LOUISIANA COASTAL AREA–ADDRESSING DECADES OF COASTAL EROSION

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WATER RESOURCES AND ENVIRONMENT

OF THE

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INFRASTRUCTURE
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LOUISIANA COASTAL AREA—ADDRESSING DECADES OF EROSION

THURSDAY, JULY 15, 2004

HOUSE OF REPRESENTATIVES, COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE, SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT, WASHINGTON, D.C.

The subcommittee met, pursuant to other business, at 9:55 a.m. in room 2167, Rayburn House Office Building, Hon. John J. Duncan, Jr. [chairman of the subcommittee] presiding.

Mr. DUNCAN. We're going to start the Committee hearing a few minutes early here, and start with opening statements in regard to a very important project, the Louisiana Coastal Area.

I want to welcome everyone to our hearing today. We will examine the draft recommendations of the Army Corps of Engineers to address decades of coastal erosion in Louisiana. Last week, the Corps of Engineers released a draft report on the Louisiana Coastal Area, Ecosystem Recreation Study that recommends projects and programs that could be carried out within 10 years. The total cost of these recommendations is $1.96 billion, and it will address the erosion problems of this important region. This is one of the larger projects that we're having a series of hearings, in regard to a lot of larger projects that Army Corps and EPA and other agencies are working on around the country.

A final Chief's Report is expected by the end of this year. This Committee will consider the recommendations when we have the Water Resources Development Act conference with the Senate this fall. The Louisiana Coast consists of vast areas of wetlands, including lakes, bays, swamps, marshes, bottom land forests, coastal beaches and barrier islands. The coastal wetlands of Louisiana are among the Nation's most productive and important natural resources. The region contributes nearly 30 percent by weight of the total commercial fisheries harvest in the lower 48 States.

There is approximately $100 billion worth of critical energy, transportation and industrial infrastructure in the Louisiana area, including 1,800 miles of navigation channels, 4,200 miles of pipelines, several large refineries, and 2,500 miles of highways.

The barrier islands and marshes of the coastal areas serve as a buffer, protecting the infrastructure in communities against storm events. But this protective coastline has been eroding at an alarming rate, putting these natural and man-made resources at risk. The barrier islands, swamps and marshes of coastal Louisiana are rapidly eroding into open water. The Louisiana coastal wetlands once covered more than 4 million acres. The Corps tell us that in

the past 70 years, over 1 million acres have been lost and if corrective action is not taken, another 328,000 acres will be lost in the next 50 years.

The Corps has focused its planning efforts on stabilizing shorelines and reintroducing fresh water and sediment to the coastal region. This is not an easy task.

I'm pleased to see that the Corps has recently issued a draft report that recognized a plan that could hopefully be accomplished in 10 years. Many uncertainties remain about how to stop wetlands loss in coastal Louisiana while at the same time maintaining navigation and flood control in the region. This short term plan will provide lessons that will guide the Corps in planning the longer term solutions in the future.

There are some questions and concerns that I hope our witnesses today will be able to address. I would like to know just what we will get for nearly $2 billion. As all of us know, we have project requests, major project requests from all over the Nation. And certainly funds are not unlimited.

What difference will we see in the erosion rate? What is a reasonable ultimate goal that we should be striving for? How much bang will we get for our buck, in other words? Will the short term plan reverse the trend of land loss in Louisiana? Should the standard cost sharing of 65 percent Federal and 35 percent non-Federal apply in this case? And if not, why not?

What effect will moving some freshwater out of the rivers and into the marshes and bays have on existing oyster grounds and commercial and recreational fishing areas? Will this project preserve the benefits of the flood control and navigation projects that sustain the economy of this region and the Nation?

Finally, as I pointed out when this Subcommittee was recently reviewing the proposed ecosystem restoration measures for the Upper Mississippi River, we don't have a method for ranking ecosystem restoration investments on a national level. How important is restoring the Louisiana coastal area compared with other priorities, such as the project for restoring the Upper Mississippi River that we reviewed last month, or the project for restoring the Indian River Lagoon estuary in Florida, the work down in the Everglades that we will be reviewing next week?

Before we get to our distinguished witnesses, I would like to turn to my colleague and Ranking Member Mr. Costello for his opening statement at this time.

Mr. COSTELLO. Mr. Chairman, thank you, and I want to thank you for calling this hearing today on proposal by the Army Corps of Engineers to restore the Louisiana coastal area. For the past century, the Louisiana coastal region has witnessed the loss of thousands of acres into the Gulf of Mexico due to natural and manmade factors. Mr. Chairman, the challenge now is how to best address this problem while at the same time maintaining the essential flood protection and navigation projects that have been constructed in the region.

Today we will receive testimony from a variety of individuals and stakeholder groups from the region who will comment on the Corps' proposed plan for restoration of the Louisiana coastal region. The Corps' plan has been characterized as the initial effort towards res-

toration, estimated at a cost of $1.9 billion, with the likelihood that additional projects will be needed to construct and to the constant maintenance that would be necessary to reverse the loss of coastal lands.

Another major question that will need to be addressed is how to equitably allocate the cost of restoration work within the region in light of the unique location, nature and utilization of the study area as a key navigation corridor and important oil and gas production area. Mr. Chairman, the Louisiana coastal area is truly unique and in need of immediate attention to address the continuing loss of valuable coastal habitat and shoreline protections. While I am certain that we will address many of these issues that I have referenced in the months ahead, I look forward to working with you to assure the protection of this vitally important region.

I look forward also to hearing the witnesses that we have scheduled to testify here today. Mr. Chairman, thank you.

Mr. DUNCAN. All right, Mr. Brown.

Mr. BROWN. Thank you, Mr. Chairman. I will hold my opening statement until the time of questions if that's OK.

Mr. DUNCAN. All right. Thank you very much.

There being no other opening statements, I understand that all three of the Congressional witnesses we have are on their way, and hopefully one or more of them will be here in just a minute. We did start this a little bit early. If they don't get here in the next couple of minutes, we will go ahead and start with the first panel of regular witnesses. But we'll be in a brief, hopefully momentary, recess.

[Recess.]

Mr. DUNCAN. Good morning. We had a brief markup on five bills and we had about 12 or 14 members here, so we went ahead and started this Subcommittee hearing a little bit early. We were just waiting for you. We understand Mr. John and Mr. Vitter are on their way, but we're going to let you go ahead and give your statement.

The way I do with members' panels, in order to get more quickly to our other members, we save our questions for the Floor or other opportunities that we have to discuss with you. We'll let you go ahead and make any statement you wish and then you can move on to other important matters that we know you have to deal with. But you've been here with us before, and we're ready for your statement. And you honor us with your presence.

TESTIMONY OF HON. W.J. (BILLY) TAUZIN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF LOUISIANA; HON. DAVID VITTER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF LOUISIANA; AND CHRISTOPHER JOHN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF LOUISIANA

Mr. TAUZIN. Thank you, Mr. Chairman. I want to present to you a case of extreme urgency to the great people of Louisiana that I've been privileged to represent for over a quarter of a century now here in the Congress.

I want to ask you, all of you, to think for a second with me. What do you think would be the response of the Corps of Engineers, the

response of the EPA, how about the response of the FBI if someone showed up and destroyed over 1,900 square miles of wetlands in your State. I can tell you what happened in the case of the United States Government v. Lambert, Incorporated. The president of that company was sentence to a $20,000 fine, one year in jail, two years probation and had to deed five acres of land to the State of New Hampshire for a park, because he impacted seven acres, seven acres of wetland.

In Maryland, James Wilson was threatened with years in jail, multimillion dollar fines, because he placed on top of 2.5 acres of land the Corps previously rejected as wetlands. He racked up $6 million in legal fees before he finally won his case in the United States Supreme Court.

Another question, the U.S. Fish and Wildlife Service, how do you think they'd respond if someone destroyed hundreds of square miles of critical habitat as defined in the Endangered Species Act for the piping plover, the Gulf sturgeon, the Kemp Ridley sea turtle? I can tell you what happened to a farmer when he created a fire break, when his home was threatened by fire. The Federal Government tried to put him in jail for there years and fine him $300,000.

Mr. Chairman, we lose 35 square miles of wetlands in Louisiana every year. And I'd like to tell you that this incredible loss is the greatest ecological loss in this Nation's history, it is. I'd like to go on with that for a minute or two, I'd like to tell you, for example, that $1.3 million acres of critical habitat are being lost, some of the most critical habitat in America. From an environmental standpoint, we ought to mobilize all the forces of this country to try to prevent this.

But I want to give you a better reason, even better than that most sacred reason. It's gotten down to life or death for my people. The Red Cross will not even open a shelter below I–10 any more, because it's not safe. You go to the west bank of the Mississippi River at the FEMA office there, and they have a computer system you can log onto. You can see a simulation of what a category four hurricane does coming up Lake Bourne, or eastern New Orleans, coming up on the west side of New Orleans. They'll tell you that New Orleans will be inundated, 27 feet of water. I said, my God, when I saw this.

Is this really going to happen? The guy who put the program together told me, Congressman, it ain't if, it's when, if we don't do something soon. The folks that I represent, the culture of Acadiana, Chris John represents it, Mr. Vitter represents part of it, we'll be faced one day with horrific losses. We'll be faced on day with thousands of our citizens drowned and killed, people drowned like rats in the city of New Orleans because there's nowhere to go but up and they can't all get up.

And along the coast, we'll be leaving our homelands. We'll be having to vacate, just like the Red Cross has done. We'll have to leave the lands that our ancestors have lived on since before the Louisiana Purchase, lands that we settled on because we were kicked out of Canada, remember? We were kicked out of Nova Scotia by the British, finally settled in Louisiana, which we call paradise. And our paradise is about to be lost.

So first of all, I want to thank you for all the efforts this Committee has made, Chairman Young has made, you, Mr. Duncan, and others, to try to help us in the energy bill, by trying to make sure we get some money back from the offshore drilling. Interior States get 50 percent of the royalties. We get nothing from the offshore monies that we produce in Louisiana, or virtually nothing, less than a percent. For helping us try to get some of that money back, and you know, the Energy Bill has stalled on the other side, we're not allowed to talk about what happens on the other side, but it's stalled over there because they can't bring closure on a filibuster.

Fifty-eight members were ready to vote for it. And it would have meant the first of billions of dollars for us to begin saving the coastline of Louisiana, saving the lives of the people I represent, and Chris John and Mr. Vitter represent. I want to thank you for helping us get it to that point. There may be other cases before this Congress is over, before I leave after almost 25 years of service here, where we can put something in, a water bill, a Coast Guard bill or somewhere, something to begin the process of providing some relief, some help to begin stopping this incredible loss of wetlands, this incredible disaster, this incredible threat to the lives of men and women and children loving along the coast of Louisiana, which is going to happen to the not if but when, if we don't move soon.

You've been watching the 9/11 Commission hearings, people coming before that Commission saying if only, if only we had talked to one another, if only we had some regulation in place where we would have shared information, if only we could have gotten some kind of hint in time that these people were about to do what they did. If only.

I'm telling you now, before the disaster, please don't let it happen in Louisiana. It won't be Al-Qaida, it won't be some other enemy of this country, it will be Mother Nature destroying lands, the wetlands and the lives of the people south of Jenner, because we could have acted in time but we didn't.

Please don't let's have a commission where all of us, red-faced, say we saw it coming and didn't do anything. Please don't let that happen. Please help me before this session is over find some way, somewhere, that we can place in the law some system that the Corps and the great people of my State can collectively work in a Government-private partnership to begin doing something about 35 square miles of wetlands loss, critical land mass loss, every year. That's the barrier between us and death. That's the barrier between us and the storms that churn in the Gulf that are about to destroy not only the cities and the communities, but the lives of the people I represent.

Please help me and help the delegation stop that from happening. Thank you very much.

Mr. DUNCAN. Well, thank you very much, Mr. Tauzin. You've testified here before in regard to WRDA and it looks like the Senate's going to pass that in September. We're going to go to conference then and certainly, as I mentioned to you earlier, we had 12 or 14 of our members here a few minutes ago when we did our markup, and we finished that a few minutes early, so Mr. Costello and I went ahead and gave our statements at that time. We both ex-

pressed our knowledge of the importance of this project and we're going to be hearing from several distinguished witnesses following your testimony.

I will tell Congressman John and Congressman Vitter, as I told Mr. Tauzin that the way we handle members' panels, we save our questions for the Floor later on, so we can get to other witnesses. So each of you is allowed to make your statements and then leave if you wish. We'll let Mr. Tauzin, you've certainly been a great member, unless you want to stay and make sure that Chris and David don't say anything mean about you, you can go ahead——

[Laughter.]

Mr. DUNCAN. You can leave or stay as you choose.

Mr. TAUZIN. I'll stay.

Mr. DUNCAN. David, you were next, so we'll go ahead and let you make your statement.

Mr. VITTER. Thank you very much, Mr. Chairman, and Committee members. Thanks very much for this hearing today.

I want to start by thanking all of my colleagues in the Louisiana delegation. This is absolutely, as Billy so passionately pointed out, a critical life or death issue for all of us. And all of us feel that way, and all of us are coming together united on this crucial issue.

And certainly, Billy has been the leader on the House side, and we want to thank him for his focus and dedication, service and passion. He's done the job on the House side, we passed CARA several years ago, which was going to be a major start to set this right and to save our coast.

Then when that didn't go anywhere in the Senate, then he came with an energy bill which had a billion dollars, a major start, a real Federal breakthrough plan B. Unfortunately, that met the same fate in the Senate. So here we are again. But his leadership, passion on this issue in particular has been there all along. All of us on the delegation owe him a debt of gratitude, and we appreciate that, Billy.

He's also a tough act to follow, and certainly I can't add much in terms of what it means to Louisiana. It is life or death for us. There is impending disaster unless we do something. It means, as he said, the loss right now of 35 square miles a year, literally a football field of land every few minutes, just land going away into the Gulf, evaporating into nothingness. All of our coastal communities are on edge, wondering how much longer they can survive.

But it affects other Louisiana communities, too. A year ago, our coast line was hit by two back to back storms, Isidore and Lili. One of my communities in my Congressional district, which is not right on the coast at all, had enormous flood waters, not from rain, but from storm surge. Neighborhoods and homes were flooded that had never, ever been flooded before.

And again, this wasn't heavy rainfall, the sort of flooding that could happen anywhere. This was storm surge, ultimately from the Gulf. People were just confounded. How could this happen? It had never happened before.

And my answer, as I visited those ravaged neighborhoods and tried to console people, my answer was, well, I think the biggest part of the answer is that we're losing all of that buffer land on our coast. We're losing 35 plus square miles a year, so of course,

that water is going to come upland much more quickly, much more easily. So it takes less and less of a storm to flood more and more of our State and cause more devastation.

I want to make a few comments about why this is absolutely a Federal priority. First of all, because we're talking about Federal resources. Our coast is crucial to our Nation's energy industry. It produces $30 billion annually in petroleum products. It accounts for 27 percent of our domestic oil, 26 percent of our natural gas.

Infrastructure and resources that are necessary to support this critical industry are all there. Commerce, maritime commerce, our port system ranks first in the Nation in tonnage, making the area critical to our national commerce. We contribute billions of dollars in commercial and recreational fishing. We're a unique habitat for a variety of water fowl, fish, shellfish, a number of endangered species. So we absolutely are a national treasure.

There's another reason. We're not here to dwell on the past and point fingers, but there is another reason, which is that past national decisions have been the leading contributor to this problem. Now, I support a lot of that activity that has happened in the past, like leveeing the Mississippi River. Thank goodness, we did that. We wouldn't exist in South Louisiana without it. New Orleans wouldn't be on the map.

But that fact pushes all of that rich material out into the Gulf instead of building our delta and our coast line. And our development of oil and gas resources has cut up our coast line, allowed the infestation of salt water and led to enormous coastal erosion problems, too. So there's responsibility there.

And I want to end on a hopeful point, which is that there is a plan to get us started in the right direction. I would like to very specifically ask you to focus on joining the Bush Administration, which has just come out in support of a detailed near-term plan. The key is to get this full near-term plan, which will be just a start, but a significant and a meaningful start in WRDA in conference. That is my very specific goal and specific ask.

Again, the Bush Administration just recently announced its full support of this meaningful near-term plan. I've been meeting with many folks in the Administration, including the President himself, including Jim Connaughton, his chief environmental advisor, the leadership of the Corps of Engineers, folks at OMB. And I have been focusing on five key near-term objectives. I'm happy to say all of those objectives are met in the near-term plan.

First, I wanted the release of the full substance of the Louisiana Coastal Area study. That had been the big plan that quite frankly had been holed up by OMB and the Corps for the last year or so. And with the release of this near-term plan is the substance of that full coastal area study. That's important for us to understand where we're going and how this is just a start to a bigger project.

Second, the near-term plan will have to be significant in terms of dollars. It is, it's $1.9 billion, $1.2 billion of which is fast-tracked, five major projects which comprise almost two-thirds of that $1.2 billion.

Third, we need to start concrete work now and not much later. As Billy said, the time is now, we need to act now. And in the near-

term plan, start on meaningful projects has been pushed up to 2006.

Fourth, we need to include significant diversion projects, because at the heart of saving the Louisiana coast eventually has to be major diversion projects, including diversion projects involving the Mississippi. We do have those projects in the near-term plan at Hope Canal and Myrtle Grove. They are two of the fast-track projects.

And fifth and finally, and it comes back to point number one, we all need to understand that this is a start and not the end. And we would have everyone acknowledge and nod, yes, you're right, we'll put it on the record, this is a start and not the end. But it's a good start, and it's a breakthrough in terms of Federal commitment, so please help us include the full aspect of this near-term plan as a major start, as a real breakthrough in this year's work.

Mr. Chairman, thank you very much for your attention to this matter. I thank all the Committee members.

Mr. DUNCAN. Well, thank you very much. We're glad to have you back. You were here a few days ago on the Lake Pontchartrain problem, and we just dealt with that in the markup. When the staff was going over all this with me yesterday, they talked about all that you had mentioned and what had happened in the past and the fact that some of the navigation, flood control work and the levees have caused the natural. The Mississippi used to naturally overflow its banks and move sediment down to the coastal area and so forth. I said, well, it sounds like there's a simple solution that everybody in New Orleans and its suburbs should just move out.

[Laughter.]

Mr. VITTER. Unfortunately, if we don't do something, that may be the simple solution.

Mr. DUNCAN. We're going to do everything we can to see that something is done. We're taking this promise very, very seriously as I know you are, and Mr. Tauzin. Certainly we're also honored to have our colleague Chris John here with us and Chris, you can give your statement at this time.

Mr. JOHN. Thank you, Mr. Chairman. I certainly appreciate the opportunity to speak to you and Ranking Member Costello about an issue that is not only important for Louisiana, but it is certainly personal, I mean, important for America, but it is certainly personal for Louisiana because we're talking about not just dirt and sawgrass and marsh grass, but we're talking about a piece of our country and a piece of the State of Louisiana. It gets very personal in Louisiana. That's why I think you see a bipartisan, bicameral effort on the part of Louisiana and other coastal State delegations to try to address this.

Because frankly as we sit here today, a bit more of America and Louisiana washes away. You've heard the statistics from Mr. Tauzin and Mr. Vitter, and you'll hear more in personal detail of the devastation with some of the witnesses that we have to follow. And I have my own stories that I won't share with you today because you've heard them before.

But it is something that I believe is not just a Louisiana issue, because frankly, because of all the number of the offshore oil and gas, the energy that's produced, the commercial and recreational

fisheries, this is a national treasure. It is frankly an energy security issue for America and certainly an economic security issue for Louisiana.

I want to thank my colleagues up here, Congressman Vitter, and also Congressman Tauzin. Congressman Tauzin and I share the coastline of Louisiana. Between his district and ours, we're going to lose a piece of that just today. We both represent about half of the coastline. I grew up in the marshes, not only fishing but hunting there. And I know that Congressman Tauzin has done the same. We both have been very strong supporters. I want to particularly credit his leadership, not just today and yesterday, but when he was in the State legislature with my dad. They fought this issue. So Billy, thank you very much for this effort.

We're making progress. We certainly are. I want to also thank Don Young. Chairman Young has worked with us through the CARA debate, which was a phenomenal piece of legislation that we need to continue to strive for, because I think it was a standard mark that produced real results in long term funding.

And of course, as we all know, last week the Administration released their revised coastal restoration plan that authorizes the $1.92 billion in Federal funding over the next 10 years. I'm actually very encouraged that the Administration is now stepping forward and putting in a plan. We have been urging release of the LCA since last October, I believe, Billy, as a way that I thought was a stalemate about moving forward on this issue.

So I'm very encouraged to know that it's been released, and this commitment. I certainly applaud the efforts to sustain this coastline and all of America's wetlands.

But what I am I guess most concerned about is the plans for funding. This is just an appropriation, and we need to continue, we see every day in this Congress bills that are passed, that are authorized but certainly not significant dollars following it. That's what concerns me most, and I believe this is a first step that we must engage in making sure that we take care of this.

Coastal restoration certainly is going to require a commitment with Federal dollars and State dollars and lots of them. Before the recent revised near-term proposal here, the Federal Government, along with Governor Foster in Louisiana put together the Coast 2050 plan.

We spent five years and $24 million putting together a very comprehensive plan that came to the conclusion that we're going to need $14 billion over 30 years to address this problem. Although this plan today that we are dealing with in the Administration, both the $14 billion plan of the Coast 2050 and the $2 million plan that we're talking about today will require significant Federal resources.

I think with the budget realities that we are facing today, it's going to take a united effort and overwhelming bipartisan, bicameral support to address this problem and to make it a reality.

You know, the House passed impact assistance, as was mentioned by Congressman Vitter, the CARA bill, of which I was a coauthor and a strong supporter, about Federal royalties. And I think the fact that we're here today talking about the Federal Government engaging in a project I think is a long way of giving us some

results that they have recognized that Federal policies have caused, unintentionally, but have caused some damage to our great American wetlands.

So I'm excited about this plan. I'm going to continue to work. I just want to make sure that we get the necessary funds. In fact, a blueprint is important to move forward.

But Governor Blanco, the present Governor of Louisiana, requested $50 million to start through impact assistance. In the President's budget, we're only allotted, or it was only presented to us, $8 million. I think we need to step that up in the commitment, and this is certainly a first step in doing that. I appreciate the opportunity to say a few words.

But this is a personal issue for Louisianans, and I certainly believe it's an economic security issue for America because of what's at stake.

Mr. TAUZIN. Mr. Chairman, before Mr. John completes and before we all wrap up, I wanted to add a personal note. His father is Representative John John, a dear friend of mine, and Chris John is a dear friend of mine. I want you to know how poor they were. They couldn't even afford a last name. I mean, think about how poor this family grew up in the marshes.

[Laughter.]

Mr. TAUZIN. Let me quickly share some numbers with you, then I'll quit.

Mr. DUNCAN. OK, sure.

Mr. TAUZIN. Last year, offshore production, offshore Louisiana, produced $5 billion for the U.S. Treasury. Five billion dollars. Keep that number in mind. The States of Wyoming and New Mexico produced $950 million. The States of Wyoming and New Mexico got back $550 million of that, out of $950 million they got $550 back. We produced $5 billion, we got $30 million back. That's the inequity we're talking about. That's the source that we're asking you to help us find some sharing that will help us save this incredible coast line. Thank you, Mr. Chairman.

Mr. DUNCAN. Well, thank you. I think another important point is all this arose when the loss of land down there happened through no fault of the people who have lived there. It's not that they haven't been taking care of their land or they've been doing something that's destroyed it. It's happened because of other activities in other locations.

Before you go, though, we do have another member from Louisiana. Congressman Baker is a very active and outstanding member of this Subcommittee. I wonder, Mr. Baker, if you have anything you wish to say before we get to the regular panel.

Mr. BAKER. Mr. Chairman, I appreciate your courtesy. I want to extend to my colleagues my appreciation for their willingness to be here this morning and spend the time, not only today but over the course of their individual careers, in bringing this matter to the Congress' attention.

I just want to make a couple of quick points. No one disputes that this area of the country is a valuable resource making significant contributions to our ecosystems and to our economy. No one disputes that we're losing it at incredible rates on a daily basis, a football field worth every 15 minutes. On the other hand, no one

can dispute the fact that to date, not a great deal has been done nationally to help us in this fight against the loss to Mother Nature.

On the other hand, we have areas of our State and Arkansas, Mississippi, Texas, where land owners try to go out and build a barbecue pit or build an addition onto the house and they are told by the Corps of Engineers, you can't do it, because you're encroaching on a wetland, because of the Corps' obligation to abide by statutory and regulatory constraints that define what constitutes a wetland. Unfortunately, when the landowner looks at, where his family's been there for hundreds of years, perhaps, in the farming business or in other activities. It's not a piece of property where you see ducks settling to spend the night. It's grassland. It may have a tractor rut in it. It's a wetland by some act or omission. It's not a wetland in the sense of coastal Louisiana.

The end result of this is we argue, we debate, we hire engineers, we ultimately litigate as to whether even it is a wetland. While at the time we're debating that, and fighting parcel by parcel, inhibiting common sense development, we're losing a football field of undisputable, unquestionable, valuable resource, which is a flyway for millions of ducks, for thousands of tons of seafood, for fur, for any number of valuable resources the Nation makes use of.

So we force people to go to a mitigation bank. A local couple in my district was told they had a wetlands. They didn't believe it. Then they had to hire folks to come out and tell them, yes, you do, and then they had to go to a wetlands bank to try to make a deal. The first offer was $7,500 an acre for property which they owned, which they paid about $3,500 for. They didn't believe that was fair. The owner of the mitigation bank said, take it before the price goes up. And in fact, 30 days later when they didn't exercise their right to take the officer, the price went up to $10,000 an acre.

We have created a private monopoly in mitigation banking which extorts from good faith land owners who are trying to build on their own property, in areas which are questionable wetlands in the first place, while we stand by and let the most valuable wetlands in our Nation disappear at the rate of a football field every 15 minutes. We would be far better, Mr. Chairman, if we call this little coast area, designed by the Corps, as a true wetland and let people make a payment toward the preservation of Louisiana's valuable coastal wetland, which is not disputed, which is absolutely 10 percent valuable wetlands, and let people proceed with their development.

Now, I know the Corps has this rule, you've got to do it in the same ecosystem, the same drainage basin. Give them all that. When you look at value paid for value returned, there is nothing better than what these gentlemen are prescribing as a valuable, long term, generational wetland of value than the subject at hand this morning, for which we do nothing. And we spend money on lawyers and engineers and surveys to fight over something that's a piece of dirt that isn't a wetland.

Mr. Chairman, this is just goofy. We're up here begging for money, which we ought to get anyway. We can't seem to find a way to make it logical for somebody in Nebraska to give us money. Let Louisiana, Texas, Arkansas, Mississippi, let us pay the bill. But

don't force us to buy land we don't want to buy in the first place that does no good for the ecosystem generally.

With that, I'll yield back my time.

Mr. DUNCAN. Thank you very much, Mr. Baker. You're certainly correct.

Mr. Vitter, did you have something you wanted to add very quickly?

Mr. VITTER. I was just going to add, when you mentioned that this is happening to our people through no fault of their own. It's even worse than that. It's happening to our people in part because of the direct result of the sacrifice they have made for the Nation, creating our energy domestically and servicing our maritime commerce domestically.

Mr. TAUZIN. And Mr. Chairman, I want to make one little comment. In my district there's a place called Port Fourchon. Twenty percent of this Nation's energy comes from that little port. It's a one line highway across a marsh serving that port. Next storm takes that highway out, and this country is in trouble. And it's running right through the marsh. You can see water on both sides. One lane highway. Twenty percent of the Nation's energy.

Think about it, please. It's not just our lives. It's the lives of the Nation at risk here.

Mr. DUNCAN. Mr. Vitter mentioned a few minutes ago that the Administration issued a statement to the Army Corps through Secretary Woodley just a few days ago on July 6th indicating their very strong support for this work. Mr. Costello just reminded me that shortly after the election in November, he and I and Mr. Brown and possibly some others are going to come down, review some of this and hopefully help call some attention to it and make sure that this work is starting and see what's going on down there first-hand. We're looking forward to that.

Mr. BAKER. Mr. Chairman, if I could suggest that in the late fall, the biological sampling process is greatly enhanced with certain species of speckled trout that occur in that region of the world.

[Laughter.]

Mr. TAUZIN. And some migratory birds come in about that time, too.

Mr. BAKER. Yes, we could work it out to where you could really understand the value of this.

Mr. DUNCAN. OK. Well, thank you very much. And we will meet with some of the Louisiana members I'm sure at that time. But thank you very much. You've added greatly to this hearing and we appreciate your being here.

What we're going to have to do, because we're going to have votes coming up shortly, is combine these two panels, so that we can get everyone's statements in all at once. So we will ask that all the witnesses take their seats at the table at this time. Our first witness will be Brigadier General Don T. Riley, who's here representing the Army Corps of Engineers. He is the Director of Civil Works here in Washington. And he of course will be our most distinguished and lead-off witness.

Mr. Scott A. Angelle, representing the Louisiana Department of Natural Resources. He is its Secretary and he's from Baton Rouge,

Louisiana. I will ask that all these witnesses start taking their seats at the table at this time.

Representing the Governor's Advisory Commission on Coastal Restoration and Conservation will be Mr. King Milling, who is the Chairman of that Commission. He is from New Orleans.

Representing the Coalition to Restore Coastal Louisiana will be Mr. Mark Davis, who is its Executive Director, from Baton Rouge. Representing the Houma-Terrebonne Chamber of Commerce will be Mr. William Clifford Smith, who is a member of the Parish Chamber of Commerce. He is from Houma, Louisiana.

Representing the Greater Lafource Port Commission is Mr. Ted Falgout, who is the Executive Director of that Commission, and he is from Galliano, Louisiana. And representing the Shell Pipeline Company Limited Partnership is Mr. Ed Landgraf, who is the Environmental Coordinator. He also is from Houma, Louisiana.

I think this is the first time we've had a witness from Houma, Louisiana and today we have two. We're glad to have each of you here today. All of your full statements will be placed in the record. As all committees and subcommittees do, we ask that witnesses limit their statements to five minutes.

In this Subcommittee, we know it's hard to get a statement in, in five minutes, so we give you six minutes. But once that six minute clock reaches, you'll see me raise this gavel. And that means stop. I do that in consideration to other witnesses, because we have had some witnesses way back who would go 12 or 13 minutes and take other people's time. So your full statement will be placed in the record. You will be allowed to summarize if you wish to do so.

General Riley, we will start with you. And we're very pleased to have you with us today.

TESTIMONY OF BRIGADIER GENERAL DON T. RILEY, DIRECTOR, CIVIL WORKS, UNITED STATES ARMY CORPS OF ENGINEERS; SCOTT A. ANGELLE, SECRETARY, LOUISIANA DEPARTMENT OF NATURAL RESOURCES; R. KING MILLING, CHAIRMAN, GOVERNOR'S ADVISORY COMMISSION ON COASTAL RESTORATION AND CONSERVATION; MARK DAVIS, EXECUTIVE DIRECTOR OF THE COALITION TO RESTORE COASTAL LOUISIANA; WILLIAM CLIFFORD SMITH, MEMBER, HOUMA-TERREBONNE CHAMBER OF COMMERCE; TED M. FALGOUT, EXECUTIVE DIRECTOR, GREATER LAFOURCHE PORT COMMISSION; AND ED LANDGRAF, ENVIRONMENTAL COORDINATOR, SHELL PIPELINE COMPANY LP

General RILEY. Thank you, Mr. Chairman and members of the Subcommittee. I'm General Don Riley, Director of Civil Works, Army Corps of Engineers. I'm pleased to be here today and have the opportunity to speak about coastal Louisiana. My testimony will provide information on the background and progress made to date by the Corps of Engineers, our local sponsor in the State of Louisiana and our many partners in addressing the degradation of this nationally significant ecosystem.

The loss of Louisiana's coastal wetlands has been ongoing since at least the early 1900's, with commensurate adverse effects on the ecosystem. There have been several separate investigations of the

problem and a number of projects constructed over the last 20 to 30 years that have provided localized remedies. For example, the Coastal Wetlands Planning, Protection and Restoration Act, commonly known as the Breaux Act, has successfully created or restored more than 81 square miles of coastal wetlands since its enactment in 1990. While these smaller scale efforts have shown the public that restoration tools and methods are available and effective, they were not part of an overall strategy of integrated groups of projects that could yield greater environmental benefits by acting in concert on a watershed basis.

The 1998 Interagency Federal-State Coast 2050 plan outlined general ecosystem management strategies essential to the restoration of coastal Louisiana and became the basis for further studies. And in February 2000, the Corps and the State initiated two additional coastal wetland interim studies which then further evolved into the broader comprehensive ecosystem restoration study.

The Administration's fiscal 2005 budget guidance identified the need to address the most critical ecological needs of the coastal area over the next 10 years. Since early this year, the Corps, the State and our partners have worked together to develop a proposed near-term action plan. And last week, the Corps and the State released the draft Louisiana coastal area ecosystem restoration study report and programmatic environmental impact statement to the public. The public NEPA review and comment period will run through August with nine public meetings scheduled, and the chief's report is scheduled for completion in late December.

The draft proposed plan includes seven components at a cost of $1.96 billion over the next 10 years that begins to arrest the most significant ecosystem losses, restore wetlands and habitat where practicable and advance the science to ensure cost effective applications, all with the intent of achieving a sustainable coast. Implementation of the proposed plan includes the highest priority actions that would quickly begin to reverse the current trend of degradation of the ecosystem and help project our citizens and infrastructure in coastal Louisiana, thereby providing a sustainable coast and contributing to the well-being of the entire Nation.

Mr. Chairman, that concludes my statement. Again, I appreciate the opportunity to testify today before the Committee. I would be pleased to answer any questions you or the members may have.

Mr. DUNCAN. General, thank you very much.

Mr. Angelle?

Mr. ANGELLE. Thank you, Mr. Chairman and members of the Subcommittee. I am Scott Angelle, Secretary of the Louisiana Department of Natural Resources. I am here today representing Governor Kathleen Babineaux Blanco. Accompanying me today is Ms. Sydney Coffey of the Governor's Office of Coastal Activities, and Mr. John Porthouse, a member of our staff. I would like to thank you, Mr. Chairman, and other members of the Subcommittee, for scheduling this hearing and for inviting me and other speakers from Louisiana to testify on a matter which is of critical importance not only to our State but to the Nation as a whole.

On behalf of Louisiana I would like to specifically thank Congressman Tauzin for his efforts, and especially for his leadership

on the energy bill, as well as Congressman Chris John, Congressman Baker and Congressman Vitter.

The coastal Louisiana ecosystem is on the verge of collapse. You have undoubtedly heard these words many times in reference to other nationally significant ecological systems throughout the U.S. I am confident that as you come to understand the crisis facing coastal Louisiana, you will agree that the scale and implications of our land loss are unprecedented in the Nation and perhaps the world.

You will hear many statistics today, that Louisiana has lost nearly 1,900 square miles in the last 70 years, an area the size of Delaware. We are continuing to lose at a rate of 35 square miles a year, a football field every few minutes. And it is projected we will lose another 500 square miles in the next 50 years, if nothing is done to halt or reverse these trends. This rate of land loss is perhaps believed to be the fastest in the world.

You will hear other speakers talk about the implications for the State and the Nation of this continuing degradation of our coast. Currently, the Louisiana Coastal ecosystem provides fish and wildlife habitat that supports the Nation's second largest fishery, and a recreational hunting and fishing industry valued at over $1 billion per year. The coastal wetlands shelter oil and gas wells and related infrastructure and produce or transport over 30 percent of our Nation's oil and gas supply. Louisiana is indeed America's energy corridor.

Also, coastal Louisiana includes the Nation's largest port complex. Over 2 million people live and work in Louisiana's coastal zone and lives, property and supporting public and private industry are at increased risk. I believe that it is not an overstatement to say that an impending crisis in coastal Louisiana will have profound consequences for not only our State but for the entire Nation. What is at stake is the economy, our energy security, a unique culture and the most productive and valuable ecosystem in North America.

We have seen this problem growing for the last several decades. But we did not adequately understand the complexity of the problem, or the cost and complexity of the solutions. Since the late 1980's, when coastal restoration efforts began in earnest, nearly 70 projects have been constructed at a cost exceeding $400 million. These projects, constructed by the State and in partnership with Federal agencies, have generally been relatively small scale projects, which although successful are inadequate to cope with the magnitude of our land loss.

In the early 1990's, planning for a comprehensive program was initiated under the Coastal Wetlands Planning, Protection and Restoration Act. A conceptual plan called the Coast 2050 plan was produced and work on the implementation plan was initiated. By the end of the decade the Corps of Engineers and the State had entered into a partnership to develop a feasibility study titled The Louisiana Coastal Area Study. Over $20 million has already been spent on this study to date. And in February of 2004, about six months prior to the scheduled release of this study, the Corps received guidance in the President's fiscal year 2005 budget to halt further work on a comprehensive coast-wide plan and to refocus

studies on a more reasonable 10 year near-term plan. The near-term plan has recently been released for final public review and it is expected that a report of the chief of engineers will be completed by the end of the calendar year.

This plan builds on the 14 years of restoration efforts and is based on the best available science and technology and addresses areas of critical need. In addition to specific recommended projects, the plan will recommend the establishment of a science and technology program, demonstration projects and a comprehensive monitoring and adaptive management program to ensure that the program continues to rely on best available science and technology. The State of Louisiana desperately needs the full support of the Federal Government.

A solution to the coastal land loss problem is clearly beyond the technical and financial capability of our State. We have done much to prepare ourselves to effectively participate in a joint Federal-State program. Our citizens have approved constitutional amendments to provide additional funding and additional constitutional amendments to limit potential legal liability from operations in the coastal zone.

I would like to make a final point. The causes of the problem facing our coast are the result of both human activities and natural phenomena. It is clear that our collective efforts to manage the major rivers and facilitate navigation over the years have contributed significantly to the coastal land laws. While these actions were beneficial in terms of improving living conditions and contributing significantly to the national economy, they had unintended consequences. We are now living and coping with these consequences. The State of Louisiana is not a wealthy State, and a large scale restoration program is beyond our financial capabilities.

One solution would be for the Federal Government to agree to share some of the billions of dollars generated by the oil and gas industry off the coast of Louisiana. Another would be to reduce the non-Federal cost share requirements of the project. We believe that an exception to the 65 percent Federal 35 percent non-Federal cost sharing requirement is warranted. We believe that the case for a non-Federal share of 25 percent can be made.

I want to reemphasize the urgent need for definitive action. Over 200 years ago, President Thomas Jefferson consummated the biggest land acquisition deal in the history of the world, the Louisiana Purchase. The acquisition of these lands doubled the size of America and added to her strength. It is a portion of these very same lands that we need your help to save.

Thank you.

Mr. DUNCAN. Thank you very much, Mr. Angelle. We're always—Mr. Milling, I want to interrupt for just a few moments. We're always honored to have the Ranking Member, the longest serving member of this Committee and a former, before that, executive director or staff director of this Committee, Mr. Oberstar from Minnesota. I would like to call on him at this time for any comments or statement that he might wish to make in regard to this very important work.

Mr. OBERSTAR. Thank you, Mr. Chairman, for those very thoughtful comments. I can readily appreciate why you were so

well respected as a judge. Your distinguished leadership of this Subcommittee, following on your equally progressive, thoughtful and persistent leadership on the Aviation Subcommittee during your years as chair there.

Why should the member from Minnesota have an interest in Louisiana wetlands? Well, much of the water that Louisiana gets comes from Minnesota and from the other 10 States along the Mississippi, Missouri, Ohio Rivers system. Secondly, it is the summering place for much of the wildlife, migratory wildlife that comes, starts in Canada, comes to the Louisiana coast and on to further nesting and breeding grounds in South America and Central America.

The central flyway for ducks, geese and other migratory birds is the richest in the world. There is none other to compare. But if the overnight feeding grounds in coastal Louisiana are eroded, destroyed, then there is a clear and direct connection to the decrease in migratory water fowl numbers. That number has dropped 50 percent since the turn of the century, that is around 1900.

Third, once saltwater intrusion begins, it is irreversible. And when you lose the wetlands, and you lose the ability to retain freshwater in those grounds, that freshwater is the barrier. It is the pressure gauge against saltwater intrusion. It is vitally important to understand the causes of deterioration of that barrier wetlands that is so vitally important to sustaining wildlife habitat and human life and recreational experience, as well as many other values.

A fourth point is, my wife was born and raised in New Orleans. [Laughter.]

Mr. OBERSTAR. I've had more tabasco since Jean and I have been married in the last decade than in my entire life. We periodically, two or three times a year get to New Orleans and meander along through Houma and down to Lafayette and Avery Island and sample the coast line and see first hand the deterioration. And it is fearsome.

So I commend you, Mr. Chairman and Mr. Costello, for initiating these hearings. This is kind of a continuation of an inquiry that began when Chairman Young and I served on the Merchant Marine and Fisheries Committee many years ago and inquired into this subject. It's a great service to the environment that you are rendering by conducting these hearings.

Thank you very much, and I thank all the witnesses. I've read the testimony in advance, which is very, very constructive work. Thank you.

Mr. DUNCAN. Thank you very much, Mr. Oberstar. As you pointed out, erosion almost makes it sound not as serious as this. Destruction is probably the more accurate word.

Mr. Milling, we're ready for your statement at this time.

Mr. MILLING. Thank you. I'm King Milling, Chairman of the Governor's Advisory Commission on Coastal Restoration and Conservation. I'm President of the Whitney National Bank in New Orleans.

Mr. Chairman, I appreciate the opportunity to address the Committee on this critically important issue. I am not an engineer nor a scientist. I'm a lawyer, a banker, a pragmatist. If I can leave you with one thought, it would be that this deteriorating condition

must be addressed aggressively and with an unwavering sense of urgency.

As you have heard, since 1930 Louisiana has lost over 1,900 square miles. It is projected by the year 2050 we will lose another 500 to 700. And it will not stop then. It will continue.

The coastal loss is largely attributable to Federal policy, policy with unintended consequences. Levees were built along the banks of the Mississippi River and the sedimentary load, estimated to be between 160 and 180 million tons a year, is therefore being channeled into the depths of the Gulf of Mexico. Thus, the natural process of building a delta ceased, and what remains of a once vital ecosystem is dying for lack of rejuvenating substances. Ultimately, the seventh largest deltaic system on Earth will literally implode and the shoreline will have advanced inland by up to 33 miles.

For every 2.7 miles of loss of marsh or swamp, there is a corresponding increase of one foot of storm surge. Thus, traditional tidal surges created by, for example, a category 3 storm will increase from 8 feet to as much as 22 feet. Smaller storms will continually inflict increasing and disproportionately greater damage.

Clearly, the loss of the Mississippi deltaic plain would be an environmental disaster of international proportions. But this is far more than an environmental issue. The obvious consequence shall be the vulnerability of New Orleans itself, in addition to towns and communities across the entire expanse of Louisiana's coast.

In the Terrebonne/Barataria Bay area alone, there are over 220,000 homes, 180,000 businesses, 200 schools, over 7,000 miles of road. Thus, a complex culture, created by the amalgamation of Creoles, Cajuns, African-Americans and others will be impacted in ways hard to imagine. Massive human dislocation, property damage, loss of insurability, and as you have heard this morning, loss of life itself. The economy will be impacted. Thirty percent by weight of commercial fishing harvested in the lower 48 States is from Louisiana. If this ecosystem, the primary breeding and spawning area for commercial fish, not only in Louisiana, but the Gulf of Mexico is lost, this Nation will in fact feel that pain.

Approximately 30 percent of all the oil and gas that is delivered to the continental United States crosses this fragile ecosystem. That delivery is dependent upon thousands of miles of pipeline, oil wells, platforms, storage tanks and compressor systems. Being able to withstand natural forces, each was fabricated, predicated upon the protection afforded by Louisiana's ecosystem. As it is lost, critical systems will break under unanticipated new stress. Pipelines will rupture, and the delivery of product will be jeopardized. Costs will increase nationwide.

Over 150 miles of our inland navigation waterway system will become exposed. And it is not inconceivable that our levee system will effectively become in various areas a barrier between the Gulf and the river. As the natural buffer is lost, siltation will increase, navigation will become more dangerous, maintenance costs will become far more costly.

The Environmental Defense Fund and the National Wildlife Federation are working with fishing interests, oil and gas interests, property owners and others with a single thought in mind, that we must solve the problem of Louisiana's coastal deterioration. Only a

matter of substance and seriousness would trigger such consistency and thought and action among such traditional adversarial interests.

So we face a crisis of human, social, environmental and economic dimension unlike any in this country. The State of Louisiana and the Corps of Engineers have prepared a plan of action to address this critical problem. We must move forward to authorize this plan with the full recognition that it is an initial step toward the reestablishment of a sustainable coast line. Time is of the essence. We must commence the implementation now.

Thank you very much.

Mr. DUNCAN. Thank you very much, Mr. Milling.

Mr. Davis.

Mr. DAVIS. Good morning, gentlemen. My name is Mark Davis, and I'm the Executive Director of the Coalition to Restore Coastal Louisiana. It's a pleasure to be here with you this morning, and I would particularly like to extend an offer of honorary citizenship in coastal Louisiana to Mr. Oberstar.

The Coalition to Restore Coastal Louisiana is a citizens organization that was formed in the mid–1980's around this issue. At that time, there were no Federal programs, there were no State programs, there was very little energy that had been marshaled to either identify the problem, much less formulate a solution.

I'm delighted to say over the years, as we've had the opportunity to appear before panels such as this, we've come a long way from problem awareness to essentially putting a plan on the table that starts moving us toward a sustainable future. This is a momentous time.

As you've heard from many of the other speakers this morning, and I'm sure you'll hear from others, this is a crisis that has a history. It's a history that involves the natural dynamic forces of this unique area, at least unique to this continent. But it's one that has been exacerbated by the decisions we have made as a society. Many times they were the right decisions for the time. Oftentimes they were informed by the best judgment at the time.

Nonetheless, they've come with costs that were either unanticipated or it was assumed that someone somewhere down the line would have the wisdom and the ability to deal with them when the problems arose. Well, that day has arrived.

It's been noted that this is truly a matter of survival, and it is. Survival of an ecological treasure of not only national but international significance, a cultural treasure, not only of importance to us in Louisiana but as a cultural treasure of this Nation, and an economic engine and treasure that this country cannot afford to lose.

And the questions that we're often presented with as we're forming our plans is, can we do these things without affecting flood control, navigation, fisheries management, energy production and a whole host of other things. I would submit to you that clearly, those things will be affected. The question is, is there any other way to conduct ourselves that will accommodate those things into the future. And I would suggest to you the answer is no.

We're often asked, well, can we afford to do this, we have so many other priorities and limited budgets, and those things are

also true. But I would also suggest to you the issue is not really, can we afford to do it, but can we afford not to. As you've heard already, the cost of dislocation, the cost of emergency response, the cost of securing the navigation, flood control and other values that this country has already invested tens and tens of billions of dollars in, can only be secured by investing in a new comprehensive approach to managing this resource. It's the prudent thing to do.

But what are the elements of such a plan? Obviously we're not asking for a blank check. What we're actually asking for is a clear and firm commitment to the stewardship and sustainable management of this resource. Only then can we actually be honest with ourselves and honest with the taxpayers of this country today and tomorrow that we are securing good value. And that's why I think the elements of the plan that have been put before you, and that are put forth in the draft report the Corps is releasing is the framework for that beginning. There will be much work to do to make it as good as it needs to be ultimately. But those are not excuses to wait.

This needs to be a national effort, not merely a Federal effort, and not a local effort. This is a situation that's going to require the best of us all, and it's impossible for any one partner to conduct what needs to be done. Even if the State of Louisiana had all the money in the world, without the participation of the Federal family of agencies and responsibilities, it couldn't pursue what needs to be done without effectively bumping into those Federal jurisdictional issues.

It needs to be rooted in the best science and engineering that we can bring to the table. And it needs to be recognizing the fact that, while this is not merely about ecology, if you do not get the ecology of this system right, you won't get a sustainable economy, sustainable communities and sustainable cultures. It's that fundamental. But the decisions for how we plan it, how we design the projects and programs really must be informed. And we need to begin on the projects that can push this forward.

In closing, I'd just like to say, more on a personal note, the fact that we're holding this hearing today and the things that we're all saying won't probably be widely noted or long remembered. But history will judge what is done or not done. Because the choice here is not whether or not we can afford to do this or not, but it is really whether we want our legacy to be a vibrant, sustainable America's wetland or a memory of something that was once here and that could have been, had we had the courage and wisdom to act.

I urge that we make the right choice.

Mr. DUNCAN. Thank you, Mr. Davis.

Mr. Smith.

Mr. SMITH. Thank you, Mr. Chairman. We certainly appreciate the opportunity to be here, and really appreciate your all taking the time to have this hearing concerning this gigantic problem that we have in South Louisiana.

I live in Houma, Louisiana, as you mentioned. I live 65 miles southwest of New Orleans, 30 miles north of the Gulf of Mexico and 2 inches above the water. And the water is literally rising. I

say I live 30 miles north of the Gulf, I probably live closer to the Gulf now than I did when I left home two days ago.

Again, I live where the rubber meets the road or really where the water meets the land. I am here today representing the Houma-Terrebonne Chamber of Commerce. Terrebonne Parish is the county or parish that I live in. Again, Houma is the urban area in Terrebonne Parish. There's about 110,000 people living in Terrebonne Parish. I'm here today representing 800 members, businesses of the Houma-Terrebonne Chamber of Commerce, which have about 22,000 employees.

I'm also a member of the Mississippi River Commission. I was appointed to that Commission by the President of the United States, which is a commission that advises the Corps of Engineers in the Mississippi Valley and on the Mississippi River. I'm also a civil engineer and land surveyor, and I've been living in the community all my 69 years. My father before me was a civil engineer and land surveyor. So from an educational standpoint and from a business experience standpoint, I have been observing this problem, frankly, for many years. It's now become very obvious to the common individual, but as a professional I guess I knew about this a long time ago and have been concerned about it a long time.

My family has been in the area for about 130 years. So again, we are very much involved, we see our homeland really truly washing away. Terrebonne Parish, by the way, means good earth in French. It was primarily settled by French people. We have about a 1,300,000 acres of land, surface area in Terrebonne Parish, not land, because some of the surface area down in the Gulf of Mexico is bays, freshwater marsh, saltwater marsh, and swamp land.

We have about 300,000 acres in Terrebonne Parish above the five foot contour. We think that's high land, and we call that ridges and high land. This is where we live. We're not like the people who live in New Orleans and Jefferson area, where there's about a million people living north of us that live below sea level. And in my humble opinion, besides my citizens and my constituency, where I live is very vulnerable to hurricanes then the New Orleans area is probably even more vulnerable, because they live below sea level.

Economically, we are very dependent on the exploration for oil and gas, and seafood production and some agriculture production. We still grow a lot of sugar cane and produce some sugar. We have about a 4 percent unemployment rate where I live. We've had about a 10 percent unemployment rate where I live. We've had about a 10 percent increase in population over the last 10 years. The only negative thing that is happening to us right now is that we're losing 400,000 acres of land in my life time in my parish. We're losing about 10 square miles in my parish per year. That's part of the 35 square miles we're losing in Louisiana.

How does this affect most of the land where I live? Again, we live above sea level and we gravity drain the property where human beings live on. We have now recorded elevations in the water table arising 18 to 24 inches in our area. Same area that we get, by the way, 60 inches of rainfall a year, and we drain into the Gulf of Mexico and the Gulf of Mexico is rising. That's rather critical. In the last 90 days in my community, we've had 30 inches of rain. So that affects everybody that lives there, everybody.

Of course, the major problem that we're going to have in the future is hurricanes. Hurricane Isidore and Hurricane Lili hit our area within 30 days in October and September of 2002. We had another storm, Bill, in June of 2003, that drastically affected our area. Lili would have flooded my entire community if it hadn't moved 40 miles to the west and went from a category four to a category one.

I predict that in my community alone we could lose 2,000 to 3,000 people from a hurricane. I predict that we could lose 15,000 to 20,000 people in the south Louisiana area. Again, besides oil and gas, we produce of course seafood for the whole Nation. We produce oil and gas for the whole Nation. As far as we're concerned, we're going to have a disaster. I'm not very optimistic that we're going to build projects which I know about which I believe could work. But I don't think we're going to build them fast enough before we are going to have a disaster in coastal Louisiana.

We're not worried about Al-Qaida in coastal Louisiana. We don't need gas masks to protect ourselves from terrorists. What we need is life vests and body bags to protect us, and those that can survive then to take care of those that don't survive. Very frankly, that's how critical it is.

In 1997, there was a flood in the Mississippi River. All the systems on the river worked, all the spillways worked. No commerce was interrupted, all the way from Minnesota by the way, to the Gulf of Mexico. If we hadn't had the controls on the Mississippi River in 1997, all of South Louisiana would have flooded, 300 miles from Lafayette to Slidell, Louisiana would have flooded. It would have affected 1,500,000 people.

It didn't flood because of what we did as a Nation to control the river, which allows for flood control and navigation up and down the Mississippi River. At one of the coastal commission meetings, one of the observances was that 100 years ago we didn't have a coastal erosion problem in Louisiana. That's absolutely correct. We didn't have one 100 years ago. What we had, though, what we now have is navigation and flood control up and down the Mississippi Valley, which has made it the most productive valley in the world.

Thank you all so much.

Mr. DUNCAN. Thank you very much, Mr. Smith. I know that everybody feels very strongly about this, but we're going to go to Mr. Falgout next.

Mr. SMITH. When you come to Louisiana, by the way, come after the hurricane season.

Mr. DUNCAN. OK, thank you.

Mr. Falgout.

Mr. FALGOUT. Thank you, Mr. Chairman, members of the Committee. Again, I'm Ted Falgout, Port Director of Port Fourschon, which provides support services for approximately 16 percent of the U.S. oil and gas supply. Congressman Tauzin told you 20 percent. And just to show you how important we are, in this short period of time from when I left the port yesterday to today we gained 4 percent.

But perhaps this is the first time you've heard of Port Fourschon, but believe me, if it's rendered inoperable, you will hear a lot about it. Being a fisheries biologist by education and an avid outdoors-

man, I understand and witness daily the coastal losses that we're experiencing. As a port director and coastal zone manager for nearly three decades, I've been involved directly in sustaining the resources that are at risk.

I'll focus my time on the issue I know best, the role that this remote area plays in furnishing the energy that impacts our everyday lives. This country's richest oil and gas resources by far are located in offshore Louisiana. Therefore, the majority of the support infrastructure runs through coastal Louisiana. Unlike many States, Louisiana has embraced the oil and gas effort. We do it well, with very little fanfare.

In 1995, deepwater drilling off the coast of Louisiana was ignited when Congress passed the Royalty Relief Act. This Act reduced foreign energy dependence, it reduced the trade deficit, it generated record lease sales and fat bonuses to the U.S. Treasury. Since then, deepwater production has risen 535 percent for oil and 620 percent for gas. There are now 90 hydrocarbon production on line, approaching a million barrels of oil per day and 3.6 billion cubic feet of natural gas. Deepwater oil production has surpassed the shelf, and there's an estimated 71 billion barrels of reserve in the Gulf, more than Alaska.

An astounding 87 percent of the oil and 80 percent of the natural gas from Federal offshore waters is coming from offshore Louisiana. In addition to coastal Louisiana's huge role in providing domestic energy, it also serves as the land base for LOOP, this Nation's only offshore oil port which handles approximately 15 percent of the country's foreign oil and is connected to 30 percent of the U.S. refining capacity.

When you combine Louisiana's ever-increasing role in the deepwater Gulf with LOOP's role in both domestic and foreign oil, we play a critical role in almost a third of the country's oil and gas supply. Much of this support infrastructure is located in the most rapidly deteriorating and vulnerable areas of the coast.

A prime example of the vulnerability exists at the port I manage. Port Fourschon currently supports 75 percent of the deepwater production in the Gulf. We're connected to the main land by a 17 mile stretch of winding, two lane road that runs through the most rapidly eroding estuary in the country. As a result of coastal land loss, this road is often inundated by flooding and subject to being totally washed out.

It was spoken about Hurricanes Isidore and Lili. This two storm event shut the port and its service area down for eight days. In this short time, over a billion dollars of oil and natural gas was not available for the U.S. market. The seriousness and national significance of this threat cannot be overstated.

It's difficult to mention this threat without touching on the tremendous inequity that was mentioned earlier in offshore revenue sharing. In 2002, $7.5 billion was generated to the U.S. Treasury from offshore leases. Over $5 billion of that came from offshore Louisiana. If we would have received 50 percent of these revenues, we would not be here today asking for help. We'd be deploying the necessary resources to halt this aggression.

And I use the word aggression in its most serious sense. Today we have a very formidable aggressor in coastal land loss. It's

threatening, it's capturing thousands of acres of U.S. soil, it's threatening our nationally significant renewable resources, and the infrastructure that shields this country.

Even a brief disruption in the flow of energy through coastal Louisiana could easily send this country into a recession. Unless we invest at a level necessary to halt this aggressor now, we will pay dearly in the very near future. Thank you.

Mr. DUNCAN. Thank you very much, Mr. Falgout. Very fine testimony.

Mr. Landgraf?

Mr. LANDGRAF. Thank you, good morning Chairman Duncan, and Ranking Member Costello and members of the Committee. I am Ed Landgraf of Shell Pipeline Country, and I also live down the bayou.

Thank you for this opportunity to speak to you about something that is near and dear to my heart and something I witness every day on my job and the place I live. That is, Louisiana's deteriorating coastline and the impact it has on the Nation's energy infrastructure.

I serve as environmental coordinator stationed in Houma, Louisiana. My area covers from the Gulf of Mexico north into southern Illinois. I volunteer my personal time to serve several coastal preservation organizations. I am vice chairman of the Terrebonne Parish Coastal Zone Management and Coastal Zone Restoration Committee, and I serve on the boards of Restore or Retreat and the Baritaria-Terrebonne National Estuary Program.

In my testimony today, I would like to explain how continued loss of Louisiana's coastland is a national problem with serious national implications. Louisiana, including offshore, provides 25 to 35 percent of the Nation's total energy production. Much of this energy infrastructure is at risk as the coast line continues to disappear. Saving, protecting and restoring Louisiana's coastal wetlands, marshes and barrier islands is vital to protect this energy infrastructure and the security and economy for this great United States.

This problem affects the life and livelihood of every American. Therefore, we are asking the Federal Government to join us in our cause and play a significant role in saving South Louisiana from being lost forever.

As you know, approximately one football field of land is lost every 15 to 30 minutes. Coastal land masses serve as a buffer zone and protection area from Gulf of Mexico tides, tropical storms, flooding and hurricanes. This buffer zone shelters everything contained in it, including the critical infrastructure of the oil and gas industry. Today there is very little remaining buffer zone that can truly reduce a storm's potential damage.

I would like to tell you about the energy infrastructure of the State. Louisiana, including offshore, is the second largest energy producing State. Petroleum infrastructure is extensive, with a large network of crude oil, natural gas, refined products, LPG, pipelines, production, refining and storage facilities. You can see an example of this on page 10 of your report.

Southern Louisiana is also home to two of the four Strategic Petroleum Reserve facilities. Other infrastructure includes 17 petro-

leum refineries with a combined crude oil distillation capacity of 2.7 million barrels a day, also second highest in the Nation.

The Gulf's contribution to the Nation's energy supply is truly remarkable. Production in the Federal portion of the Gulf of Mexico outer continental shelf amounts to 23 percent of the Nation's gas production and 30 percent of the Nation's oil production. Natural gas and electricity dominate the home heating market with similar market shares about 47 percent each.

The Henry Hub, located in south Louisiana, is the nexus of 13 natural gas pipeline systems where spot prices are set. Approximately 49 percent of U.S. production passes through this area. Other facts, of 17 refineries, 13 are located in south Louisiana, and they produce 20 percent of all U.S. refined products. Over 2.5 million barrels of crude oil and 12 million feet of cubic gas a day are transported through south Louisiana's coastal zone. Over 191 outer continental shelf pipelines cross the Louisiana coastal zone.

When this infrastructure is down, approximately $100 million of production and associated United States revenue is lost a day. This cost is eventually passed on to the consuming public.

As the buffer zone is lost, even smaller and less severe storms will have increasing damage effects. I have some real live pictures on page 11 of my report. These events could easily cripple Louisiana energy production and transportation by shutting down many oil and gas facilities. Effects will also be felt on a myriad of critical oil and gas service companies. This will subsequently impact the national economy and security by not having a ready supply of petroleum products and natural gas when and where it's needed across the Nation.

It is not inconceivable that this could take months to years to bring some of these facilities back on line. As coastal erosion land loss continues, some of the example of the compounding effects to the oil and gas industry would be loss of yearly crude oil and natural gas production, extended and frequent down time to facilities and increased risk to the transportation and pipelines that were once buried, more frequent power outages to all facilities, closing of marginal facilities due to increased business risk.

In conclusion, the United States relies on south Louisiana for a major portion of its energy supply and security which fuels our economy. The Federal Government should play a positive role in securing its future sustainability. In the long term, the cost of inaction would be much greater than the cost of preserving and protecting this vital natural resource and ecological treasure.

I hope you will agree that aggressive action needs to be taken and this problem is of such importance that the United States Government will take the appropriate action. Furthermore, the level of importance the United States places on this problem should be reflected in the level of support given to implement its solutions.

Thank you.

Mr. DUNCAN. Thank you very much, Mr. Landgraf. I want to thank Dr. Boozman for being with us during this entire hearing, and I want to thank all the witnesses for very informative testimony. I'm going to let Mr. Baker sort of wrap up, then Mr. Costello and I will have some comments also.

Mr. Baker.

Mr. BAKER. Thank you, Mr. Chairman. I shall be brief in light of the fact we have a series of votes and we have such a large panel it would be unreasonable, I think, to hold them over pending the votes. So I will focus principally on the Brigadier General and the Corps' positions on matters. I think our panel of witnesses has demonstratedly clearly the necessity for action, the justification for action from a national perspective.

Brigadier General, it's clear, I think, and if you chose to answer this later that's fine. But I just want to get them on the record as issues of concern. You would concur, and by the way, academically you are an engineer or attorney?

General RILEY. Engineer, sir.

Mr. BAKER. Well, I may be asking something difficult of a military man who's an engineer to set aside the rule book for a moment. But in your personal view, and based on your experience, you would agree that the land in question is of the highest quality of wetland resource in the country?

General RILEY. That I know, yes, sir.

Mr. BAKER. OK, great. You would also agree that we are losing it at an extraordinarily unacceptable rate?

General RILEY. Yes, it is unacceptable.

Mr. BAKER. And that one of the principal contributors to the loss is the fact that the levee channelization efforts of the Corps over the years, pursuant to Congressional direction, acknowledged, has distributed the sedimentary proceeds into offshore continental United States, as opposed to its geologically significant role in the past of rebuilding coastal Louisiana. Is that correct?

General RILEY. That is one of the multiple causes.

Mr. BAKER. But the principal one, we could agree.

General RILEY. No, sir, I wouldn't agree to that.

Mr. BAKER. OK, we'll dispute that one later.

Finally, we would agree that the Federal Government today, through the Corps' resources, has done little in respect to the scope of project and dollars required to mitigate the property loss today?

General RILEY. Sir, I would take that one for the record on mitigation.

Mr. BAKER. OK. Do you believe that the current mitigation process engaged in, say, central Louisiana, Arkansas, Mississippi, where land owners dispute the designation of a property being wetland, particularly in a case of a tractor rut, other man-made items which result in designation of wetlands, in contrast to the cost to resolute those issues, meaning determination by engineering surveys, ultimately perhaps mitigation, mitigation bank costs, and the value of the wetlands ultimately preserved come in a distant second to the value of the wetlands we're trying to preserve in this coastal area?

General RILEY. Sir, I would say that almost the wetlands down there are valuable. It would be hard to compare individual pieces of wetlands to the——

Mr. BAKER. So could we do it on the basis of numbers of species, endangered birds, number of ducks, number of square feet of water? In other words, I can go back for you and take a case where we have no wetlands identifiable factors other than a palmetto, historically significant sedimentary deposits, the fact that it does

maintain water for a certain number of days. But there are no attributable wildlife or habitat issues on that property, other than those geologically identified issues by virtue of the Corps' handbook, which call it a wetlands, as opposed to something that's generating 30 percent of the Nation's seafood and 40 percent of the Nation's oil and gas.

Does there seem to be an imbalance in that picture?

General RILEY. Sir, if it's as you described, then there is an imbalance.

Mr. BAKER. Well, it is as I described.

Let me proceed. Would you consider or assign people to evaluate the current mitigation prospects, and to look more carefully at the coastal wetlands being lost which is, even you will acknowledge, high class wetlands, very valuable, we are losing it, the Corps has had some part in helping to cause the loss of those wetlands? A pilot project, at the very least, to allow people to write a check for coastal reclamation USA, designate it Louisiana, administered by the Corps, which would go a great way, I think, toward providing immediate and necessary resources for smaller projects, immediate benefit for coastal reclamation and preservation.

Is that a pilot you would at least concede, or have someone review the appropriateness of?

General RILEY. Sure——

Mr. BAKER. Getting current statutory——

General RILEY. Sir, that's probably a matter of legislation——

Mr. BAKER. It is, but I'm just saying, would you look at it from a professional standpoint and give us feedback as to whether you think that makes any sense?

General RILEY. Clearly we would, yes, sir.

Mr. BAKER. Thank you, I appreciate your courtesy.

Mr. DUNCAN. We've got this series of votes, and we don't to hold all these witnesses over. We're going to submit a number of questions in writing, to each of the witnesses.

Mr. BAKER. I thank you very much. I yield back.

Mr. DUNCAN. OK, thank you. General Riley, I would like to get a statement from you as to where these projects, you think, where the Corps feels they will really stop the erosion and destruction or whether they just reduce the rate, and how much they would reduce the rate to these first projects.

Mr. Brown's been here the entire time, and I think he wanted to make one brief statement.

Mr. BROWN. General, if I might, I represent South Carolina, which is about 150 miles of the coastline. We also have a port there, too. We have a lot of similar problems that you all have. So I'm glad that you came from Louisiana to present your case.

If you would just bear with me just a minute, I'd like to kind of relate a little bit to the comparison that you all made to South Carolina, which we have apparently, looks like the Corps has reneged on their responsibility insofar as the intercostal waterway, keeping it at a normal depth, and also beach renourishment. We have the same argument, I guess, with beach renourishment along our coasts as you do there. I think it's been proven that the beaches that have been renourished have less of an impact when the

hurricanes come through, and we are certainly confronted with them every day, just like you folks are.

General, what is the long term outlook as far as resuming the responsibility for the renourishment of the beaches and maintaining the intercostal waterway?

Mr. DUNCAN. General, we're in danger of missing this vote. We'll ask that you submit that in writing.

Once again, I want to thank each of you for being here. You've been very informative, very helpful. With the exception of having these questions that we're going to submit to each witness in writing, that will conclude this hearing for the time being.

[Whereupon, at 11:35 a.m., the subcommittee was adjourned, to reconvene at the call of the Chair.]

Louisiana Coastal Area – Addressing Decades of Coastal Erosion

Scott A. Angelle, Secretary
Louisiana Department of Natural Resources
July 15, 2004

I would like to thank the Chairman and the Subcommittee for inviting me to testify today on a matter that is of the utmost importance to not only my state of Louisiana but to the nation as a whole. The coastal Louisiana ecosystem provides fish and wildlife habitat that supports the nation's second largest fishery and over $1 billion per year in recreational fishing and hunting. This productive land also provides protection for infrastructure that produces or transports 30 percent of the nation's oil and gas supply and the nation's largest port complex by tonnage. This rich coastal land, which is home to two million Louisiana residents, is in grave danger. In the last 70 years, Louisiana has shrunk in land area by nearly 1900 square miles—an area nearly the size of the State of Delaware—and is projected to shrink by another 500 square miles in the next 50 years if more aggressive actions are not taken. This puts the fisheries, oil and gas infrastructure, ports, and residents at increased risk of loss due to ecosystem collapse and storm damage. From the state of Louisiana's perspective, this risk is unacceptable. We urgently need the assistance of the Federal government to restore sustainability to this great coastal ecosystem, a unique national treasure.

Background

The Mississippi River transports enormous volumes of sediments, nutrients and water from the heartland of America to the coastal area of Louisiana. Before this Nation was settled and developed, the Mississippi River had built over four million acres (6250 square miles [mi^2]) of coastal swamps, marshes, barrier islands, and other associated habitats in coastal Louisiana through a process known as the "delta cycle". The heart of the delta cycle is the ability of the river to alter its distributary course— when an existing course becomes inefficient, it is abandoned in favor of a more direct route to the Gulf of Mexico. When this channel switching occurs, the introduced sediment, nutrients, and fresh water are enough to counterbalance the natural process of subsidence and salt water and tidal influence, and a new sub-delta is created by building extensive new wetland areas. The abandoned sub-delta's wetlands receive less sediment and nutrients, and the natural subsidence and increased saltwater and tidal influences contribute to the slow degradation of the sub-delta. Despite this slow degradation, significant areas of coastal wetlands continue to be sustained by retaining some river influence, and habitat diversity increases as more saline marshes begin to dominate and the seaward edges are reworked into barrier headlands and barrier islands. The Mississippi River has changed its course several times during the last 7,000 years, and each time, the river has built a major sub-delta.

The delta cycle has been interrupted by activities which have allowed us to live and work in the coastal zone. Federally-authorized flood protection and navigation projects have reduced the sediment load of the Mississippi River, fixed the river and its distributaries in place, and confined their flows to the channel itself. These projects have provided significant flood damage reduction and navigation benefits to the Nation, but have had the unintended consequences of

accelerating the degradation of the entire coastal Louisiana ecosystem and preventing development of new sub-delta lobes. The annual floods and periodic river crevasses, which had built and sustained the coastal ecosystem, have been eliminated and most of the Mississippi River's fresh water, with its nutrients and sediments, flows directly into the Gulf of Mexico. The cumulative effects of human activities and natural processes in the coastal area have severely impaired the deltaic processes and shifted the coastal area from a condition of net land building to one of net land loss. Without significant intervention, the Louisiana coastal ecosystem will continue to decline, which will jeopardize the future economy of the region and the Nation.

Although the coastal Louisiana ecosystem contains 30 percent of the coastal marsh in the contiguous United States, it now accounts for 90 percent of the total coastal marsh loss. Coastal Louisiana has lost over 1.2 million acres (1,875 mi^2), since the 1930s (Barras et al., 2003; Barras et al., 1994; and Dunbar et al., 1992). The rate of loss from 1990 to 2000 was about 15,300 acres per year (23.9 mi^2/yr), much of which was due to the residual effects of past human activity (Barras et al., 2003). It was estimated in 2003 that coastal Louisiana would lose an additional 328,000-acres (513 mi^2/yr) by the year 2050 (Barras et al., 2003) if more aggressive actions are not taken.

National Significance

Louisiana's coastal wetlands and barrier island systems provide many nationally significant economic and environmental services. They protect an internationally significant complex of shallow and deep-draft ports from the destructive forces of storm-driven waves and tides. This complex handles 21 percent of the Nation's waterborne commerce, more than any other port in the Nation, and has the most active segment of the Nation's Gulf Intracoastal Waterway (GIWW) (Waterborne Commerce Statistics Center (WCSC), 2002). Louisiana is also nationally important in its contribution to energy. In 2001 Louisiana's crude oil and natural gas production, including production from the outer continental shelf, ranked 1st and 2nd in the nation, respectively (LDNR, 2002). Capital investment in the Louisiana coastal area totals approximately $100 billion. These investments include facilities, supporting service activities, and urban infrastructure (Waldemar S. Nelson, 2003) providing for over 2 million inhabitants (46 percent of the state's population). Coastal Louisiana's environmental services include commercial fishing landings at a dockside value of $305 million in 2002, and account for approximately 30 percent of the total catch by weight in the lower 48 States (USDOC 2002). Expenditures on recreational fishing (trip and equipment) in Louisiana have been estimated to be between $703 million (USFWS, 2002) and $1.2 billion (Gentner et al., 2001).

In addition to their economic value, coastal Louisiana's wetlands provide very valuable environmental services. Louisiana's coastal wetlands contain an extraordinary diversity of coastal habitats ranging from narrow natural levee and beach ridges to forested swamps and freshwater, intermediate, brackish, and saline marshes. These unique habitats combine to place the coastal wetlands of Louisiana among the Nation's most productive and important environmental assets. Coastal wetlands are critical habitat to birds, including neotropical migratory songbirds, waterfowl, and water birds. Approximately 70 percent of all waterfowl that migrate through the United States use the Mississippi and Central flyways, for which Louisiana provides the most important wintering habitat. Additionally, coastal Louisiana provides critical nesting habitat for many species of water birds, such as the endangered brown pelican.

History of the Louisiana Coastal Restoration Program

Early coastal restoration efforts in Louisiana were often small and produced localized benefits. By the 1980s it was recognized that Louisiana needed to construct projects that mimic the deltaic land-building processes which had been disrupted by human actions. Since the 1980s, through implementation of projects of steadily increasing scale, it is now apparent that only a comprehensive ecosystem scale, process-based approach to restoration will achieve the necessary sustainable restoration benefits. The following is a brief history of the evolution of Louisiana's coastal restoration efforts.

Early Efforts

Responding to the crisis at hand, the state of Louisiana began constructing projects as early as the 1970's, and initiated a series of legislation to offset the catastrophic loss of coastal wetlands. The Louisiana State and Local Coastal Resources Management Act was passed in 1978 to regulate the developmental activities that affect wetland loss. The resulting Louisiana Coastal Resources Program became a federally approved coastal zone management program in 1980. Restoration projects built in these early years were mainly small-scale, state-funded projects designed for shoreline stabilization and marsh management.

State Legislation and CWPPRA

By 1989 increased understanding of the vastness of the land loss problem led to the creation of a dedicated source of funding and a structure to advance the state's restoration efforts. In 1989 the Louisiana Legislature passed Act 6 of the Second Extraordinary Session (R.S. 49:213-214), and a subsequent constitutional amendment which created the Coastal Restoration Division (CRD) within the Louisiana Department of Natural Resources (DNR), as well as the Wetlands Conservation and Restoration Authority (Wetlands Authority). Act 6 also established the State Wetlands Trust Fund, which provides revenues derived from oil and gas activities to wetland restoration efforts in Louisiana. Because of these actions, the State now has a secure and steady means to pay its cost-share of Federal coastal restoration projects, and is now staffed with technical experts who can effectively partner with their Federal counterparts in planning, designing and constructing restoration projects.

Federal support came in 1990 when the United States Congress passed the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA; Public Law 101-646, Title III) to contribute federal monies to state restoration activities. Since passage, CWPPRA has provided approximately $50 million annually to plan and construct wetland restoration projects in Louisiana. To date, 68 projects have been constructed at a cost of $258 million, and another 64 are currently in the design phase (LDNR, 2003).

Additionally, CWPPRA created a strategic and productive partnership between Louisiana and five federal agencies: the United States Departments of the Army, Agriculture, Commerce, and Interior; and the United States Environmental Protection Agency. We have used the knowledge gained from implementing this program to design and build projects that are more effective in meeting their restoration goals.

Other Federal Support

Between 1992 and 2002 the United States Army Corps of Engineers (USACE) constructed two significant freshwater diversion projects along the Mississippi River near New Orleans at a total cost of $147 million (LDNR, 2003). Authorized through the Water Resources Development Act (WRDA), the Caernarvon and Davis Pond river diversions have the potential to benefit vast areas of deteriorating marsh by introducing beneficial freshwater, sediment, and nutrients. It is anticipated that these river diversions will benefit over 51,200 acres of wetland habitat (LDNR, 2003). Construction and operation of those projects have given us confidence that the technology is sound and an effective means of restoring our coastal wetlands.

In addition to freshwater diversion projects, Section 204 of WRDA 1992 allows for wetland restoration through the beneficial use of dredged material. For example, material from the maintenance dredging of Federal navigation canals can be used to create land in open water areas, applied in thin layers to bring degraded wetlands up to intertidal elevation, or used to stabilize eroding natural wetland shorelines. However, this funding source is of minimal use, relative to the enormity of the problem facing coastal Louisiana because Federal expenditures on Section 204 projects are not to exceed $15 million annually for the Nation. Between the years of 1991 and 2002, thirteen Section 204 projects were built in Louisiana at a total cost of $11.3 million. This equates to less than 20 percent of the 70 million cubic yards of material annually dredged in Louisiana being used beneficially (LDNR, 2003).

Coast 2050 Plan

All of these efforts have advanced coastal restoration in Louisiana, by providing greater understanding of what ecosystem responses may be expected from different restoration techniques, and which techniques are most appropriate for various coastal regions. Through this work, it was also recognized that, while smaller site-specific projects are effective, an ecosystem-level, process-based approach to coastal restoration is needed to restore this national treasure. Therefore, a significant planning effort was initiated in 1997, resulting in a report entitled "Coast 2050: Toward a Sustainable Coastal Louisiana" (Louisiana Coastal Wetlands Conservation and Restoration Task Force and the Wetlands Conservation and Restoration Authority, 1998). This plan included input from private citizens, local governments, state and federal agency personnel, and the academic community. Additionally, "Coast 2050" focused all efforts of participating agencies on the common goal of creating a comprehensive, ecosystem-level coastal restoration plan that utilized the best available scientific knowledge, and emphasized the need for a larger scale, more encompassing attitude toward coastal restoration. This document was the basis of a USACE reconnaissance report approved in May 1999. While this report was a landmark achievement which outlined the general ecosystem strategies needed to restore coastal Louisiana, it did not contain the details needed for implementation.

Basin-Scale Studies

In February 2000, the interagency team which had been working in concert on coastal restoration since the inception of CWPPRA began working on implementation of Coast 2050 taking a 10-year basin-by-basin approach. The study focused on Barataria Basin Wetland Creation and Barataria Basin Barrier Shoreline Restoration. In support of this planning process, development was also begun on a basin-wide hydrodynamic model. However, it became apparent that this basin-by-basin approach to planning for coast-wide restoration did not allow managers to

compile all information needed for setting priorities, and could not be implemented in a timely manner.

LCA Comprehensive Plan

Thus, in March 2002 the interagency team, aided by the academic community (together referred to as the Project Delivery Team [PDT]) initiated the Louisiana Coastal Area comprehensive ecosystem restoration study with the goal of developing a comprehensive multiple basin plan which could serve as the blueprint for implementation. The resulting draft report, entitled "Louisiana Coastal Area, LA – Ecosystem Restoration: Comprehensive Coastwide Ecosystem Restoration Study", focused on such restoration features as river diversions, barrier island and other geomorphic structure restoration, shoreline protection, and hydrologic restoration. Basin-scale modeling tools, which represent the best available scientific understanding of coastal Louisiana ecosystem function, were developed to aid in the development of the most ecologically beneficial and cost-effective 30-year construction program to restore coastal Louisiana. Other important outcomes of this draft report included the interagency and academic partnerships which will serve as the basis for the establishment of a future Science & Technology (S&T) program.

LCA Near-Term Plan

Based on guidance given in the President's Fiscal Year 2005 budget request, the LCA Comprehensive Plan was revised to focus on a near-term plan of action which addresses the most critical ecological needs of the coast. This proposed plan is a small subset of the Comprehensive Plan, comprised of those critical restoration studies, projects, and programs that could be implemented within a ten-year timeframe. This first phase of implementation represents an opportunity to construct projects in areas of critical need and to continue the advancement of scientific and technological knowledge for optimization of future project construction.

Released on July 9, 2004 for public review, the Louisiana Coastal Area (LCA), Louisiana Ecosystem Restoration Study (LCA Study) begins to address the following critical needs: preventing future land loss, restoring connections to river resources in degrading areas, restoring endangered geomorphic structures such as barrier islands and land bridges, and protecting vital community and socioeconomic resources.

Goal and Purpose

The goal of the LCA Study is to reverse the current trend of degradation of the coastal ecosystem. The purpose of the LCA Study is to:

- Identify the most critical ecological needs of the coastal area;
- Present and evaluate conceptual alternatives for meeting the most critical ecological needs;
- Identify the kinds of restoration features that could be implemented in the near-term (within 5-10 years) that address the most critical ecological needs;
- Establish priorities among the identified near-term restoration features;
- Describe a process by which the identified priority near-term restoration features could be implemented;
- Identify the key scientific uncertainties and engineering challenges facing the effort to protect and restore the ecosystem, and propose a strategy for resolving them;

- Identify, assess and, if appropriate, recommend feasibility studies that should be undertaken within the next 5-10 years to fully explore other potentially promising large-scale restoration concepts; and
- Present a strategy for addressing the long-term needs of coastal Louisiana restoration beyond the near-term focus of the LCA Study.

LCA Study Recommendations

The LCA Ecosystem Restoration Study components include:

- *Programmatic Authority for 5 critical restoration features* ($786 million): Construction will be subject to follow-up decision documents. All restoration features have been deemed to have significant restoration benefits in the most critically degraded areas of the coast, are based in proven technology, and already have initial design efforts in progress.
- *Approval of an implementation plan of eight additional near-term critical restoration features for which a standard authorization process will be followed* ($730 million): These projects have been deemed to have significant restoration benefits in the most critically degraded areas of the coast and are based in proven technology; however, significant design efforts have not been initiated on these projects.
- *Authorization of a Science and Technology (S&T) Program* ($100 million over 10 years): The S&T Program would provide a strategy, organizational structure, and process to facilitate effective programmatic incorporation of advancing science and technology.
- *Authorization of Science and Technology Demonstration Projects* ($175 million over 10 years): Authorization of demonstration projects would allow for the resolution of critical areas of scientific and engineering uncertainty while providing meaningful restoration benefits whenever possible. Information garnered from these projects would be used to advance the restoration program.
- *Programmatic Authority for the Beneficial Use of Dredged Material* ($100 million over 10 years): On average, only approximately 20 percent of the 70 million cubic yards (mcy) of material that is dredged annually in Louisiana is used for marsh creation. It has been estimated that an additional 30 mcy could reasonably be used for the purposes of marsh creation adequate funding were available. This programmatic authority would allow up to 21,000 acres (32.8 square miles) of wetlands to be created over the next ten years.
- *Programmatic Authority for Modification to Existing Structures* ($10 million over 10 years): Opportunities for modifying or rehabilitating existing structures and/or their operation to achieve cost-effective, expedited restoration benefits should be explored. Initiation of studies of restoration opportunities relative to such modifications requires advanced budgeting; therefore, programmatic authority is requested to initiate such studies.
- *Approval of a plan for assessing the feasibility of potentially promising large-scale restoration feature concepts* ($60 million): Very large-scale restoration concepts which exhibit significant potential to contribute to achieving restoration objectives need to be further analyzed and confirmed in order to determine how best to incorporate them, if at all, into the LCA Program. These include such concepts as the

"Third Delta", which proposes the construction of a channel from the Mississippi River to degraded areas of Barataria and Terrebonne basins that would transport Mississippi River water at a rate up to 250,000 cubic feet per second in order to build new sub-deltas in these regions.

The total cost of the LCA Study near-term plan is $1.961 billion over 10 years.

Adaptive Management

The vibrant ecosystem found in coastal Louisiana is a product of an ever-changing, natural environment. While this dynamic condition provides the energy which created and sustains the ecosystem, it also ensures that scientific knowledge of this – or any – ecosystem is far from complete. Therefore, scientific uncertainties are unavoidable when managing large-scale ecological systems. Additionally, because construction of restoration projects on the scale required for restoration of coastal Louisiana is unprecedented, there is also a degree of technical and engineering uncertainty associated with this restoration effort. However, if properly acknowledged and addressed, these uncertainties need not hinder the progress of a restoration program.

Through a process called adaptive management, uncertainties may be identified and resolved throughout a program's implementation, and the resulting information may be continuously incorporated to improve the operation and design of existing and future projects within a restoration program. This process has been ongoing for the past 14 years in Louisiana, where knowledge gained from past restoration projects as well as academic research initiatives has been used to improve our understanding of the types and operation of restoration features which most effectively address the goal of reversing the trend of degradation of the coastal Louisiana ecosystem.

The LCA Study builds upon the best available science and engineering knowledge garnered from previous restoration efforts in Louisiana. The LCA Study presents a near-term restoration plan which is based in extensive scientific understanding and proven technology. Because there are uncertainties associated with other promising techniques, the LCA Study also recommends a coordinated Science & Technology program and demonstration projects to ensure that implementation continues to rely on the best available technology. An adaptive management program has also been incorporated into the LCA program in order to ensure that lessons learned continue to be incorporated into future planning efforts.

Future

Over the past 20 years, the State of Louisiana and its Federal partners have learned a great deal about the causes of the coastal crisis and the necessary actions that will restore sustainability to the coastal Louisiana ecosystem. As our scientific and technical knowledge has grown, we have also discovered that existing policies and procedures are limiting our capability to address this critical problem in a timely manner and on meaningful scales. We therefore propose the following actions to facilitate the restoration of the coastal Louisiana ecosystem.

Comprehensive Authorization
Our experience with the CWPPRA program has shown that we can build effective relatively small restoration projects that restore and protect discrete areas of coastal habitat. In addition, our two WRDA-authorized river diversions have shown that we can produce significant beneficial ecosystem effects on a basin scale. All of these efforts have shown, however, that a project-by-project approach is not adequate to provide a systemic and coordinated solution. Beginning with the Coast 2050 effort in the late 1990's, we recognized that a long-term, comprehensive restoration plan relying on a systems-approach was vital to achieve the goal of establishing a sustainable coastal ecosystem. We firmly believe that a long-term, comprehensive restoration plan is necessary for the restoration of the coastal Louisiana ecosystem. The state of Louisiana and the USACE had prepared such a comprehensive report that would provide a programmatic basis for comprehensive implementation of the Coast 2050 Plan. However, in response to the guidance given in the President's Fiscal Year 2005 budget request, the state of Louisiana agreed to scale back and refocus this comprehensive planning effort on a more short-term effort to address only some of the critical ecosystem needs. Although this first phase of implementation yields an excellent opportunity to construct projects in some areas of critical need, many more areas of need remain to be addressed. We firmly support the full authorization of the recommendations in the *Louisiana Coastal Area (LCA), LA Ecosystem Restoration Study* report as a necessary first step, but we believe that this effort is not enough. A comprehensive report must be prepared in an expedited manner and authorized as soon as possible.

Cost Sharing and Appropriations
Current law requires a cost share ratio of 65 percent Federal and 35 percent non- Federal for construction of ecosystem restoration projects with 100 percent non-Federal responsibility for operations, maintenance, repair, replacement, and rehabilitation (OMRR&R). We are requesting the non-Federal share of program implementation be set at 25 percent, including construction and OMRR&R costs. The State of Louisiana believes this alternative cost share scenario is appropriate and justified based on the root cause of the problem, historical precedence, and the national scope of the problem.

Other existing federally authorized projects constructed in Louisiana have provided significant flood damage reduction and navigation benefits. An unintended consequence of these projects, however, was the disruption of natural processes that has directly contributed to the need for coastal restoration. Without modification of these federal projects, many constructed at 100 percent Federal cost, further decline of the coastal ecosystem is a certainty.

The non-Federal cost-share obligation for construction and OMRR&R of two Water Resources Development Act projects in the vicinity of New Orleans, the Caernarvon and Davis Pond freshwater diversion projects is 25 percent. These projects were built following final authorization in the WRDA of 1986, and are similar to several projects proposed in the LCA study for near-term implementation.

In addition, the nation derives considerable benefits from the coastal Louisiana ecosystem. The Louisiana coastal area provides protection for the production and transport of about 30 percent of the nation's oil and gas supply, supports the nation's second largest commercial fishery and supplies significant navigation and port facilities. If land loss is not addressed aggressively,

there will certainly be national impacts, including increased risk to the security of the country's energy supply. Allowing for reduced non-Federal cost share ratios and ensuring adequate Federal appropriations are critical to maintain an optimal schedule for construction of these vital projects.

Streamlined Implementation Process
While it is important to maintain checks and balances to ensure wise and efficient use of resources, program requirements should not preclude a timely response to this urgent problem. The traditional process used by USACE for project planning, design, and construction is too cumbersome and slow to address a problem of this magnitude in a timely manner. For example, the Davis Pond project was authorized by the Flood Control Act of 1965, (PL 89-298) and was further amended by the Water Resources Development Acts (WDRA) of 1986 (PL 99-622), and 1996 (PL 104-303). Construction began in 1996, and operation finally began in 2002, nearly 40 years after project conception. Davis Pond is a landmark project providing substantial ecosystem benefits; however, constructing future projects on this same time scale is not adequate to address the critical and urgent nature of the problems facing the coastal Louisiana ecosystem. Therefore, streamlined procedures for preparation and submission of decision documents need to be developed. These documents should provide adequate assurances that the projects will be effective and cost-efficient in meeting their objectives, but should not be traditional feasibility reports. In addition, expedited mechanisms should be created to implement projects that have undergone extensive engineering and design efforts under other State and Federal programs. Lastly, coastal ecosystem restoration projects should be justified solely on National Ecosystem Restoration benefits, although ancillary economic impacts and benefits should be considered and reported. The programmatic authority recommended in the *Louisiana Coastal Area Ecosystem Restoration Study* report is a good example of streamlined processes, and needs to be fully endorsed and implemented.

Summary and Conclusions
Because of the unintended consequences of activities which have allowed us to live and work in the coastal zone, the natural processes which built and historically maintained coastal Louisiana have been disrupted to the point where this ecosystem is on the verge of collapse. It is estimated that approximately 1900 square miles – an area the size of Delaware – has been lost since the 1930s, and another 500 square miles could be lost in the next 50 years if no further action is taken to combat the problem (Barras et al., 2003). This crisis is not only a concern for local and regional interests, but also to the Nation as a whole because of the tremendous benefits this region provides. Failure to act puts the fisheries, oil and gas infrastructure, ports, and residents at increased risk of loss due to ecosystem collapse and storm damage.

State constitutional amendments passed in October 2003 and state legislation passed in 2004 have bolstered funding for the restoration program and limited potential liability associated with project construction. This shows that Louisiana's citizens and legislators are willing to make sacrifices for aggressive action. On a procedural level, the amendments specifically make important first steps toward addressing previously intractable problems of funding and liability. Decades of coastal restoration research and projects have taught us much about what types of restoration projects work, what projects do not work, and –very importantly – how to structure a program which will allow us to advance the coastal restoration program and rise to the challenge facing us today. This improved program readiness has already engendered increased confidence among Louisiana's federal coastal restoration partners. In addition, these efforts are receiving

international attention as a model of how to proceed with wetland restoration, as evidenced by the recent visit of the Iraqi Minister of Water Resources.

We urgently need the assistance of the Federal government to restore sustainability to this great coastal ecosystem, a unique national treasure. Specifically, we need the LCA Study to be authorized and funded in its entirety. We have already trimmed this request from the estimated $14 billion needed to restore the coast over a 30-year period down to a $1.9 billion plan which is comprised of the most critical actions needed in the next 10 years. We strongly believe that the near-term plan described in the LCA Study represents the minimum possible effective action, and must not be further compromised. It is essential that this plan have a streamlined implementation process, as the usual decades that it has taken to for planning, design, and construction of WRDA projects is not an option. In addition, it is crucial that a comprehensive program be authorized to ensure that this vital national treasure is preserved. Given the tremendous resources the state of Louisiana provides to the Nation and the consequences the Nation will face if these resources are compromised, we believe that a 25 percent state cost share is justified.

Louisiana is only 1.5 percent of the area of the entire United States, yet we handle 21 percent of the total waterborne commerce, 30 percent of all oil and gas consumed in the country, and provide 30 percent of the seafood from the lower 48 states (Waterborne Commerce Statistics Center (WCSC), 2002; LDNR, 2002; NMFS, 2003). All of these resources are threatened by the land loss crisis facing coastal Louisiana. Many valuable lessons have been learned and a blueprint for Louisiana's future has been developed. We are prepared and ready to take the next steps needed to restore America's Wetland.

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TESTIMONY OF MARK DAVIS, EXECUTIVE DIRECTOR OF THE COALITION TO RESTORE COASTAL LOUISIANA

TO

HOUSE TRANSPORTATION AND INFRASTRUCTURE COMMITTEE, SUBCOMMITTEE ON WATER RESOURCES AND THE ENVIRONMENT

July 15, 2004

My name is Mark Davis and I am the executive director of the Coalition to Restore Coastal Louisiana. On behalf of the Coalition, I would like to express our appreciation to the Committee and the Chairman for inviting us to speak with you about the urgent need to address the crisis that exists today in the lower Mississippi River delta and coastal plain, a place now known as America's Wetland.

The Coalition to Restore Coastal Louisiana is a broad based not-for-profit organization comprised of local governments, businesses, environmental and conservation groups, civic groups, recreational and commercial fishermen, and concerned individuals dedicated to the restoration and stewardship of the lower Mississippi River delta and Louisiana's chenier plain.

Let me begin by recognizing the astounding efforts put into the cause of coastal restoration and stewardship by the State of Louisiana, her federal partners and a great many environmental groups, business, landowners, academics, local governments and individuals over the past 15 years. Thanks to those efforts we now have the ability and the opportunity to chart a brighter future for our coast, our communities, and our natural heritage.

That said, let me clearly tell you that this nation and America's Wetland are facing a crisis. Despite the best efforts that have been marshaled to date, coastal Louisiana is still disappearing at the alarming rate of nearly 25 square miles each year. Without bold, decisive action Louisiana as we now know it--geographically, ecologically, culturally, and economically-- may cease to exist in the next 50-to-100 years. The resulting loss would be incalculable and the tragedy compounded by the knowledge that it did not have to be. If the unthinkable should occur, it will not be because we were overtaken by events, but because we did not rise to the challenge when there was still time.

On that point let me also make clear to the Committee that the Coalition firmly believes there is still time to act, but that it is running frighteningly short.

I would be pleased to provide the Committee with abundant evidence about the nature of this crisis and the many vital interests at risk. But in the brief time we have here I will focus on some of the factors that make this such an urgent matter and on the steps the must be taken now to secure this great treasure for ourselves and for future generations.

The Need for Action

When the crisis in our coast was first gaining attention in the late 1980s there was a general perception that somehow this was a local issue and that it was purely a "wetlands" issue. It is now clear that it is much more than that. Simply put, this is a survival issue of local, national and international importance. The very survival of one of the world's greatest ecologic, cultural and economic treasures is at stake. The price of doing too little or waiting too long will be measured in terms of dollars, lives, and our natural and cultural heritage.

The fundamental problem facing this coast is an induced collapse resulting from hydrologic changes and wetland conversions on a landscape scale. To be sure there are factors other than human activities that contribute to this situation, but it is beyond dispute that the principle drivers are related to efforts to confine the rivers, facilitate navigation and promote the exploration and production of oil, gas and other subsurface minerals. I do not say this critically but rather to make the simple point that for much of the last 150 years it was the aim of our society—and often federal policy—to channelize our waterways, convert our wetlands, support the exploration, production and transportation of oil and gas, and facilitate deep-draft and coastal navigation. There were often very good reasons for those actions and policies but they came at a cost that was not adequately appreciated or understood at the time. Now we know the price of all that progress--over one million acres of land lost to subsidence and erosion since 1900 and a continuing loss of nearly 25 square miles each year.

The response to this calamitous land-loss must be systematic and long-term. To approach it too narrowly or with short-term fixes is to court certain disaster. The restoration effort we seek will not replace the million plus acres of land that have been lost. Rather, it will restore a functional balance to this coastal ecosystem, so that it becomes ecologically, culturally and economically sustainable. The key to sustainability is to work with the natural forces that built and nurtured these lands over thousands of years... I am speaking principally of the Mississippi River and its distributaries. For those who live along the river or in its coastal plain, it has always been necessary to balance and rebalance our relationship with the river and our waters. Many of the decisions that are now driving our coastal collapse at one time made it possible to live and prosper here, but unless a new balance is struck, and struck soon, this place will cease to exist as we know it. It is no exaggeration to say that the continued collapse of this area could claim tens of thousands of lives in increasingly flood-prone areas, wipe out one of the greatest biological and estuarine treasures in the world, and severely disrupt our nation's energy and transportation system.

There is still time to avert these tragedies, but this Committee and this Congress must act decisively.

The Elements of Success

This crisis did not appear over night and was not caused by a single project or program. Similarly, it will take a concerted effort over time that is truly comprehensive in its scope to successfully restore this system to health and vitality. Fortunately, over the past decade much work has been done at the federal, state and local levels and in the academic and private sectors to assemble and vet the essential elements of a successful coastal restoration program. While there is still uncertainty about some points, enough is known to make a substantial start. There will always be an element of uncertainty to this business and we will always know more five or ten years hence, but just like a cancer patient who hopes that a miracle will be developed soon but who cannot wait to begin treatment. Our coast does not have the luxury of time. If anything we have waited too long.

Because of the urgency of this matter we are pleased that the Army Corps of Engineers and the State of Louisiana have prepared a draft near term restoration plan. We are also pleased that this Congress is now recognizing this as critical issue as it develops the 2005 Water Resources Development Act. In many ways the basic structure of the program set forth in the Senate's WRDA bill is sound though it is too narrow in scope and too tentative its project authorizations to be an acceptable next step in the restoration of America's Wetland. In the coming weeks it will be necessary to bring those various pieces together into an actual vehicle for creating at least the first phase of a truly effective and comprehensive coastal restoration and stewardship effort. To help that along we would like to make the following suggestions.

1. **Whatever is authorized must ultimately be part of a comprehensive effort.** It is vital that any near term program that is authorized include an authorization and direction that a comprehensive coastal plan be prepared and delivered to Congress. This comprehenisive plan must be one that advances not only the construction and operation of coastal restoration projects but that provides a basis for integrating other vital public works such as flood control, navigation and fisheries management as well as regulatory programs into a consistent fabric that ensures sound stewardship and value for the investment of public resources. We believe that completion and delivery of this comprehensive plan should be required no later than July 1, 2008.

2. **Coordinate with ongoing coastal restoration programs and ensure meaningful agency involvement.** The restoration effort must engage the expertise of a range of federal agencies whose programs and expertise can be brought to bear on the resources, communities, and infrastructure of our coastal region and the Gulf of Mexico. The multi-agency task force created in the Senate's WRDA bill seems to be appropriately inclusive, though it is not clear what resources will be used to coordinate the Task Force's activities or to encourage the participation of the agencies other than the Army Corps of Engineers. Since many of these agencies are already funded to be part of the multi-agency task force created under the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA),

it may be desirable to link the functions of that task force with the task force proposed under WRDA to ensure both continuity and engagement. However given the lower level composition of the current CWPPRA task force it is vital that it not be substituted for the higher level policy and program coordinating task force envisioned under the Senate WRDA bill.

3. **Authorize and direct a plan for eliminating and addressing the adverse consequences of the MRGO.** The Mississippi River Gulf Outlet (MRGO) is acknowledged to be a major source of environmental degradation and land loss in southeastern Louisiana. The ultimate "closure" of this marginal federal navigation channel to prevent salt water migration, storm surges and continued bank erosion has been called for by the reconnaissance report for the Louisiana Coastal Area study, by a resolution of the Louisiana legislature, by local governments, and by a wide array of environmental, civic, and landowning interests. The Senate WRDA directs the Corps of engineers to prepare a plan for "modifying" the MRGO. We strongly support the explicit directive to the Corps to prepare such a plan but it must be clear that the plans for "modification" should not preclude the ultimate closure of the channel to deep-draft navigation. Clearly the interests of deep--and shallow-draft navigation must be considered in any coastal restoration effort, but any plan that does not deal effectively with the damage done (damage which is ongoing) by the MRGO is not an effective and comprehensive coastal restoration and stewardship plan. It is essential that Congress authorize and direct the Corps to prepare this plan for the MRGO.

4. **Create a near term program of adequate scale and purpose.** The level of effort in the near-term plan should be appropriate in scale and purpose. While there may be good reasons for Congress to defer authorizing a full comprehensive program at this time, it is essential that what *is* authorized now contribute to and lay the groundwork for the ultimate comprehensive effort. At a minimum we urge that the following program elements and projects be included in any program considered by this Congress:

    a. A science and technology program that engages both agency and non-agency science and technical expertise to help craft and evaluate the success of coastal restoration projects. For such a program to produce significant value it must be clearly integrated into the development, sequencing, review and evaluation of the near term program and projects as well as in the development of the comprehensive plan. We appreciate that this science and technology program will not be a decision making body but rather an advisory and supportive program. But history teaches that unless such a program is created and integrated on the front end it simply does not get included in a meaningful way. I do not mean this as a criticism of any agency or existing program but rather as an honest recognition of how specific these bridges between programs and pools of expertise have to be for them to produce the sort of value it will take to make the survival of America's Wetland a reality. The State of Louisiana has recommended that this effort—which will in many ways be the applied research

and development arm of the restoration effort as well as a key part of the adaptive management and public accountability facets of the program—be budgeted at $100 million over ten years. We believe this is a sound figure and consider it essential to ensuring that public funds are invested in projects and activities about which there is a high degree of scientific confidence.

b. A demonstration or pilot-project program should be authorized to field test the technologies and techniques that will be used to implement the actual restoration projects included in the comprehensive plan. This program would demonstrate how innovative approaches or techniques, perhaps used elsewhere on a smaller scale, might work at the landscape-scale called for in this effort. These demonstrations will enable the Corps and the state to base programmatic decisions on real-world experience. The Senate WRDA provides for such a program but its funding limits, particularly the $15-million-per-project cap, are a serious constraint. We believe the program proposed by the state is more realistic.

c. The authorization for construction of key projects that have been planned and developed under other federal authorities and are ready for implementation. These would include the following projects:
    i. The Bayou LaFourche River Reintroduction Project. At the turn of the last century Bayou LaFourche was a major distributary of the Mississippi River and served as the principle conduit for river water to the vast marsh system in the lower Barataria-Terrebonne estuary.. Since the Bayou was effectively cut off from the river in 1904 its character and that of the wetlands it sustained have deteriorated significantly. The absence of this riverine influence can be seen on the landscape as areas that were once swamp and fresh marsh are becoming saltier or open water. Indeed this area is in the bull's eye of the land loss crisis in America's Wetland with loss rates exceeding 12 square miles a year at times. This area is critically important to the biological diversity and productivity of the Gulf of Mexico as well as being a vital part of the storm protection and drinking water supply to the communities, farms and businesses of the area. This project has been studied extensively under the Coastal Wetlands Planning, Protection, and Restoration Act and is now ready for action. While limited in scope, this project is a keystone project for this area that will improve the natural resources, provide tangible community benefits, and provide experience that will be essential to the design and implementation of larger scale projects for Barataria-Terrebonne region.
    ii. The Maurepas Swamp River Reintroduction Project (Hope Canal). The Maurepas Swamps between the Mississippi River and Lake Maurepas were once fed by the waters of the Mississippi River. These swamps,

which are among the largest cypress tupelo swamps in this nation, are a direct and vital part of the ecology of the wetland and estuarine system that make up America's Wetland east of the Mississippi River. The leveeing of the River combined with other changes to the hydrology of the area, including the construction of I-10 and the opening of the Mississippi River Gulf Outlet, have left this system effectively without a circulatory system and subject to higher salinities from the Gulf side. Without a source of sediment, nutrients and freshwater of the sort once provided by the river, this system is under great stress and dying. This project would not solve those problems but it could give the system a new lease on life to permit longer term solutions to be crafted.

iii. Barataria Basin Barrier Shoreline Restoration. The key to successful coastal restoration lies in reestablishing to a functional degree the natural processes that once built and sustained this coast for its many uses and values. The two main ingredients of a sustainable system are (1) riverine influence and (2) barrier shorelines to protect the interior systems and reduce tidal exchange. This project would work on the latter but needs to be understood in context with such projects as the Bayou Lafourche project discussed above and the Myrtle Grove project discussed below—you can't save this place just with river diversions or just with barrier shoreline restoration. The barrier shorelines of the Barataria Basin are among the most threatened in our nation and though, with the exception of Grand Isle, they are unpopulated they provide proven value as habitat for breeding and migratory birds as well as for fish, shrimp and crabs; storm buffers for natural and developed habitats; and protection and anchoring points for vital energy infrastructure such as oil and gas pipelines. In many ways these islands, particularly in the Caminada Headland area, are the border of our coast and the Gulf of Mexico—a border that is rapidly disappearing. Restoration of these barrier shorelines to a functional condition that can ultimately work with a rehabilitated interior hydrology is essential to the ultimate survival of this region. This is not a case in which the restoration is justified by the developmental value of the islands and shorelines but upon their value as natural habitats and natural defenses that provide distinct values for which there are no practical substitutes.

iv. Sediment Enriched River Reintroduction at Myrtle Grove. The river and its sediments are the fundamental building blocks of this coast and they are the very things that a restored coast must be built upon. This project would reestablish the full compliment of riverine resource (fresh water, nutrients and sediments) to an area that stands to lose more than 35,000 acres of land over the next ten years. This project would both help stem that loss by nurturing existing wetlands and create conditions for new wetland creation. This project has been the subject of extensive studies

and work under the Coastal Wetlands Planning, Protection, and Restoration Act and is now ready for further action.

We cannot emphasize enough the urgency of not only acting at this time but acting wisely and at a level that can make a difference. This is not just another water project or conservation initiative, it is a legacy issue by which history will judge our stewardship. It is a challenge we can't afford not to meet.

We would like to thank the Committee again for the opportunity to appear here and we pledge to be of whatever assistance we can be to the Committee and the Congress as it moves ahead with the enormous challenge of saving our coast and safeguarding our future.

Respectfully submitted,

Mark Davis
Executive Director

Testimony of Ted M. Falgout
Executive Director
Greater Lafourche Port Commission
Before the Subcommittee on Water Resources and the Environment
Committee on Transportation and Infrastructure
July 15, 2004

Mr. Chairman and Members of the Committee, my name is Ted Falgout, and I am Port Director of this Nation's most significant energy port, Port Fourchon, a place you may not have heard of before today, but believe me, if it is rendered inoperable, you will hear a lot about it. In fact, I would venture to say that there will be Congressional Hearings on how could we have left such a critical piece of nationally significant energy infrastructure so vulnerable.

Being a fisheries biologist by education and an avid outdoorsman, I understand and witness daily the coastal losses that we are dealing with. As a Port Director and having been actively involved in Coastal Zone Management for nearly three decades, I have been directly involved in sustaining the industrial and cultural resources that are at risk.

You have already heard much about what is at risk and what we propose to do about it. I will use my time to focus on the issue I know best -- the role this remote area plays in furnishing the energy that impacts our every day lives.

This country's richest oil and gas resources by far are located offshore from Louisiana, and therefore the majority of support infrastructure runs through coastal Louisiana.

Unlike many states, Louisiana has embraced the offshore oil and gas industry; we do it well, with very little fanfare.

In 1995, with the passage of the Royalty Relief Act and the advancement of new technology, the Gulf of Mexico was transformed from what was once called the Dead Sea to what is now America's Expanding Frontier. This transition occurred seemingly overnight and made way for the Black Gold Rush to "deepwater" – an area in the Gulf of Mexico, outside of any state boundaries, and near or off of the Outer Continental Shelf. Once again Coastal Louisiana was called upon to support this country's energy needs.

The post Royalty Relief shift to OCS exploration and deepwater is significant – a decision of this nation that has been very rewarding, with reduced foreign energy dependence, balance of trade, record lease sales, and fat bonuses.

Much like the Gold Rush of the 1800's, this country has pursued the Golden Gulf with virtually no policy and very little concern about the landside infrastructure needed to retrieve this bounty.

The Gulf of Mexico is now in its 9th year of sustained expansion of the deepwater frontier. According to the U.S. Minerals Management Service, deepwater oil and gas exploration and development in the Gulf of Mexico Outer Continental Shelf has exceeded even the most optimistic expectations and shows no sign of diminishment. There are now 90 hydrocarbon production projects on line approaching 1 million barrels of oil per day, and 3.6 billion cubic feet of natural gas. In 2002, deepwater oil production surpassed production on the shelf, and there is an estimated 71 billion barrels of reserve in the deepwater Gulf. More than Alaska.

An astounding 87% of the oil and 80% of the natural gas from federal offshore waters is coming from offshore Louisiana.

In addition to its huge role in domestic production, Coastal Louisiana serves as the land base for LOOP, this nation's only offshore oil port which handles about 15% of this country's foreign oil and is connected to over 30% of the U.S.'s total refining capacity.

When you combine Coastal Louisiana's ever-increasing role in the deepwater Gulf of Mexico and LOOP's role in both domestic and foreign oil, Coastal Louisiana plays a critical role in more than a quarter of this country's oil and gas supply. Much of this support infrastructure is located in the most rapidly deteriorating and vulnerable areas of the Coast.

A prime example of the vulnerability is the Port I manage. Sitting on the Gulf, there is simply no better place geographically, economically and environmentally to support this offshore activity. Our port currently supports 75% of the deepwater production in the Gulf. We are connected to the mainland by a 17-mile stretch of winding road that runs through the most rapidly eroding estuary in the country, perhaps the world. Largely as a result of coastal land loss, it is often inundated by flooding from tropical systems and subject to being totally washed out.

To give you some idea of what's at stake here, I'll go back to 2002, when as a result of Tropical Storm Isidore and Hurricane Lili, much of the Gulf production off of Louisiana was shut down for 8 days, and over 22.4 million barrels of oil and 88.9 billion cubic feet of gas were not available for the U.S. Market. That's well over a Billion Dollars of raw product in only 8 days.

A disruption of the highway system leading to Port Fourchon and the other support areas would have a similar impact.

I cannot mention the threat that exists to our nation's energy supply as coastal land loss takes its toll without touching on the tremendous inequity that exists in offshore revenue sharing.

In 2002, the U.S. Minerals Management Service generated from offshore mineral leases over $7.5 billion nationally, which went to the U.S. Treasury. Of this amount, over $5 billion, more than 2/3, came from offshore Louisiana. If this would have been on federal lands within the state, Louisiana would have collected 50% of these revenues. Alaska would have gotten 90%. But because this activity is outside of the State's 3-mile jurisdiction, we are feeling the full impact of supporting this activity, but not sharing in the revenues. Louisiana received $13.4 million in 2002, or ¼ of 1% of what was generated off of its coast, while in contrast, New Mexico received what $387 million or 50% of what mineral-related activities on federal lands generated within its state.

If Louisiana shared anywhere close to that percentage, we would not be before you today. We would be deploying the necessary resources to address this aggression.

I use the word aggression in its most serious sense. Today we have a very formidable aggressor in Coastal Land Loss that is capturing hundreds of thousands of acres of U.S. soil; it is threatening our unique culture, our abundant renewable resources, and the infrastructure that fuels this nation.

Unless we invest at a level necessary to halt this aggressor now, we will pay dearly in the future. With the level of land loss that exist today, a well placed Category Four Hurricane would cause the price of gasoline to go up $1.00, double the price of natural gas, and cause huge loss of life. This would throw this country into an immediate recession and its impacts would dwarf the costs of protection. I pray that the next time I testify it is not to say, "I told you so".

TESTIMONY OF CONGRESSMAN CHRIS JOHN

TO

HOUSE TRANSPORTATION AND INFRASTRUCTURE COMMITTEE,
SUBCOMMITTEE ON WATER RESOURCES AND THE ENVIRONMENT

July 15, 2004

Thank you, Mr. Chairman, for the opportunity to speak before the Committee this morning. As we sit here today, a little bit more of America washes away. Louisiana's vanishing coastline takes with it important cultural, economic, and societal benefits to our nation. The witnesses following this panel can describe in personal detail the devastating effect of coastal erosion on the communities, businesses, and infrastructure in south Louisiana. Coastal erosion is a race against time in Louisiana and today we are losing the battle.

During my past 8 years in Washington, I have worked to make coastal restoration a priority here in Congress. My colleague, Congressman Billy Tauzin, deserves particular credit for his leadership in the House on this effort during his long career of service. So does Chairman Young who has worked with us for the past several years on a solution.

Last week the Administration released a revised coastal restoration plan that authorizes up to $1.9 billion in federal and state spending for the next 10 years. I am encouraged now to see the Administration lending credence to this issue. Acknowledging responsibility for federal policies that have significantly contributed to the coastal land loss is an important step toward making this project a reality. While I applaud this effort to sustain the ecology, culture, and economy of America's Wetland, I am also concerned about the plans for funding this initiative.

Coastal restoration will require a commitment of federal dollars, and lots of them, to provide tangible results. Before the recently revised near-term proposal for coastal restoration, the federal government, along with the Administration of Governor Foster in Louisiana, put together a comprehensive approach resulting from over 5 years and $24 million of investments of public and private resources. The resulting "Coast 2050" plan called for as much as $14 billion in coastal investment over 30 years. Although this plan was revised to fit the priorities of this Administration and Congress, both the original $14 billion plan and the revised $2 billion plan will require significant federal resources. With the budget realities we are facing today, it will take a united front and overwhelming bipartisan support to make this project a reality.

With the broad support of members of this committee, the House has passed impact assistance legislation tied to federal royalties on offshore oil and gas production on more than one occasion, but appropriators have fought our efforts to create a mandatory spending mechanism. A blueprint of how to move forward is important, but the funding to accompany this plan is critical. For instance, Governor Blanco requested $50 million

to kick-start this initiative through the 2005 federal budget, yet she received less than one-sixth of that request ($8 million) through the President's budget.

While the coastal restoration plan will undoubtedly continue to evolve over the next 30 years, our coastal ecology, communities, and economy cannot sustain themselves while we wait for budget surpluses to fund this initiative. There is no such thing as a viable short term fix or small scale restoration proposal for such a large scale restoration and conservation effort. The state and local governments in Louisiana have done their part to dedicate funds for coastal restoration. We must now ensure that the federal government does its part to keep this national treasure above water.

Statement of Ed Landgraf

Environmental Coordinator, Shell Pipeline Company LP

Before the

Subcommittee on Water Resources and Environment

Transportation and Infrastructure Committee

United States House of Representatives

July 15, 2004

Good morning Chairman Duncan, Ranking Member Costello, and members of the Committee. I am Ed Landgraf of Shell Pipeline Company. I would like to thank the Committee and the Chairman for this opportunity to speak to you about something I witness every day in my job – that is Louisiana's deteriorating coastline and the impact it has on the nation's energy infrastructure.

I serve the Gulf of Mexico Region as an Environmental Coordinator stationed in Houma, Louisiana. I am responsible for the environmental integrity of Shell's pipeline systems and for pipeline public awareness programs throughout an area that covers from the Gulf of Mexico to Southern Illinois. I volunteer my personal time to several organizations involved in coastal matters. I am Vice- Chairman of the Terrebonne Parish Coastal Zone Management and Coastal Restoration Committee, and I serve on the boards of Restore or Retreat and Baritaria-Terrebonne National Estuary Program.

I am happy to be here to discuss an issue that is near and dear to my heart, the tragic loss of Louisiana's coast.

Shell Oil Company, parent company of Shell Pipeline Company, recognizes this is a serious national issue and the company has committed various resources

through employee involvement, educational publications and being the world sponsor of the America's Wetland Campaign.

In my testimony today, I will explain how the continued loss of Louisiana's coast is a national problem with serious national implications.

Louisiana, including offshore state and federal rights, provides 25-30 percent of the total United States energy production. Much of this energy infrastructure is "at risk" as the coastline continues to disappear. Saving, protecting and restoring the Louisiana coastal wetlands, marshes and barrier islands is vital to protect this critical energy infrastructure and the security and economy generated by the oil and gas industry.

It is not an over-statement to say that failure to address South Louisiana's coastal erosion, subsidence, and land loss will affect the life and livelihood of every American citizen. For these reasons, and others described by my colleagues, the federal government needs to play a significant role in saving South Louisiana from being lost forever. In doing so, it would stop the devastation and protect the environment and the national economy.

First, let me explain what the problem is.

While south Louisiana is home to 40 percent of the nation's wetlands it is experiencing over 80 percent of the land loss in the continental United States. Each year nearly 25 square miles of wetlands are lost. This is the equivalent of approximately one football field of land lost to open water every 30 minutes. This problem devastates the environment, estuaries, wildlife, fisheries, residents, communities, culture, businesses, and the economy not only in the state, but nationally as well.

Coastal landmasses serve as the main buffer zone protecting coastal Louisiana from Gulf of Mexico tides, tropical storms, flooding, and hurricanes. This "buffer zone" is the natural protection area for all of South Louisiana and everything contained in it – people, wildlife habitat, ecology, and the critical infrastructure of the oil and gas industry. Today there is very little remaining buffer zone that could naturally reduce a storm's potential damage, and it continues to disappear at an alarming rate.

Second, I would like to tell you about the energy infrastructure that is at stake.

Louisiana, including offshore, is the second largest energy producing state. The petroleum infrastructure is extensive with a large network of crude oil, natural gas, refined products, and liquefied petroleum gas (LPG) pipelines, and production and storage facilities. Louisiana is also home to two of the four Strategic Petroleum Reserve (SPR) storage facilities: West Hackberry in Cameron Parish and Bayou Choctaw in Iberville Parish, Louisiana. Other infrastructure include 17 petroleum refineries with a combined crude oil distillation capacity of more than 2.7 million barrels per calendar day, also the second highest in the nation.

Louisiana has numerous ports including the Louisiana Offshore Oil Port (LOOP), which is capable of receiving ultra large oil tankers with a capacity of 1.4 MM bbls per day. Natural gas and electricity dominate the home heating market with similar market shares totaling about 47 percent each.

The Gulf's contribution to the nation's energy supply is truly remarkable. Production in the Federal portion of the Gulf OCS amounts to 23% of the nation's natural gas production (just under 5 trillion cubic feet) and 30% of the nation's oil

production (570 million barrels) for 2002. Deepwater production has been rising rapidly.

The Henry Hub, located near Erath in Vermillion Parish, is the nexus of 13 natural gas pipeline systems that draw supplies from offshore and onshore gas fields in Louisiana and federal OCS waters. It is the point where financial markets determine the value of natural gas and is the largest centralized point for natural gas spot and futures trading in the United States. Approximately 49 percent of U.S. wellhead production either occurs near the Henry Hub or passes close to the Henry Hub as it moves to downstream consumption markets. *(source: EIA)*

Other Facts:

- Of the 17 refineries in the state, 13 are located in South Louisiana
- In 2003 South Louisiana refineries alone produced nearly 20% of all U.S. refined products
- Over 2.5MM barrels of crude oil and over 12 MMcf of natural gas per day are transported through Louisiana's coastal wetlands
- The MMS lists 191 OCS pipelines crossing the federal-state boundary into Louisiana's coastal zone

- Gulf of Mexico pipelines transport over 2.5 million bbls of crude oil per day – when the coastal infrastructure is down approximately $100 million of production and associated U.S. revenue is lost each day (assumes $40/B). This cost is eventually passed on to the consuming public.

Third, I would like to explain how the problem affects the oil and gas industry.

The coastal landmasses that serve as the main buffer zone protect coastal Louisiana from Gulf of Mexico tides, tropical storms, flooding, and hurricanes by dissipating storm surge and thus storm damage and flooding. As the buffer zone disappears, the coastal zone and everything in it becomes more susceptible to storm damage and flooding from ever-smaller and less severe storms and hurricanes. This phenomenon has been well studied and documented.

The increased likelihood and severity of storm damage and flooding due to coastal land loss and the loss of the protective buffer zone could cripple the Louisiana energy production and transportation by shutting down many oil and gas facilities, refineries, terminals, and pipelines. Wide ranging effects will also be felt on the myriad of oil and gas service companies that are critical to the

industry's reliability. This would subsequently impact the national economy by not having the ready supply of petroleum products and natural gas when and where it is needed across the nation. Depending upon the severity of the resulting storm or flood related damages, it is not inconceivable that it could take months to years to bring some of these facilities back online.

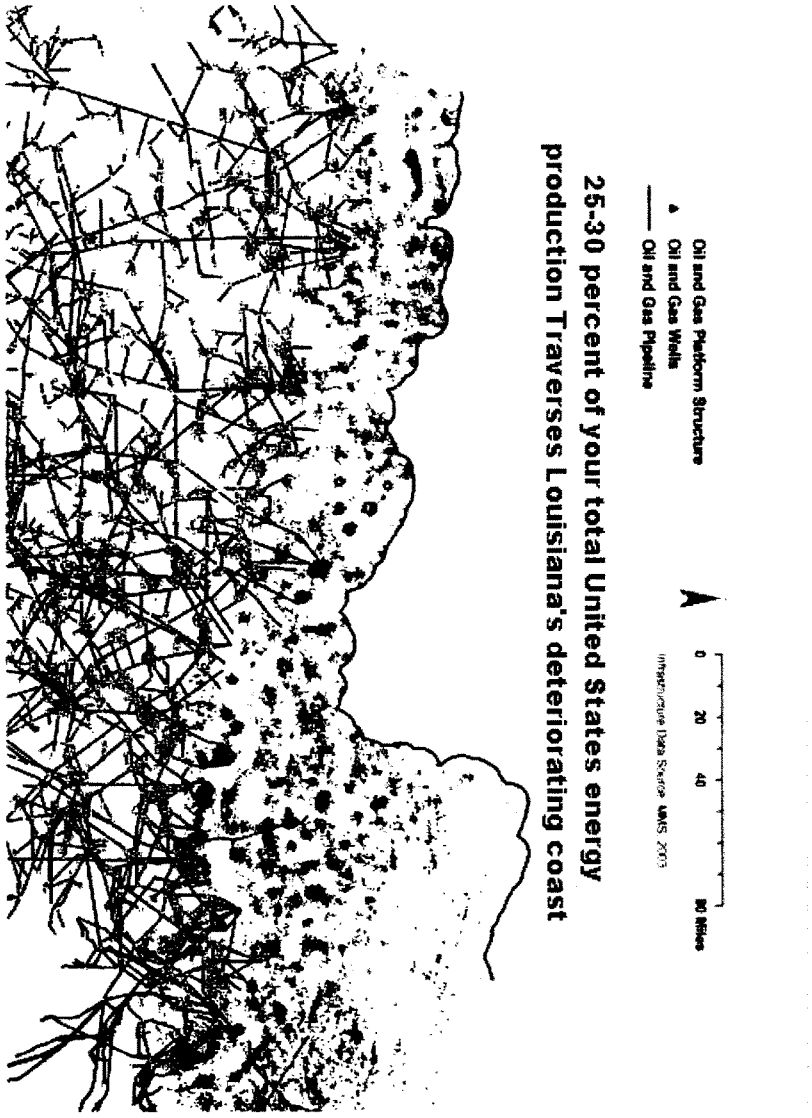
As coastal erosion and land loss continues, the effects will be compounded. The oil and gas industry would be impacted as follows:

- Loss of crude oil production due to the inability to provide the necessary support and equipment as facilities are damaged
- Extended facility downtime due to increased facility flooding
- Increased exposure and risk to energy transporting pipelines as formerly buried pipelines become exposed due to continued erosion and loss of the wetlands.
- Extended shutdown of refinery complexes
- More frequent and extended outages to oil and gas pumping, processing and refining facilities due to power supply interruptions
- Closing of marginal facilities due to the increased business risk
- Increased operational costs in the region to stabilize, repair or replace damaged or integrity threatened facilities by coastal land loss.

In conclusion, national energy security can be maintained only if Louisiana's coast is restored and preserved. Because the United States relies on South Louisiana for a major portion of its energy supply, which fuels our economy, then the federal government should play a positive role in securing its future sustainability. In the long-term, the costs of inaction will be much greater than the costs of preserving and protecting this vital national resource and ecological treasure.

I hope you will agree that aggressive action needs to be taken and that the problem is of such importance that the United States Government will take appropriate action. Furthermore, the level of importance the United States places on this problem should be reflected in the level of support given to implementing solutions.

Thank you.



25-30 percent of your total United States energy production Traverses Louisiana's deteriorating coast

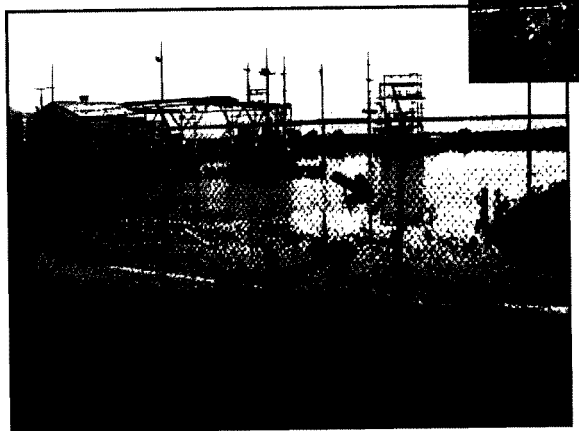
"Tropical Storm" Bill

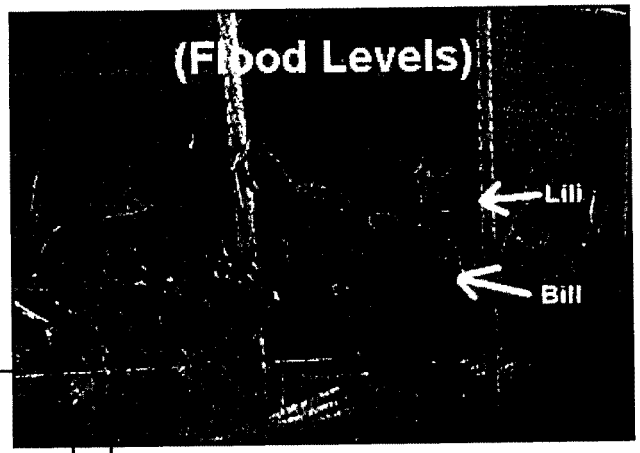
7 Ft. Storm Surge

vs.

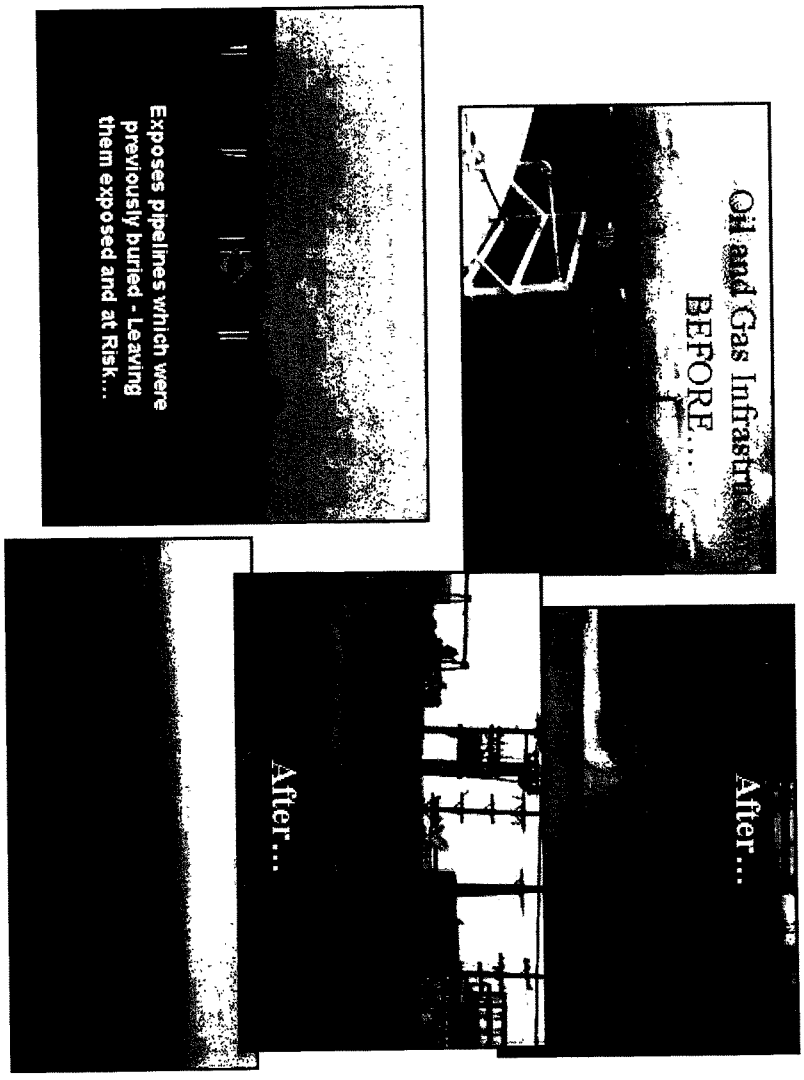
"Hurricane" Lili

8 Ft. Storm Surge





Coastal Erosion and Land Loss Increases Hurricane, Storm Surge, and Flooding Damages to the Oil and Gas Infrastructure


Oil and Gas Infrastructure
BEFORE...
After...
After...
Exposes pipelines which were previously buried - Leaving them exposed and at Risk...

Your
Economy
And Culture
Affected!
Fisheries, Seafood,
Oil and Gas
Infrastructure
And
Communities
Threatened

TESTIMONY OF KING MILLING,

CHAIRMAN, GOVERNOR'S ADVISORY COMMISSION ON COASTAL

RESTORATION AND CONSERVATION

TO

HOUSE TRANSPORTATION AND INFRASTRUCTURE COMMITTEE,

SUBCOMMITTEE ON WATER RESOURCES AND THE ENVIRONMENT,

THE LOUISIANA STATE SENATE ENVIRONMENT

July 15, 2004

I am King Milling, Chairman, Governor's Advisory Commission on Coastal Restoration and Conservation.

I appreciate the opportunity to address the committee on the issue of Louisiana's deteriorating coastal ecosystem. If I can leave you with one paramount thought today, it would be the recognition that this deteriorating condition must be addressed aggressively and with an unwavering sense of urgency. The consequences which will flow from a failure to act timely and in a meaningful fashion will be felt not only by hundreds of thousands of citizens in Louisiana and those living and working in the immediate region but by the country as a whole.

One might reasonably ask, "What facts support such a declaration?" Unfortunately, the facts speak for themselves.

Louisiana's 400 mile coastline is the largest expanse of coastal wetlands in America comprising 30% of the nation's coastal marsh. It was created over thousands of years from accumulations of sediment, nutrients and fresh water derived from flooding of the Mississippi River. This extraordinary ecosystem, the seventh largest deltaic system on earth, has provided a natural buffer against tropical storms and hurricanes. It is considered the richest and most productive estuary in the United States. It is disappearing at an alarming rate. (Attached as Exhibit A is a map of South Louisiana, prepared by U.S.G.S. depicting the land loss from 1930 through 2050.)

From 1930 to 2000, Louisiana has lost in excess of 1,900 square miles (1,236,000 acres). It is projected that by 2050 Louisiana shall lose an additional 700 square miles. In the 1990's alone, approximately ninety percent of the nation's coastal land loss occurred in Louisiana. Each year, we lose approximately 24 square miles.

This coastal land loss is largely attributable to human intervention undertaken by the federal government to achieve worthy objectives of sustaining navigation and flood protection. However, in the case of South Louisiana the intervention achieved unintended consequences. As a result of levees built along the banks of the Mississippi River, the massive sedimentary load, which historically created and nourished the delta, is being channeled into the depths of the Gulf of Mexico. In short, with the construction of the levee system the natural process of building the delta ceased and what remains of a once vital ecosystem of marsh and swamp is dying for a lack of rejuvenating substances. .

If this problem is not addressed in the near future, the seventh largest deltaic system on earth will literally implode. The delta as we know it will be lost and the existing shoreline will become a part of the Gulf of Mexico. In some critical areas, the shoreline will advance inland by up to 33 miles. The impact of that change may not be intuitively obvious until one recognizes that for approximately every 2.7 miles of loss of marsh or swamp, there is a corresponding increase of one foot of storm surge.

The very existence of this massive ecosystem has protected those who over centuries live and work in Louisiana from the ravages of the Gulf of Mexico. These wetlands provided a natural barrier against storms and hurricanes. Historical storm surges pushed by approaching hurricanes reached levels of 10 to 12 feet and spread inland as much as 25 miles. Without that buffer, it is estimated that surges created by a category 3 storm will increase to heights estimated to be between 16 and 22 feet. It is equally clear that if the deterioration continues as expected, smaller storms will begin to inflict disproportionately greater damage in the future.

The obvious consequence shall be the vulnerability of New Orleans itself; as historically important and as strategically situated as any city in the country. But this is about more than just a metropolitan area located on the banks of the Mississippi. It is about the very survival of towns and communities across the entire expanse of Louisiana's coast. For example, it is estimated that in the eleven parishes within the Barataria/Terrebonne Estuary System (a broad estuary system located south and southwest of New Orleans) there are 220,000 housing units, 180,000 commercial establishments, 200 public schools, 7,000 miles of road, 300 oil and gas fields with over 18,000 wells, 5 major refineries, 22 gas processing plants, and more than 30 public water utilities. Almost every house and building is built on land at or near sea level. Few, if any, structures shall be capable of withstanding the impact of storm surges and hurricanes of the future.

Thus, a complex culture created by the amalgamation of Creoles, Cajuns, African-Americans, French, Spanish, Native Americans, Italians, and others living and working along this fragile coastline will be impacted in ways one hardly wants to imagine. Clearly, unless we address the problem head on, the threat of massive dislocation, property damage, loss of insurability and even loss of life itself is a realistic expectation for our future.

But this is about more than just a question of loss of homes, lives, culture and livelihood (not to mention an area of land greater in size than the State of Delaware).

From an environmental standpoint the loss of the Mississippi deltaic plain would be an international disaster. It would devastate migrating patterns along the Mississippi flyway, as well as countless species of fish, birds and animals whose survival is dependent upon its existence. As it is the most productive ecosystem in the United States, it is critical to breeding, spawning, foraging and nursery for a variety of fish and shell fish. It is estimated that over 75% of Louisiana's commercially harvested fish and shell fish are dependent at some stage in their lifecycle on these wetlands and 98% of offshore Gulf of Mexico commercial species population are dependent upon Louisiana's estuary.

Moreover, this continued deterioration will have a ripple effect throughout the country. Louisiana is an important contributor to the nation's domestic fish

and shellfish production. It is the largest producer of shrimp, blue crab, oysters and menhaden in the country. 30% by weight of commercial fishing harvested in the lower 48 states is from Louisiana. The linkage among this deteriorating ecosystem, diminishing production over time, limited domestic availability and higher prices is self evident. If this ecosystem, the primary breeding, spawning and nursery for commercial fish in Louisiana and the Gulf of Mexico is lost, the nation as a whole will feel the pain.

As this ecosystem goes, it is inevitable that the production, prices and delivery of oil and natural gas will be negatively impacted. There is produced from and/or transported through Louisiana's fragile ecosystem approximately 30% of every MCF of gas and barrel of oil delivered into the continental United States. Louisiana is the number one producer of oil and the number two producer of natural gas.

The delivery of that product is dependent upon the capacity of infrastructure to withstand the natural elements. There are thousands of miles of pipeline in coastal Louisiana which are critical to orderly transportation of oil and gas and their by-products ranging in size from small gathering and feeding lines to large diameter systems. There are also thousands of oil wells, platforms, storage tanks, and compressor systems, which are integral to delivery throughout the country. For the most part, each mile of pipe and each interdependent facility were not designed to accept the increased winds and wave action experienced in open bays or the Gulf itself. Each was built with an inherent

appreciation of the protection afforded by Louisiana's ecosystem. As it is lost, critical systems will break under new and unanticipated stress, pipelines will rupture, cathodic protective systems will fail and the delivery of products will be jeopardized. Cost will increase nationwide.

Continued coastal erosion will adversely affect marine transportation within Louisiana resulting in increased costs of product delivery, increased transportation costs and significant increases in federally funded dredging and maintenance costs. South Louisiana has two major waterway systems used to transport hundreds of millions of tons of commerce, north-south along the Mississippi River basin and east-west along the Gulf Intercoastal Waterway System (GIWW). Five of the 16 largest ports by tonnage in the United States are located along these two interlocking systems. The ports of South Louisiana handle approximately 14% of all U.S. oil imports and 57% of all grain exports. While the ports on the Mississippi largely link Louisiana with the rest of the country to the north, the GIWW is a critical link in the shallow draft transportation system which affords relatively inexpensive commodity and bulk transportation alternatives east and west along the Gulf of Mexico.

The effects of coastal erosion on transportation costs and timely delivery of product will be felt by the country. The GIWW traffic and mode of transportation has been protected from wind, weather and waves from the Gulf by the coastal marshland. As erosion occurs, the buffers are lost, siltation increases, and navigation and maintenance will become more difficult and

expensive. Coastal erosion will also increase the threat of closure of the Mississippi River from siltation. It is not inconceivable that our levee system will become effectively a barrier between the gulf and the river itself.

One could extrapolate other impacts which would have national implication but suffice to say that all of these very real impacts of coastal erosion in Louisiana set out above are critical to the decision made by this country concerning Louisiana's deteriorating coastline.

They also speak volumes for the need to address these critical problems aggressively and with a sense of urgency. It is a hackneyed phrase indeed but applicable in this case that "the clock is ticking." Unless we address this issue with a full understanding and appreciation of the impact of coastal erosion upon Louisiana and the nation, we cannot and will not achieve the commitment required nor the sense urgency.

As the Chairman of the Governor's Advisory Commission on Coastal Restoration I have witnessed an extraordinary commitment from professions which are historically adversarial. Environmental interests represented by Environmental Defense Fund, National Wildlife Federation, the National Audubon Society, the Nature Conservancy and the Coalition To Restore Coastal Louisiana have joined hands and are working with fishing interests, oil and gas interests, property owners and others with the single thought that we must collectively solve the problem of Louisiana's coastal deterioration, or, we will collectively fail.

Only a matter of such substance and seriousness would trigger such consistency in thought and action. We speak with one voice, not just for Louisiana but for the nation. We must develop a comprehensive solution and it must be implemented with a sense of urgency. It will be founded on best science and engineering and it will be complex and expensive, but it must be done. For everyone involved, there is no choice.

The State of Louisiana and the Corp. of Engineers have prepared a plan of action to address this critical problem. It is imperative that we move forward with authorizing the plan with the full recognition that it is an initial step towards the reestablishing of a sustainable ecosystem. Time is of the essence and so we must commence the implementation now.

Respectfully submitted,

R. King Milling

America's WETLAND: Historical and Projected Land Change in Coastal Louisiana (1932 - 2050)
Alexandria
Lafayette
Baton Rouge
Lake Charles
New Orleans
Slidell
Houma
Morgan City
Grand Isle
Land Loss 1932 to 2000
Land Gain 1932 to 2000
Projected Land Loss 2000 to 2050
Projected Land Gain 2000 to 2050
Backdrop: Fall 1999 Landsat Thematic Mapper Satellite Imagery
Primary Road
USGS
America's WETLAND

COMPLETE STATEMENT OF

Brigadier General Don T. Riley
DIRECTOR, CIVIL WORKS
U.S. ARMY CORPS OF ENGINEERS

DEPARTMENT OF THE ARMY

BEFORE THE

Committee on Transportation and Infrastructure
Subcommittee on Water Resources and Environment
UNITED STATES HOUSE OF REPRESENTATIVES

JULY 15, 2004

Introduction

Mr. Chairman, Members of the Committee, I am Brigadier General Don T. Riley, Director of Civil Works, U.S. Army Corps of Engineers. I am pleased to be here today and to have the opportunity to speak to you on the Louisiana Coastal Area (LCA), Louisiana - Ecosystem Restoration Study. My testimony today will provide information on the background and progress made to date by the Corps of Engineers and the State of Louisiana in addressing the degradation of this nationally significant ecosystem. I will share with you some information on the problems and opportunities, the Tentatively Selected Plan restoration features, the estimated cost of the plan's components and the current study's status.

Background

The loss of Louisiana's coastal wetlands has been ongoing since at least the early 1900s with commensurate deleterious effects on the ecosystem. There have been several separate investigations of the problem and a number of projects constructed over the last 30 or so years that provide localized remedies. For example, under the Coastal Wetlands Planning, Protection, and Restoration Act, commonly known as the Breaux Act, Federal agencies and the State of Louisiana have created or restored an estimated 81.3 square miles of coastal wetlands since 1990. Under this Act, the principal Federal wetlands agencies and the State use a competitive process for

allocating funds to potential wetlands restoration projects. They select the best individual projects on the merits, but lack an overall strategy to identify integrated groups of projects that could yield greater environmental benefits by acting in concert on a watershed basis.

Two related activities, the Barataria Basin Wetland Creation and Restoration and the Barataria Basin Barrier Shoreline Restoration interim studies, were initiated under a feasibility cost sharing agreement (the Barataria Basin FSCA) signed between the Corps and the Louisiana Department of Natural Resources on behalf of the State of Louisiana in February 2000.

Given the magnitude of Louisiana's coastal land losses and ecosystem degradation, it has become apparent that a more systematic approach would be the best way to restore natural processes with a physical problem of such large proportions. In March 2000, Louisiana and the Corps jointly decided to undertake development of a comprehensive plan, and signed an amendment to the original Barataria Basin FCSA to initiate a broader ecosystem restoration study. Restoration strategies presented in the 1998 report entitled "Coast 2050: Toward a Sustainable Coastal Louisiana," which evolved into the 1999 Louisiana Coastal Area (LCA) 905(b) reconnaissance report, formed the initial basis for this broader-scale effort. Planning for this effort is now called the Louisiana Coastal Area Ecosystem Restoration Study (LCA Study).

The LCA Study team produced an internal, preliminary draft report in October 2003. Guidance from the Assistant Secretary of the Army (Civil Works) and in the President's fiscal year 2005 Budget identified the need to refocus this study's effort to address the most critical ecological needs of the Coastal Area over the next ten or so years. Since early this year, the Corps and the State have worked together to develop a proposed near-term action plan consistent with this guidance. The plan that we are developing will build upon progress made under the Breaux Act and is intended to guide the next phase of the restoration effort.

The change in focus of the LCA planning process, which began as a general description of a long-term coast-wide comprehensive effort but is now focused on identifying specific actions that can and should be initiated in the near-term, will enable us to take advantage of currently available science and technology, while recognizing that we still have much to learn. All of the ecosystem restoration measures under consideration for the near-term plan are based upon data from similar projects initiated in past years. Further detailed analysis and site design for these projects, after approval of the near-term plan, will ensure that these projects are highly cost-effective and begin to address the most critical ecological needs of the ecosystem. We are focusing our efforts on the parts of the ecosystem that require the most immediate attention, and will propose to address these needs through features that provide the highest return in net environmental and economic benefits per dollar of cost.

The Proposed Plan also contemplates studies of potentially promising, long-term ecosystem restoration concepts, with the objective of determining whether they would provide a highly cost-effective way to create coastal wetlands. Meanwhile, we also would pursue efforts to address the key scientific uncertainties and engineering

challenges associated with coastal restoration, and to improve the cost-effectiveness and likelihood of success of restoration efforts during, and beyond, the ten-year period that will be the focus of the near-term plan.

In addition to identifying the features and other program elements that are proposed to be included in a near-term plan of action, the draft report proposes several "programmatic authorizations" to facilitate their implementation. In some cases the proposed programmatic authorization would apply to new projects whose feasibility has been demonstrated by similar projects already constructed or is informed by feasibility-level studies already conducted. In other cases the programmatic authority would apply to small-scale modifications of existing structures, demonstration projects to prove new technologies, research programs to develop new technologies, and to the beneficial use of dredge material near by existing channels. The report proposes that any feature or program elements that are authorized programmatically may be implemented only upon approval of the Secretary of the Army, and subject to Congressional appropriation.

After review of the public comments, our goal is to recommend the best restoration features and activities that can be implemented over the next ten years, the best way to sequence that work, and the best way to evaluate its success. The intent is to target restoration efforts to the parts of the ecosystem that require the most immediate attention, to improve our understanding of the needs of the ecosystem and our ability to meet them, and to otherwise make the best possible use of available funds, while continuing to pursue the further studies and planning needed to support current and future ecosystem restoration efforts.

Problems

While Louisiana's marine fisheries are still highly productive, vegetation and wetlands functions are on the decline. Without further action, Louisiana's complex coastal ecosystem, composed of diverse habitats and wildlife, will continue to be threatened. Since the 1930s, coastal Louisiana has lost more than 1,875 square miles. The rate of loss from 1990 to 2000 was approximately 23.9 square miles per year, much of which was due to the residual effects of past human activity. It was estimated in 2000 that coastal Louisiana would continue to lose land at a rate of approximately 10.3 square miles per year over the next 50 years, resulting in an additional 513 square miles of net loss by the year 2050.

The combination of the past and continued loss of Louisiana's coastal wetlands is having a discernable, serious adverse environmental impact. Although the rate of annual wetland loss is declining in acreage terms, it is possible that the decline of the natural ecosystem could accelerate if left unchecked. At a minimum, without further action we would expect to see a further decrease in various associated wetland functions and values, including corresponding diminished biological productivity and increased risk to critical habitat of threatened and endangered species.

Opportunities

The sediment, nutrients, and fresh water of the Mississippi River system can contribute to the restoration of the coastal Louisiana ecosystem. The Federal Government and State of Louisiana have been conducting ecosystem restoration efforts for the past 14 years under the Breaux Act and other authorities. In addition, the scientific community in Louisiana is recognized internationally for their expertise in climate and wetland research. The lessons learned and experience gained from these past restoration and research efforts have been applied in the Louisiana Coastal Area Study in a systematic way to develop a proposed near-term plan for addressing the critical needs now facing coastal Louisiana. The potential near-term strategies for ecosystem restoration include:

- Freshwater and sediment re-introductions by diverting some of the flow of the Mississippi River into hydrologic basins;
- Barrier island restoration through placement of sand from offshore sources or the Mississippi River to sustain key geomorphic structures. This would help protect the ecology of estuarine bays and marshes by reducing gulf influences, as well as protect nationally important water bird nesting areas;
- Hydrologic modification to help restore salinity and marsh inundation patterns and provide fishery access in previously unavailable habitats, such as through projects designed to degrade excavated dredged material banks; and
- Creating a marsh platform in areas nearby existing navigation channels through the beneficial use of maintenance dredging material.

By applying ecologically sound principles and restoration methods developed in recent years, and through improved understanding of coastal system processes and ecosystem responses to restoration projects, there is an opportunity available for Louisiana and the Nation to move the LCA ecosystem toward a sustainable future.

Current Status

On July 9, 2004, the Corps and the Louisiana Department of Natural Resources released the Draft Louisiana Coast Area Ecosystem Restoration Study report and Programmatic Environmental Impact Statement to the public. The public NEPA review and comment period will run from July 9 through August 23, 2004. The public comment period will include a series of public meetings conducted in late July through early August. The Corps and State will conduct these meetings in several locations in Louisiana, as well as in Beaumont, Texas, Bay St. Louis, Mississippi, and Memphis, Tennessee. The final study report is currently scheduled for completion in early December, with a Chief's Report expected in late December.

Tentatively Selected Plan Restoration Features

The proposals in our Draft Report amount to a $1.96 billion plan. This Proposed Plan includes 15 near-term restoration features that would have significant restoration benefits in the most critical areas of the coast, a Science and Technology program, Science and Technology demonstration projects, beneficial-use of dredged material, modifications to existing structures, and several long-term coastal restoration concepts that may warrant more detailed study.

The Draft Tentatively Selected Plan, which will hereinafter be referred to as the Proposed Plan, includes a proposal for:

- Accelerated implementation of five initial near-term restoration features, with an estimated cost of $786 million. These five restoration features would address the most critical ecological needs of the coastal area in locations where delaying action could result in a "loss of opportunity" to achieve restoration and/or in much greater restoration costs. Each of these features also would help lay the groundwork for success in addressing the needs of the Louisiana coast beyond the scope of the ten-year plan. The benefits provided by these features include the sustainable reintroduction of riverine resources, rebuilding of wetlands in areas at high risk for future loss, the preservation and maintenance of critical coastal geomorphic structure, and perhaps most importantly, the preservation of critical areas within the coastal ecosystem so as to preserve the ability to successfully implement other potentially promising long-term restoration solutions that require further study.

  The five restoration features proposed in our Draft Report under this component are:

  - Mississippi River Gulf Outlet environmental restoration features
  - Small diversion at Hope Canal
  - Barataria Basin barrier shoreline restoration (Caminada Headland and Shell Island reaches)
  - Small Bayou Lafourche reintroduction
  - Medium diversion at Myrtle Grove with dedicated dredging

  Except for the Mississippi River Gulf Outlet, these features already have initial design efforts in progress.

- A Science and Technology Program, which would provide the scientific data and technological tools needed to facilitate effective program design and implementation and to improve our overall understanding of coastal wetland ecosystem processes. The cost is $100 million over the next ten years. While the LCA Plan is based upon the best currently available science and takes advantage of the experience gained from previous Louisiana coastal studies and restoration efforts, there remain significant scientific uncertainties and engineering challenges facing the effort to protect and restore the ecosystem.

The Science and Technology Program would aid in resolving these challenges and uncertainties. The program also would further our understanding of ecosystem needs; develop system-wide frameworks for modeling, monitoring, and evaluating restoration efforts based on the responses of the ecosystem and the incremental cost-effectiveness of restoration features; and address the most significant uncertainties affecting estimates of cost and effectiveness. To improve the prospects of success for our restoration efforts, we must ensure that the science and technology that we are using -- both in the planning, design, construction, and operation of the near-term plan components and in future restoration efforts -- will steadily advance. We will integrate this proposed Science and Technology Program with research efforts conducted at universities and those sponsored by other Federal agencies, and to ensure that it encourages creativity and scientific collaboration while responding to the needs of the restoration program.

- Science and Technology Demonstration Projects to resolve critical scientific and engineering uncertainties. The estimated cost is $175 million over the next ten years. Five initially identified candidate demonstration projects would serve to decrease critical uncertainties and provide valuable lessons learned to improve overall program performance. These first five candidate demonstration projects have an estimated total project cost of $82.3 million. An additional five to 20 demonstration projects will be defined during implementation, bringing the total to $175 million over ten years.

  The first five proposed demonstration projects are:

  - Wetland Creation in Vicinity of Barataria Chenier Unit (freshwater chenier restoration)
  - Pipeline Conveyance of Sediment to Maintain Land Bridge
  - Pipeline Canal Restoration (various methods and locations)
  - Shoreline Erosion Protection Test Sections in the Vicinity of Rockefeller Refuge
  - Barrier Island Sediment Sources Demonstration in Vicinity of Terrebonne Barrier Islands

  These projects would examine the movement and application of available sediment resources throughout the system and the repair or prevention of widely spread wetland loss problems, and are also directed toward the development of large-scale solutions to broad systemic problems.

- Beneficial-Use of Dredged Material in areas nearby existing navigation channels to take advantage of ongoing maintenance dredging to restore geomorphic structure and in some cases supplement river water reintroductions. The estimated cost is $100 million over the next ten years. This component of the Proposed Plan would take greater advantage of existing sediment resources

made available by maintenance activities to achieve restoration objectives and enhance the Proposed Plan's effectiveness. There is a potential to use up to an additional 30 million cubic yards of material annually. It is estimated that approximately 21,000 acres of newly created wetlands would result from the beneficial use of this quantity of material, over a ten-year period. Areas with that would be examined to determine whether additional beneficial use of material is warranted include:

- The bar channel of the Mississippi River Gulf Outlet, LA project
- The bay reach of the Barataria Bay Waterway, LA project
- The [lower] Mississippi Rivers &Tributaries project, Head of Passes and Southwest Pass
- The bar channel of the Atchafalaya River and Bayous Chene, Boeuf, and Black, LA, project
- The inland reach of the Calcasieu River and Pass, LA, project

- Modifications to Existing Structures to achieve cost-effective, expedited restoration benefits. The estimated cost is a total of $10 million over ten years. As we learn more about the response of the ecosystem responds to restoration projects, we will need to modify or rehabilitate some of these projects. This component of the Proposed Plan would address relatively inexpensive changes to structures previously constructed, consistent with their authorized purpose and/or their existing operation management plans.

- Ten additional near-term restoration features. The cost is $730 million. The proposed restoration features employ a variety of restoration strategies, such as freshwater and sediment diversions; interior shoreline protection; barrier island and barrier headland protection; and use of dredged material for marsh restoration. Construction of these features could begin within the next ten years. The ten restoration features proposed in this category are:

  - Multi-purpose operation of the Houma Canal Lock;
  - Terrebonne Basin barrier-shoreline restoration, East Timbalier, Isle Dernieres;
  - Maintain land bridge between Caillou Lake and Gulf of Mexico;
  - Small diversion at Convent/Blind River;
  - Increase Amite River Diversion Canal influence by gapping banks;
  - Medium diversion at White's Ditch;
  - Stabilize gulf shoreline at Pointe Au Fer Island;
  - Convey Atachafalaya River water to northern Terrebonne marshes;
  - Re-Authorization of Caernarvon diversion – optimize for marsh creation; and
  - Re-Authorization of Davis Pond diversion – optimize for marsh creation.

- A plan for assessing potentially promising large-scale restoration concepts. The cost is $60 million. Several candidate large-scale and long-term concepts for potential incorporation into the Proposed Plan were identified during plan formulation. These restoration concepts may have significant potential to

contribute to achieving restoration objectives for Louisiana's coastal ecosystem. Accordingly, the corresponding benefits and costs for these potential plan features should be further analyzed and confirmed to determine how best to incorporate them, if at all, with other plan features.

The Proposed Plan specifies the initiation of feasibility studies of large-scale restoration concepts which, based on scope and/or complexity, will require more time and further study prior to implementation. The large-scale, long-term initiatives identified in the plan include:

- Mississippi River Hydrodynamic Model
- Mississippi River Delta Management Study
- Third Delta Study
- Upper Atchafalaya Basin Study (including evaluation of alternative operational schemes of Old River Control Structure funded under Mississippi Rivers &Tributaries)
- Chenier Plain Freshwater Management and Allocation Reassessment Study
- Acadiana Bay Estuarine Restoration Study

Conclusion

The degrading Louisiana Coastal Area Ecosystem is an urgent, time sensitive issue:

- The five "most critical" proposed restoration features represent restoration opportunities where failure to act as soon as possible will significantly increase degradation and increase restoration costs.

This two-plus year Louisiana Coastal Area study effort is the result of a multidisciplinary, multiagency Federal-State partnership:

- Corps, Federal resource agencies, and State team have collaborated and built upon the Breaux Act and other restoration experience and collective expertise.

Public involvement has been growing since the late 1980s with the passage of the State's Act 6 (1989). Environmental stakeholders such as the Environmental Defense Fund, National Wildlife Federation, Nature Conservancy, Audubon Society, and the Coalition to Restore Coastal Louisiana, and others also have contributed input.

The near-term plan will be based upon the best available science:

- Leading academic and governmental scientists have been and will continue to be engaged in ecological modeling to forecast and monitor ecosystem response
- The Plan will incorporate the recommendations of a National Technical Review Committee, which is a forum through which noted scientists, having expertise in a broad array of fields, participate in discussions, exchanges and reviews of

information so that each scientist may more meaningfully give his or her own individual and independent advice or recommendations to the study team.

- The Science and Technology Program and Demonstration Project Program will aid in optimizing future implementation and help reduce uncertainty.
- The planned restoration activities will be sustainable and adaptively managed for maximum effectiveness:
    - Every effort has been made to determine solutions that not only aid in short-term restoration, but are also sustainable in the long-term: for example, projects that establish reconnections to the river sediment flows that built the coastal lands.
    - An adaptive environmental assessment and management framework is imbedded in LCA management and implementation to continuously apply lessons learned.

The Proposed Louisiana Coastal Area Ecosystem Restoration near-term Plan includes the highest priority actions and would begin to reverse the current trend of degradation of the coastal ecosystem. The plan maximizes use of restoration strategies that reintroduce historical flows of river water, nutrients, and sediments to coastal wetlands and maintain the structural integrity of the coastal ecosystem. Such a plan is the next logical step in the restoration effort, and would enable the State and the Nation to make significant progress towards protecting and rebuilding this nationally significant coastal ecosystem.

Mr. Chairman, that concludes my statement. Again, I appreciate the opportunity to testify today before the Committee. I would be pleased to answer any questions you or other members of the Committee may have.

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
WASHINGTON, D.C. 20314-1000

20 SEP 2004

RECEIVED
OCT 0 4 2004
Hon. John J. Duncan, Jr.
Washington, DC

REPLY TO
ATTENTION OF:

Mississippi Valley Division
Regional Integration Team

Honorable John J. Duncan, Jr.
Chairman, Subcommittee on Water
Resources and Environment
Committee on Transportation and Infrastructure
House of Representatives
B-376 Rayburn House Office Building
Washington, D.C. 20515-6020

Dear Chairman Duncan:

This responds to your letter dated July 27, 2004, regarding the July 15, 2004, Subcommittee hearing on Louisiana Coastal Area and some questions for the record. Attached are our responses.

Please let us know if any additional information is needed. Mr. Bruce Heide (761-4580) is our point of contact in the Corps Headquarters office.

Sincerely,

Carl A. Strock
Lieutenant General, US Army
Commanding

Subcommittee on Water Resources and Environment
Hearing on Louisiana Coastal Area - 15 July 2004
Questions for the Record

Question: If the projects proposed in the Near-Term Plan are built, will they stop the erosion or just the rate of loss?

Answer: The projects proposed in the Near-Term Plan, identified in the Corps' draft report as the Tentatively Selected Plan (TSP), will not achieve a condition of no net loss. However, current simulation models indicate the Near-Term Plan would reduce the overall rate of loss. The total amount of reduction will depend on the projects included in the final near-term plan. The individual components of the plan will, in some cases, stop erosion and create new wetlands and in others serve to simply reduce the active rate of land loss.

Question: Why didn't the Corps do an analysis of the economic benefits of the project? Protecting oil and gas infrastructure is often cited as a reason to carry out the Coastal Louisiana project. Will the Corps be conducting one while completing other analyses in anticipation of a long-term, large-scale study? Does the Near-Term Plan provide any economic benefits?

Answer: The primary objective of the study, and basis for any recommendations, was the restoration of the coastal ecosystem. Corps ecosystem restoration projects are justified through evaluation of environmental benefits, normally expressed in acres of restored habitat or other habitat evaluation methods. While ecosystem restoration projects, such as the Coastal Louisiana Area project, do provide incidental economic benefits, the magnitude of the projects that were evaluated prohibited detailed economic analysis on each project. However, an inventory of the economic infrastructure in the Louisiana coastal area subject to direct and/or indirect impacts from coastal erosion was conducted and additional economic analyses in subsequent design phases will be conducted for the recommended projects. The Near-Term Plan, in protecting and restoring critical areas in the coastal ecosystem, will provide benefits that ultimately translate into economically measurable outputs.

Question: The Corps' recommended plan has many uncertainties. What are the problems or uncertainties associated with larger-scale projects that would divert massive amounts of Mississippi River water and sediment through other channels to try to build new land? Why aren't some of those projects being recommended here?

Answer: While large-scale concepts have been and will continue to be considered, the significant system modifications and the associated uncertainties of the trade-offs they represent require much more detailed assessment before they can be recommended. These uncertainties include: the availability of sufficient quantities of sediment resources and the sustainability of those resources; the manner in which sediment

materials can be properly dispersed to promote the establishment of new marsh vegetation while minimizing damage to existing marsh; the ability to predict ecosystem responses to human and natural disturbances; and the economic impacts and associated linkages. Some specific uncertainties related to some of the large-scale diversions that will be considered during long-range studies include: wetland losses that result from construction of diversion channels; the loss of existing fisheries related socio-economic activities in the estuary receiving the diversion; the impact of deltaic land building and associated stage increases on navigation activities, oil and gas activities, land use, and local drainage and flood protection; and the long-term effects these diversions pose to the existing navigation, flood control, and water supply uses in the Mississippi River. These and other uncertainties will be addressed in detailed studies or as part of the Science and Technology and demonstration programs. Until these uncertainties are sufficiently addressed, the Corps is not ready to recommend implementation of these larger scale projects.

Question: Does the Corps have the necessary knowledge today to go forward with a comprehensive, long-range, large-scale plan?

Answer: The Corps has developed concepts for a comprehensive approach to restoring the coastal ecosystem but has not yet studied this in sufficient detail to recommend a definitive long-range, large-scale plan that might efficiently achieve the study objectives. Experience and data gained from Corps of Engineers environmental restoration projects, such as the Caernarvon and Davis Pond diversion projects, along with the numerous Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) restoration projects, provide a solid technical base for addressing critical coastal restoration needs. The challenge now is the restoration of an entire coastal system and its interlinking functions. To move forward toward comprehensive, long-range restoration we must work from the restoration frameworks that have been identified by building comprehensive analytic tools and acquiring the data to support them. This information is needed to provide the basis for adequately assessing much larger and broader combinations of projects and their systemic effects that over the long-term will provide a comprehensive restoration of the coast. The components of the TSP are designed to further the restoration process, keeping in mind future restoration opportunities and objectives. In this process, the necessary scientific knowledge and data will continue to be acquired to develop the tools to more efficiently utilize existing resources and investments in the coast and identify in detail the most effective and efficient long-range solutions for the coastal ecosystem.

Question: The Corps' recommended plan also has many engineering uncertainties, specifically the movement of sediment by pipeline. Have any of these sediment delivery projects been attempted by other Corps districts?

Answer: The pumping of dredged sediments is an activity commonly undertaken by the Corps of Engineers throughout the nation as part of the maintenance of navigation

projects and with beneficial use of dredged material projects under section 204. This is typically done in the most cost effective and beneficial manner possible, i.e., utilizing the nearest available placement site to achieve these objectives, typically 2-3 miles. The use of remote sites or long distance transport, distances exceeding 8-10 miles, for direct pumping of material in Corps of Engineers projects is not typically done. While there are some dredging industry examples of projects performed up to these limits, we are not aware of Corps of Engineers projects that have applied this technology over the combination of distance, range and magnitude that the Louisiana coastal restoration would potentially require. Engineering uncertainties associated with movement of sediment by pipeline may be resolved through information and data gained through demonstration projects.

Question: What would be the effect of the recommended plan on existing navigation and flood control projects in Louisiana? Would additional dredging be required on the Mississippi River navigation channel and if so, what would the additional dredging cost?

Answer: We do not anticipate significant effects on existing navigation and flood control projects, nor we do anticipate any significant increase in dredging costs with the recommended plan. The use of sediment diversions to restore wetlands in the near-term recommended plan would offset any increased dredging costs. However, there are more uncertainties associated with large-scale, long-range projects and their potential impact on existing navigation and flood control projects will be evaluated.

Question: This current plan for nearly $2 billion is meant to address the most critical needs in the next ten years and is not a final solution to the erosion problem. Other than cost, what were the other reasons the Corps did not recommend a comprehensive long-term restoration plan at this time?

Answer: Our ability to accurately identify a comprehensive long-range plan (one that might take 30 or more years to implement) is limited by the availability of data and the ability of ecosystem models to forecast system changes and/or its reaction to implemented restoration features. In addition some of the largest, long-range restoration concepts could fundamentally alter the basic nature of the coastal system or how it is currently managed thus requiring adjustments as we progress.

Question: How much is a long-term comprehensive restoration effort likely to cost?

Answer: Coast-wide restoration plans detailed that were identified to be the most cost effective opportunities in the October 2003 draft Comprehensive Coast-wide Ecosystem Restoration study, ranged from $5.2 to $8.7 billion, with maintenance costs of approximately $40 to $50 million per year.

Question: What are the major areas of controversy associated with this effort to stop coastal erosion in Louisiana?

Answer: The areas of controversy associated with coastal restoration are centered around the trade-offs in balancing multiple uses of the coastal system. Six areas of controversy that were identified in the LCA Ecosystem Restoration Study report are listed below. The coastal inhabitants are extremely concerned that lack of immediate and comprehensive action will result in the need for abandonment of some coastal development. The continued presence and function of navigation, oil and gas, marine fabrication, and flood control activities, as well as development, within and adjacent to the coastal wetlands, are of concern both locally and nationally. Equally important, there is concern over the possible direct change to the dynamic make up of the coastal ecosystem. There is a concern with the anticipated movement and redistribution of vegetative and species classes, and subsequently the resource users and businesses, throughout the coastal zone. The identified areas of controversy are:

1. *Elements of the public have expressed concerns that the restoration of the LCA must include a comprehensive, long-term restoration effort to significantly reverse the current trend of land loss while many members of the public acknowledged the need for a 'near-term' effort.*
2. *There is widespread, public demand for the immediate construction of restoration project.*
3. *There is widespread public concern that oyster lease issues will make restoration efforts prohibitively expensive in light of the significant damages awarded to oyster lessees (settlement pending appeal) as a result of prior restoration efforts.*
4. *The public is concerned that diversions will potentially over-freshen receiving basins and adversely impact commercial and recreational fisheries.*
5. *There is concern with impediments to navigation and proposed re-routing of the Mississippi River and the Atchafalaya River Navigation channels that could result in delays and restricted access, which could interrupt the transportation of goods and commodities into and out of various ports in the LCA.*
6. *There are differing opinions regarding public access to restored areas and the extent to which mineral rights should be restricted within project areas. Also, some elements of the public are concerned that public monies will be used to benefit private land.*

Question: The State gets about $50 million annually from the Coastal Wetlands Planning, Protection and Restoration Act (commonly referred to as the Breaux Act) that can be used to address coastal erosion. Can this project be completed using current Breaux Act authority? If not, what are some of the shortcomings of the Coastal Wetland Planning, Protection and Restoration Act?

Answer: The CWPPRA is effective in small-scale solutions, but was never intended to provide a coast-wide comprehensive solution to the wetlands loss problems. Additionally, the available funding has not been adequate to implement actions to

address both the broad and dynamic small-scale needs and undertake the much larger-scale actions needed for comprehensive restoration simultaneously. The recognition of this was what led the CWPPRA Task Force to sponsor the Coast 2050 planning effort that resulted in the initiation of the LCA Ecosystem Restoration Study. It is believed that a combination of both an LCA plan and the CWPPRA program are necessary to ultimately reverse the wetland loss trend and restore coastal Louisiana.

Question: There are miles of obsolete and abandoned oil and gas pipeline channels throughout the Louisiana Coastal Area that may be contributing to wetland losses. What are the Corps and the oil and gas industry doing to close these channels? What federal and State regulatory authorities apply to these channels?

Answer: Current processes have not provided effective, long-term solutions to the problems created by the channels. Although the permit process requires that pipeline canals be closed once activities have been terminated, the degradation in the coastal wetlands and the highly dynamic nature of the estuarine system often causes the banks adjacent to theses closures to erode. The complete refilling of these canals at the end of their use is typically impractical with the loss, redistribution, and compaction of the original dredged materials over time. Efficient and effective programmatic methodologies to address this issue have been identified in the TSP as an area of technology needed both for restoration and effective regulatory management. The methodology and technology required will be evaluated in the Science and Technology program and demonstration projects.

Question: What is the Corps response to those who might argue that this plan will use public money to restore private land?

Answer: The primary objective of LCA is to restore ecosystem functions. In achieving this objective, incidental benefits may accrue to adjacent private land but in accordance with the State's obligations as the non-Federal sponsor, the State will provide the necessary real estate interests for any restoration efforts. This includes the real estate necessary for the construction, operation, maintenance, repair, rehabilitation, and replacement of the project. The State of Louisiana claims ownership to navigable water bottom, including historic lands that have been so submerged through erosion or subsidence that they are now water bottom, so the State will simply authorize entry to those areas for project execution. As for private lands and non-navigable water bottom, ecosystem restoration activities will occur only when the State has acquired the appropriate real estate interest in these properties. For certain project features, the State will acquire property in fee, and so the property will no longer be privately owned. In other areas, the State will acquire an easement/servitude over the property, in which case the underlying private ownership will be subject to the rights and restrictions expressly acquired in the easement/servitude.

Question: What steps have communities and businesses taken to protect themselves from the encroaching Gulf of Mexico?

Answer: Local governments and communities continue to construct levees and other preventative projects and, recognizing they are at risk, support legislation to implement coastal restoration projects. There are also several Corps of Engineers coastal flood protection studies underway in various stages across southeastern Louisiana. Some Parishes have begun to pass revenue bonds to fund completion and construction of these efforts.

Question: Do you think that in Louisiana the erosion of barrier islands can be stopped by merely pumping more sand on them and adding plant material, or will structural measures like rock or jetties be required?

Answer: The nature of the barrier shoreline erosion problem is linked to a deficit of sediment in the system. The addition of material to the system, although not a complete solution, will aid in correcting the sediment deficit without creating additional erosion problems. The natural movement of sand through the system should also create natural near-shore sediment storage features from which material can be recycled naturally. Structural measures as armoring and jetties are typically designed to retain available material. However, they often also result in an interruption of natural movement of sediment through the system and increased degradation at other locations. There has been some success using segmented offshore breakwaters to capture material that moves from offshore toward the barrier shoreline under typically prevailing conditions. The demonstration program proposed in the TSP will continue to investigate the most efficient, effective, and sustainable methods for preserving the barrier shoreline, including whether or not structural measures like rock or jetties will be required.

Q&A from General Riley's testimony to the House Subcommittee on Water Resources and Environment.

Q1. (Mr. Baker, lines 1543-1546) We would agree that the Federal Government today, through the Corps' resources, has done little in respect to the scope of the project and dollars required to mitigate the property loss today?

In relation to property loss as a result of coastal erosion, the Corps has been involved with addressing ecosystem restoration losses throughout the State of Louisiana since 1965 with salinity control projects such as the Davis Pond and Caernarvon Freshwater Diversion projects, as well as the construction of CWPPRA projects that have created or restored an estimated 81.3 square miles of coastal wetlands since 1990. In addition, we continue to use resources for channel operation and maintenance of federal navigation projects and beneficial placement of dredged material in a manner that achieves the coastal zone consistency and management objectives set forth by the state. These combined efforts have only resulted in addressing 28% of the loss throughout coastal Louisiana and is primary reason why we are developing a systematic approach to effectively deal with the problem .

Q2. (Mr. Baker, lines 1579-1591) Would you consider or assign people to evaluate the current mitigation prospects, and to look more carefully at the coastal wetlands being lost which is, even you will acknowledge, high class wetlands, very valuable, we are losing it, the Corps has had some part in helping to cause the loss of those wetlands? A pilot project, at the very least, to allow people to write a check for coastal reclamation USA, designate it Louisiana, administered by the Corps, which would go a great way, I think, toward providing immediate and necessary resources for smaller projects, immediate benefit for coastal reclamation and preservation. Is that a pilot you would at least concede, or have someone review the appropriateness of?

The existing Louisiana Coastal Wetlands Conservation Plan (LCWCP) is a program administered by the State of Louisiana, as part of its agreement with the Federal Government to reduce its cost share in the CWPPRA program. The plan includes the statutorily dedicated State of Louisiana Wetlands Conservation and Restoration Trust Fund. The trust fund can be used in certain appropriate cases as a mechanism for permittees to purchase wetland habitat credits to mitigate wetland impacts associated with Department of the Army permitted activities that occur within the LCWCP Boundary. Fees contributed to the trust fund by permittees, in lieu of site-specific mitigation, is accumulated and later used to create/restore wetlands within the LCWCP Boundary. However, the Corps does not usually consider this to be the most appropriate means for permittees to perform compensatory mitigation for wetland impacts associated with permitted activities for the following reasons. First, it is currently not possible to directly apply contributed funds to purchase habitat credits to create wetlands in the same or a nearby basin/region to offset project impacts; and secondly, it is difficult to purchase habitat credits to create wetlands that are the same habitat type as the habitat impacted by the project.

Therefore, before the federal government becomes engaged in such a pilot program, the concept would have to be fully evaluated by the New Orleans District Corps of Engineers Regulatory Branch, Office of Counsel, Coastal Restoration Branch and coordinated with the State of Louisiana, the non-Federal Sponsor, to determine the legality, economics and administrative feasible of such a program. One option to consider may be a program that allows any individual to contribute to coastal restoration. The funds generated from this program could be administered by the Corps and used by the non-Federal sponsor as part of their cost-sharing requirements.

Q3. (Mr. Duncan, lines 1606-1611) I would like to get a statement from you as to where these projects, you think, where the Corps feels they will really stop the erosion and destruction or whether they just reduce the rate, and how much they would reduce the rate to these first projects.

The Tentatively Selected Plan (TSP) contains recommendation for implementation of critical, highly effective, near-term features that will address ecosystem loss that if left unaddressed will severely hamper or significantly increase the difficultly and cost of future restoration. In 2000, it was estimated that coastal Louisiana would continue to lose land at a rate of 6,600 acres per year over the next 50 years. The five programmatically authorized critical near-term restoration features of the TSP would reduce the loss by 600 to 2300 acres per year, while implementation of all fifteen (15) restoration features would reduce the loss by 3300 to 4200 acres per year. Beneficial use of dredged material would provide an additional 21,000 acres for the first 10 years. While these features do not eliminate the loss, it does reduce the loss and preserve the potential for success in the future.

Q4. (Mr. Brown, lines 1630-1632) General, what is the long term outlook as far as resuming the responsibility for the renourishment of the beaches and maintaining the intercostal waterway?

The FY 2005 budget reflects a change in the Administration policy regarding the funding of projects that involve periodic beach renourishment. This change will affect your planning regarding renourishment of the beaches in South Carolina. The Administration has determined that Federal participation beyond the initial nourishment phase no longer can be supported in the budget. Initial nourishment will continue to be budgeted, if justified, within overall funding constraints. However, beginning in FY2005, follow-on renourishment phases will be considered non-Federal responsibilities equivalent to operation and maintenance responsibilities on other types of projects.

This policy applies to all projects involving periodic beach renourishment, which includes some projects for coastal storm damage reduction, some projects for ecosystems restoration, and projects or activities that bypass sand or replenish shores to mitigate the impacts of coastal navigation facilities. The policy applies equally to authorized and unauthorized projects that include renourishment phases, including projects for which Project Cooperation Agreements already have been executed. Work under such agreements is subject to the availability of funding and the new policy specifies that funding no linger will be sought for renourishment projects.

The existing authorization for the Atlantic Intracostal Waterway (AIWW) in South Carolina provides for a channel width of 90 feet and a channel depth of 12 feet for the 210-mile length of the AIWW in SC. The project is divided into three segments: Little River to Winyah Bay (60 miles), Winyah Bay to Charleston (65 miles) and Charleston to Port Royal Sound (85 miles). Ideally each section is dredged on a rotating basis which means every three years, each section of the channel that needs attention gets it. The cost of that work runs about $3.5M to $4.0M annually. In recent years, however, the project has received far less resulting in only selected high shoaling areas being dredged.

The current controlling depth for the Little River to Winay Bay segment is 9.0 feet. The current controlling depth for the Winyah Bay to Charleston segment is 6.0 feet. The current controlling depth for the Charleston to Port Royal segment is 6.0 feet. Two of the highest shoaling areas on the AIWW in South Carolina are located just south of McClellanville, SC and in the vicinity of Edisto Island. The area just south of McClellanville encompasses approximately six miles of the AIWW and the section near Edisto Island is approximately four miles in length. The channel just south of McClellanville is approximately six miles in length and is now the most critical area of the waterway in South Carolina that needs to be dredged. High shoaling rates are also being experienced in the Myrtle Beach Canal (land cut) portion of the waterway (Little River to Winyah Bay reach) near County drainage canal discharge points, particularly in the Grand Dunes Resort

vicinity. This has occurred apparently as a result of increased runoff due to extensive development in the area.

TESTIMONY OF
WILLIAM CLIFFORD SMITH
MEMBER, HOUMA-TERREBONNE CHAMBER OF COMMERCE

BEFORE THE
SUBCOMMITTEE ON WATER RESOURCES & ENVIRONMENT
HOUSE TRANSPORTATION & INFRASTRUCTURE COMMITTEE
UNITED STATE HOUSE OF REPRESENTATES

JULY 15, 2004

Mr. Chairman and Members of the Committee, I appreciate the opportunity to speak to you and the time and effort you are putting forth on this gigantic problem that we have in our country's backyard. My name is William Clifford Smith and I live in Houma, Louisiana. Houma is the economic center of Terrebonne Parish, located approximately 65 miles southwest of New Orleans, Louisiana, and 30 miles north of the Gulf of Mexico. Houma is 2" above the water -- and the water is rising. I live between the mouth of the Mississippi River and the Atchafalaya River, and unlike approximately one million in the New Orleans area who actually live below sea level, I live about 8' above sea level.

I am here today representing the Houma-Terrebonne Chamber of Commerce and its ±800 member business and ±22,000 employees. I have lived in the community of Houma for 69 years, all my life. I am a Civil Engineer and Land Surveyor and have owned and managed a consulting Civil Engineering and Land Surveying firm since 1958, when I received a Bachelor of Science degree in Civil Engineering from Louisiana State University. The firm was founded by my father, a Civil Engineering graduate of Tulane University in 1913. He, too, was a life-long resident of our community. The firm now has approximately 110 associates and is owned and managed by my children, one of whom is also a Civil Engineering graduate of Louisiana Tech University. I am also a Presidential Appointee to the Mississippi River Commission, which was established by Congress in 1879 to advise the Chief of Engineering of the U. S. Corps of Engineers on the development and improvements on the Mississippi River.

Over the years, our consulting engineering firm has provided professional services to major landowners; developers; local, state, and federal governmental agencies; oil and gas producing companies; and pipeline and electrical transmission companies. We provide assistance in wetlands permitting, feasibility studies, and cost estimates; perform field, property, and hydrologic surveys; and prepare plans, specifications, and supervise and administer construction contracts. We have literally lived on the land and waters of this area for over 90 years, three generations, and have made a living at it. Practically all of the wealth that we have accumulated over the years has been reinvested into our community.

Terrebonne Parish, literally the "good earth" in French, consists of approximately 1,300,000 acres of surface area. It is the second largest surface area parish in Louisiana.

We have approximately 1,000,000 acres that I consider to be wetlands, including: open water of the Gulf of Mexico, bays, lakes, saltwater marshes, fresh water marshes, and swamps. Unlike Orleans and Jefferson Parishes where approximately 1,000,000 people live below sea level, our citizens live on the other 300,000 acres of land that is generally above the 5 ft. contour on what we call ridges and highland. We have approximately 110,000 people living in Terrebonne Parish (about a 10% increase in the last 10 years). About 50,000 people live north of the Intracoastal Canal -- which generally runs east to west across our parish -- and 50,000 live south of the Canal. The urban area around Houma, the largest concentration of people, has an approximate population of 60,000. There are about 25,000 people who actually live south of Houma, closer to the Gulf of Mexico in Terrebonne Parish.

Economically, everything is very positive for our community and has been most of my life except in the 1980's and early 1990's. We have a 4% unemployment rate and a 4% average increase in sales tax collections per year. The only real negative is that we have lost over 400,000 acres of the land in our parish to coastal erosion in my lifetime. We are now losing approximately 10 sq. miles per year at an alarming rate. This land we have lost, primarily salt, brackish, and fresh water marshes and swampland, was our buffer and protection from the Gulf of Mexico and hurricanes. In the middle of Houma, which is about 30 miles from the Gulf of Mexico (or a little closer now), the Corps of Engineers has a recording gauge which has measured the elevation of the water in the Intracoastal Canal and Bayou Terrebonne 24 hours a day, 365 days of the year for the last 35 years. The average water elevation is about 18" to 24" higher than it was 35 years ago at this location. This is an area where most of our drainage systems are gravity, and we get an average of over 60" of rainfall a year. In the last 90 days alone, we have gotten over 30" of rainfall. This is where the statistics get down to the "real world". The loss of 400,000 acres in my lifetime and the loss of 10 sq. miles per year mean that the water table where we, the people South Louisiana, live is rising and causing many problems in our everyday lives.

My two grandfathers built houses in downtown Houma on the banks of Bayou Terrebonne circa 1900. The lots they acquired were approximately 11 ft. above sea level and boasted 200 year old live oak trees. One hundred year ago, they built their houses 6 ft. above the natural ground because their property would flood periodically from the bayou, a distributary of Bayou Lafourche -- which was a distributary of the Mississippi River. With the control and leveeing of the Mississippi and the closing of Bayou Lafourche from the Mississippi, we (the Corps of Engineers, the State of Louisiana, and the nation) solved that problem; however, we also allowed our area to become one of the worst deteriorating coastal areas in all the United States -- and the world. (SIDE NOTE—in 1903, local interests built a dam across the mouth of Bayou Lafourche to keep flood waters off their fields and it wasn't until 1935 that Congress authorized its permanent closure). Of course, the navigation canals, oil and gas access channels, pipelines, drainage canals, and the natural subsidence of the area have also contributed to this problem. Now I may live to see these houses flooded from the Gulf of Mexico.

At a previous Coastal Advisory Commission meeting in Louisiana, one observation was that 100 years ago we did not have a coastal erosion problem in Louisiana. This is probably correct. But, 100 years ago the Mississippi Valley from Minnesota to the Gulf of Mexico flooded every spring. There was no navigation down the Mississippi, Ohio, and Missouri Rivers. Our ancestors made the Mississippi Valley the "breadbasket" of America -- and the world. The Mississippi Valley has allowed our nation to be the richest, most powerful in the world. It also allowed our citizens to have the highest standard of living known to mankind; but in doing this, we created a coastal erosion problem in South Louisiana. We would not have the largest industrial complex in America on the river from Baton Rouge to New Orleans without the levees and control system along the Mississippi.

The last major flood of the Mississippi occurred in 1997. All of the levees, spillways, and control systems worked. There was very little inconvenience to anyone. The Bonne Carrie Spillway, north of New Orleans and on the east banks of the river, was operated. If the controls had not been in place in 1997, all of South Louisiana from Lafayette to Slidell, a distance of about 300 miles, would have flooded and effected the population of roughly 1,500,000 people.

In my opinion, we truly live in one of the most productive coastal areas of the world, and we are losing it. South Louisiana produces oil, gas, sulphur, salt and other minerals, commercial seafood, recreational fishing and hunting, and ecotourism second to none in the United States. The oil and gas produced in the area and the Gulf of Mexico off our coast for the last 70 years has kept the East Coast and the Midwest running. In Terrebonne Parish alone there are still approximately 2,000 oil and gas wells, and we only need about two to supply our energy needs. Therefore, the rest of this valuable commodity is being consumed by the rest of the nation. Frankly, we have sacrificed some of our coast to allow this to happen. Docks in Terrebonne Parish also land over $30 million of seafood a year, most of which is consumed by the rest of the nation. Therefore, the alarming loss of our area should be of great concern to the whole nation. It is truly America's wetland.

The Mississippi River and tributaries drain 41% of the United States through Louisiana, 70% of the grain exports from the United States goes through Louisiana, innumerable commerce and other industries exist because of the development of the Mississippi Valley -- the investment needed to save our area is more than justified. Of course, I failed to mention that over 2,000,000 United States citizens and tax payers also live in Coastal Louisiana.

We do have the resources to reduce and even reverse some of the negative effects in our area. We have the resources of the Mississippi River and its tributaries, the ingenuity of our minds, and the financial resources of the nation to properly manage the river and reverse some of the devastating, debilitating things that are happening to this area. Levee systems to replace the natural buffer from storms, freshwater diversion projects from the river in critical locations, barrier island and shore land protection, and

marsh management and restoration projects are just a few very broad things that must be done quickly. Time is not our ally in this problem. As we speak, the conditions get worse.

I am not very optimistic that our government can react to these problems before we are going to experience a major disaster. The right storm in the right direction and speed could drown 2,000 to 3,000 people in my community alone, and possibly as many as 10,000 to 20,000 people in the New Orleans Metropolitan Area. It is my understanding that the Office of Emergency Preparedness of Jefferson Parish rents a warehouse and stores 10,000 body bags for such a storm. The International Red Cross will not operate a hurricane evacuation shelter in Louisiana south of I-10 or I-12. The situation gets worse every year. I have never evacuated my home for a hurricane in the past, but I believe with the right storm in the right direction with enough time and warning I would leave and move north. I believe everyone who lives in South Louisiana should have a hurricane preparedness plan and an evacuation plan. I have these plans for myself, personally, and for my business. In South Louisiana, our terrorist threat is not Al-Queda, but the Gulf of Mexico. We do not need gas masks for Homeland Security, we need life vests and body bags.

As an engineer, it is rather frustrating to have the mouth of the Atchafalaya River, the only building delta in America, on our western boundary and the worst deteriorating coastline in the world three miles to the east. Also, to my east the Mississippi River dumps approximately 180,000,000 tons of silt per year in the Gulf of Mexico causing a dead zone as we are washing away 50 miles to the west. Our situation is a resource management problem. It is not like the Everglades which is a one-time fix. In Coastal Louisiana we are dealing with dynamic resources that will have to be managed as long as human beings live and prosper in the Mississippi Valley. Properly managed, the Mississippi is an unbelievable, dynamic, recurring resource.

Any projects built should have controls and be able to be modified as much as practical. They should constantly be monitored and adjusted if necessary. We are not dealing with an exact science. In many cases, we will make science. If we are going to survive, the knowledge and skills we develop will be exportable around the world. For me, this cause is not a labor of love, but a natural human instinct known as survival.

Once again Mr. Chairman, I would like to thank you for the opportunity to testify before the Committee regarding such an important issue. The people of South Louisiana and the nation will appreciate your dedication to solving this problem. I will be glad to answer any questions that you may have now and in the future.

Wm. Clifford Smith
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August 16, 2004

Mr. John J. Duncan, Jr.
Chairman
Subcommittee on Water Resources and Environment
U. S. House of Representatives
Committee on Transportation and Infrastructure
Washington, DC 20515

RE: JULY 15, 2004 HEARING
SUBCOMMITTEE ON WATER
RESOURCES AND ENVIRONMENT

Dear Mr. Duncan:

In answer to your July 27, 2004 letter, attached are my written responses to your questions regarding my testimony at the above referenced hearing.

If you have any questions, or require further information, please do not hesitate to contact me.

Sincerely,

Wm. Clifford Smith

WCS/ckc
Enclosure

1. What do you say to those who might argue that this plan will use public money to restore private land?

   It is ironic that this private land, that for many years was considered worthless, is the estuary and buffer that has protected the more valuable and inhabited area of South Louisiana. If we don't do something to reduce the destruction of this area, eventually the metropolitan and industrial areas of Louisiana will be destroyed. It is also ironic that this land was once owned by the United States government and adjudicated to the State of Louisiana which transferred it to a levee district in the mid 1800's for their benefit to accumulate money to begin the building of levees along the Mississippi River and tributaries in southeast Louisiana. The levee district sold the land to entrepreneurs in order to tax them to obtain the funds to begin the levee systems which were eventually taken over by the United States government after the great flood of 1927. Therefore, if something isn't done to reverse the deterioration to southeast Louisiana, the entire nation will eventually be dramatically affected.

2. What steps have communities and businesses taken to protect themselves from the encroaching Gulf of Mexico?

   First, the major landowners of the estuary area began over 70 years ago to protect their properties with water control structures, bank stabilization, and other management and conservation methods. It is estimated that these companies that probably control over 1,000,000 acres of wetlands in southeast Louisiana have spent in excess of $150,000,000 of their own funds. After about 1972, they have reduced that effort because of the cost, hassle, and in some cases impossibility to get Clean Water Act 404 permits from the different state and federal governmental agencies to perform what they consider to be conservation projects.

   Second, Terrebonne Parish where I live, voted to tax themselves to construct a hurricane and conservation protection project with their partner, the state and federal government. They are now collecting over $3 million per year from taxes in our community for these purposes. The State of Louisiana and Terrebonne Terrebonne Levee and Conservation District have already spent approximately $25 million on this project over the last 15 years.

   Third, over the last 50 years, the Terrebonne Parish government has spent an additional $50 million from local tax sources, to build drainage systems to stop the continuing encroachment of water in our area where our citizens live.

   Fourth, over the last 15 years, the State of Louisiana has spent over $300 million on coastal restoration projects. These funds were obtained from a portion of the severance taxes in Louisiana primarily from oil and gas resources. Most of the money was used as the state's match in the CWRPPRA project "Breaux Bill".

   Fifth, Countless millions of dollars have been spent by hundreds of thousands of individuals in southeast Louisiana on flood insurance, individual drainage and levee systems, and structures to mitigate for changes that are happening to our environment.

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SUBCOMMITTEES ON
COMMERCE, JUSTICE, STATE AND JUDICIARY
MILITARY CONSTRUCTION
FOREIGN OPERATIONS

HOUSE REPUBLICAN POLICY COMMITTEE
CHAIR, SUBCOMMITTEE ON
REDESIGNING GOVERNMENT

Congress of the United States
House of Representatives
Washington, DC 20515

July 14, 2004

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Louisiana Coastal Area – Addressing Decades of Coastal Erosion
Water Resources and Environment Subcommittee
Testimony by Congressman David Vitter

Chairman Duncan and Members of the Subcommittee:

Thank you for having this hearing today. It is another important step in our fight to save Louisiana's coast.

Also, I want to specifically thank my colleagues from Louisiana—particularly Congressman Billy Tauzin. Billy, as our delegation's dean, has been a leader in Congress on so many issues, including the efforts to save Louisiana's coast. We'll miss him in Congress, and I thank him for his tireless service on behalf of Louisiana and the nation.

Saving our coast has been a top priority from some time for us in Louisiana. The coastal erosion crisis in Louisiana must be significantly addressed now. If we do not act sooner rather than later, Louisiana's coastal area might be lost forever.

As you know, Louisiana's coastal area is one of the most productive wetland areas in the nation. Within the coastal area, there are billions of dollars of critical infrastructure, and it contributes billions annually in economic impact.

The Louisiana coast is crucial to our nation's energy industry, producing $30 billion annually in petroleum products, accounting for 27% of our domestic oil and 26% of our domestic natural gas. Also, the area is home to infrastructure and resources necessary to support this critical industry.

Louisiana's port system ranks first in the nation in tonnage, making the area critical to our national commerce. Louisiana's coastal wetlands also contribute billions of dollars in commercial and recreational fishing. Also, this area serves as habitat for a variety of waterfowl, fish, shellfish, and a number of endangered species.

Of course, Louisiana's coastal wetlands serve as a crucial barrier from hurricanes and storm surge. We in Louisiana are literally one storm away from disaster, and with each passing year, the loss of our coastal wetlands puts us more at risk of massive losses. This point, perhaps more than any of the others, highlights the immediate need for action.

With the regional, state, and national importance of the Louisiana coast, it is only right that the federal government take more of a role in efforts to stop further land loss and restore areas lost already.

This year has been a significant year for progress—for laying the building blocks—of a federal commitment to fight Louisiana's coastal erosion crisis.

First, in the Administration's budget submission to Congress, there was a statement that admitted that federal policies and actions are partly to blame for the crisis of coastal erosion. That was the first time a presidential budget submission included such a statement.

Next, in the House Budget Resolution, I was able to insert a statement underlying the importance of addressing Louisiana's coastal restoration and allowing for increased federal participation in the efforts.

And, earlier this month, the Administration released its draft for a near-term plan. This near-term plan is a first step, but a very important one in the fight against coastal erosion. It's a breakthrough in terms of federal commitment.

During the formulation of this near-term plan, I met with the President and a number of Administration officials, focusing on five key objectives for guiding the work that will address

critical needs and lay the groundwork for future restoration efforts. And, in my conversations with Jim Connaughton, the Chairman of the White House Council on Environmental Quality and the President's chief environmental advisor, I was assured that all five of these objectives were met in this near-term approach.

Here are the five key goals that I believe are achieved by the near-term proposal:

1. Releasing the substance of the full Louisiana Coastal Area Study.

All of the science and other findings of the original draft of the LCA study are included in the near-term plan. This near-term plan overlays that information with a focus on near-term objectives, but all the substance is there. Having this information publicly available is very important so that we all understand the further effort which will be needed.

2. Making sure the Near-Term Plan is significant in term of dollars.

This plan represents the most significant plan to date from the federal government to commit the needed resources to Louisiana's coast. This plan would provide $1.9 billion total over ten years. Of that total, $1.2 billion has been allocated for five critical projects that the Corps proposes to be approved in an expedited way, or "fast-tracked." Of these five identified projects, there is significant information that will likely rise to the feasibility-study level, so all of the required information will be still be available.

3. Starting concrete work sooner, rather than later.

The initial plan by the Army Corps and the Administration was to plan for work to actually begin in 2008. I thought this was unacceptable, and, at my insistence, the schedule for actual substantive work to begin has been pushed up to 2006. We have to act now. Louisiana loses from 25 to 35 square miles a year, so time is not on our side. The work in first 2 years will save critical areas that need action now, and it will also save us valuable time for future work within the 10 year near-term plan and beyond.

4. Including significant diversion projects.

To address Louisiana's coastal crisis, we cannot continue focusing only on the smaller projects. These smaller projects over the years have been very helpful, but I felt strongly that it was time to step up the pace and include significant diversion projects. This near-term plan has done that with the inclusion of diversion projects such as the Diversion at Hope Canal and the Myrtle Grove Diversion in the "fast-tracked" projects.

5. Making sure everyone understands this is a start and not the end.

I believe that everyone involved does indeed understand that – including the President, the Office of Management and Budget, the Corps of Engineers, the State of Louisiana, and me and my colleagues from Louisiana here today.

The important start of the Corps' near-term proposal will be a failure – simply wasted money – unless it leads to further effective projects, some of which were outlined in general in the submission model for the Louisiana Coastal Area Study, some that we will develop within some of the science and technology work included in the proposal. With the near-term plan in place, we can set the ground work to continue the efforts and save and protect Louisiana's coast in the long-term.

Louisiana is losing coastal wetland at an astonishing rate, and we must act now to stop it. I urge the Committee to include authorization for this near-term plan as Congress moves forward with the final version of the Water Resources Development Act. Authorization is needed as soon as possible so that work can begin.

Mr. Chairman, thank you again for holding this hearing and focusing on this important issue. I look forward to continuing the work with my Louisiana colleagues and the members of the subcommittee as we work quickly to address this crisis in Louisiana.

Statement of

Environmental Defense, Natural Resources Defense Council, National Audubon Society, National Wildlife Federation, and the Ocean Conservancy

Submitted to the Subcommittee on Water Resources and the Environment
Of the House Committee on Transportation and Infrastructure

July 22, 2004

Our organizations strongly support immediate steps to reverse the loss of Louisiana's coastal wetlands and the completion of a comprehensive coastal restoration plan by July 1, 2008.

Every year, nearly 24 square miles of wetlands are lost from coastal Louisiana largely because sediments that once re-nourished the Mississippi's coastal delta are now funneled into the Gulf of Mexico by a wall of navigation and flood control levees. More than 1 million acres of wetlands -- or 1,900 square miles -- have been lost since 1930. The U.S. Geological Survey predicts that 328,000 to 440,000 acres of additional wetlands – or 500 to 700 square miles -- will be lost by 2050 if nothing is done.

Simply put, one of the largest deltas on earth faces an unprecedented environmental and economic catastrophe.

The Mississippi's coastal delta provides habitat for hundreds of species, including commercially important species like shrimp, sea trout, oysters, menhaden and a wide variety of fur-bearing animals. Louisiana ranks second only to Alaska in the value of seafood landings, annually landing 1.2 billion pounds of seafood worth more $345 million. More than 30,000 commercial fishing jobs depend upon the health of the river's delta.

The marshes, forested wetlands and other habitats of the Mississippi's coastal delta also provide food and shelter for permanent and seasonal visitors, including 70 percent of the waterfowl that use the Central and Mississippi flyways. The river's coastal delta also provides critical habitat for 17 federally endangered and threatened species.

These wetlands also serve as a natural flood protection system for the nation's largest assemblage of oil and gas infrastructure, the nation's busiest port, and the city of New Orleans. Coastal wetlands and barrier islands absorb the energy of approaching storms, protecting more than $100 billion worth of public and private infrastructure and millions of people. Some of the nation's essential oil and gas facilities are protected by these wetlands, including two of the four major storage facilities of the Strategic Petroleum Reserve and the Louisiana Offshore Oil Port, which serves as the central unloading and distribution point for all incoming supertankers to the Gulf region. Restoring these wetlands will also help address an 8,000 square mile "dead zone" in Gulf of Mexico by intercepting and removing nutrients that would otherwise contribute to hypoxia.

To reverse the loss of Louisiana's coastal wetlands, our organizations urge you to authorize construction of several crucial freshwater and sediment diversion projects that can immediately restore many of the wetlands that have been lost during the past 75 years, to require the development of a comprehensive restoration plan by July 2008, and to empower scientists to guide future restoration efforts.

In particular, we urge you to:

- **Authorize Critical Early-Action Projects**. Congress has an opportunity to immediately reverse the loss of coastal wetlands. The projects are well-defined and ready to be authorized this year. We urge you authorize:

    - A freshwater and sediment diversion at Myrtle Grove to restore the loss of brackish wetlands. This project should be designed to permit releases between 15,000 and 50,000 cfs.
    - A project to increase the diversion of freshwater and sediment into Bayou LaFourche. To ensure that this project addresses restoration as well as water supply needs, the project must be designed to accommodate releases up to 5,000 cubic feet per second (cfs).
    - A diversion project to increase the flow of freshwater and sediment into Maurepas Swamp to address subsidence and saltwater intrusion. Unless action is taken, this cypress swamp will soon lose the ability to regenerate cypress trees.
    - A barrier island project to reduce the likelihood of immediate breaching and fragmenting the Caminada Headland.

  In addition to providing immediate economic and environmental benefits, two of these early-action projects would demonstrate ways by which the Corps can incorporate Bayou LaFourche into a long-term comprehensive restoration plan, and would demonstrate the use of control structures to divert sediment into shallow, open water areas. In general, we urge you to authorize an ambitious demonstration program to resolve quickly outstanding scientific and engineering uncertainties. In particular, we urge you to give priority to demonstration projects that resolve scientific and engineering questions about sediment movement, including sediment movement through pipelines.

- **Require a Comprehensive Restoration Plan**. We urge you to require the Corps and the state of Louisiana to complete by July 1, 2008 a comprehensive restoration plan to reverse the loss of wetlands, improve ecosystem health, enhance wildlife habitat, and improve water quality. The plan should, to the maximum extent practicable, utilize, restore or replicate natural deltaic processes, and should include the results of large-scale feasibility studies of the mouth of the Mississippi, conveyance channels and pipelines east and west of Bayou LaFourche, and alternative uses of the Atchafalaya, including the movement of water and sediment to the east and west to address high rates of subsidence.

- **Enlist and Empower Scientists.** Sound science is critical to restoration success, Accordingly, we urge you to authorize $100 million for a Science and Technology Program to assess the benefits of different coastal restoration measures and develop new restoration technologies. We further urge you to create an independent science board to review and comment upon the study, selection, sequence and operation of restoration projects, the criteria used to select, sequence and operate projects, the comprehensive restoration plan, and the extent to which project construction and operations comply with the goals of the comprehensive restoration plan.

- **Close the Mississippi River Gulf Outlet.** We urge you to develop a plan to close the Mississippi River Gulf Outlet, which has eroded well beyond the channel's original dimensions, causing the direct loss of wetlands and degraded water quality by increasing saltwater intrusion, and to restore these wetlands east of the Mississippi River. Congress should direct the Corps to develop a closure plan that addresses the needs of the navigation industry and the needs of the environment. We do not support inclusion of the MRGO environmental restoration features as an early action project unless they are part of a comprehensive plan to close the channel and to address the long-term environmental impacts of channel construction.

We have no time to lose. Approximately 500 to 700 square miles of wetlands will be lost by 2050 if nothing is done. Far more than fish and wildlife are at stake. More than $100 billion in public and private infrastructure -- and millions of people -- will become increasingly vulnerable to hurricanes. Nearly 1 million jobs hang in the balance. Restoring this ecosystem through the reintroduction of Mississippi River water, sediment and nutrients into these wetlands can also help to reduce the scale of the dead zone in the Gulf.

We urge you immediately to reverse the loss of coastal wetlands by authorizing freshwater and sediment diversion projects and an ambitious demonstration program, by requiring the development of a comprehensive restoration plan by July 2008, and by empowering scientists to guide this nationally critical effort to restore this remarkable coastal deltaic system.

Statement of Keith Ouchley, State Director
Louisiana Chapter of The Nature Conservancy

Submitted to the Subcommittee on Water Resources and the Environment
Of the House Committee on Transportation and Infrastructure

Representative John Duncan, Chairman
Representative Jerry Costello, Ranking Member

ON
LOUISIANA COASTAL AREA RESTORATION

July 23, 2004

Keith Ouchley, Ph.D.
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The Nature Conservancy (the Conservancy) is committed to the preservation of the world's biodiversity through conservation and restoration of important habitats. Coastal Louisiana is recognized as a biodiversity resource of global significance that is under significant decline, losing nearly 24 square miles of coastal wetlands and habitat every year. Because of the critical condition of coastal Louisiana and its vital link to supporting biodiversity, the Conservancy supports a substantial federal investment to reverse the ongoing wetland loss. A large-scale, systems approach to ecological restoration, as proposed by the Louisiana Coastal Area (LCA) Ecosystem Restoration Study, is the only means to conserve coastal Louisiana's native biodiversity and the ecological and economic services it provides such as storm surge attenuation, water quality improvements, and fisheries and fur production. Such a program is critical for protecting the human communities along the coast as well as the nationally significant energy production facilities.

The Conservancy is a global organization dedicated to our mission of preserving the plants, animals, and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. The Conservancy has about one million individual members and over 1900 corporate sponsors worldwide. We currently work in all 50 states and in 27 other countries. To date, our organization has protected more than 15 million acres in the United States and an additional 102 million acres internationally through our work with local partners around the globe. Our conservation work is grounded in strong science, strong partnerships with local landowners and stakeholders, and tangible results on the ground.

The Conservancy has been conserving important habitats in Louisiana since 1989 and nationally since 1951. Currently the Conservancy is working hand in hand with public and private partners in Louisiana to protect and restore a variety of coastal habitats such as the prairie/marsh complex at White Lake; the marshes, swamps, and seagrass beds of the Lake Pontchartrain basin; the barrier island forests of Grand Isle, and; the swamps and bottomland hardwood forests of the Atchafalaya Basin.

1) **Restoration decisions must place an emphasis on restoring the range of coastal habitats and species indigenous to Louisiana.** The coastal habitats of Louisiana are varied and in some instances unique only to Louisiana. Louisiana's coastal habitats include marine and estuarine open water, seagrass beds, oyster reefs, barrier islands (forest and non-forested), emergent marsh (various associations form salt to fresh), forested wetlands (e.g., cypress-tupelo swamp, bottomland hardwood forest), natural levee live oak forests, salt domes, and cheniers. Historically, these habitats existed in a mosaic pattern across the landscape. These habitats relate to each other functionally and structurally and it is critical that all habitats be present on a restored landscape. As an example, a healthy barrier island system is the best defense against inland marsh loss. Many species, both commercial and non-commercial, require several habitats throughout their life cycle – gulf sturgeon, for example, require seagrass beds during their juvenile years and open water as adults. Achieving an appropriate balance of these restored habitats and their associated species, and developing a monitoring program to track progress, must be a goal of the restoration program. Specifically, the identification of indicator species, whose population and distribution are representative of the abundance and diversity of ecosystem-dependent aquatic and terrestrial species, must be one of the outcomes measured in any restoration project. Further, more systemic parameters should also be developed to assess the cumulative contribution of the individual projects toward the ultimate objective of achieving a sustained, biologically-diverse coastal ecosystem.

2) **Restoration decisions must be based on sound science and must be part of a comprehensive effort to restore a sustained coast. Agency and non-agency experts must be involved in all phases of restoration planning, implementation and monitoring.** A Science Board should be created of national and international experts in conservation biology, hydrology, geology, engineering and other ecosystems restoration disciplines to ensure that restoration and management decisions are based on the most up-to-date understanding of ecosystem restoration science. This Science Board should be involved in crafting a comprehensive restoration plan for coastal Louisiana, informing project selection and operation, and evaluating project and program success by utilizing principles of Adaptive Management. The Science Board, as currently described in the

Senate Water Resources Development Act (WRDA) will "provide periodic review and comment on program and project activities" to the Secretary. The Conservancy supports broadening this language to more accurately reflect the full role of the Science Board. Additionally, $100 million should be authorized to fund the Science and Technology program. Finally, a comprehensive plan that enlists the expertise of agency and non-agency personnel from a variety of disciplines must be developed by July 2008 to guide restoration of the coast.

3) **Critical early action projects must be authorized this year to reverse the trend of wetland loss.** Portions of Louisiana's coastal wetlands are on the verge of collapse in large part due to the loss of sediments, nutrients, and freshwater from the Mississippi River and its tributaries. Due to the efforts of state and federal partners, academia, and others there is considerable knowledge and planning available to immediately stave off this condition. There are currently several projects that have been planned and developed under other authorities that can be implemented immediately. The Conservancy supports full funding of these projects. These include the Bayou LaFourche River Reintroduction Project, the Maurepas Swamp River Reintroduction Project, and the Myrtle Grove Sediment Enriched River Reintroduction. These projects will restore thousands of acres of emergent and forested wetlands and will also provide valuable opportunities to demonstrate the use of structures to divert sediment, nutrient, and water into shallow water areas. These demonstration projects will inform and integrate with the larger-scale coastal restoration effort envisioned for the next several decades. A fourth project supported by Conservancy, the Barataria Basin Barrier Shoreline Restoration, is also ready for implementation and is critical for protecting inland marsh systems from continuing degradation.

4) **A well-funded demonstration program is important for making sound decisions based on tested methods.** As presently defined in the Senate WRDA, the efficacy of the demonstration program is severely compromised given the funding limitations. The Conservancy urges Congress to fully fund the demonstration program and to remove the $15 million per project cap.

5) **Existing and proposed public works and navigation projects should be evaluated for consistency with the goals and objectives of the LCA.** There is considerable evidence pointing to saltwater intrusion from the Mississippi River Gulf Outlet (MRGO) as a major cause of significant and ongoing wetland loss throughout the Lake Pontchartrain Basin. In 2003, the Conservancy, in partnership with area academics, agency personnel, and the public, completed a detailed analysis of the Lake Pontchartrain Basin and saltwater intrusion was identified as a top threat to the biodiversity health of this system that must be addressed immediately. This view is supported in the reconnaissance report for the LCA and through a resolution of the Louisiana legislature as well as local governments. The current Senate WRDA directs the Corps to prepare a plan for "modification" of MRGO. The Conservancy supports more explicit language stating that "modification" should not preclude the possible option of closing the channel to deep-draft navigation.

6) **Non-governmental organizations can play an important and increased role in helping to achieve conservation and restoration of the coast.** For this reason, the Conservancy supports authorization for non-governmental organizations to be eligible to be the non-Federal cost share for restoration projects.

The Conservancy is committed to restoration of Louisiana's coastal biodiversity and commends the efforts of the Corps, State, and others. While the country has long relied on this fragile ecosystem for oil, gas, transportation, and seafood, what has not been recognized is the contribution of this imperiled ecosystem to the nation and world's biodiversity. It is imperative that Congress take the opportunity presented now to respond to what may well be one of the most devastating social, economic, and ecological catastrophes our country has ever faced.

In summary, the Conservancy urges Congress to support a coastal program that includes authorization of four near-term projects; a fully-funded demonstration program with a substantially raised cap-per-project; attention to creating a biologically diverse landscape; opportunity for participation of agency and non-agency experts and a fully funded science and

technology program; consistency between existing and proposed navigation and public works projects with the goals of LCA, and; a greater role of NGOs in project delivery.

Thank you for this opportunity to provide testimony. I would be pleased to respond to any questions the Committee may have.

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