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U.S. ARMY CORPS OF ENGINEERS' BACKLOG OF AUTHORIZED PROJECTS AND FUTURE OF THE CORPS' MISSION

HEARING

BEFORE THE

SUBCOMMITTEE ON
TRANSPORTATION AND INFRASTRUCTURE

OF THE

COMMITTEE ON
ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE

ONE HUNDRED SIXTH CONGRESS

SECOND SESSION

MAY 16, 2000

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C O N T E N T S

U.S. ARMY CORPS OF ENGINEERS' BACKLOG OF AUTHORIZED PROJECTS AND FUTURE OF THE CORPS' MISSION

TUESDAY, MAY 16, 2000

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

The subcommittee met, pursuant to notice, at 10:10 a.m. in room 406, Senate Dirksen Building, Hon. George V. Voinovich (chairman of the subcommittee) presiding.

Present: Senators Voinovich, Bond, Smith, Thomas, Graham and Lautenberg.

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

Senator VOINOVICH. The hearing will please come to order.

Today's hearing is intended to be a backdrop to our consideration of the Water Resource Development Act of 2000. Last week we had a full committee hearing on the Comprehensive Everglades Restoration Plan which will be the cornerstone of this year's WRDA bill.

On May 23, the subcommittee is scheduled to hold its initial WRDA hearing. However, I felt it was extremely important to have this hearing today prior to our first WRDA hearing to discuss a major point of concern that I have. I asserted this concern as the full committee hearings on the Comprehensive Everglades Restoration Plan were held.

As most of my colleagues know, Congress passes Biannual Water Resources Development Act with billions of dollars of new authorization for projects and programs and assumes the money will be available to build these projects.

The stark reality is that the current levels of construction appropriations for the Corps water resource projects, we already have more water resources projects authorized for construction than we can complete on any efficient construction schedule.

At the current low levels of construction appropriations, it would take 25 years to complete the active projects in the backlog without even considering additional project authorizations.

Currently, the Corps has a backlog of over 500 active authorized projects with a Federal cost to complete these projects of about $38 billion. I want to emphasize the words "active projects." These are

projects that have been recently funded, economically justified and supported by a non-Federal sponsor.

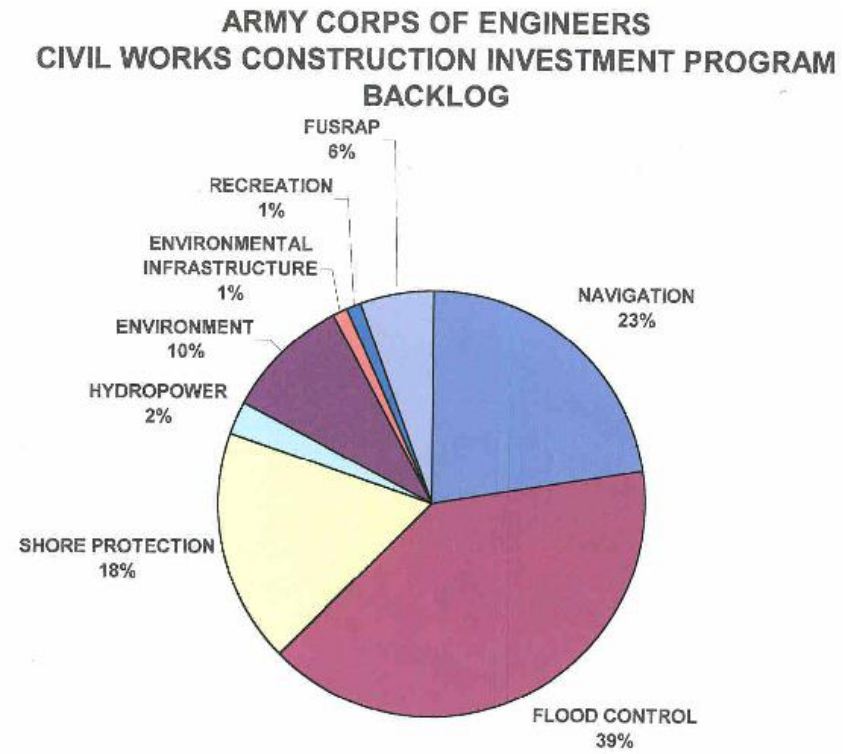
If we included the outdated, unneeded authorized projects, the backlog figure would be almost 800 projects at a cost of $46 billion.

Let me make this one point on the obsolete projects. We have made an excellent start in WRDA 86 to deauthorize these projects. We need to accelerate the process.

The Administration has a proposal to speed up that deauthorization process and it merits our serious consideration.

However, deauthorizing inactive and outdated projects will have relatively little impact on the backlog which is largely made up of active projects which have positive benefit-cost ratios and a willing, capable, non-Federal sponsor.

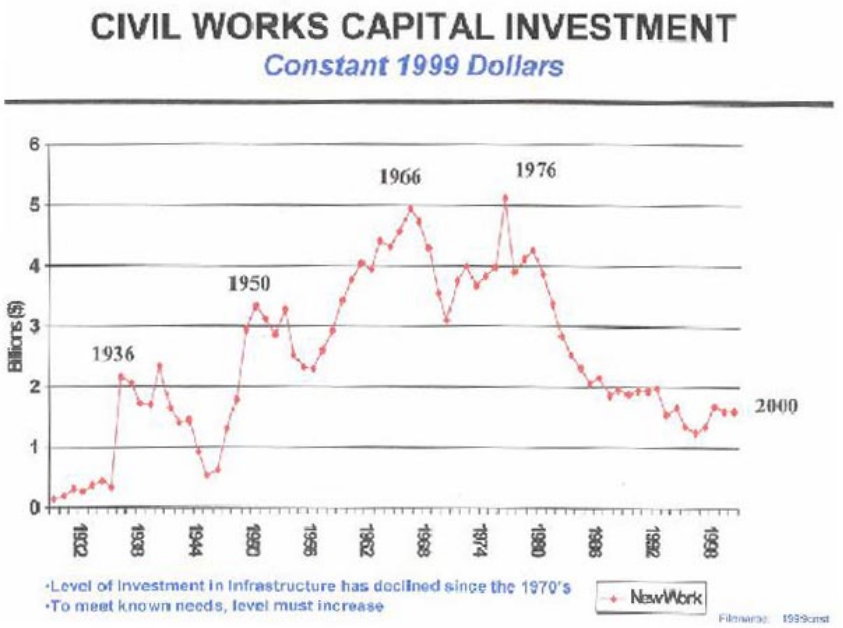
Chart One, which we have here and the members of the committee have a copy before them, shows the general breakdown of the backlog by project purpose. You can see that it covers the full range of traditional Corps projects including navigation, flood control, shore protection projects, hydropower project rehabilitation, and recreation-plus projects and the major new emission area of environmental restoration.



Projects in the other new mission areas of remediation of formerly used nuclear sites that we call fuse wrap and environmental infrastructure are also in the mix. So there are quite a few categories of projects.

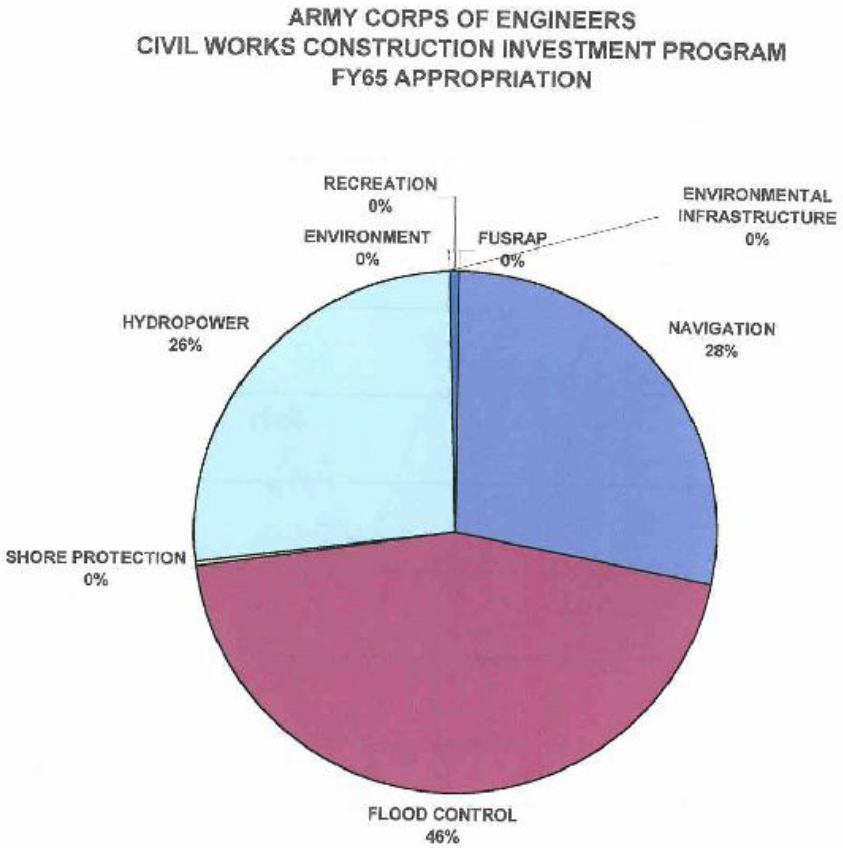
Why this backlog? There are a couple of reasons. The first and most significant is the decreasing Federal investment in water resources infrastructure.

Chart Two, and this is very interesting, Chart Two dramatically illustrates what has occurred. It shows our capital investment in water resources infrastructure since the 1930's shown in constant 1999 dollars as measured by the Corps of Engineers Civil Works Construction appropriation, you can see the sharp decline from the peak in 1966 of a $5 billion appropriation and appropriations through the 1970's in the $4 billion level to the 1990's where annual Corps construction appropriation have averaged only around $1.6 billion.

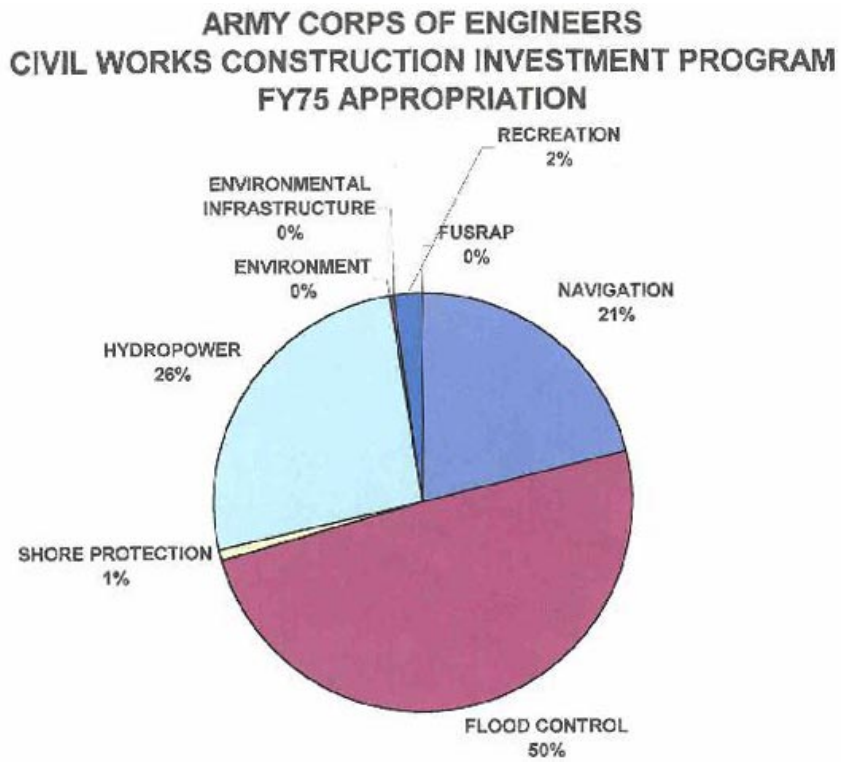


The second reason for the backlog is that we are asking the Corps of Engineers to do more with less. We have a series of charts in front of you showing the breakdown by mission area for the Corps construction appropriation by representative year from the decades of the 1960's, 1970's, and 1990's.

These charts are going to show that the mission of the Corps has grown substantially. If we look at Chart Three you will see that in fiscal year 1965 there were three large dominant mission areas: flood control, navigation and hydropower, with a low level of spending for recreation development.

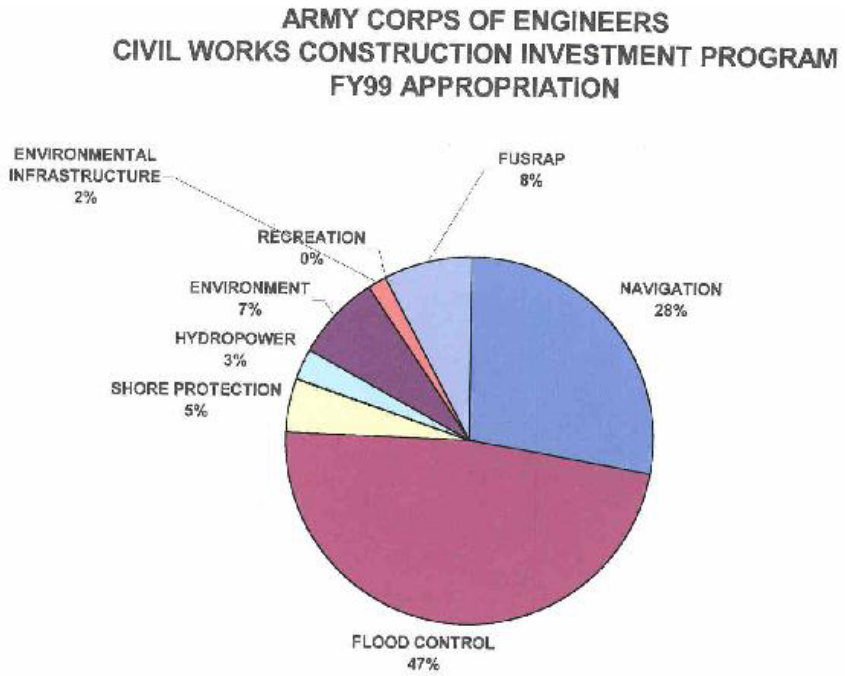


Switching to Chart four, in fiscal year 1975 you can see the big three of flood control, navigation and hydropower but with increased recreation spending. In fiscal year 1975 shore protection enters the picture and the first tiny wedge of environmental restoration work emerges.



When we talk about environmental restoration work, we are talking about habitat protection, restoration of particularly wetlands and aquatic habitat.

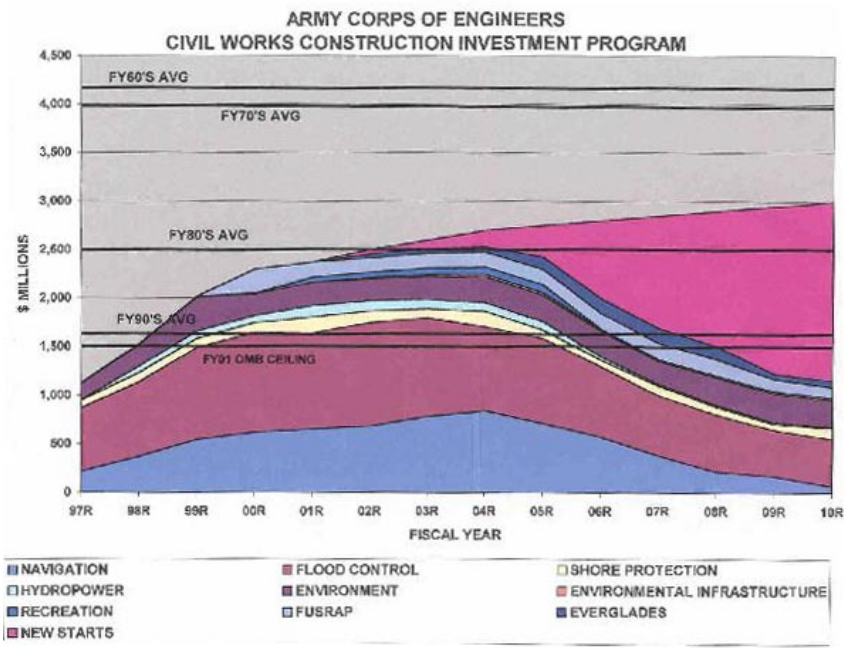
Now in Chart Five, in the 1990's we see a dramatic mission increase with environmental restoration as a significant mission area and two new mission areas of environmental infrastructure and remediation of formerly used government nuclear sites.



Environmental infrastructure as contrasted with environmental restoration includes such work as construction of water plants and sewerage treatment facilities. Again, we can see we are broadening the scope of the Corps of Engineers.

Now, what is the point of this? Well, if you recall our second chart, the Corps' construction appropriations have been falling since 1965 and it fell sharply in the 1990's. At the same time the Corps' mission has been growing. The result is today's huge backlog of projects.

The final chart illustrates where we are. This shows the recent construction requests by the Corps of Engineers and the anticipated future requests in the areas of navigation, flood control, shore protection, hydropower, environmental restoration, environmental infrastructure, recreation, remediation of formerly used sites, Everglades restoration work, and the anticipated future requests we continue to authorize.



As you can see, the budget requests, which are constrained by Administration budget policy, are far short of historic funding levels and are in the range of about $2.5 billion and anticipated to approach $3 billion in 2010.

So it is obvious, we need another billion, at least, and if we are going to look at projections, another $2 billion more than what we are spending to respond to the needs that we have.

If we don't receive that money, the result will be an even greater backlog and inefficient construction schedules.

What should be done? First, I think our witnesses will tell us that the needs are not going away. Given that reality, I think we need to significantly increase the construction appropriation of the Corps of Engineers.

I think a doubling of the current construction appropriations would be appropriate. I am a fiscal conservative, but there are certain areas where the Federal Government has an appropriate role.

I think navigation, flood control, restoration of nationally significant environmental resources like the Florida Everglades are areas where the Federal Government does have a role.

In this regard recently the House passed the Conservation and Reinvestment Act, CRA, which authorizes $2.8 billion in expenditures for land acquisition, coastal conservation, wildlife conservation and historic preservation.

One wonders if anyone ever sits down and weighs the unmet Federal and non-Federal roles versus the poll-driven spending too often by Congress. Does the left hand know in the Administration, or for that matter, in Congress, what the right hand is doing?

We just keep going on with new projects and we have great unmet needs. Does anybody ever put them on the scale and balance them?

Second, I think we need to control emission creep of the Corps. For example, even though I have obtained a limited authority for the Corps for environmental infrastructure in Ohio, I am not convinced that there is a Corps role in water and sewerage plant construction. That should be a State and local responsibility with some Federal assistance through the State revolving loan funds.

We will never get control of the backlog if the mission of the Corps continues to creep.

Finally, I think we need to assure that the Corps process of planning and recommending projects is open, objective, and inclusive and the project evaluation meets the highest standards of professionalism and quality.

We must be able to continue to rely on the Corps to recommend to the Congress for authorization and funding only projects that make maximum net contributions to the economic development and environmental quality of this country.

These are some pretty weighty issues and I am eager to hear what our witnesses have to say about our responsibility to meet our national water resources needs effectively and efficiently and whether we should narrow the scope of projects being considered for authorization by this committee.

The Senator from Missouri was first today. And we are lucky to have with us the chairman of the committee.

The Senator from Missouri.

OPENING STATEMENT OF HON. CHRISTOPHER S. BOND, U.S. SENATOR FROM THE STATE OF MISSOURI

Senator BOND. Thank you very much, Mr. Chairman. I would be happy to let our distinguished committee chairman go ahead or you can come back and clean up and go after us and straighten out anything that you disagree with.

I very much appreciate your efforts to hold this hearing. I wish I could stay for the entirety, but this is a busy time, as you know, and I am going to have to leave.

I welcome Dr. Westphal's representative, Ms. Tornblom, before us today. I know the Civil Works has done its best to survive the crossfire you must often find yourselves in more frequently than not these days. You have always been responsive and worked hard to try to balance the difficult and competing issues that land on your desk.

In my opinion, you have done so not only without the support of the White House political leaders, but you have done so despite some active attempts to undermine the Corps.

You don't need to consult the pollsters to tell us who the least favorite agency at the White House is. But the future of the Corps is critical to my State and many situated States in this Nation that understand how critical, one only has to look at the history of the Corps, the chairman did an excellent job of outlining some of the vitally important projects that have been undertaken in the past.

The record of the Corps in terms of flood damage prevented, lives saved, economic development and other national benefits speaks for itself.

To understand the broad, bipartisan support for the mission of the Corps, you look at the programs and the projects funded by this Congress and the politics suggested by this Administration that the Congress has rejected.

The new policy that we will reject on a bipartisan basis, I predict, is the proposal to raise local cost share from 35 percent to 50 percent which creates a class system of flood control whereby only rich urban communities with very significant financial resources and bonding authority can protects their homes or jobs.

When you talk about local flood control, frankly, that is where floods happen. Floods happen locally. They don't happen on some great flood starting elsewhere. They start with a hole in the levee or a rise in a creek someplace and that is what happens.

Now, I have a couple of issues on which I would welcome the comments of the Civil Works in the Corps. One has to do with the situation we are now in, on the outside looking in, as the Fish and Wildlife Service drafts the new Missouri River Management Plan.

Well, many in this room may disagree honestly and passionately about where this should go, but I regret that the U.S. Government, the Federal Government, directed the Corps to work with the agencies and the States, the directly affected States, to seek a consensus, and 5 years, scores of meetings, difficult negotiations, negotiations where my State didn't always come out a winner, but after all of that, Washington has turned around, thrown out that work, and turned it over the Fish and Wildlife Service.

If Fish and Wildlife should have had it in the first place, then Washington shouldn't have been wasting the time, the resources and the energy of the State who naively thought that Washington was serious about listening to them.

This is a major change in policy and, I believe, a subversion of process which is absolutely indefensible.

Another apparent swan song from the White House and CEQ are the new eleventh hour proposed guidelines designed to make flood control more difficult to achieve.

These came out of the White House and I need to know if rewriting these guidelines will be subject to public comment and which of the existing projects will be revisited.

Also, Ms. Tornblom, for the record, will you provide the subcommittee your analysis of what our foreign competitors are doing with respect to modernizing their water resources?

I know Dr. Westphal is abroad meeting with other agencies. I would like to find out what is going on in other countries. As much as we would like to pretend that the rest of the world is not relevant, I don't believe we can answer that question, which is a subject of this hearing, without the context of knowing what is going on in water projects in other countries.

Finally, I welcome other panelists here today, the representative from American rivers who has been very active in my region and who has been willing, on occasion, to take the risk of developing a balanced consensus on river management, a representative who

has been fair in dealings with me and we have even conspired a time or two to work on environmental legislation.

These efforts deserve some credit for the trend we all support to make the Corps projects as great as possible.

I do want to raise one issue with respect to the literary license and that has to do with a column that appeared in the latest issue in which they castigated the projects, which is your prerogative, and I think that is something you may want to do, but it also, I believe, went far beyond the pale and made significant derogatory comments about the military leaders.

I think people who have distinguished records of military service, have been decorated for their honor and sacrifice, served tours in Vietnam and Desert Storm, and deserve not to be trashed in public.

They deserve some more respect than is incorporated in the editorial which convicts them of wrongdoing and suggests that top military leaders who contributed to this culture and gave direct orders to cheat should be digging latrines in Kosovo by the time you read this.

I can assure you that I don't always agree with Corps officials either. There are investigations ongoing which should and must resolve the issues that have been raised.

I was disappointed to see this attack on the people in the Corps. I believe I these difficult times when we disagree with policies, we ought to keep our disagreements on a policy level and avoid ad hominem attacks.

Mr. Chairman, I thank you for the time. I look forward to the hearing.

Senator VOINOVICH. Thank you.

Senator Thomas?

OPENING STATEMENT OF HON. CRAIG THOMAS, U.S. SENATOR FROM THE STATE OF WYOMING

Senator THOMAS. Thank you, Mr. Chairman. I will be brief. I don't have a written statement.

First of all, I would say that I am not an expert in this area. I haven't worked with the Corps as much as many of you have, but I am impressed with what they do. I am no expert.

But I do think as we look at these things and we have an oversight hearing we ought to review a little bit the role of the Corps. I do think things in this government and this agency as well get institutionalized and are very resistant to change. There has to be change.

I think we ought to do that. Part of it has to do with utilizing the private sector. Many of the things the Corps does are equally done by the private sector and I am one who thinks that is where we ought to go with a lot of the things we can.

Second, I am not sure it is the role of the Corps to be offering its services to the States and the local governments; maybe it is.

I just came yesterday from the Space Command in Colorado Springs. It is the same question. We ought to talk a little bit about what the goal is, what the mission is, and then review everything we do to see if it fits in to the accomplishment of that mission.

I understand that is a broad issue. For us here, I think when we have this backlog and all these authorizations we ought to take a look at ourselves. It is easy to authorize. We do that for political purposes.

When we do that, we leave the decisions up to the appropriators. I think we ought to take a look at our own process as we do some of those other things.

By the way, we had a hearing here, I think, on February 24. I submitted a list of about ten questions, none of which I have heard about from the Corps since February.

I would appreciate it if we could get a response to some of the questions that we asked at these hearings.

Thank you, Mr. Chairman.

Senator VOINOVICH. Thank you. Again, we are very pleased that the chairman of the Environment and Public Works Committee is with us today.

Senator Smith?

OPENING STATEMENT OF HON. BOB SMITH,
U.S. SENATOR FROM THE STATE OF NEW HAMPSHIRE

Senator SMITH. Thank you, Senator Voinovich. Thank you for holding this hearing today. It is a very important hearing to discuss the unfounded projects that Congress has authorized and also the future mission of the Corps.

Like you, Mr. Chairman, I am concerned about the number of these projects that have been authorize but have not received funding and also somewhat disturbed to see the Administration once again requested inadequate funds in the President's fiscal budget this year to meet the Nation's continuing demand for Corps service. The backlog will continue to increase.

In order to address the problem, I believe it is important for us to get a sense of how many projects on the backlog list are still viable. Projects, as you know, should be deauthorized if the local sponsor no longer exists, if the project is environmentally unacceptable, or economically unjustified, or the needs of the area changed.

For example, it is my understanding that there is $1 billion worth of projects in Florida alone that might be deauthorized once the comprehensive Everglades Restoration Project is enacted.

If this is the case, then the committee should take a look at these projects and see what the scenario would bring us.

Although the Administration includes a provision to amend the authorization process in its Water Resources Development Act, I believe the process can and should be more stringent. I look forward to working with you, Mr. Chairman, to rectify this.

One other issue that we did take a close look at is the type of projects that we authorize. I just whispered to the chairman that I received so far 150 projects on the new Water Resource Development Act Bill from our colleagues. I think the only one who didn't send one was me. I didn't send one to myself. Maybe I should, I guess, get on the list.

But since 1986, the committee has authorized only those projects that are consistent with cost-sharing requirements established in the Water Resources Development Act of 1986.

In addition, there must be an identified local sponsor for the non-Federal share of the cost and the project must have a completed reconnaissance and feasibility study and the chief's report must find the project technically sound, environmentally acceptable, and economically justified.

Although this criteria serves us well, as you know, Mr. Chairman, the next few weeks I have committed to work with you to examine that criteria and to see if we need new criteria to determine if revision needs to be made and we pledge to you that we will be working to do that.

I know there will be questions raised today about whether the Corps' mission should include environmental restoration projects. I agree with what you said, Mr. Chairman, when you said some of the water and sewer problems are more for the local communities.

But I think there is some justification for environmental restoration and I think it is within the scope and responsibility of the Corps.

I am not sure how many know this, but the Army Corps has long been involved in environmental projects. In doing a little research I found that the Corps in 1874 operated and protected Yellowstone National Park. When the buffalo herds across America were severely threatened from over-hunting, the Corps build a four-mile fence around the few remaining buffalo in Yellowstone and the herd that once numbered 25 now is in the vicinity of 3,000.

I don't know how that stacks up with my colleague down there, but I am sure you are glad we saved the buffalo. Defense was probably not too happy with that.

Senator THOMAS. Remember, the Army was in charge of the park at that time.

Senator SMITH. But also the two other points, the key player in restoring the Chesapeake Bay was the Army Corps. They engineered a plan that would allow water to flow once again through the Everglades which we are now looking at.

So, protecting our Nation's watersheds and even working to design fish ladders, the Corps has developed an expertise in mitigating environmental damage, and I, for one, welcome their expertise and their knowledge and hope to draw on it considerably as we develop criteria for future water resource development projects and other Army Corps projects.

Thank you, Mr. Chairman.

Senator VOINOVICH. Thank you.

Senator Graham?

OPENING STATEMENT OF HON. BOB GRAHAM, U.S. SENATOR FROM THE STATE OF FLORIDA

Senator GRAHAM. Senator, I appreciate very much the opportunity to join you today in this hearing focusing on the project backlog in the Corps of Engineers.

I have great respect for the work of the Corps and the direction under which it operates at Congressional authorization.

I want to make particular comment about the Jacksonville District of the Corps of Engineers which serves most of peninsula Florida as well as the U.S. interests in the Caribbean.

I have been intimately involved with the Jacksonville District for the last 30 years and I have seen a dramatic transformation in that district in terms of its greater sensitivity to environmental concerns and its openness to public involvement in its decisionmaking.

The outstanding work in developing the Comprehensive Everglades Restoration Plan is an example of that coordination with the State of Florida, local government interests and a multiplicity of citizen interests.

All of them demonstrate the Corps' willingness to adapt, make decisions with public input and ensure that sound engineering decisions remain the cornerstone of project planning.

Mr. Chairman, I would share with you your desire to support Corps projects that are authorized by Congress. I would make a couple of suggestions that this subcommittee and full committee might consider.

One is that we set standards for project eligibility before they are authorized so as to give us greater confidence in terms of things like the capacity of the local sponsor to meet both the construction and the ongoing operation and maintenance, financing of a project, some rational process of establishing priorities of projects, and that the projects meet the standards of environmental compatibility which in many cases led to their being proposed in the first place.

As an example, Mr. Chairman, I am going to be suggesting some standards in the area of beach renourishment projects that try to capture these concepts and which I believe, if adopted, would help to assure that those projects which were authorized would be projects that we would be prepared to urge their completion through continuing appropriations.

I also share your desire to eliminate unneeded, outdated and unjustifiable projects which have been authorized in the past, some of which have moved beyond authorization to construction and some of which are still awaiting appropriations for construction.

Here I would suggest, Mr. Chairman, that we might request the Corps to develop a set of standards by which they would evaluate previously authorized projects, whether they were still awaiting design and construction or whether they had actually moved forward.

Then, against that set of standards, recommend those projects that they think should be either modified in their authorization or in some cases even deauthorized. So this committee could have the benefit of the Corps' informed knowledge as we look at projects that may not justify going forward against current national priorities.

So, Mr. Chairman, I look forward to this hearing today with the Corps and the other witnesses as to how we can work together to streamline existing project authorizations as well as look to the future in terms of assuring that any new authorizations meet standards that will justify their sustained support and completion.

Thank you, Mr. Chairman.

Senator VOINOVICH. Thank you.

The Senator from New Jersey?

OPENING STATEMENT OF HON. FRANK R. LAUTENBERG, U.S. SENATOR FROM THE STATE OF NEW JERSEY

Senator LAUTENBERG. Thank you, Mr. Chairman.

Welcome, General, and Ms. Tornblom.

I think what we are seeing is continuing recognition of the varied assignments that we are giving to the Corps as being very worthwhile projects. As that expands, we also see some problems and the questions are raised about how we continue to finance these and whether or not there is the effect of the kind of cost-benefit analysis that we would like to see done.

So, Mr. Chairman, I want to thank you for holding the hearing to review the Army Corps of Engineers backlog of authorized projects and the future missions.

The Corps has an enormous list, over 500 active projects, the cost to complete of almost $38 billion, projects that have been funded within the past 7 years that are economically justified and supported by the non-Federal sponsor.

Now, Mr. Chairman, the backlog is the result of inadequate, insufficient Federal funding for civil works projects. In an era of budget surplus we need to support projects in the Federal interest that protect life and property and the economy.

One of the things that I run into on a continuing basis, I think, is directly similar to some of the questions that Senator Graham might raise. That is beach replenishment. How does that square with disaster aid, flood control, drought assistance, and things of that nature?

These are fundamentally economic decisions. That is where they are coming from, quality of life decisions.

Whether they are in a coastal State or a non-coastal State, an agricultural State, the fact of the matter is that we do wind up, I think, with not only a financial obligation, but I might go so far as to say a moral obligation and to make sure that we recognize what the problems are in each of these cases.

So, on the issue of the Army Corps of Engineers mission, I would point out that many Congresses prior to the 106th, have tried to address the issue. Throughout the nineteeth century the Corps supervised the construction of coastal light houses, railroads, public buildings, as well as mapped most of America's West.

So, later on Congress added rivers, harbor improvements, short protection, and life control work. Other Congresses have expanded their role to include electric power generation, water supply, irrigation, recreational facilities and emergency response.

In my State, that tiny State of mine manages to call on the Corps quite frequently because we have problems. We are the most densely populated State in the Union. When we have a problem it affects the lives of thousands of people as we saw in the recent hurricane and flooding cycle.

The Corps has done a terrific job in my State in cleaning up hazardous waste sites under Superfund and FSRP programs.

Under this Administration I have seen the Corps improve its openness to public concerns about environmental protection. Still the Corps has much to do to ensure that the projects it undertakes truly benefit both, the economy and the environment.

I look forward to hearing from our distinguished officials here today about the Administration's reforms and last, Mr. Chairman, as a member of the Appropriations Committee, I was disturbed to find a rider tucked into the Supplemental Appropriations Bill dealing with the Army Corps.

The rider actually prevents rather than encourages real reform efforts underway by the Administration to fix some of the problems this committee has raised. The rider says, "let's keep things the way they are" and not look at ways to do our business better, when we know in many cases when we have seen reform take place and change take place, Superfund for instance, the pace of the work has improved and the quality of the work has improved.

We have a right and an obligation to look at the way an agency as large and important as the Army Corps does its business. I think that we have to run this through this committee and not simply look at it through the appropriator's eyes.

This committee has an enormous attachment to the Corps of Engineers. So, Mr. Chairman, I hope that we can work together to remove that from the final bill.

I once again commend you for calling this hearing. I think it is timely and critical. Thank you very much.

Senator VOINOVICH. Thank you, Senator.

Our first panel this morning is composed of Claudia Tornblom, who is the Deputy Assistant Secretary of the Army, and Major General Hans A. Van Winkle, Deputy Commanding General for Civil Works, U.S. Army Corps of Engineers.

Ms. Tornblom, Assistant Secretary of the Army Westphal called me and apologized for not being here, but he said that he was sending someone that probably knew as much or more than he did about the subject matter of this hearing today.

We welcome you and we welcome General Van Winkle as our first panel.

STATEMENT OF MS. CLAUDIA TORNBLOM, DEPUTY ASSISTANT SECRETARY OF THE ARMY (MANAGEMENT AND BUDGET), U.S. DEPARTMENT OF DEFENSE

Ms. TORNBLOM. Thank you, Mr. Chairman.

I appreciate the opportunity to testify today on behalf of Dr. Westphal, the Assistant Secretary for Civil Works, on the missions and construction backlog of the Corps of Engineers Civil Works Program.

I will briefly summarize my statement. The Army takes great pride in the Corps of Engineers and its service to the Nation through the Civil Works Program. We welcome and encourage dialog about the challenges that lie ahead and how we plan to meet them.

The current primary civil works missions today are navigation, both inland waterways and deep draught channels and harbors, flood and coastal storm damage reduction, ecosystem restoration, the regulation of work by others in waters of the United States including wetlands, emergency management and support to other Federal agencies.

The Corps may also provide additional water resources purposes, recreation, hydropower and water supply in conjunction with these six primary responsibilities.

The goal of the Army Civil Works Program is to contribute to the welfare of the Nation by providing, in partnership with customers, desired goods and services that are of the highest quality and are economic, technically sound, and environmentally sustainable.

The Army Corps of Engineers construction backlog, as we are using the term today, consists of the uncompleted portions of individually authorized projects and projects currently under design.

The total Federal cost of these projects is $71 billion, of which $23.5 billion has been allocated to date and another $1.5 billion is included in the President's 2001 budget.

This leaves a balance to complete construction of $46 billion. This amount, $46 billion, comprises the construction backlog. The projects in the backlog have been divided into three overall groups: active, deferred and inactive projects.

Active projects are economically justified and are supported by a non-Federal sponsor. The backlog includes $38 billion of work in this category.

Deferred projects either have doubtful economic justification and need restudy to determine their economic feasibility or are projects for which the non-Federal sponsor is unable to provide the required terms of local cooperation.

The backlog includes $2 billion for deferred projects. Inactive projects are in one or more of the following categories: They are not economically justified and a restudy would not develop a justified plan; they no longer meet current and prospective needs; or they are not supported by a non-Federal sponsor.

The backlog includes $6 billion for inactive projects. It is unlikely that the deferred and inactive projects will ever proceed to construction.

The $38 billion active component of the construction backlog is in turn made up of three distinct parts. $26 billion is for active authorized construction projects of which about $21 billion is attributable to the out-year costs of projects included in the President's 2001 budget.

About $4 billion is for authorized projects currently in pre-construction engineering and design or PED, and $8 billion is for PED projects that are active but have not yet been authorized.

We have included these PED projects in what we are calling the viable backlog because our experience shows that projects in this phase of development have about a 90 percent likelihood of being constructed.

We are continuing our review of the $26 billion active backlog to determine the extent to which this category may also include elements of on-going projects that are unlikely to be constructed and should also be deauthorized.

The size of the construction backlog imposes a burden on the Federal budget that cannot be satisfied in the light of today's budgetary realities and overall governmentwide budget priorities.

Sufficient funding is not available to the Civil Works Program to implement all of these projects in a timely way.

Throughout history external forces have affected the Civil Works Program. The most important of these have been and continue to be customer demands for goods and services and taxpayer concerns that investments shall be well justified.

For our program to remain relevant and a viable contributor to the Nation's welfare, we must remain sensitive to both of these forces.

Based on our assessment of current water resources needs, we strongly believe that the Nation faces significant and demanding challenges.

Thank you, Mr. Chairman. This concludes my statement. I would ask that my complete statement be entered in the record.

Senator VOINOVICH. Without objection it will be entered in the record.

General Van Winkle?

STATEMENT OF MAJOR GENERAL HANS A. VAN WINKLE, DEPUTY COMMANDING GENERAL FOR CIVIL WORKS, U.S. ARMY CORPS OF ENGINEERS, U.S. DEPARTMENT OF DEFENSE

General VAN WINKLE. I don't have a prepared statement. I just wanted to make two comments. First of all, we worked with the Assistant Secretary's Office in preparing both the written and the oral statements, so we are in complete agreement about the data and the issues at hand.

Second, let me state that we are very thankful that you and the members of the committee are holding this hearing. We think this is a topic that has concerned us in the Corps for some time and the willingness of this committee to deal with this is very important to us.

Principally, it is because when we enter into the project formulation stage, we work very closely with our cost-shared sponsors.

Once we establish the relationship and determine that there is a viable project, I think our cost-shared sponsors have some feeling that this project should move along at a reasonable pace.

Again, given the problems that you have noted here, we are not able to do that for many of our sponsors. That creates some difficulties for us as an agency, as a Federal agency working.

So, bringing these issues before us, I think, is very important and we welcome this hearing.

Senator VOINOVICH. Thank you.

Could I have some help with those charts again?

The first question I want to ask is this: If you look at the charts, and the ones I want to show are the growing areas of responsibility by the Corps of Engineers. Let's start out real quickly so that we can really get a sense of that.

Of course, we will finish up with the last one, Rich. This is 1965 and you can get a sense of what it was there, pretty much the traditional things that one would think about the Army Corps of Engineers.

Then we move from that chart to the next one that shows the growing areas of responsibility. Fuse draft was in recreation and then shore protection there that Senator Lautenberg talked about.

Then over here on this side, this is 1999 Appropriations. You can see how the role and the mission of the Corps has changed.

Ms. Tornblom, some of the initiatives that appear on that chart took place during the 1990's, during the Clinton Administration.

The question I want to ask is this: In light of the expanded role and mission of the Army Corps of Engineers in areas, for example environmental restoration which all of us are very supportive of, the question is, why is it that you have not asked for more money in order to take care of these projects?

In other words, you have expanded the mission for worthwhile projects. But if you look at the request from the Administration in terms of funding, it is below what it was earlier on. So you have a period of increased mission responsibility and less requests for dollars to fund these projects.

At the same time when the Administration is going into other areas on the Federal level, increasing spending for education and you name it, what bothers me about what I have observed is that the responsibilities that we have, the Federal responsibilities, the Federal role in so many areas, is being neglected and we are going off into a lot of these other areas. We need to get back to basics.

I want to know, why haven't we received requests for more money from you?

Ms. TORNBLOM. As you pointed out, the Administration's requests I the 1990's have been significantly below those in the two or three prior decades. During this period, the balancing of the budget was a very high priority for both the Administration and Congress.

The agreements on the Budget Enforcement Act and other agreements between the Administration and the Congress to reduce and finally eliminate the deficit put spending limits in all categories that constrained the ability of the Administration to provide more money for this program.

While we only have to look at the water resources needs of the country, the President is required to consider the entire array of government responsibilities.

The amount of funds in the budget reflected his assessment of the amount that should be made available to this program.

I would note that Congress as a rule appropriated more than the budget request, but even the Congressional appropriations were insufficient to keep projects on schedule. That is another reflection of the fact that all parties have been constrained in recent years.

Senator VOINOVICH. I would just like to comment that I looked at the numbers for, for example, education, which is pulling double digits now. In the last 10 years we have increased it 100 percent. I think we have gone from $10 billion to $20 billion.

Again, it bothers me as a former Governor and one who has had a look at the competing demands that we haven't concentrated more on these unmet needs.

For example, is the Administration in favor of this CRA bill that just passed the House? Do you know?

Ms. TORNBLOM. No, I don't.

Senator VOINOVICH. I would like to find out. Is the Administration in favor of it? That is going to spend almost $1 billion more a year. It is very worthy. I have been lobbied very hard about it. I have looked at people in the eye and say, "We have other unmet needs that need to be taken care of."

Then I mention the $38 billion of unmet needs that we have here in the same area. So some of this is going to have to be reconciled if we are going to move forward and get the job done or we might as well not even have another WRDA Bill.

Ms. TORNBLOM. Yes, sir.

Senator VOINOVICH. The other question I have is that with environmental restoration, new missions, do you believe that there should be a cap on environmental restorations, say of 25 percent?

Ms. TORNBLOM. I don't believe it is necessary to put a cap on it. We have traditionally and continue to recommend the projects that are ready to move forward and are most highly justified in terms of economics and environmental benefits.

I think it would be a mistake to restrict the Civil Works Program to the traditions of the past. It would put the Corps in the back seat in terms of meeting the present and future needs for the country.

I personally think it would be unfortunate to miss an opportunity to apply the Corps' significant expertise to addressing the newly emerging priorities of the country.

Senator VOINOVICH. The problem gets back again to the allocation of resources. I have thought on several occasions that should we get into a new pot of money just to focus in on environmental restoration.

We are interested, for instance, in my State, on the Ohio River, in environmental restoration. We have them all over the country. The demand is very great.

When you have that limited sum of money, some real thought, I think, needs to be given to how do you get more money to take care of some of these very, very worthy projects that we would like to get into. Have you given any thought to that?

Ms. TORNBLOM. That is an interesting concept, sir. We will be happy to look at it. Of the top of my head, a couple of concerns I may have would be the difficulty of defining the kinds of projects that would go in that account as opposed to an infrastructure account and also the management in the Civil Works Program has traditionally relied heavily on the ability to reprogram funds among projects.

As one project may go faster than expected and others may be delayed for various reasons, the more we distribute the money among separate appropriation accounts, we limit the ability to manage the program in a way that most efficiently uses the funds available in any given year.

Senator VOINOVICH. So you have to get some more money, right?

Ms. TORNBLOM. Yes, sir.

Senator VOINOVICH. One last question: We had the hearing, Senator Smith, the chairman of this committee, had a hearing on the Everglades Restoration. One of the questions that I asked the Governor of Florida, and I am not sure he understood what the question was, was that they were asking for special permission in that legislation to move forward with the restoration of the Everglades, that is, that they would not be held back by the annual appropriations coming out of the Energy and Resource Appropriations Committee; so that they just move down the road and just build and

then they would back-charge the Federal Government for the Federal share of it.

What I suggested is that if special permission is given, what about the concept that the States could then pay more than, say in this case they are paying 50 percent, let's say they pay 60 percent of the project costs and in consideration of their paying more of the share, they would be given permission to move forward and get these projects finished up and wait their turn as the appropriations come through.

Have you ever given any thought to that concept?

Ms. TORNBLOM. We don't have any formal position on that. Again, that would be something that we would be happy to look at.

There are many other kinds of projects that have used the same process, some of the large deep draught navigation projects have benefited from that same practice.

As I am sure you know, the chairman of the Senate Appropriations Committee, a few years ago, asked for particular notification. Then last year the Appropriations Committee placed limits on the amount of annual funds, debt that can be incurred in this manner.

We will be happy to look at that.

Senator VOINOVICH. I really would be interested in your opinion on that. With Chairman Smith we have the special request that is being made and it basically says, "move down to get it done and then bill us back." That is extraordinary authority that we would give a State in regard to a particular project.

You have talked about the backlog of projects. One thing I am pleased about is that our numbers are the same. It is $46 and about $38 billion on those that have received some authorization or funding and are "legitimate projects."

So, if you are really realistic, I would like your reaction to this: You could probably eliminate some $8 billion worth of projects, but you are still down to a $38 billion backlog of projects that are worthy projects, where local funding has been identified and really should go forward.

Would you disagree with that or do you think there is still some fat in the $38 billion figure?

Ms. TORNBLOM. We are looking at that now. General Van Winkle's staff is working on that analysis. We have identified one particularly large project that you mentioned earlier, the central and southern Florida project.

It may have $400 or $500 million still within that $38 billion that will never be built because of the redirection of the project toward restoration of the Everglades rather than the draining of it.

We need to look more closely at that number and see exactly what is in it before any recommendations are made. Would you like to add anything to that?

General VAN WINKLE. Senator, we have been working with these numbers since you tasked us to look into this for you. I feel pretty confident that that number in the range of $38 billion in backlog is correct. As I said, we have been pouring over our books and there may be some small deviations, but I feel very confident to say that the backlog number is somewhere in the high to mid-$30 billions.

So, we have in fact done that. I don't think there is a lot more in terms that you could easily remove from the books. I think that work has already been done and presented to you in this testimony.

Senator VOINOVICH. Thank you.

Senator THOMAS.

Senator THOMAS. Thank you, Mr. Chairman.

Madam Secretary, your description of the current program mission is very broad. Do you have any inclination to narrow that a little bit? You could almost deal with anything under this definition.

Ms. TORNBLOM. Well, we do focus most of our resources on three of those mission areas: navigation, flood control, and environmental restoration.

Senator THOMAS. But you include resource regulation, hazardous clean-up, assistance with natural disasters, response and recovery of related land resource issues. That is pretty broad stuff.

Ms. TORNBLOM. Yes. Much of the emergency response we do is done in support of FEMA and uses their funds. We have a small amount of our own funds that are for that purpose.

Senator THOMAS. I guess I don't entirely agree with the chairman that the only answer is more money. I think as we look at all of government we have to define the roles a little more clearly and we have to upgrade from time to time and change our roles.

They are not the same forever, certainly. You indicate here that one of your roles is to provide engineering and technical assistance for other Federal agencies and the States.

Ms. TORNBLOM. Yes, sir, and that is 100 percent reimbursable by the party for whom we are doing the work.

Senator THOMAS. Why should the Corps of Engineers compete with the private sector in assisting the States with engineering?

Ms. TORNBLOM. I am going to make one comment and let General Van Winkle respond to that, also. While we don't believe that this is competition with the private sector, we are providing a protection of the government's interest.

An example of this is the Superfund work we do with the Environmental Protection Agency. We do a lot of construction and engineering management, project management, oversight, and quality assurance.

Those capabilities may exist in the private sector, but there is a governmental interest to be protected and there have been some examples of agencies being criticized for not having paid enough attention to contractors.

Senator THOMAS. The government has a policy also. I think it is called A–76, which says, "Where it is possible, we would prefer the private sector."

Do you just disregard that?

Ms. TORNBLOM. No, sir. In fact, 100 percent of the Corps' construction work is contracted. We have no in-house construction work force. All of the work is constructed by contract to the private sector and a large portion of the design and engineering work is also contracted.

General would you like to comment on that?

Senator THOMAS. Just before you do, let me remind you that we passed the bill last year with respect to having each agency report their activities that were necessarily governmental and those that were not.

The Department of Defense is one of the best contractors in the whole unit. It would seem to me there is very little reason why you all wouldn't be similar to that, but you haven't really responded to the separation of your functions.

General VAN WINKLE. Senator, if I might, let me say I agree with Ms. Tornblom in the sense that I don't view us working in opposition or in competition with the private sector.

Senator THOMAS. I am sorry, you say you are not in competition with the private sector?

General VAN WINKLE. Well, I don't like to characterize it that way. I like to characterize us as working in concert and in cooperation with the private sector.

I think there are certain instances where there is a Federal role for the Corps of Engineers to work, again, in concert with private industry.

In fact, as Ms. Tornblom has stated, we do that, in fact, 100 percent of our construction is done by the private sector. We maintain essentially no capability. Forty percent of the engineering and design work is contracted out to the private sector.

So we feel that the work we are doing is to protect the Federal interest. There is a Federal role. There is a governmental role in the formulation of these projects in determining it as a Federal interest.

Then a lot of additional work then can be contracted out. So, again, I would agree with her in terms of characterizing that as a cooperative effort rather than a competitive effort.

Senator THOMAS. Well, I just would say to you that—and those are the questions that I had submitted to you before which have not been responded to.

We work very hard and will continue to, to try and get each of the government agencies to take a look at those things that are necessarily governmental and those that are not, and to identify those, which in fact is under the law that you are supposed to do that.

You also say here, "Given America's strong and growing interest in downsizing the Federal Government and, in turn, its work force, ongoing outsourcing and privatizing for accomplishment of government work," and so on. You have that in your statement along with your goal of providing these services to the States. To me that is contradictory. But I understand you don't agree with that.

But I am going to push and press for the idea of government agencies perfecting their ability to oversee projects, but not doing them themselves. I feel very strongly about it. I think we need more changes in this operation than simply more money. More money is important, of course.

But for instance with the States, is that what we are there, too, to do the services for the States? It is certainly worth consideration.

I thank you.

Senator VOINOVICH. Thank you, Senator.

Senator Smith?

Senator SMITH. Let me ask each of you, the General and Ms. Tornblom, has Congress authorized any projects that you are aware of which the Corps believes is outside your expertise or could be better done by another agency?

Ms. TORNBLOM. I will let you answer that.

General VAN WINKLE. That is a difficult question, Senator. I certainly have a long history dealing at a national level with your question. I guess we could do some research and see.

I would say in general we are comfortable with the missions that have been given to us. Water, of course, has multi-dimensions. So as we discuss separating out flood control and navigation and environment, a gallon of water serves many purposes.

Our projects are intended to be multi-functional in that regard. So, I think in the case that we would be given projects and as they have expanded, I think a number of people have recognized that fact that many of our water projects do have multi-functions. So that may be a beginning of an answer to that.

I feel comfortable that the missions we have been given we have had the capability to conduct.

Ms. TORNBLOM. I might add to that, sir, that there is perhaps $1 billion worth of work that the Corps of Engineers does in support of the military, the Army and other services.

There is a great deal of expertise gained through that work that then can be applied by the organization to a civil works mission if and when the Corps is asked to carry out such an effort.

The FUSRAP would be an example of a program where the Corps had developed the expertise through its support for the military, the environmental restoration clean up programs and support for EPA. So, they were well prepared to take on the work of the FUSRAP program.

Senator SMITH. You heard Senator Voinovich and I discussing the criteria, in our opening statements, for these projects.

What suggestions would you give us? Are there any new criteria that you would like to see us use other than the criteria that you are aware of which the committee has in establishing these projects? Either one.

Are you satisfied that the criteria is satisfactory? If so, why do we have a backlog? If you are not, then what suggestion would you make?

General VAN WINKLE. Senator, I will address that. I think the criteria are good ones in the sense of the evaluations basically, is there a Federal role, do we have an authorization for the project and second, is there an economic justification, and third, does it meet the environmental principles?

So, I think those are sound. I don't think the general criteria need any change or adjustments. I think there is some role for discussing how those are applied and the level of expertise which we apply to those.

But I think those in general are sound principles upon which we make our decisions. I guess in some degree we are faced with the issue that given the requirements and given the needs out there and given the authorities and expertise the Corps has, and we have built up this backlog to deal with it. That would be my answer.

Senator SMITH. What is the reason for the backlog, then? Is it purely money?

General VAN WINKLE. It is a combination of funding given the requirements level and the needs.

Senator SMITH. If money was not an issue, would there be projects you would recommend not doing that are in the backlog?

General VAN WINKLE. Well, I think we could find those out in our data as to what we would not want to do at this point either because conditions have changed and are no longer applicable to the cost-shared sponsor. I think we have addressed that in the data we have given you.

Senator SMITH. Do you have chiefs reports that have been completed on projects that were not funded in this budget?

General VAN WINKLE. I believe that is correct.

Senator SMITH. How many? Do you know?

Ms. TORNBLOM. We will provide that for the record.

Senator SMITH. In order to eliminate the O&M backlog, what level of funding would the Corps require on an annual basis, Operations and Maintenance backlog?

General VAN WINKLE. Our O&M budget this year was $1.8 billion. That increased the backlog that we currently have on the books by about $100 million. So, we have about a $450 million backlog currently on the books.

I think to do that efficiently we would have to take that over a couple of years. I don't believe we could address that immediately. That is the backlog figure that we would need to deal with.

Senator SMITH. A final question, Mr. Chairman.

Do all the projects in the active category, as far as you know, adhere to the applicable cost-sharing formulas that the Water Resources Development of 1986 set as standards?

Ms. TORNBLOM. No.

General VAN WINKLE. Do you want to answer that?

Ms. TORNBLOM. No. There are exceptions that were authorized in ways that excepted them from that.

Senator SMITH. I am sorry. Would you repeat that?

Ms. TORNBLOM. There are projects within the active backlog that are not consistent with the overall cost-sharing requirements.

Senator SMITH. But why would that be? Ms. Tornblom. Because they were authorized as exceptions with special considerations or prior to; probably most of them prior to. Senator Smith. What is one example of a special consideration, just so I understand it.

Ms. TORNBLOM. The Section 202 Program.

General VAN WINKLE. Typically a disadvantaged community, low-income sorts of communities. Those are considerations that come up that where the local cost-share sponsor does not have the capability or wherewithal to provide the spot, to provide the funding support, then often times we deal with that issue of should there be a consideration in that regard.

Senator SMITH. Thank you, Mr. Chairman.

Senator VOINOVICH. Thank you.

I just have two quick questions. Environmental infrastructures, sewers, waste treatment facilities, should they be on the list?

Ms. TORNBLOM. The Administration does not believe that this is an appropriate mission to be budgeted as a civil works program.

We have traditionally provided planning assistance to States. We provide technical assistance through various authorities.

But it is the Administration's view that this is not a role that should be assigned to the Corps of Engineers.

Senator VOINOVICH. Well, I would invite the Administration to think about criteria that they think should be applicable to these WRDA bills. I think the Senate under Senator Chafee did a pretty good job and then what happened is it got into conference and lots of projects were added over on the House side.

It seems to me that we need to really give more careful consideration to just what criteria we are going to be using in terms of funding these projects in the WRDA bill.

The last question is for you, General Van Winkle. You have 500 projects, a $38 billion backlog. Obviously, when you are waiting for funding each year and it is not adequate, doesn't that extend the construction schedule of those projects and what impact does that have on the overall cost of the project?

General VAN WINKLE. Yes, sir, it has a big impact. That is one of the principal things we have to do given the funding sources, allocate that in the most efficient manner that we can.

We roughly attribute the benefits that are lost by having those extended schedules to be about $4 billion overall. Our figures show that if we were to calculate the additional costs simply by putting off construction, inflation alone adds close to $500 million to the project in and of itself.

So there are significant delays both to the sponsor and also to the Federal Government in terms of costing for delaying these projects.

Senator VOINOVICH. Are those projected costs in that $38 billion figure or would that be on top of it?

General VAN WINKLE. Well, those are inflationary costs in the process, so they are roughly included.

Ms. TORNBLOM. The $500 million due to inflation would be included, although I don't know that we have inflated the backlog. We should double-check that. The $4 billion is actually foregone benefits which would be foregone by the entire economy rather than costs that would be borne by the Civil Works Program.

Senator VOINOVICH. The one is the reckoning on the loss to the economy of some $4 billion. The interesting thing would be that if you did increase the funding for these projects and you were able to move them up, how much saving would occur as a result of that because of not having that long-term delay and that stop and start.

We have a flood control project in Columbus, Ohio that has been ongoing. General, I think you probably started it several years ago. You know, it is a bump and a grind and depending on what the—and I am not sure that is the best way to build a flood wall or a railroad.

General VAN WINKLE. Senator, those costs of an inefficient schedule, we don't have a good handle on that. Clearly, there is a cost as we make adjustments on a yearly basis to our construction schedule.

Senator VOINOVICH. But again, if you had more money and you were able to better schedule those projects, we would get the economic benefits and we would also benefit because we would be

doing them over a shorter period of time and we avoid the inflationary cost as we move down the road.

General VAN WINKLE. Yes, sir.

Senator VOINOVICH. We need efficiencies that are connected with that stop and start business.

General VAN WINKLE. Yes, sir.

Senator VOINOVICH. Do you have any other questions, Senator Smith?

Senator SMITH. I might just ask one more. What would you do to address the backlog?

General VAN WINKLE. Well, I think we are doing all we can in the Corps. We have adopted a project management schedule so that we can use the dollars that were given to us more efficiently. So we will continue to do our part in that regard.

I think the work the committee is doing in terms of looking at deauthorization to get the unworthy projects off the books is worthwhile.

My recommendation is to continue to work on the priority setting so that the projects that are most worthwhile do receive the funding.

Senator SMITH. These are active. The $38 billion that Senator Voinovich referred to are in the active status. So your point is that some of those are unworthy projects; is that correct?

General VAN WINKLE. I didn't mean to imply that. I think in the numbers we provided, the total amount have unworthy projects, I feel comfortable that the $38 million figure are worthy projects now deserving consideration.

Senator SMITH. So it is a backlog, but you are saying it is a backlog of worthy projects, the $38 billion?

General VAN WINKLE. Yes, sir, that is correct.

Ms. TORNBLOM. If I may, sir, if the committee saw fit to adopt into law the Administration's proposal in the WRDA 2000 Bill to tighten up the deauthorization process, we would have a mechanism to self-regulate this question, if you will, in the future.

If any of these projects turn out to not have a willing and capable sponsor or not be currently desired, then they probably would not receive funding over the next 4 years and perhaps Congress wouldn't appropriate money for them over that time and then the proposed automatic deauthorization would address the question of whether they should stay in the active backlog.

Senator SMITH. And that is in the $38 billion backlog, that is what you are referring to?

Ms. TORNBLOM. That would affect the entire backlog over time.

Senator SMITH. I know it would affect those that are not in the deferred category backlog.

Ms. TORNBLOM. It may. It would be a real test of whether or not those projects are supported.

Senator SMITH. Thank you.

Senator VOINOVICH. Thank you. We appreciate your being here today.

Our next panel is made up of Mr. J. Ron Brinson, President and CEO of the New Orleans Port Authority. Unfortunately, George Grugett, Executive Vice President of the Mississippi Valley flood Control Association is not going to be here today. He is ill. His tes-

timony would have focused on structural flood control. His testimony will be placed in the record.

Mr. Scott Faber, Senior Director of Public Policy, American Rivers; Mr. Tony MacDonald, Executive Director, Coastal States Organization; and we have Mr. Bill Parrish who is the Vice Chairman of the Association of Flood Plain Managers, Chief, Hazard Mitigation Planning, Maryland Department of Environment.

We welcome you here today. We appreciate your patience. We would appreciate your limiting your remarks to no more than 5 minutes, assuring you that the rest of your testimony will be captured in the record of this hearing.

We will start with Mr. Brinson. Welcome.

STATEMENT OF RON BRINSON, PRESIDENT AND CEO OF THE NEW ORLEANS PORT AUTHORITY

Mr. BRINSON. Mr. Chairman, thank you. I am J. Ron Brinson, President and Chief Executive Officer of the Port Authority at New Orleans and also for the last 14 years the Port Director at New Orleans.

I am honored to be here today representing the American Association of Port Authorities and the National Waterways Conference, two very fine groups that look after the interests of the great navigation industry of this country.

I thank you for having this hearing. These issues are so very important to our industry, the U.S. port system, and the inland waterways industry. The critical importance of these issues, I promise you, resonates throughout the businesses and the users of the navigation system.

You know, with all of these pie charts, Mr. Chairman, I thought that summarizing my testimony I would offer up a practical, outside-the-Beltway view of these issues.

What we have here is a well-documented every expanding backlog of Corps projects which very clearly is bringing into question the Corps' ability to manage its mission, and at the same time, the point that you made in your opening statement, the possibilities of mission creep.

The Corps is our partner. It is our partner in the operation, the maintenance and perhaps more importantly the development of the port system and the inland waterway system.

Today, this country is well-served by that system. It is a partnership that has created the competitiveness upon which our country relies today in terms of handling water-borne commerce, both international and domestic. We need not deal with this in the abstract.

Mr. Chairman, one million people today and thousands of businesses are involved in the operation of our ports and our inland waterways industry. Its operations in the Upper Mississippi reaches where are farmers are, of course, very, very concerned about the future of the Upper Mississippi navigation system.

More than 50 percent of the traffic today on the Ohio River will be coal moving from mines to power plants, assuring low-cost energy for the Midwest.

The commerce of 27 States will flow through the ports of Louisiana in the Lower Mississippi River today. In the great populations centers of New York, Los Angeles, Long Beach will find port oper-

ations serving the immediate needs of these great population centers.

In Virginia we will see the kind of three-part functional role of ports, giant container ships, giant bulkers handling coal exports, and giant Navy ships.

I could go on and on and on. The point here is that our navigation system is vitally important to this country's best interests. When we think of the risks and the opportunities provided in the global market place, one could observe that water-borne commerce has never been more important to our country.

The Corps has been our partner. Local and state port authorities and private businesses take the initiative to develop the system. The Corps carries out the traditional Federal responsibility for assuring the adequacy of navigation channels.

The Corps has been a good partner, Mr. Chairman, an excellent partner. Today, we could readily conclude, as we have already in this hearing, that the Corps is under funded and, I think, far too often, under-appreciated.

The Corps is a professional organization, has been resourceful. As you pointed out, they have shown that they can do a lot with a little. But that proposition, I think, is coming home to roost.

We are looking at a doubling, a doubling, in some of our trade routes, Mr. Chairman, of container ship and cargo movements within the next 8 years. Most of our markets will show a doubling within the next 15 years.

We simply have to develop the capacity, the shore-side terminal capacity and the related roadway, rail infrastructure to accommodate that, or our country will simply no longer be competitive in the global marketplace. It is a simple reality.

U.S. ports are now preparing to invest $20 billion in shore-side facilities over the next 12 to 15 years. The way we do this in terms of developing what ultimately is the U.S. port system and the inland waterway system is that we proceed with a good faith reliance upon our Federal partners, in this case, the Corps of Engineers.

While the Corps has these problems just now, a backlog, mission creep, and we are worried about their ability to carry on their part of this progressive port planning proposition.

It is the market that is placing these demands. The market demands must be answered. In this case the market is saying, "You have to have adequate ports. You have to take advantage of your water-borne commerce capacities."

Financial resources, well, as far as the ports and the inland waterway system, and we have been dealing with that for decades, our concern now is whether the Corps will be empowered with the mandate and the financial resources to assure that we can carry out what this country expects us to carry out, and that is to develop and maintain an adequate ports and waterway system.

The bottom line here, what do we do? Well, at the end of the day, Mr. Chairman, it seems this is a policy and a management and a planning issue.

It has already been documented here today that the Corps has a backlog in large measure because the Corps is not being given adequate financial resources.

It would seem that now is the time to shake the tree, get the unworthy projects out of the way, give the Corps what it needs to carry out this very, very important mission, and along the way I think it would be very, very helpful if the processes of Congress could call a little bit more attention to the urgency of competitiveness.

Mr. Chairman, thank you so much for the opportunity to be here today. I would be very glad to answer any questions that you or Senator Smith might have.

Senator VOINOVICH. Thank you, Mr. Brinson. We are going to hear from the entire panel and then we will ask you all questions at the same time.

Our next witness is Mr. Scott Faber, Senior Director of Public Policy for American Rivers.

Mr. Faber?

STATEMENT OF SCOTT FABER, SENIOR DIRECTOR OF PUBLIC POLICY, AMERICAN RIVERS

Mr. FABER. Thank you, Mr. Chairman.

I am testifying today on behalf of a number of conservation groups including American Rivers, Sierra Club, Environmental Defense, and Friends of the Earth.

We recognize that the Corps of Engineers has played an indispensable role in the repair of many of the Nation's degraded waterways.

Indeed our scientists tell us that many of the Nation's most historic rivers, including the Ohio, will increasingly lose the ability to support wildlife unless Corps habitat restoration efforts are accelerated.

We also recognize that the Corps must continue to construct navigation and flood control projects which are economically justified, environmentally sound, and serve the Nation's interests.

But some Corps projects continue to be economically suspect, environmentally unacceptable, and serve primarily private interests. The reasons are two-fold. The Corps outdated methods for predicting benefits and costs, and a hopelessly politicized decisionmaking process.

The evidence supporting the need for reform is overwhelming. Many Corps projects, though economically justified on paper, have not proved to be economically justified in reality.

Some Corps planners have bent the rules of project planning to support questionable projects. The current absence of meaningful oversight has created an atmosphere conducive to this kind of abuse.

Despite a growing backlog of authorized projects, an increasing number of Corps projects primarily benefit private interests, including many projects which lie outside the Corps' traditional missions.

The Corps frequently treats its local cost-sharing partners, rather than the American people, as their clients.

In some cases the Corps has simply failed to mitigate for environmental impacts or mitigation projects have failed to produce the promised benefits. For example, the Vicksburg District of the Corps has failed to complete nearly 30,000 acres of promised mitigation.

We believe that Congress must act now to ensure that future Corps projects are economically justified, environmentally sound, and serve the national interest, and in particular, Congress should include reforms in WRDA which modernize the agency's measurements of benefits and costs, require independent review of significant or controversial projects, expand the input of local stakeholders, prioritize Corps spending, and hold the Corps to the same mitigation standards that we hold private developers.

First, Congress should require the projects have primarily public rather than private benefits and should also require that Corps project benefits be twice as great as project costs to reflect the uncertainty of Corps benefit-cost calculations.

Second, Congress must take steps to restore the integrity of the Corps' decisionmaking process. Self-preservation, the virtual elimination of technical review, the absence of meaningful oversight, and growing pressure from cost-sharing partners and Corps constituents has created an atmosphere where abuse has flourished.

Unless the decisionmaking process is reformed, no Member of Congress and no member of the public will have a guarantee that projects are economically justified and that project's environmental impacts have been adequately assessed and mitigated.

Congress should require independent review for projects who total costs exceed $25 million or projects which are considered controversial.

We do not propose that Corps feasibility studies continue endlessly as they did in the 1970's, but instead believe that independent review could be blended seamlessly into the feasibility study phase.

Third, Congress should balance the influence of cost-sharing partners by creating a stakeholder advisory group to collect the input of all local interests and to seek a consensus regarding project objectives and design early on in the feasibility study phase.

Fourth, we urge you to work with the Clinton Administration to quickly restore civilian oversight of the Corps, the absence of which offends the Constitution, violates Federal law, and has contributed to an environment where abuse has flourished.

We strongly oppose Section 3102 of the Agriculture Appropriations Bill which is designed to frustrate these important reforms.

Finally, we believe Congress should create new criteria and apply that criteria to the backlog of existing projects as well as the proposed projects to ensure that future projects reflect the Nation's highest priority water resources needs.

In addition to requiring that project benefits be twice as great as project costs, Congress should require that proposed and previously authorized projects meet the same mitigation standards as private projects, prohibit the construction of projects when impact cannot be cost-effectively or successfully mitigated, and reject projects which could be constructed by private interests or which have primarily private benefits.

Other steps could be taken to expand the reach of scarce Federal funds, including increasing local cost-sharing for structural flood control, beach replenishment and navigation projects.

In summary, we believe Congress must act quickly and decisively to restore credibility to the Corps civil works program. Certainly

this committee should use its oversight powers to investigate abuse of the Corps' decisionmaking process.

But the committee should also recognize that the absence of meaningful review, outdated methods of predicting benefits and costs, and studies designed to meet the needs of project sponsors rather than meeting the needs of the Nation have created an environment where abuse has been able to flourish and will continue to flourish.

We urge you to implement these long-overdue reforms of the Corps of Engineers.

Thank you, Mr. Chairman.

Senator VOINOVICH. Thank you, Mr. Faber.

Our next witness is Mr. MacDonald, Executive Director of the Coastal States Organization.

Mr. MacDonald, welcome.

STATEMENT OF TONY B. MAC DONALD, EXECUTIVE DIRECTOR OF THE COASTAL STATES ORGANIZATION

Mr. MACDONALD. Thank you, Mr. Chairman. Good morning.

My name is Tony MacDonald and I am the Executive Director of the Coastal States Organization. Thank you very much for the opportunity to testify today.

Since 1970, CSO has represented the collective State interests in improving the management of our Nation's coasts, including, of course, the Great Lakes.

The task of coastal management is complex, but the objective is simple: to protect and enhance the national interests in coastal resources and the economic and social benefits that rely on those resources.

This requires a shared commitment of the Federal Government with the States and local project sponsors. I stress "shared commitment" because although the topic of this hearing is the Corp's project backlog, these projects are all done in partnership with and are jointly funded by States and local project sponsors. This is our shared backlog. This is our shared future.

My comments today do not focus on problems of the Corps, but rather on ways to strengthen our joint commitment.

While on one hand the current backlog reflects that the Corps is over-committed taking on new missions and marginal projects, on the other it can and should be seen as a reflection of legitimate, pent-up and growing demand for necessary investment in our Nation's water resource and environmental infrastructure.

While the current controversy over the Corps raises many important questions, it should not obscure the fact that in reviewing whether to undertake projects the Corps undertakes a more rigid cost-benefit analysis than many other Federal investments.

CSO believes that the Corps should continue to focus on its essential missions, maintaining 25,000 miles of Federal navigation channels, providing shore protection to protect coastal communities against loss of life, property and damage to natural resources, ensuring the protection of lives and public and private investment from flooding and erosion, environmental protection and restoration, as well as remediation of past injury to the environment from Corps projects.

I will diverge from my remarks for a minute now to talk about environmental restoration because so far I have heard mostly about environmental restoration as an independent mission of the Corps.

I think it is important to stress that we think that getting ahead with these projects will mean integration of environmental restoration objectives into the other four missions. That may be more important and as important as deciding what the future mission of the Corps should be on environmental restoration projects specifically.

This is not only a question of addressing the backlog, but as I stated, of ensuring that we have a framework in place to meet future demand.

Population and economic development in coastal areas, already the most densely populated area of the country, continue to expand more rapidly.

The total volume of domestic and international maritime trade, as we have heard previously, will more than double in the next 20 years. Coastal storms are on the rise and the threat of resulting damages is increasing.

Since capital investment needs to anticipate these challenges, it is not surprising that our backlog has reached $37.9 billion.

As we have heard before, so far Congress and the Administration in funding the program has not been motivated by future capital investment needs, but by other legitimate, but nonetheless backward-looking investment decisions.

There are three simple answers. These are not new answers. I think the problem is that associated with these answers are very difficult choices that we have not for whatever reason been able to make so far.

One, we need to increase funding for the Corps of Engineers.

Two, we need to demand greater efficiencies in planning, designing, constructing, and maintaining projects.

Last, we need to constantly work with local project sponsors to review the backlog, to assess the current need of projects as authorized.

These aren't new, but again, I think they are important.

First, there are few questions of the need for investment in the need for our roads, rail and air traffic systems; there should be little question as well of our need to maintain marine and inland waterways transportation as well as to invest in storm protection, flood and erosion control.

The vast majority of projects address very real needs. This is especially true along the coast. The Water Resources Development Act of 1996 specifically reaffirms shore protection as a function of the Corps.

Yet the Administration continues to refuse to recommend funding for authorized projects for shore protection for beach nourishment, even though Congress has increased the local cost share for the long-term maintenance of these projects in WRDA 1999.

Pressures within coastal communities to resolve the problem of erosion frequently lead to more costly and more environmental damaging solutions.

The construction of seawalls. The damaging effects that these structures have on beaches, the biological communities that depend

on the intertidal zone, and the economic revenues and tax bases of communities are the reasons why beach renourishment is a desirable alternative to shoreline hardening.

Reduce time for project completion, reduced conflicts which contribute to delays, and more comprehensive approaches to management and greater coordination with other Federal agencies and States can result in greater efficiencies within the Corps.

The Corps should take a look for opportunities to work more creatively with local project sponsors in the project sector to implement projects through project grants and expedited construction schedules.

In some cases, many different Corps projects may be combined into a comprehensive coastal resource scheme. For example, in Toledo, Ohio, they worked very creatively to bring together sediment reduction in the river with the need to clean up Toledo Harbor, with the need to dredge Toledo Harbor, with the need for better use of that material.

That is, I think, a very good example of the kind of approach we should have to resource management issues and cross-mission objectives of the Corps of Engineers. The Toledo solution was extremely difficult in coming. Hopefully, in the future we will use that model in more areas.

Another source of project delay is the result of controversy which results from the Corps setting out their project objectives, working with sponsors, but not necessarily working with the broader community of State policies and the public.

Among coastal States there have been numerous conflicts with the Corps of Engineers about how dredging is conducted and dredge materials disposed.

Working with the National Dredging Team, CSO sponsored a workshop last year for Corps district personnel, State managers and port representatives to stimulate discussions of ways to avoid and resolve these conflicts.

Along with my testimony, I have provided committee members with proceedings from this workshop. We think this workshop is the kind of thing we should do more often in terms of broader outreach and early outreach to communities.

There are recommendations within that report which I think will apply more broadly to some of the public Corps missions. They include improved clarity about goals and greater transparency in the decisionmaking process to reduce conflicts between the Corps and State and local organizations.

The planning process and procedures for State and Federal cooperation can be improved with earlier project planning, regular meetings between State and Federal agency representatives, broader participation, and longer range comprehensive planning.

Also, I think something that hasn't been previously discussed is something I think we need to bring to this discussion as well. That is better scientific understanding and greater public education are necessary to make better decisions and garner support for further expansion of these programs.

I think, Mr. Chairman, you referenced the public poll response sometimes. I think to a degree, for some reason, the public at large does not understand the very importance and the crucial element

of these investments. That is something I think we need to work together to include.

Finally, I think I would like to work on again, reiterating my point about comprehensive planning. We have long realized that in order to manage rivers effectively we need to have a consideration of the entire river and the surrounding watershed.

I think we need to bring this same comprehensive approach to Corps programs. CSO, for example, supports a sediment management policy that recognizes the importance of conserving sand resources wherever possible, not necessarily picking up dredge material and simply disposing it at a traditional disposal site.

We need to prevent the removal of sand and sediment resources from the littoral system along the Nation's coast and we need to look at alternatives that favor the beneficial use of those sand resources.

We also would like to more interagency cooperation. I will conclude right now. I appreciate it. Again, we heard Senator Lautenberg mention working with other agencies, on FEMA and so forth, and resource agencies. I do think we can work with the Corps to improve interagency coordination as well.

In conclusion, I would like to thank you for the opportunity to testify today. Thank you.

Senator VOINOVICH. Thank you, Mr. MacDonald.

Now we will call on Mr. Parrish, vice chairman, Association of Flood Plain Managers, Chief, Hazard Mitigation Planning from the State of Maryland.

Mr. Parrish?

STATEMENT OF WILLIAM PARRISH, VICE CHAIRMAN, ASSOCIATION OF FLOOD PLAIN MANAGERS; CHIEF, HAZARD MITIGATION PLANNING, MARYLAND DEPARTMENT OF ENVIRONMENT

Mr. PARRISH. Thank you, Mr. Chairman. Good morning Senator Smith and Mr. Chairman.

I am Bill Parrish, Vice Chair of the Association of State Flood Plain Managers, and State Flood Plain Manager for the State of Maryland.

The association and its 12 State chapters represent 3500 State and local officials and other professionals engaged in all aspects of flood plain management and hazard mitigation.

The association strongly supports the inclusion and continuation of the planning, the assistance to the States and the flood plain management services programs as a part of the Corps' essential mission.

All of the association's members are concerned with working to reduce our Nation's flood related losses. We work daily with cities, towns and counties that are struggling with pressure to build in flood-hazard areas, working to rebuild more wisely after floods, and planning to implement new programs and undertake flood control and management projects.

Our State and local officials are the Federal Government's partners in implementing programs and working to achieve effectiveness in meeting our share of the objectives.

Wise sustainable flood plain development and reduction of flood losses in our Nation's 20,000 flood-prone communities saves lives and property. It also saves taxpayer dollars in relief and recovery costs.

The association has been involved in flood plain management and flood control policy for decades. During the most recent decade the Nation has made some progress toward more sustainable and responsible approaches to reducing flood damage and costs.

Nevertheless, we continue to see increased damages from flooding, now approaching $5 to $8 billion per year.

The association supports both structural and nonstructural flood loss reduction projects, but believes we need to achieve a better balanced approach to flood loss reduction and prevention through stronger roles and responsibilities at the local and State levels.

Federal flood policies should support and encourage local and State solutions to flooding problems and costs. Often locally developed solutions will address multiple-level concerns incorporating economic, social, and environmental considerations into flood control and management strategies.

We encourage Congress to support policies and programs that will assist communities and citizens to develop and implement local solutions.

Successful examples of locally generated of flood plain management approaches that address multiple local objectives do exist. We should learn from these success and replicate them.

The association is proud of the efforts coordinated by our member, Dave Kennedy, village administrator of the Village of Richmond on the Ohio River.

Mr. Chairman, you may be familiar with this local decision not to build a flood wall. It is a good example of a local economy not being able to support the cost-share and maintenance components of a Corps of Engineers project, but the need to reduce flood risk while preserving cultural richness and aesthetic attractiveness of the village.

An approach instead was devised which included the clearing of a floodway, developing a public response plan geared to water levels, and engaging in a significant public awareness effort.

The Federal Government has a key role to play in helping to reduce flood damage, but that role has changed and evolved from what it was 30 to 60 years ago.

It has become apparent that federally developed solutions often yield single purpose projects which tend to address specific flooding problems, but may pay insufficient attention to other critical local considerations such as economic development, housing, water quality, watershed planning, natural resources, recreation and quality of life.

We have learned that some structural solutions to specific problems can inadvertently create new flooding problems downstream. Some generate higher operation and maintenance costs and are feasible for a community and its citizens and local officials to support.

Local governments and citizens grow to believe the Federal Government will bail them out if flooded or if problems get worse.

Structural flood control projects are necessary in many instances and are often advocated by our members.

However, without the ability to offer various solutions or a mix of approaches, structural policies and programs can provide incentives to pursue solutions which may not be the best choice for building hazard resistance in some communities.

It is important to recognize that current Federal flood policy rewards those communities and States which do the least to prevent and solve their flooding problems. Those rewards come in the form of Federal Disaster Assistance, Federal Flood Control projects, and cost sharing for these actions.

The Corps' cost-sharing formula needs to evolve in order to be consistent with the evolution to new approaches and flood loss reduction in the Nation.

As State and local officials who job it is to assist our communities in saving lives and avoiding damage from floods, we know how important it is to have a variety of tools available.

This allows us to help communities to plan their flood plain management comprehensively, to meet multiple objectives, to get the most value for the Federal, State and local dollar spent and to become fully engaged in managing their own risks.

In recent years the Army Corps of Engineers, with the assistance of Congress, has developed a number of programs which provide broad technical assistance and expertise to local communities in these efforts.

Our members have found programs like flood plain management services and planning assistance to the States to be valuable tools for which there is much more demand than can be met.

Thousands of communities have used these low-cost technical assistance programs which help them plan and implement local solutions with long-term benefits, thus saving in Federal, State and local disaster expenditures.

We are very pleased with the authorization of the Challenge 21 initiative because it offers essential flexibility such as the ability to accommodate smaller projects for communities where a traditional structural project may not be justified or the ability to mix structural and non-structural elements to better design an overall project.

This program can fill a gap that has existed in the Corps' ability to be effective in addressing certain kinds of flood plain management situations. If sufficiently well funded, it is likely that hundreds of communities in the Nation can benefit substantially from the Corps' efforts.

We encourage the Congress to continue these efforts as a supplement to any cost-effective, feasible and environmentally acceptable projects funded.

In summary, the Federal Government should facilitate local development of flood loss reduction strategies and offer incentives for wise decisionmaking.

The Corps of Engineers is pursuing some directions that add new tools for enhancing the effectiveness of those already in the toolbox, tools which allow poorest programs to meet multiple objectives for localities in their flood plain strategies which compliment other Federal programs and stress the positive impact of Federal dollars

on loss reduction and public safety represent forward-looking evolution of the Corps' critical mission.

Thank you for the opportunity to present this testimony.

Senator VOINOVICH. Thank you, Mr. Parrish.

I think that the panel has done a very good job of giving us a pretty good understanding of the work the Army Corps of Engineers is doing in the United States.

It is a little bit mind-boggling, all of the projects that the Corps is involved with.

Just hearing the testimony refreshed my memory of some of my experiences as Governor. Toledo Harbor, the Ohio River, the two floods that I experienced and the importance of mitigating the damage and what they are trying to do in Richmond, the major undertaking that we did to evaluate the entire coast of Lake Erie in the State of Ohio and put some restrictions on it and the controversy that we got into on that one. It took us 4 years to finally come up with a plan that people were satisfied with in terms of what they could do with the shoreline and what they needed to do to protect it.

So, this is quite a smorgasbord out there, isn't there, for the Corps of Engineers?

My first question is this, and it is an easy one: Do you all agree that we need to increase spending to get this job done? I would like to get your point of view on it. I will start out with you, Mr. Brinson.

Mr. BRINSON. Absolutely, Mr. Chairman. It has been somewhat interesting and somewhat depressing over the last six or 7 years to sort of watch the budget-appropriations process begin and end with a very small number and Congress has to go through the process of making it at least adequate.

We have a backlog because of the lack of funding. Surely, there is some value-added management that could take place. But fundamentally, the Corps just hasn't had the resources that it has needed to carry out these projects in a timely way.

It is becoming more and more important to the industry that I represent.

Senator VOINOVICH. It takes just a yes or no. Have you lobbied the Administration to increase spending in this area?

Mr. BRINSON. Constantly.

Senator VOINOVICH. Mr. MacDonald?

Mr. MACDONALD. Yes, I will agree with Ron. I will say here also that in my previous life I was Director of Congressional Affairs for the American Association of Port Authorities. So, I had the pleasure to work with Ron and I also know a fair amount about their needs.

I want to make two points. One is again, yes, the Federal share should be increased, but don't forget, these are all cost-shared, because we also take a local share. The State share should increase along with that.

We are willing to make that commitment and the local sponsors are, I think, as well. So, I think that is an important point to keep in mind as we try to break this logjam to increase funding.

I think as well that again, once we recognize that the reasons we haven't increased funding really have nothing to do with the need.

They are independent factors having to do with budget and other issues, extremely important.

But I think we need to be able to refocus our energies on, again, setting up that framework for investment. I know the port community has spent a considerable time identifying the needs and the amount of money.

We have worked as well very closely with the Administration on needs for shore protection projects along the coast to protect communities against coastal hazards.

We thought we had reached an agreement with the Administration last year with regard to some changes in cost sharing which we were willing to do. Yet the Administration still has balked at funding those projects.

So, we think there is a need for more funding and again I think the local project sponsors are willing to work with you to identify those kinds of projects that need to be funded in the future.

Senator VOINOVICH. Mr. Faber.

Mr. FABER. Mr. Chairman, respectfully, we disagree, in particular because so many past Corps projects have failed to meet the benefits that the Corps predicted. More than half of the segments of the Inland Waterway System have never attracted as many barges as the Corps predicted when they said those projects were economically justified.

Because of fundamental flaws in the way they predict costs and benefits, many of the flood control projects that they have constructed have not produced the benefits that they have predicted.

So, it is our opinion that if you reformed the Corps' decisionmaking process by using modern estimates of benefits and costs, then many of the projects which are currently authorized, certainly many of the projects which are not on the active list, would not have a positive benefit-cost ratio.

The other problem, of course, is that operation and maintenance costs have skyrocketed during the period in which construction costs have fallen. That reflects part of the problem that many of the segments of the Inland Waterway System are very expensive to maintain.

The Ohio is not an example, nor is the Mississippi or the Illinois, but many segments, in fact, 19 of the segments of the Inland Waterway System consume almost half of the maintenance costs of the Inland Waterway System.

In addition, if the Corps was required to mitigate at the same level that private developers and the rest of the Federal Government is required to mitigate for the environmental impacts of projects, again, many Corps projects would not be cost-justified, in particular many projects in the Lower Mississippi Delta if the real costs of mitigation were included in the Corps' benefit-cost calculation.

Then those projects simply would not be cost justified. So, regardless of whether we support more funding, if there is no more funding available, another way to get at the backlog is to reform the Corps' decisionmaking process.

Senator VOINOVICH. Thank you.

Mr. Parrish?

Mr. PARRISH. We, of course, support non-structural projects as well as structural. In particular, we would support additional funding to support non-structural flood mitigation and flood loss reduction programs that the Corps operates including the two that I mentioned earlier, planning assistance to the State and flood plain management services.

Senator VOINOVICH. I have one more question and then I will let the chairman ask questions.

Mr. Faber, you, in your testimony, and I read it, made some very serious allegations about the Army Corps of Engineers in terms of cost-benefit and whether it is benefiting private parties more than it is the public and so on.

You just again reiterated that you think a lot more people could work harder and could do more with less of the money and so forth.

I would like the other members of the panel to comment on Mr. Faber's testimony. Do you agree with what he has to say in terms of the Corps of Engineers and do you think that there is substantial need to review what they are doing and improve it?

Do you agree or disagree with Mr. Faber's conclusions that too often the projects that have been undertaken have not met the cost-saving benefits that were predicted?

Mr. BRINSON. Mr. Chairman, I would like to know more about his processes of documenting these conclusions. So far, and again, all we know is what we read in the newspapers, but so far he has kind of had a free ride.

It would be fun to get him in a forum and cross-examine him just a little bit just to see. Because I think a lot of these projects, I mean time will tell whether or not the Corps has done a good job.

Now, having said that, the Corps has not been perfect and will not be perfect. But what we have to guard against here is vulcanizing this process of Corps projects to the point that we jeopardize this country's competitiveness and we are talking about the navigation system.

If it is faulty, let's fix it. But so far the argument that we have heard is "let's shut the whole thing down and then fix it."

That is just simply an irrational approach given the imperatives of keeping our navigation system in a progressive mode.

We are doing a good job with the navigation system now, but when we look on the 10-year horizon, unless we get ourselves in high gear on the channel side of this equation, we are going to start having some serious problems.

So, sure, I think we should listen to his argument. I would like to see more documentation of his argument, but certainly we shouldn't accept the notion that we should shut the whole process down while we fix it on his terms.

Senator VOINOVICH. Well, I would like to just get into it, really, to get more specific.

There is some interest, particularly in the environmental community that question the need to deepen our ports to accommodate the latest generation of container ships, indicating that the benefits of this deepening accrues to non-U.S. based carriers and represents destructive competition between U.S. ports without benefit to the U.S. economy.

We have some projects that are being proposed to deepen some ports that are mind-boggling in terms of the dollars that are involved.

What is your reaction to that?

Mr. BRINSON. Well, first of all I want to tell you that in my professional view I don't think in the end we are going to need all these deepening projects. This is not like the great race to have every port deepened to 55 feet back in the late 1970's and early 1980's when we were going to dominate the coal export market.

But I really don't understand the point of foreign carriers using our ports. You know, our ports serve all carriers and that is the demand of the marketplace. We do have a decline in U.S.-flag presence in the liner services.

But at the end of the day, Mr. Chairman, this country is absolutely dependent upon the coming and going of ships and it is the port industry's duties to prepare for that and accommodate it.

So, I really don't understand that issue. But let us prove, let us on a port-by-port basis prove what we need. If we can't, we shouldn't carry out the projects. We also, I think, have to be on guard against any sort of redundancy, over-capacity.

We watch our industry very, very carefully and we are beginning to see some trends that if they fully mature we could end up with some over-capacities in some parts of our port system.

But today, the challenge is to get ready for a doubling of international trade, and again, depending on the trade route, it could take place within 8 years or not more than 20. Hemispheric trade, north-south trade is projected to double in the next decade.

Ninety-six percent of it will move by water carriage and thus we will become dependent upon adequate ports and waterways.

Senator VOINOVICH. Is there anybody that is really sitting down right now? We know that we are in the international marketplace. I can tell you that the economy of Ohio is tied up in international trade and international investment, big time.

But is anybody in the Federal Government looking down the road to see or make some projections about what kind of activity will be generated or what has already been generated or what will be generated or how do you deal with it and plan so that you don't end up deepening more ports and spending money that you ought not to?

In other words, who is putting together a strategic plan for the next decade about where we ought to go in terms of that international marketplace and our ports in this country?

Mr. BRINSON. The Department of Transportation has an initiative that I would characterize as being somewhat embryonic just now attempting to do that, to really package the marine transportation assets of this country and then try to draw it down into single, rational, strategic planning focus.

I can assure you, Mr. Chairman, that our industry as a whole is attempting to do this. We do it on a port-by-port basis and then we kind of pool our work so that as an industry we have a pretty good idea of what the demands are going to be. We definitely want to avoid any sort of over-capacities.

I think at the end of the day no port is going to insist on a deepening project that is not going to meet cost-benefit tests in a legal sense nor commercial tests in a rational, logical sense.

Senator VOINOVICH. Thank you.

Chairman Smith?

Senator SMITH. Thank you, Senator Voinovich.

Mr. Faber, in your comments you talk about, at least in your testimony, you talk about the under-utilization, that Congress should direct the Corps to measure the extent to which goods shipped by barge could be shipped by other means and to other destinations, et cetera.

Yet, Mr. Brinson in his written testimony said one gallon of fuel can move one ton of cargo 514 miles approximately by barge, but only 59 miles by truck or 202 miles by rail. They are pretty compelling figures that would be both economically and environmental sound in terms of fuel use.

No. 1, do you agree with his figures? No. 2, where specifically are we under-utilizing our rivers?

Mr. FABER. Well, there are two answers to that question. What I intended to say in my testimony is to suggest that when the Corps assesses whether a river should be channelized to support inland navigation or new locks should be constructed to facilitate 1200 foot tows, I wanted to make sure that when the Corps does that analysis they analyze what happens to demand for barges on that particular river when transportation costs change.

So, if the cost of moving barges on the Mississippi, for example, goes up, what is the likelihood that a farmer in Illinois will ship his grain to another destination or by another mode? It is simply requiring another demand curve to be included in the Corps' estimates of demand for Mississippi River barges, for example.

Now, one of the interesting things that has occurred recently is that the Corps has begun to do this. It is one of the reasons that the proposed locks on the Upper Mississippi and Illinois Rivers apparently were not originally economically justified according to the original economist.

But it is not done as a matter of course on all Corps navigation studies and it certainly hasn't been done to study the value of projects which were authorized years ago.

So, making sure that we accurately reflect demand for new locks or new channelization projects is important because, as you talked about, there are scare resources. As far as fuel efficiency goes, there are some studies done by Iowa State University that show that because of a revolution in the technology of rail, that rail is now, especially rail moving to the West Coast, rail is much more fuel efficient than barge.

So, I think we would have a difference of opinion about the fuel efficiency of rail and barge.

Senator SMITH. Where specifically would you say they were under-utilized, rivers?

Mr. FABER. Well, many segments of the Inland Waterway System have little or no traffic. I can provide you a list, but obvious examples are the Missouri, the Apalachicola, the Kentucky, the Coosa, and the Alabama. The list is very long, Senator.

I am not suggesting that we shut down those waterways. We strongly support navigation on rivers like the Mississippi and that is why we work with Marksey Dows and other navigation interests to make sure that they are navigated in an environmental acceptable way.

What I am suggesting is that the analysis which showed that those projects were cost-justified were wrong because the number of barges that the Corps originally predicted would use the Apalachicola, the Red, the White, the Missouri, the Tennessee Tombigbee, the Coosa, the Black Warrior, the list goes on.

Those original projections were never met.

Senator SMITH. Well, let me ask you, Mr. Brinson, are there waterways that have not met the volume of traffic that was expected when the project was authorized?

Mr. BRINSON. Yes, sir.

Senator SMITH. Do we have any idea what the cost to operate those might be?

Mr. BRINSON. I don't have it. I am sure Mr. Faber can help you. As I said earlier, this process has not been perfect, nor should be expect it will be.

But on the other hand, Senator, we have many projects that have exceeded Corps projections about 50-fold. This is going to be a constant process of trying to get it right.

May I go back to a point that Mr. Faber was just making? I think he is getting into some intermodal or some quantitative analysis related to intermodalism. I think that would probably be the exercise as I would describe it, Mr. Faber.

If you just stop right there, you could prove just about any point that he wanted to. But there is another dimension to saying OK, let's take it out of barges and put it in trucks or rail. One that comes to mind immediately is that you just put another truck on the highways and we are having problems maintaining and developing highway infrastructure.

So, if we are going to get into this kind of quantitative analysis, it is so very important that it deserves more than just a simple, straightforward calculation.

We have to look at this as a decision tree and again, you read the testimony, Senator, and quoted accurately from it, but the barge traffic is taking trucks off highways. It is relieving at-grade crossings. It is a safety issue. It is an environmental issue. It is an economic issue. If we are going to talk about this, let's talk about it in all dimensions. Let's carry the quantitative analysis out to the ultimate limb of the decision tree.

Mr. FABER. May I respond to that?

Senator SMITH. Sure.

Mr. FABER. There is no question that if some of these goods were not moved by barge they would obviously have to move by other means. But as Mr. Brinson knows, most of the truck movement associated especially with grain is short haul to a nearby terminal.

Increasingly, farmers own their semis and they haul to a terminal or processing facility where it is either taken over by a processor or shipped.

Whether it is shipped by rail or shipped by barge is not the question in the mind of the farmer. Once it is taken by truck to the fa-

cility, it is out of his mind. So that one of the things that I think many people said over the years is that if you eliminate barges then you would have hundreds of thousands of new trucks on the road.

In reality, most of the grain that would be moved by barge would simply be moved by rail if, and it's a big if here, you are going to shut down a segment of the Inland Waterway System that are under-performing or under-utilized.

That is a question obviously you have to struggle with. To answer your first question, we spend about 45 percent of our navigation maintenance funding, over $200 million a year, on segments of the Inland Waterway System that support about 3 percent of the traffic.

So, nearly half of the money we spending O&M on the Inland Waterway System is spent on segments with virtually no traffic. Getting rid of those waterways is difficult politically.

But what you might do if your long-term goal is to try to reduce the O&M burden on the Corps, is to create some sort of program to help facilitate the closure of some waterways providing groups or cities or counties some funding to help them transfer to another use of that river, whether it be a recreational use or some other use, that would replace the benefits the waterway now provides.

Senator SMITH. That is all. Thank you.

Senator VOINOVICH. Thank you.

I just have to speak from my experience, in my State, well, actually in the middle part of it, well, actually the northern part, with the merger of the railroads the people are just up in arms about the number of trains and about the delays and the rest of it. So you have a real problem with rail in this country today.

In addition to that, part of my responsibility is also the highways and transportation and we have a challenge there in terms of capacity and being able to respond to it.

One of the things that you may not take into consideration is the alternative that water makes to the customer. You say the farmer doesn't care about it. But if the farmer is going to have to pay more or get less for his product because it is not going out on water, then put it on rail——

For example, I lost a steel facility in the State of Ohio that went to Indiana. They wanted a location on the Ohio River in a certain place. The major reason they wanted it was because they could get their raw material in off the river. They could ship their product out on the river. They probably wouldn't ship it out, but they wanted the option.

So, when they negotiated with the railroads they weren't hosed in terms of the cost of their rail coverage. I think that the idea of intermodal in looking at some of these things, that we ought to take that into consideration.

You know, if I am looking at half the moneys being spent on the most unproductive part, then we ought to look at it. Do we need to maintain those rivers and should we convert them over to a different use?

If we are talking about Federal dollars, could it be better used to maintain the things that really do make a difference for our Nation?

Then you also look at the dollars coming in. Of course, transportation, now the trust fund is all going for the highway system.

But I just think that some of the organizations like yours, Mr. Faber, and Mr. MacDonald's or Mr. Parrish or Mr. Brinson, I don't know; do you guys ever sit together and talk and discuss your respective concerns and put the other guy's shoes on and try to figure out how we can work together to figure this thing out? Do you ever do that?

Mr. FABER. We have many conversations with our colleagues at Mark–2000 and Dynamo and others. So we are in regular contact, perhaps not enough.

Mr. BRINSON. I was just thinking, perhaps we ought to invite Mr. Faber and his colleagues to New Orleans and show them exactly what a barge full of grain looks like.

Mr. Chairman, you make the basic point. That is, without the availability of water transportation, chances are that farmer is not going to be shipping his grain because he has just lost his competitiveness in the global markets.

Mr. FABER. In reality, Senator, if I may, on rivers like the Ohio, the Mississippi, the Illinois, barge navigation does have an impact on rail rates and other transportation costs and I think everybody agrees with that.

We are not quibbling with whether there should be barges on any of these rivers, especially the Ohio. But what many economists will tell you is that on rivers like the Missouri River, for example, where there is very little traffic and very little agricultural related traffic, there is simply not enough grain moving to have a competitive impact on rail rates.

So, you have to draw a distinction between the high volume segments of the Inland Waterway System which have an impact on railways and the under-utilized segments that have virtually no impact on rail rates.

The main point I am making here isn't whether we need to decide to kick people off the Ohio River. The main point I am trying to make here is that the method by which the Corps has predicted whether these projects will be successful or not has failed and that many of these projects which on paper appear to be cost-justified, I think is you did a post-facto review, would be horribly economically unjustified.

I think in addition to that, one big mistake that we have made, and I think General Van Winkle and General Furman would agree, is that there are simply some projects that we should not have built because their environmental impacts were so great.

The Snake River dams, I think, are a great example, where we built dams to afford navigation even though we knew then and certainly know now that there would be no way that we could cost effectively or successfully mitigate for those projects.

The Everglades is another example. We are spending billions and billions and billions of dollars to undo the damage of past Corps projects that probably should never have been built.

Senator VOINOVICH. But the issue is that the Corps built them. I have heard that over and over again. You are right, the original concept was to drain the Everglades out and use it for agriculture and development purposes.

That was in response to the political leadership. That was decisionmaking based on bad political leadership. Then all of a sudden people woke up to the fact that we are losing the Everglades.

Mr. FABER. Here is the problem: We are about to repeat that same mistake all over the country today. We are building projects right now and we are going to build projects in the coming years that have environmental impacts that are so great that they cannot be cost-effectively or successfully mitigated.

I hope this is not the case, but 50 years from now the Senator in your seat will be trying to figure out how to undo the damage that we are about to do to the White River and to many others in Arkansas and many other rivers around the country because the Corps somehow showed that those projects were economically justified.

Senator VOINOVICH. Well, you obviously represent a perspective that is supported. I would be interested in your submitting to this committee some of the material that you just talked about in some detail and give the Corps an opportunity to go over it and look at it.

Let us see just what the facts are in terms of your perspective and your perspective.

Again, though, I think that it would be well-taken for some of the others, and I don't know all of the others that are out there and what groups they are in, but somebody ought to convene a group and sit down and figure out—you know, we have our competing interests, is there any way that we can work together to try and devise—for example, you know, all of your members are going to want deep ports. How do you decide as an organization which ones you are going to support? As an organization you are probably going to support all of them.

But it would be challenging for your organization to come together and say, you know, there are some criteria that we ought to look at in terms of, you know, what we ought to do in this area to give those of us in decisionmaking positions a better insight into just what we should support and not support and how many of them can we support.

Give us some of that kind of information and then again, sit down with Mr. Faber and look at some of these projects that they are talking about where organizations are interested and does this make sense.

Then talk about the issue of funding. You know, your answer was, ''take care of it.'' Let's get serious. You can do a lot of this stuff and you are still not.

You are talking about $39 billion worth of projects. Find out if there are ways that some could not be built and so forth. But the fact is that the money is not there and we need to recognize that it is not there and try to figure out how do we get it there.

Mr. FABER. Just because in 1936 your predecessors decided that a project should be built as long as the project benefits exceed the costs, that formulation doesn't make sense any more.

We can't build a project just because it is cost justified. The trick is, I think, respectfully, to start to say which projects are in the national interest, which are the highest priority projects, and maybe

it is locks on the Ohio River, and which are the projects which are low priority or should be built by private interests?

This New Deal era formulation that said we should justify projects regardless of who the beneficiaries are——

Senator VOINOVICH. And let's face it, a lot of the projects that were built in those days were public works projects to put people to work. They were out of work and the Federal Government went out and did a lot of things.

We could look back and a lot of them were terrific. But you are right. It is a different environment. The issue is: How do you come up with a formula to reflect the reality of today and put it in place and get people to buy off from it?

I feel sorry for the Corps of Engineers. You have people banging away on them. Some Senators are putting in this language that you can't touch the Corps of Engineers and a lot of it is because they want to protect their own pet projects; we don't care what the Corps of Engineers cost-benefit is, we are going to build it anyhow. And it is done because Congress says it is going to be built.

Somebody is in charge of some appropriations committee or another committee and jams it through. Then you go back and you don't capture the history of some guy who was chairman of this committee or appropriations who said, "I am going to do this come hell or high water."

Mr. FABER. Here is the solution honestly. It is to replace that system with a system of criteria that says we are only going to authorize and fund projects which are in the national interest, which provide significant benefits which are environmentally acceptable so there is some restraint on the ability of Congress to authorize projects which are frankly not in the national interest.

Mr. MACDONALD. If I could say something, one thing is that I think the Corps, if they were up here, would say to a large extent they do consider those things and in fact their cost-benefit is intended to consider those things.

There is a legitimate question about whether they do it correctly and what the criteria is. I think you focused on establishing criteria and I think that is the basis upon which you can get some understanding.

Senator VOINOVICH. I am a big believer in the public-private partnership, you know. I believe there are a lot of things that can get done if you get the right people talking together and then come back and get a consensus from the customers.

I haven't been in the Senate very long, but I have watched some of my colleagues and sometimes there is a tendency on my part that I am going to micro-manage, that I know all the answers.

I believe in quality management. If you believe in quality management you go to the people who have the problem, empower them and ask them, "What is your best idea about how this problem can be solved?" and then get their best thoughts.

Too often I just see a lot of competition. This group represents this group and this group. They all do their thing and they all come in here. I really do. I challenge you today to sit down and you have some ideas on this; why don't you work together and spend the next couple of months?

I am going to ask you to come back in 6 months. We will be around here in September. I'll tell you what the challenge is. I am going to ask you to really work on coming back to deal with some of the things we have just talked about here, including the issue of this criteria thing. One of them is the waste treatment facilities. I have some money put in the last one because everybody else was doing it.

My feeling is give it up. Let's just concentrate on the stuff that ought to really be in this WRDA thing and I would like your opinion on just what should be and what ought not to be. Then get together and come back and talk about some of the stuff we have been talking about today with some recommendations that you think would make sense.

I know it is not going to be easy. But I can assure you of this, if you all can get together and come back with something, there is a darned good chance that what you want will get done.

On the other hand, Mr. Faber, you go off over here, Mr. Brinson, you go over here. You do your thing and you do your things. God knows if anything will get done. Let's make something happen; OK?

Let's not just have another hearing and everybody go off and do their thing. Will you do that? Can I get you to agree today that you will do that?

Mr. BRINSON. I would enjoy doing that. Mr. Faber, I hope you will come visit us in New Orleans. We will close the door and take as long as necessary.

Mr. Chairman, Mr. Faber was referring to the 1986 WRDA bill, I think. I think we need to point out that with the 1986 bill, and this gets to your point about are we going to build a bunch of "Fields of Dreams" in our industry, with that comes some sizable cost sharing that our industry has factored into strategic planning ranging from 35 to 50 percent.

So, even as his view is that the Congressionally mandated policy has not been controlling enough, on the other hand, we have taken as a discipline that we are not going to be pursuing projects that are not going to be productive because we have to come up with a cost-share straight up.

I can tell you that the port industry would welcome this kind of dialog and I hope that I can be involved personally.

Senator VOINOVICH. I would like you to do that. We are going to have another hearing on the same subject and see if we have made some progress.

Your point also about cost, by the way, that is a really good thing. If you say we are going to do this project and in order for you to get to where the State or the country or the local people are going to participate and even the private sector, then you find out that separates the men, you know, from the boys.

I will never forget, they had a Federal program that helped urban areas. I was Mayor of Cleveland and President of the National League of Cities. The Federal Government would guarantee 90 percent of the project. So a lot of projects got built that shouldn't have been built.

They didn't worry about it because it was 90 percent guaranteed.

We went to another program called the Urban Development Action Grant Program, the UDAG Program, and it required $5 or $6 private dollars for every public dollar. It was interesting to see how it changed, the whole presentation of projects because there were some folks who were putting some private sector money in it so you really did get the issue of whether or not it they had the cost-benefit and it was justified.

So, that is a very good point that you made. Maybe we ought to look at more of that.

Mr. FABER. Well, you might think about applying cost sharing to previously authorized projects as well as projects authorized after 1986. I think many of the projects in the backlog would suddenly lose support if local beneficiaries were required to pay 25 or even 30 percent of the cost.

Senator VOINOVICH. That is not a bad idea. One of the things about the backlog, we are trying to find out if they really are legitimate.

Mr. FABER. That would be the simplest way.

Senator VOINOVICH. Yes. So much of the stuff, it gets passed and it gets authorized but it just never happens. So that is a good idea.

So listen, we will see you in five or 6 months.

Thank you very much.

[Whereupon, at 12:29 p.m., the subcommittee was adjourned.]

[Additional statements submitted for the record follow:]

STATEMENT OF CLAUDIA L. TORNBLOM, DEPUTY ASSISTANT SECRETARY FOR MANAGEMENT AND BUDGET, OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

INTRODUCTION

Mr. Chairman and members of the subcommittee: I am pleased to have this opportunity to represent the Assistant Secretary of the Army for Civil Works and to testify on Army Corps of Engineers missions and the construction backlog. Accompanying me is Major General Hans Van Winkle, the Corps' Deputy Commander for Civil Works.

We welcome and encourage dialogue about the challenges that lie ahead and how we plan to meet them. Flooding continues to threaten communities. The nation's capability to respond to natural disasters is being stretched. Much needs to be done to clean up, restore, and improve the environment.

Meeting these needs is a continuing commitment that challenges the entire organization. The Army takes pride in the Corps' record of carrying out its stewardship responsibilities.

In this statement, I will summarize briefly the Corps' historic role in service to the nation, followed by a more in-depth summary of the current Civil Works program mission, current construction backlog, and water resources related socio-economic trends and future challenges. I conclude my statement with a summary of the our strategic planning efforts, including actions we are undertaking to ensure that the Civil Works Program remains strong, balanced, responsive, and highly productive.

MEETING THE NATION'S WATER AND RELATED LAND RESOURCES DEVELOPMENT AND MANAGEMENT NEEDS

Corps' Historic Role in Service to the Nation

The Army Corps of Engineers began its distinguished public service in the New England Provincial Army, before our nation existed, with construction of fortifications for the Battle of Bunker Hill in 1775. Since then, for more than 225 years, the Corps has responded ably to the Army's and nation's needs.

What began as a military mission at the birth of the nation in the eighteenth century grew into civil and military missions of building and preserving the nation in the nineteenth century. The Corps mapped the frontier and laid out roads, canals, and railroads for westward expansion. The Corps aided national commerce through

development of a vast navigation system of coastal and inland channels, ports, and harbors. The Corps built many of the public buildings in the nation's capital, including the Capitol. In the twentieth century, The Corps built the Panama Canal, after others had failed. Based on the Corps' performance over the years, the Administration and Congress expanded both the civil and military missions dramatically.

Civil Works primary project purposes include flood, hurricane, and shore erosion protection; water and related land environmental management; hydropower generation; water-based recreation; and technical support for other Federal agencies, States, and other nations. The Corps water and related land management infrastructure includes over 400 multi-purpose reservoirs, 12,000 miles of navigation channels, hundreds of ports and harbors, and 11.6 million acres of land.

As our national needs and priorities have changed, the Corps has been at the leading edge to meet them. As we enter the twenty-first century, we envision that the Corps will continue in its longstanding and exemplary leadership role as a great problem solver for the Nation.

Current Civil Program Mission

The goal of the Army Civil Program is to contribute to the welfare of our nation by providing, in partnership with customers, desired goods and services of highest quality, designed to be economic, technically sound, and environmentally sustainable. We do this through:

- formulation, development, and operation of facilities and practices for management of the nation's water and related land resources (including protection, restoration, and management of environment resources);
- administration of water resources management programs (including resource use regulation, hazardous waste cleanup, and assistance with natural disaster response and recovery); and
- engineering and technical services for other Federal agencies and States.

The Army Civil Program is executed through subordinate programs established expressly for accomplishment of distinct phases of work, such as investigation, construction, and operation and maintenance. These programs are designed to address needs of all purposes thoroughly, fairly, and in a timely way. They are executed by a talented team of multidisciplinary staff specialists and private sector contractors. This team develops comprehensive perspectives across technical, socioeconomic, cultural, political, geographic, and environmental boundaries, in examination and recommendation of solutions to problems in all phases of our work.

The Corps works with many partners throughout this process. These include direct customers; other stakeholders such as local, State, and Federal agencies; and the general public. As a result, competing goals of many interests are balanced to satisfy needs and desires for a wide variety of water and related land resource management goods and services that contribute directly to the national welfare.

In light of these broad responsibilities and the Corps' experience in executing them, and the national needs for water and related land resources management as we enter the new century;, we present the following assessment.

CONSTRUCTION BACKLOG

The Army Corps of Engineers construction backlog consists of the uncompleted portions of all projects authorized by Congress in the Construction, General account and the construction portion of the Flood Control, Mississippi River and Tributaries account. The total Federal cost of these projects is $71 billion of which $23.5 billion has been allocated to date, $1.5 billion is included in the FY 2001 President's budget, leaving a balance to complete construction of $46 billion. This includes all authorized projects, whether or not they have received funding. This amount comprises the construction backlog.

The projects in the backlog have been divided into 3 groups: active, deferred, and inactive projects. Active projects are funded, economically justified, and supported by the non-Federal sponsor. Deferred projects have doubtful economic justification and need restudy to determine their economic feasibility, or are projects for which the non-Federal sponsor is currently unable to provide required cooperation. Inactive projects are either (1) not economically justified and restudy would not develop a justified plan; (2) no longer meet current and prospective needs; or (3) are not actively supported by the non-Federal sponsor.

Within these groupings, the construction backlog is comprised of five distinct parts: $8 billion for active preconstruction engineering and design (PED) projects not yet authorized, $4 billion for authorized PED projects, $26 billion for active projects that have been funded for construction, $2 billion for deferred projects, and $6 billion for inactive projects. It is unlikely that the deferred and inactive projects

will proceed to completion; therefore, the viable portion of the backlog totals $38 billion for active projects.

About $21 billion of the backlog is attributable to 180 projects included in the FY 2001 President's budget. The size of the construction backlog, coupled with the known projects awaiting authorization, imposes a burden on the Federal budget that today's budgetary realities cannot satisfy. Sufficient funding is simply not available to implement all of these projects in a timely way.

WATER RESOURCES TRENDS AND CHALLENGES

Introduction

Throughout its history, external forces have affected the Civil Works Program. The most important of these have been, and continue to be, customer demands for goods and services and taxpayer concern that investment in such goods and services be advisable. Our customers include direct beneficiaries of our projects, most of whom are cost-sharing partners. Taxpayers include the general public and taxpayer advocates. For our program to remain a relevant and viable contributor to national welfare, we must remain sensitive to these forces, continually reorienting, rescoping, and refocusing the program in light of them.

Meanwhile, our current assessment of water resources trends and challenges is summarized in the following:

Trends

- As global markets expand, international commerce will demand more efficient system of domestic ports and harbors and improved vessel and intermodal cargo handling facilities.
- With many properties and major populations located in the nation's floodplains, flooding will continue to threaten national welfare. Moreover, as pressures continue to develop flood-prone lands and natural flood management systems are compromised, the threat of flood damage will increase.
- Ongoing migration of the nation's population to coastal plains and coasts, and attendant property development, will increase risks of loss from coastal erosion, floods, and hurricanes.
- The ongoing migration to coastal plains and coasts will put increasing pressure on coastal habitat, especially wetlands, and other fish and wildlife ecosystems.
- Through Water Resources Development Acts of 1996 and 1999 (WRDA 1996 and WRDA 1999), the Congress placed national environmental health near the forefront of social priorities. These Acts provided additional authorities to the Corps for ecosystem restoration and watershed protection, environmental infrastructure development, and placed an increased emphasis on nonstructural floodplain management.
- As the nation's population grows, there will be growing conflicts among multiple interests within watersheds wanting to use available water for diverse needs.
- As the nation's water resources related environmental infrastructure ages, it must be rehabilitated, modified, replaced, or removed.
- Given the American public's strong and growing interest in downsizing the Federal Government and, in turn, its workforce, ongoing outsourcing and privatizing for accomplishment of government work, including engineering, will increase. Also, the nonfederal sector will have to take on more water resources responsibilities.

Current Challenges

In light of our current assessments of trends in the nation's water and related land resources management, we have identified 5 significant challenges currently facing the nation. They are as follows:

- Navigation—dealing with capacity and efficiency needs;
- Flood Protection—dealing with development of floodplains, including coastal plains and coasts, and increased demand for protection from flooding, erosion, and winds;
- Environmental Management—dealing with restoration of habitat, especially protection of wetlands;
- Infrastructure Renovation—maintaining the nation's water and related land management infrastructure and effects of global climate change; and
- Disaster Response Assistance—dealing with increasing severity and frequency of natural disasters.

We must meet these challenges in order to preserve and promote our future national welfare. In cases where other Federal agencies have authorities to address them, we promote interagency alliances and partnerships where appropriate. Each challenge is discussed next.

Navigation

The National Marine Transportation System (NMTS) comprises approximately 1,000 harbor channels; 25,000 miles of inland, intracoastal, and coastal waterways; and 238 locks. This system serves over 300 ports with more than 3,700 terminals for cargo and passenger movement, and connects to 152,000 miles of rail, 460,000 miles of pipelines, and 45,000 miles of interstate highways. The system annually provides enormous national benefits.

However, the system is nearing capacity, while demands on it will grow substantially. The Corps estimates that total volume of domestic and international marine trade is expected to more-than-double in the next 20 years to more than 4 billion tons per year by 2020. We project that inland shipments will increase over that same period by 200 million tons, to 830 million tons. This increase in shipment volume will severely stress the NMTS.

Flood Protection

Flooding is the most destructive and costly natural disaster in our nation, accounting for 85 percent of all natural disasters that occur annually. We have made a major investment in flood protection infrastructure, including, for the Corps only, nearly 400 major reservoirs and 8,500 miles of levees and dikes, as well as hundreds of smaller local flood protection improvements. The Corps estimates that, since 1950, its infrastructure has prevented nearly $500 billion in riverine and coastal flood damage, returning nearly $6.00 in flood protection benefit for every $1.00 invested, and preventing, on average, $16 billion in flood damages annually.

Despite its considerable success in flood protection, the nation still has an extensive residual flood damage problem. Costs of floods (emergency assistance costs plus property losses) still average over $4 billion annually. News coverage of recent flood disasters, including the 1993 Mississippi River Flood and the 1997 catastrophe in Grand Forks, North Dakota, have shown the enormous economic costs of flooding. Unquantifiable social costs include, in addition to injury and loss of life, stress on individuals and families caused by disruption, evacuation, and life in temporary quarters. It also includes loss of irreplaceable property, and destruction of entire communities.

The Environment

Protection and restoration of the environment is an important goal. Indeed, restoration of native ecosystems and, possibly, creation of new ones, is crucial to sustaining natural systems and habitats for future generations. Our nation has more than 3.6 million miles of rivers and streams that, along with floodplains and upland areas, comprise corridors of great economic, social, and environmental value. These corridors are complex ecosystems that perform vital environmental functions, including modulating streamflows, storing water, removing harmful materials from water, and providing habitat for aquatic and terrestrial plants and animals. Until passage of the National Environmental Policy Act (NEPA) in 1970, however, development of these corridors proceeded without concern, resulting in degradation of water quality, decreased water conveyance and storage capacity, loss of habitat for fish and wildlife, and decreased recreational and aesthetic values. NEPA prescribed integration of environmental protection and social goals with economic ones in the development of water and related land resource management projects. However, despite the shift in emphasis toward environmental benefits in such projects, much work remains to be done. The environment has suffered heavily. In order that it might sustain future generations, it must be cleaned up and restored, and further development must be tempered by an ethic of ensuring environmental sustainability of any such development.

The nation needs a healthy, sustainable environment for current and future generations.

Infrastructure Renovation

Water resources management infrastructure has improved the quality of our citizens' lives and provided a foundation for the economic growth and development of this country. Our systems for navigation, flood protection, hydropower generation, and recreation management all contribute to our national welfare. The stream of benefits is realized as reduced transportation costs, avoided flood damages, electricity, and recreation services.

Investment in economically justified and environmentally sound maintenance, major rehabilitation, and new infrastructure is needed to maintain and improve our capital water and related land resources management stock, and, in turn, benefits received from it.

Disaster Response Assistance

In recent years, our nation has suffered a series of major disasters whose impacts have been measured officially in terms of lives lost and high costs of damage to property and relocations. In addition, impacts have included loss of jobs; business failures; disruption of safe water, sanitation, food, and shelter, and transportation; public health risks due to diminished capability of public health care systems; loss of income and tax revenues; and impacts on other government programs from diversion of tax dollars to disaster response, relief, and recovery.

Adequate investment in emergency management is needed to ensure the capability of Federal agencies to respond fully and quickly when disasters strike. Coordinated planning is needed among key agencies who must work together to perform the readiness requirements under the Federal Response Plan. Our nation needs the Federal capability to deal with multiple emergency contingencies.

STRATEGIC PLAN

We are currently developing a strategic plan to help guide the direction and priorities of the Civil Works program over the next 5 years. This effort is guided by the precepts and requirements of the Government Performance and Results Act of 1993 (Results Act). However, it is also just good business to chart our course in a deliberate fashion. We intend to use the process of developing this strategic plan to call attention to critical water resources needs facing the nation.

I want to emphasize however, that the plan is now only in early draft form. Its depiction of water resources challenges, as well as our priorities, primarily reflects analysis from water resources technical experts within the Corps. We are therefore embarking on a series of 14 regional listening sessions to hear what our stakeholders, the general public, as well as our colleagues in other agencies have to say. Also, people who wish to can participate by using the Corps' website. Results will be compiled into a report that will be shared with the public and decision-makers. We expect to learn a lot, and to incorporate what we learn into the next version of the strategic plan scheduled for the end of the fiscal year. We will, of course, fully coordinate the strategic plan within the Administration and with Congress.

In response to the challenges described previously, our priorities for action are described in the following:

Stress on the National Marine Transportation System

- In consonance with the Marine Transportation Strategy vision and in partnership with the Department of Transportation,the Army will invest in American waterways and harbors, including the inland system of channels and ports, deep draft ports and harbors, and other harbors. We will seek accelerated construction funding for high priority justified inland and coastal navigation projects.

Continued Development of Watershed Management and Floodplain Policy

- We will take a proactive approach in watershed and river basin management, with increased emphasis on non-structural measures, within a sustainable development framework, with attention to meeting economic, environmental, and social objectives. We will seek more multi-purpose comprehensive basin studies, in partnership with other agencies, to find innovative solutions to water resources needs. We will also develop the capabilities and partnerships with FEMA, other Federal agencies, and state and local floodplain and emergency management agencies to achieve consistent and complementary floodplain development guidelines, standards, and evaluation principles.

An Aging National Water Resources Infrastructure

- We will ensure that our existing water resources infrastructure is operating and producing expected levels of benefits. This will involve allocating resources to reduce our high priority maintenance backlog of $450 million and to modernize aging and antiquated recreation facilities. We will also ensure that we are achieving the maximum efficiencies in our O&M procedures.

Environmental Consequences of Past Development

- We will increase environmental restoration and clean-up activities, including brownfields, and fully utilize existing environmental Continuing Authorities.

Ensuring the Capability to Respond to Disasters

- We will promote disaster planning, response, and recovery, with an emphasis on advance measures planning assistance to communities.

CONCLUSION

Based on our assessment of the nation's current water and related land resources management needs, we feel strongly that the nation faces significant and demanding challenges in dealing with those needs. We also know that the Corps has many unique assets from which to draw in tackling those challenges. These include its longstanding and exemplary leadership role in water and related land resources management; highly competent multi-disciplinary workforce, complemented through contracting by a large public sector workforce; world-class research and development laboratories; highly developed and continually improved business processes, including the recently fielded project management process; geographically dispersed organization; and capital infrastructure including thousands of completed facilities.

Finally, we are committed to improvement in performance and customer satisfaction within available resources—continually maximizing the value of the Civil Works Program to the Army and the nation.

Thank you Mr. Chairman and members of the committee. This concludes my statement.

STATEMENT OF J. RON BRINSON, PRESIDENT AND CEO. PORT OF NEW ORLEANS, ON BEHALF OF THE NATIONAL WATERWAYS CONFERENCE, INC., AND THE AMERICAN ASSOCIATION OF PORT AUTHORITIES

Good morning. My name is J. Ron Brinson, President and Chief Executive Officer of the Board of Commissioners of the Port of New Orleans. I am testifying today on behalf of the American Association of Port Authorities (AAPA) and the National Waterways Conference, Inc. Founded in 1912, AAPA represents virtually every U.S. public port agency as well as the major port agencies in Canada, Latin America and the Caribbean. AAPA members are public entities mandated by law to serve public purposes primarily the facilitation of waterborne commerce and the generation of local and regional economic growth. The National Waterways Conference, of which I am currently first vice president, is a 40-year-old organization of inland waterway shippers and carriers, ports and terminals, shipyards and other waterways services, and river valley associations dedicated to the establishment of a greater understanding of the widespread public benefits of the American waterways system.

Mr. Chairman, we commend you for calling this hearing on the Army Corps of Engineers' civil works program and, more particularly, whether it has sufficient funding and the high-level public policy priority it needs and deserves to respond to pressing navigational and other water resources needs. Since colonial times, waterborne commerce has stimulated the economic growth and vitality of this great Nation. Inland waterways foster trade and commerce within our borders, and the coastal and Great Lakes ports are America's gateways to the global marketplace. A modern, world-class, well-maintained port and waterways system is essential to the United States continuing its role as a world leader in trade and, even more importantly, in maintaining our economic competitiveness and national security.

The ports and waterways infrastructure is vital to our Nation's economy, environment, and quality of life. Waterways provide the most inexpensive, energy-efficient mode of transportation, and they are the lifelines to foreign markets. As the importance of international trade grows, so does the value of waterborne commerce to our country and its future. This is the motivation for the U.S. Department of Transportation's far-sighted "marine transportation system" initiative that pulls 17 Federal agencies and 31 waterway-related organizations in the private sector together with the objective of transforming the U.S. marine transportation system into "the world's most technologically advanced, safe, secure, efficient, effective, accessible, globally competitive, dynamic and environmentally responsible system for moving goods and people." The Army Corps of Engineers' central mission of maintaining Federal shallow- and deep-draft navigational channels is critical to our ability to meet DOT's overall goal.

In my testimony today, I will discuss the following principal points:

- The importance of the navigational mission of the Army Corps of Engineers to the national well-being, and the relevance of investments in the ports and waterways infrastructure to today's public policy objectives.
- The critical need to address the Nation's huge backlog of Congressionally authorized water resources projects and to reverse the growing volume of deferred maintenance which threatens the integrity of numerous projects.
- The urgency of assuring adequate funding for the navigation program despite so many competing demands within the civil works budget for new and perhaps de-

serving missions, which threaten essential investment in ports and waterways infrastructure.

The Importance of the Navigational Mission of the Army Corps of Engineers

Improving and maintaining navigational channels and waterways is one of the oldest programs of the United States government, starting in 1789 with the construction of lighthouses to guide sailing vessels into safe harbors. In 1824, the Corps of Engineers was authorized to begin clearing snags to facilitate navigation on the Ohio and Mississippi Rivers. Following World War I and for the next 30 years, the Federal Government itself operated a demonstration bargeline on the inland waterways system to encourage efficient waterborne commerce. At present, the Corps of Engineers maintains 12,000 miles of mainstem inland waterways, 627 shallow-draft ports and 299 deep-draft ports. The resulting transportation system safely and efficiently handles more than 2.34 billion tons of domestic and foreign commerce annually, almost equally divided between the shallow- and deep-draft segments.

Foreign trade is an increasingly significant part of the U.S. economy, currently accounting for over 30 percent of our Gross Domestic product. Our exports and imports are projected to increase in value from $664 billion in 1998 to $1.6 trillion in 2010. In fact, the volume of cargo is expected to double over the next 20 years. More than 13.1 million U.S. jobs now depend on waterborne commerce and the number is expected to grow as world trade increases. Trade pacts with other countries could escalate this intense exchange of commerce. Currently, more than 95 percent of U.S. overseas trade by volume passes through U.S. ports. With the huge increases in trade expected in the next few years, our navigation infrastructure must be in place, in top-notch shape, and able to cope with soaring demands.

Our water highways are national assets that serve a broad range of economic and strategic interests. The navigation system links countless communities throughout the Nation to the world marketplace, enabling us to create export opportunities for many small businesses as well as for the products of our mills, mines, forests and farms. Efficient ports and waterways also allow the delivery of imported goods more inexpensively to consumers across the Nation. However, the benefits of increased international trade will be realized only if we continue to maintain and modernize the navigation infrastructure.

In addition, the waterways play an increasingly critical role in our Nation's defense. That role was never more apparent that during the loadouts of military cargo and personnel during Operation Desert Shield/Desert Storm. The huge build-up of U.S. forces in and around the Persian Gulf would have been impossible without the up-to-date facilities and strong support afforded by America's ports. More than 50 ports have agreements with the Federal Government to provide ready access for national emergency purposes. With the ever-present military threats about the globe, the U.S. military depends on our ports as bases of operations to ensure that our men and women serving overseas are properly supplied.

Ports and inland waterways serve broad multi-state needs. The foreign trade activities of each state are supported by a variety of ports both within and, more often, outside the state. On average, each state relies on between 13 to 15 ports to handle 95 percent of its imports and exports. The goods from 27 states leave the country through the ports in Louisiana alone. Mid-western grain supplies the Pacific rim market through ports in the Pacific Northwest. Imported crude oil refined in New Jersey and Pennsylvania reaches consumers on the entire East Coast, from Maine to Florida. Great Lakes ports supply steel and other products to Midwestern industrial centers. Ports on the West Coast handle goods such as cars, computers and clothing, which are destined for consumers throughout the country, including Rocky Mountain and Desert Southwest states not generally associated with the water transportation system.

Economic Benefits of the Inland Waterways System

The inland system of navigable rivers and waterways helps to drive American dominance of the global economy of the twenty-first century. Almost every conceivable commodity goes to market or reaches consumers along the extensive inland waterway network:

- Farmers from the Canadian border of Minnesota to the Mississippi Delta rely on the Mississippi River system to get their corn, wheat and soybeans to feed lots, processing plants and store shelves, both here and abroad. A whopping 56 percent of U.S. grain exports go through the Port of New Orleans and neighboring Lower Mississippi River ports each year. That means money in the pockets of farm families the length and breadth of the Mississippi River and its tributaries. And this also explains why Louisiana ports are the state's most important economic resource.

- The Ohio River is a "kilowatt highway." The quickest and most cost-effective way to move coal from the mines to a power plant's boilers is by river barge. It's little wonder that coal accounts for 58 percent of the total traffic on the Ohio River system and is critical to the economy of the Ohio Valley and the Nation as a whole. Without the electric power reserves of the Ohio Valley, America would see its economic expansion short-circuited.
- The Nation's freight transportation network relies heavily on the inland waterways. Petroleum products make up 20 percent of all the commodities moving on the rivers, some 125 million tons of crude oil, diesel fuel, JP4 jet fuel, gasoline, heavy fuel oils and asphalt. No other mode is as efficient in moving massive quantities of fuels, farm crops, forestry products, industrial chemicals, and manufactured goods. True, barges are slow but they are very efficient, particularly in the movement of heavy-loading and/or price-sensitive commodities.

Environmental Benefits of Waterways Transportation

Waterways efficiently convey large volumes of bulk commodities over long distances with minimal disruption to the environment. Waterways in the United States, including the Great Lakes, move about 16 percent of all intercity freight. Because of the buoyancy of water itself, far less fuel is required to transport a ton of waterborne commerce. Typically, one gallon of fuel can move one ton of cargo approximately 514 miles by barge, equivalent to the distance from Pittsburgh to Louisville. That same one gallon of fuel will move cargo only::

- 59 miles by truck, equivalent to the distance from Washington, D.C., to the Delmarva Peninsula, or
- 202 miles by rail, equivalent to the distance from Toledo to Cincinnati.

The fuel efficiency of waterborne transport means nearly 10 times less emissions than if that same cargo were carried by truck, and two-and-a-half times fewer emissions than if the cargo were moved by rail. Waterways transportation means cleaner air for all Americans.

Safety benefits. Highway safety is of increasing concern to a growing number of Americans. Every year, hundreds of motorists are killed in accidents at unguarded rail crossings. More thousands are killed or injured in accidents involving passenger vehicles and long-haul semi-trailer trucks. Millions of man-hours are lost each year as motorists sit on jammed Interstate highways backed up by semi-trailer rollovers, collisions and other accidents.

The toll in deaths, injuries and lost productivity would be exponentially greater were it not for the Nation's inland waterway system. One 1,500-ton barge can carry 52,500 bushels of grain or 433,000 gallons of petroleum products. That's equivalent to:

- 15 jumbo rail hoppers, or
- 57 semi-trailer trucks.

The scope of waterways' contributions to reducing congestion on the Nation's highways and rail networks is even more evident when the large carrying capacity of barge tows is taken into account. Each 15-barge tow, which is typical on the Upper Mississippi River, is approximately 1/4 mile in length and replaces:

- 225 jumbo rail hoppers in 2–1/4 unit trains stretching 2–3/4 miles in length, or
- 879 semi-trailer trucks. Assuming 150 feet between trucks, it would take a nearly 35-mile-long convoy of trucks, stretching in a solid line from Washington, D.C., to Baltimore, to haul the commodities carried by one 15-barge tow.

Waterways help reduce traffic congestion and contribute to highway safety, benefitting every American motorist.

Quality of life. Last, but not insignificantly, waterways serve to enhance America's quality of life. The construction of locks, dams and impoundments on the river system in the first three-quarters of the twentieth century was driven as much by flood control as by navigation. The floods that ravaged the Midwest in 1993 and North Dakota's Red River just 3 years ago were a frighteningly common occurrence on the Nation's rivers in the early part of this century. Hundreds of lives were lost, hundreds of thousands left homeless, and millions of dollars in property damage were inflicted in the floods of:

- 1913 on the Ohio and its tributaries.
- 1927 on the Lower Mississippi.
- 1937 on the main stem of the Ohio.
- 1943 on the Missouri and its tributaries.
- 1951 on the main stem of the Missouri.

The construction of locks and dams created a reservoir system which became a mecca for recreational boating and sport-fishing throughout America's river valleys. Flood protection allowed industries to locate in interior regions, and the availability of waterway transportation allowed these plants to obtain their raw materials from much more distant locations and to reach more far-flung markets than would otherwise have been possible. This process allowed for the dispersal of industries away from fragile, overcrowded coastal regions and thus help revive the economies of thousands of inland cities and towns. The result is an improved quality of life for millions of Americans.

Inadequate Funding Leading to Intolerable Civil Works Backlog

In terms of real dollars, the amount of funding provided for the Corps of Engineers' civil works mission has declined dramatically in recent years. There was very little change, in fact, from the funding level in FY 1994 to that in FY 2000. In FY 1994, $3.97 billion was appropriated for civil works. By FY 2000, the total had increased to $4.14 billion a growth of only $170 million in real dollars. When you consider inflation, plus the transfer of the $140 million-a-year Formerly Utilized Sites (FUSRAP) program from the Department of Energy to the Corps of Engineers, the amount of funding available for civil works has dropped substantially.

In comparing funding for traditional Corps missions, such as the construction-general account, there is relatively no change between FY 1994 and FY 2000. In FY 1994, $1.38 billion was appropriated for construction-general as compared with $1.4 billion in FY 2000. The President's budget requests in those years are, unfortunately, also closely aligned $1.2 billion in FY 1994 and $1.23 billion in FY 2000. As a matter of fact, since 1965, the civil works budget has continually become a smaller percentage of both the total Federal Government budget and the Gross Domestic Product. Since 1955, civil works appropriations have not exceeded 1.1 percent of the Federal budget. Currently, it represents about 0.2 percent of all Federal outlays.

These situations have conspired to create an incredible backlog of Corps of Engineers' civil works projects in all categories. The navigation function, particularly on the inland system, has been acutely affected. The disparity between the amount provided for these types of projects and the amount needed to keep the program on track is continuing to grow. According to some estimates, the backlog of construction projects on the Corps of Engineers' plate amounts to at least $27 billion, not counting those authorized in the 1999 Water Resources Development Act (WRDA). In addition, deferred maintenance of inland navigation projects is approaching the half-billion dollar mark, increasing by some $100 million or more annually.

All the while, the locks and dams and other capital stock are aging and deteriorating. Forty percent of all the lock chambers on the fuel-taxed inland waterways system have already exceeded their original 50-year design lives. Construction of new locks with additional capacity and major rehabilitation of older locks is essential to maintain the efficiency of the system. The 1986 WRDA authorized eight new or replacement navigation locks. Through 1998, six additional lock-and-dam replacements and 10 major rehabilitations were authorized. The need for these modernizations is evident. However, the limitation on the civil works program in terms of constant dollars will doubtless lead to further traffic delays and increased expenditures.

Strengthening the Federal Partnership

Ports and waterways rely on the Army Corps of Engineers to operate and maintain the system to facilitate trade and commerce, maintain U.S. competitiveness, and augment national defense. The Corps of Engineers is the only agency which has the expertise to assess and address current and future infrastructure needs. Through a fuel tax, bargelines pay one-half of the cost of constructing new or replacement locks and of undertaking major rehabilitations. To improve deep-draft channels, ports must enter into specified cost-sharing arrangements. So the navigation program is really a Federal-state-private sector partnership. Because of this partner-ship, the Corps of Engineers must be diligent in improving the timeliness of its project planning and decision-making processes so that we do not fall further behind in meeting the rapidly mounting navigation infrastructure needs.

Over the years, the Corps of Engineers has been directed to undertake more and more missions, including environmental restoration as well as FUSRAP. Pending proposals would thrust the Corps more directly into such areas as water supply, wastewater infrastructure, brownfields, etc. All are worthy programs, and the Corps would seem to be ably equipped to tackle these new assignments. However, we are concerned that these expansions may come at the expense of traditional Corps missions, such as navigation.

Environmental restoration is a rapidly growing program, but it is the responsibility of several Federal agencies, many of which have this goal as a central mission. We encourage the committee to investigate methods of funding the Corps of Engineers' work in these new areas, as important and popular as they may be, in ways which do not take funds away the traditional missions whose benefits can be measured in dollars-and-cents returns to the American economy. For example, in the Superfund program, funding for the Corps of Engineers' work is transferred from the Environmental Protection Agency's budget. By using more pass-troughs, Congress may eliminate some of the pressures on the Corps of Engineers' budget and ensure that funding to pay for environmental restoration and other new initiatives does not reduce funds available for such vitally significant endeavors as the navigation program.

Addressing Navigation Needs of the 21st Century

The Federal Government, through the Army Corps of Engineers, provides only in-channel navigation improvements. Port authorities along the coasts, the Great Lakes and inland waterways spend billions of public non-Federal dollars in providing and maintaining the landside infrastructure that allows goods to be transferred between water and land modes. It is this Federal/non-Federal partnership which makes the navigation system work. The functions of the Corps of Engineers are two-fold managing maintenance and providing improvements in Federal navigation channels that support U.S. domestic and international trade and enhance national defense.

In spite of the huge construction backlog, new projects are needed to allow our ports to continue to dock new, larger and deeper-draft containerships and other vessels which are joining the world merchant fleet. On the inland waterways system, several needed lock replacements are pending on the Ohio River system, and agricultural producers in the Upper Midwest must have efficient waterway access to seaports to compete with South America which is pouring billions into its transportation infrastructure. American farmers' principal navigation artery, the Upper Mississippi Waterway, is over 60 years old but its modernization is now mired in controversy over its economic feasibility.

Predicting how much traffic will move on a waterway over the next half-century is a rough guess at best. In many cases, the Corps of Engineers' estimates have been overly conservative. Before its construction, for instance, the agency predicted the Gulf Intracoastal Waterway would move 5 to 7 million tons annually, but it actually carried 113.6 million tons in 1998! Despite reports to the contrary, the Red River Waterway's tonnage is ahead of official projections, and just this month a 64-barge convoy moved the Indiana National Guard's military equipment half-way up the Red River for training exercises at Fort Polk, Louisiana.

With regard to the Upper Mississippi modernization project, let me quote from the venerable Prairie Farmer: "The Federal Government, through its current farm policy, expects American farmers to get more income from the global marketplace. Our competitiveness is linked to our ability to efficiently transport products from farm to market, wherever that market may be. To maintain this advantage, we must have viable, efficient transportation systems. Currently, the per-ton cost for transporting grain in the United States is lower than in other countries. But we'll lose that advantage as other countries gain the ability to transport at lower costs. We have allowed our river transportation infrastructure to deteriorate, jeopardizing our position in world markets. And despite the recent scandal at the Corps, the time for study is over. We must push forward on river infrastructure improvements—now."

Thank you for the opportunity to testify today. To ensure that our Nation maintains its international competitiveness, it is presently more important than ever to commit the necessary funding to provide a world-class water transportation system, to consider this investment as a high-priority public policy objective vital to America's national growth and prosperity, and to ensure that navigation continues to be a central mission of the Army Corps of Engineers.

Thank you.

RESPONSES BY J. RON BRINSON TO ADDITIONAL QUESTIONS FROM SENATOR SMITH

Question 1. How much does it cost annually to maintain the nation's navigation system and how does this amount compare to what is being appropriated?

Response. This is really a question for the program management officers of the Army Corps of Engineers, but it is my understanding that the President's budget for fiscal year 2001 requests $1.067 billion for operation and maintenance (O&M)

of the U. S. navigation system. This figure includes approximately $700 million for deep-draft waterways and port access channels and $367 million for shallow-draft inland and intracoastal waterways. How much Congress will appropriate for O&M in fiscal year 2001 is not known, but assuming the figure is $1.067 billion, this will leave a maintenance shortfall of about $252 million—$180 million for deep-draft channels and $72 million for shallow-draft waterways.

For fiscal year 2000, Congress appropriated approximately $678 million for deep-draft maintenance and $376 million for shallow-draft maintenance, leaving a maintenance shortfall for the current year of $202 million. I am told that the shortfall amounts to $149 million for deep-draft channels and $53 million for shallow-draft waterways. When added to the existing backlog, needed but unfunded maintenance totals almost one-half billion dollars, and it is growing rapidly, all too rapidly. In the case of structures like locks and dams, the longer preventive maintenance is delayed, the greater the risk of catastrophic failure.

For deep-draft ports, 100 percent of maintenance dredging comes out of the Harbor Maintenance Trust Fund, which is funded from an ad valorem tax on imports and domestic cargo. Because of budget caps, Congress does not appropriate the full amount of the trust fund collections each year. Over the last 14 years, this fund has built up a surplus of more than $ 1.6 billion—money which is needed for maintenance. This situation has prompted calls for the trust fund to be taken "off budget."

Question 2. Which waterways are the most heavily used? Are these same waterways the most expensive to operate and maintain?

Response. In terms of cargo tonnage, the Lower Mississippi (Cairo to Baton Rouge) and Ohio Rivers and the Gulf Intracoastal Waterway are the most heavily used shallow-draft channels. Among deep-draft channels, the Lower Mississippi (Baton Rouge to Head of Passes), Houston Ship Channel, and Port of New York-New Jersey handle the largest volumes of commerce, and all require periodic dredging to maintain authorized depths.

The Army Corps of Engineers has current figures on tonnages moved on each waterway segment and the cost to operate and maintain those segments, but I believe you will find that the Lower Mississippi River is listed among the most expensive to operate. This is because it is funded as a part of the massive Mississippi River and Tributaries flood control project, and 25 percent of these expenditures (which include levees, concrete mattresses along the banks in river bends, and the Old River Control Structure to keep the Mississippi from flowing down the Atchafalaya River) are arbitrarily assigned to navigation. On a ton-mile basis, however, navigation costs on the Mississippi River are very low because so much traffic moves up and down this vital waterway—averaging 116.4 billion ton-miles annually or 44.1 percent of all fuel-taxed inland waterway traffic in 1990–94. And the ports along the lower river (Greater Baton Rouge, South Louisiana, New Orleans and Plaquemines)constitute the largest port complex in the world.

Some critics have charged that many smaller waterways authorized and funded by the Congress have fallen short of projected tonnages. One explanation is that often 20 years or more elapse between the time of the evaluation and the completion of the project—during which time the domestic and international economy undergoes structural changes (less steel used in fabricating ships and cars, a decline in iron and steel production, lower coal exports, etc., as well as the emergence of new waterborne movements such as wood chips, containers on barge in the Pacific Northwest and more exotic industrial chemicals).

However, not all tributary waterways handling less traffic than originally forecast should be considered as economic failures. Far from it. The overwhelming reason why Congress authorized and funded most tributary improvements was for the purpose of regional economic development. Critics have tried to portray such low-volume navigation channels as "rivers of no return" because they handle only a few barges. Even one barge, however, takes at least 58 trucks off busy roads and a jumbo barge hauls as much commerce as 116 18-wheelers.

Barge cargo volumes, however, are only one measure of a waterway's worth. The value of commerce moved is a more valid indication of its regional importance. Two jumbo barges per week on the little-used Ouachita River may seem insignificant at first glance, but they provide an oil refinery at Smackover, Arkansas, with 350,000 tons of petroleum per year, sustaining the jobs of 110 employees in a very economically depressed area. A single barge on the Tennessee-Tombigbee Waterway may go almost unnoticed but it could be carrying a 300-ton shipment of rocket motors manufactured at a riverside plant employing some 2,000 workers and worth the equivalent of 4,000 barge loads of coal! Nationally, 72.6 percent of the tonnage moving on tributaries actually originates or terminates on mainstem waterways.

The availability of barge transportation attracts industries which pay family wage jobs, and navigable waterways serve to hold down railroad rates for all shippers.

Waterway development frequently provides flood protection, and reservoirs behind navigation dams afford a dependable, year-round water supply for homes and industries. These pools also allow freely accessible, widely available water recreation—for skiffs and outboard motorboats, houseboats, regattas, fishing, bass tournaments, water skiing, waterside camping, picnicking and sunbathing as well as marinas, restaurants and motels, all of which are extremely significant to local and regional economies. Far from destroying the environment, navigation channels back up water into sloughs, creeks and other tributaries, enhancing fish, wildlife and wetlands resources, forming "chains of lakes" which frequently become flyways for ducks, geese and other waterfowl to the delight of hunters and fishermen.

While barge tonnages moved on some tributary waterways may be less than anticipated, the committee should not write off these investments. In many cases, they are proving to be extremely beneficial to local and regional economies, providing jobs, incomes and an expanding tax base. It should be noted that estimates of the traffic which may move on any waterway segment over the next half-century is dependent on a multitude of factors, most of them having nothing to do with any single waterway or the waterways system. First and foremost, potential traffic is influenced by overall economic conditions in the United States and abroad. No wonder no other Federal agency, except the Corps of Engineers, even attempts such a fine-line forecast of the future.

Question 3. In your testimony, you talk about the great economic benefits that are gained from our navigation channels and water highways. Considering they are creating so much money, do you believe that the users can and should contribute more financially to address the backlog?

Response. Asking users to pay is a complicated issue. Currently for deep-draft ports, importers and shippers of domestic cargo are already paying for maintenance dredging through the Harbor Maintenance Tax (HMT). The tax on exports was declared to be unconstitutional and is no longer being collected, and the European Union has stated it plans to challenge the import tax in the World Trade Organization because it discriminates against other nations. In finding the export levy to be unconstitutional, the courts ruled that it constituted a tax rather than a user fee because more was being collected than spent on maintenance and also because some ports did not require much maintenance dredging. As a result, the American Association of Port Authorities (AAPA) spent 3 years investigating possible alternatives to the HMT but was unable to identify any user fee that could equitably raise revenues in reasonable relationship to the distribution of benefits to the nation. That is why AAPA supports the SHIP Act, H.R. 1260, introduced by Representatives Borski and Oberstar, which would repeal the existing Harbor Maintenance Tax and fund maintenance dredging from general revenues.

On the shallow-draft system, some 27 waterway segments are subject to the inland waterways fuel tax enacted in 1978. The tax is now 20 cents per gallon plus another 4.3 cents collected for deficit reduction. Proceeds are deposited in the Inland Waterways Trust Fund and used to pay one-half of lock-and-dam replacements and one-half of the shallow-draft share of deep-draft projects like the Inner-Harbor Lock replacement in New Orleans as well as certain other navigation construction like the Sargent Beach erosion control project to keep the Gulf of Mexico away from the Gulf Intracoastal Waterway. In addition, the trust fund pays one-half of the cost of major rehabilitation of shallow-draft navigation locks and dams. However, trust fund revenues have not been fully utilized. In spite of mounting construction and rehabilitation needs—which for navigation projects total approximately 23 percent of the huge $38 billion civil works backlog—the Inland Waterways Trust Fund surplus has been steadily growing and at the end of March totaled $388.3 million. So user taxes are not a panacea.

Relying on a public right-of-way open to all, waterborne commerce is intensely competitive. Hundreds of bargelines continually compete for traffic, guaranteeing the lowest possible freight rates and ensuring that the savings in transportation costs from channel improvements are passed on to shippers, receivers, processors and ultimately consumers. Because of this competition on the waterways and resulting rock-bottom barge rates—and frequently only because of these low rates—U.S.-produced corn, soybeans, coal and other products are able to enter foreign markets. Who benefits? Not the bargelines, but tens of thousands of U.S. producers. The price they receive for their crops is the seaport price minus transportation and handling costs. As transport costs go up, their incomes go down.

When waterborne commerce is exported or imported, shippers and carriers contribute significant taxes and fees to the Federal Government so funding dredging from general funds is simply a small return on these payments. In a report last fall, the U.S. General Accounting Office found that 11 Federal agencies collect 124 different fees and assessments on maritime commerce and that these collections

amounted to a whopping $21.9 billion in 1998. The lion's share comes from customs collections at U. S. seaports. To recompense the individual states for relinquishing the privilege of collecting these customs duties, the fledgling U.S. Government, in one of its first acts after ratification of the Constitution, agreed to build and maintain lighthouses as an aid to navigation. Without modern ports, the Federal Government would not have this sizable revenue source. This fact has encouraged some lawmakers to discuss whether there should now be "customs sharing" to finance port improvement projects.

Shallow-draft waterways users already pay a substantial fuel tax. If waterways shippers were required to "contribute more financially," this would increase the cost of transportation—a cost increase which would have to be passed on. In the case of agricultural exports, farmers would receive less Or their crops. In the case of coal, electricity customers throughout the Midwest and as far away as New York and New England (which receive "peaking power" from Ohio Valley power plants) would face higher bills. Motorists would find the cost of gasoline increased in many parts of the Nation which rely on barge deliveries of petroleum and petroleum products. In short, the American consumer would foot the bill.

Question 4. Since 1986, the committee has authorized only those projects that are consistent with cost-sharing requirements established in WRDA 1986. In addition, there must be an identified local sponsor for the non-Federal share of the costs, the project must have a completed reconnaissance and feasibility study, and the Chiefs Report must find the project to be technically sound, environmentally acceptable, and economically justified. Do you believe that the committee standard is inadequate and, if so, why?

Response. In the judgment of most proponents of water resources development, the "committee standard" and the existing criteria for evaluating the economic, engineering and environmental feasibility of navigation, flood protection, and other proposed water projects are quite adequate. The present criteria quickly weed out inefficient, short-sighted and localized projects. Indeed, most proposed projects never pass this test. Besides, the use of a realistic interest/discount rate, currently 6–5/8 percent, practically eliminates all new construction in which benefits would accumulate slowly over a period of years and concentrates available funding on projects like deepening port access channels and replacing congested locks—projects which will handle additional traffic almost immediately upon completion.

It would make no sense to require that potential economic benefits amount to twice projected project costs, or a benefit/cost ratio of 2-to- 1, when only a portion of the benefits are evaluated. At present, only "national economic development" benefits are counted in feasibility studies. Other benefits, including regional development, water-compelled freight rate reductions, social well-being, and quality of life, are ignored. Neither does the present evaluation include any accounting of the "environmental amenities," as described in a recent National Academy of Sciences report ("New Directions in Water Resources Planning for the U. S. Army Corps of Engineers"), such as wetlands creation, "water-enhanced, non-consumption recreation (picnicking, bird-viewing, camping)," visual and cultural benefits, etc.

And why should wealth- and tax-producing projects like navigation and flood protection be subjected to elaborate, time-consuming economic analysis when it is humanly impossible to predict underlying national and global trade patterns more than a few weeks into the future? Also, why should we subject navigation and flood control projects to such intense scrutiny when projects serving other national needs, such as environmental restoration, need only a conceptual framework and are frequently launched without any feasibility report, benefit/cost analysis or even detailed cost estimate? Such projects are approved because of a judgment that they are worthwhile and meritorious Federal investments.

Why shouldn't navigation projects, in particular, also be authorized because they are good for America?

Cost-sharing formulas enacted in WRDA 1986 not only provide a portion of the construction costs but also help to rationalize the waterways system by restraining unwarranted improvements and in holding down project costs by encouraging innovative, money-saving construction techniques. However, the American Association of Port Authorities (AAPA) strongly favors one change in cost-sharing formulas because ships in the world's merchant fleet are now much larger, carry more cargo at lower cost but require deeper navigation channels than was the case in 1986. For that reason, AAPA believes that the 45-ft. "standard" for port access channels should be raised to a 53-ft. standard and the Federal/non-Federal cost share be changed appropriately.

STATEMENT OF SCOTT FABER, SENIOR DIRECTOR FOR PUBLIC POLICY AMERICAN RIVERS

Mr. Chairman, thank you for the opportunity to testify today. My name is Scott Faber and I am Senior Director for Public Policy for American Rivers, a national river conservation organization.

Corps of Engineers projects have produced significant benefits for the nation, including many navigation and flood control projects, and the Corps has played an indispensable role in the repair of many of the nation's environmentally degraded waterways. Indeed, scientists warn that many of the nation's most storied waterways—including the Missouri, Mississippi, Ohio, Sacramento, Columbia and Snake rivers—will increasingly lose the ability to support river wildlife unless Corps habitat restoration efforts are accelerated. It has become increasingly clear that the Corps is only agency with the legal jurisdiction and requisite expertise to repair many of our nationally significant rivers and estuaries.

We recognize that the Corps must continue to construct navigation and flood control projects which are economically justified, environmentally sound, and serve the nation's interest. However, many Corps projects continue to be economically suspect, environmentally unacceptable, and serve primarily private interests. The reasons are two-fold: the Corps' outdated methodology for predicting the benefits and costs of proposed projects, and a hopelessly politicized decision-making process.

The evidence supporting the need for reform is overwhelming.

Many Corps flood control and navigation projects have failed to produce predicted benefits, or have resulted in unacceptably high environmental costs. Some Corps planners have bent the rules of project planning to support economically questionable projects, and the current absence of meaningful oversight has created an atmosphere conducive to this kind of abuse. Many projects are built to serve the needs of a handful of special interests, and the Corps frequently treats local cost-sharing partners—rather than the American people—as their clients. Despite a growing backlog of authorized projects, an increasing number of Corps projects primarily benefit private interests—including many projects which lie outside the Corps' traditional missions of flood control, navigation and restoration. In some cases, the Corps has simply failed to mitigate for the environmental impacts of levees, dams and channels, or mitigation projects have failed to produce promised benefits. Some flood control and navigation projects are constructed even when there is ample evidence that project impacts cannot be cost-effectively or successfully mitigated.

Congress must act now to ensure that future Corps projects are economically justified, environmentally sound, and serve the national interest. In particular, Congress should include reforms in the Water Resources Development Act of 2000 which modernize the agency's measurement of benefits and costs, require independent review of significant or controversial projects, expand the input of local stakeholders, prioritize Corps spending, and require adequate mitigation for Corps projects. We will not support, and will urge the President to veto, water resources legislation which fails to reform the Corps.

1) Require Modern Estimates of Benefits and Costs

Congress should direct the Corps to reform the agency's feasibility study process to require that Corps projects have primarily public, rather than private benefits, and should include reforms which reflect the uncertainty of Corps benefit-cost calculations.

The nation should no longer invest public resources simply because the benefits of a proposed project, to whomever those benefits may accrue, exceed project costs. We should instead replace this New Deal-era formulation which a system which requires that future projects produce primarily public benefits—including the public benefits of healthy rivers—and apply this system to both proposed and previously authorized projects. Congress should direct the Corps to develop new tools to better predict the benefits and costs of proposed projects. For example, Congress should direct the Corps to measure the extent to which goods shipped by barge would be shipped by other means and to other destinations as transportation costs change. Congress should also require that project benefits be twice as great as project costs to reflect the Corps' inability to accurately predict likely benefits and costs.

Many completed projects have failed to produce promised benefits, including many segments of the Inland Waterway System. Unlike the Mississippi, Ohio and Illinois rivers, many segments of the Inland Waterway System have never supported as many barges as predicted, including the Missouri, Alabama-Coosa, Atlantic-Intracoastal, Tennessee-Tombigbee, Allegheny, Pearl, Willamette, Apalachicola, Kaskaskia, Kentucky, White, and Red rivers. Consequently, 18 of the Inland Waterway System's 29 segments move less than 3 percent of the nation's barge traffic

while consuming more than 30 percent of the system's Operations and Maintenance costs.

Similarly, the costs of many Corps projects are frequently greater than forecast. In retrospect, many Corps projects—though economically justified on paper—have not proved to be economically justified in reality. Congress should direct the Corps to develop new tools to predict project benefits and costs and, to address this uncertainty, require that project benefits be twice as great as project costs. Congress should apply this requirement to previously authorized projects as well as future projects. Steps should be taken to better monitor the performance of completed projects to ensure that the Corps' benefit-cost calculations are reasonably accurate, and a new process should be created to regularly review and update project operations to reflect changed conditions and new information.

2) Require Independent Review, Greater Local Input and Civilian Oversight

Congress must take steps to protect the integrity of the Corps' decision-making process. There is mounting evidence that Corps planners have bent the rules of project planning to support economically questionable, environmentally unsound projects. There are many reasons for this abuse: self-preservation; the elimination of technical review by the Corps' review branch; the absence of meaningful oversight by Congress and the Assistant Secretary of the Army; and, growing pressure from cost-sharing partners and other Corps constituents.

As we have seen, there is evidence of abuse of the Corps's decision-making process by the Rock Island District—a string of e-mails, internal memos and affidavits which show that the Corps' military and civilian leaders urged economists to exaggerate expected demand for barges to justify the construction of new locks. Top Corps officials ordered the Rock Island study team "to develop evidence or data to support a defensible set of . . . projects." One memo candidly declared that if the economics did not "capture the need for navigation improvements, then we have to find some other way to do it."

But there are other examples of abuse and inaccuracies as well.

A $311 million proposal to deepen the Delaware River incorrectly presumes that oil refineries will deepen their approach channels to take advantage of the deepening project. Indeed, the Corps knowingly ignored evidence that some refineries will not deepen these approach channels. A $230 million proposal to deepen Savannah Harbor is based upon predictions of unprecedented and unlikely demand for the port, estimates which ignore ongoing consolidation in the deep draft shipping industry. Corps planners have routinely underestimated the long-term maintenance costs of beach replenishment projects. And, as we have seen in the case of Devil's Lake, this abuse of agency planning rules is not limited to the Corps' military leadership or the agency's civilian planners.

Unless the Corps' decision-making process is reformed, Members of Congress and the public will have no guarantee that projects are economically justified or that a project's environmental impacts have been adequately assessed and mitigated. In order to ensure that Corps studies are based on sound science, Congress should require independent review for projects whose total costs exceed $25 million, or projects which are considered controversial by the U.S. Fish and Wildlife Service. Independent review of large Corps projects would have several benefits: independent review would detect abuses or mistakes, discourage abuses, and empower Corps planners being pressured to bend the rules by Corps cost-sharing partners and other constituents. Independent review would also inject new ideas into the Corps' planning process.

We do not propose that Corps feasibility studies continue endlessly and fail to recommend projects, as was the case during the 1970's. We believe independent review could be blended seamlessly into the feasibility study phase and would not increase the length or the cost of feasibility studies.

We also urge Congress to balance the influence of cost-sharing partners by creating a stakeholder advisory group, subject to the Federal Advisory Committee Act, to collect the input of local interests and to seek consensus regarding project objectives and design.

Congress should create a commission, as proposed by Senator Daschle in S. 2309, to assess the civil works functions of the Corps, including the quality of the Corps' analysis, whether the Corps' management structure should be changed, compliance with environmental laws, and whether any civil works functions should be transferred from the Department of the Army to a civilian agency or privatized.

Finally, we urge you to work with the Clinton Administration to quickly restore civilian oversight of the Corps, unessential tenet of our system of government. The absence of meaningful civilian oversight offends the Constitution, violates Federal law, and has contributed to an environment where the abuse of Corps rules has

flourished. We strongly oppose Sec. 3102 of the Agriculture Appropriations Bill for Fiscal Year 2001, which is designed to frustrate these important reforms.

3) Require Adequate Mitigation

In some cases, the Corps has failed to mitigate for the environmental impacts of levees and dams, or mitigation has not produced expected benefits. For example, the Vicksburg District of the Corps has a backlog of more than 30,00 acres of promised mitigation which has not been completed. In addition, mitigation for Corps projects often replaces a fraction of the habitat destroyed.

Congress should require that the Corps meet the same habitat mitigation standards as must be met by private developers. In particular, Congress should require the Corps to concurrently replace an acre of habitat for each acre of habitat impacted by a project, and should design projects to reflect the contemporary understanding of aquatic ecosystems. Funding for project construction and mitigation should be included in a single construction appropriation to ensure that mitigation is completed.

In addition, we believe the Secretary should not recommend a project when the impacts of a proposed project cannot be cost-effectively or successfully mitigated. In the past, the Corps would attempt to mitigate for projects regardless of cost or the likelihood of success. Efforts to mitigate for the construction of four dams on the Lower Snake River is an example of this approach—though we have spent more than $3 billion on mitigation, all runs of Snake River salmon are considered endangered by the Federal Government. This has been neither cost-effective nor successful. We propose that an expanded Environmental Advisory Board evaluate projects in the reconnaissance phase to determine whether the project is likely to have environmental impacts which cannot be cost-effectively or successfully mitigated.

4) Meet National Priorities

In light of the backlog of authorized projects, Congress should create new criteria to ensure that future Corps projects reflect the nation's highest priority water resources needs.

Many authorized projects have questionable economic benefits and unacceptably high environmental costs. I have already mentioned several new tests that could be applied to proposed projects as well as currently authorized projects: Congress should require that project benefits be twice as great as project costs, ensure the Corps adequately mitigates for projects, and prohibit the construction of projects when expected impacts cannot be cost-effectively or successfully mitigated. Congress should expand the scope of the current Reauthorization statute to eliminate projects which do not satisfy these tests as well projects with questionable economic benefits, and projects which could be constructed by private interests.

Other steps should be taken to address the backlog and expand the reach of scarce funds. For example, Congress should increase the local contribution required for structural flood control projects, beach replenishment projects, and navigation improvements, and should apply those cost-sharing reforms to proposed and previously authorized projects. In particular, Congress should require states to share part of the cost of navigation projects.

To help guide appropriators, Congress should direct the Corps to develop, in collaboration with the Federal Emergency Management Agency, a flood damage reduction priority list which recognizes the importance of protecting people and public infrastructure. Though FEMA has identified the location of the nation's most repeatedly flooded structures, the Corps does not use this information to guide flood control spending. Indeed, currently proposed Corps flood control projects protect few of the nation's most frequently flooded homes and businesses.

Clearly, many projects should be Reauthorized. In general, we propose that the Congress apply new criteria to authorized and proposed projects to identify those projects which should no longer receive Federal support. However, we believe several projects merit special attention, including environmental infrastructure projects, municipal water supply projects and agricultural irrigation projects. In particular, Congress should Reauthorize irrigation and navigation projects slated for Arkansas' White River.

Finally, the Congress should declare a moratorium on new beach replenishment projects until the Corps completes a National Shoreline Study, and should carefully review beach replenishment projects slated for New Jersey and Long Island. Experts predict that a recent authorization to provide 100-foot wide beaches along all 127 miles of New Jersey's sea coast will cost more than $9 billion over the next 50 years.

5) Expand the Corps' Restoration Mission

As I have already mentioned, many Corps flood control and navigation projects have had devastating impacts on the nation's aquatic resources. Scientists have

linked dams, levees and channel training structures to the extinction of scores of freshwater species, and the likely extinction of hundreds more freshwater species during the next century. Indeed, North America's freshwater species are disappearing as quickly as tropical rainforest species and five times faster animals that live on land. To date, 17 freshwater fish species are extinct, and one in ten of North America's mussel species are extinct. Two-thirds of North America's remaining mussels and one-third of North America's amphibians are imperiled.

Corps projects are a major contributor to the loss of our freshwater biodiversity. More importantly, the Corps is, in many cases, the only agency with the legal jurisdiction and engineering expertise capable of repairing these damaged waterways. For example, the Corps is frequently the only state or Federal agency which can restore wildlife habitat along segments of the 11,000-mile Inland Waterway System. The simple fact of the matter is that the biological future of many of the nation's most nationally significant waterways—including the Mississippi, Missouri, Ohio, Columbia, Snake, Rio Grande, Sacramento rivers—depends solely upon the restoration skills of the same agency which has placed their biological future in peril.

Just as Congress must ensure that flood control and navigation projects reflect sound science, Congress must also ensure that the Corps' restoration and mitigation projects reflect the state-of-the-art. We urge you to apply the same reforms I have already mentioned to the Corps' restoration program—independent review, greater local input, better estimates of cost-effectiveness, and adequate economic mitigation for the economic impacts of proposed restoration projects. These reforms will ensure that restoration and mitigation projects are cost-effective, scientifically sound, and meet broad ecological goals.

Other steps can be taken to improve the Corps' restoration mission. In particular, Congress should allow the Corps to share the cost of land acquisition for restoration and mitigation projects. Currently, project sponsors are required to provide all lands, easements and rights-of-way. In addition, Congress should allow the local-share to be satisfied by in-kind contributions.

6) Restore the Rivers of Lewis and Clark

We also urge the Congress to act now restore the rivers of Lewis and Clark by boosting restoration efforts for the Missouri River by $250 million, as has been proposed by Senator Bond; creating a $200 million Ohio River restoration program; and creating a $175 million Lower Columbia River Estuary restoration program. In next few years, millions of Americans will retrace the steps of Lewis and Clark. But, America's most famous explorers would not recognize these arteries of the continent if they were to return today. Corps flood control and navigation projects have so altered these rivers that many of the wildlife species they encountered are now in jeopardy of extinction. You have an once-in-a-lifetime opportunity to repair these damaged waterways that must not be squandered.

Army engineers forced the broad, slow-flowing Lower Missouri River into a deep, faster canal, eliminating virtually all of the river's islands, sandbars and side channels—the places river wildlife need in order to survive. The river's floodplain was cleared and cut off by a wall of public and private levees. Consequently, more than 30 species have been placed on state and Federal watch lists and more than 100 species are considered rare in some places. One species of sturgeon which has resided in the Missouri for more than 100 million years has been nearly eliminated by Corps alterations implemented in the last 50 years. The Missouri River Valley Improvement Act sponsored by Senators Bond, Daschle, Kerrey,Johnson and Brownback would give wildlife a fighting chance by expanding the Missouri River Fish and Wildlife Mitigation Project and the Missouri River Enhancement Program, assessing opportunities for restoration along reservoirs in the Dakotas and Montana. and bv establishing a long-term monitoring program to measure success.

Dams constructed on the Ohio River to aid commercial navigation inundated spawning habitat for popular sportfish like bass and undermined the river's floodplain forests and wetlands. Legislation that is being developed by Senator McConnell would help meet the needs of river wildlife by authorizing the Corps to restore wildlife habitat, including spawning grounds, side channels, and floodplain forests and wetlands

Finally, several House members have proposed the creation of a program to restore the Lower Columbia River's estuary, where Corps navigation and flood control projects have contributed to lethal conditions for young salmon preparing for life in the ocean. The river's estuary serves a critical role in the survival of salmon, providing refuge and nutrients while juvenile salmon change physiologically from a freshwater to a saltwater organism. Scientists with the National Marine Fisheries Service have concluded that estuary restoration is one of the most promising means of restoring Columbia and Snake salmon runs. Although estuary restoration does not

reduce the need to remove four dams from the Lower Snake River, estuary restoration must be a central component of our salmon recovery strategy.

Conclusion

Congress must act quickly and decisively to restore credibility to the Corps' civil works program. Certainly, this committee should use its oversight powers to investigate abuse of the Corps' decision-making process, including potential abuses by the Clinton Administration. But, the committee should also recognize that the absence of meaningful review, outdated methods of predicting benefits and costs, and studies designed to meet the needs of project sponsors rather than the nation have created an environment where abuse has been able to flourish and will continue to flourish. We urge you to implement important, long-overdue reforms of the Corps of Engineers, including independent review, greater local input, modern estimates and benefits and costs, and adequate mitigation for project impacts.

RESPONSES OF SCOTT FABER TO ADDITIONAL QUESTION FROM SENATOR SMITH

Question. Since 1986, the committee has authorized only those projects that are consistent with cost-sharing requirements established in WRDA 1986. In addition, there must be an identified local sponsor for the non-Federal share of the costs, the project must have a completed reconnaissance and feasibility study, and the Chief's Report must find the project to be technically sound, environmentally acceptable, and economically justified. Do you believe that the committee standard is inadequate and if so, why?

Response. The recent elimination of meaningful technical review by Corps civilian planners undermines the credibility of the Chief's Report—that is, the committee should no longer assume that a proposed project is economically justified and environmentally sound in spite of the presence of a Chief's Report. There are several reasons for this development: the elimination of Washington-level technical review, the Corps' desire to increase agency spending by 50 percent, and pressure by Corps cost-sharing partners. Because Congressional committee members and staff do not have the time or expertise to scrutinize Corps' economic and environmental analyses, we propose that all large projects be subject to independent technical review. In particular, we urge you to require independent technical review for projects with costs greater than $25 million, limit review costs to $250,000, and weave technical review into the feasibility study.

RESPONSES OF SCOTT FABER TO ADDITIONAL QUESTIONS FROM SENATOR BAUCUS

Question 1. Mr. Faber, as you may recall in 1994, I introduced a flood plain management reform bill that would have made some changes to the way the Corps evaluates flood control projects, including calling for the revision of the Principles and Guidelines, which is a reform you say is still needed today. What do you see as the result of revising the guidelines?

Response. Revising the Principles and Guidelines—as was proposed by the Federal Interagency Floodplain Management Review Committee—would ensure that future water resources projects meet both economic and environmental objectives. Currently, the Corps constructs projects which maximize economic benefits and separately construct projects to restore lost habitat—a dichotomy rejected by modern water resource planners and managers. Instead, the Corps should establish an environmental restoration account to complement the existing economic development account, and seek tradeoffs among these two planning goals.

Question 2. Another reform that you say is needed is independent review of projects with a cost of more than $25 million. Independent review often minimizes later controversies and in many agencies already is required for far less costly projects. Could you elaborate on why the Corps needs independent review and why $25 million is your suggested trigger for such a review!

Response. The absence of meaningful technical review of Corps projects has created an environment where Corps planners, under pressure from project cost-sharing partners and boosters, have exaggerated the economic benefits of proposes projects and underestimated environmental costs. We believe that projects which would have significant economic and environmental impacts—that is, projects which cost more than $25 million—should be subject to greater scrutiny.

Question 3. During your testimony, you indicated there were a number of Corps projects that did not achieve the anticipated benefits. Could you provide the commit-

tee a list of those projects and the projected benefits compared to the actual achieved benefits?

Response. Many Corps projects declared economically justified on paper have not proven to be economically justified in reality. Let me give you a few examples:

- On paper, the Corps predicted that barges on the Lower Missouri River would carry 12 million tons of cargo. In reality, barges have never carried more than 3.3 million tons and now carries about 1 to 2 million tons annually. Unfortunately, channelizing the Lower Missouri eliminated nearly all of the river's islands, sandbars and side channels—the places wildlife need to survive—and more than 30 species are now on state and Federal watch lists.
- On paper, the Corps predicted that the Tennessee-Tombigbee waterway would carry 27 million tons of cargo. In reality, barges have never carried more than 8.4 million tons. And the promised regional economic development benefits have never materialized either.
- On paper, the Corps predicted barges on the Red River would carry 3.7 million tons by 1996. In reality, traffic reached 1.1 million tons, and 99 percent of this cargo was materials used to build the waterway, or sand and gravel and limestone—mineral operations which do not require a navigable waterway. Traffic in commercial products was less than 20,000 tons in 1996 and less than 50,000 tons in 1997—less than 2 percent of the predicted traffic. None of the commodities used to justify construction of the Red River waterway in 1968 are among the top ten commodities moving on the river.

STATEMENT OF TONY B. MACDONALD, EXECUTIVE DIRECTOR OF THE COASTAL STATES ORGANIZATION

Chairman Voinovich and members of the Subcommittee, I am Tony MacDonald, Executive Director of the Coastal States Organization (CSO). On behalf of CSO, thank you for the opportunity to testify on the future of the Corps of Engineers. The Coastal States Organization is an association of states formed in 1970 to represent the collective interests of the states in improving the management of our nation's coast along the Atlantic and Pacific oceans, Gulf of Mexico, and Great Lakes. Each member state is represented by a Delegate appointed by the Governor.

Let me say at the outset that I am an admirer of the Corps of Engineers. I say this knowing full well that CSO and individual states have often disagreed with the Corps.

The task of coastal management is complex but the objective is simple, to protect and improve the quality of life for the people who live near and visit the coast. One of the primary means of meeting this objective is the protection of the resources and livelihoods which attract people to the coast. This requires a shared commitment by the Federal Government working with the states and other local project sponsors and communities.

The Federal responsibility in meeting this objective is clear. The Federal Government has a constitutional duty to administer navigable waters. The Corps of Engineers serves a critical national function as the lead agency with the authority and expertise to meet this responsibility. In addition, among Federal agencies, the Corps of Engineers is charged with some of the most challenging tasks:

- Maintaining 25,000 miles of Federal navigation channels which serve as the highways and gateways to the more than 300 ports in the nation, and are essential to maintaining the competitiveness of the United States and meeting our energy and defense needs;
- Providing shore protection to protect coastal communities against loss of life, property and damage to natural resources resulting from coastal storms;
- Ensuring the protection of thousands of lives and billions of dollars of public and private investment from flooding and erosion;
- Environmental protection and restoration of wetlands and other coastal habitat, and
- Correcting the mistakes of the past when the adverse environmental effects of activities and projects were unappreciated.

Over its nearly 200-year history, the missions of the Corps have evolved and continue to evolve. With its multiple missions and the increasing complexity of public policy, the challenges facing the Corps are increasing:

- Population in coastal areas, already the most densely populated area in the country, is increasing rapidly;

- The total volume of domestic and international marine trade is expected to more than double over the next 20 years. Much of the cargo delivered to our ports will be delivered on larger vessels which require deeper waterways;
- More than 44 percent of the inland waterway locks and dams are at least 50 years old. Many locks are undersized for modern commercial barge movements;
- Coastal storms are on the rise and resulting damages are increasing;
- The active project backlog for the Corps estimated to be $37.9 billion;
- Funding for the Corps has been stagnant. Downsizing of the Corps is threatening its ability to provide critical services.

Questions have been raised about the projects which the Corps undertakes, but it needs to be pointed out that the Corps does not just decide on its own initiative to go out and do a project. Projects are demand driven with input from local project sponsors, states, and support from Congress.

The Corps has also been much criticized for the way it conducts its studies and analyses. It should be remembered that the project recommendations are driven more by the specific mandates under which the Corps operates, than by the arbitrary discretion of the Corps. Despite the faults of the Corps studies and analyses, they are based upon comprehensive cost-benefit and project assessment tools developed to address both public policy and economic considerations.

How do we address the current backlog?

There are three simple answers, although hard choices, to meeting the over $30 billion backlog of authorized projects.

(1) Increase funding for the Corps;
(2) Find and establish greater efficiencies in planning, designing, constructing and maintaining projects; and
(3) Carefully work with local project sponsors to review the backlog to assess the current need for projects as authorized.

Recommendation No.1

Increase Funding for the Corps. CSO strongly supports increased funding for the Corps of Engineers. Corps projects comprise vital components of our nation's infrastructure, and are essential to our well-being. Few question the need for investment and maintenance in our road, rail and air traffic systems. There should be little question of the need to maintain our marine and inland waterway transportation system as well. Likewise, the investments in storm protection, flood and erosion control have prevented the loss of untold billions of dollars.

There is a misimpression among some of the public that the Civil Works Program is a pork barrel. The vast majority of projects address very real needs. This is especially true along the coast. Coastal erosion, such as along the bluffs of Lake Erie or the beaches of Virginia, Long Island, or Florida, is threatening property and public infrastructure. In addition, it is destroying wetlands and other habitat. The Water Resources Development Act of 1996 specifically recognized shore protection as a function of the Corps, yet the Administration has refused to fund authorized projects for shore protection through beach renourishment even though Congress increased the local cost share for the long-term maintenance of these projects in WRDA 1999. While the Administration turns a blind eye on the need to maintain our nation's beaches, the problems resulting from erosion and threats of coastal storms only worsens.

Without Federal assistance and the planning and design expertise of the Corps of Engineers, the pressures within coastal communities to resolve the problem of erosion can frequently lead to more costly and more environmentally damaging solutions, i.e., the construction of seawalls. The damaging effects that these structures have on beaches, the biological communities that depend on the intertidal zone, and the economic revenues and tax bases of communities are the reasons why beach renourishment has been utilized as an advanced alternative to shoreline hardening. Furthermore, I note that this is a glaring inconsistency in the Administration's policy in regards to its much touted commitment to environmentally beneficial nonstructural approaches to flood damage reduction. In WRDA 1999, Congress authorized the Administration's proposed Challenge–21 program which is intended to restore the flood plain environment with the use of nonstructural approaches. Yet, in regards to preserving the beaches and their role in the coastal ecosystem, the Administration policy would abandon communities to fend for themselves using seawalls and groins which compound the problems resulting from shoreline change.

Recommendation No. 2

Increase the Efficiency of the Corps. Reduced time of project completion, reduced conflict, more comprehensive approaches to management, and greater coordination

with Federal agencies and states can result in greater efficiencies in planning, designing, constructing and maintaining projects.

Reduce the Time of Project Completion

One of the greatest factors in the escalation of project costs is the increase in the time it takes to complete a project. Time wasted is money spent. Many, if not most, projects are not completed in the shortest available time. This is due in part to the need of the Corps to keep as many Congressional and local project sponsors as happy as it can at any given moment. By spreading around funding to as many projects as possible, project completion is lengthened and costs increased. A good answer to this dilemma is found in CSO's first recommendation: provide more funding for the timely completion of projects. The Corps should also look for opportunities to work more creatively with the local project sponsors and private sector to implement projects through project grants and expedite construction scheduled. In some cases, many different Corps "projects" may be combined into comprehensive and restore management schemes. For example, navigation and restoration in San Francisco Bay, sediment reduction, beneficial reuse of dredged material and harbor dredging in Toledo.

Reduce Conflicts which Contribute to Delays

Another source of project delays results from controversies which result when project objectives may be inconsistent with state policies. Among coastal states, there have been numerous conflicts with the Corps of Engineers over how dredging is conducted and dredged material disposed. Working with the National Dredging Team, CSO cosponsored a Workshop last year for Corps District personnel, state coastal managers, and port representatives to stimulate discussion of ways to avoid and resolve the conflicts being experienced by the Corps Districts and states. Along with my testimony, I am providing committee members with the proceedings of the Workshop prepared by the National Academy of Public Administration. Within the proceedings are several key recommendations:

- Improved clarity about goals and greater transparency in the decision-making process can reduce conflicts between the Corps and state and local organizations;
- The planning process and procedures for state and Federal coordination can be improved with earlier project planning, regular meetings between state and Federal agency representatives, broader public participation;
- Longer-range planning will contribute to better project implementation and funding; and
- Better scientific understanding and greater public education are necessary to make better decisions and to garner support for further expansion of these programs.

Provide for a More Comprehensive Approach to Management

Much of the conflict between the Corps and states has centered on how to meet state requirements for the beneficial reuse of sand and other dredged materials. This issue highlights, another avenue for improving the efficiency of the Corps of Engineers the need for greater project integration. WRDA 1999 signaled a movement in this direction with the authorization of the National Shoreline Study. CSO holds out much hope for the findings and recommendations of this study, one of which is the feasibility of a systems-based approach to shoreline management.

The project-by-project approach of the Corps to respond to shoreline change is costly, inefficient and sometimes inconsistent. We long ago realized that in order to manage rivers effectively, we need to take into consideration the entirety of the river and its surrounding watershed. We need to do the same in managing the nation's shoreline. The change needed in our approach is the difference between responding to shoreline change and managing for shoreline change. Shoreline management requires an understanding of the littoral processes and systems occurring along the shore, sediment sources and their movement within the system, and agreement on the primary objectives in managing segments of the shoreline. CSO supports a sediment management policy that recognizes the importance of conserving sand resources and, wherever possible, prevents the removal of sand and sediment resources from the littoral system along the nation's coast or promotes beneficial reuse of that sand to restore beaches and shoreline habitat.

The National Shoreline Study will:

- Advance our understanding of the dynamic processes, both natural and anthropogenic, which change the coastlines and sea floor along coastal margins;
- Provide information critical to planning for the future environmental and economic health of the nation's coastal areas;
- Provide a geologic framework for policy decisions; and

- Provide a foundation for a reassessment of national policy.

The Office of Management and Budget, the Under Secretary of the Army for Civil Works as well as the Coastal States Organization, the American Coastal Coalition and the American Shore and Beach Preservation Association all support the National Shoreline Study. The President's fiscal year 2001 budget requests funding for the Study, and we are especially pleased that Senator Lautenberg has provided his support for funding the study.

Promote Interagency Cooperation

The benefits of the aforementioned National Shoreline Study go beyond the study itself. The National Shoreline Study is intended to be a multi-agency cooperative effort which utilizes and integrates the data, expertise and resources across federal, state and local agencies. It is our hope that this effort will be an exemplary demonstration of how improved efficiencies can be obtained by the Corps working with its Federal and state partners.

This type of interagency cooperation envisioned for the National Shoreline Study can and should be applied to many other areas. For example, legislation of the Corps mission before this Congress, S. 835, the Estuarine Habitat Restoration Partnership Act (sponsored by the late Senator John Chafee), would require the Corps working with its Federal counterparts also charged with estuarine restoration responsibilities to develop a joint strategy to restore one million acres of estuarine habitat over the next 10 years. The integration and coordination of Federal agency projects pursuant to the strategy will provide greater leverage of the funds provided under the Act. CSO is very pleased that the Senate has passed S. 835, and we are strongly encouraging the House to bring its companion, H.R. 1775 (Gilchrest, R-MD), to the floor for approval.

Recommendation No. 3

Review the Project Backlog to Reassess Project Needs. With a $37.9 billion backlog, there needs to be an independent review in partnership with the local project sponsor and reassessment of authorized projects. While I do not believe that such a reassessment should be binding on the Congress, it would at least provide a framework to begin to establish a plan to reduce the backlog of Corps projects.

Conclusion

The specific recommendations provided to the Subcommittee today on improving efficiencies in the Civil Works Program reflect CSO's perspective and experience. The general recommendations provided in our testimony—reducing the time of project completion, reducing conflicts, taking a more comprehensive approach for project integration, and promoting interagency cooperation, can be applied to a much greater range of Corps activities. Over the years, there have been numerous studies and recommendations on improving the Corps. CSO recommends that Congress request a study by an independent entity, summarizing these strategies and providing recommendations on improving efficiency and needed changes to Corps authorities.

The Corps has a difficult job to do. We need to help them to do it better. We hope that the attention from the current controversies involving the Corps will be utilized to undertake a review of the Corps which will result in constructive improvements to the Civil Works Program and the Federal policies that guide it.

Thank you again for the opportunity to testify before you. I am pleased to answer any questions.

TESTIMONY OF WILLIAM PARRISH, ASSOCIATION OF STATE FLOODPLAIN MANAGERS, INC.

Mr. Chairman, Senator Baucus, members of the subcommittee, I am Bill Parrish, vice chair of the Association of State Floodplain Managers and State Floodplain Manager for the State of Maryland. The Association of State Floodplain Managers, Inc. and its 12 State Chapters represent over 3,500 State and local officials and other professionals engaged in all aspects of floodplain management and hazard mitigation. All are concerned with working to reduce our nation's flood-related losses. we work daily with cities, towns and counties that are struggling with pressure to build in flood hazard areas, working to rebuild more wisely after floods and planning to implement new programs and undertake flood control and management projects. Our State and local officials are the Federal Government's partners in implementing programs and working to achieve effectiveness in meeting our shared objectives. .

Wise, sustainable floodplain development and reduction of flood losses in our nation's 20,000 flood prone communities saves lives and property and also saves taxpayer dollars in disaster relief and recovery costs. The Association has been involved in floodplain management and flood control policy for decades. During the most recent decade, this nation has made some progress toward more sustainable and responsible approaches to reducing flood damage and costs. Nevertheless, we continue to see increased damages from flooding' now approaching $5–8 billion each year.

TOWARD LOCAL SOLUTIONS

The Association supports both structural and non-structural flood loss reduction projects, but believes we need to achieve a better balanced approach to flood loss reduction and prevention through stronger roles and responsibilities at the local and state levels. Federal flood policy should support and encourage local and

state solutions to flooding problems and costs. Often, locally developed solutions will address multiple local concerns, incorporating economic, social and environmental considerations into flood control and management strategies. We encourage Congress to support policies and programs mat will assist communities and citizens develop and implement local solutions.

Successful examples of locally generated floodplain management approaches that address multiple local objectives do exist. We should learn from these successes and replicate them. The Association of State Floodplain Managers (ASFPM) is proud of the efforts coordinated by our member, Dave Kennedy, Village Administrator of the Village of Richmond on the Ohio River. Mr. Chairman, you may be familiar with that local decision not to build a flood wall. It is a good example of the local economy not being able to support the cost-share and maintenance agreement components of a Corps of Engineers project, but needing to reduce flood risk, while preserving the cultural richness and aesthetic attractiveness of the village. An approach was devised which included clearing the floodway, developing a public response plan geared to water levels and engaging in a significant public awareness effort.

THE FEDERAL ROLE

The Federal Government has a key role to play in helping to reduce flood damage, but that role has changed and evolved from what it was 30 to 60 years ago. It has become apparent that federally developed solutions often yield single purpose projects which tend to address specific flooding problems, but may pay insufficient attention to other critical local considerations such as economic development, housing , water quality, watershed planning, natural resources, recreation and quality of life.

We have learned that some structural solutions to specific flooding problems can inadvertently create new flooding problems downstream. Some generate higher operation and maintenance costs than are feasible for a community and lead citizens and local officials to believe flooding is a Federal problem, enabling them to ignore prevention and mitigation at the local level. Local governments and citizens grow to believe the Federal Government will bail them out if flooded or if the problem gets worse.

Structural flood control projects are necessary in many instances and are often advocated by our members. Unfortunately, however, without the ability to offer various solutions or a mix of approaches, structural policies and programs can provide incentives to pursue solutions which may not be the best choice for building hazard resistance in some communities. It is important to recognize that current Federal flood policy rewards those communities and states which do the least to prevent and solve their flooding problems. Those rewards come in the form of Federal disaster assistance, Federal flood control projects and cost-sharing for these actions. The Corps cost-sharing formula needs to evolve in order to be consistent with the evolution to new approaches in flood loss reduction in the nation.

ADDING TOOLS

As state and local officials whose job it is to assist our communities in saving lives and avoiding damage from floods, we know how important it is to have a variety of tools available. This allows us to help communities to plan their floodplain management comprehensively, to meet multiple objectives, to get the most value for the federal, state and local dollars spent and to become fully engaged in managing their own risk.

In recent years, the U.S. Army Corps of Engineers, with the assistance of the Congress, has developed a number of programs which provide broad technical assistance and expertise to local communities in these efforts. Our members have found programs like Flood Plain Management Services and Planning Assistance to States

to be valuable tools for which there is much more demand than can be met. Thousands of communities have used these low cost technical assistance programs which help them plan and implement local solutions with long term benefits, thus saving in federal, state and local disaster expenditures. We are very pleased with the authorization of the Challenge 21 initiative because it offers essential flexibility such as the ability to accommodate smaller projects for communities where a traditional structural project might not be justified or the ability to mix structural and nonstructural elements to better design an overall project. This program can fill a gap that has existed in the Corps' ability to be effective in addressing certain kinds of floodplain management situations. If sufficiently well funded, it is likely that hundreds of communities in the nation can benefit substantially from Corps' efforts. We encourage the Congress to continue these efforts as a supplement to any cost-effective, feasible and environmentally acceptable projects funded.

IN SUMMARY

In summary, the Federal Government should facilitate local development of flood loss reduction strategies and offer incentives for wise decision-making. The Corps of Engineers is pursuing some directions which add new tools for enhancing the effectiveness of those already in the toolbox. Tools which allow Corps' programs to meet multiple objectives for localities in their floodplain strategies, which complement other Federal programs and which stretch the positive impact of Federal dollars on loss reduction and public safety represent forward looking evolution of the Corps' critical mission.

Thank you for the opportunity to present this testimony.

RESPONSES BY BILL PARRISH TO ADDITIONAL QUESTIONS FROM SENATOR SMITH

This letter responds to the questions submitted by Senator Smith for the hearing record. This letter supplements the testimony of the Association of State Floodplain Managers that I presented on May 16, 2000.

Issue one.—Proposal to increase the non-Federal cost share from 35 percent to 50 percent for structural flood control projects. Would it provide incentives for nonstructural flood control projects?

Response. We believe that continued debates over the cost share percentage as currently crafted is non-productive. The primary policy outcome becomes "how much is implemented by the Federal Government and who pays". Adjustments in other policy areas such as the mix and match of projects is a bit too obscure to draw any conclusion.

We think there is a better approach, one that in time reduces the reliance on the Federal Government, and encourages the development of local and state self sufficiency in managing flood damages and costs. A sliding cost share that financially rewards local and state governments for proactive floodplain management activities will restore that self reliance, lead to long term reduction in Federal expenditures, and reduce disaster costs. This concept has been discussed previously and does not need to be complex.

Issue two.—Is the Committee on Environment and Public Works standard for approving projects adequate?

Response. Problems with projects are more apt to occur in the process before the projects get to Congress. The Congressional process seems thorough, in most cases, and is surely time consuming. However, it relies on data developed in a process that has many concerns, including an over reliance on the Benefit/Cost.

The ASFPM suggests this question may not lead to consideration of the best national approach to encourage wise use of floodplains and sustainable development in the nation. It is now clear that projects which (1) get built the quickest, (2) have the most community support (and thus least opposition), and (3) address multiple community problems, such as flooding, community development, ecosystem stability, water quality, etc., are those projects which are locally planned, with technical and financial support from Federal and state agencies. Examples of communities where the Corps has played such a role include: Stockton, CA; Clark Co, NV; Napa Valley, CA; Harris Co, Texas and Tulsa, OK.

The role of the Federal Government must change from "doing" the projects to "facilitating" projects. Local governments must take the lead in developing their comprehensive plans and involving all members of their public to solve multiple problems and gain broad support. Only in this fashion, will we move to truly sustainable development, with the Federal Government assuming a role which will be less costly and lead to more feasible projects which get built quicker.

We suggest to the committee that a transition to a sliding cost-share would be a strong step to lead the Nation forward. Communities and states will be encouraged to accept responsibility for their share in preventing future disasters, in a way that they can control and support. To help explain some of the local initiatives which could determine cost-shares, and to show such local initiatives need not be complex or expensive to undertake, an example list is attached.

December 15, 1997.

RE: Low cost incentives for better floodplain management

The Association of State Floodplain Managers has long advocated Federal cost sharing arrangements that would provide incentives to state and local governments to take actions on their own which will reduce the number of structures at risk in their community/state to flooding.

Some people feel such incentives will penalize poorer communities and states, because they feel all such actions require money to implement. In response to that concern, the ASFPM provides this partial listing of actions which we feel can be implemented at little or no cost to the community, but rather simply require a commitment from local leaders to reduce the exposure of citizens and property to flooding.

- Identify and inventory community natural hazards.
- Adopt local comprehensive community mitigation plans—using the many available programs which help with planning [HUD,FEMA, RPC's and state]
- Determine if public buildings are in flood hazard areas; purchase flood insurance, and implement low-cost mitigation measures for those buildings.
- Preserve open space use through planned density development.
- Information and education to citizens about hazards they face.
- Real estate disclosure of the hazards that property may experience.
- Development regulations beyond national minimum standards.
- Warning and preparedness planning in the community.
- Retrofit at-risk structures using available programs for funds.
- Partnering with private business on mitigation so everyone saves money.
- Certification of local code administrators and planners so programs can be planned and administered by knowledgeable staff.
- State/local tax break for money invested in risk reduction measures.
- Tax differential depending on hazard risk location of property.

Many of these items can be done at the local level, or the State can assist or require each community to undertake them in order to comply with rules or to be eligible for certain programs. If it's a state-wide requirement, all communities in that state receive credit for the action, as long as its clear the state has a mechanism for monitoring compliance.

As an aside, many of the communities eligible for Community Rating System credit, are not affluent, but still commit to making communities safer from natural hazards.

STATEMENT OF GEORGE GRUGETT, EXECUTIVE VICE PRESIDENT, MISSISSIPPI VALLEY FLOOD CONTROL ASSOCIATION

Chairman Voinovich and members of the committee. Thank you for letting me come before you today to discuss some matters very important to the Mississippi Valley Flood Control Association, the people of the Lower Mississippi Valley, and the Nation as a whole. The Corps Civil Works program, processes and management structure have come under a well-financed and well-orchestrated attack by a group of organizations and agencies. These groups have little understanding of the role civil works projects across the Nation has played in the protection of citizens and property, and the better standards of living that would not have been possible without their construction. If these groups are successful in their efforts, we will continue to suffer irreparable damage from the devastating floods that regularly keep many parts of the Nation from making economic progress.

Of particular interest to residents of the Lower Mississippi Valley is the Mississippi River and Tributaries Project. Although this project is regional in scope, I believe it serves to demonstrate a national issue. Before the MR&T Project, floods regularly devastated the Lower Valley, killed hundreds of residents, flooded millions of acres, and kept the region in a state of poverty with poor health and living conditions. Because of the 1927 Flood, recognized as one of the great natural disasters ever to occur in the United States, the MR&T Project was implemented to protect this area from ever having to suffer another such disaster. With the MR&T Project,

the region has become economically stable, and although it still needs to make strides economically, contributes greatly to the economy of the Nation. However, the job isn't complete. Today, $4.6 billion remains to be constructed on a project begun many years ago, and because of inflation, lack of funding, and environmental and structural modifications, the completion date has slipped 31 years over the past 20 years. Because of low and declining investment levels, we are actually getting further away from completion!

Although many areas of the Nation are protected from major floods, there are still very important portions of other projects that, although authorized by the Congress, remain uncompleted. Indeed, there is a large backlog of authorized, uncompleted or unstarted projects nationwide that are not being financed. Without these projects, we are losing benefits and economic efficiencies that can never be recouped. Proposals that are being pushed by environmental groups and the Administration will put unparalleled new environmental restrictions on all civil works projects. This will not only further stifle completion of the projects, but will jeopardize the needed maintenance of existing features. We cannot risk the lives of the citizens and the billions in property protected by these projects.

Some of the current proposals that greatly concern us include:

1) A draft policy that the Council on Environmental Quality is circulating within the Administration, entitled, "Enhanced Protection of Wetlands and Water Resources". The proposal calls for a review of all Corps policies and possible changes to the current Principles and Guidelines for Water Resource Planning, likely imposing much stricter environmental standards. We are greatly concerned about the following possible impacts and implications of this proposed policy:

- This proposed policy will halt all structural flood control projects because it is impossible to have structural flood control that does not impact wetlands.
- It will stop all maintenance of existing flood control channels and navigation projects as well as raising of the main line Mississippi River Levees.
- The draft directive not only targets Federal flood control, but port authorities, navigation, drainage projects, and private development activities.

2) In a move perhaps related to the CEQ initiative, the U. S. Fish and Wildlife Service is pushing for a comprehensive environmentally-focused review of the MR&T Project calling for implementation of non-structural flood control measures that would create so-called New Directions for the MR&T Project.

3) The Administration has submitted its version of the Water Resources Development Act of 2000 to Congress. There is no request for authorization for any flood control, navigation, or harbors project in the bill. Instead, there is increased funding for the environmental project for the Florida Everglades. We have no objection to a balanced approach to protecting the environment, but we cannot continue to risk the lives of people and billions in property with such a one-sided approach. Also, the bill would increase cost sharing for structural flood control from 35 percent to 50 percent. The Lower Valley already suffers economic problems and simply cannot bear any more project costs. I am sure the same is true of other areas in the Nation.

We think that the current Principles and Guidelines for Water Resource Planning have served the Nation well and provide a balanced approach. We do not object to, in fact we have always recommended, a balanced approach to addressing the needs and opportunities related to water projects, including environmental concerns. However, there must be a process that continues to recognize economic growth, and standard of living while maintaining high environmental standards.

Another broad concern is the apparent shift from the proven concepts of structural flood control to unproven concepts. While we think that non-structural solutions can be part of an overall plan, it is wishful thinking to believe that such methods can completely solve flooding problems. In the case of areas that can be impacted by major flood events, this approach alone is too risky to citizens and property.

In conclusion, I request that you reject these proposed changes. This is in the best interest of millions of citizens whose very lives, as well as their livelihoods, depend on a sound, balanced approach to solving water resource problems. Such an approach is already in place with current guidelines and the Corps management structure. We need the national will and determination to face them. The Nation's future depends on it. Thank you for the opportunity to speak to you today.

RESPONSES BY BOB GRUGETT TO ADDITIONAL QUESTIONS FROM SENATOR SMITH

Question 1. Are there flood control navigation or harbor projects that had completed Chief's Reports on April 10, 2000, the date on which the Administration

transmitted its WRDA 2000 proposal to Congress, which were not included in the Administration's proposal?

Response. No.

Question 2. Since 1986, the committee has authorized only those projects that are consistent with cost-sharing requirements established in WRDA 1986. In addition, there must be an identified local sponsor for the non-Federal share of the costs, the project must have a completed reconnaissance and feasibility study, and the Chief's Report must find the project to be be technically sound, environmentally acceptable, and economically justified. Do you believe that the committee standard is inadequate, and if so, why?

Response. Although the Mississippi Valley Flood Control Association disagrees with the cost-sharing requirements for flood control projects and opposed passage of WRDA 1986 for this and other reasons, we realize that WRDA 1986 is now a matter of law, therefore we believe that the committee standard as outlined is adequate.

STATEMENT OF WAYNE BRUNETTI, NEW CENTURY ENERGIES, INC.

Mr. Chairman. My name is Wayne Brunetti, and I am the Chairman and Chief Executive Officer of New Century Energies, Inc. New Century Energies is a public utility holding company headquartered in Denver, Colorado, serving 1.6 million customers in Colorado, Texas, Wyoming, New Mexico, Kansas and Oklahoma. NCE will soon merge with Northern States Power, a utility based in Minneapolis, Minnesota, to form Xcel Energy. Xcel Energy will be the eighth largest utility in the country, serving 3.1 million customers and generating over 21,000 megawatts of electricity.

NCE has made environmental excellence one of its priorities. It has been responsible for a number of innovative environmental programs, such as its Windsource program. Windsource is the largest customer driven renewable energy program in the country. Later, I will discuss another innovative program that is especially pertinent to your efforts.

I appreciate the opportunity to testify today regarding some of our experiences with the Clean Air Act. As in other parts of the country, the West has often grappled with the Clean Air Act's rigidity and the EPA's inflexibility. In the last 5 years, we have found that one of our greatest challenges is complying with the requirements imposed on us by EPA under the Clean Air Act.

Much of the electricity in the West is generated by coal-fired power plants. For example, 74 percent of the electricity generated by NCE comes from coal-fired facilities. The West also produces a growing percentage of the coal burned in power plants throughout the country. The popularity of Western coal arises from its low sulfur content, something we in the West have known about for a long time. Typically, even our uncontrolled plants emit sulfur dioxide at a lower rate than two-thirds of the country's coal-fired plants.

The air quality concerns in the West are also different from the East. Most of the country's National Parks, Wilderness Areas and other "Class I" areas are located in the West, so the region is naturally concerned about the impact of emissions from mobile and stationary sources on visibility in these areas. For our company, that translates into concerns about emissions of sulfur dioxide, in spite of the fact that these emissions are already relatively low.

The West's urban centers have made great progress addressing air quality. For example, although it is still characterized as a "non-attainment" area, Denver has not violated an ambient air quality standard for 5 years. As the committee may know, the Denver metropolitan area is among the fastest growing in the country. Our company struggles daily to provide adequate power supplies to meet this expansive growth. Air quality issues have a significant impact on this effort.

In the West, as elsewhere, EPA administers the Clean Air Act in an irrational, costly way that often does not benefit the environment. Let me give you some examples:

- As I mentioned, growth in Colorado is substantial and requires that we obtain significant new generating capacity to avoid energy shortages in the Denver metropolitan area. The Colorado Public Utilities Commission requires our subsidiary, Public Service Company of Colorado, to acquire these new resources through competitive bidding and encourages the company to enter into contracts with independent power producers rather than build new plants itself. Last fall, EPA ruled that a new, independent power plant owned by a third party was a modification of a nearby, existing plant. EPA based this ruling only on the fact that the independent power plant would be connected to the Public Service Company electric system. The effect of EPA's interpretation is to require expensive emission controls on new, independent "peaking" power plants that operate only a few hours a year—often making

them uneconomical to operate. Because it may stand in the way of our efforts to provide adequate power to the people of Colorado, we have challenged EPA's interpretation in the 1Oth Circuit Court of Appeals.

- Earlier this year, we were attempting to obtain a Prevention of Significant Deterioration permit for a new gas-fired generating unit at our Fort St. Vrain plant. Rather than install EPA's preferred nitrogen oxide control equipment (selective catalytic reduction), we proposed to make much greater nitrogen oxide emission reductions—at much lower cost—at one of our existing coal-fired units. The state of Colorado and the environmental community were supportive of this proposal. EPA, however, rejected it as an affront to the "integrity" of the Clean Air Act.

These are just two examples of the perverse outcomes that often result from EPA's interpretation of the Clean Air Act. Our experience with the Agency stands in sharp contrast to our dealings at the state level, and I think you might find our experience useful as you grapple with these problems.

At NCE, one of our operating priorities is "Customer First." We try to be responsive to our customer needs and desires. During the initial phase of our Windsource program, we conducted surveys that indicated 62 percent of our customers would be willing to pay a little bit more for "cleaner" power. As a result, we began to consider alternatives to address the customers' concerns. Our best opportunity was in Denver itself.

Public Service Company operates three coal-fired power plants in the Denver metropolitan area. We became convinced that, unless we responded to the community's concerns, our next great challenge would be over the emissions from these plants. Therefore, in 1997 after much study of different alternatives, we proposed a voluntary emission reduction program to reduce sulfur dioxide emissions from those plants by 70 percent and nitrogen oxide emissions by 40 percent. We stated that we would need three things to implement our proposal:

- Flexibility in the operation of the facilities;
- Assurance that new state regulations would not require additional reductions from those facilities for a period of 15 years; and
- Recovery of the cost of the new controls.

Having worked successfully with the environmental community on our Windsource program, we first presented this proposal to them. We also took it to a wide range of other interested parties, including businesses, labor unions, coal suppliers, the local air quality planning agency and the appropriate Colorado state agencies. We worked closely with these groups to develop and pass legislation that would allow our proposal to become a reality. That legislation, Colorado Senate Bill 98–142, was passed by the General Assembly during the 1998 session. Senate Bill 142 encourages the Colorado Air Pollution Control Division to enter into flexible voluntary emission reduction agreements with stationary sources. It grants such sources a period of "regulatory assurance" during which they will not be subject to additional state regulatory requirements. For coal-fired power plants, Senate Bill 142 specifies that a 70 percent reduction in sulfur dioxide emissions will result in a fifteen-year period of regulatory assurance. The Act also ensures that regulated utilities (such as Public Service Company) can recover the costs of these controls from its customers.

In July 1998, Colorado and Public Service Company entered into a voluntary emission reduction agreement to implement our proposed Denver emission reduction program. The Agreement grants Public Service Company flexibility in complying with its requirements—through annual emissions averages, flexible tonnage caps and trading of emissions between the different plants. It grants us certainty by ensuring that the plants will not be subject to new or different state requirements for a period of 15 years. And, it assures that we can recover the costs of these controls in a way that does not put the plants at a competitive disadvantage should the electric utility industry in Colorado be restructured.

Unlike traditional command and control approaches, Senate Bill 142 allowed us to define the most cost-effective way to reduce emissions from the plants. Our analysis led us to retire the two oldest and smallest units, install relatively low cost, less effective controls on the smallest of the remaining units and install controls to achieve the maximum reductions on the largest units. We are now in the process of engineering these controls and will be in compliance with the new emission limits beginning on January 1, 2003.

The success of this plan was the result of a great deal of hard work by a broad range of interests. I do not believe that, under the current Clean Air Act, we could have reached such an environmentally beneficial result by working with EPA. This plan became a reality largely because of the leadership of the state of Colorado.

As compared to our Denver emission reduction program, EPA's regulation of air quality under the Clean Air Act appears to be broken. It frequently creates obstacles to cost-effective environmental improvements. Our recent experience at our Fort St. Vrain plant confirms that fact. As Senate Bill 142 demonstrates, there are ways to make environmental improvements without jeopardizing the financial integrity of companies. We did it in Colorado.

Again, this committee is to be commended for exploring a new approach to regulation of air quality. I urge you to learn from our experience. I believe that the four broad concepts embraced in Colorado Senate Bill 142 should form the basis of any reforms to the Clean Air Act: flexibility, regulatory assurance, cost recovery and state control. These four concepts were at the heart of Senate Bill 142. We have already seen how effectively they can result in significant emission reductions. I believe that, in one form or another, they will work in your process as well. With them, you will be surprised by the degree of environmental progress that the utility industry can achieve.

Thank you for allowing me to be here today. We look forward to working with you and your staff on these issues in the months ahead.

TESTIMONY OF CHARLES D. MCCRARY PRESIDENT, SOUTHERN COMPANY GENERATION

Chairman Inhofe, Senator Graham and members of the Subcommittee, it is a pleasure for me to present testimony to you on significant issues related to the reauthorization of the Federal Clean Air Act specifically as they relate to the electric power generation industry. There are few industries as heavily regulated under Federal, state and local environmental laws as electric power generation. The industry has made remarkable strides in providing reliable economic electric power to a growing economy while steadily improving its environmental performance and reducing emissions. There is growing pressure at many levels for the industry to reduce its environmental impact even further. It is certainly appropriate for this subcommittee to explore ways to improve the environmental performance of our electric generation infrastructure while at the same time making sure that we do not disrupt the supply of economic energy that is so necessary for our continued economic growth.

I am President of Southern Company Generation, which provides services to the fossil and hydro generation assets owned and operated by the operating companies of Southern Company in our traditional Southeastern U.S. service area. Southern Company is the largest generator of electricity in the United States including operating about 30,000 Megawatts of fossil-fueled generation in the Southeast. In this area, encompassing more than 120,000 square miles, Southern Company also operates 5800 Megawatts of nuclear capacity and 2700 Megawatts of hydroelectric capacity. We serve 3.8 million retail customers in this area through our operating affiliates: Alabama Power, Georgia Power, Gulf Power, Mississippi Power, and Savannah Electric.

About 70 percent of Southern Company's generating capacity is fueled by coal, which is the most abundant domestic supply of energy for electricity generation. In Ski coal is used to generate 55 percent of the electric energy in the United States and its ready availability and low cost have been key factors in providing an economic supply of electric energy to fuel America's growing economy over the last decade.

Background

There are presently over 25 Federal programs that regulate air emissions from electric generating plants and some of these programs are over 30 years old. (See Figure 1) The 1977 and 1990 amendments to the Federal Clean Air Act set up a structure for requiring reductions of air emissions along with technology requirements, and very stringent permitting and monitoring requirements. Title IV of the 1990 amendments required a 50 percent reduction in sulfur dioxide emissions and a 2 million-ton reduction of nitrogen oxide emissions from electric generating plants. Further reductions of nitrogen oxide emissions are occurring under the ozone nonattainment provisions of Title I of the 1990 amendments.

The electric generating industry, and specifically Southern Company, has stepped up to the plate and met the challenge of reducing emissions as required by legislation and the follow-on regulatory programs. We have accomplished this by taking advantage of lower than projected costs for low-sulfur coal and by increased competition in coal transportation. Southern Company has also harnessed the power of the marketplace by playing a leading role in developing an emission trading market

in sulfur dioxide and been an industry leader in the development and use of advanced emissions controls.

These reductions in emissions have occurred while the generation of electricity and the use of coal has increased to fuel a growing economy. Figure 2 shows that over the last 30 years America's growth in Gross Domestic Product (GDP) has been almost exactly matched by the growth in sales of electricity. While this has occurred, however, industry wide emissions of sulfur dioxide and nitrogen oxides have gone down. (See Figure 3)

In the case of Southern Company, while our generation is projected to increase by 49 percent between 1990 and 2010, our emissions of nitrogen oxides and sulfur dioxide are both projected to decline by about 42 percent. Our emission rate or emissions per unit of product are projected to decline even further.

These reductions include our commitment in Alabama and Georgia to assist in those state's efforts to demonstrate compliance with the 1-hour ambient ozone standard. We will spend over $1 billion in those states on control technology for further reductions of nitrogen oxides. This involves the installation of selective catalytic reduction technology at seven units in Georgia and one unit in Alabama as well as burner modifications at numerous other plants. This cost means that in the case of Georgia, 85 percent of the state's reductions of nitrogen oxides under its recently revised State Implementation Plan will come from power plants while those plants only represent some 40 percent of the total emissions.

There will also be a steep increase in the use of lower emitting natural gas in Southern Company's future generating fleet. By the year 2010 natural gas will make up 26 percent of our total fuel mix as compared to 2 percent in 1998. Coal is expected to fall from 77 percent of our fuel mix in 1998 to 58 percent in 2010. This does not represent a decrease in our use of coal but reflects the fact that almost all of the growth in demand over the next decade is expected to be met with natural gas fired technology.

Regulatory Agenda

Even with this record of performance, pressure has built for even more reductions in emissions from coal fired generation. An aggressive regulatory agenda has been advanced by the EPA that appears to be targeted specifically at coal fired generation. There are over a dozen proposed or pending regulatory actions that could drive up the cost of coal fired generation or make it impractical. These include the Regional NOx SIP Call, the adopted (though remanded) new 8-hour ozone and fine particle standards, and a proposal to adopt a radically different approach to applying new source review at existing facilities. (See Figure 4) The possible adoption of the Kyoto Protocol or other mandatory program for the reduction of carbon emissions would also demand a large replacement of coal-fired generation with natural gas or some other less carbon intensive fuel.

An issue that greatly concerns us is EPA's recent actions on New Source Review. For several years EPA has been considering modifications to the existing new source review program in ways that would limit the ability of utilities to perform routine maintenance on power plants to ensure their safety and reliability without triggering extremely costly NSR requirements. To meet EPA's goals in a more cost effective manner-; Southern Company and other utilities in the Utility Air Regulatory Group (UARG) in the spring of 1999 developed an alternative proposal that would ensure the reduction of generating plant emissions beyond current requirements over time.

EPA never engaged in serious negotiations over the UARG proposal but in November 1999 filed lawsuits against Southern Company and seven other utilities alleging numerous past violations of new source review requirements. Under EPA's interpretations, new source review would be triggered by many common routine maintenance operations including operations that improve plant efficiency. Trying to retroactively apply a new interpretation to actions clearly considered acceptable in the past has resulted in litigation that is diverting major amounts of time and other resources that could be used more productively in working together to solve problems. In addition, future efficiency and reliability improvements are now being discouraged.

These issues can all be addressed but it is extremely important that it be done in an orderly manner that avoids threatening the continued economic supply of electric energy. The potential requirements, as currently being applied, are often duplicative, piecemeal and do not allow time for the design and installation of multiple additional pollution control systems. In many cases decisions to install pollution control equipment can be rendered uneconomic in just a few years due to future regulations. For example, the decision to install flue gas desulfurization to remove sulfur dioxide may be ultimately be uneconomic with the prospect of some future program

to reduce carbon emissions, which could require the retirement of coal units to be replaced with natural gas.

Clean Air Act Reauthorization

You have asked me here today to testify about "incentives" for utility emission reductions in regard to the reauthorization of the Clean Air Act. There certainly are many challenges ahead for the electric generation sector as I have discussed. I am not here today however to tell you that these challenges are due to the Clean Air Act being broken. In fact Southern Company thinks that the foundation for the Act is sound. The goals and objectives are clear and the processes that are set forth for the EPA to follow in adopting standards and regulations are comprehensive and allow for the best decisions to be made to protect the public health and welfare. Deliberations on reauthorization of the Clean Air Act should examine both the strengths and weaknesses of the Act and not focus only on what to "fix".

We believe that most of the problems related to the future regulatory agenda for electricity generation stem from the EPA's failure to follow the proper procedures and appropriately apply available scientific information in implementing the Clean Air Act. They also have improperly revised the historic application of rules to create wholly new interpretations of existing law. Recent court actions have supported this view with several rulemakings being remanded due to EPA's failure to follow proper procedure. Other potential regulatory conflicts we ark facing could have been avoided if EPA had more closely followed the recommendations from the Agency's own scientific advisory committees.

Alternative Approaches

Some parties have espoused changes in the Clean Air Act and other Federal laws that would constitute alternatives to the way that emissions from electric generating plants are now regulated. These alternatives deserve inquiry and we agree that the Subcommittee should include them in its deliberations on reauthorization of the Act. The examination of these approaches must include looking at ways to meet clean air goals in the most cost effective and efficient manner possible. The benefits of alternative legislative approaches should be compared against the provisions of the existing Act as intended by Congress.

Some examples of alternative approaches that have been discussed include:

Comprehensive Approach

A proposal to develop a comprehensive package of emission reduction requirements that would combine many of the pending and proposed regulatory programs has been suggested by some in the industry. It is argued that this could provide some efficiency as compared to an unorderly pollutant by pollutant approach. It is also believed that this approach could provide some regulatory "certainty" for a period of time during which capital investment decisions could be made. This general concept has been discussed in several forums and we feel that there are potential positives but also potential hurdles to this approach. Positives include possible cost savings from a multi-pollutant approach compared to command and control for individual pollutants on single generating units at different timelines. Issues to overcome include ensuring that such an approach does not codify requirements that could not otherwise be justified on scientific or economic grounds, that deadlines make sense from a reliability and economic standpoint, ensuring that "regulatory certainty" could in reality be achieved, and reaching agreement on a large number of other details that are likely to be controversial.

Financial Incentives

The adoption of financial incentives to encourage cleaner generation and the installation of emission controls has been urged by some. Examples include:

1. Investment Tax Credits
2. Production Tax Credits
3. Accelerated Depreciation
4. Grants, Low interest loans and tax exempt bonds

Individually or in combination such proposals could provide an incentive to early reductions by generating companies or help to mitigate the impacts of regulatory requirements.

Advancement of New Technology

Proposals have been made to facilitate the development and installation of new technologies. At Southern Company we believe that the development and commercialization of advanced technologies holds the key to improving the environmental performance of electricity generation. We have been leaders in the Department of Energy's Clean Coal Technology demonstration program and currently operate

DOE's Power Systems Development Facility in Wilsonville, Alabama. The PSDF is the nation's premier testing and development site for the demonstration of technologies that increase the efficiency and environmental performance of coal in the generation of electric energy. Our goal is to demonstrate technologies that ultimately will mean coal fueled generating facilities that are as clean as natural gas fired plants.

Southern Company is also a leader in the development of distributed generation options including fuel cells and micro-turbines. We have developed partnerships with some of our key commercial customers to demonstrate these technologies including the installation of a 250-kilowatt molten carbonate fuel cell at a Daimler-Chrysler plant near Tuscaloosa, Alabama.

Principles for Clean Air Programs

We believe that the development and implementation of any clean air program that applies to the electricity generation sector should include certain common principles. These principles will help to ensure that improvements in environmental performance will result in real enhancements of environmental quality in the most cost- effective manner possible. Most of these could be incorporated under the provisions of the existing Clean Air Act. They are:

- Any new program for controls must be based on sound peer-reviewed science and an accurate assessment of the environmental improvements expected from existing regulatory programs.
- Targets and timetables for emission controls should reflect environmental needs and priorities and not controls for controls sake or a "one size fits all" approach.
- Air quality control programs should consistently utilize unencumbered market based trading systems. The SO2 control program under Title IV of the 1990 Amendments has been very successful in accelerating emission reductions and minimizing costs and we should build on the success of those provisions.
- Any control program should allow a source to meet reduction requirements in the most cost-effective and flexible manner possible and avoid unit-by-unit technological controls.
- Compliance with new emission reduction requirements should be timed to recognize the size of the generating fleet and phase in compliance requirements over a long enough period to allow the orderly installation of controls and the avoidance of a supply disruption.

Summary

Southern Company and the electric utility industry have made tremendous strides in improving the environmental performance of electricity generation. Emissions have been reduced and the quality of our air and water have substantially improved. This has occurred even while electricity generation and the use of coal has increased. Southern Company is committed to continuing to improve environmental quality in the areas that we serve. The future regulatory agenda put forth by the EPA however will present great challenges in ensuring that we can continue to utilize coal, the most abundant domestic energy supply in the generation of economic electric energy. This is not due to the failure of the Clean Air Act but the failure of EPA to follow the proper procedures and effectively utilize its discretion under the Act in making regulatory decisions. There are numerous proposals to amend the Clean Air Act to implement alternative approaches to regulating the electric generating industry. All of these concepts should be examined against the benefits of the implementing the existing Act in a proper manner.

Southern Company is committed to playing a constructive role during the process of reauthorizing the Clean Air Act. We will continue to work with Congress, EPA, states, courts and other interest groups to meet the challenges of maintaining a clean and safe environment and an adequate and affordable supply of energy.

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