

**OVERSIGHT HEARING ON IMPLEMENTATION OF
CORPS OF ENGINEERS WATER RESOURCES
POLICIES**

HEARING

BEFORE THE

**COMMITTEE ON
ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE**

ONE HUNDRED THIRTEENTH CONGRESS

FIRST SESSION

FEBRUARY 7, 2013

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COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

ONE HUNDRED THIRTEENTH CONGRESS
FIRST SESSION

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**OVERSIGHT HEARING ON IMPLEMENTATION
OF CORPS OF ENGINEERS WATER RE-
SOURCE POLICIES**

THURSDAY, FEBRUARY 7, 2013

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

The full committee met, pursuant to notice, at 10 a.m. in room 406, Dirksen Senate Office Building, Hon. Barbara Boxer (chairman of the full committee) presiding.

Present: Senators Boxer, Vitter, Cardin, Gillibrand, Carper, Baucus, Whitehouse, Lautenberg, Fischer, Wicker, and Boozman.

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

Senator BOXER. Good morning, and welcome, everybody. Welcome, our new member, Senator Fischer. We are thrilled that you are here.

And I have to say, this is a very important day, starting with a very important hearing. But at 1:30, I have to admit, Senator Cardin and Senator Mikulski are going to be receiving a massive gift from Senator Feinstein and I regarding the Super Bowl. We are not going to say much more about it now, we are not.

Senator CARDIN. Senator Boxer, I just really want to thank you for your generosity. You are being so kind, I might ask Senator Vitter not to hold that investigation on the power outage that I was going to ask him to do.

Senator VITTER. Madam Chair, I was just going to say, it could be worse. You could be a Saints fan.

[Laughter.]

Senator BOXER. Well, I was worried that the cameras would catch me climbing up the electric pole.

[Laughter.]

Senator BOXER. But fortunately for me, they were focused on some of the players.

But Senator Cardin, you know I am a good loser.

Senator CARDIN. I had never noticed that about you.

[Laughter.]

Senator BOXER. I was about to check with Senator Vitter to see if he would mind if I took away your subcommittee chairmanship. But I decided you are just too good in the job.

Anyway, we will have more fun with that.

Today we continue this committee's oversight of the Army Corps of Engineers by looking at its water resources policies and how they impact our communities. The Corps' flood control projects

keep our families safe, provide enormous economic benefits. The Corps has also contributed to the construction of over 14,000 miles of levees across this Nation, and the Corps estimates that its flood protection efforts prevent \$37 billion annually in damages.

The testimony we hear today will help us as we move forward with the next WRDA bill, the Water Resources Development Act, which authorizes the Corps' projects and programs. The devastation caused by Superstorm Sandy last year has placed the spotlight on the need to ensure that communities have critical flood protection, which is one of the primary goals of the WRDA bill.

Sandy and other extreme weather events in recent years have resulted in the loss of lives, caused billions of dollars of damages and wiped out entire communities. And no one knows that better than the gentleman sitting next to me, my Ranking Member, Senator Vitter.

We have proposed a new title for the WRDA bill that will enable the Corps to help communities better prepare for and reduce the risks of extreme weather-related disasters, including severe flooding. There are other goals we want to accomplish in WRDA that will help many local governments, including those in my home State of California.

Our draft WRDA bill includes a provision that will allow the Corps to consider regional differences and work with State and local governments to develop the most appropriate approach for managing levee vegetation. This may seem like a small matter, but it is a big matter. In California, vegetation not only provides stability for many levees, it also offers the last remaining habitat for some species, such as salmon.

After evaluating its levees and identifying critical maintenance and repair needs, California has rightly prioritized its projects to address the most pressing problems first. The Corps has begun working with California and other States to consider regional approaches to vegetation management. The Corps has also stated that it will allow local officials to address the worst problems first.

I am encouraged by this progress, I say to you, Hon. Jo-Ellen Darcy, I am encouraged by this. You are allowing greater flexibility and I believe we must make this localized approach to vegetation management permanent.

Another issue we must address in the WRDA bill is the Corps' policy for providing credit for work carried out by non-Federal sponsors of Corps projects. In California, State and local governments are bringing billions of dollars to the table to improve flood protection. Unfortunately, the Corps' crediting policies may be discouraging local investments. State and local participation is vital. That is why I have worked with Assistant Secretary Darcy to give non-Federal sponsors more flexibility.

I appreciate the commitment she has already made to consider exceptions that would allow non-Federal sponsors to proceed with work ahead of the Corps, if it will improve public safety or provide other benefits. This type of flexibility is something we should make permanent as part of the next WRDA bill.

So I look forward to working with my colleagues and with the Corps on these and other important issues that will be raised today. This hearing will help us tremendously. I want to give great

credit to Senator Vitter for asking for this hearing. I think we will identify ways to improve the Corps' policies and practices in the next WRDA bill.

Senator Vitter and I will work with our colleagues on both sides of the aisle to hear their concerns. I appreciate everyone's participation in today's hearing. With that, I call on my Ranking Member.

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

Senator VITTER. Thank you, Madam Chair. Thank you for this hearing, which you graciously organized as soon as I requested it. And thank you for your leadership and partnership on water resources.

I think this hearing is another clear, bold statement that this entire committee, in a very bipartisan way, is committed to a new WRDA bill. And we are well into the concrete work of that bill on a true bipartisan basis. So we are going to do it in the near future, and it is because of your leadership, Madam Chair. Thank you very much for that. This hearing is an important step toward that.

But of course, any bill, including any WRDA bill, is only as good as its implementation. And that is what I wanted to focus on the most in this hearing, looking back to the 2007 WRDA, discussing what I consider real and serious implementation problems and frustrations, so that we solve them for the 2013 WRDA.

I certainly share the Chair's concerns about all the issues she mentioned, and I will bring up some more. First of all, some very basic ones, things that are clearly mandated in the 2007 WRDA with the word "shall" with a crystal clear, non-discretionary mandate that the Corps has simply ignored. Many other cases where deadlines have slipped significantly on a routine basis, causing us to miss important deadlines, even including a loss of authorization of some projects.

Post-Katrina engineering and design guidelines, everyone wants to learn the lessons of Katrina. Everyone wants to strengthen engineering and design guidelines in an appropriate way. I fear, though, that in some cases the new guidelines are really put together with the thought, if unspoken, that the safest levee is one that never gets built. Some of these guidelines have priced protection completely off the map. And a levee that isn't built, of course, can't breach. But it also provides no protection.

The levee vegetation issue that the Chair mentioned, I certainly share in that. We need a flexible, localized response to that, so that we do it right. The new introduction of the Modified Charleston Method in the New Orleans district is very troublesome and inconsistent with what many other districts do. And the great curtailed lock hours of operation we have seen in Louisiana around the year are also troublesome. So we'll hopefully get to all of these and other important matters that the members care about.

Thank you, Madam Chair.

Senator BOXER. Thank you so much, Senator.

Senator Cardin.

**OPENING STATEMENT OF HON. BENJAMIN L. CARDIN,
U.S. SENATOR FROM THE STATE OF MARYLAND**

Senator CARDIN. Thank you, Madam Chair. Let me thank you and thank Senator Vitter for your working together to get us a WRDA bill. I think that is extremely important.

We had a hearing last week as to how important WRDA reauthorization will be for jobs in our community. For the Port of Baltimore, which is the ninth busiest commercial port, it is thousands of jobs that are involved. Getting the WRDA bill done will help save and create jobs in my community.

Last week I pointed out that between 2004 and 2019 on the Harbor Maintenance Trust Fund, the Baltimore Port contributes \$228 million and we receive back \$155 million. So we need to do a more aggressive job in keeping our ports competitive. I mentioned the fact that when you have to load ships at less than capacity because of the maintenance of the channels, we are not going to be as competitive as we need to be in the global economy.

Now, I want to talk about a couple of issues that are directly related to the Assistant Secretary of the Army, and to the Army Corps, dealing with how we are going to be handling dredged material, particularly in the Port of Baltimore. In the 1996 WRDA Authorization Bill, we authorized Poplar Island, which was a barrier island that almost disappeared in the Chesapeake Bay. That project allowed for dredged material, not only a place where we could dispose of it, but it also became a plus on the environment, by restoring an environmental area.

In 2007, we authorized the next phase of Poplar Island. So as I look at the WRDA bill, we have to handle extending the WRDA Section 902 cost limit authority for projects like Poplar Island. The 2013 WRDA bill will have a major impact on the long-term success and utility of these projects.

The Corps and the State have worked successfully over the years to redevelop the barrier islands that have historically been present in the Chesapeake Bay, using dredged material from the harbor and elsewhere. As the constructed islands reach their design capacity, the State and Corps need to work to close these facilities and move on to the next disposal sites.

The Baltimore Corps District is revising its dredged material management plan to reflect the closure of Hart-Miller Island. Cox Creek will replace Hart-Miller Island as a disposal site for the dredged material in the plan for the Baltimore dredging projects. I am pleased that the discussions between the Baltimore Corps and the State are resulting in a mutually agreed-to solution.

Let me also mention Pierce Creek, which is a disposal site that is to be reopened, but has to be done in a remedial work for the community is sensitive to the environmental concerns. I do have concerns that we are using an old study that involved one community. I would expect, and I will be watching to make sure that the remedial work involves all the communities that are at risk, that could be at risk with the re-opening of the Pierce Creek facility.

Another major set of concerns are the accumulated sediment and nutrients behind the Conowingo Dam, and the impact these pollutants are having on the Chesapeake Bay water quality. In December, I wrote a letter, with several of my Bay State Senator col-

leagues, to the Assistant Secretary, urging the completion of the long-overdue Lower Susquehanna Watershed Assessment. This study is designed to examine the loads of pollutants accumulated behind the Conowingo Dam. The completion of this study is imperative to informing any remedial action that may be necessary to improve the health of the Chesapeake Bay.

Now, I understand the Corps may not be directed involved in the work to remediate the accumulated contaminants behind the dam, but I think the findings and the ongoing assessment could be very informative on the upcoming FERC relicensing process.

Then last, let me just thank the Corps for the work that you do in the restorations in the Chesapeake Bay, the shoreline protection, the sediment management, oyster and habitat restoration programs. These are absolutely critical to the health of the Chesapeake Bay. The Corps has been very active in this. It is not only an important cash crop for our watermen, it is also an important environmental crop for how it filters the pollutants in the Bay itself.

Madam Chair, I really do look forward to this hearing. I look forward to working with you and the Ranking Member, so that we can carry out our responsibly and pass, I hope in a timely fashion, the Water Reauthorization Act.

[The prepared statement of Senator Cardin follows:]

STATEMENT OF HON. BENJAMIN L. CARDIN,
U.S. SENATOR FROM THE STATE OF MARYLAND

Madam Chairman, I appreciate you holding this hearing today to discuss the Army Corps' Civil Works' water resources programs. It goes without saying that these programs are incredibly important to Maryland's economy and the health of the Chesapeake Bay.

I am very pleased that our committee is not wasting any time in working on reauthorizing the Water Resources Development Act. This hearing, as well as last week's hearing, certainly helps advance progress on the reauthorization process.

The high quality jobs associated with maintaining and building our waterways infrastructure makes reauthorizing WRDA all the more important.

The 2007 WRDA received overwhelming bi-partisan support from this committee. The projects that bill supported provided critical employment opportunities at a time when the Nation was beginning to face uncertain economic times. Now, we've come back from the brink of economic catastrophe and reauthorizing WRDA this year helps keep our economy on the right course.

WRDA projects are critically important to the U.S. economy. According to the Research and Innovative Technology Administration, 1 in every 11 shipping containers engaged in global trade is either bound for or originates from a U.S. port.

The Port of Baltimore is ranked ninth among all U.S. commercial ports, in terms of total value of goods moved through the port. In July 2012, the Port of Baltimore handled a record 853,818 tons of general cargo. The Port of Baltimore handles the most "roll on/roll off" cargo, like cars and trucks, as well as the most ore, sugar and gypsum than any port in the United States.

The Port of Baltimore also directly employs more than 1,000 workers while supporting thousands more across Maryland. These jobs and the movement of the valuable cargo coming in and out of the port would not be realized if it weren't for the Army Corps' work to maintain the Baltimore Harbor Channel.

That's not to say more work is not needed. My statement from last week's hearing explained the backlog of work that is needed at the Baltimore Harbor. I also discussed my concerns with the inequity in how Harbor Maintenance Trust Fund dollars are distributed. Between 2004 and 2010, the Port of Baltimore generated approximately \$228 million in Harbor Maintenance Trust Fund revenues, yet during that same period the Port of Baltimore only received \$154.7 million for dredging.

The extensive work that is done to maintain Maryland's shipping channels generates a great deal of dredge material that needs to be disposed of in a safe and responsible manner.

A great project that exemplifies a critical dredge material disposal site that also represents an important ecological restoration project is the reestablishment of Poplar Island. Prior to the restoration project, Poplar Island had washed away to less than 5 percent of its historical landmass. The first phase of the Poplar Island restoration project was authorized in the 1996 WRDA and has been a success. The 2007 WRDA authorized the next phase of the Poplar Island restoration project which is still in the planning phase but is nearly ready for construction.

I want to make sure that both of these worthwhile projects that serve the multiple purposes of dredge material disposal, ecosystem restoration, and barrier island protection for coastal communities from storm surges, continues to progress.

How we handle extending the WRDA Sec. 902 (Cost Limit) authority for projects like Poplar Island in the 2013 WRDA will have a major impact on the long term success and utility of these projects. I look forward to asking Assistant Secretary Darcy for her input and assistance with keeping these projects on track.

The Corps and the State have worked successfully over the years to redevelop the barrier islands that have historically been present in the Chesapeake Bay using dredge material from the Harbor and elsewhere. As the constructed islands reach their designed capacity the State and the Corps need work to close these facilities and move on to the next disposal site.

The Baltimore Corps District is revising its Dredge Material Management Plan (DMMP) to reflect the closure of Hart-Miller Island (HMI). Cox Creek will replace HMI as the disposal site for dredge material in the DMMP for Baltimore dredging projects.

I am pleased that the discussions between the Baltimore Corps District and the State are resulting in a mutually agreed upon solution. I will continue to follow the development of this process and will be in contact with the Assistant Secretary as the revised DMMP makes its way to her for approval.

Another major set of concerns are the accumulated sediments and nutrients behind Conowingo Dam and the impact these pollutant are having on Chesapeake Bay water quality. In December, I wrote a letter, with several of my Bay State Senate colleagues, to the Assistant Secretary urging the completion of the long overdue Lower Susquehanna Watershed Assessment.

This study is designed to examine the load of pollutants accumulating behind the Conowingo Dam. The completion of this study is imperative to informing any remediation actions that may be necessary to improve the health of the Chesapeake Bay.

I understand that the Corps may not be directly involved in the work to remediate the accumulated contaminants behind the dam, but I think the findings of the ongoing Assessment could be very informative of the upcoming FERC relicensing process.

I'd be remiss if I didn't also take this opportunity to mention the important work the Corps is doing in Maryland, and throughout the Bay region, to provide critical environmental restoration of natural resources. The Corps' shoreline protection, sediment management, and oyster and habitat restoration programs are integral to Chesapeake Bay restoration efforts. Since oysters represent more than just a source of income for Maryland's watermen—they are natural biological filters continually cleaning up the Bay—WRDA's habitat restoration is leading to long-term solutions for water quality in the Bay.

It has been more than 5 years since Congress passed the last WRDA legislation. It is essential to our Nation's infrastructure, economy, and environment that we work together to craft a strong, effective bill. I look forward to working with my colleagues on the latest reauthorization of WRDA.

Senator BOXER. Thank you very much, Senator.
Senator Fischer.

**OPENING STATEMENT OF HON. DEB FISCHER,
U.S. SENATOR FROM THE STATE OF NEBRASKA**

Senator FISCHER. Chairman Boxer and Ranking Member Vitter, thank you for holding this hearing today.

I would also like to extend my gratitude to Assistant Secretary Darcy and General Bostick and all the other witnesses for being here today, and for your willingness to share your time with this committee.

Madam Secretary, I know you had the opportunity in 2011 to spend some time on the Platte River in Nebraska. I want to thank

you for coming to our State. I understand that you saw several bald eagles while out on the Platte River, and you developed a real appreciation for the natural resources of our great State.

I would like to take this opportunity to point out some other resources that Nebraska has to offer as you carry out your work. Recognizing the important role that technical expertise plays in the Corps of Engineers mission, I want to make you aware, if you are not already, of the recently established Water for Food Institute at the University of Nebraska. The Institute's executive director, Professor Roberto Lenton, who was previously at the World Bank and helped to launch the global water partnership.

I would like to invite the experts at your engineering research and development center and across the Corps to visit and utilize these experts that we have at the University of Nebraska. Nebraska, like so many other States, has grappled with water resource management challenges. After dealing with the damage and devastation of the floods along the Missouri River in 2011, we are now facing a time of historic drought all across our State.

I am pleased to be joining a committee that has a very strong history of bipartisan cooperation on these important infrastructure issues, and I look forward to working with all of my colleagues on the committee on this next Water Resources Development Act. I am pleased we are meeting today to examine the implementation of the Corps' water resource policies. Before we undertake the consideration of this new bill, that will hopefully reform and expedite project delivery and prioritize water resources projects, it is important that we understand how the Corps is currently working to maintain navigation channels, reduce flood and storm damage and restore aquatic ecosystems.

Thank you again, Madam Chair, for holding this hearing. I look forward to today's testimony and questions. Thank you.

Senator BOXER. Thank you so much, Senator Fischer.

Senator Gillibrand.

**OPENING STATEMENT OF HON. KIRSTEN GILLIBRAND,
U.S. SENATOR FROM THE STATE OF NEW YORK**

Senator GILLIBRAND. Thank you, Madam Chairwoman, for holding this very important hearing on our Nation's water infrastructure priorities.

For New York, in the wake of Superstorm Sandy, this is one of the most urgent priorities for New Yorkers trying to rebuild our communities. I want to thank Assistant Secretary Darcy for your willingness to testify before this committee twice in 2 weeks, and for your strong commitment to helping my State. I am incredibly grateful, because all the communities in the Northeast that were damaged by Sandy are in urgent need. We will need your assistance in rebuilding our communities and our coastal infrastructure.

For Madam Chairwoman and Senator Vitter, I share your commitment to having a strong WRDA bill this year. New York is not only a maritime State, it has 127 miles of coastline, but our State is also home to 70,000 miles of rivers and streams and 76,000 freshwater lakes, pond and reservoirs, and hundreds of miles of shoreline along Lakes Erie, Ontario and Champlain, and the St. Lawrence Seaway. Superstorm Sandy, Hurricane Irene and Trop-

ical Storm Lee have shown us in no uncertain terms the importance of Army Corps flood protection and mitigation to communities across New York and the Northeast.

One of the lessons learned is that mitigation matters. And providing adequate flood protection, whether it be structural or non-structural, reduces the risks associated with extreme weather. Communities along the coast that did not have dunes or sea walls were exposed to a greater impact from the storm surge than those that did, and suffered far greater damage as a result.

Another lesson learned is that we cannot just rebuild what was lost. We have to rebuild smarter, stronger and more resilient. That is why I am working with Senator Lautenberg to provide the Corps with more flexibility when they rebuild and repair infrastructure damaged by a disaster to provide more effective protection against the next storm or flood. In the era of more frequent extreme weather that we live in, this is just common sense.

While rebuilding from Sandy remains a top priority, there are other key water infrastructure priorities that I hope will be addressed in the next WRDA bill. Last week, this committee had a hearing on the Harbor Maintenance Trust Fund, which is a major priority for the Great Lakes communities that rely on strong ports and harbors to support local jobs and strong local economies. I fully support Chairwoman Boxer's efforts to include a Harbor Maintenance Trust Fund guarantee in the next WRDA bill.

The Army Corps also has an enormous responsibility to protect the Great Lakes against the threat posed by Asian carp. These invasive species pose a significant threat to the Great Lakes and to the regional economy of Western New York. The Army Corps must move quickly to finalize the Great Lakes-Mississippi River Inter-Basin Study, which must be completed by January 2014, so that additional measures can be taken to prevent the flow of carp from the Mississippi River Basin into the Great Lakes.

Maintaining our Nation's water infrastructure is one of our biggest responsibilities as a Federal Government. Dams, levees, dunes and other flood control infrastructure provide life-saving protection to our coastal and flood-prone regions. Maintenance of our harbors protects jobs and ensures the United States can remain competitive. Keeping our lakes and streams free of dangerous invasive species keeps our drinking water clean and our sporting and recreational industry strong.

So I look forward to working with our Chairwoman and Ranking Member. I look forward to working with the Corps and my colleagues on this committee to address these very urgent needs. Thank you.

Senator BOXER. Thank you so much, Senator.

Senator Wicker.

**OPENING STATEMENT OF HON. ROGER WICKER,
U.S. SENATOR FROM THE STATE OF MISSISSIPPI**

Senator WICKER. Thank you, Madam Chair.

Madam Chair, thank you and the Ranking Member for scheduling this important hearing. I am delighted to be here for my first hearing as a member of this committee. I want to thank our two distinguished panelists for being here, also.

America's inland waterways, ports and flood control structures help drive domestic and global commerce, spur economic development, and support millions of American jobs. The President has stated he wants to double America's exports. To do so, we must address needed updates in infrastructure that manages our water resources. We must make sure that American products can move efficiently to global markets.

Most of us recognize the Inland Waterways Trust Fund is dysfunctional, due in part to cost overruns and decreased revenues. The trust fund may require structural changes to ensure that aging infrastructure can be maintained and rehabilitated. Any changes should include meaningful input from commercial shippers that pay the fuel tax to support the fund.

With 15 ports, my home State of Mississippi recognizes the importance of our Country's water resources, in particular the extraordinary value of the Mississippi River. The Mississippi River is a wonderful work of nature. It is also a critical backbone of our Nation's economy, responsible for creating \$105 billion worth of America's GDP. It should be a key component of any discussion we have about the Nation's commerce and waterways.

The Mississippi River and Tributaries Project, MR&T, has protected this essential artery of commerce for more than eight decades, safeguarding the flow of traffic on the river and fertile agricultural lands along its shores. Since 1928, the project's planning, construction, operation and maintenance has delivered a 34 to 1 return on its investment and saved \$350 billion in prevented flood damages.

In short, the MR&T is a Federal project that works. Yet we are not fully utilizing this proven investment. The MR&T is only 85 percent complete, leaving many areas and the flow of commerce vulnerable to disaster, including areas in my State of Mississippi.

In addition to the Mississippi River, effective policies concerning water resources along the Gulf Coast are vital to the protection of life, property and the well-being of our Nation's economy. The Mississippi Coastal Improvement Program was authorized by Congress following Hurricane Katrina to provide storm damage protection off the coast of Mississippi. The Corps of Engineers completed the program's initial projects under budget. But Mississippi is still waiting for work to be done on other Mississippi projects that have received favorable chief reports from the Corps.

It is only a matter of time until another hurricane hits the Gulf Coast of our Country. We must be prepared. Work on these projects needs to begin without further delay.

I would like to hear the Secretary's views today on these issues and what the Corps is doing to address inland waterway needs, especially how projects of national significance, such as the MR&T, might be impacted should sequestration occur. Unless this policy changes, the Corps of Engineers will face an 8.2 percent reduction in its budget. So I am concerned that the MR&T could lose funding, putting jobs and safety of Americans at risk.

I am also interested in learning how the Corps prioritizes projects for funding each year in the Administration's budget. Finally, I would like to state that we are long overdue in addressing the dredging needs of our Nation's ports, which was a subject of the

committee's most recent hearing. It is particularly troubling that lack of maintenance dredging makes a port less competitive in securing future maintenance dredging. For Mississippi's State port, at Gulfport, Mississippi, this has become a self-perpetuating cycle that must be addressed.

So thank you, Madam Chair. Thank you to these distinguished witnesses. I look forward to a very important hearing.

Senator BOXER. Thank you, Senator. Welcome to our committee. I think you will find that when we are in the area of WRDA and highways, we are very bipartisan. A little different when we are talking about climate change.

[Laughter.]

Senator BOXER. But we are starting off on the things we agree with. So that is good.

Senator WICKER. Thank you.

Senator BOXER. And we know you will be a part of a very productive committee.

So the order is Carper, Boozman, Baucus. And at that point, we are going to stop the opening statements and go straight to our distinguished panel. Senator.

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

Senator CARPER. I agree with what the Chairwoman's characterization of our committee. It is a good committee; we do get a lot done.

I just want to say to Senator Fischer, as she prepares to head for her next meeting, it is great to have you on board. We welcome you and also Roger. I think you will both add a lot to this committee. Welcome.

Secretary Darcy, it is very nice to see you. Thanks for joining us today. Thanks for bringing General Bostick with you. It is a pleasure to see you both. Thank you for your leadership. You have hard jobs, very challenging jobs, but really important jobs, as you know. We are grateful for your leadership and what you do.

I want to welcome out in the audience, sitting two rows behind Secretary Darcy, over your right shoulder, is a fellow from Delaware, Collin O'Mara, who is our Secretary of Natural Resources and Environmental Control. He has been a terrific Secretary for the last 4 years, hired by our Governor, Jack Markell, and one of the best hires that the Governor has made. He has been terrific. Not only just a good Secretary for us, but he has actually played leadership roles among the Nation's Secretaries of Environment and Natural Resources. We are happy that he is going to testify later today. We look forward to his being here. He is a real credit to our State.

As you all know, our State of Delaware, we have water to our east, we have the Delaware River, which farther south becomes the Delaware Bay, farther south becomes the Atlantic Ocean. And not far off to our west is the Chesapeake Bay. So we are kind of surrounded by water and some land as well. But along with our inland bays, our smaller rivers and tidal marshes, we are also blessed with terrific water resources. The Army Corps of Engineers has

been and remains a critical partner to us in managing those resources.

For example, the Corps is in the midst of deepening the main channel of the Delaware River, a critical shipping corridor, to 45 feet in anticipation of the larger super Panamax, the ships that are going to be coming our way. This project, this deepening project, years in the making and vital to regional commerce, will allow Delaware ports like the Port of Wilmington to make our contribution to the President's goal of doubling exports by 2015.

On the other side of the State, to our west the Chesapeake Bay is the largest estuary in the United States of America, host to countless species and one of our Country's natural national treasures. Senator Cardin has left us, but he has spent huge amounts of time and energy trying to make sure that the large estuary, huge estuary which has these enormous dead zones, is brought back to life. I think we are actually seeing some encouraging progress.

If you can believe it, back to Delaware, both the pharmaceutical industry and the Red Knot, the Red Knot is an endangered migratory bird, depend on the largest population of horseshoe crabs in America. Those horseshoe crabs are found right along the Delaware Bay shore.

The Corps' partnership in environmental restoration projects has helped to revitalize and enhance these magnificent coastal environments for the benefit of wildlife, the benefit of outdoorsmen and women, for tourists and the businesses that they support. Finally, as we tragically saw during Hurricane Sandy, Delaware is also at the mercy of severe coastal storms. We depend on the Corps' flood protection projects, which have spared lives and protected hundreds of millions of dollars worth of our constituents' properties. Whatever the project may be, we value our partnership with the Army Corps of Engineers and the work that they do, that you all do. I really want to thank Senator Boxer and our Ranking Member, Senator Vitter, for making WRDA a top priority in our 113th Congress.

I often say my work in the Senate, everything I do, I know I can do better. I think the same is true for all of us, if we are honest, and the same is true of all our Federal programs. That is true of the Army Corps of Engineers.

We last passed a WRDA bill in 2007. I was proud to be part of the bipartisan reform efforts that I believe have had a positive impact on the Corps' effectiveness. I appreciate that Senator Boxer and Senator Vitter have been just as receptive to our suggestions, to my suggestions this time around. However, as much as we seek to improve the policies that guide the Corps' work, we also have to keep in mind the fiscal constraints under which we are all acting. I was reminded of that just in the last 2 days. We have to focus on new ways of doing business that offer us better results for less money where possible, doing more with less, rather than less with less.

Nowhere is this as clear to me than in the storm damage protection and coastal hazard mitigation. The Corps, along with FEMA and States and municipalities, must form even closer working relationships to help protect against rising seas and stronger, more fre-

quent storms. There are other areas of coastal policies such as the regional management of sedimentation, sediment resources that I believe could also yield cost savings while offering better outcomes.

Ultimately, I am sure we can accomplish this. We have more solutions than we do have problems. While our budgets may be limited, our capacity to innovate is limitless. I look forward to hearing your ideas from this panel and the subsequent panel. We are delighted to have this hearing today.

Thank you, Madam Chair. My thanks to the witnesses.

Senator BOXER. Thank you very much.

And we turn to Senator Boozman.

**OPENING STATEMENT OF HON. JOHN BOOZMAN,
U.S. SENATOR FROM THE STATE OF ARKANSAS**

Senator BOOZMAN. Thank you, Madam Chair.

I think in the interest of time, which you will appreciate, you and the Ranking Member, I will submit something into the record. There are a couple of things, reduced levels of service on our inland waterways, hydropower modernization, levee safety policies as well as the Olmstead and Inland Waterways Trust Fund. Certainly those are things that I'm concerned about, along with other aspects of your testimony.

So it is good that you are here. I look forward to hearing the testimony.

Senator BOXER. Thank you, Senator. We will put your opening statement into the record.

[The referenced statement was not received at time of print.]

Senator BOXER. Senator Baucus.

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

Senator BAUCUS. Thank you, Madam Chairman.

I am very pleased to be here, for a lot of reasons. One, because of the importance of the Corps to not only the Country, but my State of Montana. Second, to be able to ask the Assistant Secretary of the Army Corps, Jo-Ellen Darcy, some questions. Jo-Ellen Darcy once worked for me. She was on my staff, and just terrific. I would turn to Jo-Ellen with all kinds of questions about the Corps and WRDA, you name it. I very much appreciate how competent and how well she answered, and what a sterling person she is. So I am not at all surprised that she has been promoted, a while ago, to be Assistant Secretary of the Army for Civil Works. We are very proud of you.

I would like to focus on a couple of areas, how the Corps affects the State of Montana. First, flood risk management, the second is water demands on Missouri. A couple of years ago, 2011, Montana suffered some of the worst floods in recent memory. It was stunning, the floods in the State of Montana. And I am sure this is true across the Country. People, restaurant owners, people who worked on the highway and county commissioners, and farmers, ranchers, all joined together to help each other out. It was really flooded. It is hard for me to find the superlatives just to explain how flooded it was.

I had to go visit some of these places; I was stunned how much was underwater. I didn't know there was that much water, but it was there. I deeply appreciate all that they put together.

FEMA alone distributed I think about \$60 million to pay for roads and levees and irrigation ditches and water treatment plants and now they are slowing getting back together. I was just there a year ago, and it was still not totally recovered.

The Corps, of course, played a very essential role in both planning ahead and managing the base when the floods came.

On the first count, I have worked for 3 years to inject some common sense into the overlapping levee inspection, a process that involves both the Corps and FEMA, especially the Corps' certification process of FEMA. I know, Madam Secretary, how much you understand and appreciate that. I will go visit communities in Montana, around Great Falls, for example, Sun River, Miles City, people are just fit to be tied. They just want to do the right thing, they want to have the levees there so flood insurance can be provided, so the area can be developed. It is just bureaucracy, the tension between the Corps and FEMA, who is going to pay for it and so forth.

Frankly, I would like to hear from you, Madam Secretary, about how the Corps is implementing all of that, especially a provision that Senator Tester and I included in the Highway Bill last summer, to straighten out that confusion.

Now while we are sitting here in the Capitol today, we expect rain tonight. While it is raining here, the snow packs will be building in the mountains of Montana. The question is, will 2013 bring another 500-year flood. Nobody knows. But the independent panel that reviewed the Corps operation in Missouri in 2011 did note the recent frequency of extreme weather. And droughts become floods in Montana, it is amazing.

Therefore it seems appropriate that our Chairman has chosen to focus a section of the new WRDA Act on extreme weather. I think that is very appropriate that we do that, because it is happening, it is with us, we have to deal with it. The whiplash damage caused by floods one year, then drought and fires the next year, underscores the need for more attention to this phenomenon, the fluctuation, the frequency.

It also underscores the need to avoid knee-jerk reactions. We too often forget or choose to forget a very important fact. The Missouri River wasn't dammed up just to benefit our friends east of the 100th meridian, or stated differently, less obliquely, opaquely, we didn't build dams on the Missouri to benefit our friends on the Mississippi. That was not the plan. So I understand that people downstream, and by downstream I mean way downstream, on the Mississippi, not downstream Missouri, but on the Mississippi, want us to flood water down from the dams upstream in the Missouri. I understand that. But that is not the purpose of the master manual that manages the dams on the Missouri.

The current operating manual took a decade and a half to complete, a decade and a half. So much time and effort has been put into putting that master manual together. So beyond flood management, I remind you, Madam Secretary, Montanans irrigate their farms, they run valuable fishing businesses, you know about Fort Peck Lake. They draw their power from the river.

In 2010, 800,000 visitors went to Fort Peck and Lake Kocanusa, spent about \$17 million annually. I spent years on this committee fighting attempts to drain the livelihood of Montanans to float barges downstream. I needn't remind you of that economic study the Corps undertook, you are smiling, so you know what I am talking about, and you know the conclusions in it, which basically provided that on about an eight to one basis, economic value is much greater, that is the recreation value and dollar value, is about eight times higher upstream than is the economic value of downstream Missouri barge traffic. Eight times higher economic value from recreation than it is for downstream.

And that is in the manual. The manual sets policy and I thank you for following the manual.

In two consecutive years, now, though, for separate reasons, but the drop of a hat, downstream rivers have attempted to siphon off our water. It is just not right, but first of all, that is not what the manual provides.

So I look forward to the comments of our witnesses about the long-term stable management of our water resources, and I thank you, Madam Secretary, for your good work.

[The prepared statement of Senator Baucus follows:]

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

Good morning. I am pleased to join today for this oversight hearing on the Corps of Engineers. I welcome the Assistant Secretary of the Army for Civil Works, Jo-Ellen Darcy, who was a key member of my staff before taking over the reins at the Corps.

While the Corps affects many areas of American life, I will focus on two key areas: flood risk management and water demands on the Missouri River.

In 2011, Montana suffered some of the worst floods in recent memory. For months, we used Montana grit to make emergency repairs in towns like Roundup, Ryegate, Joliet, Lodge Grass, and Sun River.

FEMA, the Federal Emergency Management Agency, alone distributed over \$60 million to pay for repairing roads, levees, irrigation ditches, and water treatment plants.

The Corps, of course, played an essential role in both planning ahead and managing the basin when the floods came.

On the first count, I have worked for 3 years to inject some common sense into the overlapping levee inspection process of the Corps and certification process of FEMA.

I hope to hear today from Assistant Secretary Darcy about how the Corps is implementing a provision that Senator Tester and I included in the highway bill last summer.

Now, while we sit here in the Capitol expecting rain tonight, the snowpack is building in the mountains of Montana. Will 2013 bring another 500-year flood? No one can say.

But the independent panel that reviewed the Corps' operation of the Missouri in 2011 did note the recent frequency of extreme weather.

It seems appropriate, therefore, that the Chairman has chosen to focus a section of a new Water Resources Development Act on extreme weather.

The whiplash damage caused by floods one year, then drought and wildfires the next year, underscores the need for more attention to this area. It also underscores the need to avoid knee-jerk reactions.

We too often forget, or choose to forget, an important fact. The Missouri River wasn't plugged up just to benefit our friends east of the hundredth meridian.

Or put another way: we didn't dam the Missouri River just to help the Mississippi.

Congress authorized the Corps to manage the Missouri for multiple purposes. The current operating manual took a decade and a half to complete.

Beyond flood management, Montanans irrigate their farms, run valuable fishing businesses, and draw their power from the river. In 2010, 800,000 visitors to Fort Peck Lake and Lake Koocanusa spent \$17 million locally.

I have spent years on this committee fighting attempts to drain the livelihood of Montanans to float barges downstream.

Lo and behold: in two consecutive years now, for separate reasons but at the drop of a hat, downriver States have attempted to siphon our water.

In that light, I look forward to the comments of our witnesses about long-term stable management of our water resources.

Thank you.

Senator BOXER. Thank you so much, Senator.

So we are now going to hear from our distinguished panel, Hon. Jo-Ellen Darcy, Assistant Secretary of the Army. She is accompanied by Lieutenant General Thomas P. Bostick.

We will give you, I think we should give you about 8 minutes instead of the 5 minutes, so that you don't have to rush your testimony. Go ahead.

STATEMENT OF HON. JO-ELLEN DARCY, ASSISTANT SECRETARY OF THE ARMY, CIVIL WORKS; ACCOMPANIED BY: LIEUTENANT GENERAL THOMAS P. BOSTICK, COMMANDING GENERAL AND CHIEF OF ENGINEERS, U.S. ARMY CORPS OF ENGINEERS

Ms. DARCY. Thank you, Madam Chair and members of the committee. I am honored today to testify before you on the implementation of the U.S. Army Corps of Engineers Water Resources Policy.

To address the Nation's water resources infrastructure needs and continue to provide greater value to the Nation, the Army Corps of Engineers is working to transform the Civil Works program to improve performance and responsiveness, to enhance the quality of our products, to increase customer satisfaction, to build public trust and confidence and most importantly, to improve the reliability of the Nation's water infrastructure.

First, I will highlight the four issues that you addressed in your letter of invitation for this hearing. The first was vegetation on levees. Over the last few years, the Corps has been looking in depth into the issue of how vegetation impacts infrastructure performance worldwide. Also, advancing our woody vegetation research efforts and using the information to work collaboratively with other Federal agencies and local levee authorities to develop the best path forward for managing vegetation on or near public safety infrastructure in the Country.

The second issue was in-kind credit. For approving in-kind credit for projects, the Corps provides guidance on the implementation of Section 221 of the Flood Control Act of 1970, which was amended in WRDA of 2007. This is to study and construct Corps water resources projects and provide for the affording of credit to the non-Federal sponsor for their planning, for their design and for construction of work, if the work is determined to be integral to the project under discussion.

The third issue was levels of service on our Corps locks. By establishing operating hours for its locks, the Corps is implementing a system-wide, uniform approach to standard levels of service. We do not plan to close any locks, but rather, adjust the operating hours of service with the lowest level of commercial use, those with

less than 1,000 commercial lockages per year. This impacts approximately 54 of the Corps 239 locks on our systems.

The fourth issue that you raised was applying engineering standards for flood damage and for hurricane protection projects. The Corps is using a risk-informed process to both confirm as well as adjust the application of post-Katrina standards to other projects resulting in a more appropriate and cost-efficient design approach. The Corps has been developing a strategy to address major challenges, including ensuring the performance of the key features of the Nation's water infrastructure and responding to shifting demographics, as well as changes in societal values and climate variability.

Our intent is to better equip the Corps program, our civil works program, to effectively meet current and future needs, as well as ensure that decisionmakers are fully informed. This strategy focuses on four main areas: planning modernization, budget development transformation and infrastructure strategy and our methods of delivery. We are looking to ensure that the budget development process considers the entire portfolio of potential studies and projects. Funded projects will be completed more quickly, thereby realizing the benefits for those projects that offer the best return on investments from the Nation.

The Civil Works transformation also links national objectives, our strategic goals and current and emerging needs using a system-based watershed approach. When implemented, this new approach will compare outcomes of competing studies and projects based on their returns. Collaboration with our customers, our stakeholders, the public and Congress will enable us to successfully implement this approach.

Ensuring the continued performance of the key features of our infrastructure is becoming more costly over time, in part because of the age of the components of some of our projects, but also because of the increases in costs to repair and rehabilitate them. Operational demands have also grown and changed. We are working on an infrastructure strategy to address these growing needs. The strategy incorporates four focused areas. It will be an integrated approach to manage our assets, managing the system over its entire life cycle, evaluating whether a project or group of related projects should remain a Federal responsibility prior to making a substantial further investment, and potentials for alternative financing mechanisms.

The Administration is exploring alternatives for infrastructure financing, including public-private partnerships and an infrastructure bank. The intent of the strategy is to make the best use of Federal and non-Federal dollars to reduce risk and improve the reliability of the Nation's water resources infrastructure.

The strategy is to have reliable and efficient methods of delivery by linking technical capabilities to uniform national standards, maintaining our core competencies and having consistent methods, processes and approaches throughout the Corps of Engineers. The desired end result is a high quality and timely product delivery services for our customers and our stakeholders. To that end, for example, the Corps has established centers of expertise from major

dam safety modifications as well as inland navigation design and deep draft navigation economics.

The Corps of Engineers has a strong tradition of working collaboratively with our non-Federal interests to plan as well as deliver our products. Our transformation partners include States, tribes, local governments, non-governmental organizations, non-profit agencies and the general public. These partnerships are increasing and will likely continue to increase as we share our common goal of having reliable and resilient infrastructure for our Nation.

Madam Chairman and members of the committee, I thank you for the opportunity and I look forward to answering any questions that you might have.

[The prepared statement of Ms. Darcy follows:]

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DEPARTMENT OF THE ARMY CORPS OF ENGINEERS

COMPLETE STATEMENT

OF

**JO-ELLEN DARCY
ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)**

BEFORE

THE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

UNITED STATES SENATE

ON

**IMPLEMENTATION OF CORPS OF ENGINEERS WATER RESOURCES
POLICIES**

February 7, 2013

Madam Chairman and Members of the committee, I am honored to testify before you today on the implementation of the U.S. Army Corps of Engineers water resources policy.

To address the Nation's water resource infrastructure needs, and continue to provide greater value to the Nation, the Army Corps of Engineers is working to transform the Civil Works program to improve performance and responsiveness, enhance the quality of products, increase customer satisfaction, build public trust and confidence, and most importantly, improve the reliability of the Nation's infrastructure.

Before I address these transformation initiatives, I would like to discuss the four items you mentioned in your letter and will also address implementation of policies that this Committee was so integral in championing during the development of the Water Resources Development Act of 2007. Title II of WRDA 2007 included provisions that provide guidance and policy direction to the Corps.

Vegetation on Levees: Over the last few years, the Corps has been looking in depth into the issue of how vegetation impacts infrastructure performance world-wide; has been advancing its woody vegetation research efforts; and has been using this information and working collaboratively with other Federal agencies and local levee authorities to develop the best path forward for managing vegetation on or near public safety infrastructure in the United States.

The Corps recognizes that there are many existing levees with noncompliant vegetation. The Corps has put in place a process to provide levee sponsors an extended period of time, if needed, to address any deficiencies related to vegetation that may require a multi-year effort or coordination between multiple entities. In addition, this policy supports prioritizing deficiencies such that the highest risk deficiencies are addressed first in order to optimize flood risk reduction.

The Corps also recognizes that there may be some instances where the removal of vegetation may not be consistent with the requirements of applicable environmental laws, regulations, Executive Orders, and treaties or the vegetation may need to remain to preserve the rights and interests of Native Americans. For these situations, the Corps has a vegetation variance process that considers the implementation of alternative vegetation management standards for a levee or portion of a levee as long as structural integrity and functionality of the levee are retained.

It is important to note that vegetation management is just one aspect of a levee system and should not be considered in isolation. There are many other aspects that are important to levee integrity such as seepage and slope stability. In some cases, vegetation may not be the most high risk deficiency. Each levee and its condition must be considered in its entirety so well informed decisions for prioritizing levee safety actions can be made. The Corps policy enables levee sponsors to address the highest risk issues first.

Approving In-Kind Credit for Corps projects: The Corps issued an Engineering Regulation (ER 1165-2-208), which provides guidance on the implementation of Section 221 of the Flood Control Act of 1970, as amended by Section 2003 of WRDA 2007 (Section 221). Section 221 applies to the study and construction of Corps water resources projects and provides for the affording of credit to the non-Federal sponsor for planning, design, and construction work if the work is determined to be integral to the project. The guidance ensures consistent credit application across the Corps mission areas.

Establishing Operating Hours for Corps Locks: The Corps does not operate all of its locks 24 hours per day, 7 days per week. The Corps is implementing a system-wide, uniform approach to standard levels of service. We do not plan to close any locks, but will be adjusting the operating hours of service on our locks with the lowest level of commercial use – those with less than 1,000 commercial lockages per year. This impacts approximately 54 of the Corps 239 locks. The Corps is conducting meetings with stakeholders in order to minimize impacts to users. The reduced levels of service will reduce wear and tear on operating components, extend the life of the assets, reduce operating expenses, and allow the Corps to focus savings on higher priorities, including funding for the maintenance of some of the affected locks.

Applying Engineering Standards for Flood Damage and Hurricane Protection Projects: The Corps is using a risk informed process to both confirm and adjust the application of post-Katrina standards to other projects. This results in a more appropriate and cost-efficient design approach. We have also developed specific guidance on a single national elevation datum to ensure consistent communication of design heights, on site specific sea level rise to ensure regional adaptation of climate change, and on wall and levee design to ensure consistent design and construction based on local conditions.

In response to the enactment of WRDA 2007, the Corps has also been actively integrating the following efforts into its business practices.

- The Corps has implemented the new procedures for fish and wildlife mitigation and the monitoring of ecosystem restoration projects for ecological success, including annual mitigation status reports to Congress.
- The Corps has successfully and proactively integrated the requirements for external independent peer reviews and safety assurance reviews into its operating procedures.
- The Corps is actively modernizing its planning program and processes.
- The Corps has completed the compilation of laws. This is extremely beneficial to Corps partners and stakeholders, Corps personnel, and congressional staff wanting to research laws pertaining to the Corps water resources program.

For the last several years, the Corps has been developing a strategy to address major challenges including ensuring the performance of the key features of the Nation's

infrastructure, and responding to shifting demographics, changes in societal values, and climate variability. The intent is to better equip the Civil Works program to effectively meet current and future needs and ensuring decision makers are fully informed. This strategy is focusing on four main areas - planning modernization, budget development transformation, infrastructure strategy, and methods of delivery.

The Corps planning modernization effort emphasizes execution, instills accountability, and improves the organizational and operational model to produce quality products that address water resources priorities. Part of this modernization focuses on improving the knowledge and experience level of Corps planners through additional training, professional certification, and updated planning guidance. The current focus of our planning modernization effort is facilitating the timely completion of decision documents that appropriately address the increasingly complex water problems that plague communities and constrain economic activity. For decades, the Corps has seen a steady increase in the costs and time required to complete investigations. This trend delays the realization of benefits from the construction of a project. The Corps has recognized the need to modernize its approach, through an initiative that we call SMART Planning.

SMART stands for Specific, Measurable, Achievable, Risk-Informed and Timely. SMART Planning encompasses a new approach to investigations, accountability, and portfolio management. The new approach to investigations reduces resource requirements, both time and money, by appropriately focusing on the key drivers in resolving problems while complying with all applicable laws and.

The goal under SMART planning is to complete most feasibility studies within 3 years for \$3 million dollars or less. The end product is a decision document that has been fully coordinated by three levels of the organization (Corps headquarters, the Corps division office, and the Corps district office) from study inception to completion. As a shorthand, we are calling this goal "3x3x3". The Corps expects full implementation of this new approach in FY 2014 and has been working with its Federal and non-Federal partners to use this new approach in evaluating water resources problems.

The Corps is prioritizing its current portfolio of planning studies and applying the 3x3x3 approach to new and ongoing studies. The Corps has reduced the number of active studies in its portfolio and is focusing efforts on completing these studies more effectively by prioritizing funding. The more timely completion of studies will allow the Corps to better use its investigation funding. Since enactment of the Water Resources Development Act (WRDA) of 2007, 19 reports on proposed projects have been forwarded to this Committee, 11 of which were completed in fiscal year 2012.

The Civil Works budget is performance based. In order to achieve budget transformation goals, we must continue to prioritize Federal funding on the highest performing projects and studies. We are working to ensure that the budget development process considers the entire portfolio of potential studies and projects.

The funded projects will be completed more quickly, thereby facilitating the realization of benefits for those projects that offer the best return on investment for the Nation.

The Civil Works transformation links national objectives, strategic goals, and current and emerging needs using a systems-based watershed approach. When implemented, this new process will compare outcomes of competing studies and projects based on their returns. Collaboration with our customers, stakeholders, and the public (including input from the Congress) will enable us to successfully implementing this approach.

Ensuring the continued performance of the key features of our infrastructure is becoming more costly over time, in part because of the age of the components of some of our projects, but also due to increases in the cost to repair and rehabilitate them periodically. Operational demands have also grown and changed, particularly over the past 30 years, creating additional stress. I am working with the Corps on an infrastructure strategy to address these growing needs. The infrastructure strategy incorporates four focus areas: an integrated approach to manage assets, managing the system over its life cycle, evaluating whether a project or group of related projects should remain a Federal responsibility prior to making a substantial further investment, and potential alternative financing mechanisms.

Preliminary efforts in this area include the development of a national inventory of Corps assets that includes the results of an assessment of the condition of each major infrastructure component. This will help us to develop a long term strategy to manage these assets and reduce risk, as well as help us determine where priority investments need to be made. End of life cycle decisions will be made regarding which projects to retain and recapitalize, which projects to repurpose, and which projects to recommend for de-authorization and decommissioning.

The Administration is exploring alternatives for infrastructure financing, including public private partnerships and an infrastructure bank. The intent of this strategy is to facilitate the best use of federal and non-Federal dollars to reduce risk and improve the reliability of the Nation's water resources infrastructure.

Transforming the way we deliver the Civil Works program requires state of the art processes and a highly skilled workforce that is capable of responding to current and future demands. The strategy is to have reliable and efficient methods of delivery by linking technical capabilities to uniform national standards, maintaining core competencies, and having consistent methods, processes and approaches throughout the Corps. The desired end result is high quality and timely products and services delivered to our customers and stakeholders. To that end, for example, the Corps has established Centers of Expertise for major dam safety modifications, inland navigation design, and deep draft navigation economics.

The Army Corps of Engineers has a strong tradition of working collaboratively with non-Federal interests to plan and deliver products. The current transformation initiative is no different. Our transformation partners include states, tribes and local governments,

non-governmental organizations, non-profit agencies, and the public. These partnerships are increasing and will likely continue to increase as we share a common goal of having reliable and resilient infrastructure for our Nation.

Madam Chairman and members of the committee, this concludes my testimony. I look forward to continuing to work with this Committee on these very important issues. Thank you.

**Environment and Public Works Committee Hearing
February 7, 2013
Follow-Up Questions for Written Submission**

Questions for Darcy & Bostick

Questions from:

Senator Barbara Boxer

1. We have worked with you over the past two years on the Corps' policy for management of levee vegetation. As you know, the initial Corps proposals caused significant concern for many in the State of California. Requiring levee managers to remove all vegetation would be cost-prohibitive and in many instances may not increase public safety.

- a. The impact of vegetation on levees can vary based on many factors. Given this, do you believe it is important to take local and regional conditions into account in determining how best to manage levee vegetation?

Answer: Yes. Each levee system is a unique flood risk reduction system that operates within equally unique local and regional conditions. I support developing solutions to levee issues while considering local resources, site-specific situations, and local and regional conditions.

- b. As you work to finalize your vegetation policy, will you commit to work with the Committee and affected stakeholders?

Answer: Yes, I remain fully committed to working with the Committee and affected stakeholders.

2. I noted in my opening statement, many California communities are concerned that the Corps' policy on credit for work carried out by non-Federal sponsors could delay local efforts to protect communities from flooding.

Assistant Secretary Darcy, I appreciate the letter you sent to me last year expressing agreement that some local sponsors should be able to move forward more quickly than current policy allows. In addition, I am glad you indicated your willingness to consider exceptions to the Corps policy where a compelling need can be demonstrated.

- a. Given your letter, do you agree that there are certain instances where it makes sense for non-Federal sponsors to act to reduce flood risk in advance of the Corps?

Answer: I agree that there may be certain instances where it makes sense for non-Federal sponsors act to reduce flood risk in advance of the Corps. But in those instance where there is an expectation of credit, a decision by a non-Federal sponsor to undertake construction work for which it hopes to be afforded credit toward the non-Federal share of a future Federal flood risk management project should be based on a reasonable likelihood that the work will be determined to be an integral part of the ultimately recommended Federal project.

- b. Do you also agree that we should encourage non-Federal participation in Corps projects as much as possible?

Answer: I agree that non-Federal interests should participate in Corps projects as much as possible. However, Federal processes should not inadvertently create situations that induce people to unknowingly place themselves and their livelihoods in harm's way. The potential risks to life and property should be understood before decisions are made that may encourage people and development to remain in or move into areas where the residual risks may be unacceptable.

3. Assistant Secretary Darcy, your testimony notes that the Corps has seen a steady increase in the costs and time required to complete water resource studies. This delays the benefits of these projects and increases costs for state and local governments. You also highlighted the Corps' new SMART planning effort and indicated it will save time and money while complying with all applicable laws.

Can you expand on why you believe this new approach will reduce the time and resources necessary to complete Corps projects?

Answer: Planning Modernization is a central component of the Corps' Civil Works Transformation efforts and is focused on improving the processes, capabilities and products that support timely and sound decisions regarding the Nation's water resources needs. This initiative means improved project delivery that yields smarter outcomes; improved technical capability of Corps planners; enhanced collaboration with Federal, Tribal, State, Local and non-government partners; evaluating and enhancing production capability and staffing at Corps Planning Centers of Expertise; and strengthening the objectivity and accountability of the Corps planning efforts. Improved planning performance will include: updated planning guidance and policy; streamlined, adaptable planning processes that improve effectiveness, efficiency, transparency, and responsiveness; and enhanced technical capabilities.

Planning modernization includes improving how the Corps manages and delivers feasibility studies. A new planning process referred to as "SMART Planning" has been developed and has guidance issued that all feasibility studies shall be completed with a target of within three years, at a cost of no more than \$3 million, use of 3 levels of the Corps vertical team and of a "reasonable" report size, referred to as the "3-3-3 Rule". "SMART" planning – Specific, Measurable, Attainable, Risk-Informed, and Timely – supports the Corps of Engineers Planning Modernization goal of completing high quality feasibility studies with shorter timeframes and lower costs.

SMART planning is risk-informed planning that focuses on decision-making and deliberately scoping analyses to what is necessary for decisions. SMART planning promotes more frequent and effective team communication by all levels of the Corps, from Districts to Headquarters, throughout the planning process. The 3-3-3 rule sets parameters to help achieve SMART Planning. The emphasis on risk-based decision-making, early Corps vertical team engagement and complying with the 3-3-3 Rule will reduce the time and resources necessary to complete Corps feasibility studies.

All active feasibility studies which do not meet the guidelines of 3-3-3 will be critically examined under the SMART Planning principles and rescope with a clear path to study completion. A critical examination of the Planning Portfolio of feasibility studies has already resulted in a 54% overall reduction in active studies since 2011. In 2012, 35 studies that re-examined their scope and path forward identified approximately \$75 million of potential savings – savings to the federal government and the non-federal sponsor.

The 3-3-3 rule is not a “one size fits all” approach. There are and will be complex or large-geographic scale studies that will not be completed within 3-3-3 – but these studies are expected to be an exception and they must each focus on complying with the SMART Planning process and decision-based milestones. For instance, SMART planning principles have led to significant time and cost reductions to the Port of Charleston Post 45 foot Feasibility Study from \$20 million in 8 years to \$11.9 million in approximately 4 years.

The Corps of Engineers is committed to conducting rigorous studies focused on timely and appropriate decision-making, rather than spending resources on tasks that may not lead to better federal investment decisions.

Senator Max Baucus

1. Has the Corps estimated a cost to the U.S. economy of the often-cited statistic that at the 59 busiest U.S. ports, authorized channel dimensions are available less than 35% of the time?

Answer: The Corps has not estimated the cost to the U.S. economy. The data would have to be provided by the individual ports and shippers.

2. Has the Corps evaluated how our trading partners and competitors plan to respond to the need to deepen some of their ports in order to serve larger ships that will move through the Panama Canal?

Answer: We understand that our trading partners and competitors are preparing for the expansion of the Panama Canal. For example, Canada built a tightly linked rail and port system to link U.S. Midwest and Eastern importers and exporters with mega-ship terminals at Vancouver and Prince Rupert. China is working with Brazil to increase port capacity to take maximum advantage of increased Panama Canal capacity for soybeans in direct competition with U.S. farmers.

3. Has the Corps taken a view on the principal conclusions about capital funding gaps and possible economy-wide impacts from reduced trade contained in the American Society of Civil Engineers' September 2012 report, "Failure to Act: The Economic Impact of Current Investment Trends in Airports, Inland Waterways, and Marine Ports Infrastructure"?

Answer: The Corps has not taken a position on the conclusions of the American Society of Civil Engineers' September 2012 report.

4. In July of 2012, the Federal Maritime Commission issued a report which studied inland containerized cargo moving through Canadian and Mexican ports that were bound for the United States, and found that Pacific Northwest ports are especially vulnerable to cargo diversion. The report estimated that much as 26.7 percent of container volume in 2010 for the West Coast ports of Seattle, Tacoma, Portland, and Oakland was 'at risk' of diverting to a Canadian port as a result of the current structure of the Harbor Maintenance Tax. The estimate was determined by assessing the vulnerability of U.S. bound containers to further incursions by Canada's west coast ports by comparing data on containers bound for the Midwest.

Is the Corps amenable to working with members of Congress on how to address this challenge highlighted by the Federal Maritime Commission?

Answer: Yes, the Corps will work with Congress.

5. Can you tell me what is being done to move the cooperative work forward of the Corps and the Bureau of Reclamation on the St. Mary Diversion works?

Answer: The Corps is currently not doing any work on the St. Mary Diversion Project since the project has never received appropriations. We are not aware of what work Bureau of Reclamation is pursuing on the project, but they have not requested any technical assistance from the Corps as of this date.

6. How many voluntary buy-outs of landowners in floodplains have occurred through Corps programs since 1993 (in terms of landowners and acreage)?

Answer: The Corps has acquired land, or real estate interests in land, totaling over 390,930 acres from over 8,171 willing-seller landowners in the floodplain.

Senator Benjamin Cardin

Conowingo Dam

1. Where does the Lower Susquehanna Watershed Assessment (LSWA) currently stand in process and how far is from completion?

- a. When can I reasonably expect the LSWA to be completed?

Answer: With timely provision of Federal funds, the LSRWA report is scheduled to be finalized in September 2014.

2. Is your office advocating for OMB and the President to include a request for funding to complete the LSWA in the President's FY14 Budget?

Answer: At this time the President's FY 14 Budget is not yet finalized. This project, along with all other eligible projects Nationwide, will compete for funding in FY 14.

3. If sufficient funds to complete the LSWA are not going to be requested, allocated, or directly appropriated, how is the Corps planning to conclude this study?

Answer: Without sufficient funds, study activities will be brought to a logical stopping point until such time as funds are made available to continue/complete the study.

4. Absent the timely completion of the LSWA, Will the Corps entertain publishing an interim set of findings accompanies with recommended actions to take to mitigate contaminants behind the dam?

Answer: The Corps has placed all interim technical products to date on the project's website which is available to resource agencies and the general public. All future interim, technical products will be placed there as they become available.

5. How could the (completed) LSWA help inform FERC's terms of relicensing the Conowingo Dam? Would the Secretary support FERC using the LSWA to inform its relicensing process?

Answer: The Corps role in the FERC relicensing is limited to its regulatory function. If Exelon (the owner of Conowingo Dam) proposes or FERC requires certain activities, such as dredging, placement of structures, or discharge of fill material, as part of the relicensing, then Corps of Engineers approval is required under Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act. Should any regulated activities be proposed or required, the Corps will request to be a cooperating agency in FERC's preparation of an environmental assessment for the project.

6. With the FERC relicensing of the dam due in August 2014 and recognizing that the findings and recommendations of the LSWA could be very informative to the relicensing process, would the Corps transmit its findings and recommendations through the LSWA to FERC ahead of the relicensing of the Conowingo Dam? (Recognizing that there is no legal requirement to do so).

Answer: Within the lower Susquehanna agency group, the Maryland Department of Natural Resources (MDNR) has been the lead on the FERC relicensing issue. As a project partner, MDNR has access to all technical findings by the project team. Consequently, MDNR would handle any coordination of these findings with FERC.

7. I understand that EPA intends to reach out to FERC regarding the accumulated materials behind the Conowingo Dam; will the Corps also assert itself in the relicensing process, even if it is just in advisory/consultative role?

Answer: The Corps role in the FERC relicensing is limited to its regulatory function. Should any regulated activities be proposed or required, the Corps will request to be a cooperating agency in FERC's preparation of an environmental assessment for the project.

Pearce Creek

8. The following questions relate directly to the findings and information found in the January 17, 2013 Hydrogeologic Framework, and Water Quality in the Pearce Creek Dredge Material Containment Area and Vicinity, Cecil County, Maryland report (heretofore referred to as "the report") published by the United States Geological Survey (USGS), in cooperation with the United States Army Corps (USACE).

- a. The map on Page 9 of the report shows the wells that USGS tested. They are all located in one of the three residential communities adjacent to the Pearce Creek Disposal facility. What input did the Corps provide USGS on the scope, location (area delineation) and sample size of where the well tests were done?

Answer: The scope of the study was an interactive process developed by the Corps with USGS based upon the Corps goals and purposes for the study. USGS developed the study scope in accordance with the Corps goals, purposes, time limitations and budget constraints. Nine sample locations were selected based on prior information from past studies with all locations outside the West View Shores area. Three samples were performed in the Bay View Estates area and six samples were located at various locations along Pond Neck Road.

- b. The map on page 48 of the report shows the groundwater flows under the Pearce Creek facility and a very limited sample area of flows offsite. The map shows groundwater flows in the direction of the other communities proximate to Pearce Creek, but the map depicts these flows stopping at the border of the facility. The homes in these other communities are on private wells tapping into the same underground aquifer, the Magothy aquifer, which is the same aquifer that flows under the Pearce Creek disposal facility. Is it reasonable to think that even though the map neglects to indicate the Northerly and Southerly flow directions of the aquifer beyond the Pearce Creek facility that the aquifer does in fact continue beyond where the arrows point?

Answer: Yes, the aquifer does extend beyond where the arrows point even though the map does not indicate the Northerly and Southerly flow direction of the aquifer beyond the Pearce Creek facility.

- c. Given the direction these arrows point, even though they stop at the facility's borders that it is likely the aquifer flows under the adjacent communities to the South and North?

Answer: It is likely the aquifer flows under the adjacent communities to the South and North, however, the surface lines were truncated at the limits of the available data per standard scientific practices. The direction the groundwater flows outside of the data area cannot be determined without additional data points at this time.

- d. What is the explanation for why the report did not take into a larger sample size to do its well tests?

Answer: The report did not include a larger number of sample well tests due to the limited funding available for the testing.

- e. If there is a reasonable, if not likely, occurrence that wells in the other communities are contaminated, would the Corps recommend USGS revise its report to include well samples from the communities that were not initially tested?

Answer: If additional project funds and directions are provided to test other communities that may be contaminated, the Corps could request USGS to include well samples from these communities that were not initially tested and amend its report.

- f. If the study is not revised, will the Corps provide assurances to the other adjacent communities that were not included in the study that any activities the Corps takes to remediate the site and prevent further ground water contamination will protect them also?

Answer: The Corps can only address those sites included in the current study.

- 9. The ground condition of the Pearce Creek facility resembles that of a wet marshland. Isn't it important to have a level field and solid base to successfully install a liner?

Answer: Yes, it is important to have a level field and solid base to successfully install a liner.

- 10. How would the Corps go about compacting the soils and installing a liner, that would not be vulnerable to tears, if the ground is so difficult to work on?

Answer: The Corps would use standard soil compaction methods and equipment to install a liner. The most common use liner is a High Density Polyethylene geomembrane. It resists tears, insects, rot, and leaks. This material has been used as liners for approximately 20 years and is well documented by the EPA.

- 11. Will the Corps also install leak detection systems to accompany any mitigation measures that are taken?

Answer: The Corps will consider the installation of leak detection systems as part of any mitigation measures but until a final mitigation plan is formulated it not known at this time whether the leak detection system is necessary.

Senator Tom Udall

Albuquerque levees

1. The Albuquerque Levees Evaluation Report was completed in 2008, but is not considered a Chief's report for purposes of authorizing construction to rehabilitate the levees. That is a considerable delay for bill we are now considering in the Environment Committee. What will the Corps do to complete the necessary evaluations and analysis and to get to a Chief's report for these levees?

Answer: The Corps has not received additional funding for this activity. If funding was made available, the Corps could conduct a feasibility study, leading to a Chief's Report, within three years of receipt of funds.

Rio Grande Environmental Management Program

2. The Rio Grande Environmental Management Program is basically a collaborative mechanism for Federal, state, local and other stakeholders to review planning and environmental issues with regard to projects along the Rio Grande. I think this is extremely important. Do you support this type of program?

Answer: The Corps supports collaborative watershed approaches that seek to resolve water resource issues such as those targeted by the Rio Grande Environmental Management Program.

3. Unfortunately tensions are rising along the Rio Grande due to the drought. Growers are looking at some of the smallest allocations in recent memory and we need to also provide water and habitat for endangered species in the river. I must stress the importance of these kinds of collaborative efforts in helping to keep the peace during a time of stress. If this program is reauthorized, will the Corps strongly consider including funding in its budget?

Answer: Yes, if this program is reauthorized, the Administration would consider it during the budget development process.

Rio Grande Floodway, San Acacia to Bosque del Apache

4. I understand that the Army Corps and the Fish and Wildlife Service met on Tuesday, February 5th, to discuss their dispute over the size of mitigation land necessary for the Southwestern Willow Flycatcher because of impacts of the proposed San Acacia levees. Can you update me on that conversation?

Answer: The Corps and the Fish and Wildlife agreed to a range of mitigation for the Biological Opinion. A draft Biological Opinion is expected to be issued by the Fish and Wildlife Service on February 15, 2013. A meeting between the Corps and Fish and Wildlife will be conducted on February 27, 2013 to resolve remaining issues for the Biological Opinion.

5. I am a supporter of conservation efforts but I want to confirm that New Mexico will not see the loss of construction funding due to an intra-federal disagreement like this. Are you committed to seeing this project through?

Answer: The Corps is committed to working with the Fish and Wildlife Service to resolve the issue so that this project can move forward. The Administration supports flood risk management projects that reduce the risk of flood damages for the nation.

Rio Grande Water Operations

6. The Corps and the Bureau of Reclamation both manage a number of dams and reservoirs along the Rio Grande, and must operate them in concert during each water year. Further coordination is necessary with large irrigation districts and the Government of Mexico.

Is the Corps engaged with these other agencies to look at options for better managing this infrastructure to minimize evaporation, seepage, and other losses and maximize the amount of water available to growers and the environment?

Answer: Yes, the Corps has been engaged with other agencies to look at options for better management since 1996 when six federal agencies entered into a Memorandum of Understanding (MOU) to develop a unified water operations model and to coordinate model development activities with other Rio Grande Basin interests. This MOU, which was renewed in 2007, includes signatories from multiple Federal, State, and local agencies, universities and stakeholders. Recent enhancements to the water operations model include setting up an updated representation for modeling returns to the river at outfalls and wasteways from the Middle Rio Grande Conservancy District distribution system and a new method for representing evaporation losses from wetted sands on the river bed.

7. What more can we do to stretch our water budget farther?

Answer: The water operations model is currently complete for the Middle Rio Grande. We are currently improving the model to include Colorado (scheduled for completion in Fiscal Year (FY) 14). Continued development of the model to include the Lower Rio Grande Valley (below Elephant Butte Dam and stretching into Texas) would allow for more comprehensive analyses of water usage and potential water savings. We plan to begin this in the latter part of FY 14 and will complete in FY 16.

Senator Kirsten Gillibrand

1. The Wallkill River is desperately in need of dredging, and is in danger of flooding whenever there is heavy rainfall. During Hurricane Irene in 2011, the river flooded and caused havoc for farmers in the region who lost acres and acres of crops. It is my understanding that the Corps has completed a reconnaissance study, but has not yet completed a full feasibility study.

- a. What is the status of this study, and do you expect that the Corps will be able to move forward with full feasibility at any point in the near future?

Answer: The feasibility study for the Wallkill River has not yet been initiated. The Corps is unable to move forward with full feasibility because the state of New York has not identified a local cost sharing partner for the feasibility study and Federal feasibility study funds have not been appropriated at this time. The final 905(b) reconnaissance report was approved in September 2008. The Corps has coordinated with the New York State Department of Environmental Conservation, Ulster County, and Orange County to develop and negotiate a Project Management Plan (PMP) for a Feasibility Study from 2008 until December 2010. If a local partner is identified, executes a feasibility cost-sharing agreement, and if Federal feasibility funds are provided along with the local sponsor matching cost share, the Corps will initiate a feasibility study.

- b. Will you work with my office to address this issue?

Answer: Yes, the Corps will work with your office to address this issue.

2. Small boat harbors are critical to the economy of communities along Lakes Erie and Ontario. Several towns in Western New York are unable to welcome vessels to dock due to shallowness of their harbors.

If Congress were to pass the Harbor Maintenance Act, or similar legislation that would require that money in the Harbor Maintenance Trust Fund be spent for its intended purpose, would this enhance the ability of the Corps to begin to prioritize some of these smaller, but locally important, harbors?

Answer: Yes. An increase in the Corps annual appropriation for Civil Works, and the coastal navigation program specifically, to enable the Corps to spend the \$1.5 - \$1.6 billion annual revenues in the Harbor Maintenance Trust would provide additional funding for the low commercial use projects.

Senator David Vitter

Levee Vegetation

1. According to a California State Association of Counties document, “The Corps began reassessing its levee maintenance policies following extensive flooding in New Orleans from hurricane Katrina.” As a result, the Corps implemented a new national policy that mandated the removal of levee vegetation even though it has been proven that this was not the cause of the levee failures in New Orleans.

- a. What scientific research was used to justify implementing this new policy?

Answer: The Corps has had documented vegetation criteria since the 1970s and its current criteria has been in place since 1993. The Corps’ current vegetation standards and approaches reflect best practices in the engineering profession worldwide. Noncompliant vegetation on levees blocks visibility for inspections, impedes access for operation and maintenance, and hinders flood-fighting activities – proven through field experience.

- b. In the absence of credible scientific research, why did the Corps unilaterally change a policy that had been working for all stakeholders and levee sponsors?

Answer: The Corps’ current vegetation management standards have not recently changed. With the creation of the Corps’ Levee Safety Program in 2006, the Corps has been striving for national consistency in enforcement of levee maintenance policies; assessment and documentation of levee condition; and, public transparency when levees do not meet levee safety criteria, including vegetation criteria. Having an accurate understanding of the condition of a levee and associated consequences is an important first step to making informed decisions.

- c. Was the unnecessary financial burden to be incurred by the non-Federal sponsors considered before implementing this policy?

Answer: Levees must be properly operated and maintained to ensure long-term reliability and performance. Most levees constructed by the Corps or those that have been authorized to be part of the federal system have a levee sponsor who has agreed to operate and maintain the levee in accordance to requirements specified by the Corps. To facilitate an approach of developing solutions that ensures consideration of local resources and levee specific conditions, the Corps issued a policy in November 2011, known as the System-wide Improvement Framework. This policy provides eligible levee sponsors an extended period of time to address system-wide levee deficiencies that might require a multi-year effort and coordination between multiple entities. In addition, this policy supports addressing deficiencies prioritized by the highest risk first in order to optimize flood risk reduction.

- d. The Corps requires a positive benefit-cost ratio for almost all water resource development projects, except ecosystem restoration. Does this policy have a “positive benefit-cost ratio”, in other words, does the benefit of removing the vegetation exceed the cost incurred by the non-Federal sponsor by removing the vegetation?

Answer: The Corps implements a suite of peer reviewed and well tested design standards to assure appropriate infrastructure performance during potentially catastrophic events. The Corps’ vegetation management standards for levees are among a suite of operation and maintenance requirements that contribute to sustaining levee integrity. Levee systems themselves are complex

because of their length and multiple components. In addition, there are many possible failure modes and potential causes of these failure modes that may exist for a levee system. Although it is uncertain how woody vegetation may directly impact the integrity of the levee, it often prevents adequate inspection, access, and treatment of some of the more prevalent failure modes such as seepage and erosion. Tools to isolate vegetation and determine its influence on the risk of a levee system do not exist. In addition, it would be difficult to quantify the risk that vegetation poses as an obstruction to floodfighting and maintenance activities.

2. "The Corps recognizes that there are many existing levees with noncompliant vegetation and has worked diligently over the past two years to develop a best path forward that takes into account regional differences." A Review of the President's Fiscal Year 2013 Budget Request for the Army Corps of Engineers Hearing Before the Subcommittee on Water Resources and Environment, March 27, 2012

"The Corps...has been using this information and working collaboratively with other Federal agencies and local levee authorities to develop the best path forward for managing vegetation on or near public safety infrastructure in the United States." –Darcy Current Hearing Testimony

- a. What specifically is this "best path forward" that you have been developing?

Answer: During the past few years, the Corps has been working on two policies that provide potential solutions to noncompliant vegetation. The first policy was issued in November 2011. It is known as the System-wide Improvement Framework and provides eligible levee sponsors an extended period of time to address system-wide levee deficiencies that might require a multi-year effort and coordination between multiple entities. In addition, this policy supports prioritizing deficiencies such that the highest risk deficiencies are addressed first in order to optimize flood risk reduction.

The second policy recognizes that there may be some instances where vegetation is essential to address the requirements of applicable environmental laws, regulations, Executive Orders, and treaties or to preserve the rights and interests of Native Americans. For these situations, the Corps has a revised vegetation variance policy, which is still draft, that outlines the process by which a levee sponsor may request, and the Corps may consider, a permanent variance to current vegetation standards. Because the Corps wanted to provide state and federal resource agencies and local flood management agencies opportunities to review and comment on this draft policy, the Corps posted the draft in the Federal Register twice for public comment, Feb 2010 and Feb 2012. The Corps is currently reviewing all the public comments received and discussing options for ensuring environmental compliance for the processes spelled out in the vegetation variance policy with the resource agencies. Until a decision is made on which process to implement and all public comments received are considered, a final vegetation variance process will not be issued. There is not an anticipated date on when this coordination and review will be completed.

- b. Is this "best path forward" in the interest of the federal taxpayer or is this another attempt by the Corps to force more financial responsibility on the non-Federal sponsor under constrained Federal budgets?

Answer: The Corps is applying requirements and processes in the best interest of the people whom rely and will continue to rely on levee systems to reduce flood risk.

3. Corps "Engineer Research and Development Center researchers have determined that because of the many variables, including climate, moisture, soil types, tree species and levee designs, the full

impacts of trees on levees may never be fully quantifiable.” Initial Research into Effect of Woody Vegetation on Levees, Army Corps of Engineers 9/7/2011

“As a result of this policy review, the Corps has published a draft policy guidance letter revising the current vegetation variance process to ensure application of consistent procedures and documentation on a national basis.” Proposals for a Water Resources Development Act of 2010, Part II, Hearing before the Subcommittee on Water Resources and Environment, April 15, 2010

- a. Why has the Corps implemented an indiscriminate, “one size fits all” national policy when your own researchers have pointed out the need for regional variances?

Answer: The Corps’ minimum vegetation standards are contained in Engineer Technical Letter (ETL) 1110-2-571. This document includes application of vegetation free zones, planting berms in locations where vegetation on or near a levee is desirable, and vegetation variances. The policies and standards in this document are used for a variety of purposes, such as, design of new projects; development of operations and maintenance manuals; rehabilitation of existing infrastructure; and levee inspections to ensure proper operations and maintenance.

The draft policy guidance letter referenced above involves the vegetation variance policy and is entitled “Process for Requesting a Variance from Vegetation Standards for Levees and Floodwalls.” This draft policy does not establish a “one size fits all” vegetation standard. Instead, it establishes a process by which a levee sponsor may request, and the Corps may consider, a permanent variance to current vegetation standards for areas with environmental and Tribal considerations. In most cases these variance requests would seek to retain vegetation on or immediately adjacent to the levee. This process allows for consideration of site specific and regional specific conditions.

- b. Does the Corps levee vegetation policy violate the following standing laws: Endangered Species and Environmental Act, Clean Water Act, and Tribal Treaty rights? (The beginning of the following quote states that the policy may violate those laws)

Answer: The Corps recognizes its obligations under these important statutes and treaties and works to implement its programs and processes in a manner that both complies with their requirements and respects the role and authority of the local levee sponsors that are responsible for maintaining the levee systems.

4. “The Corps has a vegetation variance process that considers the implementation of alternative vegetation management standards for a levee or portion of a levee as long as structural integrity and functionality of the levee are retained.” –Darcy Current Hearing testimony
 - a. If the structural integrity and functionality of the levee are retained with the alternative vegetation management standards that allow vegetation to remain, why is this not used across the board? Why is there an alternative to the more stringent and costly policy when acceptable standards of safety are maintained in both?

Answer: The “alternative vegetation management standards” referenced above is related to the result of analysis for a specific levee system through the vegetation variance process. The analysis is dependent on site specific levee cross-sections, the vegetation species and size, the hydrological conditions, and other site specific factors. If through this process it is determined that a site specific alternative vegetation standard could be applied across the board, then the Corps will consider revising its current national standards.

Navigation Lock Hours of Operation Reduction

5. “The Corps...is taking a nationally consistent approach to adjusting the levels of service and hours of operation commensurate with the level of commercial use.” (less than 1,000 commercial lockages per year) A Review of the President’s Fiscal Year 2013 Budget Request for the Army Corps of Engineers Hearing Before the Subcommittee on Water Resources and Environment, March 27, 2012

“We do not plan to use the Federal Register process for review and comment for these situations. Instead, the proposed levels of service will be coordinated directly with the navigation stakeholders for each affected lock or inland waterway segment, in order to come to a local agreement on the appropriate levels of service—an increase or decrease in operating hours—based on service.” A Review of the President’s Fiscal Year 2013 Budget Request for the Army Corps of Engineers Hearing Before the Subcommittee on Water Resources and Environment, March 27, 2012

- a. Does the Corps have a standard operating procedure where they inform the public of policy decision already made and if so, was this procedure adhered to in every case?

Answer: Since the change in Levels of Service did not impact all locks nation-wide, the Corps established procedures and guidelines that each district would use to coordinate any changes to Levels of Service within its area of responsibility with its navigation stakeholders.

- b. Was an analysis done show the cost-savings for implementing this reduction in lock operation hours, and if so, what were the results?

Answer: A preliminary analysis was performed, however, the focus was on reducing operating costs in order to focus constrained funding on maintenance of the inland navigation system and to extend the service life of the locks. Preliminary estimated reduction in operating costs nationwide was estimated to be about \$4.5 million.

- c. Did the analysis take into consideration any negative economic impacts on national or regional commerce?

Answer: The analysis did not take into account negative economic impacts on national or regional commerce.

- d. Does the Corps have a procedure or policy guidance on how to handle recreational emergencies or accidents after the locks have been closed and access limited?

Answer: Each individual lock has its own emergency operations procedures.

6. “We do not plan to close any locks, but will be adjusting the operating hours of service on our locks with the lowest level of commercial use – those with less than 1,000 commercial lockages per year.” –Darcy Current Hearing Testimony

- a. While this policy sets specific waterway performance benchmarks for commercial and recreational lockages, did the Corps take into consideration any excessive recreational

lockages? For example, 13,000 recreational lockages on the Calcasieu River Control Structure in a given year.

Answer: Since the locks are authorized primarily for commercial navigation, the Levels of Service focused on commercial lockages. Lock Level of Service 3, which provides a single shift daily, is justified based on either 100 to 500 commercial lockages per year or greater than 1,000 recreational lockages per year. Lock Service Level 3 is the highest level of service based solely on recreational lockages.

7. There are more than ten mitigation evaluation methods available to use in LA at the Corps' discretion. WVA has been the most widely used method in order to achieve the Corps' mission of the "no net loss" wetland policy. The Army Corps of Engineers New Orleans District chose to use the Modified Charleston Method (MCM) for all work that impacts wetlands in coastal LA. This was an effort to abate the rapid loss of coastal wetlands due to erosion and subsidence. However, the MCM cost of mitigation is unparalleled and stretches beyond the "no net loss" wetland policy. This has caused the state and local governments, businesses, and homeowners to bear undue financial burden on many existing public and private projects.
 - a. In the New Orleans District, is the Corps using the Modified Charleston Method to mitigate wetland loss from the Hurricane Storm Damage Risk Reduction System? (no)

Answer: No, the MCM is not used on Corps Civil Works projects. Impacts from the HSDRRS are being assessed by the Corps using the Wetland Value Assessment (WVA) method, in part because it accounts for "future with" and "future without" project scenarios when assessing project impact and mitigation benefit. Civil Works policies require an analysis of impacts, both with and without the proposed project conditions, taking into account future land loss relative to sea level rise. The Regulatory Program and Civil Works Program have distinct and separate missions and goals and it is therefore appropriate to use different methodologies to inform decisions.

- b. Why do many, if not all, Corps districts use different wetland valuation methodologies, which in some cases can be vastly different between neighboring districts, thus creating an economic disadvantage for public and private sector interests doing business in those particular districts.

For example: St. Tammany Parish is divided between the Vicksburg and New Orleans districts and each district uses a different wetland valuation methodology, and the neighboring Mobile District uses a completely different methodology.

Answer: While all wetlands share some common hydrologic, soil, and vegetative characteristics, they can exhibit wide variation in terms of size, complexity, and physical, chemical, and biological characteristics. Wetlands exhibit significant variation in characteristic based on a wide range of climatic, geologic, geomorphic, and hydrologic conditions in which they occur; this in turn is reflected in the variety of methods that have been developed to assess the quality of a wetland. For a wetland assessment model to receive widespread acceptance for use in the Corps Regulatory program, it would have to satisfy technical and programmatic requirements including applicability in a wide geographic area; the ability to assess a variety of wetland types and functions and; the ability to assess functions accurately and efficiently within a limited time frame with the resources that are available.

The Corps is seeking methods and tools to improve its business processes and provide more efficient service to its customers. One of the tools that it has incorporated for this use is the MCM.

Although the Corps Regulatory program determines the amount of acres or credits needed for mitigation, it neither controls, nor regulates, the cost of those acres or credits. The cost of a mitigation project is based on costs of equipment, labor, materials and valuation by the person/entity providing the mitigation. The best venue for permittees to reduce mitigation cost is to propose project designs having wetland impacts avoided/minimized to that which is absolutely needed.

A major watershed separation occurs within St. Tammany Parish. The Bogue Chitto and Talisheek watersheds are the defining separations for the Vicksburg and New Orleans District areas of responsibility. Though the distinction of the line is man-made, it is based on a natural hydrologic demarcation; hence, each watershed exhibits wetland (and non-wetland) variations which are currently better captured with their respective assessment tools. A comparison of the results of using the MCM and the Vicksburg Charleston Method (VCM) was completed by the New Orleans District on a few projects. The results indicated there was not much different in the outcomes between the two methodologies.

With specificity to St. Tammany Parish, it is worth noting that the WVA method does not have a model applicable to pine-savannah and hardwood flats ecosystems that dominate that region. Development of the WVA was based on providing a tool for ranking projects proposed or implementation under the Louisiana Coastal Wetlands Planning, Protection and Restoration Act and these ecosystems were not targeted or included in that program. Therefore, the New Orleans District relied on best professional judgment, which sometimes resulted in inconsistent mitigation assessments. Development of the MCM accounted for all ecosystem types within the New Orleans District area of responsibility in a way that enabled timely and consistent decision-making and accurately reflected the individual project site's functional value.

- c. According to Corps policy, the District Engineer has sole discretion to choose which wetland valuation methodology to use in his/her district. Do you believe a more uniform method should be used by the Corps based upon a particular coastal zone classification rather than by district?

Answer: Not necessarily. Due to the differences in wetland types, even within the coastal zone, different assessment methodologies may be needed. To better understand and evaluate existing and potentially necessary methodologies, the Corps is undertaking an inventory assessment of all methodologies and developing a technical standard to guide the development of new methodologies, when needed. It is anticipated this work will be completed in FY 13.

Corps Project Engineering and Design Standards

8. In response to recommendations of IPET after hurricane Katrina, the Corps increased their engineering and design standards in the Gulf. The Corps began requiring higher standards of safety, more stringent criteria for levee fill, and improved guidelines for soil testing all of which result in higher project cost. These standards make sense in a high risk area like New Orleans. However, this "one size fits all" mechanism doesn't work across the board. They result in project costs that are prohibitive.

“Applying Engineering Standards for Flood Damage and Hurricane Protection Projects: The Corps is using a risk informed process to both confirm and adjust the application of post-Katrina standards to other projects. This results in a more appropriate and cost-efficient design approach. We have also developed specific guidance on a single national elevation datum to ensure consistent communication of design heights, on site specific sea level rise to ensure regional adaptation of climate change, and on wall and levee design to ensure consistent design and construction based on local conditions.” -- Darcy Current Hearing Testimony

- a. The Corps’ currently uses a new risk-based decision-making process to determine the engineering and design standards for flood and storm surge protection projects, which has shown to dramatically increase the cost of building such projects. In your opinion, which has the greater amount of risk, an area with no protection because the cost of the project far exceeds the ability to pay by the non-Federal sponsor or the will to fund by the Federal government OR an area with minimal/acceptable levels of protection within reasonable non-Federal budgets and Federal budgets?

For Example: Morganza, West Shore, Donaldsonville, Plaquemines, et al

Answer: The Corps employs risk informed decision making in specific design and construction activities to address the reality that "not one size fits all" when it comes to traditional standards and criteria. Where risks and uncertainty are greater, more conservative approaches are warranted, and vice versa. In the last three years, the Corps has saved or cost avoided over \$3 billion in long term construction investments using this risk informed approach. The pending revised approach for Morganza to the Gulf flood risk management project could double these cost savings/avoidance.

The question paraphrased as "isn't any risk reduction via a lesser project better than no risk reduction with no project?" must be answered in two parts:

Answer: "Yes", but only for the short term. All reasonable temporary risk reduction measures should be employed rapidly on an interim basis while longer term investment decisions are made. The Corps has guidance for Interim Risk Reduction Measures which spells out a number of actions that sponsors can take in the short term including: increased risk communication, pre-placement of materials and contracts for flood fighting, flood insurance, flood plain management, and other non-structural measures including improved warning and evacuation effectiveness for affected communities.

- "No or Not always" for the long term. Long term risk reduction measures, specifically those structural projects that require large investments, should be approached deliberately to assure that the investments are economically justified, technically feasible, and environmentally acceptable and that risks can be managed commensurate with the benefits over time. The Corps uses risk informed engineering standards and criteria to assure that the authorized benefits can be delivered with confidence over time. If these standards and criteria are lessened based simply on an ability to pay or fund them, then the adverse impacts may include:

- understatement of the risks posed and communicated and thus a false sense of public safety within the community;
- technical approaches that are infeasible or unreliable; or

- increased risk exposure for the community and the federal government in a disaster relief environment; or
- further escalation of risk due the attraction of unsustainable development in the leveed area

Project Crediting

9. Section 221 has been implanted to apply to nonfederal construction activities initiated after a Chiefs Report is signed until the end of project construction. In contrast, Section 104 applies from the time a reconnaissance study has been completed until the project is authorized. Other than the period of overlap between the Chiefs Report and project authorization, Section 104 and Section 221 (as it is being implemented by USACE) actually apply to two separate time periods. This makes them useful as complementary authorities depending on local need.
 - a. Why did the Corps shift to using the crediting provisions of Section 221 rather than those contained in Section 104?

Answer: Section 221 of the Flood Control Act of 1970, as amended by Section 2003 of WRDA 2007, (Section 221) is a comprehensive authority applicable to Federally authorized water resources development projects that provides for the affording of credit for non-Federal sponsor planning, design, and construction work if the work is determined to be integral to the project. Section 104 applies only to the construction of flood risk management projects. This change ensures consistent application across all Corps mission areas.

Senator Roger Wicker

Prioritizing Project Funding

1. Since the moratorium on earmarks, the executive branch has gained greater influence over Corps project funding. It is less than clear how some projects receive priority consideration, while others are underfunded or receive no funding at all. The Corps of Engineers employs certain criteria to prioritize projects, but the process is less than transparent and lacks congressional guidance.

- a. When was the last time the Corps reviewed and revised its criteria for prioritizing navigation and flood control projects?

Answer: The Corps updates its budgeting priorities on an annual basis and communicates through guidance contained in the annual Budget Engineering Circular.

- b. When was the last time Congress directed the Corps, through authorizing legislation, regarding criteria that should be considered when prioritizing civil works projects?

Answer: To the best of our knowledge, there are no specific criteria in law relative to prioritizing Civil Works projects in the budget. In general, projects that are technically sound, environmentally acceptable and economically justified are eligible for consideration in the budget.

- c. Will the Corps provide technical assistance as necessary during the drafting process to address the criteria for prioritizing Corps projects?

Answer: If requested, the Corps will provide technical assistance as necessary to help address the criteria for prioritizing Corps projects.

Inland Water Ways Trust Fund

2. The Inland Waterways Trust Fund lacks sufficient revenue to fund needed repairs and upgrades to our nation's locks and dams. This is in part due to increased spending on projects, cost overruns, and falling revenues. According to the Corps Institute for Water Resources, the majority of locks in the U.S. are well past their design age of 50 years.

What actions can the Corps take now to address aging lock and dam infrastructure?

Answer: The Corps focuses Operation & Maintenance funding on those projects that have the greatest risk of failure and the greatest economic, public health and safety, and environmental benefits to the nation. The Corps is also implementing Lock Levels of Service in order to reduce operating costs, focus constrained funding on maintenance of its inland navigation infrastructure, and extend the service life of its locks.

3. The Inland Waterways Users Board (IWUB) represents commercial shipping interests and acts as an advisory committee to the Corps and Congress. In 2010, the IWUB transmitted a proposal to Congress that would increase the fuel tax for inland waterways, while increasing the federal government's cost-share for certain projects – primarily locks and dams.

- a. Would the Corps of Engineers support an increased cost-share for locks and dams if the fuel tax for inland waterways is increased, as proposed by the Inland Waterways Users Board?

Answer: The Administration does not support an increase in the percentage of construction and major rehabilitation costs that come from the General Treasury, and a corresponding reduction in the percentage of construction and major rehabilitation costs that comes from the Inland Waterways Trust Fund.

- b. Is the Corps engaging with the commercial shipping industry to come up with proposals to make the Inland Waterways Trust Fund more solvent and address aging infrastructure?

Answer: The Administration submitted a legislative proposal to the Congress in September 2011 that would establish a vessel user fee, in addition to the \$0.20 per gallon fuel tax, to generate additional revenues for the Inland Waterways Trust Fund. The Corps continues to engage the inland waterways users to address the low balance in the Inland Waterways Trust Fund and address the aging infrastructure.

Mississippi Coastal Improvement Program

4. The Mississippi Coastal Improvement Program (MsCIP) is a comprehensive plan developed following Hurricane Katrina to provide storm damage reduction, prevent shoreline erosion, and preserve wildlife off the coast of Mississippi. The Corps completed initial MsCIP projects, authorized by Congress, below their original cost estimates (by approximately \$20 M). State and local officials would like the Corps to apply the remaining funds to other MsCIP projects that have favorable Chief Reports from the Corps.

With regards to the Mississippi Coastal Improvement Program, does the Corps have authority to use excess funds from completed projects to work on those that have favorable Chief Reports?

Answer: No. Chief's Reports only make recommendations to Congress and are not authorizing documents. The Corps can only use appropriated funds to implement a project authorized by Congress.

In the specific instance, P.L. 110-28 dated 25 May, 2007 states in part that the funds provided may be used to implement projects substantially in accordance with the Report of the Chief of Engineers dated December 31, 2006, and entitled "Mississippi Coastal Improvements Program Interim Report, Hancock, Harrison, and Jackson Counties, Mississippi." This report recommended fifteen specific projects for implementation. Of the fifteen projects, two were not initially constructed to their full description as presented in the Chief's Report: Hancock County Streams and Upper Bayou Casotte. The funds remaining are being applied to fully implement these two projects as described. Hancock County Streams project will address flooding issues in the Cowan Bayou watershed near the subdivisions of Oak Harbor and Belle Isle. The Upper Bayou Casotte project will address flooding issues in the drainage area south of US Highway 90 south to Bayou Casotte proper.

Flooding issues in other areas across the coast have been discussed with local officials, however projects to resolve these are not identified in the Interim Report and therefore are not eligible for the remaining funds. The report of the Chief of Engineers for the MsCIP Comprehensive Plan which was transmitted to Congress on January 13, 2010 does contain elements to address these

additional flooding issues, however the MsCIP Comprehensive Plan has not been authorized or funded.

Mississippi River Drought

5. Last year, water stages on the MS River dropped to their lowest since the historic drought of 1988. The Corps provided assistance through emergency dredging – but the flow of commerce is still dealing with navigation issues related to the drought. This includes carrying lighter loads which impacts the price of shipping goods on the Mississippi River. Low water levels are expected until late March when seasonal flows from the Missouri River Basin typically begin.

With regard to the recent low-water crisis on the Mississippi River, what options does the Corps have to continue maintenance for navigation on the Mississippi until flows from the Missouri River Basin begin in the spring?

Answer: Current and forecasted river stages are conducive for normal loading and navigation. Low river stages are not expected to occur until early summer, at which time the Corps will prioritize dredging in order to provide best channel possible within funds provided.

Senator BOXER. Thank you. General.

General BOSTICK. Madam Chair, I have no prepared remarks, but would just like to thank the committee for all the support that we have received, and look forward to the questions.

Senator BOXER. Thank you very much.

I will start it off, talk about home a little bit, Madam Secretary. The city of West Sacramento is working with the Corps to improve the inadequate Federal levees that protect the city. And anyone who has looked at the Sacramento area knows how vulnerable we are.

The city is currently planning how to spend the substantial local and State dollars that have been committed to the project. On October 1st of last year, Mayor Cabaldon wrote to you requesting guidance on the Corps' crediting policy. The city plans to spend \$14 million, that is a lot for the city of West Sacramento, to design a 5.7 section of the levee project. But they seek assurances that its efforts will be eligible for credit.

On November 29th, you replied that you weren't able to provide specific criteria that would be used to evaluate any requests for an exception to the Corps' crediting policy. Now, without specific criteria, how can non-Federal sponsors like West Sacramento have certainty that the work they are pursuing will be eligible for credit? And how can we proceed from this point, so we can encourage the locals to move ahead with these important improvements?

Ms. DARCY. Senator Boxer, I believe in the case of Sacramento, we have worked with the local sponsor to come up with a timing schedule for when our feasibility study would be completed and when their construction would start, so that we would be able to evaluate the study and that would be completed, or in the draft feasibility stage, which is when we would be able to make a determination as to whether the construction that they were contemplating would be integral to the project. That's the key to determining credit, is if it is integral to the Federal project.

Senator BOXER. When will you let them know?

Ms. DARCY. I think this draft, I want to say August, but I will double check with staff. I think it is August 2013 that the draft feasibility will be released.

Senator BOXER. If I could, instead of taking up your valuable time, could we talk about this? That is a long time to wait. These projects are urgent. Could we talk a little about this? This is the city of West Sacramento, which is not the city of Sacramento. So could we talk later?

Ms. DARCY. Certainly.

Senator BOXER. OK. First, I wanted thank you, because we met about the Salton Sea, and for those people here who have never heard of it or don't know, it is a huge, amazing sea that came about through human activity, let's put it that way. In the 1950s and 1960s, it was just this amazing recreation area. And because of a confluence of issues, it is drying up. If it continue the way it is going, it is a huge health hazard to not only the people of Riverside County, but it will be a problem even as far away as Los Angeles. So we are talking about potentially millions of people breathing in small particles, et cetera.

We have to make sure that the sea is restored. I have been working with you and also Interior. I look forward to working with the new Interior Secretary on this.

Would you commit to me to work to make sure that the Corps is involved in the restoration of the sea? Because you are the ones that can really do it. There is a lot of talk but you are the ones who have the expertise. Can we continue our collaborative relationship?

Ms. DARCY. Of course. I believe also that Colonel Toy was with you when you went to visit the Salton Sea.

Senator BOXER. He was, and he couldn't have been nicer. It is a very big challenge for us. It is a health issue, it is a species issue and it hasn't gotten the attention it deserves.

I have one more question. Your testimony highlights the Administration's efforts to explore alternative models of infrastructure funding. In MAP-21, which was our highway bill, all of us together worked to expand TIFIA, which is a way to take a steady flow of financing and, because we have that steady flow, in other words, in this case of the highway bill, a vote by the people of the localities to fund transit or fund roads, the Federal Government can step in front and get that funding quicker and get paid back through the State a stream of funding.

So we are looking at this in WRDA, a way to do the same thing, where localities vote to improve their water resources, the Federal Government, without any risk, really, can come up front and fund it. Will you take a look at that part of our WRDA draft and get back to us as to whether you think it could be helpful?

Ms. DARCY. Yes, I believe it provides loan guarantees, doesn't it?

Senator BOXER. It is credit assistance, yes. The steady stream of funding is already there. It is not a lick and a promise. It is there via a sales tax or a commitment by a county. So will you work with us so that when we put this out, hopefully in our WRDA bill, you will have looked at the technicalities?

Ms. DARCY. I believe the provision in MAP-21 was sort of a pilot project, so putting it in WRDA maybe could build off what we learned from that.

Senator BOXER. OK, well, we are going to need your help on the funding for the Salton Sea, because that is something we just need to have. We need to look at these innovative ways, because if we do, we can really multiply jobs and multiply commerce. Because a lot of these projects are very expensive.

Senator Vitter.

Senator VITTER. Thank you, Madam Chair, and thank you, Madam Secretary and General Bostick, for all of your work. There is no State that is more dependent on the good work of the Corps than Louisiana. And of course, Hurricane Katrina underscored that, and thank you in particular for historic important work post-Katrina that made the directly impacted area far safer than the day before Katrina.

The last WRDA, WRDA 2007, was a big part of that direction and of that work. But there are some aspects of implementation of that, as I suggested at the beginning, that I am very, very frustrated about. And in the spirit of fixing those problems for the next WRDA which we are going to produce, I want to focus on that.

My biggest frustration is really that the Corps ignores mandates from Congress when it chooses to, when it doesn't want to do certain things. I think that is really inappropriate. Madam Secretary, I assume you recognize, both in terms of common sense use of the language and legal language that there is fundamental difference between a provision which says you may do this and another provision which says, you shall do this, is that fair to say?

Ms. DARCY. Yes, Senator.

Senator VITTER. I think it is universally understood, including in legal language, may is discretionary, shall is mandatory. And yet the Corps has ignored several "shalls" in WRDA 2007 because it clearly just doesn't want to do those things. For instance, with regard to the Louisiana Coastal Protection and Restoration Report, that was mandated and specifically in WRDA 2007 Section 7014 says, "The Secretary shall submit to the maximum extent practicable specific project recommendations." So the idea was not just to do a nice, general report coming out of Katrina, but that it would include specific project recommendations that could be fast-tracked coming out of this disaster.

As you know, the Corps has not submitted a single project recommendation pursuant to that. Do you think that is a fair interpretation of that mandate?

Ms. DARCY. Senator, I believe under the LCA that we came up with a suite of projects. However, the ultimate recommendation for going forward was not a recommendation of a particular project in that instance.

Senator VITTER. So again, you are confirming what I said, you all submitted no specific project recommendations, even though that was mandated, at least to the maximum extent practicable. Do you think it is reasonable to take that language and do nothing in terms of specific project recommendations?

Ms. DARCY. Senator, we make project recommendations when we have a cost-sharing sponsor for a project. And that was not the case in many of these.

Senator VITTER. Oh, I can line up many cost-sharing sponsors in Louisiana for what we are talking about. That was not an issue. That was absolutely and is absolutely not an issue. Are you considering, at this late date, making specific project recommendations pursuant to that language?

Ms. DARCY. Are we currently considering making recommendations?

Senator VITTER. Correct.

Ms. DARCY. Not that I am aware of. But it is something that we can revisit.

Senator VITTER. OK, well, I just point that out as a pretty obvious example of what I am talking about. Another one is the Louisiana Coastal Area Comprehensive Plan. Again, in WRDA 2007, you were mandated, shall submit a comprehensive plan to Congress. To date, the Corps has not done any LCA Comprehensive Plan. There is a chief's report, there is LACPR, you were mandated to put those together, submit a Comprehensive plan, clear mandate. Why hasn't that been acted upon?

Ms. DARCY. I believe that the combination of the two is something that has not been funded.

Senator VITTER. Well, through the generosity of the American people, through act of Congress, we have sent billions of dollars down there related to this. Billions of dollars. There is a chief's report and an LACPR. All you have to do is put the two together for a comprehensive plan. What does it take to do that?

Ms. DARCY. I want to just double check, I believe that the President requested it in both his 2012 and 2013 budget. And it would be considered a new start. But it has not been funded.

Senator VITTER. Quite frankly, this is a game we play all the time. When the Corps doesn't want to do something, you say, we need specific line of authorization. Even though there are billions of dollars in this area. When the Corps wants to do something that doesn't have a specific appropriation line, you do it. So again, you are picking and choosing. Not every discrete action takes a specific authorization line. There are billions of dollars in this area that fully cover that.

Let me just go to a final example of ignoring mandates, in my opinion, that touches on what Senator Boxer was talking about for West Sacramento. For crediting their two provisions, as you know, Section 104 and Section 221, they both exist, they are for different times of a project, different applications. The Corps used to use both of them appropriately.

More recently, you issued a decision that says, we are never going to use Section 104. Now, not coincidentally, that section is more helpful and more generous to the locals. So you are saving money doing that.

What has Congress done to make you think that Section 104 has gone away and does not exist? Because we did not repeal it.

Ms. DARCY. When the Congress amended Section 221 in the WRDA 2007 bill, it gave a different crediting scenario, including that the crediting could be applied to all projects. Section 104 was limited to just flood control projects. So in looking at that amendment, to Section 221, the application of credit can now be more widespread among all of our programs. It also recognizes, by saying that credit will be afforded to a local sponsor once a project has gone through the draft feasibility stage, gives us a point in time to measure whether or not that Federal project will have Federal benefits in order for us to afford the credit. Because it has to be proven to be integral to the project in order for us to be able to give the credit down the road to the local sponsor.

Senator VITTER. I will wrap up and hopefully we can come back to this. But I just note that Section 221 did not repeal Section 104. Again, you are just choosing to read it that way because it is to your advantage. But I will follow up. Thank you, Madam Chair.

Senator BOXER. Senator Cardin.

Senator CARDIN. Thank you, Madam Chair. I want to first of all follow up on one of the points of Senator Vitter. I think he expresses the frustration of many members of our committee when we have worked to get funding for a project, only to find it is not funded in the Corps' programs or it takes a lot more years to get started than we had anticipated.

We have a particular problem now because we have our restrictions on earmarks. I know that in regard to authorized projects in Maryland, we are going to need to deal with the caps, particularly

Poplar Island and Poplar Island expansion. Will you work with this committee in a way that we can carry out our responsibility, consistent with the restrictions that we are operating under, but to be able to have some degree of confidence that by our action and our intentions, that projects that have been authorized will in fact be funded?

Ms. DARCY. Yes, Senator, and I think one of the things you are referring to is the 902 cap that is in place.

Senator CARDIN. Yes.

Ms. DARCY. Historically the 902 caps have been addressed through an earmark. What we have to do in the Corps, I think, is two things. One is to look at the fact that we have too many 902 busts right now. So we need to look more carefully at how we are actually doing our cost estimates to begin with. Second, we need to devise a way that we can make recommendations on what are called post-authorization change reports, which tell you why the cost has increased and what the new total project cost should be.

But as you noted, the total project cost has to be changed by Congress if it meets the 902. That may often be viewed by some as an earmark as opposed to adjusting a current project. So I think we have to work together to figure out a way that we can address the 902s, maybe in some broader programmatic way or in a way that we can be able to have it not be an earmark. Because especially for an ongoing project, if it is 75 percent complete and you just need a little more money to complete it, that shouldn't be standing in the way.

Senator CARDIN. And some of this is self-imposed by us. I think we have to work together. This committee has worked very closely to advance projects that are important that you all have carried forward. I just urge you that if there is an understanding that by having this pool of funds that these projects are going to be able to move forward. We expect at the end of the day these projects will move forward. Poplar Island has been very popular, it has been authorized, it has been successful. And as you point out, the cap needs to be adjusted and we have to do it in a way consistent with our current rules.

Let me move to Conowingo Dam. You heard my opening comments about it. The dam has acted as a retention pond for sediment, phosphorus for decades. Every major weather event we see the pond breached, and additional sediments and pollutants ending up in the Chesapeake Bay. You received a letter signed by several of my colleagues from Pennsylvania, Maryland and Virginia. There was a study that started in 2011, the Lower Susquehanna Water Assessment Study that has not been completed.

We also have a deadline with a FERC reauthorization in August 2014. Can you tell us how we can get the adequate information and game plan at least to understand it in a timely way, also recognizing that this information will be important in the reauthorization under FERC?

Ms. DARCY. Senator, I understand that the study is important in making those determinations. However, in order to be relicensed I don't believe that assessment is necessary from the Corps, because in the relicensing process, the only time the Corps of Engineers would be involved in the relicensing is if indeed the license—

Senator CARDIN. I understand the legal point here, but it is a useful bit of information when we talk about environmental impacts.

Ms. DARCY. Right. And I believe that in the 2013 budget, I don't believe we budgeted for that assessment in the 2013 budget.

Senator CARDIN. Once again, there are pools of funds that are available. I would just urge you to work with us. This is an extremely important environmental challenge of what happens during every major weather event.

Ms. DARCY. We will, sir.

Senator CARDIN. Thank you. I appreciate that.

One last point, Pierce Creek. Pierce Creek in Cecil County is a site that was used for dredge material in the upper bay, and now likely to reopened. There was a limited study done in one community about its environmental impact. The communities that surround, and I support this, believe that it needs to be a broader review before it is reopened, to make sure that the environmental impact is protected. Will you work with us to make sure we have the best information for the community?

Ms. DARCY. Yes, sir, because I believe, some people believe that there are groundwater impacts around it that we need to improving the dyking. So yes, we will.

Senator CARDIN. Thank you. Thank you, Madam Chair.

Senator BOXER. Thank you.

I just want to thank Senators Fischer and Gillibrand, because Senator Baucus, who is Chair of Finance, has such a crazy schedule. He is going to proceed. And we thank you for your cooperation.

Senator BAUCUS. Thank you both very much. I will be very brief, Madam Chairman.

Madam Secretary, would you just give me the status of the Corps work in harmonizing the certification process with FEMA?

Ms. DARCY. Yes, Senator. As a result of the MAP-21 provision, we have been working with FEMA to better integrate and coordinate the information that we have. We actually have already finished one of our reports that was mandated under the law that hopefully we will be transmitting shortly.

Senator BAUCUS. An interim was due a month ago, isn't that correct?

Ms. DARCY. The interim report was due on the 30th of January. I believe it has been signed and is going through the Administration. We hope you will have it soon.

Senator BAUCUS. When can we expect to see it?

Ms. DARCY. I had hoped you would have it by now. I will make every effort to make sure it happens.

Senator BAUCUS. We would really appreciate that.

Ms. DARCY. There is a second phase of the report that is required by MAP-21, which I think is going to help all of us. I think the whole purpose was to better have the accreditation and the certification be in line with one another, so that the information that the Corps collects for safety purposes could somehow be used for FEMA to be able to use it in their flood insurance program. I think we are finding ways that we can hopefully share that information, even though some of the information is for safety and some is for flood insurance. But if the local sponsors or the local levee agencies

can use the Corps information for FEMA purposes, that benefits everyone.

Senator BAUCUS. I appreciate that. FEMA is a good agency, but frankly, I have even more confidence in the Corps. I encourage you, the Corps, to take the lead effort there to bring that together for an awful lot of people around the Country. And I am going to watch this closely, for one reason, it is so important. Second, the language in the bill I mentioned earlier, the highway bill, was a little bit vague, which means we are going to have to watching you very closely to make sure it is implemented in a way we think is satisfactory.

Second, if you could just tell me a bit about the pallid sturgeon restoration project in the Yellowstone Basin. There is concern about the pallid sturgeon under the Endangered Species Act. We put a provision in the WRDA bill that allows the Corps to restore a Bureau of Reclamation project, provides irrigation water for sugar beet producers downstream at Glendive. I think you received a letter, I know you haven't read it yet, because you got it I think yesterday, from the Fish and Wildlife Service, which basically states that if this reclamation project is undertaken, that it is sufficient to prevent, and therefore not require Fort Peck renovation, isn't that correct?

Ms. DARCY. That is correct. We did last night receive a letter from the Fish and Wildlife Service saying that the project that we have, hopefully will undertake at intake on the Yellowstone, will provide the kind of fish passage for the pallid sturgeon and other fish so that we will not have to do a different project at Fort Peck. The fish passage, as well as the bypasses that come along with it, will meet the requirements of the Fish and Wildlife Service.

We are also in addition to that working with the Bureau of Reclamation to get a memorandum of agreement between them and the Corps of Engineers for the future operation of the project.

Senator BAUCUS. I appreciate that.

Then finally, with respect to the master manual, I made my point earlier, but I just want to hear it from you that the Corps will not ignore the master manual when there are efforts, mainly because there is a flood, efforts downstream to say, release water earlier to help downstream, or when there is a drought, to say release it now upstream to help us now for those States downstream. I just want you to say that you are going to stick with the master manual.

Ms. DARCY. Yes, sir, I am legally bound to the master manual.

Senator BAUCUS. Good.

Ms. DARCY. The court determined in 2003 that the master control manual is the operating manual for the Missouri River Basin.

Senator BAUCUS. While you are legally bound to follow the master manual, that means that you will continue to resist requests from Mississippi States, or even lower Missouri States, to change the manual just on the basis of a 1-year event.

Ms. DARCY. Right. As you noted earlier, last summer we were fighting floods, this summer we are fighting a drought. And the purpose of the master manual is to be able to manage that Missouri River system for both instances. And it is for the Missouri River, it is not written to help the Mississippi.

Senator BAUCUS. I thank you very much, because that is something that is very important to not just Montana, it is other upper Missouri River States. Thank you very much.

Senator BOXER. Thank you, Senator Baucus. And thank you to both our colleagues, who are very gracious.

Now we call on Senator Fischer.

Senator FISCHER. Thank you, Madam Chairman.

Madam Secretary, it would appear that many previously authorized and funded water resource projects that are critical to public health and safety require Corps assessments, as you said, with Section 902 with that limit prior to a full project completion through the development of a post-authorization change report.

How can the Administration assure us of the timeliness of these assessments by the Corps and by the OMB? The issue here is how timely are those post-authorization change reports that the Corps is required to do before an adjustment can be sought by Congress.

Ms. DARCY. What we are doing internally is trying to get after it earlier. In other words, before it is a year away from meeting the 902 cap, we are trying to work within the Corps, but in our vertical team with the district, the division and then headquarters to get that information earlier, so that we are able to be able to chart a path forward on how we are actually going to get the 902 fix that we need. And actually, if it is necessary, if there are any ways we can look at what contingencies we built in to the costs or whatever.

Senator FISCHER. There are a number of projects that have exceeded their authorized spending. In Section 902, that limit appears to be at a similar phase of completion. So some of these are 80 percent finished, but they risk non-completion for 2 or maybe even 3 years with a resulting risk to the populations that they are supposed to protect.

So can you tell me what criteria is being used to determine which of these completed projects will move forward and when they will move forward?

Ms. DARCY. Do you mean in light of a 902 or just a project's phase in completion?

Senator FISCHER. In light of the 902 limit, where they are 80 percent completed, say.

Ms. DARCY. Well, if they are 80 percent complete and there is no further increment of that project that we could go forward with without a 902 fix immediately, in looking at the whole array of 902 fixes, it would appear as though that would take some kind of priority. Because it is more eminent than something that is going to meet a 902 cap 3 or 4 years from now.

Senator FISCHER. Specifically what would you use for criteria, though, to move those projects forward? What would you look at?

Ms. DARCY. In order to move them forward, we would need congressional authorization to increase the cap, increase the total project cost.

Senator FISCHER. And that would be the sole criteria you would look for?

Ms. DARCY. We could not move forward with that. That is the biggest criteria.

Senator FISCHER. OK. Thank you.

Senator BOXER. Senator Gillibrand.

Senator GILLIBRAND. Thank you, Madam Chairwoman.

My focus today is going to be, of course, on Sandy-related projects, because that is obviously the most urgent issue. And because there was no congressional report language, there are still some issues that need to resolve on how the Corps will spend the \$5.4 billion that was appropriated. As you know, I sent you a letter on February 1st, outlining what our intent of that was. So my questions are directed there.

The disaster supplemental included \$20 million for a comprehensive study to address flood risk and vulnerability along with Sandy-affected coasts. It is critical that the study be specifically focused on the New York-New Jersey region that was hardest hit by Superstorm Sandy.

Do you agree that resources should be directing to addressing flood risk in the hardest-hit and most vulnerable coastal population in my State and in New Jersey?

Ms. DARCY. Senator, I believe the authorizing language on the supplemental appropriations bill directs the Corps of Engineers throughout its North Atlantic Division, which begins in Norfolk and goes all the way up to the top of Maine, to look at a comprehensive study of that entire coastline. However, I think that what we learned in looking at Sandy is that was the most impacted area, so that has to be looked at as far as the frequency of future storms, and also the vulnerabilities that are there in New York and New Jersey are different than the vulnerabilities in other parts of the North Atlantic Division.

Senator GILLIBRAND. Well, so you are saying you do have to use the money to look at the whole region?

Ms. DARCY. I believe it says the North Atlantic Division impacted, because some of the States south of New York and New Jersey were not, and some north. Rhode Island and Connecticut had some damage as well as Maryland.

Senator GILLIBRAND. But you can primarily focus on the places that had the most damage?

Ms. DARCY. I would think that because of the vulnerabilities that exist there, and the need for increased resiliency in those areas.

Senator GILLIBRAND. I am also concerned about ensuring that the study produces tangible results that will allow the Corps to move forward with specific projects to address flood risks that are identified. Do you believe that the Corps has sufficient authority to move forward with full feasibility studies using the resources provided in the supplemental? And will you commit to moving forward with full feasibility studies of solutions to address the highest priority risks that are identified, if they are not already covered by the existing study?

Ms. DARCY. I believe the funding in the supplemental will be adequate. However, once you begin a feasibility study, you are never quite sure what the scope is necessary in the end.

Senator GILLIBRAND. Have you had any conversations or has the Corps developed any plans on how you will incorporate other Federal agencies, States and local governments into the study process? In addition, does the Corps intend to work with other agencies to incorporate non-structural options, including ecosystem restoration,

into any of the plans for addressing the flood risk in the affected areas?

Ms. DARCY. Yes, we will, and yes, we have. We have already begun also looking at, and we have been developing within the Federal family principle and criteria for what it is we would need to look at if we are going to build back resiliently. I serve on Secretary Donovan's task force, and we met yesterday. I think as part of that task force, we are also looking at this as well. I think what we are doing in the Corps with this study can help to inform what we are going to be doing with Secretary Donovan, because we have a 6-month time line to make recommendations to the President through that task force. The Corps is involved in that, both with NOAA and Commerce and Department of Interior and others.

Senator GILLIBRAND. That is helpful, thank you. Shortly following Sandy, I met with your staff and with Senator Schumer to discuss seven specific projects that we identified as high priority and included language in the disaster supplemental meant to accelerate these projects and fund ongoing construction costs at full Federal expense. Will the Corps be using the list we identified as a basis for prioritizing projects, and how does the Corps plan to prioritize other projects that are necessary to reduce flood risk?

Ms. DARCY. We will be looking at that list as well as within the Administration, looking at what will be considered ongoing construction. I know you mentioned that in your letter. So that will help determine. I think the way we have to look at this is life safety. That is our initial criteria for everything we would be doing. And that would be the priority that we would have to set.

Senator GILLIBRAND. Briefly, on carp, what is the status of the Great Lakes-Mississippi River Inter-Basin Study, and how quickly will the Corps be able to move, once that study is complete, to begin implementation measures that will prevent the flow of Asian Carp into the Great Lakes?

Ms. DARCY. The GLMRIS study, the alternative analysis that we will be presenting in December this year, the end of December, will present an array of alternatives that we think are possibilities for keeping invasive species out of the Great Lakes and the tributaries, from the Mississippi. I think once we have that, our next step will be working with Congress to decide which of those alternatives would best suit the outcome that is desired, which is no invasive species in the Great Lakes.

Senator GILLIBRAND. And I have this last question that I will submit for the record. It is about dredging.

Senator BOXER. Thank you. I am getting a little bit worried about our time. We have a panel yet to come up here.

So if it is OK with everybody, Senator Vitter is the only one that I know wanted a second round. Does anyone else need a second round of questions?

We are going to go to you, Senator, but right now, Senators Wicker and Carper haven't even had their questions. Then we will turn to Senator Whitehouse. Senator Wicker.

Senator Wicker.

Senator WICKER. Thank you, Madam Chair.

Let me go back to a couple of things I mentioned in my opening statement. And I note that Senator Carper announced how excited

his home State of Delaware is about Panamax. I think every State from Texas on up around the coast and up the eastern seaboard, we are eager to be part of economic expansion and job creation through this great opportunity of the larger vessels coming through the Panama Canal.

I mentioned, as one of my areas of concern, the Port of Gulfport. The fact that we sort of have a cycle there, we haven't had the maintenance dredging, and that makes the port less able to be competitive, because it can't take the larger ships. It becomes a self-perpetuating cycle.

We were supposed to meet, Senator Cochran, you and I and other members of the delegation were supposed to meet. At the last minute you were unable to do that, and I understand that. You sent Mr. Letmon Lee, who has been a great public servant, and we had a great meeting. I hope you will agree that we need to look at this what I call self-perpetuating cycle. When the dredging isn't there, fewer goods and less valuable goods come through. It becomes a cycle.

So I hope you will agree that you and I and Senator Cochran and others need to have that meeting and talk about this, and let's try to resolve that for the sake of jobs and the economy.

Ms. DARCY. Yes, sir.

Senator WICKER. Then let me just ask you, I understand no question has been asked about plans for sequestration yet. Again, I touched on this in our opening statement. Is it true that it will mean 8.2 percent across the board to the Corps? I will ask this of both witnesses. What contingency plans do you have? I hope at this late date we can stop it. We need to make the budget savings. But I think we can make them a lot smarter someplace else in the budget than in DOD.

So what are your plans? I am hearing, Madam Chair, that there are people on this Hill that are getting a little more relaxed about sequestration. I continue to believe it is going to be an utter disaster. So what plans do we have in the event that this does take place and takes place soon?

Ms. DARCY. Senator, if we are faced with sequestration, we are going to have to do across-the-board cutbacks in all of our program areas. We will have reduced funding for dredging, we will have reduced funding for flood protection, we will have reduced funding for ecosystem restoration. We have to take it from every program, and every project is going to have to take that percentage off the top.

Senator WICKER. Have you talked at all about sending a request upstream in the bureaucracy for prioritizing the cuts? Would you like the flexibility to do that?

Ms. DARCY. Perhaps that would be good. But right now, it is an across the board, and that is the sequestration number, and the law tell us that is what we have to do.

Senator WICKER. General Bostick, are there any contingency plans that are just waiting for this axe to fall?

General BOSTICK. I think, Senator, that across-the-board cuts are something that we are going to have to live with, as the Secretary mentioned. But I think the way our moneys are prioritized now in flood risk management and in navigation, we will at least keep the

bulk of our funds in the areas that are high priority to the Corps and to the Nation in life safety and in those areas.

We would prefer not to have across-the-board cuts, but that is the way it is. I think the funding the way we have it now is going to help mitigate that.

The other concern we have is for our people, and to make sure that technical expertise and the folks that have done all the great work for this Nation over many years, that we are able to retain the kind of technical expertise that can continue on with the mission. We will work that internally.

Senator WICKER. Thank you very much. The Chair is concerned about the time. I have 30 seconds left. Let me just say, back to one of the first points I made, we want the inland waterway system to be part of a solution to the President's goal that we increase American exports. That being the case, I just would hope, Secretary Darcy, that the Administration would help us to do that by making more realistic funding requests that actually match the needs for flood control and navigation on projects like the Mississippi River and tributaries.

With that observation, I will let it go at that and thank both of you.

Senator BOXER. Thank you, Senator.

Let me assure you that as Chairman of this committee, I just wrote an op-ed piece that ran in CNN about how to avert this ridiculous sequester. It is dangerous, it is dangerous to everything it touches. They can't have contingency plans, they have to follow the law. We didn't put into the law, none of us, a contingency plan. It is what it is.

So unless we act, we can't look at them to save us from ourselves. Just my point here. We just need to come up with a way, and I have to commend my colleague, Senator Whitehouse, because he has come up with a list of ways that we can avert this thing that is painless, truly. I hope you will take a look at it. And if there is some agreement, let's get it going across the aisle here.

Senator WICKER. In 15 seconds?

Senator BOXER. Yes, go ahead.

Senator WICKER. Let me also observe the House of Representatives passed a plan.

Senator BOXER. Oh, I read it. Oh, I saw it.

Senator WICKER. Bill Lankford scored it.

Senator BOXER. You think sequester is bad.

Senator WICKER. Where is my 15 seconds here, Madam Chair?

Senator BOXER. You can have 30 seconds.

Senator WICKER. Let me just say, I look forward to seeing bill language coming down from the White House on their proposal.

Senator BOXER. Yes.

Senator WICKER. We had a general concept a few days ago. But at least our brothers and sisters on the other end of the building have passed a bill. It is incumbent upon us to take up some language, vote on it, trying to work it out.

Senator BOXER. I couldn't agree with you more.

Senator WICKER. And some language from the Administration would help also.

Senator BOXER. I couldn't agree with you more. What I would say is, our brothers and sisters on the other side of this Capitol, it was a Republican plan, hurt their brothers and sisters in the community. It is, I call it Plan C, Calamity. It didn't do a thing to solve the problem, it just took a bunch of horrible cuts and in light of Eric Cantor's point yesterday that he now values education, it killed education, he said he valued jobs, it killed jobs. He said he valued innovation, it killed innovation. And he said he valued health care, and it kills that.

So all I am saying is, let's not look over to our brothers and sisters over there. Let us come together, because recent history shows we can do it in a way that bridges this divide. I hope that we can.

I want to see something from the President, I want to see something from us. I am with you on that. I agree with you, this is a calamitous path we are going down in terms of this sequester. I wanted you to know that I am not one that is getting comfortable. I am getting more uncomfortable by the minute on it.

Senator WICKER. Thank you. Somehow I don't think I am going to get the last word in on this, but I do thank you.

[Laughter.]

Senator BOXER. Well, you know, elections have consequences.

[Laughter.]

Senator BOXER. I ask unanimous consent to enter the following statements into the record: Senators Tom Udall, Landrieu, Inhofe, Association of State Flood Plain Managers, American Society of Civil Engineers, National Wildlife Federation, a letter from Senator Cardin and other members to Secretary Darcy. So we will put those in the record.

[Referenced statements follow. Not all statements were received at time of print.]

STATEMENT OF HON. TOM UDALL,
U.S. SENATOR FROM THE STATE OF NEW MEXICO

Good morning and welcome, Madam Secretary.

Last week, I took the opportunity to highlight three issues that are of importance to New Mexico. I'm glad we have the opportunity to follow up again today to discuss them further.

The issues I raised were:

- (1) The potential for flooding in our major city—Albuquerque, New Mexico;
- (2) My continued support for the Rio Grande Environmental Management Program; and
- (3) My concern over the current status of the project in the Rio Grande Floodway, San Acacia to Bosque del Apache.

These Army Corps projects along the Rio Grande are different from many of the other areas of the Nation, because the Corps is not the only Federal agency with projects along the river.

Like many other areas of the West, they need to work with the Bureau of Reclamation which is supplying water for irrigation, while you are trying to prevent flooding. Both agencies are also charged with maintaining enough environmental flows to support a living river for aquatic species.

Water is the lifeblood of the Southwest and we have seen its availability dramatically affected by extreme climate events, making these agencies' jobs even harder.

Temperature increases can make droughts like our current one even more severe. In addition, many scientists tell us that warming is likely to mean not only greater droughts in the Southwest, but also an increasing risk of flooding from extreme rainfall events.

So when we do get rainfall, it is often in the form of monsoons and extreme rain events that have the potential for flash flooding and devastating neighborhoods, small towns, and scenic areas.

Water supplies are projected to become increasingly scarce, calling for trade offs among competing uses and leading to conflict between competing sectors and neighboring States.

In the face of these challenges I'm calling on parties to seek cooperation, not conflict.

As a Federal agency with a lot of expertise, the Army Corps has a responsibility to help foster that cooperation, both among Federal agencies and with various State and local entities.

This is a very critical time for New Mexico and the Southwest to update the way we manage our water resources.

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

Thank you, Chairman Boxer and Ranking Member Vitter, for holding this hearing and allowing committee members to receive testimony on the implementation of Corps of Engineers' water resource policies. I also would like to thank Assistant Secretary Darcy and Lieutenant General Bostick for testifying before us again this morning, as well as the four gentlemen who will be joining us during the second panel—this committee greatly appreciates you and relies on your expertise, so thank you very much for being here.

It is crucial for the next Water Resources Development Act to authorize the necessary maintenance and updates to the infrastructure of the United States. I look forward to working with Chairman Boxer, Ranking Member Vitter, and their staffs in order to pass this important piece of legislation.

To the witnesses, I look forward to talking to you about a few possible reforms we should consider. The provisions that expedited project delivery for Highway and Transit projects were a hallmark of the MAP-21 legislation that passed through this committee in 2012. Any reforms to Corps policies should ensure a streamlined process where we can cut through the red tape, avoid bureaucratic messes, and minimize the steps taken to ensure the most effective use of existing resources. More efficient and transparent policies will allow for greater regulatory certainty on Corps projects.

We should also look to better utilize public-private partnerships. One of the most frequently discussed ways to leverage non-Federal investment is through public-private partnerships. With these partnerships, State or local governments enter into an agreement to raise private capital and transfer risks to the private sector, making challenging and unaffordable projects possible. Corps projects are woefully underfunded with a backlog of \$60 billion in authorized projects, yet only a \$5 billion yearly budget. These partnerships are a way to unleash an enormous amount of private investments in public infrastructure.

One such project is the Arkansas River Corridor Master Plan in my home State of Oklahoma. WRDA 2007 authorized \$50 million to carry out ecosystem restoration, flood damage reduction, and recreation components of the Plan. Cooperative efforts among the Corps, Tulsa County, the city of Tulsa, and Indian Nations Council of Governments (INCOG) are necessary to implement it.

Another important project includes chloride control at the Red River. I have been working with the Tulsa District Office and the local Lugert-Altus Irrigation District in order to provide new drinking water supplies, increased agricultural irrigation in the southwestern Oklahoma area, and improved downstream water quality.

Our Nation's system of inland waterways, highways, and coastal ports are our pathway to trade and economic prosperity. It is vitally important that we implement responsible policies in order to best utilize this system. Again, I thank the witnesses and look forward to their testimony.

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Statement

Of

The National Wildlife Federation

Before the

Environment and Public Works Committee
United States Senate

For the hearing on the

Oversight Hearing on Implementation of
Corps of Engineers Water Resources Policies

February 7, 2013

Prepared by

Melissa Samet
Senior Water Resources Counsel

STATEMENT OF MELISSA SAMET
SENIOR WATER RESOURCES COUNSEL, NATIONAL WILDLIFE FEDERATION

UNITED STATES SENATE
ENVIRONMENT AND PUBLIC WORKS COMMITTEE
OVERSIGHT HEARING ON IMPLEMENTATION OF CORPS OF ENGINEERS WATER RESOURCES POLICIES

February 7, 2013

Chairman Boxer, Ranking Member Vitter and members of the Committee, thank you for the opportunity to present a statement on the Oversight Hearing on Implementation of Corps of Engineers Water Resources Policies. The National Wildlife Federation greatly appreciates the opportunity to offer our views on changes to the nation's water resources policies that are critical for ensuring that U.S. Army Corps of Engineers (Corps) programs and projects protect public safety, sustain fish and wildlife, and promote sustainable economic development.

The National Wildlife Federation is the nation's largest conservation education and advocacy organization with more than four million members and supporters and affiliate conservation organizations in forty-eight states and territories. The Federation has a long history of interest and involvement in the management and protection of the nation's rich array of water resources and has long called for modernization of the Corps' planning process and programs. The Federation also works closely with the Water Protection Network, a coalition of more than 200 grassroots, regional, and national organizations from across the country working to improve the way the Corps plans and constructs water projects.

The current approach to federal water resources planning has produced far too many projects that have significantly damaged the nation's rivers, coasts, and wetlands. These projects destroy vital fish and wildlife habitat; often increase flood risks for downstream communities; and deprive the nation of vital ecosystem services, including clean water, natural flood protection and carbon sequestration. They also undermine sustainable economic development by harming tourism, recreation, hunting, fishing, and other economies that rely on a healthy environment. Outdated operating plans for many of these projects are adding to this damage.

The nation can no longer afford this business as usual approach to project planning. We face increasingly limited federal funding for water projects at the same time that communities across the country are suffering from more intense storms like Hurricane Sandy, more frequent and intense floods and droughts, and rapidly rising sea levels. Last month, Congress voted to provide more than \$60 billion in federal disaster assistance to the region impacted by Sandy, and Hurricane Sandy was neither the first nor the last extreme weather event that we will face.

If we fail to address these critical water resource issues in a way that better protects people and wildlife before disaster strikes, the devastation from future storms will be even higher. We must ensure that water resources planning will solve – instead of cause – water resources problems so that people and wildlife can thrive as the earth's climate continues to change.

As this Committee is aware, Congress enacted important reforms in the Water Resources Development Act of 2007 to change the direction of federal water resources planning. Among other key reforms, Congress directed that all federal water resources projects – including operation of the nation’s vast array of existing water infrastructure – must protect and restore the environment, seek to promote sustainable economic development, and seek to avoid the unwise use of floodplains.¹ To carry out this directive, Congress also required the Corps to, among other things, protect and restore the functions of natural systems and to mitigate any unavoidable damage to those systems.²

The National Wildlife Federation urges the Committee to enact the simple, common sense reforms outlined in Section III below to further this critical policy. Among other things, these reforms would ensure that the Corps utilizes low impact, natural solutions to reducing flood damages wherever practicable, and ensure that existing projects are managed under up to date operating plans that account for current needs and environmental conditions, including the more extreme weather and rising sea levels being caused by climate change. The proposed reforms would provide the Corps with the direction and authority it needs to ensure that water resources projects protect people, wildlife, and the nation’s economy.

I. Outdated Planning Harms People, Wildlife, and the Economy

Poorly planned water resources projects cause considerable social, economic, and environmental harm while often failing to solve critical water resources problems. During the past 20 years, federal water projects have played a major role in doubling the number of North America’s freshwater fish species at risk of extinction, from 20 percent to an estimated 40 percent. During this same time, the nation’s flood damages have increased at an alarming rate despite the construction of innumerable federal flood damage reduction projects. Outdated operating plans for Corps projects have also significantly increased flood risks for communities, caused unnecessary harm to the environment, and aggravated contentious water quantity conflicts.

A new approach to planning is desperately needed to reverse this harm, and to allow people and wildlife to thrive in the face of the more intense storms, more frequent and intense floods and droughts, and rapidly rising sea levels that are becoming the new norm. For example, as the earth’s climate continues to change:

- The Atlantic Coast will experience rising sea levels, warming ocean waters, enhanced coastal storms, and ocean acidification, all of which place both natural systems and coastal communities at risk.³ During the last century, sea level has increased by

¹ 42 U.S.C § 1962-3 (Section 2031 of Public Law 110-114, 121 Stat. 1082).

² *Id.*

³ Burkett VR and Davidson MA (Eds.). 2012. *Coastal Impacts, Adaptation and Vulnerability: A Technical Input to the 2012 National Climate Assessment*. Cooperative Report to the 2013 National Climate Assessment, pp. 150.

approximately 8 inches on average around the globe. Scientists project that the global mean sea level could increase by an additional 1 to 4 feet by the end of the century, and maybe by as much as 6.6 feet.⁴ New science suggests that the area off the Atlantic Coast is a “hot spot” for a relatively higher rate of sea-level rise than the global average.⁵

- Coastal Louisiana will suffer from a combination of sea level rise, subsidence and more frequent and severe hurricanes. Recent projections show that the combined effect of sea level rise and subsidence, which can exceed 1 centimeter a year, may result in water levels rising by as much as 2 meters (more than 6.5 feet) by 2100 in much of the Mississippi River Delta. Over the past 50 years, total hurricane intensity has increased by about 80 percent and over the past several decades the number of category 4 and 5 hurricanes has increased due at least in part to increased sea surface temperatures.⁶ Louisiana’s *2012 Comprehensive Master Plan for a Sustainable Coast* proposes to meet these challenges with a bold program of wholesale ecosystem restoration combined with aggressive measures to increase the resiliency of coastal communities.⁷
- The Midwest will see more heavy rainfall events that will contribute to higher flood risk along the Mississippi River.⁸ The frequency of extremely heavy rainfall events has increased by up to 40 percent during the last 31 years for the central United States.⁹ Climate projections for this century indicate that those big storms that historically only occurred once every 20 years are likely to happen as often as every 4 to 6 years.¹⁰

Outdated Approaches to Addressing Water Resources Problems

Over reliance on large scale, structural projects that destroy the functioning and productivity of natural systems puts the public, the environment, and the economy at risk. This lesson was made tragically, and abundantly, clear when Hurricane Katrina slammed into New Orleans. Poorly planned Corps projects led to major losses of Louisiana’s vital coastal wetlands that were not available to help buffer Katrina’s storm surge, funneled and intensified that surge into New

⁴ Parris A, Bromirski P, et al. 2012. *Global Sea Level Rise Scenarios for the United States National Climate Assessment*.

⁵ Sallenger, Jr. AH, Doran KS, and Howd PA. 2012. Hotspot of accelerated sea level rise on the Atlantic Coast of North America. *Nature Climate Change* 2: 884-888.

⁶ Mississippi River Science and Engineering Team, Answering 10 Fundamental Questions About the Mississippi River Delta, 2012 at 34 (<http://www.mississippiriverdelta.org/files/2012/04/MississippiRiverDeltaReport.pdf>).

⁷ *Louisiana’s Comprehensive Master Plan for a Sustainable Coast* 2012. Coastal Protection and Restoration Authority of Louisiana. Baton Rouge, LA.

⁸ Groisman PY, Knight RW, and Karl TR. 2001. Heavy precipitation and high streamflow in the contiguous United States: trends in the 20th century. *Bulletin of the American Meteorological Society* 82(2): 219-246.

⁹ Groisman PY, Knight RW, and Karl TR. 2012. Changes in Intense Precipitation over the Central United States. *Journal of Hydrometeorology* 13: 47–66.

¹⁰ U.S. Climate Change Science Program (CCSP). 2008. *Weather and Climate Extremes in a Changing Climate. Regions of Focus: North America, Hawaii, Caribbean, and U.S. Pacific Islands. A Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research*. [Thomas R. Karl, et al. (Eds.)]. Department of Commerce, NOAA’s National Climatic Data Center, Washington, D.C.: 164 pp.

Orleans, and encouraged the development of high-risk areas that suffered the brunt of the flooding. The city's fate was sealed by the Corps' flawed design and construction of levees and floodwalls that were supposed to protect the city, but did not.

As this Committee is well aware, the flooding of New Orleans devastated families, destroyed homes, and displaced entire communities. It also caused enormous economic losses:

"During the first 10 months after the hurricane, the city suffered an over-the-year average loss of 95,000 jobs. At the trough of the job loss, in November 2005, employment was 105,300 below the previous year's November figure. By June 2006, the over-the-year job loss, though smaller, was still substantial (92,900). Lost wages over the 10-month period from September 2005 to June 2006 were about \$2.9 billion, with 76 percent of the loss attributable to the private sector."¹¹

More than seven years later, New Orleans still has not fully recovered.

Despite the changes enacted in the Water Resources Development Act of 2007, the Corps continues to promote the same type of large scale structural projects that led to so many problems during Hurricane Katrina. While structural flood damage reduction projects will be necessary in some instances, they should be the option of last resort. Structural projects destroy wetlands and floodplains that provide natural flood protection, clean water, and vital fish and wildlife habitat. Structural flood projects often increase flooding downstream, induce development in high risk areas, and make coastal communities far more vulnerable to storms.

Nonstructural and restoration measures, on the other hand, can solve many water resources problems while protecting and improving the health of the nation's rivers, floodplains, wetlands, and coasts. Healthy rivers and floodplains play an important role in absorbing excess flood waters and slowing its movement downstream. A single acre of wetland can store 1 to 1.5 million gallons of flood water,¹² while just a one percent loss of a watershed's wetlands can increase total flood volume by almost seven percent.¹³

Healthy rivers, floodplains, and wetlands also allow people and wildlife to benefit from natural flood cycles. For example, in a healthy, functioning river system, natural floods deposit nutrients along floodplains creating fertile soil for bottomland hardwood forests. Sediment transported by floods form islands and back channels that are home to fish, birds, and other wildlife. By scouring out river channels and riparian areas, floods prevent rivers from becoming overgrown with vegetation. Floods also facilitate breeding and migration for a host of fish species, and provide vital connectivity between habitat areas. In the deltas at the mouths of

¹¹ Michael L. Dolfman et al, *The effects of Hurricane Katrina on the New Orleans Economy*, Monthly Labor Review (June 2007).

¹² Environmental Protection Agency (EPA). 2001. Functions and Values of Wetlands. EPA 843-F-01-002c. (<http://water.epa.gov/type/wetlands/outreach/upload/functions-values.pdf>).

¹³ Demissie M. and Khan A. 1993. Influence of Wetlands on Streamflow in Illinois. Illinois State Water Survey, Contract Report 561, Champaign, IL: 44-45.

rivers, floods release freshwater and sediment, sustaining and renewing wetlands that protect coastal communities from storms and provide nurseries for multibillion dollar fisheries.

The use of nonstructural and restoration measures also avoids the risks of catastrophic failure and overtopping created by structural projects like levees and floodwalls. The likelihood of such failures has caused the Association of State Floodplain Managers to urge communities to use nonstructural measures whenever possible instead of constructing new levees, which should be used only as an option "of last resort."¹⁴

Importantly, nonstructural and restoration measures are an important tool for complying with federal law and long-standing federal policies which require the federal government to use the most environmentally protective measures possible to solve water resources problems.¹⁵ These mandates can best be achieved by utilizing nonstructural and restoration measures where they will solve all or a portion of a water resources problem and are practicable. Such approaches will typically cost less than structural measures and will provide additional important benefits to public health and welfare, fish and wildlife, and economies that rely on a healthy environment. The use of nonstructural and restoration approaches will also improve the ability of natural and human communities to adapt to climate change.

Nonstructural measures include coastal and floodplain protection, relocation of flood-prone properties, water conservation and efficiency, improved management of existing water resources projects, pricing mechanisms, and navigation scheduling. Restoration measures include re-establishing the natural form, function, and hydrology of rivers, floodplains and wetlands through such things as the removal or modification of levees, dams, river training structures, cut offs, and culverts, and reestablishment of natural floodplain inundation.

As demonstrated by the success stories presented in Attachment A, these nonstructural and restoration measures can solve critical problems while providing additional important benefits that include clean water, fish and wildlife habitat, recreational opportunities, sustainable economic development, and an increased ability for people and wildlife to adapt to climate change.

Louisiana's *2012 Comprehensive Master Plan for a Sustainable Coast* recognizes the critical importance of restoration and non-structural measures, proposing to spend three quarters of its funding over the next fifty years to accomplish them.¹⁶

¹⁴ Association of State Floodplain Managers White Paper, National Flood Policy Challenges, Levees: The Double-edged Sword, Adopted February 13, 2007.

¹⁵ *E.g.*, Clean Water Act Section 404, 33 U.S.C. §1344; Clean Water Act Section 404(b)(1) Guidelines, 40 C.F.R. Part 230; WRDA 2007 Section 2031(a), (a)(2), and (a)(3), 42 U.S.C. § 1962-3; WRDA 1974, 33 U.S.C. § 701b-11; Executive Order 11990 (Protection of Wetlands); Executive Order 11988 (Floodplain Management).

¹⁶ *Louisiana's Comprehensive Master Plan for a Sustainable Coast 2012*. Coastal Protection and Restoration Authority of Louisiana. Baton Rouge, LA. at 36-37.

The importance of utilizing nonstructural and restoration approaches to solving water resources problems has been recognized – and supported – by many members of this Committee who have requested that the new planning principles and guidelines include “clear directives to avoid adverse environmental impacts to the maximum extent possible” including “a clear requirement to utilize non-structural and restoration approaches, where practicable.”¹⁷

Outdated Operating Plans

The Corps operates hundreds of projects across the country, including 12,000 miles of inland commercial navigation channels, more than 690 dams, and 75 federal hydropower facilities. Outdated operating plans for this vast array of existing water infrastructure are putting the public at risk, damaging the economy, causing significant harm to the environment, and aggravating increasingly contentious water supply conflicts.

Poorly managed federal projects destroy vital habitat, alter critical fish and wildlife life cycle processes like fish spawning, alter natural hydrologic cycles, destroy wetlands and backwater habitats, increase sedimentation, prevent sediments from reaching and restoring vital coastal wetlands, prevent nutrient-rich floodwaters from nourishing floodplain soils and plant communities, and facilitate encroachment of invasive species.

For example, the Corps has not evaluated the environmental, economic, or public safety implications of its operation and maintenance (O&M) of the Mississippi River Navigation System in decades. Instead, the Corps continues to rely on environmental impact statements completed some 35 years ago and continues to carry out the same activities that the U.S. Geological Survey has documented as playing a major role in the dramatic decline in the ecological health of the Mississippi River and the species that rely on it.¹⁸

Among other things the Corps’ O&M activities are destroying critical habitats including the rivers’ backwaters, side channels and wetlands; altering water depth; destroying bathymetric diversity; causing nonnative species to proliferate; and severely impacting native species.¹⁹ The Corps has ignored alternatives to its O&M practices that could both maintain a vibrant navigation system and improve the health of the river.

Importantly, an extensive body of recent peer-reviewed scientific literature demonstrates that the Corps’ construction of river training structures as part of its O&M activities is significantly increasing the risks of floods for riverside communities.²⁰ These structures, which are intended

¹⁷ May 17, 2011, Letter from Senators Benjamin Cardin, Barbara Boxer, Joseph Lieberman, Sheldon Whitehouse, Thomas Carper, and Frank Lautenberg to Nancy Sutley, Chair of the Council on Environmental Quality.

¹⁸ U.S. Geological Survey, *Ecological Status and Trends of the Upper Mississippi River System 1998: A Report of the Long Term Resource Monitoring Program* (April 1999); Johnson, B. L., and K. H. Hagerty, editors. 2008. U.S. Geological Survey, *Status and Trends of Selected Resources of the Upper Mississippi River System*, December 2008, Technical Report LTRMP 2008-T002. 102 pp + Appendixes A–B (Upper Midwest Environmental Sciences Center, La Crosse, Wisconsin).

¹⁹ *Id.*

²⁰ See Attachment B listing 47 peer reviewed studies linking instream structures to increased flood heights.

to reduce navigation dredging costs, have increased flood levels by up to 15 feet in some locations and 10 feet in broad stretches of the river where these structures are prevalent.²¹ While the Corps continues to deny the validity of this science, the flood height inducing effects of river training structures are so well recognized that the Dutch have “begun lowering dozens of wing dikes along a branch of the Rhine River and [have] plans to lower hundreds more as part of a nationwide effort to reduce flood risk in that river’s floodplain.”²²

Outdated operating plans are also threatening the Apalachicola River and Apalachicola Bay in Florida. At risk is the health of one of the most ecologically rich river systems in North America, recreational fishing in the Apalachicola River and Bay that contributes \$191 million to the local economy each year, and a commercial fishing industry that contributes \$200 million annually to the regional economy and directly supports up to 85 percent of the local population. The ecosystem services provided by the Apalachicola River and Bay have been valued at \$5 billion a year.

The Corps’ outdated management plans for upstream reservoirs on the Apalachicola-Chattahoochee-Flint system are preventing the Apalachicola from receiving the freshwater flows needed to maintain a healthy river and floodplain, and a healthy fishery in both the Apalachicola River and Bay. The current master water control manual for the Apalachicola-Chattahoochee-Flint river system was completed in 1958, and the Corps and has not completed an environmental review of that plan for more than 20 years (the Corps is currently preparing a new water control manual and environmental impact statement for this project, but only as the result of years of pressure and litigation).

The Corps continues to rely on decades-old operating plans for many federal water projects under its control, despite requirements to reevaluate operating plans in the agency’s own internal guidance and as required by the National Environmental Policy Act. To protect public safety, wildlife, and a healthy economy, the Corps must manage the nation’s vast array of existing water resources infrastructure to protect and restore the environment and address modern needs.

II. Protecting and Restoring the Nation’s Rivers, Coasts, and Wetlands Protects People and Wildlife, Improves the Economy, and Creates Jobs

It is clear that healthy rivers, coasts, and wetlands are vital for fish and wildlife populations across the country. It is equally clear that protecting and restoring these systems provides

²¹ Pinter, N., A.A. Jemberie, J.W.F. Remo, R.A. Heine, and B.A. Ickes, 2010. Empirical modeling of hydrologic response to river engineering, Mississippi and Lower Missouri Rivers. *River Research and Applications*, 26: 546-571; Remo, J.W.F., N. Pinter, and R.A. Heine, 2009. The use of retro- and scenario- modeling to assess effects of 100+ years river engineering and land cover change on Middle and Lower Mississippi River flood stages. *Journal of Hydrology*, 376: 403-416.

²² Government Accountability Office, GAO-12-41, Mississippi River, Actions Are Needed to Help Resolve Environmental and Flooding Concerns about the Use of River Training Structures (December 2011) (concluding that the Corps is out of compliance with both the National Environmental Policy Act and the Clean Water Act).

important protections for people including by providing natural protection from floods and storms. Wetlands act as natural sponges, storing and slowly releasing floodwaters after peak flood flows have passed, and coastal wetlands buffer the onslaught of hurricanes and tropical storms. Restoring a river's natural flow and meandering channel, and giving at least some floodplain back to the river, slows down floodwaters and gives the river room to spread out without harming homes and businesses. A single acre of wetland can store 1 to 1.5 million gallons of floodwaters.²³ Just a one percent loss of a watershed's wetlands can increase total flood volume by almost seven percent.²⁴

Frank Nutter, the President of the Reinsurance Association of America has said:

"One cannot overstate the value of preserving our natural systems for the protection of people and property from catastrophic events."²⁵

It is also clear that healthy rivers, coasts and wetlands form the basis of a vibrant economy by supporting healthy fish and wildlife populations, improving water quality, and providing recreational opportunities such as boating, fishing, and bird watching.

Outdoor recreation is a huge contributor to the nation's economy. "In 2011 90.1 million Americans, 38% of the U.S. population 16 years old and older, enjoyed some form of fishing, hunting or wildlife-associated recreation" contributing \$145 billion to the national economy in the process.²⁶ "This equates to 1% of gross domestic product; meaning one out of every one hundred dollars of all goods and services produced in the U.S."²⁷

Fishing is one of the most popular forms of outdoor recreation in the United States, attracting 33.1 million individuals 16 years old and older in 2011.²⁸ "Freshwater, excluding Great Lakes, fishing was the most popular type of fishing with 27.1 million anglers devoting 443 million days to the sport. Great Lakes and saltwater fishing were also popular with 1.7 million and 8.9 million anglers, respectively."²⁹ In 2011, anglers spent "\$41.8 billion on trips, equipment, licenses, and other items to support their fishing activities."³⁰

²³ Environmental Protection Agency, "Functions and Values of Wetlands." EPA 843-F-01-002c. (2001) (factsheet).

²⁴ Demissie, M. and Abdul Khan. 1993. "Influence of Wetlands on Streamflow in Illinois." Illinois State Water Survey, Contract Report 561, Champaign, IL, Table 7, pp. 44-45.

²⁵ Restore America's Estuaries, *Jobs & Dollars BIG RETURNS from coastal habitat restoration* (September 14, 2011) (http://www.estuaries.org/images/81103-RAE_17_FINAL_web.pdf).

²⁶ U.S. Fish and Wildlife Service, 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation: National Overview, Issued August 2012.

²⁷ *Id.*

²⁸ *Id.*

²⁹ *Id.*

³⁰ *Id.*

Healthy coasts “supply key habitat for over 75% of our nation’s commercial fish catch and 80-90% of the recreational fish catch.”³¹ Healthy rivers are equally important to supporting a vibrant commercial and recreational fishing economy. As discussed above, recreational fishing in the Apalachicola River and Bay in Florida contributes \$191 million to the local economy each year, commercial fishing in the River and Bay contributes \$200 million annually to the regional economy and directly supports up to 85 percent of the local population, and the ecosystem services provided by the River and Bay have been valued at \$5 billion a year.

Restoration projects are also an important creator of jobs that are “inherently local and cannot be exported.”³² Restore America’s Estuaries reports that coastal restoration “can create more than 30 jobs for each million dollars invested” which is “more than twice as many jobs as the oil and gas and road construction industries combined.”³³

In Louisiana, analysis of a proposed \$72 million project to restore a 30,000-acre expanse of degraded marsh near downtown New Orleans known as the Central Wetlands Unit shows that it could create 689 jobs (280 direct jobs and 400 indirect and induced jobs) over the project’s life.³⁴ Implementation of the entire \$27.6 billion dollars of restoration in Louisiana’s Master Plan over the next fifty years would multiply those jobs hundreds of times over.

In Florida, restoration of the Everglades will produce more than 442,000 jobs over the next 50 years and almost 23,000 short- to mid-term jobs for the actual restoration work.³⁵ Everglades restoration is also predicted to produce a return of four dollars for each dollar invested, including:

- Improved water supply worth \$13.1 billion;
- Increased property values worth \$16.1 billion;
- Increased park visitation and tourism worth \$1.3 billion; and
- Increased fishing and hunting as wildlife populations increase, worth \$15.1 billion.³⁶

The Department of the Interior’s FY2010 investment of \$156 million for ecosystem restoration activities in the Chesapeake Bay, Great Lakes, and Everglades supported more than 3,200 jobs and contributed \$427 million in economic outputs.³⁷ The full economic output is even greater,

³¹ Restore America’s Estuaries, *Jobs & Dollars BIG RETURNS from coastal habitat restoration* (September 14, 2011) (http://www.estuaries.org/images/81103-RAE_17_FINAL_web.pdf).

³² *Id.*

³³ *Id.*

³⁴ Environmental Defense Fund, *Profiles in Restoration: The Central Wetlands Unit, Part VI* (May 3, 2010) (<http://blogs.edf.org/restorationandresilience/category/central-wetlands-unit/>).

³⁵ Everglades Foundation, *Everglades Restoration a 4-to1-Investment* (http://everglades.3cdn.net/79a5b78182741ae87f_wvm6b3vhn.pdf).

³⁶ *Id.*

³⁷ The Department of the Interior’s Economic Contributions (Department of the Interior, 2011) at 106 (<http://www.doi.gov/news/pressreleases/upload/DOI-Econ-Report-6-21-2011.pdf>).

however, as the \$427 million does not capture the net benefits associated with the restoration of environmental goods and services not bought and sold in markets.³⁸

In Oregon, a \$411 million investment in restoration from 2001 to 2010 generated an estimated \$752 to \$977 million in economic output.³⁹ The 6,740 restoration projects completed during that time supported an estimated 4,600 to 6,500 jobs, including jobs in construction, engineering, wildlife biology, and in supporting local businesses such as plant nurseries and heavy equipment companies.⁴⁰ On average, \$0.80 of every \$1.00 spent on a restoration project in Oregon stays in the county where the project is located and \$0.90 stays in the state.⁴¹ Importantly, the monies spent on restoration are “an enduring investment” whose value “continues to accrue and pay out over generations. Improvements in habitat and fish and wildlife populations provide recreation and commercial opportunities as well as ecosystem services that are fundamental to our health, productivity, and quality of life.”⁴²

Restoration projects can also provide critical business opportunities during difficult economic times:

“During the economic recession, a habitat restoration project kept our marine transportation business afloat. We were able to keep many of our people working to rebuild a critical part of the marine environment that had been all but lost in North Carolina.”⁴³

III. Common Sense Reforms to Corps Planning Will Protect People and Wildlife

While some improvements have been made to the Corps’ planning process, the agency continues to plan and operate projects that cause significant harm to the Nation’s fish and wildlife and put communities at risk by increasing flooding, reducing water quality, and damaging economies that rely on a healthy environment. These projects also often cost far more they should and fail to solve critical water resources problems.

The reforms outlined below would avoid many of these adverse impacts while promoting modern and environmentally sound solutions to the Nation’s many pressing water resources needs. The National Wildlife Federation urges the Committee to include these reforms in the next Water Resources Development Act that moves through the Committee and to exert your leadership to ensure that these policy reforms are enacted into law.

³⁸ *Id.* at 5.

³⁹ Whole Watershed Restoration Initiative, Oregon’s Restoration Economy, Investing in natural assets for the benefit of communities and salmon (2012) (http://www.ecotrust.org/wwri/downloads/WWRI_OR_brochure.pdf).

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² *Id.*

⁴³ Restore America’s Estuaries, *Jobs & Dollars BIG RETURNS from coastal habitat restoration* (September 14, 2011) (http://www.estuaries.org/images/81103-RAE_17_FINAL_web.pdf) (quoting Simon Rich, General Manager of Stevens Towing Company).

Close Loopholes in WRDA 2007 Reforms

Congress enacted fundamental reforms in the Water Resources Development Act (WRDA) of 2007 to produce more effective, less destructive, and less costly federal water projects. Unfortunately, the Corps is exploiting ambiguities in these reforms to evade their clear meaning and intent.

1. **Congress should ensure compliance with the WRDA 2007 national water policy by requiring the use of nonstructural and restoration measures where they can provide an appropriate level of protection and benefits.** WRDA 2007 requires that projects “protect the environment” by “protecting and restoring the functions of natural systems and mitigating any unavoidable damage to natural systems” and by “seeking to avoid the unwise use of floodplains.” Despite these mandates, and despite clear legal requirements mandating use of the least environmentally damaging practicable alternatives, the Corps continues to promote environmentally destructive and costly structural projects where less costly and environmentally protective nonstructural and restoration solutions are available.
2. **Congress should ensure compliance with the WRDA 2007 mitigation provision by requiring adoption of mitigation measures recommended pursuant to the Fish and Wildlife Coordination Act.** WRDA 2007 establishes important requirements to ensure effective mitigation for fish and wildlife losses caused by Corps projects. Despite these mandates, the Corps continues to adopt mitigation plans that will not work, in part because they ignore expert recommendation made by federal and state fish and wildlife agencies.⁴⁴
3. **Congress should ensure compliance with the WRDA 2007 independent review provision by establishing clear timelines and standards for the preparation and release of independent reviews to Congress and the public.** WRDA 2007 establishes important standards to ensure transparency, accountability, and public involvement in the independent review of Corps studies. Despite these mandates, the Corps continues to withhold critical review information, impose inappropriate limits on the scope of review, and exclude the public from the process.

Modernize Operation of Existing Projects

The Corps continues to operate major federal projects under decades-old operating plans that harm the environment, increase flood risks, aggravate contentious water quantity conflicts, and fail to address current needs. The agency also continues to spend significant amounts of

⁴⁴ The many problems with the Corps’ post-WRDA 2007 mitigation plans are addressed in the Statement of David R. Conrad, Senior Water Resources Specialist, National Wildlife Federation Before the House Committee on Transportation and Infrastructure, U.S. House of Representatives, for hearings on The Water Resources Development Act of 2007: A Review of Implementation in its Third Year, March 3, 2010.

federal tax dollars operating and maintaining navigation systems that are rarely used and no longer serve the national interest.

1. **Congress should require the Corps to evaluate and update operations plans and water control manuals for large-scale Corps projects at least every 10 years and implement needed operational changes.** Many major Corps projects are being operated under decades-old operating plans that do not account for current conditions or science, put communities at risk, and cause unnecessary harm to the environment. Regular reoperation would ensure that modern science, management approaches, and needs guide the operation of Corps projects.
2. **Congress should establish a sliding local cost share for Inland Waterways operations and maintenance.** Operations and maintenance activities for all segments of the inland waterways system are currently funded 100% by federal taxpayers, even for segments that see little use. Requiring a local cost share for maintaining little used waterways would ensure that scarce tax dollars are spent operating navigation systems that provide real value to the nation and not on inefficient and environmentally destructive efforts to maintain waterways that are rarely used.

Improve Flood Damage Reduction Measures to Keep Communities Safe

The Corps continues to promote large scale structural measures to address local flooding problems even when they increase flooding downstream, induce development in high risk areas, and cause significant environmental harm. Nonstructural and restoration measures can be used to provide communities with reliable and cost effective protection from floods while also improving the environment.

1. **Congress should modernize emergency flood recovery efforts by allowing, and requiring where appropriate, the use of P.L. 84-99 funds for levee setbacks, and nonstructural and restoration measures.** P.L. 84-99 authorizes the Corps to fund 80% to 100% of the cost of restoring a publicly-owned flood project damaged by a flood to pre-disaster conditions (33 U.S.C. 701n). The Corps is prohibited, however, from using those funds to modify the project to ensure adequate flood protection in the future, and from utilizing nonstructural measures unless specifically requested to do so by the local sponsor. Removing these restrictions would ensure more effective and cost-efficient rebuilding, increase community safety, save taxpayer dollars, and improve the environment.
2. **Congress should create economic incentives for low impact flood damage reduction projects by reducing the non-Federal cost share for flood projects that utilize nonstructural or restoration approaches from 35% to 25%. Congress should also establish a programmatic authority for smaller scale flood damage reduction projects that utilize such approaches.** Communities continue to request large scale structural projects to address local flooding problems even though such projects

increase flooding downstream, induce development in high risk areas, and cause significant environmental harm. Creating an incentive for utilizing nonstructural and restoration solutions would increase community safety while improving the environment.

IV. Conclusion

The National Wildlife Federation respectfully urges you to include these critically important reforms in the next Water Resources Development Act that moves through the Committee, and we look forward to working with you to ensure that these reforms are enacted into law.

Attachment A**LOW IMPACT SOLUTION SUCCESS STORIES**

As demonstrated by the examples below, low impact solutions successfully protect communities from flooding while providing a host of other benefits.

California – Coyote Creek. The Santa Clara Valley Water District sought approval for levee setbacks and bypass channels after major flooding in 1983. The project was completed in 1995, and is credited for reducing flooding in 1997. According to the Santa Clara Valley Water District, flood waters would have been 40% faster and water volume would have been 57% higher without these improvements.

California – Napa River. The Napa River has flooded at least 30 times in the last 150 years, with residents sustaining more than \$540 million in flood damages in the past 40 years alone. After twice rejecting old-style Corps' plans for levees-only flood protection in 1998 a broad coalition worked to develop a "living river" plan that is reconnecting portions of the Napa River to its floodplain. This new plan replaces the Corps' proposed floodwalls and levees with terraced marshes, wider wetland barriers, and restored riparian zones. About 500 acres of previously drained farmland were returned to marshland. Though they were only partially completed, those natural flood control solutions are credited for lowering flood levels by about 2 to 3 feet during the 2006 New Year's Day flood.

Florida – Upper St. John's River. Florida has a long history of flooding caused by hurricanes, tropical storms, and heavy rainfall. By the 1970s, the St. John's River had lost more than 62 percent of its historic 400,000 acres of floodplain wetlands, aggravating extensive flooding in the region. In 1986, Congress authorized a combined structural and restoration project to reduce flood damages along the river. The backbone of this project is restoration of 200,000 acres of floodplain which will hold more than 500,000 acre-feet of water – enough to cover 86 square miles with 10 feet of water – and will accommodate surface water runoff from a more than 2,000 square mile area. The Corps predicts that this \$200 million project will reduce flood damages by \$215 million during a 100-year flood event, and provide average annual benefits of \$14 million.

Illinois – Cache River. Channelized, dredged, diverted, and leveed since the early 1900s, the Cache River today has lost 91% of its historic wetlands, leaving just 472,800 acres of its once 5 million-acre floodplain. Friends of the Cache, local landowners, The Nature Conservancy, and a variety of government agencies formed a partnership in 1995 that has resulted in the restoration of 9,000 acres of wetlands, reducing erosion and sedimentation, improving water quality, decreasing flooding, and allowing wildlife to flourish. The success of this project has inspired efforts to restore small creeks in the watershed to their original channels.

Illinois – Grafton. After the historic 1993 floods, and extreme flooding almost biannually for more than 150 years, the town of Grafton moved 70 homes and 18 commercial properties out of the floodplain to higher ground. The restored floodplain provides more room for the Mississippi and Illinois Rivers to spread out, reducing flood levels and damages, and providing recreational opportunities during dry periods. The 1995 Mississippi River flood left Grafton relatively unscathed.

Iowa – Iowa River. After the historic 1993 floods, communities in east-central Iowa looked to change how the land along the Iowa River was being used and purchased 12,000 acres in easements along the 45-mile river corridor for flood control purposes. Over the past decade, local communities are estimated to have saved \$7.6 million in flood damages.

Iowa – Louisa Levee District 8. In 1993, when an oxbow levee breached for the 17th time, farmers in the Louisa Levee District volunteered for a federal buyout program. More than 2,500 acres of cropland in the old levee district was converted into the Horseshoe Bend Wildlife Refuge, a combination of grassland, meadows, and wetlands, which provides natural flood protection and serves as a stopover for migrating waterfowl. Residents report that this project helped to reduce flooding in 1995. Relocating the farmers out of the floodplain kept their agricultural land safe from future flooding at a cost that was about 50 percent less than the estimated cost of repairing flood damages from the 1993 flood. The project also put a permanent end to repeated levee repairs and expensive damage payments.

North Dakota and Minnesota – Red River. The communities of Grand Forks, North Dakota and East Grand Forks, Minnesota have suffered through at least 12 major floods since 1871. Following severe flooding in the spring of 1997, the communities worked with the Corps to develop a flood protection strategy featuring a space to give the river room to expand. This project involved setting back levees and acquiring flood-prone property to create a 2,200-acre greenway along the Red River between the two cities. This greenway has produced considerable flood insurance savings and provides open space for year-round recreation.

Massachusetts – Charles River. Extensive suburban growth paved over much of the Charles River watershed in eastern Massachusetts, triggering flooding from stormwater runoff in Boston and other downstream communities. In 1972, the Corps abandoned a planned \$100 million levee and dam flood project along the Charles River after the agency determined that upstream wetlands were preventing some \$17 million worth of flood damages annually. The Corps instead developed a nonstructural plan at a fraction of the cost, the \$10 million Charles River Natural Valley Storage Project. This project, which included the purchase of 8,500 acres of wetlands with a storage capacity of 50,000 acre feet of water, helped reduce major floods in 1979, 1982, 1987, and 2006. In 1987, the storage area prevented an estimated \$3.2 million in damages. In 2006, the storage area reduced flooding to a 2 year event while nearby rivers were suffering 40 and 100-year flood levels. The storage area has the added benefit of providing important recreational opportunities for the Boston Metropolitan area.

Missouri – Missouri River. Severe flooding throughout the 1990s led local citizens to seek natural alternatives to structural flood control measures. Through a combination of fee title acquisition and easement acquisition, 19,000 acres on a 49 mile stretch between Boonville and Jefferson City, Missouri were purchased and set aside as flood overflow areas, including nearly 6,000 acres that were previously enclosed by levees. According to the Natural Resource Conservation Service, the Corps estimated that such reconnections of the river with its floodplain reduced flood levels in 1998 by about four feet.

Oklahoma – Mingo Creek. Once known as the flood capitol of the world, the city of Tulsa suffered the worst flood in its history in 1984. Five of the 14 deaths and \$125 million of the \$180 million in flood damage occurred along Mingo Creek. Rejecting the Corps' plan to build 5 structural detention sites, a team of civil engineers, urban planners, and landscape architects devised an alternative that included restoring open space where floodwater can safely overflow, creating permanent lakes, and relocating buildings from the Mingo Creek floodplain. Tulsa's flood insurance rates subsequently decreased by 25%, and repetitive loss properties declined from 93 in 1984 to just 5 in 1995.

Wisconsin – Duffy's Marsh. Located in Marquette County, Wisconsin, the Duffy's Marsh restoration project encompasses about 1,500 acres of open water, grassy wetland, and upland. The restoration work primarily involved filling agricultural ditches that drained the land. The marsh now holds approximately 55 million cubic feet of water.

Attachment B

Studies Linking the Construction of Instream River Training Structures to Increases in Flood Levels

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United States Senate
WASHINGTON, DC 20510

December 21, 2012

Ms. Joellen Darcy
Assistant Secretary of the Army (Civil)
Department of the Army
Office of the Assistant Secretary
Civil Works
108 Army Pentagon
Washington, D.C. 20310

Dear Assistant Secretary Darcy:

As you know, Executive Order 13508 directs federal government agencies to focus special attention and resources on the restoration of the Chesapeake Bay. The Executive Order builds on the federal government's commitment to restoring the Bay to ecological health that the Army Corps of Engineers began more than forty years ago.

The accumulated sediments and nutrients in the reservoirs behind the Conowingo Dam and the three other dams on the Lower Susquehanna River, Holtwood Dam, Safe Harbor Dam and York Haven Dam, are set to become the most significant single source contributing to the water quality problems in the Chesapeake Bay.


High-water flows during storm events, such as the recent tropical storms Lee and Sandy, are carrying ever-increasing loads of sediment and nutrients through Conowingo Dam and into the Susquehanna River and the Bay. A recent USGS study notes "The hypothesized changes in scour and deposition processes that appear to be underway can be expected to be a major impediment to progress toward meeting [the water-quality goals associated with the Chesapeake Bay restoration]."

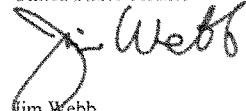
The Army Corps of Engineers' Lower Susquehanna River Watershed Assessment study was initiated as a 3-year study with Maryland Department of the Environment in September 2011. The Susquehanna River Basin Commission and The Nature Conservancy agreed to provide non federal cost share for the study. The purpose of the study is to forecast and evaluate sediment and nutrient loads to the system as it reaches the sediment storage capacity and consider various structural and non-structural strategies to increase the sediment storage capacity behind the Conowingo Dam and manage those loads to protect Chesapeake Bay water quality and aquatic life. However, as we understand it, remaining funding of approximately \$426,000 for the federal share of the assessment is not available to keep the assessment on track pending the approval of a fiscal year 2013 appropriations bill.

We strongly encourage you to use your existing authorities and resources to provide immediate funding to keep the Lower Susquehanna River Watershed Assessment on track, and to ensure that adequate federal funding continues until the study is complete.

Thank you for your attention to this request. We look forward to your response.

Sincerely,


Benjamin L. Cardin
United States Senator


Jim Webb
United States Senator


Barbara A. Mikulski
United States Senator


Mark Warner
United States Senator


Robert P. Casey
United States Senator

Senator BOXER. And now it is my pleasure to call on Senator Carper.

Senator CARPER. Thanks. I will just be very brief, and one comment before I ask my questions. I think the solution to this challenge is not easy. But there are three things we need to do. One, we need more revenues, we need to be closer to where we were when we had four balanced budgets in a row. I think revenue as a percentage of GDP, we are between 19 and a half and 20 and a half percent, last year they were down around 15 and a half, 16 percent.

The second thing is we have to look at our entitlement programs and figure out how we can save money in those entitlement programs, especially in health care. And not so savage older people or poor people, but to find ways to get better health care results for, in some cases, less money. Actually, there are some really good ways to do that, and it is humane. And while we are doing that, to preserve those programs for the long haul.

But the third thing we have to do is look at everything we do, everything we do, and just ask this question—how do we get a better results for less money, or better result for the same amount of money? So I think those are the three things we need to do. My hope is that at the end of the day we can come to agreement around that kind of proposal.

Setting that aside, and this actually is a pretty good lead-in to my question. One of the projects that you all have been working on for several years now is the dredging of the Delaware River up north Delaware, Pennsylvania, New Jersey. And they started up north first, and they are working their way south, as you know. I think maybe by the end of this fiscal year we will be down to the southernmost reach of the dredging operation.

I have a concern, and I am sure it is shared by our colleagues, certainly shared by my colleagues in Delaware, our Governor, colleagues in Pennsylvania, their Governor. The problem we saw with our colleagues in New Jersey, about the prospects of the Administration asking for funding for this continued dredging in the next fiscal year. Given the uncertainty of sequestration, the uncertainty of the budget process, I just wanted to ask, I just want to make sure that this is one that is on your radar screen. It is important not just to our State but probably much more important to Pennsylvania and I think to New Jersey. I just want to bring it to your attention.

It would be ironic, a cruel irony, if at the end of the day we had spent all that money on dredging the northern part of the Delaware River, down to the Delaware Bay, and got that dredged to 45 feet in this environmentally sensitive way, and then found ourselves at the southern part where we have to leave it at 40 feet. The Panamax ships couldn't get in to take advantage of all the investment that has been made in the northern part of that channel.

Could you just make a brief comment on that, Madam Secretary?

Ms. DARCY. Yes, Senator. I believe we did have funding in the 2013 budget for the deepening of the Delaware. You are talking about deepening, right, not maintenance dredging? The deepening project?

Senator CARPER. That is right.

Ms. DARCY. For that, and of course we are still in the process of putting together the 2014 budget. So we will be looking at that, along with every other project in this Country that is competing for limited dollars.

Senator CARPER. We have all heard the saying, probably used the saying, don't throw good money after bad. We have actually spent the first part of it pretty wisely. I would hate to have wasted it by leaving the southern part of the channel not dredged and the rest of it dredged, so it would be of no use to anybody. That would be unfortunate.

The other question I have is, if I could, Madam Secretary, I am a strong believer that when it comes to storms, an ounce of prevention is worth a pound of cure. With rising sea levels and stronger, more frequent storms, we need to focus on how we can mitigate against storm damage before it occurs. I recently succeeded Joe Lieberman as chairman of the Senate Committee on Homeland Security and Government Affairs. As part of my responsibility, I have oversight of FEMA, we have oversight of FEMA in that committee.

In the wake of Hurricane Sandy, I have had some questions about the degree to which the Corps and FEMA are coordinating with each other as well as States and towns on a variety of mitigation activities. I was grateful to Senator Boxer for including provisions on extreme weather preparedness in her WRDA draft last year. And there is my question.

Would you just take a minute and share with us your views on what can be done to increase the Army Corps' capacity to help mitigate against storm damage, and how we can ensure those efforts are well coordinated with FEMA's activities and actions in both the State and the local level?

Ms. DARCY. Thank you, Senator. I am not sure if you were here when I was answering Senator Gillibrand's questions about Superstorm Sandy.

Senator CARPER. I missed most of her questions.

Ms. DARCY. We within the Corps and FEMA and the other Federal agencies, not only through the study provisions that we were directed to under the supplemental in response to Sandy, but with Secretary Donovan's Sandy Response Task Force, we are working with all the other Federal agencies to come up with a Federal response, not only for mitigation but also for how resiliency is going to be built into our projects in the future. So mitigation is sort of at the forefront of how it is we can do this.

I think the projects along the Delaware shore during Superstorm Sandy can show what those kinds of resilient projects can be, the sand dunes and the vegetation held up pretty well.

Senator CARPER. They saved hundreds of millions of dollars, hundreds of millions. Thank you so much.

Senator BOXER. Thank you. Senator Whitehouse.

Senator WHITEHOUSE. Thank you, Chairman. Thank you, General and Secretary.

I am bedeviled by a situation that we have in Rhode Island. In March 2010, I came through the receiving dock of a Rhode Island manufacturing company in an inflatable boat. The reason I did was that we had record flooding, in some cases going beyond the 500-year level. We are obviously going to see a lot more of that as we

dump more and more carbon into our atmosphere and we create the setup for continuing worse storms.

The company is called Hope Global. It has been in Rhode Island since 1883, I think. It is a great company, it is growing, it employs lots of people, it exports to China, among other things. So it is doing good work for our awful balance of trade. And it survived in a very competitive environment.

But it is susceptible to flooding, as my visit to it in an inflatable boat proved. These kinds of things can happen again.

So this business has to make hard decisions about relocating. And of course, since it employs a lot of people and it is a very successful business, there is competition. People are reaching out to the CEO and saying, don't stay there in that flood plain, come visit us, come move to our State.

We have been working with the Army Corps trying to solve that flood plain issue and figure out what can be done to protect this company in its existing site. And the State has ponied up the money for the feasibility study. And the problem is that with all that done, we have no idea of what is going to happen. You guys have, I think, a \$62 billion backlog. We are in that big murky backlog some place. We have been unable to develop much in the way of information about where your priorities are in the backlog.

So when we have a CEO saying, I need to make decisions here, and we can't help in any respect because there is no transparency into how the Corps prioritizes the backlog, it creates problems and it create effects out in the real world where people actually need an answer on a date.

So I hope that we can find ways, as we are working on the new WRDA bill, to try to get a little bit of sunlight into that process, so that people like Hope Global can at least know where they stand. The worst answer is no answer at all. What we are stuck with is no answer at all. So I guess my question is, do you have ideas for how to clarify that so that people can have a sense of where in the \$62 billion they stand, and will you work with us on trying to get that fixed in this legislation?

Ms. DARCY. Yes, Senator, because I think that we are all looking at the backlog in a way that we have to look at how we are going to manage the assets that we have, and what is the best Federal investment for what is in the backlog. If there is a study or a project that has been there for a long period of time with no local support or no Federal funding, it doesn't make sense for us to have that even on the books any longer. Currently, under current law, the deauthorization process, if a project doesn't get money in 5 years, then it gets on the deauthorization list. But I think your question is, OK, that big list out there, who is on it, who is at the top and who is in the middle and how do you decide that.

Senator WHITEHOUSE. Other people count on those decisions, and they need to know. We can't just have this happen in sort of a bureaucratic limbo that may suit us in Congress and it may suit the Administration. But the real people who are out there depending on these projects are hurt by it.

Ms. DARCY. And they have to make investment decisions.

Senator WHITEHOUSE. Yes. And they can't.

The other question that I have has to do with, and I will make it for the record, time is short, under the 2007 WRDA Act, the Corps was encouraged to focus on natural systems and natural buffers and defenses. And I guess I would ask as my question for the record, you can get back to us in writing, how many projects approved or understudied by the Corps since the 2007 WRDA bill have or have had as their final or recommended alternative a plan that primarily uses non-structural and-or ecosystem restoration approaches to solve the problem being addressed by the project? So if you could take that as a question for the record.

Ms. DARCY. I am not sure what the universe is, but I know we can get you the number.

Senator WHITEHOUSE. I would appreciate it. Thank you, Chairman.

Senator BOXER. Thanks, Senator.

I want to talk about how we are going to deal with the rest of the hearing. I want to thank so many people for waiting a long time. I think what this shows us is that our colleagues are very interested in this. And that is a good thing. I want to say to the Lieutenant General and to the Secretary how appreciative we are of your patience with us and all these questions.

So here is what we are going to do. I am going to hand the gavel over to Senator Carper. When he leaves, he will hand it over to Senator Vitter. Senator Vitter and I have a deal, he is definitely going to repeal any environmental laws while he has the gavel.

[Laughter.]

Senator VITTER. We are just going to clarify.

[Laughter.]

Senator BOXER. So I feel very comfortable.

So anyway, here is what is going to happen. I want to ask if Mr. Johnson, Richard, would you raise your hand? I want to thank you so much for being here. Richard is a very important person to us, he is the Executive Director of the Sacramento Area Flood Control Agency. In his testimony, he is going to underscore the issues I raised, the levee vegetation, the experience that we have there which we are so, we have kept ahead of the floods so far. We have had our real serious problems, but we know we are in danger.

If we are going to keep ahead of this, the worst of it, we have to keep on moving. It is a pleasure always to work with the various agencies in the State, plus Senator Feinstein, and in this case Congresswoman Matsui and others. He will talk about the Sacramento experience, he will also talk about the crediting provisions, how do we know when to move forward at home, will the Corps please let us know in a timely fashion if what we are spending at the local level will be credited to us. This is serious business. And in the new WRDA, we are going to take these issues on.

I know that Senator Vitter has more questions. Obviously he has had to deal with a lot of serious matters. So I have agreed to give him the time for a second round, and then Senator Carper, the rest of the hearing is up to you. I will turn this over and I thank everybody.

Senator CARPER [presiding]. Senator.

Senator VITTER. Thank you, Mr. Chairman. I will be brief, covering two very important issues.

After my concern that I expressed earlier about the Corps ignoring mandates, my second biggest concern is when the Corps habitually misses and reasonable deadlines. As you all know, because we have talked about it quite a lot, in my world, the best-worst example of that is the Morganza to the Gulf Project. This is the basic history of that project since 1992.

So we have a history since 1992, we still haven't started construction. It involves two authorizations where the Corps has basically missed deadlines or allowed other changes to happen. So then the project is deauthorized.

First, there was a contingent authorization, if the Corps produced a chief's report by a certain date. The Corps missed the deadline. Second, in the last WRDA, I secured an authorization and 2 months later was informed by the Corps, oh, too bad, costs have gone up and you just broke your 902 limit. Two months after we passed the language, after we had been talking to the Corps about this, without hearing boo about the cost issue, 902 limit issue, before that.

Most recently, General, as you know, we have missed another deadline for December. We are shooting for a new report on the project for mid-year. So my first question specific to the project, are we on track to get that new report mid-year?

General BOSTICK. Yes, Senator, we released a post-authorization report in January. In parallel with that, we are doing a risk-based assessment through our risk assessment center. We feel the preliminary feedback that we are getting from that is going to allow us to reduce the cost that came out when we talked last, the \$10.6 billion. And based on where we are now, we believe some time in the mid-summer timeframe, we should be able to produce the report.

Senator VITTER. Thank you. As you know, General, that is essential, or else this history continues with a third miss.

Madam Secretary, in cases like this, do you think there should be any consequence to the Corps for missing major and reasonable deadlines?

Ms. DARCY. Senator, I think this shows that we need to look at the way we are doing some of our planning processes and the way that they are implemented. I think that we are looking internally as to how we can better improve our planning process. This is an example of ways we can look to, especially the additions, and as you said, this has been in the works since 1992. It is now 20 years later and here we are with no project.

Because of many things, including Katrina and design changes and there are reasons, but I do think that we need to be accountable. We will strive to do that, especially in this case.

Senator VITTER. I appreciate that. We are looking at those accountability issues for everyone too, for the next WRDA. I just think in the real world, negative consequences for missed deadlines are part of accountability. In this case, the Corps is essentially rewarded and not penalized. Because you don't have to move forward and spend money. So in a sense, in terms of the bureaucracy, you are rewarded for these missed deadlines, not penalized.

The second issue, which I will submit for the record, is about wetlands mitigation and the Modified Charleston Method as it is

now applied in the New Orleans district. As you know, that has been extremely onerous and costly. I would submit two questions regarding that for the record. First, do you think it is appropriate that different districts use very different wetlands mitigation standards? In my world, the Vicksburg District next door uses a different standard that has lower cost, so that St. Tammany Parish, a major county or parish in Louisiana, is split between the two districts. So two very different standards, two very different sets of cost.

The second question is, do you think it is appropriate that local government and private folks have to use this new very expensive Modified Charleston Method, but the Corps, in doing its important post-Katrina work, does not? You all essentially exempted yourselves from the higher, more expensive standard. So those are my two questions submitted for the record.

Ms. DARCY. Thank you, Senator. We will get back to you on those.

Senator VITTER. Thank you all very much.

Senator CARPER. Secretary Darcy and General Bostick, Senator Lautenberg just joined us and he has a question or two. Then we will excuse you and bring on our second panel.

Senator LAUTENBERG. Thanks very much, Mr. Chairman.

And thank you both for the work that we are reviewing today. The Corps is such an important agency that I don't think at times we understand the contribution that the Corps engineers do for us. So my hat is off to you. I just wanted to say that what we learned from Sandy was not a good lesson. But it is one that ought to stick with us for a long time.

When you look at things, let's be clear: our changing climate means severe storms are going to be more and more common, despite the doubters. And that mean the new WRDA bill must make it permanent policy to build these infrastructure projects stronger than before.

During the Sandy period, New Jersey also saw the limits of our outdated water infrastructure when two water treatment facilities were damaged, one plant leaking millions of gallons of sewage into Newark Bay. So we need smart financing programs to ensure our clean water infrastructure is modern and effective.

I proceed to ask if we can count on you, Madam Secretary. The Superstorm Sandy supplemental appropriations laws includes vague language that could lead to some communities paying a 35 percent cost share if their planned Army Corps projects aren't considered to be ongoing. Now, there may be some mystery surrounding that that I am not familiar with. But it seems like an unfair kind of a proposal. Shouldn't local governments with projects that are ready for construction be eligible for a Federal full cost share?

Ms. DARCY. Senator, I believe the language in the bill for ongoing construction, that that would be 100 percent Federal, that within the Administration we are trying to make a determination of what would be an ongoing project, whether it is a shovel in the ground or if it is a study on the books that is ready to go.

Senator LAUTENBERG. We have seen what happened in the areas that accidentally I would call it, General, where there were mitiga-

tion opportunities just because we did some replenishment or put in some berms here and there. We found out that in those communities, and New Jersey has a substantial shoreline for the size of the State, they fared fairly well.

So when we have an opportunity now to look ahead, we should have the funds, the resources to get this job done and include serious mitigation programs where we have a chance. As the planet continues to warm, events like Superstorm Sandy will become more frequent. How is the Army Corps adapting its project Development to reflect this new reality?

Ms. DARCY. Senator, we have been, for the last several years, actually, looking, part of our policy guidance and developing new plans for projects has to consider sea level change in every project that we look at. Because it is going to happen and we need to be able to mitigate for it, or else be able to build a project that will be resilient to that sea level change.

We are building that not only into our planning, but also within the Administration, we are looking at resiliency criteria for building back projects as a result of Superstorm Sandy.

Senator LAUTENBERG. So you understand, and by the way, you had a good training ground to understand these problems. You used to sit around with the group up here and you did very good service there. We know that you will here as well.

Many of these projects were inadequate before the storm hit. Fortunately, we were successful in allowing funding for Sandy relief to be used to improve projects. Not just to rebuild them as they were. And shouldn't the Corps be given permanent authority to improve projects following these future natural disasters?

Ms. DARCY. Senator, we have current authority under 216 to re-evaluate an existing project. For example, if a shore protection project outside of Avalon, New Jersey may have had a certain level of protection in its authorized purpose. But in looking at it now, post-Sandy, would it make sense to have a different scope of project, would it make sense to have a different height, would it make sense to have a different footprint? We can do that evaluation under current authority. If that evaluation determined that yes, there should be a change made to that project, then it would need to be a new authorization or a change to the existing authorization.

Senator LAUTENBERG. Coastal communities and businesses in New Jersey were devastated by Sandy. But those projects protected by Army Corps programs fared much better than those that were not, even in places that were thought to be particularly vulnerable, but where we had done work along the way. Most of the homes there fared very well.

However, the beaches and dunes that protected many towns were wiped away by the storm. Will the Corps expedite the construction of these projects so the coastal communities are protected in time for the hurricane season?

Ms. DARCY. Senator, under the supplemental, we are in the process of looking at the projects that we will restore to pre-storm conditions. We have about 16, I think, right now, that we are looking at doing that for. Hopefully that will be able to be accomplished before the next storm season.

General Bostick and I flew over the New Jersey coast the day after Superstorm Sandy. We saw proof of what you just said, the community of Avalon, which had a Corps of Engineers beach replenishment project, the homes there were undamaged. We went a mile up the coast that did not have a project, you could see the difference. I think that in looking at that and looking at also what we have to do, I think, in places like that, have to look at the projects as a system, a systems approach to what it is we are protecting and what damages we can do as a system throughout not only New Jersey but as a coastal system, not only for hurricane protection but these new kinds of storms, we are seeing surges in addition to hurricanes. So that is what we have to be able to put into our planning process and our evaluation of what kind of project is going to work or provide what kind of protection in the new kinds of storms that we are seeing.

Senator LAUTENBERG. We had bad luck because we invited several Senators from other States to take a look and understand that it wouldn't be unlikely that one of those States or several of them wouldn't be affected the same way we were. Unfortunately, it was a helicopter trip down the coast, and the fog was so thick we couldn't take off. I didn't arrange it, I promise you.

Thanks very much, Mr. Chairman.

Senator CARPER. You are quite welcome. Thank you.

We are going to excuse our panel. Madam Secretary, General, thank you both very, very much for your presence today, your responses and your willingness to respond further to questions that are being asked in writing and for your leadership. Good to see you both. Thank you.

And as Secretary Darcy and General Bostick leave, we will welcome our second panel.

Gentlemen, welcome. It is great to see one of you for the second time today, Secretary O'Mara, good to see you, and Mr. Johnson, Mr. Turner, Mr. Graves, we are happy that you could be with us today.

I am going to take just a moment to introduce Secretary O'Mara, then turn the gavel over to Senator Vitter to introduce a couple of folks from his neck of the woods, then we will start the panel. I regret that I have a luncheon engagement that I am supposed to be at in about 5 minutes, so I am not going to be able to stay for nearly as long as I would like to.

I have read your testimonies, and especially appreciate your testimony, Mr. Secretary.

Collin O'Mara is the Secretary of Delaware's Department of Natural Resources and Environmental Control, in my State. He is the chief steward of Delaware's natural resources and leads our State's efforts to improve air quality and public health to ensure clean water, remediate contaminated sites, reduce impacts from flooding and extreme weather events, expand recreational opportunities and restore wildlife and fisheries habitat. He has a lot going on, it is a great job. And he does a wonderful job of meeting those responsibilities.

He also leads the State's Division of Energy and Climate Change, where he works to secure cleaner, cheaper and more reliable sources of energy. Since joining the Administration, he has worked

to modernize Delaware's energy sector, spearheaded a range of innovative outdoor recreation and conservation initiatives, and led the largest investment in environmental and water resources infrastructure in our State's history. All these initiative are focused on preparing Delaware for current and emerging environmental and climate changes.

When Governor Jack Markell appointed Secretary O'Mara in 2009, he was the youngest State cabinet official in the Nation. I remember saying, Senator Vitter, when Jack Markell, the Governor, nominated Collin to serve, what is he doing nominating a guy 29 years old? And somebody reminded me that Joe Biden was elected a U.S. Senator from Delaware at 29, and I was elected State treasurer at 29. So I said, oh, I think he is probably ready for those responsibilities.

Collin, it is great to welcome you back to this hearing room. We have been here a number of times, and we are grateful you can do all those responsibilities, provide leadership on regional and national issues as well, and also somehow convince your bride to move to Delaware and to bring a little girl into the world about 1 year ago this week. So for all that, we congratulate you and thank you for your stewardship and the great job you are doing.

With that, I am going to yield to Senator Vitter, and he is going to run the show from here.

Senator VITTER [presiding]. Thank you, sir, and I also want to welcome the Louisiana witnesses we have with us.

Garret Graves is currently the Chair of the Coastal Protection and Restoration Authority of Louisiana, and Executive Assistant to the Governor for Coastal Activities. The CPRA was established after Hurricane Katrina as the State's leading agency for hurricane protection, flood control and ecosystem restoration, as well as other community resiliency efforts.

Garret's efforts to restructure and streamline our coastal programs and agencies has resulted in increasing project output by more than 500 percent. The Authority currently oversees a \$17 billion coastal resiliency hurricane protection and oil spill recovery program. Garret was also involved, and is, on an ongoing basis, on recovery from the BP disaster. Before his work in the State, he served many members up here very well, including myself, Ted Stevens, Bill Tauzin and John Breaux.

Robert Turner is with us. Bob is a registered professional civil engineer with 30 years of experience in the field of engineering. He served as the regional director of the Southeast Louisiana Flood Control Authority East since October 2007. That is the local flood control authority, one of the two in the New Orleans area, that is very involved in all things coastal protection and hurricane protection in that area. Bob has extensive background in flood protection and public works, including serving as the executive director of other levee districts and similar organizations. He is a graduate of Louisiana Tech University and a member of the American Society of Civil Engineers and the American Concrete Institute.

I also want to acknowledge and welcome Richard Johnson. Senator Boxer introduced Richard and alluded to him. Richard is Executive Director of the Sacramento Area Flood Control Authority.

Thanks to all of you, welcome and why don't we go in turn, starting with Richard.

STATEMENT OF RICHARD M. JOHNSON, EXECUTIVE DIRECTOR, SACRAMENTO AREA FLOOD CONTROL AGENCY

Mr. JOHNSON. Good afternoon, Ranking Member Vitter. I appreciate the opportunity to be here. My name is Rick Johnson, I am the Executive Director of the Sacramento Area Flood Control Agency.

I would like to just summarize my written comments right now. First, we are very encouraged and appreciative of the bipartisan efforts and commitment to move WRDA this year. We are fortunate that Sacramento's flood issues are being recognized by leaders like Chairman Boxer, Senator Feinstein and Congresswoman Doris Matsui. We are grateful for that strong support.

In recent years, the Corps has reviewed its various civil works policies regarding flood protection. One of the more controversial issues emerging is the Corps' implementation of policies relating to woody vegetation on levees. This is especially important in the central valley of California, where there is significant remaining vegetation adjacent to and sometimes on the levees. Our ongoing effort to strengthen and improve 42 miles of levees, protecting the Natomas Basin in North Sacramento, is an example of this.

Recognizing the complications associated with strict compliance to the Corps' vegetation policy, we developed a plan involving adjacent setback levees where they were feasible. That design was approved by the Corps. However, there was one section of levee where we had to propose a different design and sought a variance from the Corps which was not approved. Looking forward, we will face similar challenges in other parts of our system.

The Corps' concept of addressing the worst first risks will be important in this effort and elsewhere in the State. The concept is that the most at-risk areas and factors be given high priority for resolution, especially when funding is constrained. We believe a wise application of this worst-first concept is essential in successfully implementing the vegetation policies. We support Section 2017 of the Chairman's WRDA discussion draft, which addresses Corps' policies on vegetation management. This is a positive step to assure a flexible and collaborative process, especially taking into account regional factors.

Another important challenge facing the Corps is the notion of credit for work accomplished by State and local interest. State and local governments can often do advanced work on a project, thereby accelerating the schedule and lowering its cost, and should not be penalized for those efforts.

I am pleased to say that the Corps has been supportive and reasonable in its negotiations with us on past projects. I will use the Natomas project again as an example. For this project, the Corps approved four applications granting credit under its Section 104 authority from the 1986 WRDA. As a result, we have been able to complete reconstruction of the worst 18 of the 42 miles of levees, while the Corps completed their efforts on the chief's report, thus allowing immediate risk reduction to more than 100,000 people.

Though our experience regarding credits was favorable, the Corps has recently revised its policies, increasing the challenge that non-Federal partners face in obtaining credit for their work. Facilitating non-Federal efforts and allowing flexibility should be addressed in WRDA. Sections 2008 through 2011 of the Chairman's draft address various aspects of the Corps' crediting policy, and we support the positive steps taken in these provisions. We especially are supportive of the language that addresses credits and access of required cost sharing amounts for a project.

I would like to briefly address another provision in WRDA. Section 1002 is vital to the Corps' water resources program and we commend the committee for its creative approach to authorizing projects. As the Chairman is well aware, we in Sacramento have a very strong interest in this provision. Along those lines, we offer our sincere appreciation to Senator Feinstein and to Chairman Boxer for recently introducing Senate Bill 197, the Natomas Basin Flood Protection Improvements Act of 2013. This legislation and Congresswoman Matsui's bills, H.R. 135 and H.R. 136, are important acknowledgments of the flood control needs in Sacramento.

In closing, Senator Vitter, thank you for allowing me to appear before you today. We also appreciate the professionalism and courtesy of your respective staffs. I will be happy to respond to any questions.

[The prepared statement of Mr. Johnson follows:]



TESTIMONY

SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
-
IMPLEMENTATION OF CORPS OF ENGINEERS WATER RESOURCES POLICIES

RICHARD M. JOHNSON, EXECUTIVE DIRECTOR
SACRAMENTO AREA FLOOD CONTROL AGENCY (SAFCA)

-
Thursday, February 7, 2013, 10:30 a.m., SD-406

INTRODUCTION

Chairman Boxer, Ranking Member Vitter and Members of the Committee, my name is Rick Johnson and I am Executive Director of the Sacramento Area Flood Control Agency (or SAFCA). On behalf of the SAFCA Board of Directors, I am pleased to appear before you today to discuss the Army Corps of Engineers water resources policies and SAFCA's initiatives with the Corps and our State partners in implementing the Sacramento region's comprehensive program for flood risk management.

First, let me congratulate you on moving forward on a Water Resources Development Act (or WRDA). The Nation desperately needs the public safety, economic and jobs creation benefits that this water infrastructure legislation will provide. We are very encouraged and appreciative of the bipartisan efforts and commitment to move a bill this year.

The Sacramento region is one of the most at-risk areas in the country from the standpoint of potentially devastating flooding. Over the years, we have been very fortunate that this vulnerability has been recognized and acted on responsibly by our congressional delegation and by the Executive Branch. Our House delegation, lead by Congresswoman Doris Matsui and Senator Feinstein and you, Madam Chair, have provided consistently strong support and leadership in the development of national water resources policy generally and the needs of the Sacramento region specifically. We thank you for that strong support.

EVOLVING CORPS POLICIES

In my testimony today, I would like to touch briefly on SAFCA's efforts to advance the cause of flood damage reduction in Sacramento, working with the Corps of

Engineers, the Central Valley Flood Protection Board and the California Department of Water Resources. We are indeed fortunate to have capable and committed Federal and State partners. And, of course, without the active involvement and financial commitment by the Sacramento community, the Federal/State team could accomplish little.

In recent years, the Corps has reviewed its various civil works policies regarding flood protection to assure they are current and responsive to changing conditions. These policies include (1) design criteria for formulating flood protection projects; (2) procedures for allowing non-Federal work at completed Federal projects (the so-called "408" approval process); (3) policies affecting the presence of vegetation and encroachments on flood control works such as levees; and (4) the approach to approving "credit" for non-Federal work on projects. The latter two topics, vegetation and credits, are specifically addressed in Chairman Boxer's "Discussion Draft" WRDA bill and will be addressed in my testimony today.

We applaud the Corps for their efforts to modernize water resources policies and its responsiveness to the needs of its non-Federal partners. Having said that, we have some thoughts on how certain of these policies can be made even more responsive to the needs of its partners, make more efficient use of limited financial resources and, in effect, result in greater public safety.

LEVEE VEGETATION

One of the more contentious issues emerging over the past few years is the Corps' implementation of policies relating to woody vegetation on or adjacent to flood control levees. This is an especially important topic in the Sacramento-San Joaquin Valley of central California, though the issue applies equally elsewhere. Due to the nature of and circumstances surrounding development in the region over time, in many areas virtually the only remaining vegetation (certainly some of the most significant vegetation) is adjacent to ...and sometimes integral to...levees built for flood protection. This will surprise some people, who are accustomed to relatively bare, well-manicured levees common in many areas of the country.

We could discuss the history, reasons for and advisability of this practice in retrospect, but the fact remains that woody vegetation on and near levees is a fact of life in some areas that must be dealt with responsibly and in recognition of many complicating factors, such as the cost of vegetation removal and the environmental benefits provided by vegetation. Of course, the ultimate goal for all of us is public safety. The hard part is finding the right solution and SAFCA believes that the facts of each case must be weighed on its own merits.

SACRAMENTO EXPERIENCE

We are very familiar with the Corps' reassessment of its policies regarding woody vegetation on levees and its procedures for allowing "variances". Our ongoing effort to strengthen and improve 42 miles of levees protecting the Natomas Basin in north Sacramento is an example of one approach to this. The levees were originally constructed immediately adjacent to the river channel. The only riverine vegetation that provides habitat for several endangered species of salmonoids fish has developed along the toe and in some cases, on the levees. Recognizing the immense complications associated with strict compliance with the Corps' vegetation policy, the State and SAFCA developed a plan, working with the Corps' Sacramento District, involving "adjacent set-back levees" in locations where there were minimal homes and structures to remove. This basically allowed valuable riverside vegetation to remain, though at significant additional cost. Of the 42 miles of levees, approximately 27 miles needed a variance from the vegetation policy. Of those, we were able to design adjacent set-back levees or oversized levees for 26 miles. That design was approved by the Corps. There was one mile of levee where we proposed a different design because we did not have the ability of proposing an adjacent levee or an overbuilt levee because there were too many structures adjacent to the levee. I should point out that this is more typical of many of the levees in Sacramento and elsewhere in California. This proposed variance was not approved by the Corps.

Looking forward, we face another challenge with the Corps' vegetation policy as we and the State work with the agency in preparing a General Reevaluation Report on the American River Common Features Project. This effort is currently underway and we are optimistic that the partners will be able to develop an alternative that is mutually supported, affordable and cost-efficient. The Corps' concept of addressing the "worst-first" risks will be essential in this effort and elsewhere in the State. This concept calls for the most vulnerable areas to be given higher priority for resolution, especially when funding is constrained, and takes into consideration such things as the physical characteristics of an area, the affected population and economic resources at risk and the degree of risk posed by the presence of vegetation. It also calls for addressing the most serious risk factors first. For example, when analyzing a levee there may be a number of risk factors that need to be addressed (i.e. underseepage, erosion, overtopping, access, encroachments, vegetation, etc). However, if for example, the overall risk is reduced by 95% by fixing one or two of the most serious risk factors at only half the cost of addressing all of them, it might make sense to spend the limited resources on the serious ones first. Thus the term "worst-first." This concept acknowledges that limited Federal, State and local financial resources should be spent first on those activities offering the greatest benefit to public safety. We believe that success in future challenges implementing vegetation policies depends heavily on wise application of the worst-first concept.

VEGETATION MANAGEMENT POLICY IN WRDA

Section 2017 of the Chairman's WRDA Discussion Draft addresses Corps of Engineers policies on vegetation management. We support that section. This provision is similar to H.R. 399, introduced by Congresswoman Matsui and co-sponsored by twenty-five of her House colleagues. It requires the Corps to: conduct a review of its guidelines to evaluate whether they are appropriate for all regions of the country; consider various technical factors; consider regional or watershed variances; consult with stakeholders at every level; obtain peer review; revise national guidelines based on the activities that are undertaken; and submit a report to Congress. We believe this is a positive step in assuring a flexible and collaborative process. We especially applaud efforts to take regional characteristics and the relative cost of vegetation removal into consideration.

CREDITS FOR NON-FEDERAL WORK

Another important challenge facing the Corps, and one of great importance to its non-Federal partners, is the notion of "credits" for work accomplished by State and local interests. In today's fiscally-constrained environment, State and local governments can often do advance work on a project thereby accelerating its schedule and lowering its cost. We should not be penalized for our efforts. Restricting our ability to receive credit for legitimate work is a disincentive to initiative, delays public safety benefits and often results in higher ultimate cost.

SACRAMENTO EXPERIENCE

As with levee vegetation matters, we also have experience with the Corps' policies regarding credit allowed non-Federal interests for work done on flood protection projects. I am pleased to say that the Corps has been supportive and reasonable in its negotiations with us on past projects. An example is our work on the Natomas Levee Project. In 2006, the Corps established new standards for urban levees and reevaluated the 42 miles of levees protecting the Natomas portion of Sacramento. Based on these new levee standards, the Corps determined that the basin had less than a 33-year level of protection (compared a level of protection of more than 100 years). With more than 100,000 people at such a severe risk, SAFCA and the State decided to initiate construction while the Corps did the studies necessary to satisfy Federal water planning criteria and the criteria normally required for Congressional authorization. The Corps approved four applications granting credit under its authority of Section 104 of the Water Resources Development Act of 1986. As result, SAFCA, with funding from the State of California and funds raised locally, has been able to complete reconstruction of the worst 18 miles of the 42 miles of levees protecting Natomas while the Corps completed their efforts on a Chief's report on the overall Natomas project. This program allowed immediate risk reduction to 100,000 people while the requisite Federal studies were completed.

Though our experience regarding credits was favorable at Natomas, the Corps has recently revised its policies, increasing the challenge that non-Federal partners face in obtaining credit for their work. We believe that additional legislative recognition of non-Federal efforts and flexibility in applying those credits is a worthy topic for discussion.

CREDITING PROVISIONS IN WRDA

Sections 2008 through 2011 of the Chairman's WRDA Discussion Draft address various aspects of Corps "crediting" policy, including clarification of in-kind credit eligibility, transferability of "excess" credits and eligible categories of work. We support the positive steps taken in these provisions to assure that reasonable work and expenditures by non-Federal partners are fairly considered and allowed. We are especially supportive of language that allows credits that are in excess of required cost-sharing amounts for a project to be transferred to other project elements and that adequate time be allowed for credit provisions to be effective before their authority expires. It is important to us, and we believe many others, that sufficient flexibility be allowed where excess credits can be applied. We have provided input to your staff on this.

OTHER PROVISIONS

There are many other important and necessary provisions in the Chairman Boxer's Discussion Draft; too many to mention here. However, I would like to briefly mention two other sections of particular interest to SAFCA.

PROJECT AUTHORIZATIONS

Section 1002 (Project Authorizations) is vital to the continuity of a Corps of Engineers water resources program and we commend the Committee for its creative approach to generically authorizing projects that have fully satisfied the Federal water project review and vetting process. As the Chair is well aware, we in Sacramento have a very strong interest in this provision.

While on this topic, I would also like to express our sincere appreciation to Senator Feinstein and you, Chairman Boxer, for recently introducing S. 197, the "Natomas Basin Flood Protection Improvements Act of 2013." This legislation, and, Congresswoman Matsui's bills, H.R. 135 and H.R. 136, are important acknowledgments of the flood control needs in Sacramento.

LEVEE SAFETY

Title VI (Levee Safety) is an important complement to the Federal Dam Safety program. By establishing a national Levee Safety Program, the Committee is helping assure public safety by including provisions requiring that the Nation's levees are

inventoried, inspected and given adequate supporting research and by providing for technical guidelines, educational support and technical assistance. We suggest that the same flexibility, collaboration and holistic approach required in the Levee Vegetation language of Section 2017 be equally applied in Title VI regarding such matters as levee safety "standards" and "guidelines" and "consistent approaches" so the desirable aspects of Sec. 2017 are not inadvertently negated by Title VI.

CONCLUSION

In closing, Madam Chair, Senator Vitter and Members of the Committee, thank you for allowing me to appear before you today. The Committee has embarked on a vital effort on behalf of the Nation. We also appreciate the professionalism and courtesy of your respective staffs.

We look forward to reviewing the Committee's bipartisan WRDA legislation and to providing additional views. Furthermore, we understand that others are very interested in the Committee's initiative and the Corps' policies on levee vegetation, credits and related topics. This includes, the State of California and communities and other water agencies in the State. Their views and recommendations should also be given serious consideration as you move forward.

I'll be happy to respond to your questions. THANK YOU.

Environment and Public Works Committee Hearing
February 7, 2013
Follow-Up Questions for Written Submission

Questions for Johnson

Questions from:

Senator Barbara Boxer

1. **Mr. Johnson, your testimony discusses the work that SAFCA was able to do for in-kind credit on the Natomas levee project. SAFCA and the state were able to complete reconstruction of the worst 18 miles of levees protecting the Natomas basin while the Corps worked to complete the study for Federal participation.**

- a. **Can you explain why it was so important for SAFCA and the State to complete this work in advance of the Corps?**

Response: In 2006, the Corps established new standards for urban levees and reevaluated the 42 miles of levees protecting the Natomas Basin portion of Sacramento. Based on these new levee standards, the Corps determined that the basin had about a 1 in 33 risk of flooding in any given year (a 33-year level of protection).

With more than 100,000 residents at such a severe risk, SAFCA and the State decided that they could not leave those citizens at such a severe risk while the Federal process took its course. Therefore, SAFCA, with financial support from the State, initiated construction while the Corps did the studies necessary to satisfy Federal water planning criteria and the criteria normally required for Congressional authorization.

As a result, SAFCA reconstructed the most critical 18 miles of the 42 miles of levees protecting Natomas. This allowed more immediate risk reduction to 100,000 people while the requisite Federal studies were completed.

Additionally, Natomas is a community in the National Flood Insurance Program. By advancing the risk reduction, we have also reduced the liability the Federal government might experience under that program.

Another advantage that was experienced has come in the way of cost savings to the project. SAFCA and the State have spent \$400 million in constructing 18 miles of the project. This construction occurred during a period of a very favorable bid climate. SAFCA estimated that if the project were to continue under this favorable bid climate, it could be completed for as low as \$810 million. In the Chief's report the Corps estimates the cost of work in the Natomas Basin would be \$1.1 billion. The main reason for the savings was the ability to quickly get going on construction in the favorable bid climate as a result of the Section 104 program.

b. Why is it important for the Corps to grant exceptions to its new Sec. 221 crediting policy that allow local sponsors to construct projects earlier in the planning process?

Response: The Federal Government requires a non-Federal sponsor to cost share flood damage reduction projects constructed by the Corps, a minimum of 35%. The State of California serves as that non-Federal cost-share partner for most of the projects in California. California State law requires that there be a local cost-share partner. SAFCA serves as that local cost share partner for the Federal projects in the Sacramento area, paying 30% of the 35% non-Federal share, or 10.5% of the overall project.

The State of California generally funds its portion by selling bonds. Local sponsors like SAFCA have to fund our share through assessments established by a vote of the affected constituents. In 2006 when the Corps determined that there were 100,000 people living in Natomas with less than a 33-year level of protection, we jointly decided we needed to reduce that risk as quickly as possible.

However, the only way SAFCA and the State could put together a feasible financing plan was to assume Federal credits. Without the "104 program" (Sec. 104 of WRDA 1986), I do not believe SAFCA and the State could have advanced the risk reduction that has been achieved in Natomas.

SAFCA has one of the larger constituent bases in the Central Valley of California. I believe without some type of reasonable credit provisions, it will be difficult for most local agencies to advance any risk reduction. This will have the effect of keeping more citizens at a higher risk longer and keeping the Federal fiscal risk under the NFIP program higher longer.

SAFCA, with State financial support, initiated construction in 2007 and completed construction of 18 miles of levees in 2012. We have spent approximately \$400 million, which is about the non-Federal share of the project.

We were fortunate that the rules under the 104 program allowed us to start construction in 2007 and significantly reduce the risk to the citizens. Under the current Section 221 rules (Sec. 221 of the FCA of 1970 as modified by Sec. 2003 of WRDA 2007), we would not have been able to apply for credit until 2010. It would have significantly delayed our ability to to achieve early risk reduction for the 100,000 residents in Natomas.

2. Mr. Johnson, in your testimony, you discuss the levee vegetation issues in the Sacramento area.

a. Can you elaborate on the potential impacts on local governments if they were required to strictly comply with the Corps' standards for levee vegetation?

Response: In an ideal world, I believe the Corps' new criteria and standards would be a good basis for constructing a new project from scratch if there were no other factors involved. Some of the new criteria, such as designing for deep underseepage for urban levees, are an absolute necessity for achieving significant risk reduction. Others, such as requiring an access road at the toe of the levee, may be good to have for maintenance and for levee patrolling during high water events, but do not achieve any specific risk reduction and can come at an extremely high cost. Others, such as the vegetation standard, need to be examined on an individual levee basis to determine if they pose a significant risk to that levee.

On existing projects, given the fiscal constraints we have at all levels of Government, I believe we have to prudently apply the ideal criteria and standards to the individual circumstances and find the best way to achieve an extremely high degree of risk reduction in a way that makes fiscal, social, and environmental sense.

Let me use our situation in Sacramento as an example.

In 2006 the Corps reevaluated the Natomas Basin levees based on the new urban levee standard of addressing deep underseepage and determined that the levees needed significant work. SAFCA designed a plan based on the method the Corps had just constructed along the levees on the American River. There the Corps worked from the top of the existing levees and constructed a deep cut-off slurry wall through the levees to address deep underseepage. With this method the Corps did not disturb the vegetation around the American River levees other than what was in the footprint of the levee construction.

Based on this design, the Natomas levee work required to address deep underseepage was estimated to cost about \$410 million, based on the actual costs the Corps experienced along the American River.

However, before SAFCA could begin construction of this project, the Corps added two new criteria, one of those being the vegetation standard. These two criteria added about \$400 million to the project.

Recognizing the immense complications associated with strict compliance with the Corps' vegetation policy, the State and SAFCA developed a plan, working with the Corps' Sacramento District, involving "adjacent set-back levees" in locations where there were minimal homes and structures to remove. This basically allowed valuable riverside vegetation to remain, though at significant additional cost. A little more than half of the increase (approximately \$210 million) was attributable to enlarging the project footprint along the Sacramento River on the west side of the Natomas Basin to comply with new levee vegetation and encroachment standards adopted by the Corps. More borrow material was required and more real estate was required for the adjacent levees, including the removal of 22 homes.

We are working through similar challenge with the Corps' vegetation policy as we and the State work with the Corps in preparing a General Reevaluation Report on the other levees protecting the remainder of Sacramento. We have some other areas that have deep underseepage problems. This levee deficiency poses 85% to 90% of the risk to the community from those levees. Our concern would be with an all or nothing approach.

We have many reaches where the levees are at the water's edge and the only riverine vegetation that provides habitat for endangered species of fish has developed along the toe and in some cases, on the levees. On the landside, there are hundreds of homes constructed adjacent to the levees. We anticipate that if we propose removing the waterside vegetation, we would receive a jeopardy opinion under the Endangered Species Act, likely making the project un-implementable. If we propose constructing adjacent levees to save the vegetation, we would have to remove hundreds of homes, also likely making the project un-implementable from a fiscal, social, political, or timeliness standpoint.

We do not want the impediments of achieving all the requirements of the vegetation policy to make it impossible for us to address in a timely manner the deep underseepage, which poses the overwhelmingly significant risk to the community.

This is an example of how an inflexible approach to the vegetation policy has the potential to have significant impacts on the ability to reduce risk to the local communities.

b. Can you discuss how you are working with the Corps to increase flexibility in managing vegetation?

Response: I believe the situation described above with the General Reevaluation Report is a great case where we are trying to work closely with the Corps in applying the "worst-first" risk principle relative to investments in infrastructure improvements. We are working to develop a two part plan, one where we address deep underseepage and other serious issues in a timely manner, and then develop a plan over time to address some of the other issues such as vegetation.

This effort is currently underway and we are optimistic that the partners will be able to develop an alternative that is mutually supported, affordable and cost-efficient. The Corps' concept of addressing the "worst-first" risks will be essential in this effort and elsewhere in the State. This concept acknowledges that limited Federal, State and local financial resources should be spent first on those activities offering the greatest benefit to public safety. We believe that success in future challenges such as implementing vegetation policies depends heavily on wise application of the worst-first concept.

c. What principles are important to apply as the Corps works to implement standards for vegetation management nation-wide?

Response: Reiterating the discussion in the responses above, the ability to address the worst risk to the community first must be applied by the Corps. As the Honorable Assistant Secretary of the Army (Civil Works) Jo-Ellen Darcy stated in her testimony "Each levee and its conditions must be considered in its entirety so well informed decisions for prioritizing levee safety actions can be made." It is imperative that the Corps adhere to this thinking. If the Nation is to be successful in reducing flood risk to its citizens, the partners at all levels of Government need to continue to work together in fixing the worst risks first. Federal participation in addressing the most serious risk first cannot be tied to absolute compliance with standards that may not significantly provide risk reduction to the community, but may be costly, if not impossible to achieve.

Additionally, we need to continue to advance the science and better understand the effects of vegetation on levees in the various regions of the country, so that the decisions that are made can be better informed.

I believe we can, and will, be successful in working through this issue and in doing so, achieving the benefit we are all seeking for the public.

Senator VITTER. Thank you very much, Rick.
Now, Bob Turner.

STATEMENT OF RICHARD A. TURNER, P.E., CFM, REGIONAL DIRECTOR, SOUTHEAST LOUISIANA FLOOD PROTECTION AUTHORITY

Mr. TURNER. Thank you, Ranking Member Vitter.

For 7 years, our flood authority has been fully engaged with the U.S. Army Corps of Engineers and the Louisiana Coastal Protection and Restoration Authority during the planning, design and construction of the Hurricane and Storm Risk Reduction System for the metropolitan New Orleans area. So today I would like to share with you some observations and recommendations from the perspective of a local levee owner who has been in the trenches working with the Corps throughout this historical civil works project.

There are clear indications that in the years since Katrina, the Corps has made an effort to improve its relations with the non-Federal sponsors through a partnering process. There can be no doubt that significant progress has been made. But in our opinion, there is room for additional improvement, particularly when it comes to including the non-Federal sponsor in critical portions of the work.

It is hard to feel like a valued team member when Corps policy excludes you from participating in a project's alternative evaluation process which is conducted during the early planning phases of the design work. Decisions made in the AEP set the stage for almost everything else that follows. So we believe that policies and procedures should be modified to not only allow, but encourage, non-Federal sponsor participation in all project AEPs.

It is hard to feel much like a valued partner when Corps policy prohibits you from examining details of negotiated final fixed prices for early contractor involvement contracts, even though the non-Federal sponsor must pay 35 percent of that final negotiated price. So again, we think Corps policy needs to be adjusted here.

The independent external peer review process that was a result of language in WRDA 2007 I think needs some additional work. Much of the value of an IEPR is lost if the reviewer's comments on designs are not resolved before the designs are sent to the field for construction. And to assure independence, the Corps should revise existing policy to clearly define the role of a non-Federal sponsor in the IEPR process. The non-Federal sponsor should have the same access to the review process and the review panel members as the Corps.

Requirements placed upon the non-Federal for documenting and applying for credit for a work in-kind are extremely complex and very confusing. We recommend that the Corps develop a single document or guide for the non-Federal sponsor to guide us in the collection and presentation of the data necessary to support in-kind credits. The document should clearly define what is and is not creditable and include examples of acceptable submittal packages and suggested templates for use in data collection and presentation.

My authority supports the development of a national levee safety standard. The development and use of levee safety standards will ultimately provide a means to measure the level of risk reduction

provided by existing levee systems and improve the reliability of future levee projects and help communicate the flood risk for those living behind levees. But two major factors must be considered as national standards are developed.

First, the standards must be well-founded in the best available science and informed by input from levee owners and operators and other Federal and non-Federal stakeholders. Second, there must be a clear recognition that a one size fits all approach is inappropriate. For example, some criteria established for levees protecting densely populated urban areas should be quite different from criteria used for levees protecting low density rural areas. Standards should be developed with this in mind and should be structured to allow for decisions regarding the selection of project criteria to be informed by risk.

Rising sea levels, coastal erosion and areal subsidence are continuing to cause rapid loss of our coastal wetlands and barrier islands in Louisiana. We believe that compensatory mitigation is necessary when there are unavoidable impacts to wetlands, even when those impacts result from levee owners acting to fulfill their mission. But 18 months ago, the New Orleans District adopted a new method for determining compensatory mitigation called the Modified Charleston Method. It appears that in its current form the Modified Charleston Method will in some cases greatly increase the cost to mitigate for unavoidable wetland impacts associated with flood risk production projects.

So we would recommend that the New Orleans District revisit and review the ratios and calculations used in that method in coordination with the local stakeholders to confirm that they are correct and appropriate for use along the Louisiana coast, and that they properly take into account any positive impact such flood protection projects might have in prolonging the existence of wetlands that would otherwise quickly disappear due to exposure to wave and storm surge.

In closing, on behalf of myself and the Board of Commissioners of the Southeast Louisiana Flood Protection Authority—East, I would like to thank you once again for the opportunity to come here and testify before you. We hope the information provided will be helpful in your work and we look forward to answering any questions you may have and assisting the committee in any way that you might find helpful. Thank you.

[The prepared statement of Mr. Turner follows:]

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WRITTEN TESTIMONY

OF

**ROBERT A. TURNER, P.E., CFM
REGIONAL DIRECTOR
SOUTHEAST LOUISIANA FLOOD PROTECTION AUTHORITY – EAST**

**BEFORE THE
SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS**

**ON
IMPLEMENTATION OF CORPS OF ENGINEERS WATER RESOURCES POLICIES**

**FEBRUARY 7, 2013
10:30 AM – DIRKSEN SENATE OFFICE BUILDING, ROOM 406**

Chairman Boxer, Ranking Member Vitter, and members of the Committee,

Thank you for the opportunity to testify before you today. My name is Robert A. Turner, and I am a registered professional engineer with over thirty years of experience in Civil and Structural design. I served as the executive director of the Lake Borgne Basin Levee District in St. Bernard Parish, Louisiana, from 2001-2007. I now serve as the Regional Director of the Southeast Louisiana Flood Protection Authority – East (SLFPAE), which was created after Hurricane Katrina to bring regional professional management to individual levee districts. Our Board has four registered professional engineers and includes members from California and North Carolina, providing specialized expertise from beyond the borders of our State.

SLFPAE has been engaged with the US Army Corps of Engineers and the Louisiana Coastal Protection and Restoration Authority during the planning, design and construction of the Hurricane and Storm Damage Risk Reduction System (HSDRRS) for the metropolitan New Orleans area. Much has been accomplished in the years since Katrina. A 14 billion dollar civil works project designed to reduce hurricane storm surge risk in the New Orleans area has been substantially completed in less than seven years. Many dedicated individuals working for the Corps, the State of Louisiana, and local levee districts have worked tirelessly to make this happen. It serves as a testament to what our nation can accomplish when such projects are fully funded up front. Our Board of Commissioners wants to again thank Congress and the taxpayers of our nation for recognizing the importance of Greater New Orleans to the nation and for providing the funds necessary to complete the work.

Based upon our experiences with US Army Corps of Engineers policies and procedures during the last seven years, we offer the following insight and recommendations:

Partnering between the Corps and non-federal sponsor

There are clear indications that in the years since Katrina, the Corps has made an effort to improve its relations with non-federal sponsors through a “partnering” process. Progress has been made, but there is room for improvement, and several recommendations are discussed below.

Early Contractor Involvement. To facilitate the construction of several HSDRRS projects, the Corps utilized a procurement contracting method called Early Contractor Involvement (ECI) instead of the usual design-bid-build method. ECI was used to accelerate the construction schedule by bringing on a construction contractor early in

the design phase of the work to offer constructability advice and guidance to the designer. On most HSDRRS projects using ECI, the Corps did not negotiate a fixed price with the construction contractor until construction was substantially complete. The Corps prohibited the non-federal sponsor from observing the fixed price negotiation process, and continues to refuse to provide any information as to how the fixed prices were determined. Thus the non-federal sponsor is expected to pay the required cost share of a contract amount that was negotiated without observing the process, reviewing the details of the negotiations, or providing input to the negotiators. Corps policy should be changed to either allow the non-federal sponsor to observe the negotiation process and provide input to the negotiators, or prohibit the use of the ECI contracting method on civil works projects that require a cost share from a non-federal sponsor.

On several projects, the non-federal sponsors signed non-disclosure agreements prohibiting the release or discussion of sensitive information. The Corps should investigate the use of such agreements with the non-federal sponsor as a prerequisite for observing and providing input into the negotiation process.

Alternatives Evaluation Process. The Corps utilizes an Alternatives Evaluation Process (AEP) to identify and evaluate multiple alternatives and ultimately select the best alternative(s) for project design and construction. The AEP process was used in the HSDRRS Armoring planning process, and the non-federal sponsor team asked to participate. We were told that Corps policy prohibits participation of the non-federal sponsor in the AEP process. Corps policy should be changed to not only allow, but encourage non-federal sponsor participation in all civil works project AEPs.

Dispute Resolution. Occasionally, the Corps and non-federal sponsor may disagree on a chosen course of action, and despite best efforts, a consensus cannot be reached. It appears to us that the Corps has not developed a clear dispute resolution policy for such instances. The Corps should develop such a process for dispute resolution that requires timely written documentation of arguments supporting both sides of the dispute, along with the reasons for selecting the chosen course of action.

Independent External Peer Review

Several large, complex HSDRRS projects were selected by the Corps as candidates for Independent External Peer Review (IEPR). But the IEPR process has lagged far behind the design and construction of the projects. It appears that many of the projects will be substantially complete long before all of the IEPR Reports are finalized. In our

opinion, the IEPR process can serve as a valuable tool only if the process is initiated early and aggressively managed. One of the primary purposes of the IEPR process should be to inform the design process early enough to allow appropriate changes to be made efficiently and effectively. All comments generated by IEPR panel members pertaining to the project design should be resolved before the design is finalized and the corresponding portion of the work released for construction.

To assure independence, the Corps should revise existing policy regarding IEPR to clearly define the role of the non-federal sponsor in the IEPR process. The non-federal sponsor should have the same access to the review panel as the Corps. The Corps and non-federal sponsor should be allowed to provide pertinent information to the reviewers for their consideration. The reviewers' comments should be made available to both entities, and both should be allowed to submit responses .

In-kind Credit Approval

The requirements placed upon non-federal sponsors for documenting and applying for credit for "work in-kind" are complex and confusing. They are included in various sections of the Code of Federal Regulations and several Corps policy documents. We recommend that the Corps develop a document to guide the non-federal sponsor in the collection and presentation of the data necessary to support in-kind credits. The document should include examples of acceptable submittal packages and suggested templates for use in data collection and presentation. The procedures for submitting work in-kind credit packages should be reviewed with the non-federal sponsor shortly after a Project Partnering Agreement is executed.

National Standards for Levee Systems

National standards for levee design, construction, operations, maintenance, rehabilitation, repair, and improvement do not exist. We believe that the development and use of levee safety standards will ultimately provide a means to measure the level of risk reduction provided by an existing levee system, improve the reliability of future levee projects, and help to communicate the flood risk for those living behind levees. Two major factors must be considered as national standards are developed. First, the standards must be well-founded in the best available science. The Corps has already undertaken the task of advancing the scientific knowledge base and should continue to do so. But any attempt to develop national standards must include input from non-federal stakeholders, including states, tribes, regional authorities and local levee owners.

Second, there must be a clear recognition that a “one size fits all” approach is inappropriate. For example, some criteria established for levees protecting densely populated urban areas should be different from criteria used for levees in low density rural areas. Standards should be developed with this in mind, and should be structured to allow for decisions regarding the selection of project criteria to be informed by risk.

Use of the Modified Charleston Method for Computing Compensatory Mitigation

Rising sea levels, coastal erosion, and areal subsidence are continuing to cause rapid loss of coastal wetlands and barrier islands in the lower Mississippi Delta. Compensatory mitigation should be required when there are unavoidable impacts to wetlands, even when those impacts result from levee owners acting to fulfill their mission. In May, 2011, the US Army Corps of Engineers New Orleans District adopted a new method for determining compensatory mitigation called the Modified Charleston Method (MCM). It is important to note that the MCM is not used by the Corps to determine compensatory mitigation requirements for the HSDRRS in the metropolitan New Orleans area. However, it will be used for all future work that impacts jurisdictional wetlands in coastal Louisiana.

SLFPAE agrees with the stated intent of adopting a more accurate and consistent method of calculating compensatory mitigation, as compared to the previously used methodology. But it appears that in its current form, the MCM will in some cases greatly increase the cost to mitigate for unavoidable wetland impacts. SLFPAE recommends that the New Orleans District revisit and review the ratios and calculations used in the MCM in coordination with local stakeholders to confirm that they are correct and appropriate for use along the Louisiana coast, and do not unnecessarily increase costs for needed flood protection projects that reduce risks for our citizens and their communities, businesses and infrastructure.

In closing, I, on behalf of the Board of Commissioners of the Southeast Louisiana Flood Protection Authority – East, would like to once again thank the members of the Committee for allowing me the opportunity to provide this testimony. We hope the information provided will be helpful in your work. We look forward to answering any questions you may have and assisting the Committee in any way that you might find helpful. I can be reached by phone at (504)-280-2411, or by email at rturner@sifpae.com.



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 Robert A. Turner Jr., P.E.

Environmental and Public Works Committee Hearing
 February 7, 2013
 Follow-up Questions for Written Submission

Questions for Robert A. Turner from Senator Barbara Boxer:

1. *Mr. Turner, in your testimony you discuss the Early Contractor Involvement method that the Corps has utilized for some Louisiana projects to help accelerate the construction schedule.*
 - a. *While you identify some concerns with transparency of the process, do you consider early contractor involvement to be a successful way to accelerate the construction schedule?*

Yes, Early Contractor Involvement, or ECI, can be very successful when properly executed. Tapping into a contractor's knowledge, creativity and experience early in the design and development process can potentially add value by facilitating more innovative solutions, quickly anticipating and solving problems, and providing better project control – all of which can save time and money. Basically, early contractor involvement provides flexibility that is simply not available in standard design-build projects, where contractors are brought on board to construct what has already been designed.

Additionally, incentives built into this delivery method can significantly improve results, especially on large, public infrastructure projects where contractors are otherwise unwilling to assume design liability, or where challenging site conditions, demanding schedules or other unique project aspects would benefit by having a builder's input early-on and cost estimating ability throughout the design process.

Although ECI is not appropriate for every job, it is suited to certain projects, but even then, it should only be used if the process is correctly understood by all parties and can be properly managed and well executed. Success is highly dependent on effective collaboration and cooperation between four key players. Those include the government, in our case, the Army Corps of Engineers; the designer; the construction contractor; and the Non-Federal Sponsor, which is the ultimate project owner.

b. *Is this a model that can be replicated elsewhere?*

Yes, this is a model that can be replicated elsewhere as long as it is managed properly, but it requires uncommon commitment and sophistication by all parties, particularly the owner. Some suggestions based on lessons learned during the design and construction of several post Hurricane Katrina projects in the New Orleans area include:

- The partnership role of the Non-Federal Sponsor must be clearly defined before the decision is made to use the ECI process. The Corps must adjust internal policies and procedures to allow for active Non-Federal Sponsor participation in the process at all phases of the work. Otherwise, the collaborative framework essential for ECI success breaks down, leaving key design and construction decisions being made without due consideration of Non-Federal Sponsor input.
- The "firm fixed price" must be set prior to or just after 100% plans and specifications are complete. Waiting until construction is substantially complete to set the firm fixed price places almost all risk with the government and Non-Federal Sponsor, and gives all benefit to the contractors at the expense of taxpayers.
- For obvious reasons, firm fixed price negotiations must be fully transparent to the non-federal cost-sharing partner.

2. *Mr. Turner, I see that you participated on the National Committee on Levee Safety and in your testimony you support the development of National Levee Safety Standards. Can you elaborate on what National Levee Safety Standards would look like, and how they would be useful in the development of the National Levee Safety Program?*

We believe national levee safety standards should be comprehensive and include a common set of standards for levee design, construction, operations, inspections, maintenance, emergency management, rehabilitation, improvement and removal. The standards must allow for the use of proper engineering judgment to account for the diversity that exists in local site conditions and levels of risk. They could be implemented nationwide with an approach similar to the National Building Code. Although developed as a single comprehensive code, governments adopting the code – including state and local governments- may adopt it whole or adjust it to fit their local conditions.

National levee safety standards will provide designers, builders, and owners of levees with the best available tools to do their jobs effectively. They can form the basis of technical training programs for engineers and owner/operators alike, and can be used to determine and communicate levels of risk associated with existing levee systems. National standards could also establish a recognized "standard of care" related to levees and may help reduce the exposure of public agencies and private engineering firms to litigation and liability.

The ultimate goal of national levee safety standards is to reduce risk. If such standards had been in place before Hurricane Katrina, much of the devastation and loss of life in our community might have been prevented.

Submitted by Robert A. Turner, P.E., CFM
Regional Director
Southeast Louisiana Flood Protection Authority – East

February 22, 2013

Senator VITTER. Thank you very much, Bob.
Now, Collin O'Mara.

STATEMENT OF COLLIN O'MARA, SECRETARY, DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

Mr. O'MARA. Thank you, Ranking Member Vitter. I would like to thank Senator Carper also for having me here today.

I would like to begin by thanking the committee for the incredible support they have provided to coastal States like Delaware over the past several years. The 3 million cubic yards of sand that was put onto our beaches just prior to Hurricane Sandy, in the 12 months before it, prevented hundreds of millions of dollars worth of damage for a very small fraction of that price. So I just want to thank this entire committee, particularly some folks from the delegations in New York, New Jersey and Delaware and Maryland that have been working closely on storm recovery.

For Delaware, the work that the Army Corps performed to improve resiliency, to improve navigation, to improve wildlife habitat, is absolutely critical. Like many States, we have found at times working with the Corps and their policies can be challenging. We have had our battles over permits and projects. But overall, I can say with confidence that the Corps is an extremely important partner for our small State.

It has never been more important for the Army Corps to fulfill its mission efficiently and cost effectively as we face more extreme weather, more regular flooding, sea level rise. It is absolutely critical to improve the resiliency of at-risk communities and vulnerable natural resources. The provisions on extreme weather preparedness drafted by Chairman Boxer are an absolutely key component of this, and we fully support them in Delaware.

We believe that modernizing the Corps' business model and rethinking the current way that we approach projects on an individual basis would both improve product outcomes but also significantly reduce project costs. This includes more flexibility to work with State and local governments, as my colleagues have mentioned, better coordination with other Federal agencies, especially FEMA, the Fish and Wildlife Service and even EPA on infrastructure projects, and much broader thinking that breaks down the silos within the Corps and links projects and corporate benefits of multiple business lines.

There are many ways we can accomplish this. For example, many of my colleagues in Delaware and across the region have supported a proposal to develop a North Atlantic Coastal Marine Management Plan. This would allow the Army Corps' entire North Atlantic Division to work with States to develop an integrated management plan that is essential for ecosystem needs in Delaware and along our neighboring States. Such an approach acknowledges that our coast and coastal waters operate as a system and should be treated like one when prioritizing projects.

A similar systems-based approach could also help the Corps maximize benefits between business lines. Right now, the Army Corps has three separate lines of business: navigation, flood and coastal storm damage reduction and environmental enhancement.

The Congress has traditionally authorized these projects individually and then appropriated funding to these three separate lines individually as well.

With growing needs and diminishing resources, it is absolutely critical that we break down these silos between these business lines to more formally and strategically connect navigation and flood mitigation and habitation restoration projects, as well as break down the divisions between different levels of government. We recommend for the committee to consider the formal adoption of an approach called regional sediment management. Most States along the east coast have multiple projects going on in the same region. You might have an inlet and a harbor that needs to be dredged, a protective beach or dune system that needs additional nourishment work, an adjacent salt marsh for wildlife habitat that is starved of sediment and that is drowning.

Each of these elements acts as a system with the sand, silt and sediment moving from one area into another based on natural processes. Under current policies and practices, and the stove-piped funding, the Corps could receive separate funding to maintain the channel, to nourish the beach or restore the coastal wetland, but these projects would each be managed separately.

Now, not only would a systems-based approach improve the management of each of these projects, but it would lower the price tag significantly. Individually, for example, these projects might cost \$5 million each for a small State like Delaware and maybe \$15 million total if you did all three projects. But collectively, if you did them together, you might be able to save half that amount of money by just avoiding the mobilization costs for dredging alone.

The Corps has already implemented some of these projects in other places. But too often, the least-cost mandate that they have prevents this type of efficiency, unless the authorization and the appropriations for multiple projects happen to align perfectly, which rarely happens.

Too often, clean and safe dredged material is treated like a waste byproduct and is shipped overboard or sequestered into a contained disposal facility. We really need to adopt a systems-based approach that treats this clean sediment like the valuable resource that it is, and then use it where it is absolutely most valuable.

With a few changes in Corps authorization, we believe it is possible to accomplish exactly this and save millions of dollars. We are extremely grateful to Senator Carper for his efforts in this area, and we encourage the committee to work with him to improve regional sediment management practices. We respectfully recommend five things. One, provide the authority to prioritize regional sediment management projects within WRDA, including recognizing and rewarding projects that have these multiple benefits that cross business lines.

Second, formally recognize the link between storm damage mitigation projects, environmental enhancement projects and navigation projects, and the value of sediment in completing all three. Third, continue making progress toward modernizing the Corps' approach to fulfilling their mission, and by encouraging systems management approaches rather than the current project by project, line by line approach.

Fourth, expand the definition of the least-cost mandate for navigation projects to include a full benefit analysis for regional sediment management projects, to provide a true and clear picture of what is gained by the Corps' work. And fifth, provide greater discretion to the Secretary to expand the boundaries of authorized projects if greater cost efficiencies are possible.

We are extremely grateful for the tireless work of this committee to improve the resiliency of our coastal assets and we look forward to working with you as you consider WRDA reauthorization in the year ahead. Thank you very much.

[The prepared statement of Mr. O'Mara follows:]

**TESTIMONY OF COLLIN O'MARA BEFORE
THE U.S. SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
OVERSIGHT HEARING ON IMPLEMENTATION OF CORPS OF ENGINEERS
WATER RESOURCES POLICIES**

FEBRUARY 7, 2013

Chairman Boxer, Ranking Member Vitter, Members of the Committee, on behalf of Delaware Governor Jack Markell, thank you for the opportunity to testify before you today.

On October 28th and 29th, as Hurricane Sandy moved northward along the Atlantic coast region, Delaware experienced heavy rains, 15-20 foot waves, and 50 mile an hour winds. Yet despite these ominous conditions bearing down on our state, after the weather cleared and water receded, relatively few homes and businesses on the Atlantic Ocean side of our ocean beach communities had experienced significant property damage, compared to other parts of Delaware or the devastation in other states.¹

The foundation of Delaware's coastal defenses is a network of engineered dunes and beaches that extend from Lewes to Fenwick Island—built by the U.S. Army Corps of Engineers and cost-shared by the State. Over the previous twelve months, the Corps had nourished Delaware's engineered beaches with more than three million cubic yards of sand as part of a \$39 million re-nourishment projects. It was these projects that prevented much of the damage experienced elsewhere, protecting public infrastructure, natural resources, and property. Prior to the construction of engineered dunes and beaches, Delaware communities had suffered extensive property and infrastructure damage during storms with less intensity than Sandy.

Because of the protection offered by the Corps' projects, after Sandy subsided, the residents and businesses of these communities were safe, their homes and businesses had suffered little damage, and they experienced little if any interruption of utility services. And while our dunes

¹ Delaware experienced significant flooding at the Indian River Inlet Bridge where an undersized dune system washed-out and several communities and natural resource areas up and down the coast suffered flooding, including the communities situated around the Inland Bays.

lost hundreds of thousands of cubic yards of sand those couple of days, the costs of the original projects (and the subsequent restoration) are a very small fraction of the value of the assets that they protected.

I begin with this example, because it illustrates the critical work that the Army Corps perform. Like many states, we have found that working with the Corps and their policies and rules can be challenging at times, and there is room for improvement. But overall I can say with confidence that Delaware would have suffered hundreds of millions of dollars of damage if key projects had not been completed. Similarly, whether it's a navigation project to keep a river channel clear and facilitate commerce or an environmental project to restore valuable coastal marshland habitat, the Corps is an important partner to a state like Delaware.

In this and other areas that the Corps works in, it has never been more important for the Army Corps to fulfill its missions efficiently and cost-effectively. And as we face more extreme weather, more regular flooding, and rising sea-level, it is critical that we improve the resiliency of at-risk communities and vulnerable natural resources. The provisions on extreme weather preparedness drafted by Chairman Boxer are a key component of this, which we fully support. In addition, there is much we can do to build on this idea that could improve project outcomes in other Corps activities, while also reducing project costs. In particular, I believe we must improve the Corps' business model and begin to rethink the way that we approach projects on an individual basis. This includes more flexibility to work with state and local governments and agencies, better coordination with other federal agencies, and broader thinking that breaks down silos within the Corps and links projects that incorporate benefits of multiple business lines.

There are many ways that this could be accomplished. For example, along with many of my colleagues representing Atlantic Coast states, Delaware has supported a proposal to develop a North Atlantic Coastal and Marine Management Plan. This would allow the Army Corps' entire North Atlantic Division to work with states to develop an integrated management plan for essential ecosystem restoration needs in Delaware and our neighboring states. Such an approach acknowledges that our coast and coastal waters operate as a system, and should be treated like

one. This proposal will help the Corps to work with states to develop the right lists of projects, and to prioritize them to achieve the greatest impact for the money.

A similar systems-based approach could also help the Corps to consider benefits between business lines. Today, the Army Corps has three separate lines of business: 1) Navigation, 2) Flood/Coastal Storm Damage Reduction, and 3) Environmental Enhancement. The Congress has traditionally authorized projects individually and appropriated funding to these three lines separate. With growing needs and diminishing resources, it is critical that we break down silos between business lines to more formally and strategically connect navigation, flood mitigation, and habitat restoration, as well as the divisions between different levels of government.

I'd like to talk about one particular way to accomplish this that is important to coastal states like Delaware. This approach called Regional Sediment Management. Most states along the East Coast have multiple coastal projects underway or planned in the same region. In Delaware, for example, there are areas where there is an inlet or harbor (like Roosevelt Inlet at Lewes, Indian River Inlet, or Mispillion Harbor), a protective beach and dune that is eroding in front of a waterfront community, and an adjacent salt marsh wildlife habitat that is starved of sediment and drowning. All of these elements act as a system, with sand, silt, and sediment moving from one area to another based upon natural processes. Under current practice, policies and stove-piped funding, the Corps could receive separate funding to maintain the channel, to nourish the beach, or to restore a coastal wetland. But these projects would each be managed separately, with little formal coordination, directive, or funding to address them as a system.

Not only would the systems-based approach improve the management of each project, but would also likely lower the price tag. Individually, these three projects may cost \$5 million each, or \$15 million total; but collectively they may only cost \$7.5 million, if implemented simultaneously—saving the taxpayers 50% of project costs. Just eliminating the need to mobilize and demobilize dredging equipment one additional time could save \$3-\$4 million. Yet, the current “least cost” mandate prevents this type of efficiency, unless the authorization and appropriation for all three projects happen to align perfectly, which rarely happens.

Too often, we treat clean and safe dredged sediment like it's a waste byproduct to be dropped overboard or sequestered in a confined disposal facility, rather than clearly identifying the most beneficial use of the sediment deposition. We need to adopt a systems approach that connects regional projects, treats sediment like a valuable resource, and uses the sediment where it creates the most value.

With a few changes to the Corps authorization, it is possible to complete projects much more effectively and save millions of dollars in the process. We are grateful for Senator Carper's efforts in this area and encourage the Committee to work with him to develop suggestions for improvements to Regional Sediment Management as well as a regional sediment framework that addresses policy, regulatory, and institutional impediments across fragmented jurisdictions and authorities.

We respectfully recommend to:

1. Provide authority to prioritize RSM projects in WRDA, including recognizing and rewarding projects with multiple-benefits that cross business lines.
2. Formally recognize the link between storm damage mitigation, environmental enhancements, and navigation projects—and the value of sediment.
3. Continue progress toward modernizing the Corps approach to fulfilling their mission by encouraging systems management approaches rather than the current project-by project, single business line approach.
4. Expand the definition of "least cost" mandate for navigation projects to include full-benefits analysis for RSM projects to provide a true and clear picture of what is gained by Corps' work.
5. Provide greater discretion to the Secretary to expand boundaries of authorized projects if greater cost-efficiencies are possible.

Delaware, and the nation, benefit tremendously from the work conducted by the Corps. We appreciate the thoughtful way that the Energy and Public Works Committee has helped forge direction and policy for the Corps and we are optimistic that the WRDA reauthorization process will further evolve the Corps planning and construction process into a more modern approach to reducing storm risk at the coast. We, in Delaware, believe that improved management of coastal assets through a systems-based, multi-business line approach will be more effective and efficient in accomplishing what the Administration, Congress, the States, and the American people expect the Corps to accomplish. In this new reality, it will be critical that states work collaboratively, especially in the Northeast and Mid-Atlantic, and strive for greater regionally consistency in evaluating coastal needs, scoping projects, and implementing projects that improve regional resiliency. With greater budget reductions likely, we must find more efficient ways of getting critical projects done, rather than simply doing less work.

WRDA reauthorization represents an opportunity for Congress to modernize the way the Corps works. We strongly encourage expanding the opportunity for the Corps to manage sediment as the asset it is, to not be restricted to “least cost disposal” options for deposition of dredged material, to make funding available to use dredged sediment to improve the resiliency of both man built and natural communities on our shores, and to modernize the Corps’ practices to reflect a nation’s better understanding of the coastal “system” and its value to our nation. By doing so, we will better prepare our nation for future storms and other extreme weather in the years ahead in the most cost-effective manner.

Thank you.



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February 22, 2013

The Honorable Barbara Boxer
 Chairman, Senate Committee on Environment and Public Works
 410 Dirksen Senate Office Building
 Washington, DC 20510

Chairman Boxer,

Thank you for the opportunity to testify before the U.S. Senate Environment and Public Works Committee on issues important to the State of Delaware and the Nation. I have provided answers below to your questions about proposals for Regional Sediment Management and the North Atlantic Coastal and Marine Management Plan.

1. *Mr. O'Mara, you state that the coastal storm protection projects in Delaware built by the Corps were integral to reducing damages when Hurricane Sandy struck. You also note that there are ways the Corps could more efficiently and effectively contribute to coastal protection in the future, including by taking a more comprehensive and integrated approach to management of its projects.*
 - a. *Can you elaborate on how the Regional Sediment Management Program can help the Corps to better manage its coastal protection projects?*
 - b. *How can this program be improved to save costs and increase project benefits for coastal communities?*

There are two main challenges when trying to implement coastal protection and habitat restoration projects: costs and sediment availability. Regional Sediment Management can help address both. Delaware has been working closely with its neighboring states, New Jersey and Pennsylvania as well as several federal agencies (Corps, EPA USGS, NOAA) in developing a Delaware Estuary Regional Sediment Management Plan. New York and New Jersey completed a similar plan in 2008 for the New York-New Jersey Harbor Estuary. To quote a line from the Draft Delaware Plan, "The goal of Regional Sediment Management (RSM) is to consider sediment as a resource critical to the economic and environmental vitality of the region, rather than as a localized waste product or pollutant to always be disposed of in the least cost manner. Where sediment is removed from the natural estuarine system by dredging for navigation purposes, it is desirable to maximize the beneficial use of such material."

Delaware's Good Nature depends on you!

Doing this within the context of a sediment system mimics natural sediment movement and helps natural systems to thrive, such that we are working with nature rather than against her. Despite some recent pilot projects, this is not the way the Corps traditionally does business. By managing projects involving sediment individually, rather than as a system, we have wasted significant sediment resources needed elsewhere, and increased the cost of project implementation.

Over the past 10 years, for example, sediment resources retrieved from the vast majority of navigation projects along the Delaware River and Bay have been disposed of according to least-cost accounting. This typically involves dumping sediment several hundred yards from a navigation channel or transporting it to large disposal facilities. This is despite the fact that there are often erosion prone land forms that are highly valuable nearby and that would significantly benefit from deposition of these resources.

Below is a partial list of Corps projects and associated sediment volumes over the past 10 years that demonstrates the routine waste of sediment, which could be put to good use.

- Port of Wilmington with approach channel: 5 million cubic yards of silt disposed of in Confined Disposal Facilities (CDFs; upland sites) which could have been used for wetland loss mitigation at several Delaware Bayshore areas.
- Chesapeake and Delaware Canal: 1,260,000 yards of silt and sand annually disposed of in CDFs but could have been used for Bayshore habitat restoration projects. The 10 year total is approximately 12,600,000 cubic yards of material now residing in upland sites.
- Mispillion Inlet: 30,000 cubic yards of sand, which was disposed of on the Delaware Bay bottom rather than a beach adjacent to the inlet which is a prime horseshoe crab egg laying area and critical habitat for red knots and more than 20 species of shorebirds.
- Murderkill River entrance: 150,000 cubic yards of sand and silt. Sand has been put on adjacent beaches but silt was placed on DE Bay bottom. Eroded wetlands both north and south of the area could be benefitted. Approximately 50,000 cubic yards of the total was used beneficially.
- Roosevelt Inlet: 120,000 cubic yards of sand, placed on adjacent beach, which is a good example of beneficial use.
- Maintenance of Reach E of the DE Main Channel: 1 million cubic yards of sand placed on DE Bay bottom near buoy 10, this could have gone to beach building on the shore of either state, and could have likely provided sufficient sediment to prevent the complete breakdown of the beach and dune system at Prime Hook National Wildlife Refuge (federal lands).

These six highlighted projects produced approximately 19,000,000 million cubic yards of material just in the past ten years, which today would be worth \$10-20 per cubic yard or \$190M-\$380M. In contrast, only approximately 200,000 cubic yards or 10% of useable material was

placed beneficially on beaches (no wetlands work). This is a practice which desperately needs to be improved.

Rather than managing projects involving sediment resources separately, along established business lines, a process should be established that allows or encourages the Corps to take into account all of its business line responsibilities together, actively seeking out opportunities that cross business line benefits and avoid duplicative costs (e.g. mobilization, engineering, permitting, etc.). This modernization of the process is long overdue.

There are far more projects along the Delaware that will benefit from an improved asset management approach by the Corps and its partners. In the era of no earmarks, Congress can either accept the President's proposals for civil works projects for the Corps or reduce the list, it cannot add anything. With the need for reduced spending and more consideration of what services need to be reduced, it is now more imperative than ever for the President's (OMB's) budget to be the product of deeper thinking and clear cost/benefit analysis. For example, funding for navigation is based solely on the benefit to commercial shipping on a waterway by waterway basis. The Corps should be directed or allowed to account for and apply the full benefits that accrue from that work.

2. *Mr. O'Mara, in your testimony, you discuss the fact that the North Atlantic coast is an integrated system that needs to be managed and treated as a system. You call for giving the Corps authority to work with states in the North Atlantic to develop and implement a North Atlantic Coastal and Marine Management Plan.*

a. *Can you elaborate on how such a plan will improve the way the Corps presently implements restoration projects in the region?*

b. *What benefits do you expect can be achieved by using this regional approach?*

Federal, state, and local programs affecting coastal resources and their use have evolved independently, with little consideration given to unifying objectives or principles. At the federal level, there are many agencies involved in missions that relate to coastal use and protection, but there is no mechanism to resolve programmatic conflicts, promote collaboration and efficiencies between missions, or balance projects involving various uses or protection efforts. Inefficiencies may be replicated within individual States or between States, and there is no incentive, reward or mechanism for any group of states to engage in regional efforts to manage both coastal resources and risks.

By undertaking a planning process that engages all of these coastal stakeholders in the North Atlantic region, the Corps can help to identify duplication of efforts, reduce project costs particularly related to mobilization, and find opportunities for project synergies to produce improved outcomes. The planning and implementation of coastal resource measures, both federal and non-federal, on a regional scale can take into account impacts on the regional economy or particular stakeholders (business profits, jobs, etc.) that are not normally part of the planning process for water resource projects undertaken by the Corps. Such a planning process can also help the Corps and its partners to prioritize limited resources for the most important projects or those that lack other potential funding sources. This is of particular importance on the east coast where 14 states make up the Atlantic seaboard and a significant portion of the nation's population lives along the coast.

This regional approach becomes more important given the need to reduce risk and increase resiliency along the east coast. Natural systems enhanced by Corps restoration projects are particularly well suited for this task, and identifying and prioritizing the right projects to make the best use of limited resources is critical to maximizing their impact.

Thank you again for the opportunity to testify before your Committee. Please let me know if I can provide additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Collin P. O'Mara". The signature is fluid and cursive, with the first name "Collin" being the most prominent part.

Collin P. O'Mara
Secretary

Senator VITTER. Thank you very much, Collin. I am particularly glad you are here, so that Garret now realizes that he is old.

[Laughter.]

Senator VITTER. Garret Graves.

STATEMENT OF GARRET GRAVES, CHAIR, COASTAL PROTECTION AND RESTORATION AUTHORITY OF LOUISIANA

Mr. GRAVES. Thank you, Senator, I appreciate that.

Senator, I want to ask if a corrected version of my testimony could be submitted for the record.

Senator VITTER. Absolutely.

Mr. GRAVES. Senator, I am Garret Graves with the Coastal Protection and Restoration Authority of Louisiana. I want to thank you for the opportunity to be here today.

I want to commend the committee, as other folks have said, for working in a bipartisan manner on a number of important issues, including vegetation policy, levee safety, 902 limits and of course, crediting. But also I want to ask you to take a step back and remember the critical role that the WRDA bill and natural Water resources play in our day to day lives.

Whether it is the wetlands and ecological productivity, coastal Louisiana being one of the most productive estuaries on the North American continent, whether it is the buffer role that it plays. The Senator was here from Arkansas earlier. Louisiana is the buffer for Arkansas in regard to hurricane storm surge. And our buffer is those wetlands. And those wetland are being lost at an extraordinary rate.

In fact, over the last several decades, we have lost approximately 1,900 square miles of those wetlands, which is equivalent to Senator Whitehouse's entire State, and virtually the land area of the State of Delaware, with few efforts by the Federal Government to actually restore those wetlands. And of course, the seafood productivity associated with it, which makes Louisiana the top producer of commercial seafood in the continental United States.

On the navigation side, it is crystal clear that the most efficient means of transportation from an ecological or an economic perspective is maritime shipping. The Mississippi River is America's commerce superhighway. It provides maritime commerce for 31 States, and again, the most efficient means of transportation.

On the flood control side, it is absolutely fundamental, things like roads, hospitals, schools are very, very important. But when you are trapped in your attic and your house is underwater, those things become a lower priority. So it is absolutely fundamental that flood control be prioritized.

Senator, the current project process for water resources, by our estimation, but by the time you do a study, have it authorized, you get new start funding, you have your reconnaissance, your feasibility, your chief support, your second authorization, and then your new start construction funding. Our estimate is that that process takes approximately 40 years from conception to completion of a project.

In Louisiana, with the rate of land loss we are experiencing, with the vulnerability of many of our communities, as we recently saw in the northeast with Hurricane Sandy, our communities don't

have that kind of time. They don't have 40 years to be protected and to have that type of fundamental importance.

In Louisiana, we have two projects that are indicative of that process. One of them is Morganza to the Gulf, that you noted. We have been studying that project for 21 years, have spent \$72 million without putting a shovel in the ground. In this era of budget challenges, I don't know how behavior like that can be allowed to continue.

In regard to the Louisiana Coastal Area program, since about 1995 or 1996, the Corps of Engineers has spent \$100 million without building an acre of wetlands. I will say it again. We are losing up to 20, 25 square miles of wetlands per year. Much of that, the majority of that loss is the result of Corps of Engineers actions.

As you noted earlier with mitigation policies, if that were a private citizen, if it were the State of Louisiana government, they would be required to mitigate for those actions. The Corps is taking little to no action.

In addition, as Secretary O'Mara noted, the inflexibility or the rigidity associated with these Corps projects is very challenging. It actually prevents adaptive management and makes us in many cases implement lower efficacy projects because of the need to go back through the post-authorization change process to come back and wait for another WRDA bill, we give up and we say, look, we are just going to go implement a less efficient project. It is backward, and it is not how any other project process in the Federal Government is done.

If this process is so sacrosanct, if it makes so much sense, if it is perfect, then let's use it for everything else. And I assure you that the Federal Government would be shut down very quickly if that were to occur.

Today in Louisiana we have areas that are vulnerable, just as vulnerable as they were before Hurricane Katrina. We are losing approximately a football field of wetlands every hour in our State. The Corps of Engineers is having an extraordinary challenge maintaining navigation channels in Louisiana, including the Mississippi River, which is the most important navigation channel in this Nation in regard to the volume of hundreds and millions, billions of dollars in global commerce that traverses that river.

We strongly support efforts by you, Senator, and other members of the committee, to dedicate the harbor maintenance tax to ensure that those channels can be maintained and to also use those funds for beneficial use dredged materials, as Secretary O'Mara noted.

Senator, one of the other issues that I think is important to address is the accountability that you noted with the Corps of Engineers. In many Federal laws, including WRDA 2007, the Corps was directed, they shall perform certain actions by certain dates. The State of Louisiana, in many cases, depended upon those schedules. The Corps has had absolutely no accountability. In fact, since Hurricane Katrina, they have missed every single statutory deadline in WRDA or in appropriations laws, which total somewhere around 15 or 17 different deadlines, again, with no accountability, therefore disrupting our schedules and our budgets in the State of Louisiana.

As Mr. Turner noted, the role of partnership of the non-Federal sponsors is often relegated to a bystander. Yet we are responsible

for operations, maintenance, repair and rehabilitation and replacement of many of these projects, in fact, most of these projects. And we are forced to pay, or we do pay a most share on the construction of the projects. But again, largely relegated to a bystander status.

The last comment I want to make, Senator, this current project process and the tens of billions of dollars in backlogs in Corps projects, it leads folks in our States to a false assumption that these projects are going to be built. People have to make decisions on their homes, on their businesses, on their families. If there is a belief that the Morganza to the Gulf hurricane protection project is going to be built, people make decisions based upon that. And this whole situation of being in limbo I believe is even more dangerous than just telling folks, you are not getting a project. And this entire process needs to be expedited.

As you have said many times, Senator, the dollars are going to be spent, and they can be spent proactively with a much lower rate, or they can be spent exponentially more dollars coming in after the hurricanes and responding to those disasters in 2005, \$150 billion and so far with Hurricane Sandy an estimated \$60 billion.

Thank you very much for the opportunity to be here today. I would be happy to answer any questions.

[The prepared statement of Mr. Graves follows:]

***Oversight Hearing on Implementation of Corps of
Engineers Water Resources Policies***

Committee on Environment and Public Works
United States Senate

Prepared Testimony of:

Garret Graves, Chair

Coastal Protection and Restoration Authority of Louisiana

February 7, 2013



Introduction

Thank you for the invitation to testify today on behalf of the Coastal Protection and Restoration Authority of Louisiana (CPRA) and the citizens of our state. We appreciate this opportunity to share Louisiana's perspective on the efforts to update and improve the nation's water resources program. As you are well aware, Louisiana has had a great deal of experience with hurricane protection, flood control, ecosystem restoration and navigation issues over the years and we certainly recognize the importance of a strong federal partner in addressing these national priorities.

In the past seven years, Louisiana has faced the devastating impacts of Hurricanes Katrina, Rita, Gustav, Ike and Isaac and in 2011, record high water on the Mississippi River challenged flood protection systems statewide – resulting in one of the largest flood-fighting efforts in Louisiana's history. Further, our state continues to be at the forefront of the worst oil spill in the nation's history -- the Deepwater Horizon disaster. Nearly three years after the platform explosion and tragic deaths of 11 Americans, our state continues to experience re-oiling associated with this devastating oil spill. Today, over 200 miles of our coast remain oiled. These challenges that the State has faced in recent years have highlighted how incredibly important it is to both fund and execute effective preventative measures for flood control and coastal restoration to reduce overall costs to U.S. taxpayers, to improve the resilience of our nation's economy, to protect the citizens of Louisiana, to improve the health of our coastal ecosystem and to ensure the future of the best wild seafood Mother Nature has to offer.

I would first like to commend the comparative progress of the U.S. Army Corps of Engineers in accomplishing repairs and revisions to the Greater New Orleans Area Hurricane Protection System. While important milestones were missed, the job is far from over and we are not in agreement in all of the Corps decisions, the relative progress in restoring protection to this region has been impressive. What would have taken decades under the traditional Corps system, in about six years we have the best protection our region has ever had. And, the Hurricane Protection System has already begun paying off. An estimated hundreds of millions of dollars and numerous lives were saved just a few months ago as Hurricane Isaac came bearing down on south Louisiana.

Unfortunately, outside of the post-Katrina project implementation model, the Corps is a complete disaster. An outdated and inefficient project process, budget cuts, lack of accountability, rogue attorneys, and the rise of the bureaucratic morass has relegated the once-exemplary Corps to an entity incapable of progress.

A recent Harvard University study confirm our observations in Louisiana: "[t]he speed and efficiency of federal government action have declined dramatically in recent decades, threatening the ability of the Army Corps to execute its priorities."¹ This is chiefly due to an increase in the bureaucracy associated with implementing large scale engineering programs. The result of this bureaucracy is that Corps

¹ William Niebling, Jonathan Baker, Laila Kasuri, Sarah Katz, Kim Smet, "The Mississippi River," Harvard International Water Security Initiative, p. 13, available at http://watersecurityinitiative.seas.harvard.edu/sites/default/files/Harvard%20Water%20Federalism%20-%20Mississippi%20River%20Background%20Paper_0.pdf.

projects are structured in such a way as to require each project process or phase to be completed numerous times during the execution of a single project so that "it is possible to cycle indefinitely between stages, or become stalled at any particular stage."² This is especially concerning given that delays can cause what may have initially been affordable expenses to quickly grow out of control.³

Two examples of these circular processes from projects authorized in the Water Resources Development Act of 2007 (WRDA 07) include the Morganza to the Gulf Hurricane Protection Project and the Louisiana Coastal Area ecosystem restoration program. In the first instance, the Corps has spent an estimated \$72 million studying the Morganza to the Gulf project without building a single component. The project, or project components have been authorized by Congress for construction three times. Most recently, the Corps' cost estimate ballooned from \$886 million in WRDA 07 to in excess of \$12 billion according to their most recent reanalysis.

In the second example, the Corps spent an estimated \$100 million studying wetlands restoration associated with the Louisiana Coastal Area program and has not constructed a single restoration project authorized by Congress. Our state has lost an estimated 1900 square miles of coastal wetlands -- largely as a result of Corps actions -- and the Corps is doing nothing to stop the loss or restore the wetlands.

Delay and skyrocketing costs have too often been the hallmarks of Corps projects. These characteristics have repercussions far outside of the Corps of Engineers.

Disaster Prevention Versus Disaster Response

The Congressional Budget Office determined that every dollar invested in proactive disaster mitigation efforts results in three dollars in cost savings. A report for FEMA developed by the National Institute of Building Sciences found that up to four dollars in benefits resulted for every one dollar in hazard mitigation. We believe that the federal government would realize even higher rates of cost savings and benefits from proactive hurricane protection and coastal restoration investments in Louisiana.

Again, the performance of the New Orleans area Hurricane Protection System during Hurricane Isaac exemplifies the benefits of protection investments.

Rather than leaning forward, efficiently protecting communities around the nation, and aggressively seeking those disaster cost savings, our federal policies seem to prioritize disaster response over disaster prevention. This backwards approach is comparable to building a hospital next to an accident-prone crosswalk to treat victims hit by cars rather than spending a fraction of the dollars eliminating the risk through the construction of an elevated catwalk to cross the street.

I have heard many senior federal agency officials and Members of Congress say that the federal government simply cannot afford to fund projects to protect the most vulnerable American communities. The facts, common sense and sound fiscal policy prove otherwise. An estimated \$150 billion was spent responding to the 2005 hurricanes. Hurricane Sandy response efforts are already

² *Id.* at 13-14.

³ *Id.* at 18.

expected to exceed \$60 billion. The reality is that the funds are already being spent. Exponentially more dollars are being spent picking up the pieces after a disaster rather than on preventative measures that would have prevented the loss and destruction from ever happening.

Recent disasters in Louisiana prove this point.

Every consumer in the country has a stake in coastal Louisiana. One example is national energy implications of disasters in our state. A few days after Hurricane Isaac made landfall, gasoline prices spiked an average of 25 cents/gallon nationwide. This translates to consumers paying an extra \$100 million a day in higher gas prices. Following Hurricanes Katrina and Rita in 2005, consumers paid an estimated \$300 million a day in higher gasoline prices and the 2008 hurricanes (Gustav and Ike) caused consumers to incur over \$500 million a day in higher prices to fill their gas tanks.

In just the last 10 years, a fraction of the disaster response funding could have been proactively invested in hurricane protection, flood control and coastal restoration projects in Louisiana -- saving over 1,000 lives, preventing the displacement or evacuation of over one million Louisianans and protecting hundreds of billions of dollars in economic activity and infrastructure in south Louisiana.

Rather than suggesting that we cannot afford to invest in water resource projects, I would argue that we cannot afford to continue to be reactive. We must fundamentally reform this nation's water resources program in order to be responsive to the urgency of the threats we face and nimble enough to prevent impediments on our nation's waterways that obstruct commerce on the maritime transportation system.

First, Do No Harm

Following Hurricane Katrina, the State of Louisiana made fundamental reforms in our water resources program. We restructured state government and consolidated virtually all water resource missions into a new coastal office, the Coastal Protection and Restoration Authority. The governor and Legislature have entrusted the CPRA with billions of dollars in hurricane protection, flood control, non-structural and coastal restoration efforts. We also recently completed a new comprehensive master plan for coastal Louisiana that establishes a clear, prioritized, science-based vision for the future of our coastal area. Though the plan conveys a number of difficult decisions, this plan won the support of the oil and gas community, environmental groups, federal resource agencies and the unanimous support of the Louisiana Legislature.

Despite the exponential increases in state investments and our aggressive streamlining efforts, the unsustainable resource management practices of the Corps of Engineers continue to thwart our efforts. Today, the U.S. Army Corps of Engineers is the cause of the greatest rate of wetlands loss in the nation. That's right -- the federal agency that is responsible for wetlands protection is the source of the majority of the 1900 square miles of coastal wetlands that we have lost in Louisiana. The state continues to lose up to 20 square miles of coastal wetlands each year. Prior to the construction of levees on the lower Mississippi River system, the State of Louisiana was actually growing an estimated 0.75 square miles a

year. As the Corps itself concedes,⁴ one of the primary causes of coastal land loss in Louisiana is due to the construction of levees on the lower Mississippi River which have starved coastal wetlands from a crucial supply of sediment for decades. The Corps also refuses to limit navigation channels to their authorized dimensions. On the Gulf Intracoastal Waterway, for example, lack of bank stabilization has resulted in thousands of acres of private property being inundated and has allowed saltwater intrusion in many areas. The Corps' continued operations and maintenance practices on navigation channels and refusal to beneficially use their dredged material is one of the greatest ongoing threats to our state.

The Corps recently altered their wetlands mitigation methodologies in the New Orleans district to a Modified Charleston Method that triples mitigation requirements upon private citizens and levee districts in some cases. Meanwhile, the Corps has failed to carry out a single mitigation project for the extraordinary loss caused by their own actions and exempted themselves from complying with the new methodology for the post-Katrina work. The Corps has even annually ignored Louisiana's inconsistency determination under the Coastal Zone Management Act and refused to participate in mediation to address their unsustainable natural resource practices. Until the Corps is held to the same standard as anyone else in regard to mitigation requirements and respect of private property, the future of many areas of south Louisiana are in question.

Additionally, when non-federal entities, such as the State, have attempted to provide their own mitigation efforts to address damages from navigation channels by building sediment diversions off of these channels to support the sediment-starved coastal wetlands, the Corps has responded by arguing that the State must then dredge the river sediments that are deposited by natural water flow near the diversion. Thus the Corps has devised a brilliant strategy for supplementing their own operations and maintenance budget by siphoning money from these ecosystem restoration efforts (for diversions) to dredge navigation channels. The preposterous result of this strategy is that the Corps is demanding that the State mitigate for its mitigation projects. In reality such activities should clearly be funded from the Corps' operations and maintenance budget.

Delays, Costs and Lack of Accountability

While the Corps of Engineers must be commended for their relative expediency in conducting repairs and revisions to certain components of the Greater New Orleans Hurricane Protection System and praised for the performance of the system during Hurricane Isaac, a stark contrast lies in areas outside this levee system. In fact, an estimated 90 percent of the flooding that occurred as a result of Hurricane Isaac could have been prevented had the command simply completed authorized tasks. Let me repeat that for emphasis: an estimated 90 percent of the flooding that occurred as a result of Hurricane Isaac could have been prevented had the Corps simply completed tasks previously authorized by Congress,

⁴ "Another contributing factor in coastal land loss is the lack of sediment introduction by the Mississippi River to the neighboring ecosystems. Man-made structures along the river have resulted in a significant decrease in the natural introduction of river water to the neighboring ecosystems, which historically helped nourish healthy wetlands. Sediment deposits formed natural ridges and barrier islands that serve as south Louisiana's first line of defense against storm surge." Army Corps of Engineers Website, "Louisiana Coastal Area Ecosystem Restoration Study (LCA), available at <http://www.mvn.usace.army.mil/environmental/lca.asp>.

authorizations that the Corps either ignored or failed to complete. We can cite many examples, such as the West Shore project, first authorized for project development in 1971. The project has been in the Corps' "study phase" for over 40 years. Had the project been constructed thousands of homes would not have flooded and flooding of Interstate 10 and U.S. Highway 61 could have been prevented.

Several hundred million dollars for flood protection efforts in Plaquemines Parish have sat in Corps' construction appropriation accounts dating back to 2005 and 2006 with virtually no construction activities since that time. Less than six months ago many areas of Plaquemines Parish were also flooded by Hurricane Isaac. Another example includes lower Jefferson Parish. In this case, Congress authorized the consolidation and construction of several Corps flood protection projects (Section 205 projects) in the Lafitte area in WRDA 07. To date, the Corps has not taken any action to protect these residents despite repetitive flooding over the last several years -- each requiring millions of dollars in FEMA aid. Dewatering efforts in Lafitte continued for several days following Hurricane Isaac.

Every single parish in South Louisiana has an ongoing, bad example of Corps' delays and sky-rocketing costs. The southwest study (Calcasieu, Cameron and Vermilion parishes) is on track to be five years late in developing a final plan for coastal restoration and hurricane protection. The south-central study (Iberia, St. Mary and St. Martin parishes) was authorized in 2007 and has not begun. The lower Atchafalaya River Reevaluation report was completed nearly 10 years ago, but has not emerged from the Corps' processes. An estimated \$12 million dollars and 12 years were expended on the Donaldsonville to the Gulf study before the Corps determined to abandon the effort last year -- leaving a huge void in areas of St. Charles, Lafourche, St. John parishes and others.

Another example is the Mississippi River Gulf Outlet (MRGO) closure and restoration report, which was required under federal law to be submitted to Congress by May of 2008. Four years later, the report was released with the Corps threatening to abandon the congressionally-authorized project without a \$1 billion "voluntary contribution" by the State of Louisiana to the project. The Louisiana Protection and Restoration analysis and design was due to Congress in late 2007 pursuant to federal law. The Corps provided a response to Congress in 2010 that failed to answer a single question posed by Congress. Consequently, the report costs ballooned from the original estimate of \$8 million to over \$26 million.

In fact, the Corps has failed to comply with a single statutory deadline on any work in Louisiana since Hurricanes Katrina and Rita over seven years ago. Over 15 deadlines required under federal law on various proactive plans, reports and projects have been ignored by the command with zero accountability. Meanwhile, our state continues to flood and erode while FEMA spends billions of dollars reacting to hurricanes and flooding disasters. Numerous other misinterpretations of the law and regulatory obstacles have impeded state and local efforts to protect our citizens and restore our coast.

Unilateral PPAs

In 2007, Congress changed the name of the Project Cooperation Agreements to Project Partnership Agreements, or PPAs. Under the current terms of the Corps' Project Partnership Agreements, the Corps retains "exclusive control" over key terms of these agreements, in addition to general immunity, while

the non-federal sponsor's role is largely reduced to that of a bystander -- hardly that of a "partner". This prevents our ability to help keep projects on schedule and on budget.

It has also allowed the Corps to attempt to make unilateral determinations as to when a project segment is "complete" and becomes the responsibility of the non-federal sponsor.

The Corps' project completion determination process whereby once the Corps releases its contractor, it then tries to automatically turn the project segment over to the non-federal sponsor to trigger operation, maintenance, repair, replacement, and rehabilitation responsibilities for the project. But let me be clear, the standard and procedure for releasing a contractor under a construction contract is entirely separate and distinct from the standard and procedure for turning a project over to a non-federal sponsor. There is little to no correlation between a project segment established for contracting purposes and those related to actual project performance. Under this flawed scenario, there is no guarantee that the overall project will meet objectives once the Corps turns over final segments or the completed project.

For example, the Corps of Engineers has recently determined that it will transfer operation and maintenance of small segments of the New Orleans Hurricane Protection System to the CPRA and levee districts rather than waiting for completion of actual projects or polders. This is in light of the fact that, notwithstanding the "internationally acclaimed \$10 billion effort" to rebuild the New Orleans levee system after Katrina, the Corps' recent inventory of flood control systems has given this system a near-failing rating of "poor."⁵ In other recent examples, the Corps attempted to hand over project segments to the state then took them back to address engineering and seepage issues.

Further, attempting to coordinate the management of adjacent polder or project segments of a levee or floodwall during a severe weather event by different organizations only creates more obstacles to effective and efficient protection of communities. This Corps policy is a dangerous precedent that could be expanded to other areas of the country. Congress should provide strict guidance to the Corps on the transfer of responsibility for completed projects that are designed holistically to provide independent function or utility to ensure consistent management of protection infrastructure.

Furthermore, the Corps refuses to provide terms in the PPAs that would give non-federal sponsors the ability to audit the Corps in the same manner that the Corps has the ability to audit the local sponsors. In particular, the Corp contracts contain numerous provisions that allow them review the items that the State submits for crediting and have wide discretion to reject items for credit which the Corps determines are not "reasonable" expenses. Non-federal sponsors have no such rights, including even the simple right to audit the Corps expenses. The Corps has repeatedly indicated such non-federal sponsor auditing is not permitted under the Corps' "long standing policy" to prohibit auditing of their records and more particularly, to exclude the local sponsor from reviewing the "reasonableness and

⁵ Mark Schleifstein, The Times Picayune, Aug. 29, 2011, available at http://www.nola.com/environment/index.ssf/2011/08/new_orleans_levees_get_a_near-.html.

allowability” of their expenses. While the Corps has also suggested such auditing and review would violate the appropriations and appointments clauses of the U.S. Constitution because it would involve non-federal entities in matters of federal appropriations, the Corps has even rejected suggested PPA provisions that would not allow the non-federal sponsor to prohibit project expenditures but simply allow audits to determine the reasonableness, allocability, and allowability of the costs, in which the non-federal sponsor typically shares 35% of the costs. Nonetheless, auditing provisions are allowed in cooperative agreements with other federal agencies who partner with the State of Louisiana on other restoration efforts.⁶ Such review would provide an additional check on cost and time overruns by the Corps on projects. Congress should therefore require the Corps to provide local sponsors the ability to review and audit the Corps expenses.

Crediting

Likewise, the Corps should be required to clarify its crediting procedures which should encourage non-federal partners to work with the Corps to fulfill the goals of federally authorized water resource development projects. Specifically, Congress should clarify that crediting for in-kind contributions by a non-Federal sponsor which are integral to a project and eligible for credit should be allowed for work performed both *before* and *after* the signing of a PPA. First, if a non-federal sponsor is prevented from obtaining credit for work on projects prior to the execution of a PPA, this could either divest a non-federal sponsor from reimbursement for work that should rightly be credited simply because it is performed early or could increase delays in the project process while the sponsor waits for credit eligibility. Second, because it is often the case that a majority of the non-federal sponsor’s work occurs after the signing of a PPA, if such work is not credited the costs for the non-federal sponsor could become prohibitively high. It is also important that Congress clarify that credits may be transferred between projects so that non-federal parties will be encouraged to maximize their efforts to support the Corps’ work and to acknowledge their contributions in doing so. The goal of clarifying crediting parameters is essential to facilitating construction that is urgently needed for these projects in a manner that is fair to all parties.

Conclusion

We are here today because it is clear that there are numerous issues which need to be addressed with regard to the Corps’ performance which have not been fixed in the years since Hurricane Katrina brought these issues to the forefront of national attention. If we do not take action to fix these problems, this would amount to an admission that the process is working – which it clearly is not. If the Corps’ process works, Congress should impose it upon every other federal agency. In fact, no other agency employs such a bureaucratic approach to project development and implementation.

⁶ Various agreements with NRCS, USGS, EPA and USFWS contain the following provisions under articles usually entitled “State Review of Records”: “CPRA shall have the right to conduct an audit, when appropriate, of [federal agency]’s records for the Project to ascertain the reasonableness and allowability of its costs for inclusion as credit against the federal share of Project costs.”

The Corps must be forced to comply with existing laws rather than allowing the tail to wag the dog -- the Corps attorneys repeatedly thwarting the intent of Congress and inventing new legal obstacles that ostensibly require some "legal fix" in a future water resources act. Resolution to crediting, clarifying conditions for transfer of completed projects or polders, accountability to deadlines, 902 fixes, levee certification, vegetation policy, putting non-federal sponsors on a level playing field, auditing project costs and other fixes are certainly important, but even the cumulative benefit of these issues could be comparable to putting lipstick on a pig. The reality is that the entire process is fatally flawed. These incremental reforms will never put the Corps of Engineers on a trajectory to eliminate the backlog and perform efficiently.

The next Water Resources Development Act should:

- 1) Include programmatic authority for water resources projects that meet certain national benefits related to economic, ecological, loss prevention, National Flood Insurance Program liability reduction and lower Stafford Act liability. Billions of dollars in projects that fail to meet the criteria should be eliminated from the backlog.
- 2) A project development and implementation process that encourages rather than discourages adaptive management to provide for the greatest efficacy of project performance.
- 3) A predictable, dedicated revenue stream should be established based upon a certain estimated reduction in liability to the Stafford Act/Disaster Relief Fund and the National Flood Insurance Program. Other investments like pre-disaster mitigation and hazard mitigation grant program funds should be coordinated to address highest priority investments. Wetlands mitigation funds should be pooled to achieve greater net benefits. Potential partnerships with private insurers, mitigation bankers and other ecological credits should be considered.
- 4) Require the Corps to mitigate for wetlands losses and encroachment on private property (embankment stabilization) just as is required of everyone else. The Corps must first do no harm to our sustainability.
- 5) Dedicate the Harbor Maintenance Trust Fund for navigation and beneficial use purposes. Our navigation channels are the most efficient means of transportation in the nation. We need to do all we can to ensure authorized channel dimensions.
- 6) Establish a true partnership between the Corps and non-federal partners rather than relegating states and local governments to bystander status.
- 7) Hold the Corps accountable to project and actuarial milestones that reduce risk/liability and improve community, economic and ecological resilience.
- 8) Establish a separate Corps administrative fund that transparently shows the Corps administrative costs and eliminates the current process of billing project and study funding. The current practice creates an incentive for the Corps to perpetually keep a project in study or construction phase in order

to continue billing staff time and expenses to a project. Project completion rather than infinite studying should be incentivized.

9) Provide incentives for state and local governments and tax incentives for private citizens to reduce risk and liabilities associated with the National Flood Insurance Program, Disaster Relief Fund/Stafford Act and the federal treasury.

Several billion dollars in projects have been identified for implementation. These authorized projects have been subjected to years of studies, planning, public comment, environmental reviews and other processes. In Louisiana, outside of the post -Katrina HPS repairs and revisions virtually no construction funding has been made available for any of these hurricane protection, flood control or coastal restoration programs in the last several years. Stakeholders in these authorized projects often base fundamental decisions upon the efficient and successful implementation of such projects. Decisions such as whether to continue living in a newly flood-prone area, whether to elevate a home, economic development decisions, public infrastructure investments and others are all predicated upon these projects. The uncertainty and unpredictability associated with a project in limbo could be even more dangerous than not providing protection or restoration at all. Our citizens deserve some predictability or certainty on project schedules.

The fact of the matter is that the Corps' actions to impede state and local efforts, project inaction and their hypocritical position on wetlands mitigation do not serve to save the federal government money or better protect the public. In fact, they actually expose the federal government to greater Stafford Act liabilities by increasing the probability of homes flooding, of more families being displaced, a greater number of businesses being destroyed, adversely affecting employment opportunities, causing a declining ecosystem and reducing economic activity through business interruption. Further, the Corps' failure to properly maintain the navigation channels that it has constructed through Louisiana's fragile wetlands is generating millions, if not billions of dollars in costs for the state. Common sense, which the American people are more swiftly demanding of our leaders, should lead the Corps and the federal government to take preventative measures to prevent billions of dollars in damages before future storms have the opportunity to create them.

The arrogance and complete disregard for Congress and federal law by the Corps of Engineers must stop. In recent years, a number of new military leaders within the Corps appear to recognize the fundamental problems within the command. While these developments are cause for optimism, the systemic nature of these problems and the bureaucratic resistance to change will require the direct involvement of the White House and Congress to solve.

Again, thank you for this opportunity to testify today. I look forward to your questions.

Senator VITTER. Thank you, Garret.

I have a few questions and then we will wrap up. Garret, you correctly noted that the normal Corps project authorization and construction process is the most cumbersome, the most multi-layered of any model I know of, Federal Government, any other type of entity.

To all of you, what would be an alternative model, from government or from any other appropriate sector, to use instead? That is No. 1. No. 2, specifically, react to this thought because Senator Bill Nelson and I have been working on it, which is, for appropriate Corps projects, to allow the State and/or local sponsor, non-Federal sponsor, to be the lead agency, to be the project manager, if you will, rather than the Corps, much as we do almost always with highway projects. We have a Federal Highway Administration. It is not the lead agency or the project manager for Federal highway projects. The State DOT or a local entity is. If anybody wants to respond.

Mr. GRAVES. Senator, I would just quickly say that I think the Federal Highway Administration model that you noted, and in fact, this committee has jurisdiction over, is a perfect example of an alternative approach that yields much greater efficiencies in terms of schedules and dollars. I have reviewed draft legislation and I think the approach that you and Senator Nelson are working on, it is extraordinary, it is exactly what needs to happen and will result in saving lives and saving millions of dollars for this Nation.

I also want to make note, Senator, even alternative Corps project implementation processes, like currently being put in place in Hurricane Sandy, and also after Hurricane Katrina, the Corps of Engineers actually did a pretty good job under the alternative process. But the current one is clearly broken.

Senator VITTER. Anyone else?

Mr. O'MARA. I would like to agree with my colleague, because I think Mr. Graves is exactly right. Some existing authorities that we have been able to relax a little bit after some of these storms to get projects on the ground quickly have worked. We have seen some good projects come out of it. This process that I am talking about, this regional sediment management idea, we have been working very closely with our shoreline administrator, Tony Pratt, who is sitting behind me. This idea of trying to look at the region and identifying multiple needed at the same time, run the projects together and move toward more of a design-build type of approach like we used for all kinds of local projects, can make a lot of sense.

The analysis is extremely important, but if it leads to paralysis and avoids putting a project on the ground, as Mr. Graves said, that is actually impacting the local residents' ability to make decisions.

Then the idea of the lead agency, it is an interesting idea. We are finding ourselves more and more having to take that kind of responsibility for navigation projects as secondary waterways in Delaware that have traditionally been under the Corps' auspices, there is no funding for those projects, but yet there are still local needs. So I think there is a conversation to be had there on the transportation ideas are interesting. I think we do have the ability to deliver projects very quickly at the local level, if we had some

Federal support, Federal permits, things like that. So I appreciate the suggestions.

Senator VITTER. Great. Thank you. Anyone else?

Mr. JOHNSON. I would just like to add, over the years, the Corps has put in so many checks and balances in their process that they have kind of added up and I believe added to the time and process. We have reached a point where we are making all of our decisions based on a benefit cost economic decision instead of also including other factors that need to be involved.

I think if we were to reduce the amount of time, just nailing down all the little details on the benefit cost ratio and include other things like loss of life, other factors that are very important in there, that we should be able to reduce that time in the process and reach conclusions quicker, then make those decisions and move forward.

Senator VITTER. Great. Bob.

Mr. TURNER. I would like to also strongly agree with the others that have spoken about this. I really like the idea of using that transportation model for a number of reasons, one of which is it brings a lot of focus to the flood control work projects. In particular it makes it clear that they are part of our infrastructure and perhaps would give us a better way to dealing with the long-term operations and maintenance of those types of things.

Senator VITTER. Great. Several of you also talked about wetlands mitigation, huge challenge for us in Louisiana, particularly with this new Modified Charleston Method. Do you think it is appropriate that when you all are building a flood control or wetlands protection project, you don't get any credit for that, you essentially have exactly the same burden as, say, a private developer, paving over and creating a huge new parking lot for a shopping center? Do you think you should get any credit for the fact that your project is protecting against flooding and preserving valuable wetlands, which clearly just won't be there but for doing this work?

Mr. TURNER. I would like to address that. We have jurisdictional authority over several levee districts that are in the coastal area and border on the coast. Some of those districts are losing wetlands at an alarming rate, which will impact the new flood protection system that we have in the New Orleans area and is going to, over time, as those wetlands degrade, the level of protection that they are providing today will not be there.

So I think we all recognize that we have to do something to protect Louisiana's coast. But we also have to protect the people that live there. I think it is a matter of setting priorities, when we look at the tradeoffs between building flood control projects and dealing with some of these issues of coastal protection and restoration.

I think, and I have seen things that have been done that I believe will work to accomplish both, where we can actually build flood control projects and, at the same time, protect those really vulnerable areas of our coast that, without a doubt, in 10 years will not be here unless we do something to provide some type of barrier against the storms that come in on a regular basis, and just the normal everyday wave action.

So there is feeling among many of the coastal levee districts that not enough emphasis is given to the value of food control projects

in that regard, as far as being able to protect wetlands. I think that is one of the things that the Corps should take a look at when they go back and look at the Modified Charleston Method, to make sure they can capture that when they determine what exactly needs to be done in order to mitigate for those unavoidable impacts.

Senator VITTER. Anybody else?

Mr. GRAVES. Senator, I think that Secretary O'Mara noted the role of the various types of projects. I think that wetlands certainly play an important role and shouldn't be discounted. But at the same time, it is fascinating to see how important wetlands are to the Corps of Engineers in their regulatory program, yet on their operations and maintenance they cause literally a dozen square miles per year in loss and they don't do anything about it. So the hypocrisy here is rather extraordinary.

I do think that there are better ways to approach this, perhaps more holistically. There are a number of ecosystem restoration projects that are designed to restore wetlands and I think that perhaps looking at more of a pooling approach of resources could be a much more efficient model, while resulting in lower costs to the Federal Government and greater overall ecological productivity.

Senator VITTER. To follow up on that, shouldn't there be some way, at least for coastal parishes or counties, to be able to put mitigation requirements on the coast, to be able to fund those projects you are describing, which at least in the case of Louisiana are keyed up and ready to go? Unfortunately, under the present system, those two worlds hardly ever meet. There are enormous mitigation requirements for everything you do in South Louisiana.

But rarely, if ever, does it have any impact on the leading true wetland crisis in Louisiana, which is a vanishing coastline. There must be a way to marry those two.

Mr. GARRET. Again, it is great to have a good prop here, Secretary O'Mara, who by the way confided in me that he has had multiple cosmetic surgeries and he is really 82.

[Laughter.]

Mr. GARRET. He talked about breaking down these stove pipes between the various programs. This is a perfect example. We actually have situations where the Corps disposes of sediment through their dredging program and then demobilizes the dredge. We hire a second dredging company to come pick up and move the exact same sediment for restoration projects.

Mr. O'MARA. We completely echo the same comment. We have even had the same experience that Louisiana has had up until fairly recently. Obviously we have had subsidence issues and erosion and more intense coastal storms. But I think more and more local residents are seeing the value of these ecological restoration projects as that front line of defense.

There are some studies out there that if we just have a half-meter of sea level rise over the next century, because there is 11 percent of the land mass in the State of Delaware. So this idea of having additional sediment coming into these systems, and Garret is exactly right, there are these cases where we are trying to restore coastal impoundments, put additional sediment in, and it is the same sediment that right now would go to a disposal facility and have no value at all, treated like a landfill, basically.

So if there was additional authority, a lot of times the cost, the additional cost to have that sediment used to protect the wetland might be maybe 10 percent of the original project cost. But because it doesn't meet that least-cost alternative, it will either go overboard or into the containment facilities. So if there is any flexibility provided through WRDA to let folks make that academic argument, because you can avoid the entire other project, which needs mobilization and permits and everything else. We would save millions of dollars, easily, every year, in pretty much every State that has this kind of work done.

Senator VITTER. Great.

I want to thank all of you again, not just for your testimony, but for your ongoing work. We will depend on your input and insights as we continue to put together the next WRDA.

Thank you very, very much. With that, this hearing is adjourned.

[Whereupon, at 1:04 p.m., the committee was adjourned.]

[An additional statement submitted for the record follows:]



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**Statement of the
American Shore & Beach Preservation Association
On the Water Resources Development Act of 2013
Senate Committee on Environment and Public Works
February 7, 2013**

OVERVIEW

- **INTRODUCTION:** The American Shore and Beach Preservation Association (ASBPA) advocates for policies that benefit the communities and resources of coastal America. ASBPA fully supports the commitment of the Committee to pass a WRDA bill this year.
- **REGIONAL PROJECT PLANNING AND IMPLEMENTATION:** Every coastal region has unique resources and challenges. It is time to cease planning, investing, and managing individual USACE projects. The development of a regional coastal policy provides the cohesiveness and cost-effectiveness that is not possible using a project-by-project procedure.
- **THE ROLE OF CONGRESS:** While there is debate as to the wisdom of the elimination of earmarks, it is both unwise and detrimental to apply that prohibition to the civil works program of USACE. Corps project follow several steps before they are eligible for construction. ASBPA strongly believes that the authority to make those decisions should remain in the hands of Congress, and not the Administration.
- **ARBITRARY POLICIES ARE UNDERMINING THE NATION'S WATER RESOURCES PROGRAM:** OMB is currently using an arbitrarily-determined Benefit-Cost Ratio (BCR) of at least 2.5 to 1 as its standard for determining whether a project may be included in the President's Budget or USACE Work Plan. The Administration also decided to oppose funding for almost all new studies and construction. ASBPA urges the Committee to include a provision that calls for an end to the use of these two pennywise but pound-foolish budget policies.
- **SHORE PROTECTION PROJECT EXPIRATION:** Under WRDA '86, most coastal protection projects constructed by the Corps are authorized for a construction period with federal cost-share participation for up to fifty years. There are several beach projects that are rapidly approaching the end of this fifty-year period. Without a statutory procedure to continue federal fiscal participation, these projects face a cut-off in their federal funds and the loss of their ability to provide the quality of protection that is possible only with federal assistance.

INTRODUCTION

The American Shore & Beach Preservation Association (ASBPA) is comprised of coastal communities throughout the nation, as well as a large contingent of coastal engineers, researchers, scientists, and regulators. Together, we are dedicated to advocating for those policies that benefit the communities and resources of coastal America. We do not support nor oppose specific water resources projects. However, we do advocate for policies that recognize the importance of America's coastal water resources, because what happens along our coasts is inextricably linked to the health and welfare of all 50 states.

Senator Boxer, as chair of the Senate Environment and Public Works Committee, ASBPA is especially appreciative of your leadership on water resources and your commitment to passage of a Water Resources Development Act. We are grateful that you have been joined by Senator Vitter, the ranking Republican on the committee this year, and his predecessor, Senator Inhofe, who we are delighted has remained on the committee.

It has been more than five years since Congress last passed a Water Resources Development Act (WRDA), and the programs and policies that impact America's coasts are in desperate need of revision. Hurricane Sandy is the latest in a series of natural disasters that have sadly highlighted the vulnerability of American coastal regions to severe storms. What Sandy also demonstrated is that the rather modest investment that the Federal government and its non-Federal partners have made in strong dune systems and healthy beaches was repaid many times over. In the years ahead, there will be more tropical storms, northeasters, and El Niño events that will threaten lives, safety and property along the coast. Their potential impact will continue to increase as our coastal population and economy expand. ASBPA believes in the necessity of investing wisely in the Nation's future. We fully support the commitment of the Chair and Ranking Member of this committee to pass a WRDA bill as soon as possible; and appreciate the opportunity that today's hearing affords to put forth the key provisions we urge you to include, which will provide resiliency, sustainability, and efficiency in management for our coasts.

REGIONAL PROJECT PLANNING AND IMPLEMENTATION

We are now reaching a critical juncture in the Corps' long history, where the growing backlog of navigation and flood protection projects exposes the vulnerability of our nation's water resources, particularly its coastlines. As the number of unfunded and underfunded projects grows, and existing projects begin to expire, our nation's coastal health and long term economic capacity for growth is reduced. At a time when our country needs the Corps to redouble its efforts to invest in the future, the Corps is facing unprecedented funding cuts.

ASBPA's belief in the importance of investing in the future comes from an understanding of the seriousness of America's current fiscal situation. Our growing debt necessitates more careful spending on projects that will act as investments for the future. Congressional support for important coastal protection projects helps to protect thousands of communities from flooding and erosion, saving lives and money. One of the lessons to be learned for this increasing need to spend taxpayer money more wisely is that the Corps must adopt a system that plans, manages, and funds these important water resources projects more efficiently.

Nowhere is this need to increase efficiency more apparent than on our nation's shorelines; where inlets, rivers, wetlands, and beaches form complex sediment ecosystems. The interrelated nature of sediment deposition and

alongshore movement of sand on beaches is often compromised by human activities, and the high protective and environmental values that these features provide are diminished or lost. Sediment residing on eroding shorelines should naturally make its way downstream. However, jetties and manmade inlets often disrupt this natural sediment cycle, which causes dangerous erosion on downstream shorelines. The degradation or loss of natural coastal features such as dunes, beaches and wetlands results in increased storm damage to manmade infrastructure and natural resources, costing the nation millions in response and recovery from storms, diminished biological production from degraded wetlands, and tremendous human suffering. Hurricanes Katrina, Ike, Andrew, and Sandy are prime examples of this problem.

Section 2037 of the Water Resources Development Act (WRDA) of 2007 granted the Corps the authority to plan and undertake, where appropriate, coastal navigation, shore protection, and environmental restoration projects on a regional basis, rather than just project-by-project. However, it is severely limited in that it only applies: (a) where there is a federal navigation project; and (b) where there is sufficient sediment available from the dredging of that project to meet the regional water resources planning and management needs. As enacted, it is a well-intentioned effort to increase opportunities for the beneficial use of sediment obtained from the dredging of federal navigation channels, but was placed under the limiting umbrella of the Corps' Continuing Authorities Program. These good intentions were further restricted by the adoption of internal guidance by the Corps that prohibits using available supplies of offshore sediment to supplement the sand dredged from navigation channels in order to accomplish the single goal of repairing erosion. Assessments conducted at several levels on the cost effectiveness of treating sediment, once removed from a channel, as a potential resource are hindered by the limited benefits analysis by the Corps. Every penny of cost is accounted for, but only a limited glimpse of benefits is allowed to compare against those costs. The decision to maintain navigable channel depth, for instance, is based solely on the tonnage of commercial product(s) on that given waterway per year. No assessment is done on other commercial or recreational uses, and no analysis of the monetized benefits that would accrue from using dredged material for enhancing an eroded beach or degraded wetlands are considered. Yet the Corps and its customers know that these are very valuable by-products of channel maintenance work. Modernizing the Corps by mandating it to inform appropriators so they can make better decisions about supporting projects will result in improved and more efficient projects for the Nation.

This restriction hamstring non-federal interests and the Corps in making sure the multiple purposes of reducing coastal hazards, using adaptive management for existing projects, coordinating new and existing water resource projects to save significant taxpayer costs, and assuring that the impacts of planned or existing projects have a beneficial, rather than a harmful, impact on environmental resources. Section 2037 also limits affected stakeholders from having adequate input in the planning and management of federal water resource projects.

What has been referred to as Regional Sediment Management should instead be called what it is: Coastalshed Management. Within every coastalshed there are diverse economic and ecological resources and challenges. It is time to cease planning, investing and managing individual Corps coastal projects. Regional alliances of coastal states with significant coastal missions, which are supported by the Corps and other federal agencies, will allow federal, state, and local governments, together with key private sector stakeholders, to determine the water resources needs of the region and their prioritization. Equally important, if not more so, this approach will enable the development of a regional coastal policy cohesiveness and cost-effectiveness that is not possible using a project-by-project line of attack.

We know these are ambitious objectives, but the lessons of the past several years show that the congressional mandate to achieve them should be included in the WRDA bill this committee recommends. We also urge the

adoption of rather modest changes in Section 2037 that will immediately lead to the cost-effective and environmentally sensible uses of our nation's scarce supply of sand. ASBPA is grateful to Senator Carper for his leadership on this issue. We offer our continued assistance to him and to the entire committee to promote an end to the stove-piping of projects and policies that are detrimental to the health and welfare of the nation's coastal regions.

THE ROLE OF CONGRESS IN MEETING THE NATION'S WATER RESOURCES NEEDS

The federal government no longer has the fiscal capacity to meet the same level of water resources needs it has supplied over the past 50 to 100 years. Nevertheless, it is up to the federal government to provide the vision and leadership to achieve that goal and meet those water resources needs over the remainder of this century. Both the policies and funding to implement that vision are in the hands of Congress. Unfortunately, Congress delegated most of the funding decisions to the President when it abolished "earmarks." While there is debate as to the wisdom of this action, it is both unwise and detrimental to apply that prohibition to the civil works program of the Army Corps of Engineers.

To be eligible to be included in the Corps' budget, a study or a project must be authorized by Congress. The two dozen steps (which, in actuality, are closer to ten times that number) required to get through the feasibility study process are rigorous, costly, and time-consuming. To give this or any other Administration the authority to determine which studies and projects to fund is to give them the power of the purse that our Constitution has laid upon the shoulders of the congressional branch.

The same can be said of the authorization process. Every proposed Corps project must successfully go through all of the required steps, including mandatory internal and external reviews and approval by the Chief of Engineers, before it is eligible to be constructed. There is no reason to consider the final determination of such eligibility, let alone the initiation of the study process itself, to be an earmark. ASBPA commends this committee for its efforts to overcome the authorization logjam. However, we strongly urge that the authority to make authorization decisions remain in the hands of Congress and not the Administration. The best available short-term solution should be based on the approach taken in the recently-passed disaster relief bill. Any project that has been determined by the Chief of Engineers to be cost-effective, environmentally acceptable, and technically feasible should be deemed eligible to receive construction funding from Congress, subject to the availability of funds. Similarly, to assure that new studies can be initiated, we urge the committee to establish a New Starts Fund that, subject to the availability of appropriations, will enable the Corps to use current procedures to respond to requests to study emerging water resources needs.

ARBITRARY POLICIES ARE UNDERMINING THE NATION'S WATER RESOURCES PROGRAM

Under law, Corps projects must produce \$1 in benefits to federal taxpayers for every \$1 they cost. However, the Office of Management & Budget (OMB) is currently using an arbitrarily-determined Benefit-Cost Ratio (BCR) of at least 2.5 to 1 as its standard for determining whether a project may be included in the President's Budget or the Army Corps of Engineers' Work Plan. ASBPA contends that the use of this BCR is both subjective and inappropriate.

Under the mandate of the *Principles and Guidelines* for the planning of water resources projects, the Corps of Engineers planning process calls for the formation of an alternative plan labeled the "National Economic Development (NED) plan." The NED plan maximizes the net contribution (or benefit) to the national economy, but does not necessarily result in the highest BCR. Given that the Corps plans its projects to the NED standards, it is inappropriate to establish budgetary priority or identify the best projects on the basis of the highest BCR.

Some areas of the Corps' water resources responsibility benefit greatly from the use of BCR. Deep draft navigation projects, for example, receive tremendous net benefit from each additional inch of depth. This makes it easy to maximize BCR. However, for flood damage reduction projects, including shore protection projects, selecting less than the NED plan is problematic. Opting for lesser levels of protection in order to have a higher BCR and improve chances for budgeting would only increase risks to life and safety. The use of the BCR to decide which flood protection projects get funded provides a perverse incentive for the Corps that may endanger communities across the country.

Several years ago, the Administration decided to oppose funding for almost all new studies and new construction. More recently, Congress has adopted this approach. It seems reasonable to prohibit "new starts" when there is a so-called "backlog" of work to be completed. Under the leadership of Major General Michael J. Walsh, the Corps' Deputy Commanding General for Civil and Emergency Operations, much of the "backlog" is being proposed for deauthorization or placed in "inactive" status. These decisions are being made through a rational process as opposed to the arbitrary mandate to prohibit all new starts. Our nation's water resources needs are not static. Old locks must be modernized; ports need to be deepened to meet current economic conditions; levees need to be surveyed and repaired; and new flood protection measures need to be undertaken. It is, of course, more difficult to make decisions about prioritization and funding that are not based on arbitrary policies, but it is critical that the necessary time and thought be given to these choices.

ASBPA urges the committee to include a provision within its proposed WRDA bill that calls for an end to the use of pennywise but pound-foolish budget policies such as the two we have just cited. Their very existence has made it difficult to do the type of forward-looking planning and decision-making that is so needed.

SHORE PROTECTION PROJECT EXPIRATION

Another important initiative this committee can take to assure the goals of coastal sustainability and resiliency are attained is to adopt a procedure to enable the evaluation and authorization of those coastal protection projects whose period for Federal fiscal participation is about to end. Under the Water Resources Development Act of 1986, most coastal protection projects constructed by the Army Corps of Engineers are authorized for a continuing construction period with cost-sharing participation by the federal government for a period of up to fifty years from the start date of initial construction of the project. Unlike other water resources projects that can be constructed immediately, coastal protection projects are designed so that they can be nourished every few years to maintain the level of storm damage protection for which they are designed. The commitment Congress makes is to pay for a substantial portion of the renourishment costs over that fifty-year period.

There are several beach projects that are rapidly approaching the end of this fifty-year period of federal fiscal participation, including one whose fifty years expire in 2015. The Corps currently lacks the statutory authority to conduct an evaluation to determine whether or not it is feasible to reauthorize federal participation in these

projects. Without a statutory procedure to continue federal fiscal participation, these projects face a cut-off in their federal funds and the resultant loss of their ability to fund projects that provide the quality and degree of protection that is possible only with federal assistance. ASBPA supports the enactment of a straightforward evaluation procedure to determine whether continued sharing in the cost of maintaining that critical level of protection is recommended.

Sec. 2025 of the WRDA discussion draft prepared by committee staff last year would have taken a major step in achieving that objective. It allows the Corps to determine if there is a federal interest in continuing fiscal participation in those projects using a process that is based on science, local support, and the rigorous standards the Army Corps uses for determining whether continued federal participation is warranted. Unfortunately, that provision would have limited additional federal support to up to fifteen years of additional construction, rather than the full fifty years. Providing such a limited period will not afford states and local governments sufficient time to develop and implement the measures that will increase the resiliency and sustainability of their coasts. When added to what has been the substantial number of years of evaluation the Corps process has required, such a short period will also not be cost-effective for both federal and non-federal project partners. Therefore, we urge the committee to include a provision that will enable continued federal fiscal participation for fifty years.

CONCLUSION

ASBPA appreciates the opportunity to provide the committee with its views. We would be happy to offer you and your staffs the assistance of our members; including coastal scientists, engineers and managers; as well as state and local government officials and other community leaders.

