of these actions:

We have embraced External peer review. In May 2005, we published external review guidance as required by the Office of Management and Budget bulletin on independent peer review.

The most significant features of this guidance are:

- External review is required for projects that involve high risk, complexity, or precedent-setting approaches. The decision to subject a particular study to external review is made within the Corp's vertical chain of command, with consideration given to public comment. The decision ultimately rests with the Chief of Engineers.
- When appropriate, external review will be built into a study through a review plan that is integral to the overall study plan. Review Plans are established early in the study process, and adapted as warranted throughout the life of the study.
- Review plans are to be posted on a web site for public review and scrutiny. If the public believes external review is appropriate they will be able to tell us that.
- When external review will be incorporated into a project study, the selection of reviewers will follow National Academy of Science procedures (this follows directly with guidance in the OMB bulletin).

• We are currently working on a contract to get a third party independent organization in place to run the selection and administration of external panels completely independent of the Corps.

• Technical review that takes place within the Corps is executed through the Planning Centers of Expertise, outside of the home district responsible for the project study.

• All review and response must be completed prior to release of the report for State and Agency Review.

We have also been incorporating external reviews into significant water resources projects where the nature of the project setting or the path-breaking nature of the activity demand using external review: Some notable examples are: the navigation studies on the Upper Mississippi River System, Columbia River, Delaware River, and the Port of Iberia; the ecosystem restoration studies in the Louisiana Coastal Area and Everglades (both have extensive peer review organizations established and have had NRC reviews as well); and the Seven Oaks Dam and Folsom Dam. Each external review process has been unique, tailored to the specific circumstances of the study.

We are moving forward on fish and wildlife mitigation reforms.

• We are developing a mitigation tracking system that will effectively track compensatory mitigation required for Civil Works projects. This mitigation tracking system will use the new system and concepts developed for the Corps Regulatory Program. Regulatory program and Corps project mitigation would be tracked in a comparable manner. For both regulatory and Civil Works projects, the system is focused on the future. The full capability of the system will be utilized on new actions and projects. However, we will also work to capture historic and on-going mitigation activities to the extent practicable.

• We will use the tracking system to monitor the accomplishment of concurrent mitigation, as required by WRDA 86.

• Through this tracking system we will also assure that mitigation is concurrent as required by WRDA 86. We will monitor project development to assure that mitigation is completed as nearly as possible currently the primary project features but certainly no later than the next construction season in cases where the nature of the project and mitigation features make concurrence physically unachievable.

We now have a decade and half of Corps project development guidance reform.

• Our guidance modernization began when Congress added environmental protection and restoration as our mission in 1990. That was our first step beyond the sole use of economic criteria. We have been formulating water resource plans under environmental criteria since the early 1990s. We have some of the largest restoration projects ongoing such as the Everglades, Coastal Louisiana and a comprehensive restoration effort on the Upper Mississippi.

• In response to General Flowers' Environmental Operating Principles we added guidance for the formulation and recommendation of multipurpose projects based on environmental and economic criteria.

• In May 2005, we issued guidance to move beyond national economic and environmental criteria and added construction criteria that include: regional economic, environmental and social objectives. We don't give one objective priority over the others, but seek to work collaboratively with sponsors to achieve the best balance of all these criteria.

• Our current project development model is one that seeks comprehensive solutions to the range of community problems touching water resources. We are looking to bring in other Federal agencies and define all agency roles in the process. We are founding our planning on systems and watershed approaches to develop holistic and contemporary solutions.

We have implemented and continue to pursue an aggressive program of improvements to our planning procedures and methods. The main features of this initiative are:

• Intensive training of all our planners and planning disciplines of economics, environmental compliance, plan formulation and planning management

• Revival of our Planning Associates Program to give planning leaders intensive year long training in the full range of planning activities throughout the Nation.

• Alliances with several universities to develop Masters programs in Water Resources. Six of our employees have already completed these graduate degrees and over eight more are nearing completion.

• Creation of six planning centers of expertise to ensure competent planning capacity in difficult and challenging planning fields

• Creation of the Office of Water Project Review in the Headquarters, but with complete independence from project development functions

• Established a standing Washington-level Civil Works Review Board comprised of General Officers and Headquarters Senior Executives, Chaired by the Deputy Chief of Engineers, to review each pre-authorization project proposal before it is determined to be ready for formal State and Agency review.

• Creation of a model certification program to ensure external review of our planning models.

We have learned from the painful experiences of Katrina and Rita and have embarked on fundamental changes in the Corps. In August 2006, I outlined 12 interrelated actions to improve public safety and the quality of the Nation's Corps of Engineers water resources infrastructure, the quality of life for our service personnel and their families, and the way we communicate risk to our stakeholders and customers. These 12 Actions for Change will involve changing our methods and thinking and will require devoting resources to improve our products and services. These 12 Actions are grouped in three overarching themes: Implementing a Comprehensive Systems Approach; Communications; and Reliable Public Service Professionalism.

Question 2. Secretary Woodley's testimony notes that the budget request does not include funding for projects outside the main mission areas of the Corps and cites wastewater treatment activities as an example. While I certainly agree that there is an incredible amount of need for environmental infrastructure across the country, I have maintained that the Corps is not the most appropriate agency to handle these needs. Is there in fact any reason why the Corps would be uniquely well-suited, from either a technical or policy perspective, to play a large role in this area? Or would it make more sense to leave this as a state and local responsibility with some financial assistance from the EPA and to a lesser extent USDA for small communities?

Response. General Strock.—It is true that the Corps technical expertise to execute these types of programs is not unique, and that there are numerous Federal programs involved in helping to address community water supply and water treatment needs.

Question 3. This year's budget includes $10 million to continue to inventory and assess the nation's levees. Last year's WRDA bill included authorization language for this purpose. Could you please discuss how you are proceeding with this inventory and assessment and how that does or does not match up with the Senate's authorizing language?

Response. General Strock.—The initial funding for the inventory and assessment were provided by Public Law 109–148, "Department of Defense, Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico and Pandemic Influenza Act, 2006." The additional $10 million proposed for FY 2008 would be carried out in accordance with Section 105, a general provision proposed in the budget, which would provide as follows: "The Secretary of the Army, acting through the Chief of Engineers, is authorized to inventory Federal and non-Federal flood and storm damage reduction projects across the nation; develop and test a methodology to assess the structural and operational integrity of such projects and the associated risks; and establish and maintain a database of such projects, including information on their structural and operational integrity and the parties responsible for their operation and maintenance." Carried-over funds in FY 2007 and $10 million in the FY 2008 budget would enable the completion of the inventory for approximately 90 percent of the Corps program levees (levees that are operated and maintained by the Corps, levees that were federally authorized and transferred to others for operation and maintenance, or private levees where the owner has met the requirements to participate in the Corps Rehabilitation and Inspection Program), development and beta testing of the levee assessment methodology, and initiation of assessments for a few high risk levees.

From our interpretation, the $50 million proposed for authorization in the WRDA bill would be to "develop, maintain, and periodically publish an inventory of levees?" and would be used to complete an inventory of not only the Corps program levees as defined above, but also to inventory private levees not in the Rehabilitation and Inspection Program, levees owned by other federal agencies, and non-Corps program levees in the National Flood Insurance Program. It is also our understanding that the funding in WRDA would be for levee assessments, which would be conducted using the assessment methodology developed with funds in 2006–2007. The assessments would be performed using the levee inventory data collected using the 2006 supplemental, 2008, and proposed $50M funding.

Question 4. Secretary Woodley, it is now nearly 9 months after the Supreme Court's Rapanos decision regarding the definition of navigable waterways. The

Corps has been working with EPA to develop a guidance document interpreting the decision. When will the guidance be issued?

Response. Mr. Woodley.—Interagency guidance was released on June 5, 2007 by my office and the U.S. Environmental Protection Agency. In addition to the guidance itself, the agencies also released key points, a news release, a Jurisdictional Determination Form and Instructional Guidebook (with photographs and drawings), a Regulatory Guidance Letter on documenting jurisdictional determinations under the Rapanos Guidance, and a memorandum to the field that establishes an expedited process for elevating any interagency disputes over jurisdictional determinations.

Question 5. I am very supportive of the concept mentioned in your testimony of allowing the Corps to use the fees it collects to operate, maintain and improve recreation opportunities. In fact, we had language to do just that in the WRDA bill reported from this Committee last Congress. Unfortunately, we ran into budget scoring problems and had to remove it during floor consideration. I don't expect those scoring issues to disappear, so maybe we need to look at other ways of improving the recreation experience, such as through public-private partnerships.

- Could you please describe how the Corps can or does encourage such partnerships?
- What Corps policies or procedures do you see as the biggest inhibitors to such partnerships and what can be done to overcome these obstacles? Can it be done administratively or do you need legislative guidance?

Response. Mr. Woodley.—Public-private partnerships can be important elements that support the needs of our natural resources management and recreation programs. When crafted appropriately, they can provide a means of enriching services to the public and fostering long term stewardship for public lands and waters. Public-private partnerships build positive relationships and are useful in leveraging funds. We need to be sure that the overall public interest is best served in any public-private partnership.

It is the Corps policy to use partnerships to enhance its programs and to help achieve excellence.

The Corps has the authority to enter into agreements with cooperating associations in an effort to aid operations related to natural resources management, interpretive and visitor service activities. For example, associations operate bookstores on-site, purchase equipment and materials for use at Corps projects, and conduct and/or fund programs. By having associations, the Corps has developed partnerships with communities and improved communication among local constituencies. As an example, one community donated conceptual drawings for an amphitheater and raised funds, donated materials and successfully secured grants to assist in its construction.

The Corps has authority to accept contributions, donations, volunteer services, supplies, and enter into challenge partnership (cost-share) agreements with non-federal public and private groups and individuals to participate in the operation and/or management of recreation facilities and natural resources at Corps water resource development projects. Examples include construction of various types of trails, universally accessible facilities and wetland restoration.

The Corps also uses memorandums of understanding to work with national organizations like The Nature Conservancy, the International Mountain Bicycling Association and U.S. Coast Guard Auxiliary on mutually beneficial programs and projects.

These authorities are not being applied in a consistent manner throughout the Corps, resulting in confusion and discouragement among potential partners. The Corps also lacks partnership authorities available to other federal natural resources agencies. A more comprehensive, coherent and consistent approach to this program is currently under development to eliminate these issues as impediments to an effective program. As part of this effort, the Corps is exploring both administrative and legislative means that may be needed to enhance public-private partnerships. Well-defined authorities that establish consistent legal and policy interpretations and result in a streamlined process are the goals of this effort.

Question 6a. Your testimony identified a few items the Administration intends to send to the Congress at some point in the future. Could you please give me at least a rough estimate of when you expect to send the following documents to us: The Five-Year Development Plan?

Response. Mr. Woodley.—We plan to submit the plan in the third quarter of FY 2007. The plan was delayed by the extraordinary work load associated with the various continuing resolutions.

Question 6b. Legislation to require barges on the inland waterways to pay a user fee?

Response. Mr. Woodley.—The proposal is still under development. We plan to submit a legislative proposal to the authorizing Committees, following consultation with users of the system and other Federal agencies.

Question 6c. The legislative framework reflecting the Administration's priorities for a WRDA bill?

Response. Mr. Woodley.—The Administration plans to issue a "Statement of Administration Position" (SAP) before floor consideration in both the House and Senate. Additionally, we look forward to working with the House and Senate conferees during the conference process.

Question 7. Your testimony notes that the budget request does not include funding for projects outside the main mission areas of the Corps and cites wastewater treatment activities as an example. While I certainly agree that there is an incredible amount of need for environmental infrastructure across the country, I have maintained that the Corps is not the most appropriate agency to handle these needs. Is there in fact any reason why the Corps would be uniquely well-suited, from either a technical or policy perspective, to play a large role in this area? Or would it make more sense to leave this as a state and local responsibility with some financial assistance from the EPW and to a lesser extent USDA for small communities?

Response. Mr. Woodley.—I agree with the Chief's assessment that the Corps technical expertise to execute these types of programs is not unique, and that there are numerous other federal programs that address community needs for water supply and water quality infrastructure.

Question 8. There has been discussion about which Federal Agency should pay for the Modified Water Deliveries project in Florida. Does the Administration still propose to have the Corps and the National Park Service share equally in the cost of this project? I see that the Corps budget includes $35 million—is there a similar amount included in the Parks Service budget this year?

Response. Mr. Woodley.—The Administration has not proposed to have the Corps and the National Park Service share equally in the costs of this project. For example, the National Park Service (NPS) Fiscal Year 2008 budget for the Modified Water Deliveries project is $14,536,000, while the amount for the Corps is $35 million. As indicated in the Corps budget justification for this project, the Administration has not yet decided how to propose allocating the costs beyond FY 2008.

Senator BAUCUS. I appreciate that. To be candid, I am a bit disgusted and certainly disappointed at the trend often of major witnesses to say virtually nothing, because they don't want to get in trouble and say things that might be controversial and so forth, and just wait for Senators to ask questions.

I don't know if that is the intent or not, but it is a trend I have noticed over the years, with lots of Administration officials in the last 3, 4 or 5 years. I will strike the word "disgusted," but I am disappointed as one member of the U.S. Senate.

I would like to talk to you a little bit, Mr. Secretary, about the Missouri River.

Mr. WOODLEY. We could get into some controversy over that, Senator.

Senator BAUCUS. Yes, but you didn't say anything about it.

Mr. WOODLEY. I have plenty to say.

Senator BAUCUS. The problem is this. According to the Corps' own estimates, recreation in the Upper Missouri River Basin generates about $87 million a year in economic activity. By contrast, according to the Corps' own studies, navigation on the Lower Missouri generates only $7 million a year—$87 million to $7 million. We in Montana are in the seventh year of drought. In fact, there is a joke in Montana that if the boat ramps out to the lake, because it is so low now, at Fort Peck get any longer, we will have to apply for funding under the Highway bill. It is almost a mile long at

some places, the boat ramps, because the water levels are so low. They are just dropping, dropping, dropping.

In fact, the water level right now on that lake, I think it is about, I don't have the figures right here. According to the Corps' rules, our current storage of 34 million acre-feet is just 2 million lower than last year, and it is 20 million acre-feet below average. The Fort Peck water levels are expected to be 33 feet below average, a record low, this year. That is because you are dropping the water out of it for the barge folks downstream.

Your own studies show that recreation upstream is $87 million, whereas barge economic value downstream is only $7 million.

Now, this is a little bit like what Senator Voinovich is saying about the Great Lakes in the Missouri. It sounds to me that your priorities are out of whack. Right now, the Corps' general rule is 8- to 6-month navigation season on the river, and right now the master manual calls for an 8-month navigation season on the river. If the total storage system falls below 36.5 million, the season can be shortened to 6 months, and the navigation season is canceled if the water storage falls below 31 million.

I might also add that fishing is a huge, big recreation on the Fort Peck Reservoir. We have the annual walleye tournament. It has fallen 50 percent. You can't fish on the lake any more, for all intents and purposes, because you have lowered the lake pool levels so low to accommodate barge traffic downstream.

So I am asking you, doesn't it make more sense to devote your resources according to your studies that show that the economic value of higher pool levels is a lot higher than the economic value of the low pool levels?

Mr. WOODLEY. Senator, that is something that will have to be addressed constantly and continually looking into the future. The last action that we took was in 2004 to amend our master manual in a way that we feel, objectively speaking, provided a lot more support to our ability to support recreation over time, than it did to navigation.

Under that master manual, we believe this year we will curtail the navigation season by a full 61 days, and that if trends continue, next year under that master manual, that is to say in calendar year 2008, what we hope for is a good season of precipitation, but if we do not receive that, then navigation will not be supported in calendar year 2008 under our current master manual.

Now, have we struck the right balance, Senator? That is for Congress to determine and for the stakeholders and Governors of the region to determine over time. We are always interested in understanding how we can strike a better balance, but we are very much aware of the imbalance that you described, and are addressing it under our current master manual which provides our authority to act.

Senator BAUCUS. So you do agree there is an imbalance?

Mr. WOODLEY. I think it is fair to say that there is an imbalance, yes, sir.

Senator BAUCUS. Which is to say that the priorities should be changed. If there is an imbalance, the priorities should be changed.

Mr. WOODLEY. I think we should constantly examine whether or not that should be, and I must say that the people in the basin should be heard from in that regard.

Senator BAUCUS. If you agree that there is an imbalance, by definition you should agree that on pure policy levels, the priorities should be changed, if I hear you correctly.

Mr. WOODLEY. I think we should always be looking at whether we have the right balance, yes, sir.

Senator BAUCUS. Well.

Mr. WOODLEY. I can't declare today that I believe there is an imbalance, because that would take——

Senator BAUCUS. You said there was. I don't mean to be argumentative, but you said there is an imbalance. Didn't you say there is an imbalance?

Mr. WOODLEY. I think that the question of whether or not we are in the right balance should constantly be examined. It may be that we are in the wrong balance. That may be. I will admit to that possibility. That is the most I can do.

Senator BAUCUS. Usually first impressions count, and two or three times you have said "we are imbalanced." So I will take you for your word that you think we are imbalanced.

Thank you very much.

Mr. WOODLEY. Yes, Senator.

Senator BAUCUS. Senator Isakson.

Senator ISAKSON. Thank you, Mr. Chairman.

Secretary Woodley, I read in part the announcement between Georgia and South Carolina with regard to Jasper County. They have both agreed to a bi-State compact in anticipation of developing a bi-State ports authority. They are willing to put the money up and pay the cost of a feasibility study. Is there any reason why the Corps cannot, since it is being paid for by the States and they have reached that agreement, and memorialized it, immediately initiate that study?

Mr. WOODLEY. No reason at all, Senator. I am very, very pleased, as you are, to receive news of that agreement. That is an historic act on the part of the Governors and we welcome it. We will take immediate steps to implement the feasibility study.

Senator ISAKSON. Thank you very much.

You and I have had, and I know you hate to see me coming because of the water control plan.

Mr. WOODLEY. Not at all, Senator.

Senator ISAKSON. We have had numerous conversations. I want to approach it from a little bit of a different perspective than the past. On Monday, I met with 150 residents of the middle Georgia, western Georgia area of LaGrange-Troup County, which shares with Alabama the West Point Lake. The West Point Lake's winter pool is supposed to be 635. The lake on Monday was at 627. As was expressed by Senator Baucus regarding the Missouri River, all the boats were on dry land. All the docks were on dry land, and the mussels are dying, which are the system that really cleans the water.

In part, the reason for that is the Chattahoochee River and that entire basin is being operated under an interim operational plan as a response to an endangered species case regarding a sturgeon in

Florida. We have the largest water supply in the Southeast United States for three States being managed by an intermediate operational plan, and have waited 17 years for modernization of the water control plan.

To dramatize the difficulty, the deviations at West Point Lake are now 7 feet. The deviations at Lanier are at 1 foot, and at Walter George, 2 feet. Now, I don't know what the right deviation should be, but I know those three all share the same source of water. Without a coordinated plan, the operation for all three of those is in danger, but in particular right now West Point Lake is going dry.

Now, historically, and I know the Corps controls that for flood purposes, but West Point Lake by definition was built as a recreation and economic development entity or infrastructure for that part of the State. It is also a flood control, which is a concern, and the water levels south in the Chattahoochee River are going toward Bainbridge, and then to Florida.

But it seems to me like, well, it doesn't seem to me like, if you study rainfall and the history of that lake, there was a 2-day period where they had 15 inches of rain, when the lake was at full pool, 635. They had 15 inches of rain in a 24-hour period of time, which was a 200-year rainfall, and the lake did not flood.

Now, the lake is 7 feet lower now than it was then, which tells me it could take a whole lot more than is necessary to retain for flood control. I know I am making a speech and not asking a question, and I apologize, but I want to get this information in the record because I think those people, just like the people in metropolitan Atlanta and just like the people in Alabama, everybody deserves a water supply management program that balances the needs of everybody on the river. It means each community has to understand the other community, if for no other reason but because of riparian rights, deserves the right to be represented.

So you and I talked privately. We don't have to get into it. I am going to try to address the question you raised to me about the plan, but we have to get a water control plan done. The two States are not in court right now. The two Governors have started writing letters jointly to the Corps in support of getting the water compact. We know we have difficulties, but we know this: Without a water control plan, there can't be a compact. It takes 18 months to 24 months to do a water control plan, which means today the compact would only be doable by 2009.

So in the interests of the people of Alabama and Georgia, and in particular today, in the interest of that West Point Lake situation, please do everything you can to instigate that water control plan and prioritize it in the Corps.

Thank you.

Mr. WOODLEY. Thank you, Senator. I have long advocated that, and I will continue to.

Senator BAUCUS. Thank you very much.

Senator Vitter.

I am sorry. Chairman Boxer?

Senator BOXER. Yes, thank you so much.

Mr. Woodley, I would like to take a moment and talk about a critical public health and safety issue in my State: the threat of

catastrophic flooding faced by the people of Sacramento. I am sure you are familiar with it.

Mr. WOODLEY. I am very familiar with it, Senator.

Senator BOXER. Sacramento is situated at the confluence of two great rivers, the American and the Sacramento. This large floodplain is home to nearly 500,000 people and contains 165,000 homes, 1,300 Government facilities, including our State's capitol, and businesses providing 200,000 jobs.

Throughout its history, Sacramento residents have lived with devastating flooding. The last one was in 1986. The cost was enormous then, and we know a future major flood could cause between $7 billion and $16 billion in direct property damage.

Thankfully, the people of Sacramento, including the Mayor and city officials, have worked together with the Corps to help develop a plan to greatly improve Sacramento's flood control. It is the joint Federal project at Folsom Dam. We address it in this bill.

I understand the proposed Folsom Dam improvement project is in its final stages of review. I have been told that for a long time. I need to get you on the record today. Please, I am begging you, what date are you going to give us for the final plan, the final project plan?

Mr. WOODLEY. Let me ask that question, Senator.

Senator BOXER. Maybe General Strock has the answer.

Mr. WOODLEY. It is something we are going to do as quickly as possible. If you wanted a precise date, I will have to ask the General to address that.

Senator BOXER. Yes, would you do that?

Thank you, General.

General STROCK. Yes, ma'am. We do not have a precise date. For that, I will have to get back to you on the record on that.

Senator BOXER. Well, we have been told over and over again, May, June. We were told before. We can't wait anymore. So you cannot give me a date. Is it going to be within the next 2 months, 3 months? What is your outside date?

General STROCK. Ma'am, I don't know the answer to that. We will just have to take that for the record, ma'am.

May I inquire specifically which report you are referring to?

Senator BOXER. The Folsom Dam improvement project, the joint Federal project.

General STROCK. The joint Federal project with the Bureau of Reclamation?

Senator BOXER. Correct. The local people are telling us May, June.

Mr. WOODLEY. That is also what I have heard, Senator, but to get you a commitment or a firm date, we will do that. I should be able to do that by tomorrow.

Senator BOXER. Thank you so much.

Mr. WOODLEY. I can tell you that we are very anxious to get that report done. It is a very big and complex project and complex report. That is very high on our priority list. I have spent a lot of time in Sacramento discussing this with the leadership there. We are working on it. There are no holdups that I know of that are holding it up.

Senator BOXER. Thank you, Mr. Woodley, for your positive response. I can only just say, I look over at David Vitter there, and I know what he has gone through. I know what Mary Landrieu has gone through on behalf of the people. I just know we have to get this done. We can get this done. We must get it done. The local people seem ready to go. So I am counting on you.

Mr. WOODLEY. Yes, ma'am.

Senator BOXER. I have to ask Mr. Woodley a question. I think that Senator Vitter would be interested in this because this is responding to the issue of the 17th Street Canal.

As you know, our committee did go down to New Orleans. We went to the 17th Street Canal, the London Avenue Canal, and the Orleans Canal. These canals, we understand the Associated Press ran a story about the inadequacy of the pumps installed there, and that the canals could not have operated at full capacity in the event of a hurricane, even if the pumps worked perfectly.

The Corps' plan to repair the pumps that are necessary for hurricane protection is kind of like changing a flat tire while the car is moving down the freeway. What is the timeframe for a fully operational system of drainage pumps that you can state without reservation will work? And when can we tell the people of New Orleans that their hurricane and flood protection systems will work when they are needed?

Mr. WOODLEY. We will have the pumping capacity up at full capacity by July of this year.

Senator BOXER. OK.

Mr. WOODLEY. My impression of the reports were that they are based on a quality control and quality assurance report that was issued by a Corps official herself as part of our normal process of quality control, and that the actions recommended were in fact taken. But the context in which those pumps were being done was in a context of creating a maximum level of protection for the 2006 hurricane season, which began on the first of June.

Senator BOXER. OK. You gave me a good answer. You said July. Now, that is already hurricane season. Is that right? So we can't slip. So we can tell the people of New Orleans that their hurricane and flood protection systems will work in those areas because you are fixing the pumps by July.

Mr. WOODLEY. Not only fixing those pumps, but installing other pumping capacity.

Senator BOXER. Good. OK. Well, don't let it slip because then obviously it is going to be too late.

Last question, and then I will be leaving my Chairman of the subcommittee and his distinguished Ranking Member to have all the witnesses to themselves. I hope that you will support the WRDA bill. This is really important. We need the Administration to back us, to be with us.

I am going to have a bipartisan strong vote coming out of this committee for WRDA. That is why we are not changing it dramatically. We will have a few little adjustments around the edges, but even though members are coming up to me and saying, "Please, Senator, we need to do more," we will do more eventually and soon, but we have to get your support.

Do I have that support from this Administration to get the WRDA bill done?

Mr. WOODLEY. Yes, Senator, you do. The concerns that we expressed in a letter I wrote to conferees last fall still express the views of the Administration, which are that we see a lot to support in the various versions that were being considered in conference. We had some reservations as to aspects of it that we were asking the conferees to consider, but we were very pleased that the process had gone so far as to enter conference.

Senator BOXER. Well, if you could just tell the folks over at OMB and the rest that we owe this to the American people to protect them. The people in Louisiana, they can't take any more failures. We need this bill. The people in all of our States represented up here, we need the projects. This is not pork. This is necessary work that has to be done, and 6 years in the making. So I hope and I pray that we can be bipartisan in this, because this has got to get done.

My last point is a good one, Mr. Chairman. I want to tell Senator Voinovich we just did a little homework. We got over to the Budget Committee. The Chairman's mark restored all of the Army Corps cuts, so we are going to have a budget that has restored these cuts. I am just pleased to inform you of that.

OK. Thank you.

General STROCK. Senator Boxer, if I might, I have the answer to your question. I was confused on exactly which project you were talking about.

Senator BOXER. OK.

General STROCK. We are doing a post-authorization change order on the modifications. That will be ready in June. That will allow us, then to process what is called a 902 request when a project exceeds more than 20 percent of its base cost, we must come back to you and request a cost increase.

Senator BOXER. Yes.

General STROCK. We expect to be able to bring that forward in the July to October timeframe, to let you know exactly how much it is going to cost us in addition to what is already authorized. So that is the timeframe we are working in.

Senator BOXER. Thank you.

General STROCK. We have a very important part of that project with the initiation of the bridge that will allow other components of the project to move ahead. So the project is moving ahead in the right way.

Senator BOXER. That makes me very pleased. I thank you so much.

Mr. Chairman, I leave you with these words. Thank you for our leadership in this area as usual.

Senator BAUCUS. Thank you, Madam Chairman.

Senator Vitter, you are next.

Senator VITTER. Thank you, Mr. Chairman.

I wanted to focus on two issues specifically: the budget shortfall issue, No. 1; and the pumps that we have been talking about, No. 2.

So first, the budget shortfall issue. Mr. Secretary, just so everybody is clear, we are talking about emergency post-Katrina work

in Southeast Louisiana that the President has clearly committed to, and that Congress has clearly committed to, basically, the current 100-year standard. Is that correct?

Mr. WOODLEY. Yes, Senator.

Senator VITTER. Isn't it correct that the very clear timetable that the President committed to is by 2010?

Mr. WOODLEY. Yes, Senator.

Senator VITTER. OK.

Mr. WOODLEY. I am sorry. Excuse me. I need to be more specific on that. The President is committed to the 100-year level of protection. Our goal set by General Strock is to reach that goal if possible in the year 2010, and we are straining every nerve and every effort to do so. So if there is a difference, that is our operational goal to get there. The President wants us to get there as soon as possible. We believe we can get there in 2010, but the President has not personally committed to 2010. I want to be very clear on exactly what the nature of our commitment is.

Senator VITTER. But it is clearly a stated goal of the Administration to get there by 2010.

Mr. WOODLEY. Yes, sir, absolutely.

Senator VITTER. OK. In that context, of course, we now realize, it is fair to say, that there is a significant shortfall of funds required to do that. Is that fair to say?

Mr. WOODLEY. Yes, sir.

Senator VITTER. At an absolute minimum, it seems to me, you have said that it is at least $1.3 billion because that is the amount you are proposing to move around from one project to another. Is that fair to say?

Mr. WOODLEY. You could draw that inference, yes, sir.

Senator VITTER. OK. Now, as I understand it, you all are working on the exact number. You say you might have it in July. My information is that it is certain to be well over $1.3 billion. Would you agree that that seems to be where we are going?

Mr. WOODLEY. That would not surprise me, Senator.

Senator VITTER. In all of that context, I am very concerned that you are not asking for more money in the fiscal year 2008 budget, and you are not asking for more money for this in the supplemental. Is that right?

Mr. WOODLEY. Yes, Senator, that is correct.

Senator VITTER. So under normal circumstances, the next opportunity to ask for this money, billions which will be necessary, would be the fiscal year 2009 budget, and under normal circumstances the first moment you could possibly get it is October 1, 2008. But if recent history is a guide, it could well be into 2009 before you get the extra money, if it is asked for in that fiscal year 2009 budget. Is that correct?

Mr. WOODLEY. I would hope that there would be opportunities in the meantime. I am not in control of those opportunities, but I would hope to be in a position to work with you and to create some of those opportunities.

Senator VITTER. That opportunity would have to be another supplemental.

Mr. WOODLEY. Yes, sir.

Senator VITTER. OK. That is clearly not announced or not in sight yet.

Mr. WOODLEY. That is correct.

Senator VITTER. OK. So based on what we know, normal regular order would be trying to get this money in the fiscal year 2009 budget. If that is true, the first moment you would see it is October 1, 2008, maybe into 2009, to do all this work, by 2010. It seems to me if that is your plan, you should start admitting that this work cannot possibly be done and be completed by 2010. Am I missing something?

Mr. WOODLEY. I hope that there will be other opportunities to, and I expect that there will be other opportunities to proceed with the funding on this project in an orderly way. As you mentioned, I will not know until July. I cannot determine until July.

Senator VITTER. The exact total amount?

Mr. WOODLEY. Yes, sir.

Senator VITTER. But we certainly know it is over $1.3 billion.

Mr. WOODLEY. And so, I have basically two options. One is to seek additional funding in a piecemeal fashion, and the other is the one that we have proceeded with, which is to seek to reprogram funds so that we can avoid immediate delays that we now face the potential of right now. Then seek, when I have a full lay down that I can give you and everyone else, of funding and schedule that I need to complete the work that we have all, I believe, committed to. Then I can present that as a comprehensive package that we can have some confidence in, and ask the Congress and the other members and people in the Administration exactly how they wish to proceed on that.

Senator VITTER. In closing on this topic, I would just make two points. First of all, there are in fact White House public documents, White House fact sheets, not Corps fact sheets, but White House fact sheets that clearly identify 2010 as the goal. We will submit those for the record in the next few days.

Second, it seems an enormous mistake and missed opportunity not to begin to solve this problem now, because it is going to be a big number problem, and we have a supplemental opportunity now. You are talking about maybe a supplemental in the future. We don't know that. It is certainly not planned as of now. So I just think it is an enormous mistake and missed opportunity not to begin solving this problem now. I am hopeful that Congress will in fact do that.

Mr. Chairman, if I could just have two more minutes on the pumping question.

Senator BAUCUS. This is important.

Senator VITTER. It is very important. I appreciate it.

On the pumps, under the original contracts for these pumps, they were required to be tested and passed according to Hydraulic Institute standards under the contracts. How many of those pumps have been tested and have passed according to those HI standards to date?

General STROCK. Sir, I don't know the specific answer to that question, but I can get it for the record. What we were faced with here was being required to deliver a system in less than a year that normally, following normal processes of sequential testing, de-

sign and installation, would have taken 3 years. We understood that we were taking a risk in putting some system in place, and we did the very best we could on this one. But I will get the specific answer on that contractual requirement and how we accomplished that.

Senator VITTER. OK. My information is there are about 40 pumps total and that at most 4 have been tested and passed that standard. I would invite you to either confirm that, or give us some other numbers.

General STROCK. I will do that, sir. At any point where the contractor is not meeting contractual obligations, we withhold funds until he meets those obligations. So we are managing this very closely.

[The information follows:]

Testing of the full-size pumps in strict accordance with HI standards could not be achieved in the factory. However, full-scale testing of pumps with diameters over 48 inches is not the industry standard so is not normally required or conducted. As examples, none of the pumps we have installed in Jefferson and Orleans Parishes have undergone full-size testing. Corps design criteria and the Guide Specifications recommend that, for pumps having a diameter of 48-inches or greater and a discharge rate of 75 cfs or greater, model tests shall be used in lieu of full-scale testing.

In this case, model test results in strict accordance with HI standards were used. The pump manufacturer provided certified pump performance curves based on a 16-inch model. Therefore, any pump scaled up and manufactured based on the certified model, is in accordance with HI standards.

There were four pumps which did undergo full-scale performance tests to verify pump design capacities. The Corps' Engineer Research and Design Center (ERDC), in conjunction with the manufacturer, performed a full-size performance test on one of those pumps. From observation of the tests and analysis of the test data, ERDC determined that the test measurements were valid and within +/~5 percent of the actual discharge.

We are currently field-testing the pumps. In recent field tests for vibration, 18 of the 40 pumps tested to date have operated without problem. We are continuing to test the remaining pumps at a rate of four per week.

Senator VITTER. OK. Were those testing requirements, and that standard, Hydraulic Institute standard, changed or lowered in any way since the initial execution of the contract?

General STROCK. Sir, I don't know the answer to that. I will have to answer for the record.

Senator VITTER. OK. Thank you. My information is that they were changed and lowered for some significant period after the initial execution of the contract. So again, if you could confirm that or give us some other information on it.

General STROCK. Sir, I will confirm that. I would not be surprised if there was some modification, again, based on the urgency of the situation to have something in place without perhaps going through all the requirements. We may have well modified the contract to allow us to at least have some capability in place.

[The information follows:]

There were changes, but standards were not lowered. The testing procedures were changed to bring the testing requirements in compliance with the Corps' Engineer Manuals and Guide Specifications. A model test certified by the manufacturer to be in accordance with HI standards was accepted, as recommended by the Corps guidelines and consistent with industry standards. Full-size pump testing determines the amount of discharge, but it does not identify problems with particular component parts. Consequently, additional testing requirements were added, specifically to test the drive units to insure their mechanical integrity.

Senator VITTER. OK. Final question on this. As you know, General, at the 17th Street Canal, which is one of these vital canals, what we are trying to get to in terms of these pumps is 7,200 CFS, while the capacity at the canal in the heart of the city that feeds that stream is in fact over 10,000, and while the Corps' own long-term plan for the pumps at the lake are over 10,000. That is, as you know, an issue that has been causing me a lot of heartburn.

Why shouldn't we be concerned about this gap between 7,200 CFS and the Corps' own long-term goal, which is over 10,000 CFS?

General STROCK. Sir, the current projection is by July or August of this year, we will have 7,600 cubic feet per second in there. It is a concern that we have about our inability to match the nameplate capacity of pumping station six, but we are working very closely with the Water and Sewage Board to try to mitigate any potential problems as a result of that. But it certainly is a concern that we are unable to match the capacity of the fixed pumping station.

Senator VITTER. And it is in fact the Corps' long-term goal to match that 10,000-plus?

General STROCK. Yes, sir. Under the fourth supplemental, we have the authority to construct permanent pump stations at the face of the levee which will have that kind of capacity.

Senator VITTER. Thank you very much.

My apologies to the Senator.

Senator BAUCUS. Do you accept those apologies, Senator?

Senator VOINOVICH. Absolutely. David has really been working.

Senator BAUCUS. Thank you, Senator Vitter. I appreciate the point you are making very strongly. In fact, I might say it is a great opportunity for the Corps and for the Administration, frankly, to just do a bang-up job down there in New Orleans. It is so needed, and it would be just great, for lack of a better expression, for the good will I think the Corps and the Administration could get with all that. I just encourage you to take advantage of this opportunity.

Thank you very much, Senator.

Senator Voinovich.

Senator VOINOVICH. My comment is that I know that Senator Vitter gets up every morning and goes to bed late at night thinking about trying to respond to remedying the situation caused by Katrina. I have talked to him many times. This is something that he is very emotional about. I think that we should give him as much time as we can, because if we were in the issue, I think that we would feel the same way that he does.

I recently shared my concerns with General Berwick in regard to the Great Lakes and the Ohio River Division Office about the dredging backlog in the Great Lakes. Would you be willing to work with the Division and consider changes to the Corps' budgeting guidelines to provide more equitable funding allocations such as to Great Lakes?

Mr. WOODLEY. Yes, Senator. We are very interested, very concerned about the shortfall in maintenance dredging for harbors. Great Lakes is a particular case, but this is true across the Country. I would like to see a lot more done in the way of harbor maintenance dredging. As of right now, that is in a harbor maintenance

trust fund that is fed by a particular tax. The balances are adequate in the fund, but we are not able to tap them appropriately because they are on budget and they score on budget.

And so in order to do a package of maintenance dredging somewhere, we have to forego other critical maintenance in another part of the system. So I am very anxious to work over the next year to vastly increase our capacity for harbor maintenance dredging in the Great Lakes and elsewhere.

Senator VOINOVICH. OK. What you are saying, if I am not mistaken, is that they are on budget, meaning the people putting the budget together want to keep them there because if they started to spend them, that they would have to find some other money to make up for the fact that they are taking it out of that fund. Is that right?

Mr. WOODLEY. They can't be spent except by direct appropriation as part of the energy and water appropriation. That is what I meant by that.

Senator VOINOVICH. But the fact is that it is a budgetary consideration that is the reason why.

Mr. WOODLEY. It is a scorekeeping issue.

Senator VOINOVICH. Sure. It just underscores the fact that the Administration is unaware or doesn't care about the infrastructure needs of this Country that are so important to the competitiveness of the United States of America. I think that you have an obligation to stand up.

I don't know what you say when you meet with OMB people or when you meet with the President or anybody else, but I think you have an obligation in your capacity to share that information with the members of this Administration, because we have a very, very significant challenge.

If we keep going the way we are, we are going to see some real disruption in the movement of commerce in this Country that is going to negatively impact upon our competitiveness in that global marketplace and impact upon jobs in various regions of this Country.

Mr. WOODLEY. I take that very seriously, Senator, and I do advocate for this program within the Administration.

Senator VOINOVICH. How do you explain that the construction account has fallen from $4 billion average in the mid–1960's to $1.5 billion average for 1996 through 2005? I have been working on this now, this is my ninth year. I was Chairman of the subcommittee, as I said, in my first 2 years here as a freshman and somehow lucked out, I guess. But we had a big chart up here and we showed the Army Corps not only has the traditional responsibilities that they have had before, but we have now loaded them up with restoration projects. You just can't do it all.

Logic would say that if it was $4 billion in the mid–1960's, that it ought to be—mid–1960's, $4 billion—maybe it is $20 billion. I don't know the number. In other words, it shouldn't have fallen down to $1.5 billion average from 1996 to 2005.

Don't you think that that defies logic?

Mr. WOODLEY. I think that there is no question that neither the budget nor any recent appropriation has funded all of the good things that the Corps of Engineers could do.

Senator VOINOVICH. But it is ongoing. What is this, the seventh year of this Administration?

Senator BAUCUS. Yes.

Senator VOINOVICH. The seventh year. Again, it just is an indication that somebody doesn't pay attention. What do they say to you about how this is going to be taken care of? Do they say that this is a federalism issue and that the State should step forward and put the money in? Or the private sector should come in and we should privatize? What is the answer?

Mr. WOODLEY. Well, sir, I think we are trying to do as much as we can with the priorities that we have.

Senator VOINOVICH. Give it a number.

Last question is, we put provisions in the WRDA bill last year in terms of prioritization. Mr. Chairman, according to Chairman Boxer, we are going to keep that same WRDA language in there in terms of prioritization?

Senator BAUCUS. That is unclear.

Senator VOINOVICH. Well, the Administration did come forward with a positive recommendation there in terms of prioritization, didn't they? In the last WRDA bill, the Administration said that their recommendation was that we ought to prioritize these projects.

Mr. WOODLEY. Yes, sir.

Senator VOINOVICH. Can you share what that prioritization is? Or maybe the real question is: How does what the Administration wants to do with this prioritization fit in with the language that was in the WRDA bill, but came out of the Senate?

Mr. WOODLEY. I am not sure that we agree that there should be a commission or some outside group to make those determinations outside the normal channels of Government. But clearly, we feel there is a definite need for prioritization and that the priorities ought to reflect the Corps' core mission of flood control, navigation and environmental restoration.

Senator VOINOVICH. OK. In other words, you are saying that the Administration didn't come forward with recommended language to deal with the issue of prioritization?

Mr. WOODLEY. I don't recall that, Senator.

Senator VOINOVICH. General Strock, do you remember anything about that?

General STROCK. No, sir, I do not recall.

Senator VOINOVICH. OK. Well, I would be interested to know what this Administration thinks about the language that is in the WRDA bill that we got passed out of the Senate. How do you feel about it?

Mr. WOODLEY. As it passed out of the Senate, our concerns were expressed in the letter that I sent to the conferees last fall.

Senator VOINOVICH. Do you remember anything about the problems that you may have had with the language?

Mr. WOODLEY. Yes, sir. I remember that we were concerned about those aspects of it that interfered with the Secretary's capability to manage the program. I remember that we were concerned about the aspects of the authorizations that were outside of the core mission areas of the Corps of Engineers. As I recall, we indicated our very positive reaction to the concept of independent re-

view of Corps projects, but indicated that the way it was embodied should be flexible and should be incorporated early in the process—I think that was a point Senator Vitter made—rather than being tacked onto the end of the process. So those were the main items that we addressed in our letter.

Senator VOINOVICH. Were those items in that letter, General Strock, pretty much generated by the Corps, who would have to deal with this? Did you have any input in the letter that was sent in regard to this prioritization? Did anybody consult with you about whether it made sense or not, or did they just come out of OMB?

General STROCK. Sir, personally, I did not participate in that, and I don't think my staff participated.

Sir, if I might, we are adjusting our prioritization processes by going to performance-based mission area funding, so that we understand the full life cycle of a project, as outlined in studies and construction in O&M.

We look across the business line in all those areas. I think to an extent, the six budgeting principles we use do represent a method of prioritization. We began with dam safety. We then focused on national priority projects. We focused on projects with a substantial life-saving benefit. We focused on projects with mitigation or environmental requirements we had to meet under ESA and other laws. We focused on high-performing projects, those that returned at least a three to one benefit on the investment, with continuing contracts or contracts that needed to be continued.

And then we focused on another set of projects that are underway that had at least a 1.5 to 1 benefit-cost ratio. So there was a form of prioritization in this budget.

Senator VOINOVICH. Mr. Chairman, the safety issue, prior to Katrina, wasn't one of the considerations, was it? I think that we met and I was kind of shocked.

General STROCK. Sir, it has always been a consideration specifically under the dam safety, and in other projects we do evaluate it. But it is not one of the driving criteria, because in most cases we assume that our projects will perform for what they are designed to do to the given level of protection.

But if the threat is larger than that as it was in Katrina, that the area will have been evacuated. We are looking at ways to accommodate a consideration of life and property. That is one of the major outcomes of our review of Katrina is how to do evaluation of risk and consequence in decisionmaking, but it has not been a principal factor in the past.

Senator VOINOVICH. Thank you, Mr. Chairman.

All I will say is this, it would be interesting to get the Corps' impression of the language that we are going to put in the WRDA bill, because they are the people where the rubber meets the road, whether it is realistic, or whether they can work with it.

Senator BAUCUS. OK. The language we are talking about, I don't know where it exists right now at this point. But whatever it is, I think it makes sense for us to have at least an informal conversation about the language so we can try to work it out so we can agree, rather than having a big confrontation, if we possibly can. Let's work to make that happen.

Mr. WOODLEY. I hope that will be possible, Mr. Chairman.

Senator BAUCUS. Good.

I would like to just pick up on a quick point on Senator Voinovich's point about infrastructure in this Country. My personal view is that we are slipping dramatically with the competition. What is the competition? Other countries overseas.

Have you been to Shanghai and Shanghai Harbor? Have you seen it?

Mr. WOODLEY. I have not, but I have had it described to me, Senator.

Senator BAUCUS. I suggest you go. I suggest you go over to Shanghai and you see it. I was stunned when I saw it about 2 years ago, roughly. I was talking to a bunch of businessmen here on Capitol Hill about American competitiveness and infrastructure needs in this Country, and how the United States responded very well to other challenges—World War II, the Depression, Sputnik. But I also feel that even though we responded to Sputnik with a man on the moon very quickly, with great American know-how and tradition and so forth, it is hard to respond to the current challenge because it is kind of like a stealth challenge. It is kind of hard to see it, immediately and graphically, as we could Sputnik.

I mentioned that to the businessmen and we were talking about it. One CEO of a very major U.S. company who would be recognized immediately, said, "Senator, I have seen Sputnik. It is Shanghai Harbor." It scared the bejeebies out of him, what they are doing and the huge, big infrastructure they are building, with the ships and railroads and the ports and dealing with the cargo ships that are coming in. It is just stunning what they are doing.

I just urge you, in fact, I think if more people go over to Shanghai and see what the Chinese are doing, that it will scare us into doing something a little more than we should be doing, but are not doing so far.

Mr. WOODLEY. Thank you, sir.

Senator BAUCUS. I suggest you go to Shanghai.

Mr. WOODLEY. Thank you.

Senator BAUCUS. Just look.

Mr. WOODLEY. I appreciate that. At the risk of being controversial, I would like to associate myself with your remarks.

Senator BAUCUS. Thank you.

One quick question about Fort Peck. We talked about the lake. No one talked about the cabins. We in Montana sometimes we are a little stubborn. Even though the lake level is going down, we want to have our cabins on the lake.

Mr. WOODLEY. Oh, absolutely. Yes, sir.

Senator BAUCUS. Could you give me some assurance we are going to finally get those sales completed very quickly? Because as you know, it has been since the year 2000, 367, I think, cabin sites, revenue from the sales is going to go to the resource issues in Montana, the wildlife refuge, for example. The Corps said, well gee, they can't get going because they need appraisals and so forth.

The Fish and Wildlife Service has stepped up and contributed $100,000 in that regard. There was money in the 2007 appropriations. That dropped out, as we all know, but there is no request in 2008. So I wish you could just sit down with those folks that want to own those cabins. They really, really care. All they want

to do is buy them. It has been 7 years now. So can you give the cabin owners, and some who want to own cabins, some assurance here?

Mr. WOODLEY. I share your concern about that, Senator. We have a process. We need to work it. I think we need a little bit of help on the funding, but we very much would like to complete that in the next fiscal year.

Senator BAUCUS. If you could in the next fiscal year, that would be great. So is it 2008 you are talking about?

Mr. WOODLEY. Yes, sir.

Senator BAUCUS. OK. You have not made a request.

Mr. WOODLEY. I think we are not funded for that, though.

Senator BAUCUS. But you have not made a request for it either.

Mr. WOODLEY. It is not a priority within the budget.

Senator BAUCUS. Well, can you make it one?

Mr. WOODLEY. I will make it a priority within the program.

Senator BAUCUS. Let's get it in the budget.

Mr. WOODLEY. If we can achieve some consensus.

Senator BAUCUS. You have not gone to Shanghai. Have you gone up to Fort Peck?

Mr. WOODLEY. I have, sir. Yes.

Senator BAUCUS. Have you seen the cabins there?

Mr. WOODLEY. I did not. I visited the visitors center.

Senator BAUCUS. There are people currently with leases who want to buy them.

Mr. WOODLEY. Yes, sir.

Senator BAUCUS. Well, if you could just look in their eyes, you would want to do something.

Thank you very much.

Senator Isakson, any questions?

Senator ISAKSON. No. Thank you.

Senator BAUCUS. Thank you, Mr. Secretary.

Mr. WOODLEY. Thank you.

Senator BAUCUS. Oh, sorry.

Senator Whitehouse?

Senator WHITEHOUSE. Thank you.

I just wanted to thank Secretary Woodley for accompanying the committee members who took the tour down to New Orleans to see the damage that had been sustained and the unfortunate rate of progress in rebuilding that was demonstrated to us. It was good for us to have you there, and I very much appreciated that you took the trouble.

One quick and very local matter I would love to have you take a look at and get back to me on. We have done considerable work on dredging in Rhode Island. As a result, a lot of the private marinas have gone in and dredged in order to be able to accommodate the slips and so forth that they have authorization to maintain, but they don't have the depth to effectively moor boats there.

They have done it, and considerable money has been spent, but what has not been done is the channels dredged that will allow those marinas to have access to the main channel. So they are hemmed in right now and sort of locked in by a wall of mud that needs to be moved. We would love to have your attention to that and work out a plan so that the private investment that has been

made by these marinas in the hope and expectation that they would be connected to the wider ocean with an appropriate level of channel can be performed.

Mr. WOODLEY. Thank you, Senator. That is a constant problem within our program. We are underfunded for harbor maintenance in general. We are working on it, as I mentioned earlier. I intend to work very hard over the next year to find a way to improve that situation.

Senator WHITEHOUSE. It is particularly tough when small business owners, marina owners are not gigantic corporations. They are people who really are making their livelihood in a very, very difficult way, a lot of hard work, a seasonal business. For them to put the kind of money that they have into the dredging that they have had to do, and then find that they can't be connected to the waterways of Rhode Island is a very great disappointment to them.

Senator BAUCUS. Thank you, Senator, very much.

And thank you both very, very much. Thank you, General. I know how hard you work. I appreciate it very much. Thank you.

OK, next panel.

Ms. Pam Pogue is hazards program manager for the Rhode Island Emergency Management Agency. Mr. Doug Marchand is executive director of the Georgia Ports Authority. Did I get that correct?

Mr. MARCHAND. You got it right.

Senator BAUCUS. Good. Thank you.

And Mr. Jamie Williams who is State Director of GNC of Montana and also with the Nature Conservancy of Montana.

OK, Ms. Pogue, why don't you begin? Go ahead.

STATEMENT OF PAMELA POGUE, HAZARDS PROGRAM MANAGER, RHODE ISLAND EMERGENCY MANAGEMENT AGENCY, ON BEHALF OF THE ASSOCIATION OF STATE FLOODPLAIN MANAGERS, INC.

Ms. POGUE. I would like to thank Chairman Baucus and Senator Isakson, as well as Madam Chairman Boxer and Senator Inhofe, for inviting me to testify today. We look forward to working with you to develop a much more effective approach to flood risk identification and damage reduction.

My name is Pam Pogue, and I am the chair of the Association of State Floodplain Managers. My other job is the State Floodplain and disaster manager for the State of Rhode Island.

We appreciate the initiative of this committee under the strong leadership of Madam Chairwoman Boxer. ASFPM supports the Water Resources Development Act in general, but we would like to provide you with some suggestions on how we feel it can be better strengthened.

Due to my time limit of a 5-minute sound bite, I am only going to go through only a couple of points, but as you know, we submitted written testimony which goes into it in much greater detail.

Let me say something about ASFPM. We represent over 9,000 individual members with 25 State chapters. We represent State and local officials and other professionals engaged in all aspects of flood loss reduction, floodplain management and hazard mitigation. This includes risk identification, management mapping, engineering,

planning, community development, hydrology forecasting, emergency response, flood protection projects, and insurance much of what you guys have been just discussing about all morning long.

Many of our members work in communities impacted by Hurricanes Katrina, Rita and Wilma, and we work with organizations assisting those communities to rebuild. All ASFPM members are concerned with working to reduce our Nation's flood-related losses and in rebuilding a safer, more resilient community. Our State and local officials are the Federal Government's partners in implementing programs and working to achieve effectiveness in flood loss reduction.

I would like to initiate, or basically speak on only three points right now in the next probably 3½ minutes.

No. 1, there is a great need for a paradigm shift in how this Nation deals and manages with flood risk. No. 2, in the shorter term, we must address the consequences to our Nation lacking a comprehensive approach to levee safety. Finally, we must and would like to identify budget priorities for WRDA, the Corps of Engineers' programs for this fiscal year 2007–2008.

On the first point, we must change how the Nation manages flood risk. A paradigm shift is needed to place more responsibility on States. The catastrophic events of 2005 affecting most of the Gulf and Southeast Coast and the increasing flood damage elsewhere in this Nation are reminders that we continue to be susceptible to natural hazards, especially flooding.

We must have programs, policies and initiatives that can adequately handle these events, efficiently use taxpayer money, and build resilient communities with a more sustainable future. Nothing less than our Nation's prosperity and viability are at stake.

Yet despite the 75 years of water resources and floodplain management policy, simply stated, Katrina showed us and it dramatically demonstrated it is just not working. What basic programmatic changes have taken place in the last year and a half to address the devastating impacts from Katrina? From Rita? From Wilma? Nothing.

One of the most devastating natural disasters in our time, Hurricane Katrina, ravaged our community business districts, waterways, neighborhoods, critical facilities, natural resources, and human spirit. Yet what really has been accomplished, programmatically speaking, since Katrina landed on the shores of the Gulf Coast over 19 months ago, nearly 2 years ago? Very little. Are we any better prepared? Are there any national policies, programs and initiatives that will allow us to be able to handle those same issues that we are so frightfully unprepared for? No.

We need to change the Nation's top-down model of flood risk management. States should become the focal point for managing flood risk. The logic behind this is that in order to more effectively manage and reduce flood risk, we must rely on the authorities that are reserved solely for States under the Constitution, namely land use management, building codes, community planning for development, mitigation and resource protection. The ASFPM written testimony addresses in detail some of these principles that we speak about.

The second point, what are the consequences to this Nation should we lack a comprehensive approach to levee safety? Make no mistake about it, the potential for levee failure with catastrophic consequences and human suffering is not just a New Orleans problem. Levees in California are a disaster waiting to happen, complicated, of course, by the earthquake risk. Every single one of these folks from their States have levees. We in our State have a levee that is about to be decertified.

States do not know the magnitude of the problem we are facing. We don't know where the levees are. We don't know the physical condition of these structures, the number of people and structures and the critical facilities at risk behind them.

All of this points to the need for a comprehensive levee safety program for the Nation and for a national inventory of levees.

ASFPM believes that a properly designed State levee safety program is absolutely critical. The levee program must be integrated with State floodplain management to avoid the stovepiping effect we might have in other programs, which in the case of levee safety could effectively separate levee safety and the "management" from floodplain management.

The effectiveness and object of this program would be to become not a permit function, rather but to integrate the management between levee safety and floodplain management.

Finally, third point, budget priorities for the Corps of Engineer programs for this fiscal year. Two relatively small programs of the Corps of Engineers Civil Works have nationwide benefits. These are the Floodplain Management Services Program, FPMS, and the Planning Assistance to States Program. The 2008 administrative budget request for these programs is $5.6 million and $4.5 million respectively. These amounts represent a decrease or hold in these programs. Sadly, they fall short of the authorized level for these programs and will not allow the Corps to apply them in appropriate and innovative ways to assist communities throughout this Nation struggling with how we are going to address repeated flood losses, and this means to identify actions toward the recertification of levees within our own communities.

Overall, the Association of State Floodplain Managers is disappointed with the budget request for FPMS and the PAS programs. ASFPM respectfully requests funding to the full authorized level to meet the current and anticipated demand for these programs.

We particularly note the two events that have reinforced the need for these programs: Hurricanes Katrina and Rita, where numerous levees failed. These events have shown where these two programs could have been critically important to assessing the protection level of levees, and ultimately the risk of flooding behind these levees, and using that data to support accurate flood maps nationwide.

The Corps of Engineers' planning assistance to State——

Senator BAUCUS. I am going to have to ask you to summarize if you could, as well as you possibly can.

Ms. POGUE. I have two paragraphs.

Senator BAUCUS. Great.

Ms. POGUE. OK.

In terms of PAS, in our own State we are personally feeling the pain because we have had six flood events since 2003, and despite programs that might be available to be funded, we have absolutely no technical or planning experience to come up with projects that might mitigate future funding.

Therefore, we would suggest the best hope is to provide technical assistance to the communities with the levee recertification program. Also, we respectfully ask that the committee fully support the funding for PAS to its authorized level of $10 million, and we would also support the President's budget for 2008 for $10 million for the Corps of Engineers to move forward with its inventory of the Nation's levees and their status.

In conclusion, ASFPM has a mission to reduce the cost of flood damages in this Nation, which prior to 2004 and 2005 hurricane seasons exceeded $6 billion per year. We have reached new thresholds. Today, we once again stand at a crossroads in the aftermath of a catastrophic flood disaster, with an opportunity to refine our Nation's policy for managing flood hazards.

Thank you, sir, for the opportunity to provide our thoughts on these important issues. We look forward to working with you.

[The prepared statement of Ms. Pogue follows:]

STATEMENT OF PAMELA POGUE, HAZARDS PROGRAM MANAGER, RHODE ISLAND EMERGENCY MANAGEMENT AGENCY, ON BEHALF OF THE ASSOCIATION OF STATE FLOODPLAIN MANAGERS, INC.

INTRODUCTION

The catastrophic events of 2005 affecting most of the Gulf Coast and the increasing flood damage elsewhere in the nation are reminders to the nation that we are susceptible to natural hazards—especially flooding—and that we must have programs, policies, and institutions that can adequately handle these events, efficiently use taxpayer money, and build a more sustainable future. Nothing less than our nation's prosperity and viability are at stake. The Congress and this committee will be at the epicenter of this discussion, with an opportunity to make policy changes that can have importance and relevance far into the future.

The Association of State Floodplain Managers, Inc. (ASFPM), and its 25 Chapters represent over 9,000 state and local officials and other professionals who are engaged in all aspects of flood loss reduction and floodplain management and hazard mitigation, including management, mapping, engineering, planning, community development, hydrology, forecasting, emergency response, water resources projects, and insurance. Many of our members work with communities impacted by hurricanes Katrina, Rita and Wilma; or work with organizations that are assisting those communities in rebuilding. All ASFPM members are concerned with reducing our nation's flood-related losses. Our state and local officials are the federal government's partners in implementing programs and working to achieve effectiveness in meeting our shared objectives of reducing the suffering and costs associated with flooding. For more information on the Association, please visit http://www.floods.org.

ASFPM has been involved in numerous national policy dialogues with partner organizations in the past year. These have included the Flood Risk Policy Summit involving 60 experts from many different groups such as homebuilder, realtors, lenders, environmental organizations, academia and others. We co-sponsored this Summit with the National Association of Flood and Stormwater Management Agencies (NAFSMA), with strong support from the Corps of Engineers and FEMA. We also participated in the American Water Resources Association's National Water Policy Dialogue; and held discussions with the leadership of numerous agencies, the White House and Congressional staff, researchers and others.

ASFPM appreciates the leadership of this Committee, under the strong leadership of the Chair, Senator Boxer. The ASFPM also appreciates the important contributions made by Senators Russ Feingold and John McCain and a number of members of the Senate Environment and Public Works Committee to start to address the need to modernize the Corps planning process and to address issues raised by the systemic failures identified in the wake of Hurricanes Katrina and Rita. We look

forward to working with you to develop a more effective approach to flood risk reduction.

Thank you for inviting us to offer our recommendations on flood risk reduction. The following testimony addresses:

a. Changing how the nation manages flood risk—the Federal/State/local partnership

b. The History of levees in the nation—how we got in this predicament

c. Consequences to a Nation Lacking a Comprehensive Approach to Levee Safety

d. The need for data showing where levees exist or the population at risk behind levees

e. Overarching suggestions for Reducing Future Flood Damages caused when levees fail

f. Measures to improve effectiveness of the policy nexus between USACE & FEMA programs

g. Budget priorities for Corps of Engineers programs for FY 08

A. Changing how the Nation Manages Flood Risk—The Federal/State/Local Partnership

An overarching and critical issue to all our efforts as we work to change policies that led to the catastrophic consequences from program failures in Hurricane Katrina—is the understanding we need to change the nation's top-down model of flood risk management. One concept that is receiving more and more support in these discussions is to design the system to have states become the focal point for managing flood risk. The logic behind this is that in order to more effectively manage and reduce flood risk we must rely on authorities that are reserved to the states under our Constitution, namely land use management, building codes, and community planning for development, mitigation, and resource protection.

A number of principles necessary for improved flood risk management have emerged, which this testimony will address:

• Flood protection provided by levees is a double-edged sword, providing significant protection, but also leading to severe flood impacts when levees fail or are overtopped. Wise flood risk management must include use of a menu of floodplain management options and cross integration of those options.

• The nation is urgently in need of data showing where levees exist, their condition and the population and critical facilities at risk behind those levees.

• An effective levee safety program must be developed, building off the land use authorities of the states. Incentives and disincentives for states must be incorporated to foster action.

• The need to periodically update and modernize the planning Principles and Guidelines and other critical guidance that is used to plan and implement water resources development projects.

• Integrated watershed planning for water resources projects is essential for effective flood risk management. To accomplish this, states must be encouraged to play an integral role through a system of incentives using cost-shares and discounts.

• The Army Corps of Engineers can play a key role in fostering watershed and "bottom up" project development by providing states and local jurisdictions with technical assistance and consensus building assistance. (See the related budget discussion on page 11).

• For Corps projects, we must agree on a process for independent review of some projects that will help insure tax dollars are spent on appropriate, cost effective projects that reflect the true federal interest.

Why aren't states and locals doing more to manage flood risk? What factors would encourage or induce states to step up to the plate? This is a critical part of the ongoing discussion. For the past 70 years, starting with the 1936 Flood Control Act through the 1968 National Flood Insurance Program Act and its reforms, along with various versions of the Disaster Relief Act, those national programs and policies have led state legislatures, Governors and local decision makers to believe that flooding is the problem of the federal government. Over the decades this has resulted in many states and locals putting little or no resources or effort into reducing flood risk, believing the federal government would bail them out after flood events. There are few incentives or disincentives for states and locals to take action on their responsibility to reduce flood risk.

What is the appropriate model to devolve flood risk and floodplain management programs to the states? Almost none of the current federal flood risk programs are delegated to the states, and that includes water resource development programs, the NFIP, and flood mitigation. Many of these programs have some state involvement or some contractual arrangement with states, but do not delegate authority or decision making to the states. Few governors or legislatures are interested in those non-

delegated approaches, and they continue to view such efforts as federal programs, and with federal disaster assistance as a backdrop removing the need for state or local priorities or leadership. Models of programs that actually delegate authority for decision making and funding to states include the Clean Water Act and the federal highway programs. Under these models, the state works with federal programs to reach agreement on the state-specific goals of the program, then designs the state program to achieve those goals. The program is not delegated to a state until appropriate state laws and capabilities are in place. The federal program then has oversight and auditing functions to ensure the goals are being met, and can and does withhold federal funds if the state does not uphold its end of the agreement.

What incentives might be most effective? ASFPM has long advocated that federal programs use a sliding cost share to reward positive state and local actions. A sliding cost share could apply to disaster assistance payments, which might keep the 75 federal/25 state/local as a base, but the federal share could increase as states undertake more and more actions that will reduce their risk to flooding and other natural hazards. This is cost effective for the federal government since it reduces federal disaster assistance from many programs. The same sliding cost share approach could apply to water resources and flood mitigation projects. Another approach would be that, when states invest in important flood risk activities, such as flood mapping, that amount of money could be "banked" toward the non-federal share of the next disaster. In this way, state legislators and governors can see the benefit of a "pay now or pay later" scenario, and in the meantime their citizens are safer, suffer fewer flood losses and trauma, and future disasters are reduced. As a start, the sliding cost share could be linked to the Community Rating System (CRS) used in the National Flood Insurance Program (NFIP). The CRS program has a list of 18 activities a state or community can undertake that go beyond national minimum standards that will all further flood loss reduction. Certain points are given for each activity, and the number of total points determines how much incentive is given for discounted rates. In that way, the federal, state and local governments will be integrating their actions to reduce losses, and we will be rewarding those states and communities who do more, instead of the current system that provides more federal money to those states and communities who do less to reduce flood risk.

B. The History of Levees in the Nation—How we got in this predicament

Levees have existed in this nation since early times. Those early levees were simply mounds of dirt thrown up by farmers or property owners to prevent frequent flooding of their property or crops. Most of the population lived near rivers or the coast, since waterways were our highways and the rivers were our source of water for human and livestock consumption. The federal government got into the levee business in an organized way when Congress asked the Corps to become involved in the levees in Sacramento in 1917. The Flood Control Act of 1936 provided authority for the Corps of Engineers to be the lead agency on Flood Control projects in the nation. That authority has been used extensively for structural projects such as levees, dams and channelization, which modify our natural waterway systems to accommodate human needs. While the Corps has authority to also perform non-structural projects such as elevation or relocation of at risk buildings, the vast majority of projects have been structural. The evolution of responsibility for flooding and its consequences that has focused on federal structural projects has led states and communities to view flooding as a federal problem, not a state and local problem. It is important all federal legislation on levees and disaster assistance establish a shared responsibility for damages when a levee fails, and for implementing a levee safety and flood mitigation approach.

Thousands of miles of levees have been constructed by the Corps, most with a non-federal sponsor that provides cost sharing for construction and accepts responsibility for operation and maintenance. The location of those levees is known to the Corps, although many of them may not be in a geo-spatial database. Many other levees have been constructed by communities or private individuals or levee groups. We know where some of these are, especially those who apply for and participation in the Corps PL 84–99 rehabilitation program, which allows federal money to be used to reconstruct the levees after failure or damage from a storm event. Many private levees were built to protect farmland from frequent flooding in order to make it economic to crop the land. Over time, development of homes or other building has taken place in that area which would be inundated if those levees overtop or fail. Many of the property owners behind those levees may not even be aware the levee "protecting" them is poor and likely to fail.

Levees have been built to various heights to contain storms of various frequencies. In the early years levees may have been built to contain the Probable maximum flood, the 500- or 200-year flood, etc. In the past few decades most levees have been

"dumbed down" to only contain the 1 percent chance flood (100-year flood). That is an unintended consequence of combining the Corps NED policies with FEMA's policy for the flood insurance where areas protected by the 100-year flood are not required to carry flood insurance or be subject to any land use regulations for protection from flooding. Mapping those residual risk areas and requiring flood insurance in them is essential. Levee standards for protection on urbanized areas and critical facilities like hospitals, emergency operation and shelters must be protected to at least the 0.2 percent (500-year) flood event and in coastal areas a category 5 storm surge.

C. Consequences to a Nation Lacking a Comprehensive Approach to Levee Safety

We do not know the amount of population or structures at risk behind levees that would suffer damages or loss of life when those levees overtop or fail. We have no data on the population behind most of the levees in the nation, let alone how many of those people would be able to evacuate in the event that levee or floodwall overtops or fails during a storm event. Damage data on the cost of the structures or the infrastructure in those levee or floodwall inundation areas is needed in order to asses the exposure of the Disaster programs for both property damage and infrastructure.

What is the risk associated with each levee? Risk is determined by multiplying the probability of failure of the levee or floodwall times the consequences when that levee fails. Which of our levees is high risk, moderate risk or low risk? We need all these answers in order to proceed wisely.

Based on the data that a well designed levee inventory would produce, Congress can ask the agencies to design levee safety programs that would prioritize the nation's efforts to protect people and property. Without that data the size of the problem and costs of future events like Katrina-Rita are not known. To start fixing the problem before we know the magnitude or cost does not seem to be an efficient use of taxpayer dollars.

D. The Need for Data Showing Where Levees Exist and the Population at Risk Behind Levees

Levees can be grouped in 4 categories:

1. Federally built and operated
2. Federally built and locally maintained
3. Locally built and locally maintained
4. Privately built and hopefully maintained

Information on Corp of Engineers constructed levees (category 1) is now being gathered in a geo-spatial database that can provide cumulative data such as miles of levee, condition of the levees, etc. That did not previously exist, and that data for the other classes of levees is more problematic, with data on even the location of private levees being almost non-existent.

Data on the adequacy of the levee for (1) hydraulic capability (height to contain a certain level of storm) (2) structural stability (is it geo-technically sound and structurally stable) is similar to the above. Data on the population at risk when the levee overtops or floods or the cost of the structures and infrastructure likely to be damaged is also not known to any reasonable extent. The concern is that without this data, the Congress, the agencies, the states and communities or the public has any idea of the magnitude of the problem.

ASFPM surveyed the states to determine if states had an inventory of levees in their state. Only two states have a geospatial data base of their levees, and less than a dozen have even a listing of levees within their states. Other data indicates less than half of the states have implemented their authority to regulate levee design, construction or maintenance of levees.

E. Overarching Suggestions for Reducing Future Flood Damages Caused when Levees Fail-Key Provisions of any National Levee Inventory and Safety Program

Some basic principles should be included in addressing the levee problem in the nation. Those include:

1. Congress should decide if this bill should focus first on an inventory of levees so that we have enough data to determine the magnitude and potential solutions to the problem. Subsequent legislation could then design a levee safety program based on the data. We recommend you consider this approach.

2. The federal government (Corps of Engineers as lead) should develop the initial levee inventory in cooperation with states, which must collaborate with local and regional entities in their state.

3. Any long term levee program must use the states as a focal point. States are the only entity that has authority to regulate the design, construction, operation and

maintenance of levees. The federal government can encourage those things and offer incentives, but cannot mandate it.

4. Incentives must be built into the program to encourage states to undertake levee safety programs in conjunction with their regional and local governments. Monies states spend on effective levee safety programs will result in reduced federal tax spending for disaster relief. Thus, incentives could consider that appropriate state expenses could be banked against the non federal share of future disaster costs in that state.

5. Guidance must be developed that establishes criteria and definitions for high, moderate and low risk levees in order to set priorities for the assessment and future mitigation actions.

6. The federal government should not be performing detailed engineering analysis of levees or designing engineering remedies for non-federal levees. That is the function of levee owners and sponsors.

7. The levee inventory and any follow up assessment and levee safety program must be clearly coordinated with related mitigation programs of the Corps of Engineers and other federal agencies such as FEMA, NRCS, Bureau of Reclamation, etc. and especially with the flood mapping programs of FEMA. Additionally this program must be done in collaboration with state programs, which in turn must involve regional and local related programs.

8. Federal and State policy groups and Boards must be charged with recommending appropriate levee standards for various levees in the nation. Those standards must be improved to use 500-year levees for protecting urban areas and critical facilities. This moves from the current 1 percent (100-year) standard generally used, which is inadequate for protecting highly urbanized areas or for critical facilities like hospitals, drinking water, fire stations, etc.

9. ASFPM finds that future flood losses can be reduced if levees are never used to protect undeveloped land. Levees may be a viable last resort option for mitigating damages to existing urbanized areas if properly designed, constructed, operated and maintained, but only if proper warning and evacuation procedures can assure protection of lives for those living at risk behind those levees.

F. Measures To Improve Effectiveness of the Policy Nexus between Corps of Engineers and FEMA programs

There are a number of places where policies of the Corps and FEMA intersect. As explained above in the discussion of levee risk, sometimes those policy nexus results in unintended negative consequences. In addition to those mentioned above, the following suggestions come from the Flood Risk Policy Summit this past December involving many experts representing various interests:

• *Public safety must become a default standard in determining the design of and priorities for flood mitigation projects above and beyond the benefit/cost analysis and any other objectives in the NED or Principles and Guidelines.*—We cannot in good conscious be designing and building flood mitigation projects with Federal tax dollars that result in (avoidable) loss of life.

• Levees must be designed to protect urban areas and critical facilities to the 500-year flood

• *Federal monies should not place people and structures at risk, nor contribute to the increased flood risk of other structures and people.*—Many agencies will spend billions of taxpayer's monies in our efforts to rebuild the Gulf coast. This includes the Corps of Engineers, FEMA, HUD, EDA, EPA and DOT. It is imperative those agencies do not increase flood risk, or cause flood risk to be transferred to others through their actions. Federal Executive Order #11988 directs all federal agencies to analyze their actions to avoid increasing flood risk as they assist to build, finance or provide technical assistance. We urge this Subcommittee to condition each program authorization on compliance with this Executive Order.

• *Operation and Maintenance of flood control structures must be ensured through strong federal and state oversight.*—No federal assistance for flood control structures should be provided without upfront assurance of financial capability for ongoing O&M of the structure.

• *The O&M requirements of the PL 84–99 program must be tied to the criteria for certifying levees under FEMA's flood mapping program.*

• *Identify residual risk structures and lands that will be flooded when levees fail or overtop; and require flood insurance for structures in those areas.*

• *Integrate planning and program requirements for flood mitigation and water resource planning and projects between the two agencies, using holistic, watershed approaches.*

• *Require a level of protection commensurate with the risk—in the Corps and FEMA programs the map and manage flood risk, especially for flood control structures where the consequence of failure is catastrophic.*

• *Flood control structures should not be built with federal dollars in communities which do not join the National Flood Insurance Program, nor should those communities be eligible for federal disaster assistance for damage to public infrastructure.*

• *Levees should be considered an option of last resort and used only to protect existing communities.* Levees should not be used to protect undeveloped land with the speculation new development will be placed at risk behind those levees.

G. Budget Priorities for Corps of Engineers Programs for FY 08

Two relatively small programs of the Corps of Engineers Civil Works Program have nationwide benefits—these are the Floodplain Management Services Program (FPMS) and Planning Assistance to States Program (PAS). The 2007 budget request for these programs is $5.6 million and $4.5 million respectively. These amounts represent a decrease or hold in these programs. Sadly they fall far short of the authorized level for these programs and will not allow the Corps to apply them in appropriate and innovative ways to assist with recovery needs in the Gulf Coast region and throughout the Nation. ASFPM respectfully requests funding to the full authorized levels to meet the current and anticipated demand for these programs.

Overall, he Association of State Floodplain Managers is disappointed with the budget request for the FPMS and PAS programs. We particularly note that two events have reinforced the need for these programs—Hurricanes Katrina/Rita, where numerous levees failed and the efforts to modernize the nation's flood maps. Combined, these events have shown where FPMS and MS could be critically important—through assessing the protection level of levees, and ultimately the risk of flooding behind levees, and use that data to support accurate flood maps nationwide. Communities who face the threat of having their levees decertified need technical assistance to explore their flood mitigation options related to those levees. The FPMS program provides support and the ability of Corps stair to travel to and assist those communities. However, proposed funding levels will not even meet current needs expressed by states and communities for technical assistance from the Corps.

• *The best hope for providing technical assistance to communities with levees that must be certified for flood mapping and compliance with Operation and Maintenance (O&M) criteria rests with adequately funding the FPMS and PAS programs.*

FLOODPLAIN MANAGEMENT SERVICES PROGRAM

The Corps of Engineers Flood Plain Management Services Program is a Continuing Authority program authorized under Section 206 of the 1960 Flood Control Act. The program provides funding to each district office to provide coordination with States, local communities, Native American Tribes and other entities. Coordination and technical assistance is provided to assure wise use of the nations flood plains for new development and assistance in mitigating future flood hazards.

The program also provides for specific special studies for a wide range of flood related projects. Typical special studies would include flood plain analyses for communities where there is no existing data, flood preparedness plans, hazard mitigation plans and flood mitigation conceptual plans where other Corps programs are not justified. These studies generally promote a more non structural approach to flood hazard mitigation.

Based on discussions with communities there is a huge increase in interest brought on by the Gulf Coast hurricanes. All communities are extremely concerned about reevaluating their flood risk and many are requesting levee certification. This request is important in two aspects. First, as a nation, we do not even have a complete inventory of levees and also do not know the safety level that these levees provide. Second, providing technical assistance with certification of levees in the Gulf Coast and throughout the nation (the State of California is currently facing significant issues with levees and certification) will help communities and states determine where future needs are and improve the quality of our nations flood maps. Without counting levee certification the Corps FPMS program needs could be over $20 million in FY 07.

• *ASFPM urges the Committee to prove for the full authorization of the FPMS program to $15 million in FY 08, and to consider a substantial increase in the annual authorization ceiling for this program to at least $50 million in the upcoming WRDA.*

• *ASSFPM urges the Committee to direct the Corps to explore how it can utilize the FPMS program to assist communities and states to evaluate existing levees and assist with certification of them as safely providing protecting to a specific flood level. Additionally the Corps should he encouraged to work closely with FEMA to utilize*

this information to help develop more accurate flood maps for the nation that reflect the location and safety level of existing levees.

PLANNING ASSISTANCE TO STATES PROGRAM

Section 22 of the Water Resources Development Act (WRDA) of 1974. as amended, provides authority for the Corps of Engineers to assist the States, local governments, and other non-Federal entities, in the preparation of comprehensive plans for the development, utilization, and conservation of water and related land resources. Federal allotments for each State or Tribe from the nation-wide appropriation are limited to $500,000 annually, but typically are much less. Individual studies, of which there may be more than one per State or Tribe per year, generally cost $25,000 to $75,000.

One innovative use of PAS funds is currently occurring in Ohio where the Huntington District has initiated a project called the Silver Jackets that is focusing on comprehensive solutions to flooding issues through the coordination of federal agencies and pooling of resources. Currently, the City of Marietta is a pilot community which was flooded severely in September 2004 and then again in January 2005. One of the needs identified is to do a comprehensive risk assessment and vulnerability analysis on flood prone structures in the downtown area and suggest some possible non-structural and structural solutions to mitigate against future flooding. It is important to note this effort employs a comprehensive planning process to involve all sectors of the public and is led by the community.

Every year there are more requests for PAS assistance than funds appropriated leaving many needs unmet.

- ASFPM urges the Committee to fully fund PAS at its authorized level of $10 million and also to consider an increase in this program's annual authorization ceiling to at least $30
- The ASFPM supports the President's budget for FY 2008 of $10 million for the Corps of Engineers to move forward with its inventory of the nation's levees and their status.

CONCLUSION

The ASFPM has a mission to reduce the costs of flood damages in the nation, which prior to the 2004 and 2005 hurricane seasons exceeded $6 billion/year. Today, we once again stand at a crossroads—in the aftermath of a catastrophic flood disaster with an opportunity to refine our nation's policy for managing flood hazards. Thank you for the opportunity to provide our thoughts on these important issues. The ASFPM and its members look forward to working with you as we move towards a common goal of reducing flood losses. For more information, please contact:

Larry Larson, ASFPM Executive Director, (608) 274–0123, (larry@floods.org) or Pamela Pogue, ASFPM Chair, (401) 946–9996 (pam.pogue@us.army.mil).

RESPONSE BY PAMELA POGUE TO AN ADDITIONAL QUESTION FROM SENATOR INHOFE

Question. I noticed that one of your recommendations for a levee safety program is that the Federal Government should NOT perform detailed engineering analysis of levees or design engineering remedies for non-Federal levees. As a staunch proponent of limited government, I tend to agree with that position. Last year when we were developing our Senate levee safety program provision, however, I was persuaded to include language directing the Corps to perform the first round of assessments for all levees, not just Corps or other Federal levees. I insisted that all subsequent rounds for non-Federal levees would be the responsibility of the states, though. Could you please expand a bit on why you believe the Federal Government should not be involved in even these initial assessments?

Response. ASFPM has a position that the cost of performing detailed engineering analysis of existing levees is the responsibility of the owners of those levees. Where the owner is the Federal Government, the Corps of Engineers should perform those analyses. Where the owner is a non-Federal sponsor, the owner should be responsible for those analyses.

Our logic is that these non-Federal sponsors chose the levee as their mitigation approach. Federal programs of a number of agencies cost share mitigation approaches, which can include acquisition and relocation of structures out of flood hazard areas, elevation of structures above the predicted 100-year flood level, floodproofing of individual structures; or a levee. No matter which option a community chooses, the cost of operating and maintaining that mitigation option is the responsibility of the non-Federal sponsor or partner.

Communities who choose elevation, relocation or other options do not come back to the Federal Government seeking future costs to operate or maintain their selected option, and neither should communities who choose levees as their option. The community signed an agreement at the time the levee was constructed that they would be responsible for future operation and maintenance of the levee. Determining whether the levee is adequate to provide the protection it was designed for is part of that O&M. As such, the levee owner should be responsible for the detailed engineering analysis.

Senator BAUCUS. Thank you. Thank you very much.

Mr. Marchand.

STATEMENT OF DOUG J. MARCHAND, EXECUTIVE DIRECTOR, GEORGIA PORTS AUTHORITY, ON BEHALF OF THE AMERICAN ASSOCIATION OF PORT AUTHORITIES

Mr. MARCHAND. Thank you.

Mr. Chairman, Ranking Member Senator Isakson, and subcommittee members——

Senator BAUCUS. I don't know if your microphone is on. Is there a button there or something?

Mr. MARCHAND. There it is. Got it.

Senator BAUCUS. Good. Thank you.

Mr. MARCHAND. I am extremely grateful for the invitation to appear today, and also for the determination of the subcommittee to move forward with enactment of the Water Resources Development Act.

And thank you, Senator Isakson, for your hard work for our ports, going back to your earliest days in the Georgia General Assembly.

Mr. Chairman, the Georgia Ports Authority is one of the few public ports in the Nation which both owns and operates our port property and facilities. We have enjoyed historic increases in ocean commerce. Savannah is now the second largest container port on the East Coast, and the fourth largest in the Nation.

What distinguishes port operations in Georgia and the entire Nation is that how well we do our job has a direct and immediate impact on how well others can do theirs. If American businesses large or small are expected to stimulate new employment and generate increased tax revenues through world trade, then our ports must be a leader in productivity and efficiency.

Our biggest barrier to increased efficiency in the maritime transportation system is the shortfall of Federal resources. This includes lack of assurance of adequate channel maintenance dredging and the lack of sufficient authorization and funding for new projects to modernize our harbor channels.

Here are my suggestions: pass WRDA. It is a roadmap for the future of marine transportation and the key to improving productivity and lowering transportation costs. When it moves in orderly fashion, roughly every 2 years, it gives direction, commitment and accountability. So pass WRDA, even if it is not the perfect bill that we would all aspire to have.

Do not think that by delaying WRDA, as has been done for more than 6 years now, you are simply putting off problems to another year. Delay actually creates new problems, while not resolving the old. It sows the seeds of doubt, confusion and inflation-driven high-

er cost. We need a tough system to guarantee wise stewardship of tax dollars and wise stewardship of our environment.

But the system must be free of conflicting regulations and repetitive layers of review. An example of the glacial pace of action is the reconnaissance study for the Savannah Harbor expansion project, our pending harbor deepening project. A Federal interest for deepening was established in 1996. Eleven years and almost $30 million in State-funded studies later, the draft report is not slated to be out for public review until January 2008.

Mr. Chairman, it should not take a dozen years to do a study to deepen an existing channel. Either spend the money in the Harbor Maintenance Trust Fund or dissolve the fund. That fund, as you are aware, contains more than $3 billion. We have a documented core capability for fiscal year 2008 of as much as $1.3 billion. But the request for appropriations in fiscal year 2008 for operations and maintenance is only $735 million. In the words of my colleague, Warren McCrimmon of the Toledo-Lucas County Port Authority, we ought to put the "trust" back in the trust fund, or make the tax go away.

Third, modernize the Corps of Engineers and its work process. The American Association of Port Authorities has identified several proposals to do that. These recommendations range from revising the cost sharing formula for deep draft harbor projects, to providing a more accurate assessment of the true costs and benefits of the Corps' dredge fleet.

Mr. Chairman, with your permission, I ask that along with my statement, your record include a fact sheet from the American Association of Port Authorities on WRDA, with all of their recommendations, as well as recent testimony in the House on behalf of AAPA concerning port needs and dredging requirements.

Senator BAUCUS. Without objection.

[The referenced documents follow on page 115.]

Mr. MARCHAND. Finally, Mr. Chairman, in this room I know I am preaching to the choir, but more of your colleagues need to recognize that river and harbor development is not a luxury in the new millennium. It is the blood supply for the growth of our economy and all of the economic opportunities and benefits that come with international trade. We need your help.

Thank you for your time and the honor of being here with you today.

[The prepared statement of Mr. Marchand follows:]

STATEMENT OF DOUG J. MARCHAND, EXECUTIVE DIRECTOR, GEORGIA PORTS AUTHORITY, ON BEHALF OF THE AMERICAN ASSOCIATION OF PORT AUTHORITIES

Mr. Chairman, Ranking Member Senator Isakson, and subcommittee members, I am Doug Marchand, Executive Director of the Georgia Ports Authority. I am very grateful for your invitation to appear today, and also for the determination of the subcommittee to move forward with enactment of the Water Resources Development Act.

First, if I may display a little home state bias, I also would like to thank you, Senator Isakson, for your tireless work and interest in behalf of our ports going back many, many years. That work began in your days with the Georgia General Assembly, then in the U.S. House of Representatives, and now in the U.S. Senate.

Although you represented an urban District in the Atlanta area in both the state legislature and the U.S. House, you have always looked beyond the borders of your District to help our ports time and time again. We very much appreciate your com-

mitment, and I can attest to the fact that you and Senator Chambliss speak with the voice of authority in this and many other arenas of policy.

Mr. Chairman, the Georgia Ports Authority is one of the few public authorities in the nation in which we both own and operate our port property and facilities. This gives us a unique vantage point from which to survey the challenges and opportunities of modern ocean commerce.

Savannah is the second largest container port on the East Coast, and the fourth largest in the nation. In the 5-year period from 2001 to 2006, Savannah has experienced 100 percent growth, making it the fastest growing container port in the nation. Our Port of Brunswick is the sixth largest auto port in the nation. The Georgia Ports Authority directly employs 870 people, and Georgia maritime activities support more than 275,000 jobs in the state, contribute some $10.8 billion in income, $35.4 billion in revenue, and $1.4 billion in State and local taxes each year.

As the subcommittee well knows, this is a complicated business with many moving parts: ocean commerce handles 99 percent of our nation's overseas trade by volume, it operates within a complex web of local, state, and federal regulations, and it is on the front lines of homeland security in the post-9/11 world.

What distinguishes port operations in our economy is that how well we do our job has a direct and immediate impact on how well others can do theirs. If American businesses—large or small—are expected to stimulate new employment, and generate increased tax revenues through world trade—then our ports must be a leader in productivity and efficiency.

I must say, however, that the biggest barrier to increased efficiency in the maritime transportation system is the shortfall and uncertainty of federal resources. That includes the lack of assurance of adequate channel maintenance dredging, and the lack of sufficient authorization and funding for new projects to modernize our harbor channels. That is why the pending WRDA authorization, and full and fair appropriations for Fiscal Year 2008, are so important.

Here are my key points:

• Pass WRDA. It is the road map for the future of marine transportation, and the key to improving productivity and lowering transportation costs. When it moves in orderly fashion—every 2 years—it gives direction, commitment and accountability. So pass WRDA, even if it is not the perfect bill that we would all aspire to have.

• Do not think that by delaying WRDA—as has been done for more than 6 years now—you are simply putting off problems to another year. Delay actually causes new problems while not resolving the old. It sows the seeds of doubt, confusion, and inflation-driven higher costs. And it increases daily operating costs. For example, according to the U.S. Army Corps of Engineers, more than 30 percent of the 95,000 vessels that call at U.S. ports each year are light loaded. We need a system that protects the environment and assures the cost effectiveness of projects, but not a system that creates conflicting regulations and repetitive layers of review. A Reconnaissance Study for the Savannah Harbor Expansion Project—our pending harbor deepening project—identified a federal interest for deepening in 1996. After 11 years and almost $30 million in largely state-funded studies since then, the draft report is not slated to be out for public review until January 2008. Let me emphasize that most of the funding for this study has been advanced by the State of Georgia, so we have not been waiting on Federal appropriations—we have been waiting to get every block checked in the study requirements. Mr. Chairman, it should not take a dozen years to do a careful study of deepening an existing channel.

• Either spend the money in the Harbor Maintenance Trust Fund, or dissolve the fund. As you know, that fund currently contains more than $3 billion. We have a documented Corps capability for Fiscal Year 2008 of as much as $1.3 billion, but the request for appropriations in FY 2008 for operations and maintenance is only $735 million. In the words of my colleague Warren D. McCrimmon of the Toledo-Lucas County Port Authority, "we ought to put the trust back in the trust fund, or make the tax go away."

• Modernize the Corps of Engineers. The American Association of Port Authorities has identified several proposals to do that: improve partnership relationships between the Corps and local sponsors; revise the WRDA 1986 definition of deep-draft harbor and cost sharing formula to reflect the changes that have taken place in the world cargo fleet, and thus make the federal-local cost share more equitable; provide credit for in-kind work during construction; give ports broad authority to levy fees for raising the local share of federal dredging; give the Corps direction to exercise its authority to direct that removal and/or relocation of utilities within navigation channels at 100 percent of the owner's expense; and provide language to allow ports to purchase, as an allowable project cost, indemnification insurance for both the federal government and local sponsors. Finally, I also support the AAPA

initiative to have greater freedom in the operation of the Corps dredge fleet to permit an accurate assessment of the fleet's true costs and benefits.

• Pass the appropriations bills, and pass them at an adequate level to get the job done. I know that appropriations are not a matter under the direct control of this subcommittee and full committee, but without the orderly flow of funding, we tie our port system in knots, we unduly burden the Corps of Engineers and local sponsors, and we increase costs.

In this room I am preaching to the choir, but more of your colleagues need to recognize that river and harbor development is not a luxury in this new millennium—it is the blood supply for the growth of our economy and all of the economic opportunities and benefits that come with international trade.

I applaud the subcommittee for moving out early in this session to bring the bill to a vote in committee and in the Senate. I urge the House to follow your lead in moving forward, and I urge both bodies to give your very best effort to resolving disagreements and move to enactment.

Finally, Mr. Chairman, with your permission, I ask that along with my statement, your record include a fact sheet from the American Association of Port Authorities on WRDA, as well as Warren McCrimmon's recent testimony in the House on behalf of AAPA concerning port needs and dredging requirements. Thank you for your time and the honor of being with you this morning.

Senator ISAKSON. Mr. Chairman, I want to apologize to Mr. Williams. I have a 12 o'clock appointment that I cannot miss. So when I get ready to get up, which is right now, and leave, it is not because I don't want to hear your testimony. I read your brochure on the Penobscot River in Maine, and your testimony. We appreciate very much the contribution of the Conservancy, in particular to the Chattahoochee National River Forest effort in Atlanta, GA, which is now the largest urban river park in America. So thank you, and I apologize I cannot stay.

Doug, thank you very much for what you and Senator Mattingly are doing for our State. We appreciate your being here to testify today.

Ms. Pogue, likely as well. We appreciate your being here.

Thank you, Mr. Chairman.

Senator BAUCUS. You bet. Thank you, Senator.

Mr. Williams.

STATEMENT OF JAMIE WILLIAMS, STATE DIRECTOR, THE NATURE CONSERVANCY OF MONTANA

Mr. WILLIAMS. Mr. Chairman and members of the subcommittee, thank you for the opportunity to testify before you today. Again, I am Jamie Williams, State Director for the Nature Conservancy of Montana, as you well know. I am here to provide the subcommittee with my perspective on some ecosystem restoration successes with the Corps of Engineers, and to offer some suggestions on legislative and funding needs, with the strong hopes that WRDA passes this year.

The Nature Conservancy is dedicated to the conservation of ecologically important places for nature and people. Our on the ground conservation work is carried out in all 50 States and 30 foreign countries. In Montana, we have a 30-year track record of helping local landowners and communities sustain Montana's working landscape, legendary wildlife, free-flowing rivers, and recreational access—all of which, as you well know, Mr. Chairman, is so central to Montana's special quality of life.

The Corps of Engineers has been the key conservation partner for the Nature Conservancy, as we have expanded our efforts to re-

store large ecosystems such as the Upper Mississippi River, the Everglades, as well as many numerous smaller projects.

Drawing on this experience, I would like to share two success stories that demonstrate how we can meet the Nation's most challenging environmental problems, while also providing for flood control, irrigation, navigation and other water resource needs.

The Yellowstone River is one of the Conservancy's top conservation priorities in Montana. It is the longest remaining free-flowing river in the lower 48 States. The 671-mile-long Yellowstone is a rare model of the structure and function of large Western rivers. It continues to support extensive cottonwood forests and over 60 fish species, including a small population of pallid sturgeon, one of the last strongholds in the Missouri River Basin.

Just 70 miles above the river's mouth, however, lies a low-head diversion dam called Intake Dam. While critical for irrigation, Intake Dam prevents the Yellowstone's warm water fish species from reaching their native spawning grounds upstream. With only about 350 pallid sturgeon left in the Upper Missouri, fixing Intake is the keystone to their recovery in the Upper Basin.

To this end, the Nature Conservancy has been involved with a tremendous collaborative effort with the Army Corps of Engineers, the Bureau of Reclamation, the U.S. Fish and Wildlife Service, Montana Fish Wildlife and Parks, Montana's Governor and congressional delegation, and most importantly the Lower Yellowstone Irrigation Districts, to find a way of providing fish passage at Intake, while ensuring continued water delivery to over 52,000 acres of irrigated agricultural land which is key to Montana's sugar beet industry.

After studying many alternatives, a plan was developed to retrofit Intake Dam with a long rock ramp that will not only allow for fish passage, but also upgrade a deteriorating century old dam, ensuring water delivery for the next century. The project also complements other local efforts already underway upstream on one of the Yellowstone's key tributaries, the Tounge River, to modify three irrigation structures with "fish friendly" management. Once completed, the Intake project would immediately reopen 167 miles of spawning habitat on the Yellowstone, and another 375 miles of major tributaries, providing the best and cheapest alternative to restore these fish in the Upper Basin.

The project represents a creative way to meet restoration and economic needs, and has very broad local, State and Federal support.

The Conservancy is also a partner on the Hamilton City Flood Damage Reduction and Ecosystem Restoration Project in California, which is a model for meeting both human and ecosystem needs. Hamilton City is located on the Sacramento River, the largest river in California.

Historically, the river was lined by 800,000 acres of riparian habitat, over 90 percent of which has been lost. Hamilton City and surrounding agricultural lands are only marginally protected from flooding by a degraded private levee called the "J" Levee. As a result, Hamilton City has been evacuated due to flooding six times in the last 20 years.

For over 25 years, the community has attempted unsuccessfully to secure Federal engagement in efforts to reduce their risk of flooding. It was not until habitat restoration was incorporated into the project that the cost-benefit ratio justified Federal participation. When complete, this project will replace the existing "J" Levee with a structurally sound setback and reconnect 1,500 acres of floodplain to the Sacramento River. By meeting the flood control needs of the community, while restoring riparian habitat to the river processes, this innovative effort, which enjoys broad bipartisan support, is a true win-win.

While the Corps has been an excellent and willing partner on the projects I have just described, policy and fundraising constraints threaten the success of these and many other important restoration efforts. We recognize that tight budgets require difficult funding decisions, but with that said, the Conservancy believes that Congress must make ecosystem restoration a top water resource funding priority.

In addition, many of our projects, including our work on the Yellowstone and the Sacramento River I just described, are awaiting authorization in WRDA in order to move forward.

In conclusion, the Corps and its partners are developing remarkable projects that achieve significant economic and environmental gains, and are highly responsive to local interests. Congress should support this innovative work by passing WRDA and making ecosystem restoration a funding priority.

Thank you.

[The prepared statement of Mr. Williams follows:]

STATEMENT OF JAMIE WILLIAMS, STATE DIRECTOR, THE NATURE CONSERVANCY OF MONTANA

Mr. Chairman and members of the subcommittee, thank you for the opportunity to testify on America 's Water Resources needs, and in particular, the ecosystem restoration needs of our country. I am Jamie Williams, State Director for The Nature Conservancy in Montana. My comments today will focus on three areas:

- examples of successes in ecosystem restoration;
- policy and funding needs to move forward; and
- highlights of some of the nation's most significant ecosystem restoration priorities.

The Nature Conservancy is an international, nonprofit organization dedicated to the conservation of biological diversity. Our mission is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. Our on-the-ground conservation work is carried out in all 50 states and in 30 foreign countries and is supported by approximately one million individual members. The Nature Conservancy has protected more than 117 million acres of land and 5,000 miles of river around the world. Our work also includes more than 100 marine conservation projects in 21 countries and 22 US States. In Montana, we have a 30-year track record of helping local landowners and communities sustain Montana's working landscapes, legendary wildlife, free flowing rivers, and recreational access—all of which are so central to Montana 's special quality of life.

The Conservancy owns and manages approximately 1,400 preserves throughout the United States—the largest private system of nature sanctuaries in the world. We recognize, however, that our mission cannot be achieved by core protected areas alone. Therefore, our projects increasingly seek to accommodate compatible human uses, and especially in the developing world, to address sustained human well-being.

As the Conservancy has increased its engagement in a variety of restoration projects ranging from large-scale efforts in the Upper Mississippi River and Everglades to smaller scale projects under continuing authority programs, the Corps has become an important conservation partner. By number of projects, the Conservancy is now the Corps' largest non-federal sponsor of ecosystem restoration projects. This

expanding partnership is reflected in our Sustainable Rivers Program, a joint effort focusing on dam re-operations on 10 ecologically significant river systems across the country. At another 39 sites we are collaborating with the Corps under the sections 1135 and 206 Continuing Authority Programs (CAPs), and other Corps authorities, to protect and restore areas of critical ecological concern.

I. SUCCESSES IN ECOSYSTEM RESTORATION

The past century has witnessed a decline in the ecological health of many of our nation's rivers and streams. Much of this decline is the unintended consequence of federal water development projects designed to provide public benefits such as flood control, electricity and irrigation. As a result, ecosystem restoration has become a critical component of the Corps' Civil Works mission. Drawing on the Conservancy's growing experience with ecosystem restoration, I would like to share with you three success stories that demonstrate how we can meet some of the nation's most challenging environmental problems while continuing to provide for water resource needs such as flood control, irrigation and navigation.

The Yellowstone River is one of the Conservancy's top conservation priorities in Montana. As the longest remaining free-flowing river in the lower 48 States, the 671-mile Yellowstone is a rare model of the structure and function of large western rivers. It continues to support healthy riverside cottonwood forests and over 60 fish species, including a small population of endangered pallid sturgeon, one of the last strongholds in the Missouri River Basin.

Just 70 miles above the river's mouth with the Missouri is a low-head diversion dam, called Intake Dam. While critical for irrigation in the region, Intake Dam prevents the Yellowstone 's warm water fish species from reaching native spawning grounds upstream. There are only about 350 pallid sturgeon left in the upper Missouri-Yellowstone Recovery Area, and the Yellowstone presents the best functioning river system to recover this endangered fish. Right now, the fish collect at the base of Intake dam during their spawning run only to turn around without success. The sturgeon population is aging, and biologists estimate they only have about 10 years left to successfully reproduce naturally. The Conservancy has been involved with a tremendous collaborative effort of the U.S. Fish and Wildlife Service, the Army Corps of Engineers, the Bureau of Reclamation, Montana Fish Wildlife and Parks, Montana's Governor and Congressional delegation, and most importantly, the local Lower Yellowstone Irrigation Districts to find a way of providing fish passage at Intake while ensuring continued water delivery to over 55,000 acres of irrigated agricultural land critical to Montana's sugar beat industry.

After studying many alternatives, a plan was developed to retrofit Intake dam with a long rock ramp that will not only allow for fish passage but also upgrade a deteriorating, century-old dam, ensuring water delivery for the next 100 years. The project also compliments other local efforts upstream on one of the Yellowstone's key tributaries, the Tounge River, to modify 3 irrigation structures with "fish friendly" management. Once completed, the Intake project would immediately reopen up to 175 miles of spawning habitat on the Yellowstone River and another 375 miles of major tributaries once the Tounge projects are completed, providing the best and cheapest alternative to restore these fish in the Missouri Basin (see attached map).

The project represents a great, creative way to meet ecosystem restoration and economic needs, and has very broad local, State, and Federal support. In fact, it has resulted in basin-wide support, which is remarkable given that the water politics of the Missouri River basin are extremely complicated. To ensure that success is realized, we urge Congress' continued support by providing authorizing language in WRDA and necessary federal funding for this project.

The Conservancy is also a partner on the Hamilton City Flood Damage Reduction and Ecosystem Restoration project in California, which is a model for what can, and should, happen elsewhere. Hamilton City is located on the Sacramento River—the largest river in California, draining approximately 24,000 square miles and supplying 80 percent of the freshwater flowing into the Sacramento-San Joaquin Delta. Historically, the river was lined by 800,000 acres of riparian habitat. Over 95 percent of this habitat has been lost. The remaining mosaic of riparian and aquatic habitats along the Sacramento River is home to several listed threatened and endangered species, including neotropical migrant birds, all four runs of chinook salmon, and steelhead trout.

Hamilton City and surrounding agricultural lands are only marginally protected from flooding by a degraded private levee (circa 1904) called the "J" Levee. The "J" Levee does not meet any formal engineering standards and provides only a 66 percent chance of passing a 10-year flood. As a result, Hamilton City has mounted flood

fights and has been evacuated due to flooding six times in the last 20 years. In the winter of 2005–2006, flood conditions prompted delivery of 60,000 sandbags to Hamilton City. Surrounding agricultural lands also receive little protection from flooding.

For over 25 years, the community attempted—unsuccessfully—to secure federal engagement in their efforts to reduce the risk of flooding to the town and the surrounding agricultural lands that are important to the town's economy. It was not until habitat restoration was incorporated into the project that the benefit of the project was deemed sufficient to justify the cost. Project partners collaborated to conduct a feasibility study, which produced a plan with broad bipartisan support. The plan involves construction of a new set-back levee and reconnection of about 1,500 acres of floodplain to the river, which will simultaneously facilitate restoration of riparian habitat and significantly enhance flood protection for the community.

This dual purpose project has the potential to be a true "win-win"—by meeting the flood-control needs of the local community while restoring riparian habitats and natural river processes. The local community is working hard to uphold its part of the bargain. Its citizens have raised over $100,000 in donations and proceeds from annual levee festivals held since 1998 to contribute toward the project's nonfederal cost share. To continue to move forward, this project needs the continued support of Congress to provide federal funding and authorizing language in WRDA.

Lastly, I would like to highlight an innovative and cooperative project to restore over 1,000 miles of river habitat on the Penobscot River in Maine. The Penobscot is Maine's largest river and second largest in New England. Historically, runs of Atlantic salmon, American shad, alewife and nine other migratory fish species streamed from the Gulf of Maine to spawning habitats up river. These native fisheries thrived in a complex ecosystem supported by diverse and abundant invertebrate life, fertile wetlands and varied spawning. However, over the last two centuries, construction of a series of dams along the river has created impassable barriers to many of these native sea-run fish.

The restoration of the Penobscot River is an unprecedented effort to remove two dams and build a state-of-the-art fish bypass around a third to open up historic spawning habitat for endangered Atlantic salmon and six other species of sea-run fish. The seeds of the project were sown in 1999 when PPL Corporation (formerly Pennsylvania Power and Light) purchased a series of dams in Maine. PPL approached the Penobscot Indian Nation and several conservation organizations in hopes of creating a cooperative model for the dam relicensing process. The project is the result of a groundbreaking agreement among diverse parties, including PPL Corporation, the State of Maine, the Penobscot Indian Nation, the U.S. Department of the Interior and several conservation groups. An innovative part of the agreement allows the power company to increase energy production at five other hydro facilities on the river thus replacing the energy that would otherwise be lost from the decommissioning of three dams.

The Penobscot River Restoration Project resolves longstanding disagreements over how best to restore native sea-run fish and their habitat while balancing the need for hydropower production. The environmental and economic goals of the project include restoring self-sustaining populations of native sea-run fish, maintaining hydropower resources, renewing opportunities for the Penobscot Indian Nation to exercise sustenance fishing rights, and avoiding future uncertainties over regulation of the river. The project also promises to expand recreational fishing and boating opportunities, creating new opportunities for tourism and local economic growth.

The total cost for this restoration is estimated to be $50 million. To date, the project has raised $7.5 million from non-federal sources and $4.5 million from federal sources. The President's FY08 budget requests at least $10 million in support of the acquisition of the dams and for pre- and post-removal monitoring. In addition, this project requires authorizing language in WRDA to enable the Corps to become a fully integrated partner in the restoration work.

Much of our experience in ecosystem restoration, including our work on the Yellowstone, Sacramento and Penobscot Rivers, has shown how traditional water resource goals such as flood protection, irrigation and navigation can be met while providing for ecosystem needs. These success stories and many others like them demonstrate why ecosystem restoration must remain a top priority in legislation and funding.

II. POLICY AND FUNDING NEEDS

While the Corps has been an excellent and willing partner on the projects described above, policy and funding constraints threaten the success of these and many other important restoration efforts. We recognize that in tight budget times difficult funding decisions must be made. With that said, we urge Congress to make

the restoration of ecosystems that contribute to the safety, welfare and livelihoods of local communities one of the nation's top water resource funding priorities. In addition to funding needs, many projects, including the successes just described, are awaiting authorization in WRDA to move forward. To ensure that we continue to build on past successes in ecosystem restoration, Congress must quickly pass WRDA and return to the bi-annual reauthorization of this critically important legislation.

Specific recommendations for WRDA authorization and ecosystem restoration funding are outlined below.

Programmatic Funding

The Conservancy supports well-funded, robust programmatic authorities to restore functioning, sustainable ecosystems. However, funding shortfalls in existing restoration programs have hindered a number of our restoration projects. In addition, there are a number of ecosystem restoration needs that are not adequately addressed by current restoration authorities. We offer the following programmatic funding recommendations:

Raise the programmatic funding ceilings for sections 206 and 1135 Continuing Authority Programs (CAP) from $25 million to $100 million per year nationally, and the per project ceilings from $5 million to $10 million.

Under the Section 1135 and 206 Continuing Authority Programs (CAP), the Conservancy has been the lead non-federal sponsor on 17 projects. These projects seek to achieve an array of ecosystem restoration goals ranging from coastal shoreline stabilization to fish passage and floodplain reconnection. CAP 1135 and 206 projects are producing many success stories around the country, and as a result, demand now exceeds even the annual authorized limits for these programs.

Oversubscription of these programs has halted a number of projects that enjoy strong support from the local community and Corps District. In an attempt to address this problem, the FY06 Energy and Water appropriations bill implemented a ban on new starts and advancement of existing projects. Despite significant investment of both Federal and Conservancy resources in feasibility studies and project design, this situation left many of our projects languishing without funding. In some cases, this moratorium has forced the Conservancy's state chapters to either abandon work on the projects or seek other funding outside of the Corps budget. Increased authorization and full funding is needed to move these worthwhile projects forward and to continue the positive work that has been started under these ecosystem restoration authorities.

In addition to increasing overall program funding, adjustments are needed to the per project funding limits under these authorities. While the relatively small size of CAP projects provides distinct advantages for the Corps and project sponsors, the typical costs associated with ecosystem restoration such as re-vegetation or channel reconstruction can easily eclipse the Federal limit of $5 million per project. Increasing the per project authorization to $10 million will help alleviate this problem.

Create a new Small Dam Removal Continuing Authority Program authorized at $25 million per year.

Currently, there are tens of thousands of small, privately-owned dams nationwide. These dams were built to meet public needs such as flood control, irrigation and hydropower. While many are still serving these purposes, a large number no longer perform as they were originally intended and many have aged beyond their planned life expectancy, causing safety risks for communities downstream. As we have learned from our work on the Yellowstone and Penobscot Rivers, many dams also cause ecological harm to rivers by altering the natural chemical, physical and biological characteristics of the waterway and limiting access to important habitat for a number of fish species. While there is often strong support for removal of small dams that have outlived their usefulness, a dedicated funding source for this purpose does not yet exist. A new small dam removal continuing authority program would go a long way to help to fulfill this unmet need.

Reauthorize the Estuary Restoration Act

In approving the Estuary Restoration Act (ERA) in 2000, Congress recognized the importance of a nationwide, strategic plan and multi-level partnerships for effectively addressing the problems plaguing our nation's estuaries. By setting a goal to restore one million acres of estuary habitat by 2010, the Act encourages coordination among all levels of government, and engages the unique strengths of the public, non-profit, and private sectors.

At this time, a number of improvements are necessary to the Act, including funding reauthorization for the Army Corps of Engineers, as well as new authority for the partner federal agencies on the Estuary Council the Environmental Protection Agency, National Oceanic and Atmospheric Administration, U.S. Fish and Wildlife Service, and U.S. Department of Agriculture to request funding and coordinate with

the Army Corps through cooperative agreements to implement estuary restoration projects. Additionally, in order for the Estuary Restoration Program to become more effective, small projects language must be enacted to complement these cooperative agreements, thereby allowing projects under $1 million to move forward through the assistance of the partner agencies.

The Conservancy supports the inclusion of language in this year's WRDA to reauthorize the Estuary Restoration Act (ERA, P.L. 106–457). We applaud the committee for including reauthorization language for the ERA in the Senate WRDA 2006 legislation, and we encourage the committee to support maintaining the ERA language in the WRDA 2007 legislation.

Policy Constraints

Through our on the ground experience delivering ecosystem restoration projects we have identified a number of programmatic or policy changes that are needed to improve the implementation of these projects. The recommendations below will help improve efficiency and expedite project delivery by removing some of the policy barriers to successful implementation.

Permit credit for ecosystem restoration work that is related to a flood control project and is locally implemented prior to project authorization.

Presently, the Corps may credit non-federal sponsors for early implementation of flood walls, levees or other features that reduce flood damages if built to Corps standards and ultimately included in the authorized project. However, no similar authority exists for early implementation of floodplain or ecosystem restoration. In cases where flood control projects include a restoration component, allowing early restoration means implementation can proceed more quickly, perhaps accelerating the schedule by years.

Permit NGOs to serve as the non-federal sponsor of General Investigations Studies

The Nature Conservancy has been an integral partner in many ecosystem restoration efforts involving General Investigation studies, but currently, non-governmental organizations cannot serve as the non-federal sponsor. Where the Conservancy or another NGO is the lead partner in an ecosystem restoration project, this policy limits the non-federal funding and in-kind support that can be brought to a project. Allowing NGOs to be non-federal sponsors will expedite project delivery and ensure that NGOs can continue to play an active role in ecosystem restoration projects.

Permit pre-Project Cooperation Agreement (PCA) credit in the Section 206 and 1135 programs for necessary project elements performed by the non-federal sponsor.

The PCA occurs after all of the Corps studies, planning, and designs are completed and the non-federal project sponsor commits to the non-federal share of the project. All of the Corps costs prior to signing the PCA are included in the cost of the project, while any work the non-federal sponsor does prior to the PCA is not included or credited. The Conservancy proposes the local Corps District be permitted to give cost-share credit for work undertaken by the non-federal partner within 5 years prior to signing the PCA and after the initial letter of intent. This credit could include such activities as pre-project monitoring and restoration activities. Credit will not be recognized beyond the non-federal sponsor's cost share requirement and the Corps will not be liable for funds if the PCA is not ultimately signed.

Correct unlimited liability for non-federal sponsor in Project Cooperation Agreements (PCA).

Presently, PCAs permit either party to stop a project if it exceeds agreed project costs. The unlimited liability problem is a clause in the PCA that permits the District Engineer to require a project to be completed at statutorily required cost share for the purposes of public health and safety, and if the project exceeds the statutorily determined cap for federal share, then all additional costs become the responsibility of the non-federal partner. The Conservancy proposes that in the event that the District Engineer determines a project needs to be continued for the purpose of public health and safety, the non-federal sponsor will be responsible for increased project costs up to 20 percent over the original estimated project cost at the statutorily determined cost share. The Corps will assume all costs exceeding 20 percent of the original estimated project cost, notwithstanding the statutorily determined federal share cap.

III. ECOSYSTEM RESTORATION PRIORITIES

In addition to the projects highlighted above, the Conservancy is actively involved in a variety of restoration efforts across the country. As the committee evaluates the President's FY08 Budget for the Corps of Engineers and considers a new WRDA bill, we ask you to take into account these significant ecosystem restoration needs. Our top priorities are outlined below.

The Conservancy has a long history of working with partners on conservation projects within the Upper Mississippi River and Illinois River basins. To further these efforts the Conservancy and the U.S. Army Corps of Engineers Mississippi Valley Division signed a regional memorandum of agreement to promote collaborative water management of the Mississippi River. The Conservancy's goal is to conserve and restore the ecological structure, function and dynamics of the Upper Mississippi and Illinois Rivers' basins and their diverse freshwater and terrestrial ecosystems. Key strategies for accomplishing this include naturalizing flows, restoring floodplains in these river valleys and promoting compatible agricultural and forestry practices within their basins. Two important restoration authorities are contributing to our restoration work in the Upper Mississippi River basin.

The Upper Mississippi River System Environmental Management Program (EMP) is a Corps program that constructs habitat restoration projects and conducts long-term resource monitoring of the Upper Mississippi and Illinois Rivers. The EMP operates as a unique federal-state partnership involving five states (Illinois, Iowa, Minnesota, Missouri, and Wisconsin). We applaud the committee for authorizing NGOs to be non-federal sponsors for this program in the 2006 WRDA bill, which will increase ecosystem restoration opportunities within the basin. We encourage the committee to maintain this language in this year's WRDA bill. The Conservancy also supports full funding of $33.2 million for EMP in FY 2008, an increase over the President's $23.464 million request.

The Enhanced Navigation Capacity Improvements and Ecosystem Restoration Plan for the Upper Mississippi River and Illinois Waterway System is a comprehensive ecosystem restoration program that recognizes the Upper Mississippi and Illinois rivers as multi-purpose rivers that provide important economic and ecological benefits, enriching the quality of life for millions of people. However, regularly and at great cost, ecological functions and benefits have been compromised for economic development. This program will allow the Corps and its partners to begin the task of restoring the ecological health of the Upper Mississippi and Illinois rivers.

The Nature Conservancy strongly supports a well-funded, robust ecosystem restoration program for the Upper Mississippi River basin. We would like to commend the Committee for including provisions in WRDA as it passed the Senate last year that promote a science-based approach to restoring the upper Mississippi River basin and emphasize a healthy ecosystem through effective and adaptive restoration and management. We ask you to retain these forward-looking provisions as you consider WRDA this year.

The Missouri River Fish and Wildlife Recovery Program supports projects that mitigate for fish and wildlife habitat losses resulting from past channelization efforts on the Missouri River. The Missouri River has an array of aquatic and terrestrial systems containing more than 500 species of mussels, fish, amphibians, reptiles, birds and mammals, five of which are either listed or candidates for listing under the Endangered Species Act. The Corps has completed 30 projects along the river in the lower four states (Iowa, Kansas, Missouri and Nebraska) resulting in more than 40,000 acres of restored aquatic and floodplain habitat. The Missouri River Fish and Wildlife Recovery Program will not only enhance these restoration efforts, but complement protection and restoration efforts across the basin by the Bureau of Indian Affairs, Bureau of Land Management, Bureau of Reclamation, Department of Defense, U.S. Forest Service, U.S. Fish and Wildlife Service, National Park Service and the Natural Resources Conservation Service.

The Conservancy is in agreement with the Basin states Governors that program funding should be used basin-wide, including funding for the Yellowstone River Intake project in Montana. The Conservancy also supports the establishment of the Missouri River Recovery Implementation Committee to oversee and coordinate restoration efforts. We commend the Committee for including these provisions in last year's Senate-passed WRDA and request that they be retained as you consider WRDA this year. The Conservancy also supports $85.0 million in FY 2008 for the Missouri River Fish and Wildlife Recovery Program.

The South Florida Everglades Ecosystem Restoration Program includes a collection of restoration authorities that function together to restore one of our nation's most precious natural resources. The Everglades are home to a profusion of bird species, with 347 species recorded within Everglades National Park alone. The ecosystem provides breeding habitat for roseate spoonbills, snail kite, southern bald eagle, Cape sable seaside sparrow, wood stork, white ibis, glossy ibis and eleven species of egrets and herons. For the last 60 years, the Corps has built projects for human benefit that shunted water away from the Everglades. Many factors, including these flood control projects and agricultural and urban development, have contributed to the reduction and degradation of the wetlands ecosystem. Restoration of this globally significant region is a priority for the Conservancy. The Conservancy

continues to support robust funding for these efforts and recommends $249.1 million in the South Florida Everglades Ecosystem Restoration Program in FY 2008. This funding will support the following suite of restoration programs:

• Modified Water Deliveries to Everglades National Park ($35 million): This project balances fresh water crossing Tamiami Trail and entering the park. Completing this project is a pressing concern to restore habitat and stave off the danger of an estuarine collapse in Florida Bay.

• Critical Projects Construction ($8.3 million): This special program is made up of nine projects that are critical to the future of the entire ecosystem's restoration

• Kissimmee River Restoration Construction ($50 million): This project involves restoring water-level fluctuations and seasonal discharges from Lakes Kissimmee, Cypress and Hatchineha in the upper basin. This project features 22 miles of canal backfilling and structure removal along with land acquisition of over 100,000 acres.

• Comprehensive Everglades Restoration Plan (CERP) Project Construction ($35 million): Components of this plan include aquifer storage and recovery; construction of surface water storage reservoirs; construction of storm water treatment areas; seepage management; removal of 240 miles of barriers to sheet flow; and reuse of wastewater at two regional plants.

• Central and Southern Florida Project to include the C–111, CERP, and STA 1 East projects ($120.8 million): This program includes the Upper St. Johns, Manatee Protection, C–51 and STA–1E, C–111, Miami Canal Study and 10 initial projects of the CERP. Recent progress includes initial construction of manatee pass gates, with all gates expected to be completed this year; completed construction on the C–51 and transfer of operations to the South Florida Water Management District; and continuing design for the next phase of buffer construction for the C–111 project.

The Puget Sound and Adjacent Waters Program provides funding for early action projects to preserve, protect and restore critical ecosystem processes, habitats, and functions within the Puget Sound basin. A Puget Sound Nearshore Marine Habitat Restoration General Investigation study is also underway to examine the needs of the Puget Sound Basin and determine how large-scale management measures, including restoration actions, can benefit the environment. These two efforts are closely coordinated, as the Nearshore study is informing the selection of critical projects for implementation through the Adjacent Waters Program.

Initial assessments of nearshore habitat by the Puget Sound Ambient Monitoring Program indicate that the ecological health of the nearshore ecosystem is in steep decline with more than a third of the system directly impacted by development. This situation is much worse near urban centers and large river deltas, where habitat loss approaches 100 percent. The Puget Sound Basin is home to more than 220 species of fish, 26 different kinds of marine mammals, 150 species of birds and thousands of species of invertebrates. This includes federally-listed Southern resident orcas, Puget Sound chinook and Hood Canal summer chum salmon, bull trout, Stellar sea lion, marbled murrelet, bald eagle, and more than 100 other species of rare plants and animals.

Resources for conservation in this region are limited, urban areas are expanding, and an extraordinary heritage of native species and ecosystems is at risk. The Puget Sound restoration efforts are designed to provide an ecosystem approach to the ongoing Endangered Species Act and other species-specific restoration and recovery initiatives with the goal of achieving a healthy and sustainable Puget Sound basin. The Conservancy supports continued funding for these important restoration efforts and recommends $5 million in FY 2008 for the Puget Sound and Adjacent Waters Program as well as $1.9 million in FY 2008 for the Puget Sound Nearshore Marine Habitat Restoration General Investigation Study.

The Louisiana Coastal Area study (LCA) represents a committed effort to establish highly productive, cost-effective, and long-term coastal restoration projects that are essential to saving Louisiana's coastal wetlands. The Louisiana coastal plain remains the largest expanse of coastal wetlands in the contiguous United States. The coastal wetlands, built by the deltaic processes of the Mississippi River, contain an extraordinary diversity of habitats that range from forested swamps to freshwater, brackish, and saltwater marshes. These habitats comprise one of the nation's most productive and important natural resources. Coastal Louisiana produces 20 percent of the seafood in the United States and includes deep-draft ports that handle 16 percent of the Nation's waterborne commerce by tonnage. Coastal wetlands also provide critical stopover habitat for neotropical songbirds on their migration between North and Central America.

Cosatal Louisiana is home to over 2 million people, representing 46 percent of the State's population. In addition to providing vital habitat to commercial and recreational wildlife and fishery resources, the coastal wetlands protect an internationally significant commercial-industrial area from the destructive forces of coastal

storms. The need for the storm mitigating capacity of healthy coastal wetlands was highlighted by the devastation of the 2005 hurricanes that struck the Louisiana coast.

The Nature Conservancy strongly supports authorization and funding of a large-scale program for restoration of this nationally important resource. We applaud the committee for including provisions in WRDA as it passed the Senate last year that promote a science-based program to support the restoration and recovery of Louisiana's coastal wetlands. We ask you to retain these forward-looking provisions as you consider WRDA this year, and we call for continued commitment to funding for restoration of the Louisiana coast.In conclusion, our experience suggests that ecosystem restoration should be one of our Nation's top water resource priorities. The Corps and its partners are developing remarkable projects that achieve significant economic and environmental gains and are highly responsive to local interests. Congress should support that innovative work by passing WRDA and making ecosystem restoration a funding priority.

I would like to thank the Chairman and the entire subcommittee for the opportunity to share this testimony with you today.

[The referenced documents follow on page 143.]

Senator BAUCUS. Thank you, Jamie.

We have spoken often about some of the projects in our State. I am very impressed with the cooperative efforts of lots of different people, whether it is the Blackfoot Challenge, or all the various different projects in the State. It is my experience, frankly, that they have been successful basically because of the hard work of a lot of people, and also individuals spending a lot of time listening to another person's point of view, whether it is a landowner, or whether is somebody at Trout Unlimited, or whatever it is, just to get the thing put together in a way that everyone can work with and appreciate and champion, and be very proud of.

For the benefit of this committee, could you tell us what tends to work and what doesn't work? I know dollars are important, but just anything based upon your experience that this committee can benefit from as you in the Conservancy try to protect wildlife and recreational needs.

Mr. WILLIAMS. Mr. Chairman, I think probably the most important thing you mentioned there was listening. That is a hard trait for many folks. You know, there are amazing people in each of these landscapes we work that have really terrific ideas about how to achieve conservation.

And so, I would say collaborating with all the stakeholders and understanding what their interests are and where they are coming from, and collaborating on creative solutions that meets multiple interests. That has really been the key to conservation successes in Montana, and certainly the key to the success of this project.

The Intake project is a win-win for everybody and it meets all of their needs, 450 farming families, conservation interests, as well as avoiding a major regulatory train wreck, because we got proactive early and found a creative solution. Of course, at the end of the day, funding is very important.

Senator BAUCUS. Right. Thank you very much. I commend you for what you are doing, you and all your colleagues. It is very impressive, the success that you are reaching, at least in Montana.

Mr. WILLIAMS. Thank you.

Senator BAUCUS. Senator Whitehouse?

Senator WHITEHOUSE. Thank you, Mr. Chairman. I want to particularly thank the Chairman for his courtesy in having me join his subcommittee, of which I am not an ordinary member, but I didn't

want Ms. Pogue to be the only member of the panel who did not have their home State Senator present. So I felt it was advisable to stop by, and I want to commend her here for her strong leadership on so many environmental issues in Rhode Island.

Senator BAUCUS. That is a good thing to do.

Senator WHITEHOUSE. I did want to mention one piece of her testimony, where she says in the early years, levees may have been built to contain the probable maximum flood, the 500- or 200-year flood, et cetera. In the past two decades, most levees have been dumbed down to only contain the 1 percent chance flood, the 100-year flood.

I wanted to ask to what extent we need to be looking at revising those 100-year flood level estimates, some of which may have been developed 10 or 15 years ago. In the wake of new information, we are finding out about climate change driven by global warming and its effect on the severity of anticipated storms.

Ms. POGUE. Yes, thank you, Senator Whitehouse. There are a couple of points to be made with that, and that is that one of the things that needs to be looked at, and I am sure we will find as we progress I hope through the levee inventory, is that oftentimes levees were built perhaps with that 100-year standard in agricultural or open areas way back then.

What has happened, and we have seen it in our own State with dams, the 587 that we have, is that once that levee fills, and it might have initially been intended for agricultural purposes, but lo and behold you have urban sprawl and you have development and you have residential areas all of a sudden on the other side of the levee, so that 100-year standard may not be adequate.

The other point we try to make in our testimony is that what is the most adequate standard, and that is trying to make a point for, for example, critical facilities are an example of something that should perhaps be built to a 500-year standard, or a higher standard than a 100-year standard.

So I think that when we look at levees, and obviously we are not advocating that levees be built. There are other floodplain management solutions out there, but that in the event of improving levees or building levees, you need to really look at a more comprehensive approach, as opposed to project-directed, and that is, what is going to be on the other side of that levee? What type of land are you trying to protect?

We strongly advocate on behalf of the Association in the event there is no development around, there should be no levee built.

Senator WHITEHOUSE. Thank you, Mr. Chairman.

Senator BAUCUS. Thank you, all of you. Maybe we can get WRDA enacted this year. That would just be wonderful, and also an updated WRDA, too, and not just an old WRDA, but an updated WRDA.

Thank you very much. I appreciate all the time you have taken.

One final point, Senators will want to ask questions, and they will be submitted for all of you to answer. I would urge you to respond on a very timely basis. I think we have 3 days for Senators to submit questions to you, and again, if you could get them back on a very timely basis, that would be very helpful.

Thank you very much.

The hearing is adjourned.

[Whereupon, at 12:10 p.m., the subcommittee was adjourned, to reconvene at the call of the Chair.]

[Additional statements submitted for the record follow:]

STATEMENT OF BENJAMIN L. CARDIN, U.S. SENATOR FROM THE STATE OF MARYLAND

Mister Chairman:

Thank you for holding this hearing today.

I represent a state which relies heavily upon the Army Corps of Engineers' water resource programs.

Maryland has 31 miles of Atlantic Ocean coastline, which are the site of two critical Corps projects—a hurricane protection project at our premier beach resort community, Ocean City, and a mitigation project at Assateague Island National Seashore.

The Chesapeake Bay is America's largest estuary. The Corps' oyster and habitat restoration, shoreline protection, and sediment management programs are integral to our efforts to restore the Bay.

We have a geography and topography which makes the Chesapeake Bay particularly susceptible to erosion. This erosion contributes millions of cubic yards of sediment annually to the bay, adversely affecting water quality and clogging navigation channels.

The Port of Baltimore is one of the largest ports on the east coast and a vital engine of economic activity, contributing $2 billion to the State's economy and employing 18,000 Marylander's directly and tens of thousands more indirectly.

There are 126 miles of shipping channels leading to the Port of Baltimore. Maryland also has more than 70 small navigation projects around the Chesapeake Bay and Atlantic Ocean. These navigation projects are critical to commercial and recreational fisherman, to local and regional commerce and to local economies.

We rely heavily on the U.S. Army Corps of Engineers for flood protection in communities in Western Maryland and for water supply.

In short, the Corps of Engineers has projects and provides assistance to virtually every jurisdiction in the State of Maryland.

This partnership would not exist but for the authorities and funding provided in previous Water Resources Development Acts.

Our efforts in Maryland focus on four principal areas:

maintaining the navigational channels serving the Port of Baltimore and numerous communities in our state, and finding responsible and environmentally sound solutions for disposing of the dredged material from these channels,

restoring the Chesapeake Bay and the rivers and streams which flow into the Bay,

addressing the shoreline erosion problems on Maryland's Atlantic Coast, and

mitigating for previous construction of civil works such as the rewatering of the C&O Canal in Cumberland.

Because of the cuts in the President's budget for the Army Corps of Engineer's civil works program in recent years and the failure to reach an agreement on the reauthorization of WRDA, many of these priorities are at risk.

The President's budget for fiscal 2008 once again cuts essential Corps' programs and projects. It terminates federal support for the Chesapeake Bay's oyster restoration project and environmental protection programs; it zeroes out the periodic renourishment required for the hurricane protection project at Ocean city; it provides no continued funding for the flood mitigation project at Cumberland; and it significantly reduces funding for many small navigation projects.

We need a WRDA and a budget that will help move forward on all these fronts and address critical water resource infrastructure needs in Maryland.

National Academy of Sciences and National Academy of Public Administration Studies Calling For Reform And Pointing Out Significant Flaws In Corps of Engineers' Project Studies

National Academy of Public Administration, ***Prioritizing America's Water Resources Investments, Budget Reform for Civil Works Construction Projects at the U.S. Army Corps of Engineers***, February 2007: recommends, among other things, modernizing the Corps' outdated planning guidelines, improving the Corps' project planning process and revising the Corps' budgeting process.

National Academy of Sciences, ***Review of the U.S. Army Corps of Engineers Restructured Upper Mississippi River-Illinois Waterway Feasibility Study (Second Report)***, October 2004: 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.

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

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

National Academy of Sciences, ***River Basins and Coastal Systems Planning Within the U.S. Army Corps of Engineers***, 2004: 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.

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

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

National Academy of Sciences, ***Compensating for Wetland Losses under the Clean Water Act,*** 2001: highlights the significant problems with mitigation efforts to date, including mitigation carried out by the Corps.

National Academy of Sciences, ***Inland Navigation System Planning: The Upper Mississippi River-Illinois Waterway,*** 2001: 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.

National Academy of Sciences, ***New Directions in Water Resources Planning for the U.S. Army Corps of Engineers***, 1999: 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.

National Academy of Sciences, ***Restoring and Protecting Marine Habitat: The Role of Engineering and Technology***, 1994: 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.

Government Accountability Office and Congressional Research Service Reports Calling For Reform And Identifying Significant Flaws In Corps Project Planning

Government Accountability Office, ***Hurricane Katrina, Strategic Planning Needed to Guide Future Enhancements Beyond Interim Levee Repairs***, September 2006 (GAO-06-934): finds that the Corps is not properly coordinating and integrating over $7 billion in interim repairs and construction for hurricane protection work in New Orleans. This approach makes inefficient use of federal funds, and ignores the findings of a Corps-established external review that calls for careful integration of all aspects of hurricane protection.

Government Accountability Office, ***Corps of Engineers, Observations on Planning and Project Management Processes for the Civil Works Program***, March 2006 (GAO-06-529T): finds that recent Corps studies "did not provide a reasonable basis for decision-making" because they were "were fraught with errors, mistakes, and miscalculations, and used invalid assumptions and outdated data." The problems at the agency are "systemic in nature and therefore prevalent throughout the Corps' Civil Works portfolio," and ensure that national priorities cannot be met through the civil works program.

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): concludes 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.

Government Accountability Office, ***Improved Analysis of Costs and Benefits Needed for Sacramento Flood Protection Project***, October 2003 (GAO-04-30): concludes 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. The costs of the project rose dramatically because the original levee design was fundamentally flawed. The need to dramatically improved that design caused the estimated cost of this project to balloon from $57 million in 1996 to between $270 and $370 million by 2003.

Government Accountability Office, ***Oregon Inlet Jetty Project: Environmental and Economic Concerns Need to Be Resolved***, September 2002 (GAO-02-803): concludes 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. GAO also reports that the Departments of Commerce and Interior do not believe that the Corps has adequately mitigated for environmental concerns, and recommends that the project not proceed if those environmental concerns cannot be addressed.

Government Accountability Office, ***Delaware River Deepening Project: Comprehensive Reanalysis Needed***, June 2002 (GAO-02-604): concludes that the Corps' project analysis is so flawed that it can not provide a reliable basis for deciding whether to proceed with the project. GAO found that the Corps overstated the project's benefits by 200 percent, that the Corps' benefit cost analysis was based on invalid assumptions and outdated information, and that the Corps could not explain its own analysis.

Government Accountability Office, ***Scientific Panel's Assessment of Fish and Wildlife Mitigation Guidance***, May 2002 (GAO-02-574): 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.

Congressional Research Service, ***Agriculture as a Source of Barge Demand on the Upper Mississippi and Illinois Rivers: Background and Issues***, May 2004 (RL32401): 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.

Engineering Studies Concluding that the Corps' Failed Project Planning Lead To Floodwall and Levee Failures in the New Orleans Region During Hurricane Katrina

U.S. Army Corps of Engineers, ***Performance Evaluation of the New Orleans and Southeast Louisiana Hurricane Protection System Draft Final Report of the Interagency Performance Evaluation Task Force*** (June 2006): acknowledges that the New Orleans levees failed catastrophically during Hurricane Katrina because of poor design and flawed construction.

R.B. Seed, R. I. Abdelmalak, et al., (Report No. UCB/CCRM – 06/01), ***Investigation of the Performance of the New Orleans Flood Protection Systems in Hurricane Katrina on August 29, 2005, Draft Final Report*** (May 2006): finds that the catastrophic failure of the New Orleans regional flood protection system was the result of "engineering lapses, poor judgments, and efforts to reduce costs at the expense of system reliability." These failings led to the "single most costly catastrophic failure of an engineered system in history" that caused the deaths of more than 1,290 people and some $100 to $150 billion in damages to the greater New Orleans area.

American Society of Civil Engineers, ***External Review Panel for the Interagency Performance Evaluation Task Force, Letter to the Corps' Chief of Engineers*** (March 2006): finds that decisions made during the original design phase led to the failure of the 17th Street Canal floodwall in New Orleans and are representative of "an overall pattern of engineering judgment inconsistent with that required for critical structures." These problems pose "significant implications for the current and future safety offered by levees, floodwalls and control structures in New Orleans, and perhaps elsewhere."

American Society of Civil Engineers, ***External Review Panel Progress: Report Number*** (February 2006): finds that the catastrophic failure of the Corps' New Orleans hurricane protection system "demonstrates" that "fundamental flaws were part of how the system was conceived and developed."

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*** (November 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 have 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.

Senate Katrina Investigation Calls for Changes to the Corps' Planning Process

Report of the Committee on Homeland Security and Governmental Affairs, United States Senate, *Hurricane Katrina: A Nation Still Unprepared* (May 2006): finds that substantial lapses by the U.S. Army Corps of Engineers greatly exacerbated the toll caused by Hurricane Katrina. Recommends fundamental changes to the way the Corps carries out project planning, including better integration of ecological restoration efforts and hurricane protection efforts to protect and restore storm buffering wetlands, addressing the risks posed by the Corps-built Mississippi River Gulf Outlet, and calling for outside experts review of Corps flood protection projects around the country that protect significant population centers.

Department of the Army Inspector General Investigation
Finding Significant Problems In Corps Project Planning

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*** (November 2000): 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.

Federal Commission and Task Force Reports
Calling for Reforming Corps Project Planning

U.S. Commission on Ocean Policy, ***An Ocean Blueprint for the 21st Century Final Report of the U.S. Commission on Ocean Policy*** (September 2004): 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.

Interagency Floodplain Management Review Committee, ***Sharing the Challenge: Floodplain Management Into the 21st Century, a Report to the Administration Floodplain Management Task Force*** (June 1994) (often referred to as the Galloway Report after the report's primary author, Brig. Gen Gerald Galloway): recommends changes to the nation's water resources policies based on lessons learned from the great Midwest Flood of 1993, including modernizing the Corps' Principles and Guidelines, requiring the Corps to give full consideration to non-structural flood damage reduction alternatives, requiring periodic reviews of completed Corps projects, adopting floodplain management guidelines that would minimize impacts to floodplains and reduce vulnerabilities to population centers and critical infrastructure, and reinstituting the Water Resources Council to facilitate improvements in federal water resources planning.

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

GAO
Accountability·Integrity·Reliability

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.

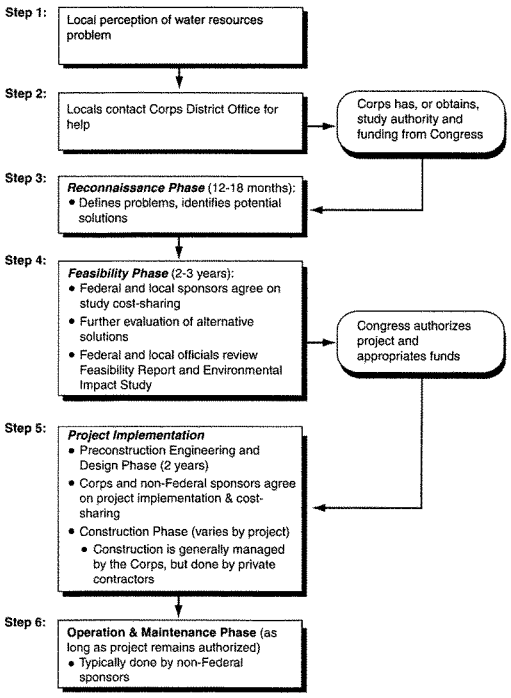
Corps' Process for Developing Water Resource Projects

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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March 12, 2007

The Honorable Russ Feingold
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United States Senate
Washington, DC 20510

Dear Senator Feingold,

As you are aware, the U.S. Congress in Section 216 of the 2000 Water Resources Development Act requested The National Academies to conduct a study of the Corps of Engineers planning and decision making procedures. The result of that work was five NAS reports, one of which was "Review Procedures for Water Resources Project Planning" (2002).

I served as the chair of a coordinating committee that followed the progress of each of the five study reports. You have asked me to explain one of the concepts included in the report of the panel on review procedures, regarding the timing of independent review of project plans and their relationship to public comment.

I refer here to chapter 4 of that report in my explanation. In that report the committee recognized that the Corps may adopt many forms for review, depending on the purpose of that review. I am limiting my explanation to the situation where there is to be a review of a draft feasibility report on a significant project, however significant might be defined by the Congress. .

As reflected in Chapter 4 and figure 4-1 of the report, the committee recommended that independent review of significant projects assure that a review panel has the benefit of public comments, the comments of other government agencies and all stakeholders on the draft report as it undertakes its review and, therefore, before it completes its review. The committee states that as the review commences "In addition to receiving viewpoints of the sponsoring agency, the review panel should receive input from relevant stakeholders." (p. 41)

This call for the broadest range of input was based in part on a view that peer review panels must be made aware of all the issues and an efficient way to be made aware is to have access to comments of stakeholders and other agencies.

I hope this answers your question about the report.

Sincerely,

/signed/

Leonard Shabman

The Times-Picayune

EDITORIAL: Forward on corps reform
Wednesday, March 14, 2007

Democrats have talked a lot about their support for the storm-ravaged Gulf Coast, but their sincerity should be gauged by how willing they are to reform the Army Corps of Engineers.

Unfortunately, a House transportation subcommittee doesn't seem to be taking that direction with the Water Resources Development Act, which it will take up today.

Environmental groups say that Rep. James Oberstar, who chairs the transportation committee, made a commitment last fall to back corps reform. But now, indications are that the House water bill will resemble pre-Katrina versions that are weaker on reform.

That's disappointing. The Minnesota Democrat needs to understand that there's no way to be in Louisiana's corner without also being for corps reform. The corps built the floodwalls and levees that failed during Hurricane Katrina. That engineering catastrophe took people's lives, homes and businesses and is the most persuasive argument for independent review of corps projects.

Sens. John McCain and Russ Feingold tried to establish that kind of oversight last year, but the House and Senate couldn't reconcile differences in the Water Resources Development Act. The water bill failed, and corps reform went down with it.

The new Congress must do better. It needs to pass a water bill -- something that hasn't happened since 2000. Among projects awaiting approval is the critical $1.2 billion Louisiana Coastal Area Ecosystem Restoration Plan, which would boost the rebuilding of wetlands. That's an urgent need, since experts now say there is a 10-year window to begin serious restoration of Louisiana's coast. Also in line for authorization is the Morganza to the Gulf levee project, which would protect much of central Louisiana from hurricanes.

Congress also must provide strong oversight of corps projects, and that could be done independently of the water bill. Sens. Feingold and McCain have reintroduced the bill they tried to get passed last session. The legislation would require peer review for corps projects that cost more than $40 million or, if it's requested by the governor of an affected state, the head of a federal agency or the secretary of the Army.

Louisiana has a keen interest in that kind of reform. The same agency that was responsible for design and construction blunders that resulted in death and destruction

here is now in charge of rebuilding our flood protection system. Louisianians need to be able to have confidence in that work.

But this isn't only a Louisiana issue. Any community that relies on corps-built projects deserves the assurance that the projects are well planned, designed and built. And making sure Americans who live beside those levees are safe ought to be the top priority for every member of Congress.

TERM SHEET

WHEREAS, Governor Sanford and Governor Perdue, as the chief executive officers of their respective states, recognize that the capacity at the existing ports in Charleston and Savannah is finite and that their states' businesses and industries have a need for increased access to marine terminal facilities to import and export goods associated with their activities for the benefit of each of the states, the United States and for international commerce generally; and

WHEREAS, Governor Sanford and Governor Perdue believe that the most practical means of increasing each state's capacity for marine-related transportation facilities is to: a) build a new maritime terminal on the Savannah River in Jasper County, South Carolina, and b) improve access to both the new terminal in Jasper County and the existing and potential new or expanded terminals in Garden City and Savannah, Georgia; and

WHEREAS, in order to expedite and facilitate the building of the new terminal in Jasper County and to improve access to this new terminal and the existing and potential new or expanded terminals in Garden City and Savannah, Governor Sanford and Governor Perdue are desirous of setting forth herein their mutual intent to cooperate and coordinate in all appropriate respects and to promote and advocate in good faith the taking and occurrence of any and all actions necessary to those ends, including, without limitation, those set forth herein;

WHEREAS, Governor Sanford and Governor Perdue recognize the importance of the environmental resources in the Savannah River and the surrounding areas, and the need for wise use and long-term sustainability of these resources through planning and cooperation on resource management in a regional and cooperative manner, and are proposing the actions herein in a manner that balances the need for economic development and protection of sustainable natural resources to the maximum extent feasible;

NOW, THEREFORE, to promote and advocate the taking of actions necessary to build a new maritime terminal on the Savannah River in Jasper County and to improve access to both this new terminal and the existing and potential new or expanded terminals in Garden City and Savannah, and to establish a framework from which their respective state legislatures can draft and adopt a formal compact to accomplish those objectives, Governor Sanford and Governor Perdue set forth this Term Sheet.

THE JASPER COUNTY MARITIME TERMINAL

1. Governor Sanford and Governor Perdue will use their best efforts as the Governors of their respective states to promote the development of a maritime terminal, by the two states on an equal basis through an appropriate entity (the Bi-State Port Authority) and pursuant to a compact (the Bi-State Compact) approved by the two states' legislatures and ratified by the United States Congress (the Congress), on an appropriate portion of the land (the Jasper Terminal Site) situate in Jasper County, owned by the Georgia Department of Transportation (the Georgia DOT) and currently subject to litigation between the states.

2. Independent of the pursuit of the Bi-State Compact to develop a maritime terminal on the Jasper Terminal Site (see paragraph 3 below), Governor Sanford and Governor Perdue recognize that, as a threshold matter, in order for a maritime terminal to be developed on the Jasper Terminal Site by any entity, the easements (the Easements) used by the United States Army Corps of Engineers (the Corps) for placement of dredged fill materials for the Savannah Harbor Federal Navigation Project (the Savannah Harbor Project) on the Jasper Terminal Site must be removed, released, or modified. In this regard, Governor Sanford and Governor Perdue further recognize that the Georgia DOT as the current owner of the Jasper Terminal Site is the appropriate party to initiate and pursue the release, removal or modification of the Easements, and they will use their best efforts as the Governors of their respective states to cooperatively pursue the timely release, removal or modification of the Easements by requesting:

   a) that the Georgia DOT, as soon as possible after execution of this Term Sheet, make a formal application to the Corps for the release, removal or modification of the Easements and that the State of South Carolina submit a letter of support to the Corps;

   b) that the Congress authorize the necessary studies to permit such release, removal or modification (the Federal Feasibility Study) and that each state take whatever action may be required, including if necessary an appropriation by its legislature during the 2007 legislative session, to ensure that each state has the requisite funds dedicated as soon as possible after execution of this Term Sheet for the payment of one-half of the estimated cost of the Federal Feasibility Study; and

   c) that each state's legislature appropriate during the 2008 legislative session, if necessary, funds dedicated for the payment of one-half of the state or local share of costs associated acquiring replacement spoil disposal sites.

   Governor Sanford and Governor Perdue further acknowledge that these efforts to release, remove or modify the Easements must immediately proceed on a track independent of the Bi-State Compact process and declare that these efforts shall represent the necessary tangible commitment by the two states to act in good faith toward ensuring that a new maritime terminal on the Savannah River in Jasper County becomes a reality. Additionally, Governor Sanford and Governor Perdue acknowledge that, in the event the Bi-State Compact process fails and title to the Jasper Terminal Site remains reposed with the Georgia DOT (and thus continues to remain the subject of the condemnation litigation pending between the SCSPA and the Georgia DOT), then it would be equitable for the State of Georgia to recompense the State of South Carolina for funds expended by it in connection with the Federal Feasibility Study and acquiring replacement disposal sites to compensate for the areas no longer encumbered by the Easements, and therefore Governor Perdue will use his best efforts as Governor of Georgia to have the Georgia legislature make the appropriate equitable reimbursement arrangements.

3. Independent of their immediate effort to pursue the release, removal or modification of the Easements from the Jasper Terminal Site (see paragraph 2 above), Governor Sanford and Governor Perdue will also use their best efforts as the Governors of their respective states to promote the passage of the Bi-State Compact in their respective state's legislatures, on or before March 31, 2008, to:

   a) create the Bi-State Port Authority to be owned on a 50-50 basis by the two states and governed by a board comprised of directors appointed in equal numbers by the two states, provided, however, that there are adequate provisions for the resolution of deadlocks and specific assurances that the Bi-State Port Authority would be completely committed to the timely development of a new maritime terminal on the Jasper Terminal Site, with specific milestones to be achieved, so that the Bi-State Port Authority would not be in any way biased toward the protection of existing or future maritime terminal facilities owned and/or operated by the South Carolina State Ports Authority (the SCSPA) at the Port of Charleston or the Georgia Ports Authority (the GPA) at the Port of Savannah;

   b) authorize the Georgia DOT's sale of the Jasper Terminal Site to the Bi-State Port Authority for its fair market value, with matters of record that prohibit the development of a maritime terminal being removed prior to the sale, with costs of such removal to be shared by the two states 50-50, such sale to close immediately after the United States Congress ratifies the Bi-State Compact;

   c) appropriate funds (with each state bearing one-half of the funding) for the Bi-State Port Authority land acquisition and costs related to its accomplishment of its responsibilities;

   d) direct the SCSPA to dismiss its condemnation action against the Georgia DOT and release the Georgia DOT from such claims simultaneous with the Bi-State Port Authority's acquisition of the Jasper Terminal Site; and

   e) direct the Bi-State Authority to issue Requests for Proposal for private companies to submit proposals to participate in the development the first phase of the Jasper Terminal Site using private capital.

THE SAVANNAH HARBOR PROJECT

4. After the release, modification or removal of the Easements from the Terminal Site, the Georgia DOT's sale of its right, title and interest in and to the Jasper Terminal Site to the Bi-State Port Authority, and the required approval and ratification of the Bi-State Compact by the state legislatures and the Congress, then Governor Perdue and Governor Sanford agree to cooperate and to use their best efforts to cause the respective Georgia and South Carolina agencies and public interest parties to cooperate each with the other and with other interested parties, including but not

limited to the Corps, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and the U.S. Environmental Protection Agency, in the deepening of the Savannah River navigation channel as conditionally authorized in the federal 1999 Water Resources Development Act and set forth as the Savannah Harbor Project further described at www.sav-harbor.com, and in the permitting of the development of the Jasper Terminal Site, with the understanding that any local sponsor or other nonfederal costs associated with the Federal Feasibility Study and the deepening of the Savannah River navigation channel to at least 48 feet from the Atlantic Ocean to and including the Jasper Terminal Site will be divided equally between the states of Georgia and South Carolina, or their respective agencies or departments, and provided that neither the State of South Carolina nor any of its agencies and departments shall bear any local sponsor or other nonfederal costs of deepening the Savannah River navigation channel beyond the westernmost terminus of the Jasper Terminal Site.

THE SAVANNAH RIVER COMMITTEES

5. By executive orders issued in June 2005, Governor Sanford and Governor Perdue created committees to identify and discuss issues of mutual interest related to the water resources of the Savannah River Basin, and pursuant to those orders the Governor's Water Law Review Committee, appointed by Governor Sanford, and the Governor's Savannah River Committee, appointed by Governor Perdue (collectively, the Savannah River Committees), have corresponded and met to discuss those issues, including, without limitation, the following:

   a) the potential that fresh groundwater supplies in the Upper Floridan Aquifer are being contaminated by salt water intrusion from the Port Royal Sound and other areas;

   b) the impact of the Total Maximum Daily Load (TMDL) regulation for the Lower Savannah River recently issued by the EPA;

   c) the use of the Savannah River below the Thurmond Dam as a receptacle for treated wastewater from municipalities and industries; and

   d) the need for a long-term strategy between the two states to manage the use of the Savannah River.

   Governor Sanford and Governor Perdue declare that nothing in this Term Sheet shall undermine the importance of the issues being considered by the Savannah River Committees and reaffirm that these committees have been and continue to be charged with the responsibility of investigating those issues, with due consideration as to how such may impact the other objectives discussed in this Term Sheet, and with the task of reporting their findings and recommendations to the two governors in a timely manner.

MISCELLANEOUS

6. Governor Sanford and Governor Perdue shall appoint a six-member task force (the Task Force) chaired jointly by a member from each state with each Governor having an equal number of appointments and direct it to present to them, within 180 days (the 180-Day Task Force Due Diligence Period) of the date hereof, a proposed Bi-State Compact that incorporates the material provisions of paragraph 3 above and that, once it has been passed by the two state legislatures and then ratified by the Congress, would create binding legal obligations in furtherance of the objectives referenced herein. Governor Perdue and Governor Sanford further agree to direct the Task Force to establish a deliberative compact development process in which the draft compact is made available to state officers, stakeholders and the public for comment and revision prior to introduction in the respective legislatures during the 2008 sessions.

7. Nothing in this Term Sheet shall delay or in any way influence the legal options available to either state relative to the prosecution or defense of litigation related to any condemnation of the Jasper Terminal Site nor shall this Term Sheet be admissible in such litigation; provided, however, that Governor Sanford and Governor Perdue will ask the SCSPA and the Georgia DOT to: a) take such actions as may be reasonably necessary to have a final adjudication in the pending condemnation action deferred by the South Carolina state circuit court judge until after the expiration of 180-Day Task Force Due Diligence Period, with the understanding, however, that the two litigants during such time would still be able to engage in activities preparatory to such final adjudication; and b) enter into a six-month tolling agreement confirming that the right of either party to petition the United States Supreme Court to accept jurisdiction of the condemnation action shall not be negatively affected by this request for a delay of final adjudication. In this latter regard, it is recognized that, notwithstanding this Term Sheet, the SCSPA expressly reserves any and all arguments and positions that it would be improper for the litigation it has with the Georgia DOT to be removed to the original jurisdiction of the United States Supreme Court and the Georgia DOT expressly reserves any and all arguments and positions that such removal would be proper.

8. Market studies conducted both by the SCSPA and the GPA indicate that a window of opportunity now exists for maritime terminals in the Southeast to increase their volume of imports and exports, and Governor Sanford and Governor Perdue will use their best efforts as the Governors of their respective states to promote regional cooperation between the State of South Carolina and the State of Georgia to take advantage of this opportunity – not only in regard to the new maritime terminal planned for the Jasper Terminal Site, but also between the existing operations at the Port of Charleston and the Port of Savannah – so that the two states are able to take advantage of this opportunity, said cooperation to include, without limitation, the development of a coordinated and improved network of rail access to and rail delivery and distribution from terminal operations in Jasper County, the Port of Savannah and the Port of Charleston.

9. This Term Sheet is a statement of the mutual understanding of the parties. Neither this Term Sheet nor any provision hereof constitutes, or shall constitute, a legal and binding obligation, contract or agreement between either of the parties. Even though this Term Sheet is not binding in any way, the parties agree that: a) if, within 180 days of the creation of the Task Force referred to in paragraph 6 above, a proposed Bi-State Compact is not presented to Governor Sanford and Governor Perdue by such Task Force, then this Term Sheet shall terminate automatically; and b) if by March 31, 2008, the legislatures of the two states have not formally approved the Bi-State Compact, then this Term Sheet and the Bi-State Compact, if any, shall terminate automatically.

_____
Marshall C. Sanford, Jr.
Governor of South Carolina

_____
George Ervin "Sonny" Perdue III
Governor of Georgia

Jasper County, South Carolina
March 12, 2007

Alliance of the Ports of Canada, the Caribbean, Latin America and the United States

Reauthorization of Water Resources Development Act

Authorizations Essential for Trade

Authorization of Harbor Projects Vital

AAPA urges Congress to pass a Water Resources Development Act (WRDA) in 2006 to allow our nation to reap the economic benefits of increased trade. Local sponsors of federal navigation projects rely on biennial authorization of WRDA for needed studies of, and improvements to, the nation's deep-draft navigation system. The last WRDA was enacted in 2000. Further delay in authorizing vital navigation projects will result in increased costs and reduced benefits to the nation.

The enactment of WRDA is of critical importance to the nation's economy. A U.S. Army Corps of Engineers report states that almost 30% of the 95,550 vessel calls at U.S. ports are constrained due to inadequate channel depths (*National Dredging Needs Study of U.S. Ports and Harbors: Update 2002*; www.iwr.usace.army.mil/iwr/pdf/ndnsupdate.pdf). Regular biennial authorization of navigation improvement projects in WRDA is essential to ensure the competitiveness of the nation's exports and permit America's access to low-cost imports, which help control inflation.

Harbor Maintenance Trust Fund

As part of any WRDA authorization, AAPA urges Congress to guarantee that the funds deposited in the Harbor Maintenance Trust Fund (HMTF) are used for the operations and maintenance purposes for which they are intended.

The Administration's recent budget request estimates that the surplus in the HMTF will grow to more than $3 billion in fiscal year 2006, yet there is a dramatic and growing backlog of maintenance needs at our nation's ports. Discretionary funding for non-defense related programs continues to be constrained by restrictive federal budgets and is not meeting the maintenance needs of our nation's navigational channels. Guaranteed funding treatment similar to that provided for the Highway Trust Fund would assure an adequate source of funding for important maintenance dredging.

AAPA also supports inclusion of WRDA language for removal of the Harbor Maintenance tax from domestic cargoes to encourage domestic short sea shipping as a means of relieving congestion and associated adverse environmental effects at intermodal connection points serving ports.

Modernization of the Corps of Engineers

AAPA has identified seven Corps modernization proposals needed to improve the partnership between the federal government and local sponsors in building federal navigation projects:

- **Partnership Agreements.** AAPA believes there are fundamental disparities in the partnership relationship between the Corps of Engineers and local sponsors that should be corrected. AAPA recommends that WRDA'86 be amended to reference partnership agreements and that the process of negotiating and implementing agreements be improved.

- **Cost Sharing.** AAPA believes that local sponsors are providing a greater share of the cost of

navigation channel deepening projects than Congress expected when it mandated cost sharing in 1986. AAPA recommends that Section 101 of WRDA'86 be amended to revise the definition of deep-draft harbor and the cost-sharing formula to reflect the changes that have occurred in the general cargo fleet.

- **Credit for In-Kind Work During Construction.** AAPA recommends adoption of a provision allowing local sponsors credit for in-kind services during construction of a project.

- **Port and Harbor Dues.** AAPA believes that ports should have broad authority to levy fees for raising the local share of federal dredging projects. AAPA believes common law and precedent provide this authority, but that Section 208 of WRDA'86 severely limits this ability. AAPA recommends that all of Section 208 be replaced by a general authority restating the common law principle that ports can assess fees to recoup the cost of their services.

- **Utility Relocation.** AAPA believes that the Corps should exercise its authority under Section 10 of the Rivers and Harbors Act and/or its navigation servitude powers to direct the removal and/or relocation of utilities within navigation channels. AAPA recommends that Section 101(a)(4) of WRDA'86 be deleted, and that report language should express Congress' view that the Corps should exercise its existing authority to direct the removal and/or relocation of utilities within navigation channels at 100% owner expense.

- **Indemnification.** Because many ports are prohibited by state anti-deficiency laws from providing indemnification to the federal government, AAPA recommends that Section 101(e)(2) of WRDA'86 be deleted. AAPA could support alternative language that would allow for the purchase of indemnification insurance for both the federal government and the local sponsor as an allowable project cost.

- **Local Sponsor-Initiated Projects.** AAPA believes the procedures for local sponsor-initiated projects should be streamlined. AAPA recommends that Sections 204 and 205 of WRDA'86 be amended to allow: (1) for the reimbursement of projects which are constructed by the local sponsor without prior approval by the Chief of Engineers and authorization by Congress; and, (2) for the assumption of maintenance by the Corps for such projects.

The WRDA bill passed by the House in 2005 included most of AAPA's policy recommendations, including changes in the cost-sharing formula and authorization of measures to streamline the process for planning civil works projects and for permitting non-federal projects. AAPA urges Congress to include these, as well as provisions addressing indemnification, timing of non-federal payments and port and harbor dues, in any final bill.

Government Dredge Fleet

AAPA urges Congress to enact policies that will ensure adequate capacity and the availability of dredging equipment to meet dredging needs. Specifically, AAPA urges Congress to direct the Corps of Engineers to analyze the costs and benefits of existing and proposed restrictions on the use of the Corps' hopper dredge fleet. Congress should allow the Corps fleet to operate unconstrained by statutory and administrative restrictions for a specified period of time so an accurate assessment of the fleet's true costs can be determined.

March 2006

To learn more, visit AAPA's Web site at
www.aapa-ports.org/govrelations

Alliance of the Ports of Canada, the Caribbean, Latin America and the United States

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Testimony of Warren D. McCrimmon

Chairman, U.S. Delegation, American Association of Port Authorities
Seaport Director, Toledo-Lucas County Port Authority

Before the
House Appropriations Committee

Subcommittee on Energy and Water Development

FEBRUARY 16, 2007

Mr. Chairman, Ranking Member and members, I am Warren McCrimmon, Seaport Director of the Toledo-Lucas County Port Authority in Ohio. I am here today as the Chairman of the U.S. Delegation of the American Association of Port Authorities. The Association represents public port authorities throughout the Western Hemisphere in the U.S., Canada, the Caribbean and Latin America. We have 97 member coastal and inland waterways ports here in the U.S.

Mr. Chairman, on behalf of the Association (or as we call it, AAPA), I want to thank you and the Subcommittee for giving me the opportunity today to discuss with you and my fellow panelists the importance of identifying the future need for waterside infrastructure and related maintenance. U.S ports are challenged on all four coasts to meet the increasing demands of world trade.

Before getting into the specifics of future needs and project delivery processes, I'd like to take a minute to set the stage by looking at the economic impact of U.S. ports and the importance of continued federal and non-federal investment. Public ports generate significant local, regional and national economic growth, including creation of jobs. As I'm sure you are aware, ports handle 99 percent of the nation's overseas trade by volume.

The total direct and indirect annual impact of the U.S. port industry includes:

- 4.9 million jobs, accounting for $44 billion in personal income;
- over $2 trillion in international trade value and over $18 billion in industry fees and taxes;
- more than 2.5 billion tons of imported and exported goods equaling 99 percent of U.S. overseas trade.

Mr. Chairman, we are cognizant of and appreciate the bipartisan support of the Subcommittee in insisting that the Corps of Engineers use responsible and accountable financial management practices. We applaud the Subcommittee's past efforts to that effect and in furthering the concept of orderly future year financial planning. Projecting both future needs for capital improvements and associated maintenance and identifying resource requirements isn't an option in the ports' business model, but a necessity to grow and prosper in meeting the nation's waterborne commerce requirements.

As governmental entities, public port authorities must also plan for future requirements, request and defend the need for appropriations from city or county governments, or state legislatures and be accountable to the state, the board of commissioners and to the communities in which we operate. Without a comparable federal process, there is no assurance or predictability that the federal share of new channel construction will be available at the point in time that the project is needed and the local share is available. The result is an inefficient project implementation process often at a much higher cost. The real loss, however, is the loss of benefits to the regions and the nation in jobs, income and tax revenues.

In addressing the demand side – the demand for future deepening projects – I'd first like to dispel a common misconception that there is a so-called "race to the bottom," with ports deepening channels just to match the depths of other ports. The evidence is to the contrary. We're still building yesterday's projects. We have not kept up with standard depths in other parts of the world. Looking at the major world ports in Europe and the Pacific Rim, Rotterdam is at 74 feet and Singapore is at 72 feet and many others are naturally deep water ports. The Panama Canal is expanding to a new lock depth of 60 feet and both Mexico and Canada have aggressive port development plans. This has driven the demand for larger, wider and deeper ships to capture economies of scale and lower the overall cost of goods shipped. We, unfortunately, are not realizing the full economic benefits, as many ships lighter or reduce their loads to make calls at U.S. ports.

Because of the 50 foot and less depth restriction on the East Coast, a ship lightering industry is flourishing in the Caribbean, in the Bahamas, Jamaica and Puerto Rico to transfer cargoes from large to smaller ships, adding both delay and cost in the process.

Today, with about 85 U.S. deep water ports, there are only ten major deepening projects underway at Miami, Oakland, Los Angeles, New York, Brunswick, Jacksonville, Tampa, Columbia River and Houston. The deepest are at 50 feet. There has not been a new project authorization since 2000 and only two have been proposed over the past six years: Corpus Christi and the next deepening increment at Miami, both to 50 feet. The common depth of 50 feet accommodates ships that call at multiple ports on a single trip, which is the norm, but as I stated earlier, does not allow the efficiencies and reduced costs to be realized from a larger dimension world fleet. The first port of call in a ship rotation is not always known in advance.

I'd also like to point out that with the existing cost-sharing formula, which dates back 20 years to the 1986 Water Resources Development Act, ports typically are the major

investor and provide over 60 percent of the cost of new deepening projects over 45 feet. AAPA recommends a revision of the formula to reflect current conditions. When all development costs are factored in to include required landside infrastructure, berthing area deepening and associated wharf costs, ports pay up to 80 percent of the costs necessary to fully realize the benefits of a deepening project. Large deepening projects cost in the hundreds of millions of dollars and represent a tremendous local, state and regional investment responsibility that in itself moderates the demand to deepen. Project sponsor funding should not be placed at risk due to lack of future planning for funding the federal share.

New deepening projects are further restricted by constraints imposed by expansion potential on the landside. Available port real estate and infrastructure, highway capacity, rail availability and proximity to projected future markets are significant challenges to overcome in consideration of a deeper federal channel. Gentrification or demand by local developers for port property has in a number of instances actually reduced the ports' footprint and ability to grow. Port security costs are largely borne by the ports and compete against other needed investments like deepening. And, where ports have to step in and pay maintenance dredging costs that are the responsibility of the federal government, that, too, reduces the port's ability to apply revenue to future needs.

From time-to-time there is discussion of the need for national port planning to concentrate both funding and commerce into just a few large ports. That would be a devastating blow to the nation's economy. It ignores the shippers' needs to reach targeted markets as efficiently and cheaply as possible, the intermodal infrastructure already in place and the impossibility of accommodating the huge and growing volume of cargo in just a few locations, not to mention the negative impact on jobs, income and community development on all four coasts and at the inland waterway ports.

As a starting point, we believe a more rational approach involves having the Corps in its budget development process consult with ports on future needs, as well as for the budget year under consideration. We were encouraged last year to see the Corps, at our request, include language in its budget development guidance to field offices to consult with project sponsors. The information on future port needs, when collected on a national basis, would provide a reasonable picture of where world market forces and growth pressure would trigger consideration of the large non-federal investments necessary to pursue a new deepening project. This information would be subjected to scrutiny by federal navigation experts, the Administration and the Congress. The feasibility report, authorization and appropriation processes provide additional checks on the federal interest in participating in the projects. In addition, state and local investors weigh in as well, providing further discipline in the process.

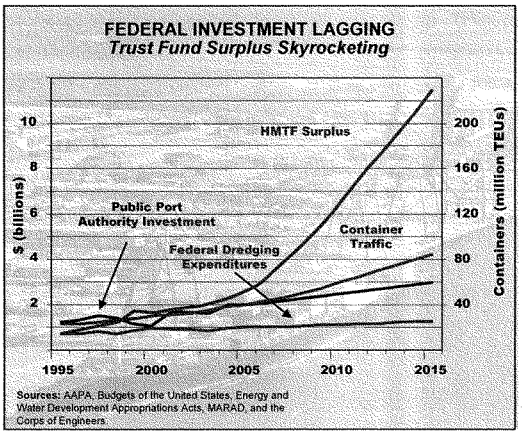
I'd next like to turn to the need for future planning for maintenance dredging. The delay in addressing maintenance dredging needs is the single biggest issue facing most ports today and into the foreseeable future, in spite of the fact that the dredging costs have been pre-paid by port users. Ports are expected by users to provide the needed depth, and in turn, the ports rely on the federal government to maintain the federal channel portion of

the ports' waterside infrastructure. A reliable and realistic future budget forecast of maintenance dredging is, on a year-to-year basis, as important as forecasting future deepening needs. Negotiating ship calls, terminal leases, employment levels and the ability to accommodate demand for port services are all dependent on the port's ability to provide a dependable level of service. Imagine trying to run an international business without being able to forecast the resources available and level of service to be provided. We simply do not know from year-to-year whether the Corps will have sufficient funds to perform required dredging; or, whether it will even budget for the work. We view a good five to ten year plan as a necessity.

For example, in the case of my port, Toledo-Lucas County, regarding channel maintenance, we are concerned with overall project dimensions, not just depth. The typical Channel depth at Toledo Harbor is 27 to 29 feet and the standard width is 500 feet. The width has been reduced to 100 feet at some portions of the Channel creating potential hazards to navigation and impeding the ability of ships to pass within the Channel. Essentially, we have lost a lot of the efficiency and economy of using water transport while the highways, rail and border crossings to our largest trading partner, Canada, are congested. Because of the unique nature of port to port movements on the Great Lakes, it's also important for us to know the dimensions of other ports around the Lakes and be able to reasonably predict future conditions in developing our business plans. Light loading at any one port in the Great Lakes will typically have negative impacts on at least two ports because most Lakes trading takes place within several ports, as opposed to salt water ports where typical trade is international and only a single port is impacted.

Nationally, we estimate that maintenance dredging funding requirements for federal channels based on Corps expression of capability are about $1.1 to 1.3 billion a year. The just released Administration budget request only includes $735 million, which means that nearly a third of the required dredging will not be performed. This is in spite of the fact that the Harbor Maintenance Trust Fund, dedicated by law to fund maintenance dredging, takes in about $1.3 billion annually and has a surplus balance approaching $4 billion.

The funds collected by law for the express purpose of dredging the nation's ports and harbors needs to be used for that purpose or the tax should be repealed. We need to either gain the benefit of having a direct offset for dredging costs or take away the disincentives created by the tax. In short, we need to put the trust back in Trust Fund or make the tax go away. The following chart depicts the growth in the fund surplus and port and federal expenditures as well as the growth in container cargo.



AAPA recently surveyed member ports on maintenance needs. I'd like to relate just a few of their responses to illustrate the negative effects of failing to project and fund those maintenance projects.

I mentioned needs in my port of Toledo-Lucas County. In Toledo, we are constantly fearful of the Port being closed or crippled, as one bad storm in Lake Erie could close the shipping channel. The Corps is currently 3 to 4 million cubic yards short of what it should have dredged and every year the dredging program does not meet the volume required to even equal what is being deposited into the ship channel. The Port of Toledo is expanding its tonnage throughput and the diversity of its cargoes to a significant measure annually and the prospects for continued growth are apparent. With this growth comes an increase in local employment and in the economic spin-offs benefiting the region. Midwest steel manufacturers depend upon their raw materials coming to them economically via Toledo. Midwest machinery manufacturers depend upon raw steel getting to them via Toledo. Local farmers depend upon the fertilizers continuing to come in, and this is a growing business. Regional power plants depend upon receiving raw materials for scrubbing operations that limit emissions into the environment. Major grain handlers depend upon the Port to export their products, as do Midwest coal mines. The auto industry depends upon the many different metals that come in through Toledo in ever increasing volumes. Toledo has been identified as a key Great Lakes port for the future handling of containers originating from and bound for the Midwest, and the Port is already a major petroleum products handler to and from the Midwest.

The annual shortfall in dollars for Corps dredging within Toledo Harbor is estimated at initially $10 million annually to address the existing backlog plus needed maintenance, and then $3 million annually to perform required maintenance dredging to dredge the channel to standard. With the doubling of the number of international ships using the Port this past season and anticipating there will not be a fall-off in the port's growth, it is increasingly important to assure international shipping lines that the port has plenty of width and depth at all points in the channel. A single grounding incident can damage a

port's reputation for years, driving international ships to avoid the port where the grounding occurred. We need the Corps to plan with us and other ports and recognize the needs in future forecasts and budgeting for maintenance dredging.

On the East Coast, the federal navigation channels in the Port of Boston are in urgent need of maintenance dredging. The 40 foot Main Ship Channel into the Port of Boston has shoaled in, to the extent that -35 feet MLLW is now the controlling depth. As a result, the deepest draft vessel that can be brought in without any regard to tides is 33 feet. (This does not take into account strong westerly winds that can further reduce available water depths by as much as 2 feet.) In 2005, there were more than 600 movements in Boston Harbor by "tide-restricted" vessels (i.e., vessels with drafts of 34 feet or greater). This results in a significant and negative economic impact to the region, and it raises significant operational, safety, economic and environmental concerns. Vessels will need to lighter their cargo in the outer harbor, thereby increasing costs to consumers and the chances for an oil spill in these harbor areas. In the worst case, these severely shoaled channels could result in ship grounding, with potentially devastating environmental consequences.

The Port of Boston provides significant economic benefits to the Commonwealth's residents and businesses, and to the nation. The Port is credited with generating 34,000 jobs and a $2.4 billion annual economic impact. This significant economic benefit could be jeopardized by the current severe state of shoaling in their channels, since the economic viability of the port rests in large part on the depths of its navigation channels. If deep draft vessels cannot safely and efficiently transit the harbor to access their channels, significant economic and potential environmental impacts result. Also, waterborne transportation of cargo is the most environmentally sound transportation alternative available. If cargo cannot reach its destination by water, it will be diverted to the highways, resulting in increased air emissions, traffic and further deterioration of highways and bridges.

In South Carolina, the Charleston District of the U.S. Army Corps of Engineers currently collects about $40 million annually in harbor maintenance taxes, and gets back only about $9-$12 million a year for maintenance work for navigation channels critical to the ports of Charleston and Georgetown.

Georgetown and the businesses located there are particularly hard hit. The authorized depth along the 14 mile navigation channel into Georgetown is 27 feet but the channel is currently only 25 feet or less in many areas in the main channel leading to the state pier berth (and has been consistently under-maintained for many years).

The Port of Georgetown also has seven different active steel importers who bring in approximately 90,000 tons annually. This tonnage accounts for about 60 jobs relating to stevedores, port employees, and local trucking companies. The vessels discharging this cargo must light-load prior to coming to Georgetown even with a 27 foot draft. When the draft falls under 27 feet, these vessels will not come in and the cargo is delivered to other neighboring ports, which causes a significant increase in trucking costs to the customer.

Many times, the increased cost exceeds the profit margin and the business is simply a loss.

A number of other long-term customers at Georgetown are also having to light-load vessels due to decreased channel depths.

The Port of Georgetown also has significant amounts of new business expected to begin in 2007 and 2008 which will depend on a minimum draft of 27 feet.

In the Gulf, the Port of Brownsville, Texas, is not able to operate efficiently due to lack of channel maintenance and resultant inadequate channel depths. Carriers have had to bring in lighter loads in more ships into Brownsville or ship the steel into other nearby ports, at an additional cost of up to $135,000 for a single ship call due to extra steaming, extra unloading time, extra chartered days, additional broker fees, etc. or more likely go to Altamira, Mexico (with inferior rail connections). The Port of Brownsville has offered concessions to keep the business, such as slashing its fees, but fears that it might eventually lose the business completely, and most likely to a Mexican port (a loss to the U.S. economy).

The Port of Brownsville recently commissioned John Martin of Martin and Associates to perform a study to assess the economic cost to the users of the Brownsville Navigation District of not maintaining the current dimensions of the Waterway. The study analyzed the difference between the total voyage costs of shipping the cargo at the 42-foot channel depth, and the total costs of shipping the cargo at various restricted channel depths. It found that, in total, the economic benefit of maintaining the channel at 42 feet versus 39 feet is $2.7 million annually. The economic benefit of maintaining the channel at its authorized depth of 42 feet versus 35 feet is $19.4 million annually.

On the West Coast, funding shortfalls for both maintenance and deepening are hampering port operations at Long Beach. Long Beach is California's largest liquid bulk port, handling very large crude and refined product vessels for the nation's largest market of those products. The federal navigation channel has been authorized for -76 feet to accommodate the large liquid bulk carriers.

However, due to delays in permitting and funding, portions of the main channel dredging that serve the port's largest crude berth have been repeatedly postponed. Consequently, fully laden vessels must be lightered offshore in an expensive and more environmentally risky manner.

And, as the Subcommittee is aware, the Corps is also responsible for navigation needs in the U.S. Territories. In the U.S. Virgin Islands over the past thirty (30) years the U.S. Army Corps of Engineers has not undertaken any dredging projects within the harbors of the Virgin Islands. The harbors of concern are Charlotte Amalie, including Crown Bay (Gregorie Channel), on the island of St. Thomas and Frederiksted, Christiansted and Limetree Bay harbors on the island of St. Croix.

These harbors throughout the Virgin Islands serve the islands in terms of cargo importation and cruise ships to which the islands' economy is dependent. Both Christiansted and Charlotte Amalie, including Gregorie Channel, have Congressional designation as far back as 1950.

The VIPA has paid for all dredging of the harbor areas, whether to extend port terminals or for maintenance purposes, without any financial assistance from the territorial or federal government. These territorial needs should also be recognized in a comprehensive assessment of future year needs.

In summary, Mr. Chairman, the American Association of Port Authorities appreciates the oversight and direction provided to the Corps of Engineers by this Subcommittee. We particularly want to emphasize the need to develop reasonable, realistic and comprehensive planning to identify and meet needs in future years. We believe all concerned should have access to the full range of out year needs in developing the Corps' Civil Works Program. The Association and its member ports see a high value in participating fully in that process and believe that full consultation with project sponsors during the budget development process will result in a clearer picture of both new construction and maintenance needs, and in what timeframe those requirements must be met.

Mr. Chairman, again thanks for this dialogue opportunity and I'd be glad to respond to any questions.

# # #

Attachment

AAPA American Association of Port Authorities

Alliance of the Ports of Canada, the Caribbean, Latin America and the United States

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Port Specific Examples 2007
Navigation Channel Maintenance

In January 2007, AAPA member ports in the U.S. were asked to respond to the following questions about their federal funding needs for maintenance dredging. Below are the questions and the answers AAPA received.

1. What are your port's dredging needs in FY'08 by the U.S. Army Corps of Engineers and what examples can you cite that show how important it is to meet these needs for your port's continued operations?

2. What were the actual dollar shortfalls in the Corps' budget in FY'06 and FY'07 (estimated) to maintain your port, harbor and/or channel at its operationally-required depth and width? In other words, what was your port's Corps of Engineers funding in FY'06 and FY'07 vs. what your port actually needed to meet the operational needs of the ships that called or will call? (Note: In some cases, authorized depths are actually greater than operationally-required depths.)

Alabama State Port Authority

FY'08 O&M dredging needs include routine maintenance of the Bay, River and Theodore channels, utilizing both pipeline and hopper dredges removing approximately 6-7 million cubic yards of maintenance material. Lack of maintenance in these major channel sections will result in reduction of depths and corresponding vessel draft reduction by approximately 2 feet.

Funding was adequate as a result of supplemental appropriations received for Hurricane Katrina damage, although sections of the project were shoaled in for much of the year due to the vast amount of shoaling and the shortage of dredge capability.

FY07 - Actual funding amounts are uncertain due to the ongoing Continuing Resolution; however, the indications are that funding will not be sufficient to perform all the maintenance needed. The Corps struggles to meet all maintenance requirements, particularly considering the increases in fuel prices and subsequent impact to dredging costs. The Corps' response to funding shortfalls is to direct available resources to the most immediate critical dredging needs. This leaves shortfalls in long term maintenance

items such as disposal area maintenance, advance maintenance and dredge material management plans, etc. This results in immediate dredging needs being met early in the FY, with little or no resources being expended on proven long term cost savings initiatives. For FY'07 the Corps plans to perform only the most basic dredging and dredge related operations, and, even with that, it is anticipated that shortfalls will occur in basic dredging funding before the end of the FY, resulting in reduced channel depths.

Port of Brownsville

The port's dredging needs in FY'08 are approximately $6.6 million – this much is needed in FY'07 and probably at least that much in FY'08 to get our entire 17-mile channel back to its required depth.

Due to the inadequate channel depths, APM has had to bring in lighter loads in more ships into Brownsville or ship the steel into other nearby ports, such as Corpus Christi (at an additional cost of $135,000 for a single ship call due to extra steaming, extra unloading time, extra chartered days, additional broker fee, etc.) or Altamira, Mexico (with inferior rail connections). The Port of Brownsville has offered concessions to keep the business, slashing its fees, but fears that it might eventually lose the business completely, and most likely to a Mexican port (a loss to the U.S. economy).

The Port of Brownsville recently commissioned John Martin of Martin and Associates to perform a study to assess the economic cost to the users of the Brownsville Navigation District of not maintaining the current dimensions of the Waterway. The study analyzed the difference between the total voyage costs of shipping the cargo at the 42-foot channel depth, and the total costs of shipping the cargo at various restricted channel depths. It found that, in total, the economic benefit of maintaining the channel at 42 feet versus 39 feet is $2.7 million annually. The economic benefit of maintaining the channel at 42 feet versus 35 feet is $19.4 million annually.

Port of Corpus Christi

The projected FY'08 maintenance dredging needs for the 45' deep Corpus Christi Ship Channel system include nearly 2 million cubic yards of material in 15 miles of channel reach. This includes the over 7 mile long inner harbor reach, where the majority of industry resides and where the fully authorized channel depth is utilized. Additional dredging is required to support the Port's shallow draft canal system and industrial park. Federal funding needed for dredging for FY'08 is estimated at $13 million.

In both FY'06 and projected FY'07 there were/are shortfalls between the final budget and the needs expressed to adequately maintain the channel system. In FY'06 the Corps expressed a capability and need for over $13 million for the operation and maintenance of the federal channel system and only $3.51 million was budgeted. For FY'06, draft restrictions were imposed for much of the year. Fortunately, in part due to the ability of

funds able to be carried over from FY'05, a portion of the reach that contained the draft-restricting shoal was dredged by late FY'06. For FY'07, the Corps expressed a capability and need of $14.73 million to operate and maintain the channel system, including $4.5 million to demolish and remove a navigation hazard; however, only $7 million will be budgeted.

In addition, the Port is seeking authorization for its Channel Improvement Project to deepen and widen the present channel system to 52' deep and to extend the channel to accommodate the Port's La Quinta Container Terminal. Should the project be authorized in FY'07, construction general funding of $40 million would be required in FY'08 for the first construction contract.

Port of Everett

For FY'06, $1.4 million was funded versus $1.5 million listed as capability by the Corps. The Corps capability figures represent an estimate of the maximum amount of work on a project, assuming an unlimited supply of resources -- financial, manpower, equipment, and construction materials. This amounted to a shortfall of $100,000.

For FY'07, $895,000 was funded versus the listed capability of $1.5 million. This amounts to a shortfall of $605,000.

Port Everglades, FL

In FY'08, Congress will need to appropriate $1.05M to the Army Corps of Engineers to complete an ongoing Feasibility Study to deepen and widen the Port Everglades entrance channel, turning basin, and Intracoastal Waterway. To date, approximately $4M of federal and port funding has been spent on the study.

Shipping lines utilizing Port Everglades are modernizing their fleet of vessels to include broader beamed and deeper draft vessels. As a result, the existing navigational channel and Port waterways are becoming limited for vessel transit. The current Feasibility Study conducted by the U.S. Army Corps of Engineers and Port Everglades has determined that deeper and wider channels are required at Port Everglades to serve these vessels and allow for the continued flow of trade and commerce. The Feasibility Study has recommended many navigational improvements throughout Port Everglades. These improvements include the widening and deepening of the Outer and Inner Entrance Channels, the Main Turning Basin, the Southport Access Channel (including the Turning Notch), a possible new turning facility at the intersection of the Dania Cut-off Canal and the Intracoastal Waterway, as well as improvements to the Dania Cut-off Canal. The results will provide navigational improvements within the Port Everglades harbor by increasing the capabilities for larger class vessels to utilize Port facilities, thus increasing the trade and commerce capabilities of Broward County and all of South Florida. The U.S. Army Corps of Engineers anticipates completion of its Environmental Impact

Statement Report (EIS) draft in 2007 and authorization in 2008, which will outline the benefits of the project and associated costs. Upon approval of the EIS, efforts to obtain the required funding and implementation of the project will proceed.

The Port provides an economic regional impact of more than 15,500 direct jobs and generates $2.8 billion in business activity and $865 million in personal income annually in Broward County. Statewide, Port Everglades provides 15,700 direct jobs, $3.2 billion in business activity, and $979 million in personal income. Federal taxes on business activity through Port Everglades related to the State of Florida amount to $45.7 million. In addition, more than $15 billion of waterborne commerce moves through Port Everglades annually.

Port Freeport, TX

Port Freeport anticipates a need in excess of $11 million for maintenance dredging in FY'08 given the shoaling of certain areas of the channel and given the fact that there are areas that have not been dredged to authorized or pilot-required depths. Over the past 6 or 7 years, the port area has not gotten nearly enough funding for operations and maintenance, and the port has to fight to get enough to allow the Corps to let contracts. The result of the lack of dredging to proper depths is users like Dow moving its facilities to the Middle East and the possibility of loss of business to deeper ports...in Mexico and Canada.

In FY'07, the allocation was more than $2.4 million less than we needed. The Corps couldn't find a dredging company that would give it a quote that would meet that funding level. Only one bid was received and the port had to fight again to get additional funds and get the dredging contract re-bid. In FY'06, the allocation was $3.249 million.

The Corps has been requesting funds in the $500,000 range for Port Freeport Dredged Material Management for years and has never received the first dime! Maintenance dredging funding in FY'06 was short about $1.2 million, and the Corps had to reduce the allowable overdredge and authorized width in order to award the contract.

Port of Green Bay

Most important is Green Bay's lack of sufficient dredging. Dredging in the Green Bay Harbor is an annual maintenance requirement that the U.S. Army Corps of Engineers (Corps) is increasingly falling behind on due to a lack of financial resources. Over the past 5 years, a range of 80,000 to 115,000 cubic yards/year of sediment have been removed from the Green Bay Harbor, which historically has had an average of 150,000 to 200,000 cubic yards/year removed.

The Green Bay Harbor has a Congressionally authorized channel width of 500 feet from Grassy Island lakeward to the entrance light. In several locations, the width is less than

100 feet. Ships are refusing to enter Green Bay or are bringing in substantially less cargo for fear of grounding. For example, Anamax Corporation has ceased exporting 5-7 ships/year of tallow to Europe. Last year 23 international vessels, with cargo destined for Green Bay and the Fox Valley, were required to off-load 50% of their cargo in Menominee, Michigan, before continuing on to Green Bay. The channel condition has contributed to lost business development opportunities including importing wind turbine generation equipment, plate and coiled steel, gypsum, fertilizer and kalonite clay.

One company that has been affected is KK Integrated Logistics in Green Bay, a company that employs 200 people and provides stevedoring, warehousing, and trucking services and provides a local economic impact of more than $1 million annually (payroll plus subcontract trucking). KK Integrated Logistics imports forest products for use in construction in the Green Bay area. Because of the lack of maintenance dredging in the Port of Green Bay, it has had to off-load a large portion of these cargos 60 miles away in Menominee, Michigan, and send the materials by truck into Green Bay, at an increased cost of more than $100,000 annually. The total cost to the business each year needs to be measured in lost opportunity--if the Fox River were truly a 26 foot river, KK could increase its business dramatically.

The Corps indicated that there are four (4) critical areas of concern in the Green Bay Harbor. The minimal cost of dredging only the most critical areas of concern is estimated at $10M. The cost of removing the total 1M cubic yards of backlog dredged material is estimated at $50M. Sufficient maintenance dredging is of the utmost importance to the future of the Green Bay Harbor.

Port of Houston Authority

The Port's dredging needs for FY'08 are estimated to be $33.6 million to $50.676 million for construction general (CG), and $22.236 million to $27.2 million for operations and maintenance (O&M), depending on if the final appropriation for FY'07 for the Houston Ship Channel reflects the President's budget for FY'07 or the final FY'06 appropriation amount. The largest container facility in the U.S. Gulf of Mexico, the Port of Houston Authority's Barbours Cut Container Terminal, was draft-restricted as recently as last year (2006). It is vital to keep the Houston Ship Channel at its operational depth to maintain the flow of commerce through the largest foreign tonnage port in the nation. The projects for FY'08 include deferred construction and projects that will give greater capacity for dredge material placement. These are necessary to continue the maintenance of the channel.

The port's needed vs. actual Corps of Engineers funding for fiscal years 2005, 2006 and 2007 (estimate) were:

Year	CG Capability	CG Funded	O&M Capability	O&M Funded
FY2005	$29 million	$29.5 million*	$31.476 million	$16.0 million

FY2006	$45.1 million	$26.0 million	$23.38 million**	$17.964 million
FY2007	$58.0 million	$26 to $43 million***	$19.8 million	$13 to $18 million***
FY2008	$33.6 to $50.7 million		$22.2 to $27.2 million	

*includes reprogramming of $7.5 million to the project. After savings and slippage the actual allocated is $27.045 million.
**original request by Corps was $16.561 million and was increased midway through the year.
***FY2007 appropriations has not passed, these are estimates using the President's budget numbers vs. carryover from the FY2006 numbers.

Jacksonville Port Authority

JAXPORT has two important dredging projects. A 5.3 mile section of Jacksonville's federal channel, currently at a depth of 38 feet, has received federal authorization to be deepened to 40 feet (plus one foot of overdredge); however, the federal share of funding has not yet been made available for this project. We do anticipate funding to be made available and are working closely with our elected representatives on this issue. Separately, a General Re-evaluation Report (GRR) is now underway to determine the potential of a new project to deepen the entire federal channel to 45 feet or more. Federal funding also will be a vital part of this project, which is important as a new customer at JAXPORT initiates direct container ship service between Jacksonville and ports throughout Asia beginning in 2008. Many shipping lines currently utilizing the Port of Jacksonville, particularly container and bulk fuel carriers, also are eager for harbor deepening to proceed so they may deploy vessels requiring this deeper water.

Port of Kalama

In addition to annual maintenance dredging, we ports on the Lower Columbia River section need an additional $25 million in 2008 and $25 million in 2009 to complete the deepening of the Columbia River project, which is less than half complete.

Port of Lake Charles

The Calcasieu River Waterway (Lake Charles, Louisiana, and vicinity) is the 12th largest port district in the nation. More than 58,000,000 tons of cargo were handled by facilities on this channel in 2005 (the latest figures available). As a port of national significance, it warrants priority funding for required periodic maintenance dredging to ensure

Congressionally authorized ship channel dimensions are maintained. On average, $17,000,000 is required annually to maintain the nation's longest dredged approach channel and waterway to authorized dimensions of 400' wide shoreward and 800' wide offshore, with 40' minimum depth.

Because of inadequate funding in FY'06 and the constraints of the proposed continuing resolution that will fund the Corps for FY'07, the channel's dredging needs are far greater than normal. A total of $18,400,000 is needed to restore the channel to project dimensions. In addition, $20,000,000 is needed for foreshore protection that will retard shoaling and provide necessary disposal sites for dredged material.

Historically, less than half the amount needed to maintain the channel at project dimensions has been appropriated. The Calcasieu River Waterway ship channel is routinely dredged to less than authorized project width and needed dredging is frequently postponed. Currently, an 11 mile reach of the channel is 350' wide rather than the authorized width of 400'.

The amounts above do not include funds to do smarter things with dredged material: reclaim property lost to hurricanes and through subsidence and restore coastal wetlands. This innovative use of dredge material will provide both hurricane protection and reverse coastal restoration. To do so will cost considerably more than currently allowed under "the federal standard."

Historically, the channel's dredging needs are under funded. The Corps New Orleans District usually requests $15-20 million for Calcasieu O&M and receives $10-15 million. In 2005, Calcasieu O&M was $13.6M, later supplemented by $25M more in hurricane relief. In 2006, the Corps only received $8.9M for Calcasieu O&M but was able to carry over some of the hurricane supplemental appropriation. However, the shortfall in FY'06 funding will impact FY'07 funding because of the Continuing Resolution that will apparently fund the Corps for the remainder of 2007.

Inadequate funding of the Calcasieu Ship Channel is a detriment to the region and the nation. An economic impact study of the port was last completed in 1999. It showed that port facilities move 10 million tons of cargo annually and private facilities move over 45 million tons of cargo annually. The port generates $18.3 billion in annual spending. The port creates $633 million in income and 13,200 jobs. The port generates $68 million in state taxes and $63 million in local taxes. A nine-day closure of the channel in the summer of 2006 cost the nation $1 billion in increased gasoline and natural gas prices.

A January 2007 draft report by the Corps of Engineers shows that a one foot reduction in vessel operating draft costs Calcasieu Channel users $5.4 million per year. Poor channel maintenance in the past has caused users representing 52% of the channels deep draft vessel traffic to voluntarily reduce their operating draft by one foot, incurring losses of about $2.8 million per year based on the Corps' preliminary report. When the three LNG facilities (one existing, one under construction and one approved by FERC) are operating

at full capacity, that same study reports a loss of one foot in operating draft will cost channel users $24.1 million per year.

The Calcasieu River Waterway (Lake Charles, Louisiana and vicinity) enabled transit of over 58,000,000 tons of cargo in 2005. Significant forecasted increases are on the near-term horizon. The Waterway continues to support and lead the nation in liquefied natural gas (LNG) imports. Expansion of Trunkline LNG and FERC-approved construction of a new two-berth Sempra Energy, Cameron LNG, LLC terminal and contemplated construction of a third LNG Cheniere Creole Trail terminal near Cameron, Louisiana, will make the waterway a leader in imported LNG. Expansion of major refineries operated by CITGO and ConocoPhillips will increase the channel's importance to the nation. It is anticipated that ship traffic on the channel will increase 70% by 2010.

Chemical and other manufacturing, shipyard activity and intermodal cargo handling by other waterway reliant industries such as PPG, W.R. Grace, Alcoa, Firestone, Lyondell, Westlake Styrene, Omega Protein, Global Industries, Bollinger Calcasieu LLC, Texas Butylene, Venco, Dunham Price, Port Aggregates, and the Lake Charles Harbor & Terminal District depend on an adequately maintained Calcasieu River Waterway.

The waterway also serves military-essential mobilization activities, the commercial fishing industry, outer continental shelf offshore oil and gas production, and essential oil spill response readiness capabilities of the Marine Spill Response Corporation. Critical U.S. Department of Agriculture food programs rely on services of the Lake Charles Harbor & Terminal District and the waterway's efficacy. The federal Strategic Petroleum Reserve (SPR) facility is adjacent to the waterway. Recreational facilities (casino vessels), which rely on the safety of the adjacent waterway, will soon entertain over seven million patrons annually.

Crude oil imports through the Waterway are primarily from the western hemisphere and are not subject to the variables impacting crude oil from the Middle East. Ensuring a fully funded and maintained waterway for these imports and other purposes of national importance is essential.

Port of Long Beach

Long Beach is also California's largest liquid bulk Port, handling very large crude and refined product vessels for the nation's largest market of those products. The federal navigation channel has been authorized for -76 feet to accommodate the large liquid bulk carriers.

However, due to delays in permitting and funding, portions of the main channel dredging that serve our largest crude berth have been repeatedly postponed. Consequently, fully laden vessels must be lightered offshore in an expensive and more environmentally risky manner.

The U.S. Army Corps is working with the port on the main channel project. The project has received support from the senate in the amount of $5M but more than $6M is needed to complete the work and is being requested in the upcoming FY 2008 budget.

Port Manatee

In the Corps FY'06 Budget and as authorized by Congress, there was zero for new construction and $1.5 million for maintenance dredging. In FY'07, there was still zero. The Port actually requested $12 million for new construction and $3.5 million for maintenance. The lack of funding has hindered closure of the Manatee Harbor Dredging Project, which should have been completed in CY 03 or early CY 04.

Up until FY' 06 the Manatee Dredging Project had been federally funded, however, because of the Corps' own delays on this continuing contract, appropriations were reprogrammed. It is our understanding that of the approximate $24 million that was reprogrammed, the Corps has worked to restore some of the reprogrammed funds whereby up to $5 or $6 million dollars still remains reprogrammed for other activities.

For FY'07 the funding requirements as currently viewed are for new construction, $16 million and for maintenance, $4 million.

The project co-sponsor, Manatee County Port Authority, has been detrimentally affected. Since the Corps dredging on this phase also included deferred maintenance dredging in addition to new construction, the pilots continue to impose water draft constraints that have been in place since January of 2002. These constraints are costing the sponsor an estimated $12 million per year. In addition, the Port has new berths constructed to tie in with the new construction dredging that have been online since 2003 but cannot be used. These two berths represent a port investment of $20 million dollars.

Finally, the federal government and the sponsor have invested $60 million in the dredging from which benefits and return on investment cannot be derived. This is the waste of federal and sponsor funds invested from which benefits are not being generated and for all practical purposes could be wasted unless it is cured by federal appropriations.

Maryland Port Administration

Maintenance dredging is critical to the Port of Baltimore, since the deeper laden ships using the northern or C&D Canal route into Baltimore sail with 33' drafts, putting them within 2' of the authorized channel depth of 35'. For the southern route up the Chesapeake Bay, some of the deeper laden ships sail with drafts of 47.5', putting them within 2.5' of the authorized channel depth of 50'. Full authorized depth is needed in both channel systems to maintain current ship usage patterns.

Northern, C&D Canal route maintenance dredging (Philadelphia District COE) is fully funded for $12M in 2008, unless some of the O&M funds are diverted to bridge maintenance, which could cost up to $4.0M.

For the southern Chesapeake Bay route into Baltimore, the Corps (Baltimore District COE) is funded for $16.7 to perform about 2.5 million cubic yards (mcy) of dredging in 2008. Another $3.0M ($20M total) is needed to dredge an additional .5 mcy in order to clear up the most critically needed maintenance dredging; a total of $25M to $28M would be needed to dredge a total of 4 mcy to 5 mcy, if all maintenance backlogs were cleared up in this channel system in 2008.

Funding shortfall for the C&D O&M program is $4.0M, in order to avoid diversion of maintenance dredging funds into bridge maintenance. Another $3.0M is needed for the southern route into Baltimore to enable dredging of the most critically needed maintenance dredging, bringing the funding shortfall to $7.0M, and if all maintenance backlogs were addressed, another $5.0M to $8.0M would be needed, bringing the total funding short fall to $12M to $15M.

Massachusetts Port Authority

The federal navigation channels in the Port of Boston are in urgent need of maintenance dredging. Although the Inner Harbor Maintenance Dredging Project has been fully permitted, it has not yet been bid due to a lack of sufficient federal funding. Once the FY'07 budget is finalized, the first phase of the project will be put out to bid. Dredging is expected to begin in the spring of 2007. The port will need total federal funding of $10 million for FY'08 - $8 million to continue the Phase I maintenance dredging and $2 million to start the Phase II maintenance dredging.

The 40-foot Main Ship Channel into the Port of Boston has shoaled in to the extent that -35 feet MLLW is now the controlling depth. As a result, the deepest draft vessel that can be brought in without any regard to tides is 33 feet. (This does not take into account strong westerly winds that can further reduce available water depths by as much as 2 feet.) In 2005, there were more than 600 movements in Boston Harbor by "tide-restricted" vessels (i.e., vessels with drafts of 34 feet or greater). This results in a significant and negative economic impact to the region, and it raises significant operational, safety, economic and environmental concerns. Vessels will need to lighter their cargo in the outer harbor, thereby increasing costs to consumers and the chances for an oil spill in these harbor areas. In the worst case, these severely shoaled channels could result in a ship grounding, with potentially devastating environmental consequences

The Port of Boston provides significant economic benefits to the Commonwealth's residents and businesses. The Port is credited with generating 34,000 jobs and a $2.4 billion annual economic impact.. This significant economic benefit could be jeopardized by the current severe state of shoaling in our channels, since the economic viability of any port rests in large part on the depths of its navigation channels. If deep draft vessels

cannot safely and efficiently transit the harbor to access their channels, significant economic and potential environmental impacts result. Also, waterborne transportation of cargo is the most environmentally sound transportation alternative available. If cargo cannot reach its destination by water, it will be diverted to the highways, resulting in increased air emissions, traffic and deterioration of highways and bridges.

In FY'06, the port needed $10 million for the federal costs. However, it only received $6.6 million, a $3.4 million shortfall. Since the FY'07 federal funds have not yet been appropriated to allow the dredging to continue uninterrupted, the project has not yet been bid and the FY'06 funds have not yet been spent. For FY'07, the port needed $7 million, and the President's budget carried $0, a $7 million shortfall.

Port of Miami

For FY'08, the Port needs federal funding to initiate the Pre-Engineering Construction and Design (PED) for our Phase III deepening project. The Record of Decision (ROD) was executed by the Assistant Secretary of the Army (ASA) in May 2006 based on an approved General Reevaluation Report (GRR). The extensive economic study details the nation's benefit for this 50' deepening project. In anticipation of this project, the port has heavily invested in infrastructure and security projects for our future. In 2005, the port received two super post-Panamax gantry cranes to handle cargo retrieval of equivalent sized ships. The Port also recently completed an additional 1,145 feet of gantry dock to accommodate post-Panamax vessels. These investments are all part of the port's preparation for the future 50' deepening project. The POM is the second largest economic engine in Miami-Dade County, contributing approximately $16 billion to the economy, and 120,000 direct/indirect jobs. With its 52' draft, Freeport Bahamas (just a short 65 miles from Miami) is the deepest port south of Norfolk, Virginia with 99% of its cargo being unloaded/reloaded. As a result, Freeport is positioned to take business away from the U.S., including the POM. With the capital expense already initiated at Miami and its proximity to Freeport, Miami needs $2M in FY'08 for the Phase III deepening project and the initiation of PED.

The POM's dredging needs were met for FY06 and FY07. The Corps completed the maintenance dredging project in FY'06 at a cost of approximately $1.5 million. Additionally, the Corps completed the Phase II deepening (depth of 42') project in FY'07.

The Port of New Orleans

Maintenance dredging of the Lower Mississippi River for the Port of New Orleans and other Louisiana ports varies between $30 million to $60 million per year, with the average usually falling around $45 million. The cost to the Corps to dredge the New Orleans Harbor is about $2 million per year.

In FY'06 and '07, the Corps was able to complete dredging operations for the Mississippi River, but had to defer jetty and dyke repair at the mouth of the river that would have cost $10 million to $15 million. It's important to keep those jetties and dykes in good working order because continued deferral of maintenance could lead to greater shoaling and increased maintenance dredging costs. The slow pace of funding has also affected access to the Port's Inner Harbor, which uses the Mississippi River Gulf Outlet (MRGO) and the Inner Harbor Navigational Canal (IHNC) as its main channels.

Had the IHNC lock replacement project been completed, the Port wouldn't be in such a bind right now with the imminent closure of the MRGO. The MRGO shoaled from 36 feet to 21 feet after Hurricane Katrina. It will not be redredged, and the Port is currently seeking $150 million in funding to move container facilities and cold storage facilities that can no longer be accessed by deep draft vessels. The lock project, when it is complete, will provide another suitable route for deep draft vessels without the time delays caused by the current antiquated lock. The lock project also plays an important role in our nation's inland waterway system. The completion of this project is critical for the continued success of the Gulf Intracoastal Waterway, because the IHNC lock represents a huge bottleneck for barges transiting that route.

The Port Authority of New York and New Jersey

With regard to dredging, the ongoing NY & NJ Harbor Deepening Project will improve transportation efficiency and will benefit the markets served by the Port, as well as the nation's defense capability. The Port and private industry have been engaged in a $2 billion redevelopment program that includes waterway, terminal, and access improvements to meet this anticipated growth. The harbor deepening program at the Port of NY/NJ is one of the largest Corps projects in the nation. It is essential to complete the 50 foot channel deepening in order to accommodate the vessels of the future and encourage continued private industry investment. These investments by the federal government, the Port Authority and private companies have resulted in 230,000 jobs in the region and almost an additional 200,000 jobs nationwide. A total of $130 million is needed in construction funds due to the significant number of contracts to be awarded over the next several fiscal years. This level of activity must be maintained through FY'10 in order to complete the 50' deepening project on schedule. Project slippage will have serious negative impacts on Port commerce as well as the region's economy.

In FY'06 & FY'07, the President's Budget and the required budget for construction were sufficient. However, operation and maintenance funds are always much less than required. Maintenance projects are critical to the commerce, navigation and security of the Port and the nation. Billions of dollars are being spent to deepen the Port's channels. The return on this investment will be lost if these channels are not maintained as needed by today's deeper draft vessels. Additionally, the risk of groundings will increase. Past and current budgets enable only partial maintenance of the channels, leaving significant areas at shallow and potentially unsafe depths. The Port is the nation's busiest petroleum port, and the Arthur Kill (under NY & NJ Channels) is critical to that trade. Maintenance

of the channel is needed to support the industry, which serves the greater New York Metropolitan area and much of the Northeast. Maintenance also protects and perpetuates the federal infrastructure investment. The port identified several critical projects with pressing dredging safety concerns. In FY'07, the shortfall between the Administration's budget and the funding required for O&M was $21.4 million. In FY'08, we require approximately $46 million, a similar number to what we required in FY'07.

North Carolina State Ports Authority

With regard to dredging, in FY'08, the North Carolina State Ports Authority needs construction general funding for completion of the Wilmington Harbor Deepening Project, general investigation funding for regional sand management and for port expansion reconnaissance studies for the new North Carolina International Port, and operation and maintenance funding for upkeep of existing authorized project dimensions at the Ports of Morehead City and Wilmington.

The Wilmington Harbor Deepening Project is basically one dredging contract away from completion. Over the last several years, the U.S. Army Corps of Engineers Wilmington District, in close coordination with the Cape Fear River Pilots and the North Carolina State Ports Authority, has been maximizing successive annual reduced federal funding levels. The Port of Wilmington has been working with less than half of its authorized turning basin length, while awaiting funding that would allow completion to full project dimensions. The reduced turning basin dimensions were to be an interim situation agreed to by the Pilots and the Ports Authority, and now present potential ship safety and operational concerns that threaten to jeopardize current customers' business and new business opportunities.

The Wilmington Harbor Deepening Project mandates an updated Dredge Material Management Plan that delineates the dredge material management capabilities and capacities for maintenance dredging in operational out-years to include beneficial use of dredge material along adjacent ocean shorelines. The high quantity and quality of – and demand for – beach compatible sand found at the mouth of the Cape Fear River and in the Beaufort Harbor require the Corps to develop Regional Sand Management and Dredge Material Management Plans for the Port of Wilmington and the Port of Morehead City. The beneficial use of dredge material and the benefits gained from the navigational projects' maintenance materials require an approach above and beyond the current Corps' least-cost placement policy. The North Carolina State Ports Authority, with its site-specific dredge material management challenges, requires additional Corps funding to ensure a regional and holistic approach to dredge material management while delivering full authorized project dimensions that facilitate North Carolina's significant participation in our nation's prominence in international maritime trade, as well as maintaining our nation's military preparedness.

Capability	Authorized	Pres. Budget FY07	~

FY 06			
Morehead City	$4.5M	$3.6M	$0.9M
Wilmington	$15.6M	$11.8M	$3.8M
FY07			
Morehead City	$6.7M	$5.2M	$1.5M
Wilmington	$14.4M	$9.4M	$5M

Port of Shreveport-Bossier

The port's dredging needs include the Red River Waterway System as a whole. The total minimum operations and maintenance (O&M) required is $12M; dredging needs are $ 3.2 million; L&D operations and other O&M are $8.8 million.

South Carolina State Ports Authority

In South Carolina, the Charleston District of the U.S. Army Corps of Engineers currently collects about $40 million annually in harbor maintenance taxes, and gets back only about $9-$12 million a year for maintenance work for navigation channels critical to the ports of Charleston and Georgetown.

Georgetown and the businesses located there are particularly hard hit. The authorized depth along the 14 mile navigation channel into Georgetown is 27 feet, but the channel is currently only 25 feet or less in many areas in the main channel leading to the state pier berth (and has been consistently under-maintained for many years).

ISG/Mittal Steel Group, which employs 375 people locally, currently moves 300,000 tons of cargo through the port but could move 500,000 tons if the channel were dredged to its authorized level. As a result of the channel depth, ISG still must "light-load" vessels, or use smaller vessels, which has a direct effect on its raw material cost. According to ISG, the cost difference between handling a 25k metric ton handymax ship and 30k metric ton handymax ship is $3 per metric ton, or about $15,000/ship because of insufficient draft. The company handles about 12 ships/year now (for a total economic impact of $180,000/year), vs. 30 ships/year as recently as 2001 (for a total economic impact of $450,000). Having to use smaller ships and pay the HMT on imports of raw materials is a contributing factor to their loss in sales and ship traffic, because it puts them at a competitive disadvantage in the world market. Their customers have to absorb those fees in the prices they charge for their steel.

Holcim Cement moves 150,000 net tons annually through Georgetown and employs 4 people at the terminal. Holcim serves the ever fast growing construction industry in the greater Myrtle Beach and surrounding area. It provides some 150 truck driver jobs and numerous construction jobs are dependent on its concrete for construction projects. This

company desperately needs a channel maintained at 27 feet again to remain competitive in the market.

MMA (Martin Marietta Aggregate) currently moves 300,000 tons annually through port authority facilities and plans to move 500,000 tons in 2007 through Georgetown. The company brings in aggregate (rock) from the Bahamas to support the concrete industry in the Myrtle Beach/Conway area. At a 27 foot draft, MMA already had to light-load their vessel to discharge only 28,000 tons. With the channel at only 25 feet, the company can only load 24,000 tons, significantly driving up its operating cost, and driving up construction costs and affecting jobs in South Carolina.

International Paper Company moves 60,000 tons annually to its mill in Georgetown, which has 750 employees and is only ¼ mile from the Port of Georgetown. The mill has break-bulk tonnage destined for the Far East region, but due to the size of the vessels loading the cargo and the reduced draft in Georgetown due to lack of dredging, the mill is railing this tonnage to Wilmington, NC, over 250 miles of track to be loaded on a ship for export. This represents a loss of cargo annually to Georgetown and increased costs to International Paper as a result of shipping through a more distant port.

The Port of Georgetown also has seven different active steel importers who bring in approximately 90,000 tons annually. This tonnage accounts for about 60 jobs relating to stevedores, port employees, and local trucking companies. The vessels discharging this cargo must light-load prior to coming to Georgetown even with a 27' draft. When the draft falls under the 27 feet, these vessels will not come in and the cargo is delivered to other neighboring ports, which causes a significant increase in trucking costs to the customer. Many times, the increased cost exceeds the profit margin and the business is simply loss.

A number of other long-term customers at Georgetown are also having to light-load vessels due to decreased channel depths.

The Port of Georgetown also has significant amounts of new business expected to begin in 2007 and 2008 which will depend on a minimum draft of 27 feet.

Tampa Port Authority

The port's FY'08 request for dredging will be approximately $8.0 million.

In 2006 the Port received all the dredging funding requested and needed. For '07, it anticipates receiving the full amount requested ($4.15 million). However, owing to unforeseen shoaling, it now appears that the port's need in '07 will be about $ 4.0 million greater than the actual amount received.

Toledo-Lucas County Port Authority

In Toledo, port officials are constantly fearful of the Port being closed or crippled, as one good storm in Lake Erie could close the shipping channel. The Corps is currently 3 to 4 million cubic yards short of having dredged compared to what it should have dredged and every year the dredging program does not meet the volume required to even equal what is being deposited into the ship channel. The Port of Toledo is expanding its tonnage throughput and the diversity of its cargoes to a significant measure annually and the prospects for continued growth are apparent. With this growth comes an increase in local employment and in the economic spinoffs benefiting the region. Midwest steel manufacturers depend upon their raw materials coming to them economically via Toledo. Midwest machinery manufacturers depend upon raw steel getting to them via Toledo. Local farmers depend upon the fertilizers continuing to come in, and this is a growing business. Regional power plants depend upon receiving raw materials for scrubbing operations that limit emissions into the environment. Major grain handlers depend upon the Port to export their products, as do Midwest coal mines. The auto industry depends upon the many different metals that come in through Toledo in ever increasing volumes. Toledo has been identified as a key Great Lakes port for the future handling of containers originating from and bound for the Midwest, and the Port is already a major petroleum products handler to and from the Midwest.

The annual shortfall in dollars for Corps dredging within Toledo Harbor is estimated at initially $10 million annually to address the existing backlog plus needed maintenance and then $3 million annually to perform required maintenance dredging to dredge the channel to standard. With the doubling of the number of international ships using the Port this past season and anticipating there will not be a fall off in the port's growth, it is increasingly important to assure international shipping lines that the port has plenty of width and depth at all points in the channel. A single grounding incident can damage a port's reputation for years, driving international ships to avoid the port where the grounding occurred.

Port of Vancouver, USA

Dredging needs in FY'08:

Columbia River Channel Deepening – $25 million requested for FY'08

a. Increased capacity to handle cargoes, particularly wheat – nearly 70% of Port of Vancouver USA tonnage – estimated at $600.000 additional outbound cargo per ship could be accommodated by a deeper channel
b. Assumption of maintenance for new turning basin planned adjacent to Port's Columbia Gateway development – necessary to relieve congestion and insure navigation safety

Virgin Islands Port Authority

Probably over the past thirty (30) years the U.S. Army Corps of Engineers has not undertaken any dredging projects within the harbors of the Virgin Islands. The harbors of concern are Charlotte Amalie, including Crown Bay (Gregorie Channel) on the island of St. Thomas and Frederiksted, Christiansted and Limetree Bay harbors on the island of St. Croix.

These harbors throughout the Virgin Islands serve the islands in terms of cargo importation and cruise ships to which the islands economy is dependent to a significant extent. Both Christiansted and Charlotte Amalie including Gregorie Channel have Congressional designation as far back as 1950.

The VIPA has paid for all dredging of the harbor areas, whether to extend port terminals or for maintenance purposes, without any financial assistance from the Territorial or federal Government.

There is a lack of availability of dredging equipment in the Virgin Islands or in neighboring Caribbean islands, mobilization cost is high as well as mitigation since the marine resources and water quality are of higher quality within all of the harbor areas.

The VIPA is presently in the process facilitated by AAPA of requesting financial assistance/consideration from the Army Corps of Engineers as we are not included in their FY budget. The projected estimated amount for consideration is $10 million.

Virginia Port Authority

FY08 Norfolk Harbor dredging fund requirements:

Required for O&M for CIDMMA:	$ 1,700,000
Required for Craney Island Dredge Material Management Area:	$16,688,000

The Port of Virginia, the U.S. Navy and the U.S. Coast Guard are heavily dependent on the proper maintenance of navigation channels in Norfolk Harbor (Hampton Roads). Fortunately, the USACE has a cost effective dredge disposal site, Craney Island Dredge Material Management Area (CIDMMA) that makes dredging in Norfolk Harbor one of the lowest cost dredging areas in the country. However, even with CIDMMA, the USACE still must perform maintenance and conduct routine operations at CIDMMA as well as maintenance work on the Norfolk Channels.

The Port of Virginia is the second largest port on the East Coast. The Port of Virginia serves the nation, with over 55% of the cargo that moves over the docks in Hampton Roads entering or leaving the state. The Virginia Port Authority has a $667.5 million annual regional state impact through port-related jobs and their resulting income. Cargo moving through the port, and all of the jobs related to this cargo, generate 165,000 jobs in Virginia that in turn generate $4.9 billion in personal income.

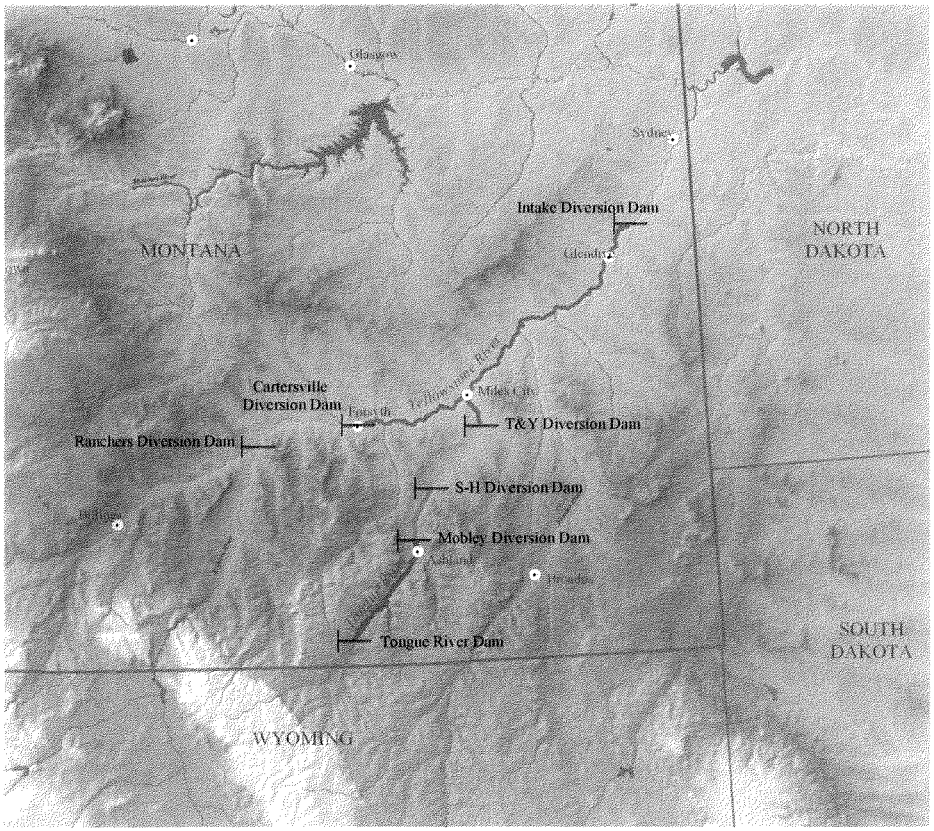
Closing the port would restrict movement of key military vessels located in this harbor that transport troops and supplies to points throughout the world. Hampton Roads is home to the largest Naval Base in the world, Naval Station Norfolk, home of the Atlantic Fleet. In addition to being the world's largest Naval Station, it is also the largest military station in the world. Naval Station is homeport to aircraft carriers, cruisers, destroyers, large amphibious ships, submarines, and a variety of supply and logistics ships. Port Services at this facility control more than 3,100 ships' movements annually as they arrive and depart their berths. Port facilities extend more than four miles along the waterfront and include some seven miles of pier and wharf space. Naval Station Norfolk has 78 ships and 133 aircraft home ported here. When they are not at sea, they are alongside one of the 14 piers or inside one of the 15 aircraft hangars for repair, refit, and training.

FY06/07 Norfolk Harbor dredging fund requirements:

	FY06	FY07
Required for O&M for CIDMMA:	$14,672,000	$17,266,000
Received / Budgeted:	$13,205,000	$ 0
Norfolk Harbor Deepening:	$6,295,000	$ 3,400,000
Received / Budgeted:	$3,221,000	$ 0
Shortfall:	$4,541,000	$20,666,000

# # #

Fish Passage on the Lower Yellowstone River



Diversion Dams

Elevation (meters)

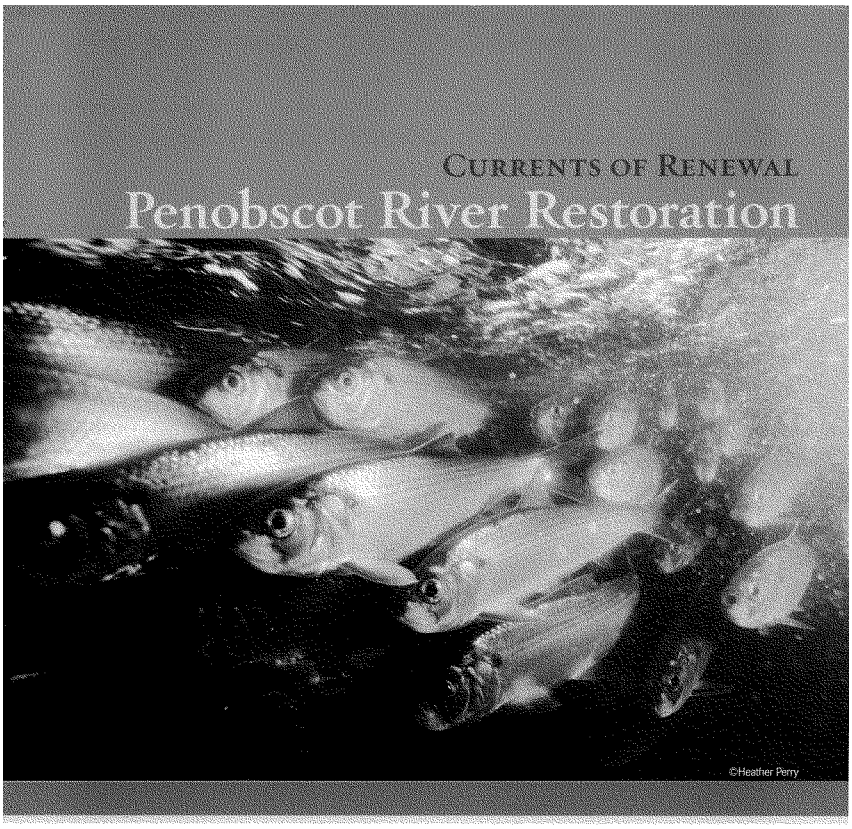
High : 3779

Low : 547

N

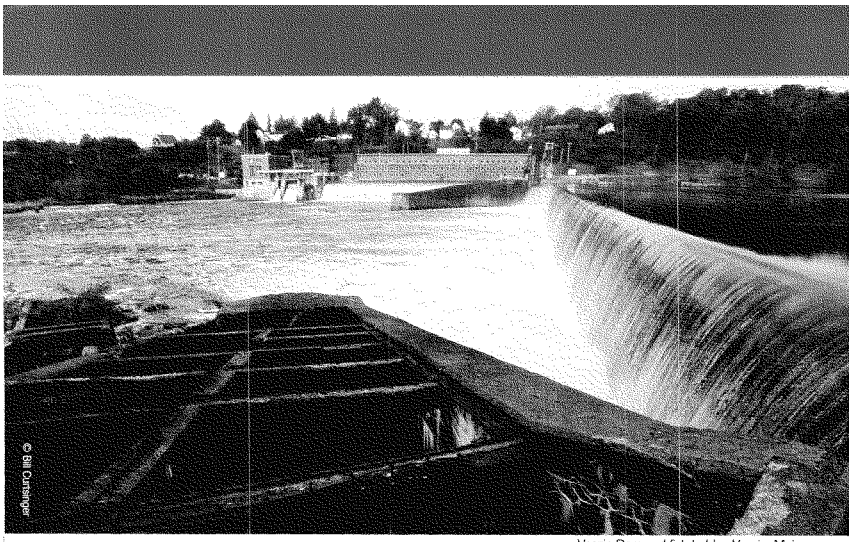
0 12.5 25 50 Miles

Area of Interest
Montana



TO UNTRAINED EYES, the dams along the Penobscot River aren't particularly imposing. But to an Atlantic salmon, each dam is as daunting as the Great Wall of China, blocking the route to historic spawning grounds. Those that manage to climb the fish ladders emerge battered and exhausted. For fish like shad, rainbow smelt and striped bass, the upstream side of a dam might as well be the dark side of the moon.

But all that will change soon. An innovative collaboration between industry, environmental organizations, and federal, state and tribal governments is poised to improve access to nearly 1,000 miles of habitat in the Penobscot watershed for endangered Atlantic salmon and six other species of sea-run fish. The project will restore access to 100 percent of the historic habitat in Maine's largest river system for four additional species. From the forests and streams of central Maine to the Penobscot estuary and the Gulf of Maine, the recovery of fish populations will have cascading benefits for whole communities of plants, animals and people.



Veazie Dam and fish ladder, Veazie, Maine.

THE RESTORATION of the Penobscot River is an unprecedented effort to remove two dams and build a state-of-the-art fish bypass around a third. Hundreds of miles of habitat along the river and its tributaries will be re-opened for sea-run fish, with tremendous benefits to biological and human communities.

The seeds of the project were sown in 1999 when PPL Corporation (formerly Pennsylvania Power and Light) purchased a series of dams in Maine. PPL approached the Penobscot Indian Nation and several conservation organizations in hopes of creating a co-operative model for the dam relicensing process. Discussions led to a remarkable announcement four years later calling for removal of the Penobscot's lowermost dams while maintaining hydropower production by increasing power generation at other dams upriver.

A 2004 agreement outlining the river restoration process was signed by the US Department of Interior, the State of Maine, PPL Corporation, the Penobscot Indian Nation, American Rivers, Atlantic Salmon Federation, Maine Audubon, Natural Resources Council of Maine and Trout Unlimited. The Nature Conservancy joined as a full partner in 2006.

An Ambitious Two-Phase Project

In the first phase of the project, three dams will be purchased by the Penobscot River Restoration Trust (Trust), a 501(c)3 organization created to implement the restoration. The dams may be purchased for $24 million before June 22, 2007. The price then escalates by $1 million a year until the purchase option expires in June of 2009. In phase two, with help from the Army Corps of Engineers, Great Works and Veazie Dams will be removed. A fish bypass resembling a natural river channel has been proposed at Howland Dam. The estimated cost of this phase is $25 million.

"Our identity as a tribe is deeply intertwined
The river's restoration is critical to our

Partners for Restoration

The Penobscot River Restoration Trust is the 501(c)3 organization responsible for implementing the Penobscot River Restoration Project. Six environmental organizations and the Penobscot Indian Nation are members of the Trust. The Trust is partnering with PPL Corporation and a variety of state and federal agencies to accomplish an ambitious agenda for the restoration of the river.

The Penobscot River Restoration Project resolves longstanding disagreements over how best to restore native sea-run fish and their habitat while balancing the need for hydropower production. The environmental and economic goals of the project include restoring self-sustaining populations of native sea-run fish, maintaining hydropower resources, renewing opportunities for the Penobscot Indian Nation to exercise sustenance fishing rights and avoiding future uncertainties over regulation of the river.

Restoring Communities

Historically, life pulsed through the Penobscot River. Runs of Atlantic salmon, American shad, alewife and nine other migratory fish species streamed from the Gulf of Maine, some reaching as far as Mt. Katahdin. These native fisheries thrived in a complex ecosystem supported by diverse and abundant invertebrate life, fertile wetlands and varied spawning habitats.

The removal of two dams and proposed bypass of a third will expand recreational fishing and paddling opportunities, revitalizing local salmon clubs and re-opening canoe and kayak routes. The project is expected to create new opportunities for tourism and business. Communities along the river are already planning for the economic benefits of the project.

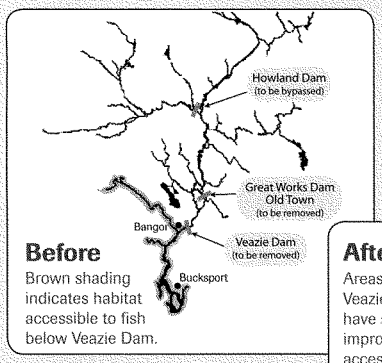
Restoring Traditions

For over 10,000 years, the Penobscot Indian Nation has lived at the heart of the Penobscot River watershed. Today, the Reservation is composed of the islands, riverbed and surrounding waters of the river above Milford Dam. The tribe's treaty-reserved fishing rights and many sacred traditions are inextricably linked to the river. Restoring the ecological integrity of the river is a necessary step in allowing these traditions to continue.

with the **health of the river.**
cultural survival."

—Kirk Francis, Penobscot Indian Nation Chief

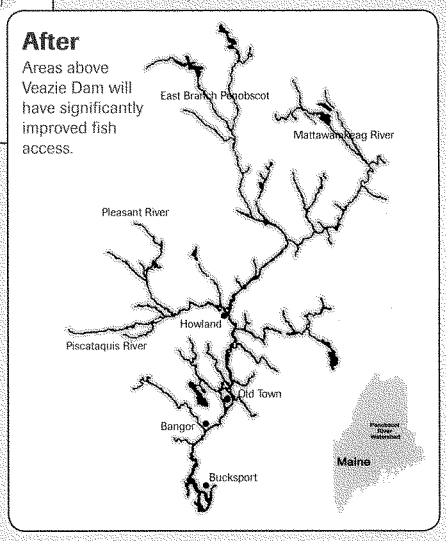
A Win-Win Opportunity



Before
Brown shading indicates habitat accessible to fish below Veazie Dam.

For Fish

This project will improve access to almost 1,000 miles of habitat for endangered Atlantic salmon. It will open thousands of miles of habitat for American eels, and hundreds of miles for alewives. Species such as threatened Atlantic sturgeon, endangered shortnose sturgeon, tomcod and smelt will be able to access their full natural habitat ranges, which end at a series of natural ledges in Milford (over 20 miles downstream of Howland Dam).



After
Areas above Veazie Dam will have significantly improved fish access.

For Renewable Energy

Successfully implemented, the Penobscot River Restoration Project will achieve a balance on the river between hydropower production and native fisheries for the first time since the dams were built nearly 200 years ago. The project will allow maintenance of nearly all of the current total hydropower production on the river. Under the agreement, PPL Corporation has the opportunity to increase energy production at six additional dams. The first phase of enhancements have already been approved by the Federal Energy Regulatory Commission (FERC) and are underway.

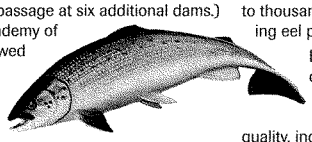
"**Rivers are critical** to making Maine's coastal fisheries productive. Sea-run fish . . . were once a **powerful economic driver** that generated thousands of sustainable, year-round jobs throughout the state."

– Ted Ames, Fisherman and MacArthur Award Recipient

THE CAST OF CHARACTERS

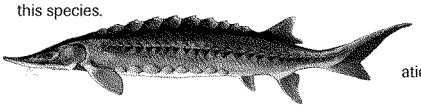
Eleven species of diadromous fish (alewife, American eel, American shad, Atlantic salmon, Atlantic sturgeon, blueback herring, **rainbow smelt**, sea lamprey, shortnose sturgeon, striped bass and tomcod) spend critical stages of their life cycles in East Coast rivers. The Penobscot watershed has the greatest potential of any river system in the Gulf of Maine to restore self-sustaining populations of these species. The recovery of fish populations will yield tremendous ecological benefits to the Penobscot River watershed and the Gulf of Maine.

When this project is complete, **Atlantic salmon** will be able to reach 52 percent of their historic habitat with one dam passage. (A naturalistic fish bypass is proposed at Howland, along with enhancements to fish passage at six additional dams.) A 2005 National Academy of Sciences report showed that 80 percent of recent US Atlantic salmon runs came into the Penobscot and recommended a program of dam removal on the river. After this project, Penobscot Atlantic salmon runs could increase from less than 1,000 today to a self-sustaining run of 10,000 to 12,000.

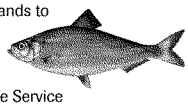


The removal of the lowermost dams on the river (Veazie and Great Works) will provide access to 100 percent of the historic habitat for four fish species: Atlantic sturgeon, federally endangered shortnose sturgeon, tomcod and rainbow smelt.

Nearly extirpated, the **Atlantic sturgeon** will regain access to virtually all of its potential spawning habitat on the Penobscot. Federally endangered shortnose sturgeon will also see increases in spawning habitat. The Penobscot is one of only five rivers in New England with known spawning habitat for this species.



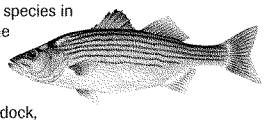
Penobscot **alewife** runs are expected to increase dramatically after dam removal—growing from current numbers in the thousands to several million. American shad could go from near zero to 1.5 million a year.



The US Fish and Wildlife Service recently considered listing the **American eel** under the Endangered Species Act because of declining eel populations in Eastern US rivers. Although eels were not listed—in part because of their abundance in undammed rivers—the USFWS report notes that dams exact a heavy toll on migrating eels. Mortality was estimated at 40 to 60 percent in rivers with multiple dams. This project will improve access to thousands of miles of potential eel habitat, helping eel populations recover.

Benefits for sea-run fish are only part of the expected impact of this project. Removing and bypassing dams on the Penobscot is expected to improve water quality, increase diversity and abundance of aquatic invertebrates and provide improved habitat and food sources for birds and mammals, from otters and minks to ducks and bald eagles.

Ted Ames, a fisherman, researcher and MacArthur Award recipient, has argued that along with overfishing, the loss of sea-run fish, especially **herring** and alewife, was a significant factor in the decline of coastal groundfish stocks. Increases in herring and alewives would likely expand the food supply for many species in the Gulf of Maine that prey on these smaller fish, including cod, haddock, bald eagles and seals as well as important recreational species such as **striped bass** and bluefish.



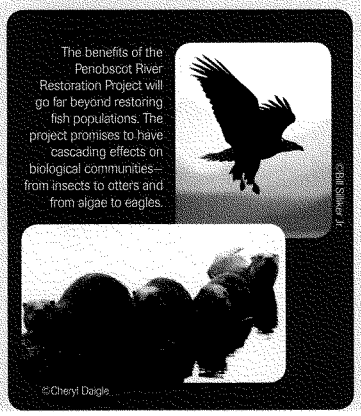
Drawings ©Duane Raver

CASE STUDY

Kennebec Thrives after Dam Removal

In July of 1999, the 160-year-old Edwards Dam in Augusta, Maine, was removed, allowing the Kennebec River to flow freely from Waterville to the sea. The dam removal opened 17 miles of migratory fish habitat, and the restoration that resulted was rapid and dramatic:

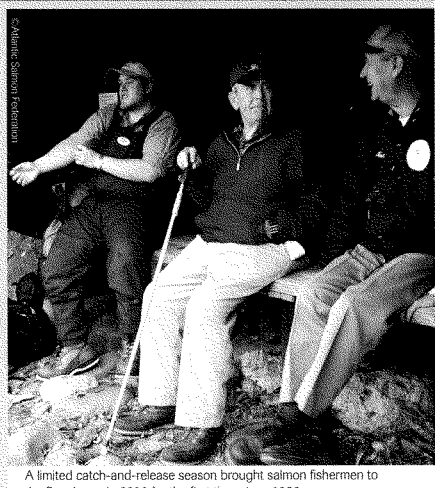
- Water quality improved markedly within a year.
- Diversity of aquatic insects tripled and their abundance increased 30-fold.
- Atlantic salmon, striped bass and sturgeon spawned in newly accessible habitat one year after dam removal.
- Alewife runs above the dam site increased from a few thousand to over 2 million, allowing state agencies to issue 26 commercial fishing permits.
- American shad population increased from several hundred to 8,000 adults.
- Populations of birds and mammals grew dramatically, including bald eagle, osprey, great blue heron, several duck species, mink, river otter and harbor seal.



The benefits of the Penobscot River Restoration Project will go far beyond restoring fish populations. The project promises to have cascading effects on biological communities—from insects to otters and from algae to eagles.

©Bill Sheehy Jr.

©Cheryl Daigle



©Atlantic Salmon Federation

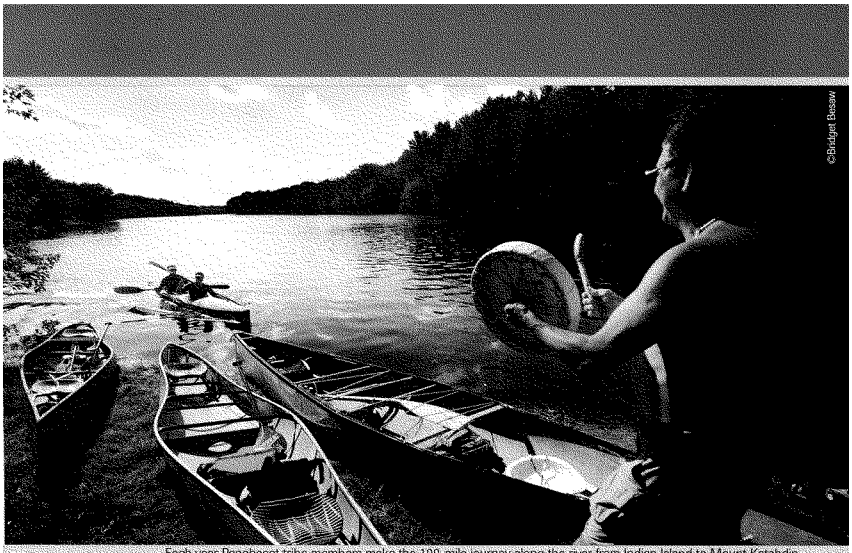
A limited catch-and-release season brought salmon fishermen to the Penobscot in 2006 for the first time since 1999.

Measuring Success

Studying the ecosystem response to the Penobscot River Restoration Project is critical to managing environmental resources along the river. Monitoring will allow scientists to evaluate the success of ongoing restoration efforts and adjust restoration strategies to obtain the maximum benefit.

Potential areas of focus for monitoring efforts include water flow and quality, as well as the health of plant, algal, fish, invertebrate, mammal and bird populations. Monitoring and research are being coordinated by experts in hydrology, geology, freshwater biology and other disciplines. Social scientists and economists will also assess the economic and social benefits of river restoration.

Studies of this project will be of broad interest to those involved in similar freshwater restoration projects nation- and worldwide. Partners in the project are currently working to support research that will describe baseline conditions before dam removal so that changes resulting from the project can be accurately measured and studied.



Each year Penobscot tribe members make the 100-mile journey along the river from Indian Island to Mount Katahdin.

Funding Needs

As the June, 2007, deadline approaches to purchase the dams before the price escalates, the funding need becomes more urgent. The Trust is raising approximately $25 million from a wide variety of sources for this first phase of the project. We are seeing a strong commitment from communities, businesses and civic organizations throughout the Penobscot region.

Federal funding has come through grants and appropriations from NOAA, USFWS and NFWF. The President's FY08 NOAA budget includes a significant funding request for the project. The State of Maine is committed to funding economic development along the river. Project partners are working with the State to find additional funding sources.

The Trust and project partners are preparing for dam removal and bypass. Congress has granted approval for the Army Corps of Engineers to begin the required study process. The Corps will engage in a feasibility study or move directly into determining the best way to remove the dams.

The Administration and Congress have supported and funded a similar partnership project on the Elwha River in Washington State that involves dismantling two dams. The Elwha River Restoration Project, when completed, will open 70 miles of salmon and steelhead spawning habitat at a cost of $182 million in federal funds. At a quarter of the federal dollar cost, the Penobscot River Restoration Project is a cost-effective approach to restoring Maine's largest river system.

This project represents the first specific plan to address the root of the problem for declining migratory fish populations—high mortality associated with multiple up- and downstream fish passages. By working to remove dams, maintain hydropower generation and involve local communities, the project has become a national model for large-scale river restoration.

No river restoration project in US history has benefitted sea-run fish as dramatically.

The West Branch Penobscot River with Mount Katahdin in the distance.

"The Penobscot River is an American Treasure. Opening the river will **breathe new life** into this rich natural resource and the wildlife and **communities it sustains.**"

—Carlos M. Gutierrez, US Commerce Secretary

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