S. HRG. 106–729

EVERGLADES RESTORATION

HEARINGS

BEFORE THE

SUBCOMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

AND THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS UNITED STATES SENATE

ONE HUNDRED SIXTH CONGRESS

SECOND SESSION

JANUARY 7, 2000—NAPLES, FL
MAY 11, 2000
SEPTEMBER 20, 2000

ON

THE COMPREHENSIVE EVERGLADES RESTORATION PLAN PROPOSED BY THE STATE OF FLORIDA, THE U.S. ENVIRONMENTAL PROTECTION AGENCY, AND THE U.S. ARMY CORPS OF ENGINEERS

Printed for the use of the Committee on Environment and Public Works

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EVERGLADES RESTORATION PLAN

FRIDAY, JANUARY 7, 2000

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
Naples, Florida.

The committee met, pursuant to notice, at 3:45 p.m. at the Naples Golf Club, 851 Golf Shore Boulevard, Naples, Florida, Hon. Bob Smith [chairman of the committee] presiding.

Present: Senators Smith, Graham, and Voinovich.

Also present: Representative Meek.

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

Senator SMITH. The meeting will come to order.

The Senators have set the example for those of you who want to take your jackets off. Please feel free to do it. What we should do is adjourn outside to the beach.

I know it's warm in here and very crowded, but we are very grateful for the interest in the Everglades, and I certainly want to welcome our first witness, Administrator Browner. We will be talking with her in just a moment.

I'm somewhat intimidated by sitting between two Governors who have to deal with these statewide problems much more than we do in the U.S. Senate, but maybe I will learn something from the Governor on either side.

The purpose of today's hearing is to receive testimony on the proposed Comprehensive Everglades Restoration Plan, and I extend, again, my gratitude to our hosts, the Everglades Coalition, for inviting us to participate as part of their fifteenth annual conference on the Everglades. Although the coalition will not be testifying today on any of these panels, they will be invited to testify to a subsequent Washington hearing, which will be chaired by Subcommittee Chairman Voinovich. I'm sure that they will be happy to receive their testimony at that time.

I'm pleased to be here with Senator Bob Graham of Florida, who is well known to the Everglades and well known as a friend of the Everglades. As Governor of Florida, he was responsible for one of the first major Everglades restoration initiatives, Florida Save Our Everglades Act of 1983, when he was the distinguished Governor from this State.

He remains a strong voice in the Senate for the protection of this vital national resource, and I'm delighted to be here in his State and appreciate very much his invitation to be here.

Also joining us today is Senator George Voinovich of Ohio's jurisdiction. Senator Voinovich is the chairman of the subcommittee with jurisdiction over the Everglades restoration proposal, and I know he plans to hold additional hearings on this subject in Washington; and I also would like to acknowledge the important contribution of Senator Connie Mack, who I talked to yesterday, who could not be here today. He is also a strong supporter of Everglades restoration.

I also want to acknowledge the presence today of Representative Carrie Meek, whose district encompasses part of the Everglades. Representative Meek, thank you for being here. Your statement will be made part of the record.

Ms. MEEK. Thank you.

Senator SMITH. There are many other people to be commended, not only for their efforts that went into this plan, but for the work that still remains to be done. Certainly Administrator Browner, a Florida native who has been an advocate and a leader within the administration on this project, Interior Secretary Babbitt and the Army Corps of Engineers, Joe Westphal, who are also in leading roles in this effort.

The Federal Government has very strong partners here in Florida, starting with Governor Bush and including the Department of Florida Environmental Protection and the South Florida Water Management District.

There are many others too numerous to mention right now who have been instrumental in bringing the Everglades restoration agenda to this critical juncture.

People you see here today at this hearing and participating in the conference have been integral in this effort to preserve and protect the Everglades for the next century and beyond.

At this point I might like to interject to say that oftentimes in politics, we think toward the next election, and sometimes in businesses we think toward the bottom line or the next profit and loss statement. I think we have to think very much long term when we talk about environmental matters. We have got to think about next generations, maybe even the next millennium.

I hope that, when the fourth millennium starts, some other panel might be able to sit here and say, "You know, those guys back there in 2000 saved the Everglades, along with the help of many, many good people."

This is my first hearing as the chairman of the Environment and Public Works Committee, and there is no mistake and no accident that the subject of my first hearing is the restoration of this national environmental treasure. We are here because the restoration of the Everglades is one of the nation's most urgent environmental priorities. That is my position. I think it's the position of many others, and it's my hope that today's hearing will set the tone for the committee's activities in the coming year.

Let me also say that I appreciate the opportunity to be here in Florida to learn more about this effort. Over the past 30 years, I have had the privilege of enjoying Southern Florida's hospitality many times as a private citizen, sometimes as a member of the house and as a Senator, but more often as a husband and a father

with my children as I have basically vacationed all over the State from north to southeast to west.

I have been to the Everglades National Park many times, and I want to take the time to thank Superintendent Richard Ring—where is Richard Ring? Right here—for his private, informative tour of the Everglades last week. It's deeply appreciated. He is a fine outstanding public servant, and I wish more people, especially those who like to criticize those who work in government, could see the kind of dedication and commitment of Superintendent Ring. He believes strongly in what he does and it was evident and it was deeply appreciated and informative.

I think, as most of you are aware, Senator Chafee was strongly committed to seeing this effort go through. I know that he talked to you, Senator Graham, about this, and I'm pleased to fulfill his commitment to be here and look forward to working with you in a bipartisan manner.

Senator John Chafee was a very close friend of all of us. If I could turn back the clock and not be here as the chairman and be sitting either to the left or to the right of Senator Chafee, I would do it in a heart beat.

Unfortunately, we cannot do that, but you will not find daylight between John Chafee and Bob Smith on the support for the Everglades. I will work to ensure that we in Congress do what we need to do to achieve this goal. I intend to take over where Senator Chafee left off and move with Senator Graham and other of my colleagues on the committee to craft legislation that we can all support that will get the job done and implement the goals of the plan early in the session of Congress, this session.

The face of South Florida has changed significantly over the past 50 years. The entire region has experienced explosive growth in that time, and this growth in turn has exerted tremendous pressure on the natural resources of the region, especially the Everglades. The Everglades, estimated to be half the size they were at the turn of the century, are the largest wetland and subtropical wilderness in the country and home to countless species of wildlife.

We know that the Everglades face grave peril. The unintended consequence of a massive Federal flood control project in the late forties is the too efficient redirection of water from Lake Okeechobee, and I emphasize unintended consequence. Clearly we didn't do it deliberately, but we did it, and if the Federal Government messed it up, then the Federal Government needs to step in and help us correct it.

Water—1.7 billion gallons a day—is needlessly directed out to sea. The project was done with the best of intentions, but the Federal Government had to act when devastating floods took thousands of lives. This was a fact. Unfortunately, the success of the project disrupted the natural sheet flow of water through the so-called river of grass.

I won't go into all the technical aspects of that. We will be hearing that shortly from the witnesses; but this plan, although there will be some who will be critical of parts of it, and we'll hear a lot of that and support as well, but it does strike a balance between restoring the biological health of South Florida and that ecosystem and delivering enough water to urban areas as well for farms and

communities in the region to keep the economy moving. The multitude of projects that this plan contemplates will be constructed over many years at a cost of nearly $8 billion.

Although I'm sure witnesses will comment on the cost, I would like to remind witnesses that we intend to explore costs and the financing of the project at the hearing in Washington. We are not necessarily accepting every single point here in terms of the cost. We will be looking at the cost. We have an obligation to do that, and I'm sure Senator Voinovich will be working on that as well.

Today, we want to hear the details of the project, its impact on the health of the Everglades, including its many species of plants and animals, as well as the impact on the nearby communities and industries.

The scope of the plan is as large as the problem. Some of the key elements are 181,000 acres of new reservoirs to 300 underground aquifer storage wells, and so forth.

I can assure everyone that the committee will take a hard look at this plan. There are many important questions that need to be answered before legislation is finalized, and again we will receive a budget at some point, hopefully sooner rather than later, from the administration on WRDA. We will then—the sooner we get it, the sooner we can begin the process of crafting legislation. We will carefully scrutinize that plan, compare it to the administration budget, and work with it within the committee in a bipartisan way to put all of these facts together and craft a piece of legislation that answers the problem.

Many will ask: Why should the Federal Government be involved?

Well, it's a national treasure. As I said, you don't have to visit here too many times, probably not more than once, to know that this is a national treasurer. Restoring the Everglades benefits, not only Floridians, but to the millions of visitors who flock to Florida each year. This is the Grand Canyon of Florida. It has been said that the Everglades are to Florida and the Nation what the Rockies are to the western States or what the Grand Canyon is to Arizona.

It was Federal legislation that authorized the Central and South Florida project in 1948 and we have a responsibility to correct what we did in that legislation, what we damaged.

Finally, this is a legacy to our future generations. When our descendants move into the fourth millennium, I hope it will be remembered that this generation at the beginning of this millennium put aside partisanship, put aside self-interest, and put aside short-term thinking and answered the call to save the Everglades.

There are a lot of birds and fish and wildlife out there that don't have any lobbyists, Senator Graham. They don't have any money, and so we have an obligation, I think, to protect them. In fact, I met one of those alligators the other day when the superintendent took us a little bit too close to the bank and he came into the water after us and said, "Get out of here." So we did just that.

Before I conclude, I would like to recognize the contributions of four Senate members. I hate to single out four because so many have done so much, but Catherine Cyr of Senator Graham's staff, and Ellen Stein of Senator Voinovich's staff, and Jo-Ellen Darcy of Senator Baucus' staff, and Chelsea Henderson of my staff, and, of course, Tom Gibson and Dave Conover as well. I also want to

thank Senator Baucus for his support. His staff director, Tom Sliter, is here. Thank them as well.

I want to close by saying, reiterating my position, there will be some differences on how we go about looking at this plan, but the bottom line is I support the restoration of the Everglades and that is my goal, to get this legislation crafted which we will deal with it before we get too far along into the session and not be able to make this happen. So the goal is to do it this spring. We will do what we need to do to achieve that goal, and in close cooperation with Senator Voinovich, who will work together to closely scrutinize the details and costs of this plan, and I commit to working in an open, bipartisan manner to move forward with this bill this spring.

I tried to find a poem that nobody else had in theirs, in their statement. I think I succeeded. Did I succeed, Dave? I'm not sure. Let me use Marjory Stoneman Douglas, author of The Everglades: River of Grass in which she says, quote, "A Century after man first started to dominate the Everglades, the progress has stumbled. Consequences have started to catch up. It is perhaps an opportunity. The great wet wilderness of South Florida need not be degraded to a permanent state of mediocrity. If the people will it, the Everglades can be restored to nature's design."

I don't think you can say it any better than that as far as how I feel about it. So, again, thank you for your hospitality, to all the people here in South Florida, and I now turn it over to my distinguished colleague and your Senator here in Florida, the Honorable Bob Graham.

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

Senator GRAHAM. Thank you, Mr. Chairman, and it was particularly appropriate that you concluded with those poetic words from a Floridian who was a close friend of many of us here and who in many ways was the voice of the Everglades and particularly the transition to the current attitude of the Everglades as a national treasure for which each of us has a responsibility for protection.

I am anxious to move forward so that we can hear from the many witnesses we have. Also, since I am the speaker this evening, I don't want to give my whole speech and end up with nobody coming to dinner. So I warn you that there will be more to come later.

I want to thank the chairman for having this hearing. As he indicated, this had been a hope of Senator Chafee to have started the new year here with us in Naples, participating in this important hearing on the future of the Everglades. He was taken from us, and we fortunately have a man who, I believe, we have come to know and understand shares that commitment. I like that phrase, "There is no daylight between you and Senator Chafee."

I'm also very pleased Senator Voinovich, who brings a great deal of experience, not only in his period in the U.S. Senate, but as Governor of Ohio, as mayor of Cleveland, as a State legislature who has dealt with similar environmental issues throughout his political career, is going to be playing such a pivotal role and has taken the time to spend today, starting last evening with a briefing in West Palm Beach, and then a flyover and a visit to Loxahatchee

National Wildlife Refuge. Those are all indications of his commitment to this important work.

The year 2000 is going to be a very important year for the Everglades. If you wrote down the years of significance to the Everglades, and this will again be a teaser to come back for dinner tonight, you would write dates like 1882, 1947, 1948, and I think the year 2000 will justify being entered in that list of pivotal years for the Everglades.

This is going to be the year, hopefully, which we will authorize the restudy that has been done by the Corps of Engineers, that we will lay the financial foundation that with convert that authorization into reality and, through initiatives, such as the fifteenth Everglades Conference, will continue to expand, face a public understanding and support for the coalition of Americans who will bring this to reality.

In the spirit of bipartisanship, I will quote President Reagan, who asked the question, "If not now, when? If not us, who?" I would ask those questions as it relates to the Everglades. If the year 2000 is not the year to move forward, what will be the year, and if the people to lead that effort are not the ones who are in this room and our colleagues across America, what group of Americans will assume the responsibility for leadership to save the Florida Everglades?

Thank you, Mr. Chairman. I look forward to the hearing.

Senator SMITH. Thank you, Senator Graham. Senator Voinovich.

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

Senator VOINOVICH. Thank you, Mr. Chairman.

I think the fact that the chairman of the Environment and Public Works Committee, the new chairman, and the chairman of the subcommittee are here in Florida with Senator Graham is an indication of how important we think the Everglades are to this country and are anxious to receive the restudy report that has been done.

I'd like to thank my good friend, Senator Graham, for inviting me to his home State. Your Senator is one of the most admired members of the U.S. Senate. I'd also like to thank the South Florida Water Management District folks, the Army Corps of Engineer people, the Florida Department of Environmental Protection for their warm hospitality that they have extended to me last night and today.

Senator Graham and I have worked together on several issues. This is my first year in the Senate and he is very much committed to legislation that deals with children's issues, and one of the most significant pieces of legislation that I think that came out of this last Congress was the legislation Congress passed to allow the States to keep their tobacco money, and I don't know if you fully comprehend how important that is, but Senator Graham really took a leadership role to get that passed.

Senator I don't know how much money that means to the State of Florida, but I can tell you to the State of Ohio that that tobacco money is over half of our annual growth in all State revenues. Think of that. That money coming into the State makes other

money available so that we can do some other things that are so very important.

I'd also be remiss if I didn't mention Connie Mack, who happens to be a good friend of mine. Connie is the facilitator of our weekly prayer breakfast, and Connie is leaving the Senate, and I want you to know I tried very hard to convince him to stay.

I refer to Connie as a born-again Catholic, and I'm sure that the holy spirit is leading him, has led him to his decision and has something else in store for both Connie and his family.

As many of you know, there are lots of Ohio Buckeyes in Florida. The warm weather and the lack of State income tax have enticed many of our retirees to move here, and my wife, Janet, and I have visited this State many years, just as you and your wife and your family; and do you know something, we have seen the pressure on Florida's environment, aquifers and, of course, the Everglades as development has occurred over the years.

I'm no stranger to the Everglades. When I was Governor, thanks to the Florida Fish and Game Commission, I spent almost a day helicoptering around the Everglades, taking one of those boats into the Everglades, and I reminded the head of the South Florida Management District that I have fished Florida Bay, Flamingo, tried to get some snook in the Everglades.

So the point is that I'm fairly familiar with the Everglades and some of the challenges and opportunities that you have here in this State.

I think that in too many cases that the development has occurred without sufficient planning and consideration of its impact on the environment, water supply, and, yes, the Everglades themselves. We realize that, and the problems confronting the Everglades today are mostly man-made and as such can only be corrected by a man's proper stewardship of the environment and by regulating current and future growth.

I don't wish to appear to be singling out Florida because Florida is not alone in terms of impact of rapid growth. A lot of States have not given appropriate consideration to the environmental impacts of aggressive, commercial, housing and agricultural development.

Two years before I left the Governor's office in 1996, I realized the effects of encroaching development in Ohio's farmland. After seeing acres and acres of farmland gobbled up by development and urban sprawl, we created the Ohio Office on Farmland Preservation for the purpose of developing a statewide management policy to preserve farmland and encourage responsible development.

In addition to recognizing the need to recycle our urban wasteland, we undertook Brownfields legislation, and I hope that my colleagues agree that one of the things that our committee may get at this year is Brownfields legislation. We have acres and acres of urban wasteland out there and you have them here in Florida and, if you're going to save the Everglades and not continue to encroach it with development, you are going to have to go back into other areas and redevelop those areas, and Brownfields legislation is, I think, very important to us.

I share—I'm not as eloquent as the chairman—the importance of the Everglades as a national treasurer; however, I think, and I'm going to be very candid because that's the way I am, the problems

facing the Everglades need to be viewed from a national perspective. The primary concern before Congress on the Everglades issue is what course of action will best help restore and preserve the Everglades ecosystem and what level of responsibility should be assigned to the Federal Government as Congress puts together the water resources bill for 2000, as well as future water bills.

I would like to stress that, as chairman of the subcommittee, equity among the States is a key factor in terms of things that come before the committee. Every State wants its share of project authorizations under the Army Corps of Engineers' Civil Works program.

In other words, there are over 400 projects that have received funding, and others have not received any funding at all. We could authorize the projects, folks, but Senator Domenici's Appropriations Committee on Energy and Water appropriate the money for the authorizations that come out of our committee.

Today, the State of the Florida has about $3 billion in project authorizations from past WRDA bills for Federal runs for projects under design and construction. This represents about 10 percent of the $30 billion backlog. Think of that, a $30 billion backlog of projects that have been authorized by the committee, and, Mr. Chairman, there are other projects that we haven't spent any money in design and construction for that we still haven't put into the hopper.

With the request from WRDA 2000 for $1.7 billion in construction authorization, half of which would be Federal expenditures to begin implementation of the Everglades project, Florida would have the largest requirement for Federal funding to complete authorized water projects of any State. You would be No. 1 in the country.

For example, the State of Ohio has uncompleted flood control projects in Cincinnati and Columbus that require additional funding, and you know they're all over the country.

So I think that everyone has to know that we are going to have to measure water projects currently on the books with those that are coming on board, and I think that Florida—I know you have got projects for beach nourishment in several locations, channel improvements in Canaveral Harbor, Miami, and Tampa Harbor, and Kissimmee River restoration project. All of it's very important stuff.

With respect to water development projects, the authorized level of funding is rarely matched with a full level of appropriations and, therefore, it's clear that we must review projects to the fullest extent and only authorize those projects which are of utmost importance to the individual States.

In addition, Florida is going to have to make, and I talked with your secretary about this, decisions about its own priorities for water resources development within the State. With its current backlog, what will Florida's priorities be? Your Governor and your congressional delegation will have to decide what you want to do with those authorized projects when you come before the committee.

Just this last year, our committee, Mr. Chairman, authorized 248 State-specific projects for a total Federal and non-Federal cost of $5.6 billion, and of that amount, 14 projects were included for Florida in the amount of $341.2 million. OK? That's a lot of money. So

you add that on to the backlog of three billion to give you some sense of the dollars.

Now, what does that mean? What it means is this, is that this last year, the Appropriations Committee have provided $1.4 billion. Think of that, just $1.4 billion for all of these projects all over the United States; and Florida is going to receive 11 percent of the funds of that appropriation, $157.7 million; so that out of every dollar, ten cents will be going to Florida.

So the thing is that we have a major problem that needs to be addressed, major opportunity, but I want all of you to know that this project is—we are talking about $7.8 billion over 20 years; and we can talk all we want to and have the greatest plan and this committee can authorize every project on the restudy commission, and, if there is no money, it's not going to get done.

So I think that one of the things that all of the groups represented here should understand is that, unless we get more money in that appropriations bill, and we are expecting the administration to come through with some more, but we're not going to be able to really do anything about this problem, and that's important.

I'm editorializing, but the Federal Government is going off into many directions today. Your Senator and I have talked about it and we are concerned about our national debt, aren't we, Bob? Out of every dollar we spend, 14 cents goes for interest. OK? Fifty-four percent of every dollar goes for Medicaid, Medicare, Social Security. In 10 years, it's going to be 66 percent and, if we don't do something about the debt and get the interest cost down, what's going to be left for projects like the Everglades? I mean, we have a real challenge here.

So in the process of hearing from you today, I would hope all of you here, whatever groups you represent, you all are concerned about the Everglades, but it's really important that you understand that we need to have those resources in Washington so that we can make them available to the Everglades and we can move forward with the Everglades and other projects in Florida throughout the United States of America. This is important to our country.

So I'm anxious to hear from our witnesses today about the plan. I mentioned to Mike last night that it didn't have the specificity of some of the other things that we had and he tried to explain to me why that is, but we're anxious to hear from you. We will have hearings in Washington and then we will have to sit down and figure out how we're going to prioritize things and move forward.

Thank you, Mr. Chairman.

Senator SMITH. Thank you, Senator.

I want to say I see another—if you want to know what happens to ex-Congressman when they leave the Congress, they move to Florida and retire. We have Congressman John Meyer here from Indiana. Welcome. Good to see you again, John.

Administrator Browner, welcome. Welcome home, I guess I should say, and we're looking forward to your testimony, so here we go.

STATEMENT OF HON. CAROL BROWNER, ADMINISTRATOR, U.S. ENVIRONMENTAL PROTECTION AGENCY

Ms. BROWNER. Thank you, Mr. Chairman, and it is indeed a pleasure to refer to you as Mr. Chairman at this, your first hearing, and I will say, I think, on behalf of all of us who care deeply with the Everglades, it is quite significant for us that you chose this as your first hearing.

It is also a pleasure to be with my Senator, Senator Graham, and with Senator Voinovich.

If I might, Mr. Chairman, just take a moment to recognize all in the Federal family who have worked so hard over the last 7 years of this administration on the Florida Everglades—my colleagues at the Environmental Protection Agency, the Department of Interior, the Army Corps of Engineers, and so many others; and it really has been a collegial effort, each of us bringing to this challenge, this task of the Everglades, our own expertise and a shared vision and a shared commitment.

I also want to say a word about the State of Florida and the leadership that they are providing. The task of restoring and preserving the Everglades is not a task that will be done by one institution, by one level of government. It will take all of us working together, Federal, State, local, Federal Government, the State of Florida, the Water Management District, a public/private partnership.

Obviously an important part of this effort and those who continue to remind us daily of the need for the work that we are here to discuss are the environment groups that make up the Everglades Coalition. So I also want to take a moment to thank them for the work that they do and for holding our feet to the fire, reminding us that we need to do more and questioning us when they think we have not done enough.

As I think everyone knows, I am a native Floridian. I grew up in Miami and in many ways my childhood backyard was the Everglades. But it is really, really much more than that. I think, for all of us who choose to do the work of public health in the environment, we are inspired in our work by a very special place, and perhaps, Mr. Chairman, for you it is the White Mountains. Well, for me it is the Florida Everglades on a warm January day and a great blue heron has just taken flight. There is nothing more inspiring, more beautiful than that.

In many ways, the Everglades has been threatened since Florida's earliest days as a State, considered really nothing more than a swamp that stood in the way of progress.

Florida entered the union in 1845. Just 5 years later, Congress passed the Swamp and Overflowed Land Act and thus began the draining of South Florida, the literal draining of Florida's liquid gold.

There is a great debate that took place in the Florida legislature about the turn of the century where one member of the Florida Senate stands on the floor and says, "Let's get it drained and put it back the way God intended it to be." We have drained and drained and drained the Florida Everglades.

After more than a century, we did come to realize, unfortunately, almost too late, but nevertheless we did come to realize that we

were in danger of losing this most unique and beautiful place, and gradually a new sense of environmental awareness emerged thanks to activists like Marjory Stoneman Douglas, leaders like then-Governor Graham, now Senator Graham, and my mentor, the late Senator and Governor Lawton Chiles.

When Lawton Chiles first ran for the Senate in 1970, he walked the length and breadth of this great State, and I dare say, if one of us were to walk the path that Lawton Chiles took in 1970, we would see a very different Florida, a growing, a dynamic, a vibrant place, but also a Florida that has beautiful places forever protected because of the work of Senator and then-Governor Chiles.

One of his greatest commitments was to create a coalition of government, business, farmers, environmental leaders to build on the work of Governor Graham to really preserve and restore the Everglades. Today at the dawn of this new millennium, we need to seize the opportunity to expand this legacy.

With the leadership of President Clinton and Vice President Gore, we have embarked on an ambitious, long-term restoration plan that will give new life to this great natural wonder.

As a member of this administration, I was very pleased to join Vice President Gore in February 1996—Senator Graham and others joined us—as he set forth the Everglades restoration blueprint, a vision that has already been delivered on, the acquisition of the Talisman land and other critical restoration lands, key to water quality and quantity, increased Federal funding, and now the comprehensive restoration plan.

For the first time ever, we recognize that, to sustain that which gives us this incredible quality of life we enjoy here in South Florida, we must sustain, restore and preserve the natural system, that we cannot simply put the needs of the natural system third, fourth or fifth.

The challenge is two-fold, water quality and water quantity, clean fresh water where and when the natural system needs it. The heart of the Everglades must once again pulse with the water that is essential to its health.

As Harry Truman said when he dedicated Everglades National Park in 1947, "Here are no lofty peaks seeking the sky, no mighty glaciers or rushing streams wearing away the uplifted land. Here is land, tranquil in its quiet beauty, serving, not as the source of water, but as the last receiver of it."

One of my most important responsibilities as the head of the country's Environmental Protection Agency is to ensure that we honor the Clean Water Act, the nation's most important environmental law. The Clean Water Act is essential to maintaining and preserving water quality, everything from water quality standards to where we measure those standards, to protecting the wetlands, which are nation's only way of cleaning the water. That is the essence of the Clean Water Act.

As the State of Florida completes its work to set a phosphorous standard, which is essential to the health of the Florida Everglades, essential to clean water, it is not just the standard or the number that will be important but where you measure that standard, where you measure compliance with that water quality standard.

If we are to be successful in our efforts for the clean water that is fundamental to the health of the Everglades, we must commit ourselves to meet the standard at the point of discharge, not somewhere downstream.

In other words, we must eliminate the mixing zones, the waters where pollutants are allowed to mix and hopefully dilute with the clean receiving waters.

If we have learned anything over the last 30 years of working to protect our environment in this country, we have learned that dilution is no solution to pollution. You have to prevent it.

Several Great Lake States have already taken this step. If we don't do the same for the Everglades, we will sacrifice this river of grass to the grinding march of the cattails and other exotic plants.

The measurement of success must be the needs of the ecosystem, not merely what one particular technology may or may not achieve, but the needs of the ecosystem. Success should not be defined as the installation of this or that technology and whatever water quality it may bring. Success is the clean water necessary to restore the health of the Everglades.

Mr. Chairman, members of the committee, the clock is ticking. We must move forward at an aggressive pace. In the coming year, it is my strongest hope that we can work together to do the following four things. First, to authorize the Comprehensive Everglades Restoration Plan in WRDA 2000, including the critical projects; second, I believe that we should amend the original project, the Central and South Florida project in WRDA 2000, to include water quality as an explicit project purpose. With such amendments, we will ensure that water quality is a fundamental component to all Everglades decisions and that Federal cost sharing is available for achieving essential water quality; third, we must agree to set, not only tough water quality standards, but to measure compliance—our success in meeting those standards at the point of discharge, not somewhere downstream.

Finally, Mr. Chairman and, Senator Voinovich, you spoke to this, let us pledge to work together to secure long-term funding commitments. Many ideas have been put forward. Senator Graham has put forward ideas. Let us look at these ideas, let us evaluate these ideas, and let us make a commitment to a long-term funding mechanism.

Mr. Chairman, in addition to the work that I hope we will all be able to do with the Everglades, I think I would be remiss in my responsibility for clean water for all the people of this country if I did not also ask you and this committee to close a loophole in the Clean Water Act which is resulting in the loss of wetlands from Maine to the Mississippi Delta, the Great Lakes, the San Francisco Bay Delta, even the Florida Everglades. Because of a court decision commonly referred to as the Tulloch Decision, EPA estimates that as many as 30,000 acres of wetlands have been destroyed in just the past year, 30,000 in just 1 year. Although EPA and the Corps are working hard to use our remaining tools to protect wetlands, the court's ruling makes it clear that only action by Congress that closes the Tulloch loophole and fixes the Clean Water Act can ultimately stop the destruction.

We hope that we can work with the committee to close the Tulloch loophole.

I think that, if we can commit ourselves to the Everglades and to the restoration plan, that if we can do all of these things in the new century, we will do much to correct the mistakes of past centuries, a past where clearly we looked at the Everglades and we said, "It's a swamp; let's drain it."

That's kind of like looking at the Grand Canyon and saying, "It's a hole; let's fill it."

Mr. Chairman, 7 years ago next week, I appeared before this Senate committee in Washington as President Clinton's nominee to head the United States Environmental Protection Agency. I said that day in seeking the support of this committee that my greatest hope was for my son, who was then five, to grow up and to know the same Everglades and other natural wonders of this great country that I had known as a child, to know the same special place that has meant so much to me.

I said 7 years ago that I believed that, if we were prepared to make tough decisions, we could give my son, we could give all of our children that opportunity and inspiration, and I believe that this administration, working in a bipartisan manner, has made a set of tough decisions. We have put forth a vision and a plan to finally save the Everglades. Now it is incumbent on all of us working together with the Congress to write the law, to provide the funding, to achieve the shared vision of a healthy, restored, protected Everglades. There is no other river of grass and there will be no other chance. Now is the time to act.

Thank you.

Senator SMITH. Thank you very much, Administrator Browner. It's been a pleasure working with you over those 7 years. As a member of this committee, we have worked on a number of issues. We have had some successes, a few failures, but it's been a pleasure, though, to work with you during that time.

In terms of process here, we are in Senator Graham's home State, so I'm going to defer to Senator Graham in a moment for the first question. What I would like to do is have each of us ask a question or two, not be confined to the clock; and then after that, open it up so that anyone feels, if they wish to interject with a question, we will do that. Then Administrator Browner can move on. We will bring the next panel up.

Senator Graham, the floor is yours.

Senator GRAHAM. Thank you very much, Mr. Chairman. I'm going to ask a similar question of most of the witnesses because it goes to what I think will be one of the most challenging aspects of the authorization of the Corps study and, that is, the issue of assurances language, assurance to what various stakeholders in the Everglades will have relative to the quality, quantity, hydroperiod of water.

In 1999, as part of the Interior Appropriations Bill, it was agreed to defer this issue of assurances language to the Water Resource Development Act of 2000. I know that the administration and various State officials have been working to try to develop what would be those appropriate words of assurance. I wonder if you could de-

scribe what your feelings are as to what some of the principles should be in developing this assurance language.

Ms. BROWNER. Well, I think language will be extremely important. I think we do need to recognize and we do need to commit ourselves to restoring and preserving the natural system because it's only when you do that that you can meet all of the other demands, whether it be the agricultural demand, whether it be the drinking water demands of the people of South Florida. So I think it is important when we look at allocation of this resource that I suppose at one point the thought was that the supply was never ending, but we now know today has to be managed carefully to ensure that we do what is necessary to rehydrate the natural system. With that will then come other resources that we need for the other uses, and this is certainly something the administration has had a lot of experience with out of the San Francisco Bay Delta where you have a very similar situation.

You have drinking water demands. You have agricultural demands and you have a natural system demand, and we need the recognition there, that by serving the natural system, you could better meet other, competing needs.

I think, Senator Graham, given the nature of this particular proposal, where it's very project-specific, you may make slightly different decisions, depending on what is the ultimate purpose of that project. So in some ways it may initially be easier to have the conversation around the specific project that would move forward in the first several years and to make determinations within the specific projects because some of them are clearly designed to meet one set of needs versus another set of needs. I think the overarching principle has to be to recognize that, when you take care of the natural system, when you provide for the natural system, that gives you the greater flexibility then to deal with the other competing demands, which are primarily the people of South Florida and the agricultural community.

Senator GRAHAM. Thank you.

Senator SMITH. Administrative Browner, in your testimony, in your written testimony, you devoted a significant portion of it to the mercury problems and, in fact, you indicated that some of the fish might be bordering, may not be edible, some of the game fish, and also that significant amounts of mercury were showing up in other wildlife and birds in the whole ecosystem.

I guess the question is, No. 1: What do you view the major source of this mercury because it's not really addressed in the plan, the issue of mercury; and, No. 2, is this unusual in the Everglades? Is this an anomaly or are we talking about something that's pretty much in every ecosystem where you have water and wildlife?

Could you address that, because I think, if we wind up making all these corrections and save the quality of the water but lose the wildlife, then we have lost a significant portion of the treasure.

Ms. BROWNER. We certainly think that mercury is a significant problem and one that we have only become more aware of in recent times. It was not something that the scientific community studied or understood 30 or 40 years ago.

More than likely in most systems, the mercury is a result of air deposition, probably from coal fire utility plants and other types of

incineration. It's a byproduct of the process, and I think there's certainly some who believe that the mercury, some of the mercury in the Everglades, may be from air deposition.

The scientists are looking at questions of whether or not certain agricultural practices may be resulting in increased mercury levels. EPA is very engaged in research that looks at what we could perhaps do working with people and perhaps the agricultural industry to manage that source of mercury contamination.

I should tell you, EPA sent to Congress last year a report on mercury and air deposition, as was required by law. As part of that report, we indicated that, by December 15 this year under the Clean Air Act, we would make a determination as to whether or not mercury emissions, air emissions, should be regulated subject to a technology-based standard, and we are on track to make that decision by the end of this year. We have not made a final decision yet.

If we were to make an affirmative decision that mercury is a pollutant that should be regulated in air emissions, that would then trigger a whole rulemaking process to set standards on particular industry sectors.

Senator SMITH. The question for me is: Is this showing up disproportionately here in the Everglades than, say, the Mississippi Delta or some other ecosystem?

Senator VOINOVICH. It's the biggest problem we have in the Great Lakes.

Ms. BROWNER. Yes, it's very big in the Great Lakes. They have fish consumption advisories in the Great Lakes. Mercury is a significant problem and though we haven't made a final determination at EPA, I will tell you within the scientific community, that large numbers of scientists think it is one of the greatest challenges we face right now in terms of healthy ecosystems and wildlife.

Senator SMITH. Thank you.

Senator Voinovich?

Senator VOINOVICH. I would like to get to some specifics. The plan has many elements to it and part of, I think, the committee's responsibility is to sift out through those elements projects which are what we refer to as genuinely a Federal project and one which we should be involved with, perhaps some that may not be Federal in nature.

Two wastewater treatment facilities that have capital costs of 800 million and contribute to about half of the $84 million in proposed operation and maintenance costs as planned are in the proposal, and the question is: What's the Federal interest in those plans? I mean, that's a lot of money, and one of the things that you are proposing to doing or the plan is proposing to do is the Federal Government picking up a lot of maintenance costs which we have not done before. So I would like your comment about those waste treatment facilities and how do they fit in with the project.

If you can't comment on it, perhaps some other witnesses later can do it.

Ms. BROWNER. You are asking about the money and that's the question I was trying to get an answer to.

The State of Florida, as did every State, as you're well aware, received some money through the State Revolving Fund program, the Clean Water SRF program. It's a population-driven formula.

Senator VOINOVICH. Which you would like to get reauthorized?

Ms. BROWNER. We would like to get reauthorized? Yes, exactly. I wasn't going to bring that up but thank you for bringing it up.

Generally these types of projects are eligible for funding through the State of Florida's SRF program. I don't know where they have ranked them or if they have ranked them yet at this point in time.

Right now, nationally, that fund is revolving at two billion annually. So it's a fairly large amount of money that's moving through the system and available to each of the States.

Senator VOINOVICH. So the answer is that, if it's not funded out of WRDA and doesn't perhaps meet the requirements, that it could be funded out of another fund, which is the State Revolving Fund program?

Ms. BROWNER. Yes, sir, generally, loans are available it its a local responsibility.

Senator VOINOVICH. One other question I would like to ask and, that is, I think it's what Senator Smith had to say, that—this is CERP, right?

Ms. BROWNER. Right.

Senator VOINOVICH. One of the things that I pointed out earlier is that I think it's really important that everybody understand that this isn't the comprehensive restoration plan for the Everglades because of the fact that we have mercury. When we were up at Loxahatchee today, we learned about the exotic plants that have invaded the Everglades and the serious problems that they have in regard to that.

Is there any thought from any other of the Federal agencies that are represented here today about how they're going to deal with those very serious problems, because we can go ahead and do this project and it will help substantially, but there are some other things that all ought to be concerned about; and I wonder, is this high priority with some of the other Federal agencies that could help in dealing with this?

Ms. BROWNER. In terms of the other problems?

Senator VOINOVICH. Yes.

Ms. BROWNER. Well, for example, in terms of exotic species, there are a number of programs which the State of Florida participates in, I know through USDA and others, to try and eradicate exotic species.

You know, if I could step back for a moment, in developing the comprehensive plan, there was a vision and the vision was about bringing the water back to the system, and so the plan's components focused on that.

It is not to say that there may not be some ongoing activities, like exotic species, eradication, like mercury, that are not also important to the health of the system and will continue to go on. They will, in fact, continue to go on, but the primary challenge in this system and the most important thing we can do is to bring the water back into the system and that is what the plan focuses on.

Senator VOINOVICH. It in itself is not going to—there are other problems that need to be addressed; that's the point I'm making.

Ms. BROWNER. They are. For example, the issue of mercury, there are mechanisms in the Clean Air Act for addressing those problems. There is research underway. The same thing on exotic species. It's not as if those issues are being ignored. They are being addressed. They are being addressed in other ways.

Senator VOINOVICH. I'd like to know from somebody later on specifically how they are being. I think it's really important, if we are going to spend this money, that we are also working on the other problems.

Ms. BROWNER. I agree. We can do that.

Senator SMITH. Senator Graham.

Senator GRAHAM. Carol, I would like to go back to one of your four points for 2000, which was the inclusion of the issue of water quality as one of the purposes of this project.

I wonder if you can elaborate on what is the current significance of not having water quality as an objective and what would be the consequences of that. Maybe you could give an example of those consequences.

Ms. BROWNER. The current WRDA project, not the restudy, but the current project you know as the Central and South Florida project, is the mechanism under which much of the work heretofore has gone on. I think because it's not what the way people thought when that project was originally conceived, water quality has never been included as a project purpose.

It has largely been about the draining of South Florida, and water quality was not a component of that project; but as we continue to work within that project and that project is ongoing and there are certainly many important efforts underway within that project, we think it would be extremely important to add water quality to the project purpose.

Now, the State of Florida, I'm fairly certain, agrees with us on this. In part they would agree with us because some of the work that they might do under the project, which has a cost-share requirement, might bring water quality benefits, but they would not be eligible for some of the cost share as they would be within other types of activities. So it allows us to do some of the kind of cost sharing that I think is important to the long-term success.

I think it would also allow us to make a set of evaluations for any other activities that might take place under the original project to ensure that, in making those types of decisions, we weren't simply making water quantity decisions or water transfer decisions, but that, if those quantity or those transfer or their drainage decisions had a water quality impact, it was part and parcel of the decisionmaking process.

I think for a long time down here we didn't really see the two as interconnected, but they're completely linked, water quality and water quantity. In some ways, it almost appears as if it's a silly oversight now, that the original project doesn't include water quality; and so going back and adding it would ensure that any decision that might have to be made under the original project wouldn't come at the expense, maybe unintentionally, but nevertheless at the expense, of water quality.

Senator SMITH. Administrator Browner, the comprehensive plan addresses and frankly relies pretty heavily on the Stormwater

Treatment Areas to reduce the flow of phosphorus, and the plan actually proposes to construct stormwater treatment that would deal with some—I think it's 36,000 acres, as I recall of wetlands.

I guess one question: How effective have these areas been at reducing the phosphorus discharges. That's No. 1, which is under your responsibility anyway. Second, can they really deal with the volume of water that we are anticipating coming through here in this plan? I don't want to put too much on you.

The third point is: When this happens, when they no longer can be as effective at removing phosphorus from the billions of gallons of water, it would seem that these treatment areas may not provide the term-long solution. I mean, we don't want to have these beds of phosphorus-filled weeds or grass that become basically phosphorus holding pens, if you will.

So I'm concerned that, with the increase flow of water through the plan, you've had experience in dealing with the phosphorus nonpoint source of pollution as it is.

Just comment, if you could, on how you feel this will enhance us in regards to eliminating phosphorus in the plan.

Ms. BROWNER. I think there is wide-scale agreement that the Stormwater Treatment Areas, the STAs, are effective in reducing levels of phosphorus as it enters the STAs through management of the STA, through vegetation and other activities.

Senator SMITH. By creating those vegetation areas, right?

Ms. BROWNER. There's an uptake that you can create through vegetation and other practices and that has been effective. The water management district just yesterday released another report showing what kind of clean-up you can get through the STAs.

I think you raised an important question, which is: What happens over a long period of time? Do you reach a moment when they've sort of done everything they can do? I think it's important to note that the comprehensive plan does not necessarily limit STAs to 36,000 acres. It recognizes that, with experience, with the passage of time, you may find that you need some additional STA; you may find you may learn more about some other technologies that could provide answers. So it doesn't limit it. It doesn't say—in no way does the plan say, this amount of STA will solve the problem.

The point I made in my opening statement I'd like to make again: The solution to the Everglades will not simply be to install technology and, whatever it does, so be it.

The solution has to be clean, available water, and what the plan does is put together a variety of tools for cleaning the water. Some of them we know more about than others. They all bring some benefits, but as we proceed, we may find that they're not enough and we may need to add to them, but we won't know that until we go out there and do it. It's like any other sort of large challenge. You have to begin. You have to start. You have to get the knowledge. You have to get the expertise, and then you can make adjustments, if necessary.

The STAs certainly have proven to work. I think everyone agrees that a large number of them will be important to this, but we have to keep our eye on the ultimate goal, which is the clean water, and that may mean making some adjustments down the road.

Senator SMITH. Do we have any science or evidence, though, in regards to what the capacity of these phosphorus storage beds can handle?

Ms. BROWNER. Yes, there is evidence now. The Water Management District would actually be in the best position to answer that. They have been studying the assimilation capacity.

Senator SMITH. We'll want to pursue it.

Ms. BROWNER. They're better than was originally thought, although they are not hitting the kind of phosphorus level that many of us think will be important to hit to get to the health of the Everglades. They're not getting all the way down, but they are doing a good job and they're taking up more than was originally, I think, anticipated.

Senator SMITH. I assume the canal system being removed will enhance that, as well, correct?

Ms. BROWNER. Probably should.

Senator SMITH. Yes.

Senator VOINOVICH. This is a little technicality, but it's interesting. The water runoff that comes into the canals, a lot of it is runoff from——

Ms. BROWNER. Agricultural lands.

Senator VOINOVICH.—agricultures. Any of it come off of housing developments?

Ms. BROWNER. Yes. Some of it is urban. Some of it is agricultural.

Senator VOINOVICH. You know we have a real problem with combined sewer, sanitary——

Ms. BROWNER. CSOs.

Senator VOINOVICH. The fact is that, in those areas where they don't have separate sanitary and storm, does all that water come into those canals too and then——

Ms. BROWNER. Yes, it's not that much. From Broward County, which is north of here, there is some coming in. There is not all that much urban stormwater runoff coming into this system.

Senator VOINOVICH. The reason I'm saying that is this is an alternative way of doing something and you are talking about the period where once a while you have that big flood or, you know, that big rain. That could save some of those communities money if this was an alternative in terms of forcing them to separate their sanitary and storm.

Ms. BROWNER. Senator, I think—this just occurred to me—most of the development that we are talking about in the Everglades' ecosystem is relatively newer development, so some of the kinds of issues that you're familiar with don't present themselves down here.

Senator VOINOVICH. So they don't have the problems?

Ms. BROWNER. Not of the nature, I think, that you're familiar with as a former mayor, no.

Senator VOINOVICH. That's good. That's good.

Ms. BROWNER. It's different, yeah. It's just newer developments. Things didn't develop in the same ways.

Senator SMITH. I think we are all set, Administrator Browner. Do you have any comments or points that you want to make before we move to the next panel?

Ms. BROWNER. No. I want to thank you for taking the time and for making this your first hearing and to pledge our willingness to work with the committee in a bipartisan manner. I think there is a tremendous opportunity. This is an issue I have worked on for the better part of my adult life now, and there have been various moments over the last 20 years where we have turned an important corner, and I think that that is the opportunity that is in front of all of us now with the plan, with your interest, with the committee's commitment; and we will work with you to achieve that.

Thank you.

Senator SMITH. Thank you very much for being here. We appreciate it.

Let me say to the audience, because we do have a packed room here, there will be a 3- or 4-minute automatic break as we change panels. So if anybody needs to go out, that's the time to do it, if you can, because also, unless we have an emergency up here, we are going to try not to take any breaks other than that and keep moving. So if one of us leaves, you'll know that we will be back.

So thank you very much, Administrator Browner.

Ms. BROWNER. Thank you.

Senator SMITH. If we can have the second panel work its way up.

[Recess.]

Senator SMITH. I would like to welcome the second panel. I'm going to do my best to introduce you and not mess it up here for the record, but what we have with panel No. 2 are a combination of key Federal and State partners for the Everglades restoration project.

We have Dr. Joseph Westphal, who is the assistant secretary of the Army for Civil Works, chief of the agency responsible for implementing the restoration plan of the U.S. Army Corps. He also has several of his deputies responsible for the project here in Florida with him.

From the Interior Department, we have Mary Doyle, who is another Floridian, I understand, who was recently appointed as counselor to Secretary Babbitt. Ms. Doyle has also been appointed as the chair for South Florida Ecosystem Restoration Task Force.

Joining the Federal family, are their Florida sponsors, the Honorable David B. Struhs, the secretary of the Florida Department of Environmental Protection. He's here representing the State on behalf of Governor Bush, who could not attend today because of a special session of the State legislature.

The last witness on the panel—do we have everybody—is Captain Mike Collins——

Senator VOINOVICH. Where is Mike Collins?

Senator SMITH. Over there—who is the chairman of the South Florida Water Management District, the State's cost-sharing partner for this restoration effort.

Now, I see Mr. Davis here, and I don't have, for some reason, any information.

Mr. WESTPHAL. Mr. Chairman, he is with me. He's going to help make the presentation.

Senator SMITH. OK. Great. We didn't mess it up then.

Mr. WESTPHAL. No.

Senator SMITH. I would ask each witness to do your best to keep your remarks confined to 5 minutes or less. Every word of your statement will be part of the formal record and you all know how the drill works and so that we can try to move along as quickly as possible. I'm not sure of the protocol here. I think probably it's either the Army Corps or Ms. Doyle. Which is it?

Ms. DOYLE. I think the Corps, Mr. Chairman, will lay out the plan.

Senator SMITH. All right. We will start with you, Dr. Westphal. Go ahead.

STATEMENT OF HON. JOSEPH WESTPHAL, ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS), U.S. ARMY CORPS OF ENGINEERS

Mr. WESTPHAL. Thank you, Mr. Chairman, Senator Graham, Senator Voinovich. We have submitted a formal statement for the record and ask that you make it a part of the record.

Senator SMITH. It will be done.

Mr. WESTPHAL. Mr. Chairman, I am here with my deputy assistant secretary, Michael Davis, whose played a key role in this effort, and we are going to do a little tandem work here to present to you an overall look at what we are proposing and will be proposing.

Senator SMITH. Can the folks in the back hear?

[Response in the negative.]

Senator SMITH. Maybe pull the microphone a little closer, see if that works.

Mr. WESTPHAL. There we go.

Senator SMITH. Better now? Is that better? All right.

Mr. WESTPHAL. So we will give you an overview of what we see as the problem and what we see as the possible solution in this effort.

I also have with me, sitting behind me, General Rick Capka, who is our South Atlantic Division commander, who oversees the Jacksonville District's work in the Florida arena.

Mr. Chairman, what we are going to do this afternoon is very quickly do a little PowerPoint presentation. I know this is unusual in a congressional hearing but——

Senator SMITH. Maybe it will liven it up.

Mr. WESTPHAL.—we thought we would give you a more visual look at what we're going to talk about.

Now, I have to say you stole some of my thunder when all three of you have made mention of several of the things that we are going to say here. So we will go through them fairly quickly, but I think you'll see from this presentation where we are heading, what we are proposing, and why we think this is so important.

So let me start by giving you this brief presentation. Mr. Chairman, you see there the Everglades. You made mention of the Grand Canyon and other great—Yellowstone Park, California's ancient redwoods, as places that are irreplaceable. The Everglades is such a place.

You see that the Everglades designated, not just an international park, but an international biosphere reserve, a world heritage site and so on. The Everglades is unlike any ecosystem anywhere in the world. It is unique. It is splendid. It is majestic. It is critically sig-

nificant, not just to Florida or to the United States, but to this planet's future and survival.

This is roughly the area we're talking about. Mr. Chairman, I was born 52 years ago in 1948, when the first project was authorized by Congress; and at that time there was an intention to do a lot of good, to protect people from floods, provide water supply, to manage water, among other benefits; and it has accomplished much of what was intended to do in that area, but we have also seen a population grow from 500,000 people to six million people, and we project a significant growth in this millennium and this ecosystem that you see here is now being reduced in half. What you see here as the river of grass, this connected system, this flow of water, is no longer the case and what you see is an ecosystem in danger. You see the Everglades as a dying natural ecosystem.

Indicators of the problems, I won't read them all to you, Mr. Chairman. They're in part of the record, but you can see there, to amend this endangerment and threatened species, wildlife, billions of gallons of water lost every day, over 1.5 million acres infested with invasive species and exotic plants. You also have declining population level of important fish species and other major impacts to the environment.

Everyone in this room that you see behind us has had a major part in this. The tribes have an important role to play and are an important part of this ecosystem. The organizations that are represented behind us, and this administration, starting with the President and the Vice President, Carol Browner, who just testified before the committee, Bruce Babbitt, your committee, Mr. Chairman, you, and, of course, Senator Chafee, Senator Graham, and many others who have been staunch supporters of this program, including the delegation from Florida, the people such as Clay Shaw, Connie Mack, whose here, Porter Goss, Peter Deutsch, Mark Foley, Carrie Meek, and others.

The State of Florida and its people, its leadership, its Governor, are all committed to this comprehensive plan. Governor Chiles worked hard on it. Governor Bush has made strong commitments to it, and we stand ready to support him, and to work with him as equal partners in this process.

Also, the restudy team has made a tremendous effort led by both the Corps of Engineers and South Florida Water Management District, and I want to congratulate them, Stu Applebaum and Tom Teets for their work.

Specific implementation of the plan, what we hope to accomplish are listed here, improvements to the health of over 2.4 million acres of South Florida ecosystem, virtually eliminate the damaging fresh water releases to the estuaries, and improve water deliveries to Florida and Biscayne Bays. Administrator Browner already addressed some of these water quality improvements. They are significant. They are very vital and very important.

The comprehensive plan incorporates a number of major principles, the first of which is, of course, the restoration, preservation and protection of the system.

The comprehensive plan is based on best available science. There is a significant amount of work that has gone into this, tremendous intra-agency work to develop the plan, the comprehensive plan, de-

veloped through an inclusive and open process, engaging all stakeholders and interest groups; and all applicable Federal, tribal, State and local agencies were partners in this and continue to be partners in this process.

This is a key, it is a flexible plan based on adaptive assessments. Modifications will be made as we go along. There is a 20-year plan that will certainly require us to have the flexibility to adapt as we monitor to adapt and modify what we're proposing to do.

Now, the ecosystem is in trouble. It's in trouble basically because of four major components: How much water is involved, the quantity; how good the water is, the quality side of it; where to distribute the water; and when on the timing part of it.

Those components are written there. They are much too small for anybody to see, but there are 68 major components to this comprehensive plan, and in these four areas of quantity, quality, distribution and timing, we are proposing a number of major activities and major projects that will address and attempt to address these four major problems.

On the quantity side of things, we have got 1.7 billion gallons per day of water wasted and discharged into the Atlantic Ocean and Gulf of Mexico, and with this plan, we hope to capture and restore the water to a truly reliable and adequate water supply.

On the quality side, we have too much phosphorus, as we'd mentioned earlier, too much mercury and other contaminants, causing significant degradation. We hope to improve the quality of the water discharged to the natural areas by the development of a comprehensive integrated water quality plan.

From the timing side, we have altered the hydroperiods, the flooding and the drying of the area, vital to the functioning of the ecosystem. We hope to restore these variations in water flows and levels and to ensure that timing of these flows matches the natural patterns.

On the distribution side, we have not only reduced the Everglades by half but what has remained, we have cut it off by canals and levees and we have disturbed the continuity of the conductivity of the sheetflow. The movement of water is vital to the ecosystem.

So will remove, in that case, we are proposing to remove, about 240 miles of impediments, canals and levees, and to restore a more natural overland water flow.

If we can turn back to the previous slide, you can see, Mr. Chairman, that's where the water is going currently. That's where we are losing water, significant amounts of water into the Atlantic and into the Gulf of Mexico.

Here you see the various features, again difficult to read from a distance. You have got surface water storage reservoirs, 1.5 million acre-feet capacity on the surface water reservoirs to capture the water.

We are also proposing aquifer storage recovery, about 300 wells, 1.6 billion gallons per day pumped down into those aquifers.

We're proposing Stormwater Treatment Areas, 35,600 acres of man-made wetlands to be built, draining into Lake Okeechobee and into other parts of the ecosystem.

We are proposing wastewater reuse, two advanced wastewater treatment plants producing about 220 million gallons per day of treated discharge going back into the system.

We are also talking about seepage management using barriers and levees, pumps and managing water levels that will help control the loss of millions of gallons of ground water.

Removing barriers to sheetflow. Removing, as I said earlier, 240 miles of project canals and internal levees.

Then we are talking about operational changes, work with water delivery schedules to alleviate extreme fluctuations in the water.

As you see here, Mr. Chairman, and members of the committee, what you have is a system that will eventually restore 80 percent of the water we hope to capture, restore it back to the ecosystem, back to the environment, back to the park, back to the natural system; and 20 percent of that water, new water, to enhance water supplies for our cities and our farmers.

So the historic flows, the current flows and where the plan will take us, it won't recover the Everglades to its original and natural historic flows, but it will make a significant change in this ecosystem, and I would want to say that that's what this plan proposes to do. It's the result of a significant amount of cooperation and work between us and our State partners and all the groups represented in this room and many others, and we hope to be able to get to that plan.

Now, I have asked Michael Davis to take another couple of minutes to get a little more specific on the rest of the plan.

Mr. DAVIS. Thank you, Dr. Westphal, Mr. Chairman, Senator Graham, Senator Voinovich. Thank you for hosting this hearing. You are to be commended for doing that.

Let me just take a minute, if I can, to explain what we are going to be asking the Congress to do in our Water Resources Development Act 2000 proposal. We see the plan as five basic parts. First, an authorization of the plan itself as the conceptual road map for restoring the Everglades, an agreement that this is a national priority, something that has to be done, something that has to be done quickly.

That has four basic pieces, some pilot projects, a suite of projects that we would like to get authorized in a WRDA 2000 bill, a programmatic authority, and then the bulk of the project would be authorized in some future WRDAs.

We have six pilot projects proposed; however, two of those were recently authorized in the Water Resources Development Act of 1999, so we will be proposing four of those as part of our legislative proposal.

As I mentioned earlier, we are also going to propose ten, what we will call, initial authorization projects, a package of projects that we believe are very important, that were carefully thought out and considered that will allow us to get on with the business of restoring the Everglades very quickly.

It's important to move on with these projects because they're a link to existing, ongoing work in the Everglades. They take advantage of some of the lands that we already own, some of the lands that the State already owns, and we believe it is very important and we gave this part of the plan a lot of thought.

It's important to, I think, understand kind of the process that the Comprehensive Everglades Restoration Plan lays out for, not only this initial suite of projects, but for all of the future projects. Not one shovel full of dirt will be turned on any project until we do detailed project implementation reports, which is equivalent to a feasibility level analysis that you're used to getting in your committee.

Not one project will be undertaken until we complete a full environmental impact statement, which includes full public involvement; and, again, that's not just the ten initial projects. That's for every feature that will be undertaken under this plan.

We are also going to ask for a programmatic authority. We know that there are a lot of relatively small scale projects that provide immediate and very important benefits to the ecosystem and we'd like to move on with those very quickly.

This is very similar to the existing critical project authority that we have that were received in the 1996 Water Resources Bill.

Then you can see from this, the remaining components of the plan would be authorized in future WRDAs in the year 2002 and beyond. This is about 6.2 billion of the $7.8 billion worth of projects to be in some future WRDAs, and these would come through what is really the normal process that you deal with water resources projects in your committee. We would submit to you the reports of the feasibilities with the EIS and the other documentation that you are used to getting in all these future water components.

Some have suggested that this plan doesn't work fast enough and how long will it take or how long does it have to take to restore the Everglades. Implementation of this plan completely will take about 36 years, but we know, based on modeling and technical evaluations, that after about 10 years, we will start to receive and see substantial changes in the ecosystem; and the vast majority of the benefits will actually be obtained about 20 years into the plan.

It is important to remember that this ecosystem and other wetland ecosystems will not automatically immediately respond to hydrological changes. It will take some time. It took quite a while to impact the ecosystem. It will take some time to restore it as well.

As Dr. Westphal mentioned, the plan itself was developed in a very scientific technical manner with substantial peer review, and we are going to continue that. We know that we don't have all the answers. We know the plan is not perfect and we are going to have to make some midcourse corrections. That's why we are proposing an extensive monitoring plan and we also have created the Science Advisory Panel. We have a group of independent scientists who will give us their opinion on some of the problems and some of the issues that we will inevitably face in this 25-year journey of restoring the Everglades.

There is not much I can say here, Mr. Chairman. You, Dr. Westphal, Carol Browner, and others have made it very clear, I think, that restoring the Everglades is a national priority and it is very important to us. I think it is important to put it in the context of other investments. Certainly 7.8 billion sounds like a lot. It is a lot of money, but we do spend a lot of money around the country on other public works investments as well.

The Woodrow Wilson Bridge, just in all of our backyards, is $1.8 billion. The Boston Artery and Tunnel in Boston is about 10.8. So there's other public investments in this country that cost similar amounts.

Finally, there is what I would call the report card, and we have a copy over here to the right on this poster as well. If, in our judgment, and this is not just a guess, this is based on our best modeling and scientific efforts, in our judgment, if we do nothing, we are going to have the condition on the left, and red is not good. Red is a failure, and we're going to lose the Everglades.

We also believe, based on modeling and scientific expertise, that, if we implement the plan over the next 20 or 25 years, we're going to have the report card on the right. We're going to have a lot of green. We'll have a healthy, viable and sustainable Everglades.

Thank you, Mr. Chairman.

Senator SMITH. Thank you very much, Mr. Davis. I would say, since the Army Corps is the presenter of the plan, I was more generous with the time, but I think we're going to have to try to hold to the 5 minutes.

We have an administrative decision here. It might flow a little more smoothly if anybody has a question of these two witnesses right at this juncture, we should ask it, and then we can move to Ms. Doyle. I think it will just flow a little better.

I want to make one comment to you, Dr. Westphal. You know that, in order for us to move forward, which you have outlined asking us to do in there, that we are going to need the fiscal 2001 budget from the President, and we are going to need the legislative language.

I know when the budget normally comes, which is mid-February, but if we wait—if the language, let's say the language doesn't come for another month into March, it's really moving out now into an area where it's going to make it very difficult to move this thing along at a pace that I would like to do it.

So I would urge you to do your best to get us that legislative language much earlier than March, No. 1; No. 2, if we can get a heads-up on the budget, at least that portion of the budget that deals with this, that would be very helpful. So let me make that request of you, realizing that, hopefully, you can make it happen, but realizing it may not be possible, but it's going to slow it down dramatically if we don't get that information before this. Maybe the good Senator from Florida here could work on that a little, too, within the administration.

Mr. WESTPHAL. Well, I think we can definitely do everything we can to meet both of those expectations, especially on the WRDA piece.

I had a discussion with you earlier. I also had a discussion with the chairman of the Transportation and Construction Committee in the House, Chairman Shuster, about trying to get this bill to you as soon as possible so that you could work on it early in the session and get it done for a variety of reasons. I think he is in agreement with that, and we are working very hard to put that together.

We will try to work with your staff to keep you apprised of how our progress is going.

Senator SMITH. You know how the process works, February and March, you know, is a good time to be able to work on this kind of legislation.

Mr. WESTPHAL. Right.

Senator SMITH. You start getting into the end of the spring and the summer, then you have got the appropriations bills beginning to hatch and floor time becomes a problem and so forth.

Mr. WESTPHAL. Mr. Chairman, it's not so much our inability to produce the language of a bill to turn over to you. A lot of it is getting OMB to approve that language, and OMB is simultaneously working on getting you a budget for fiscal year 2001. So they are always juggling all these balls and getting both authorizing and a budget put together; and that's where we get into the road blocks; but I will work with OMB to expedite it and to get as much of it to you as early as we can. If we can give you any advanced language that we can work on mutually, I think we can do that.

Senator SMITH. A finer point for me, you identified that $1.1 billion or so of projects. You also identified them as the highest—maybe you didn't use that exact term, but the implication was that these were the highest priority items yet and were going to have the most immediate impact.

I think it's important that you maintain that priority base so we don't get into a future year where suddenly something that we missed becomes an emergency that causes us to have to adjust the schedule upward and causes somebody to lose the desire to support the project.

I mean, you've told us in that presentation $1.1 billion. You listed certain areas of the plan that were the highest priority, and I think, if that's the case, then we need to stay focused on that and make sure that we know ahead of time if that starts to slip or something else takes on a higher priority that might be more immediate in nature. Just a little caution on that.

Senator Graham?

Senator VOINOVICH. I have a couple questions about the scheduling. One of those is, I understand that some of these projects are going to have to be permitted by the State. Have the proposed initial flight of projects been reviewed by the State and, if so, what is the status in terms of their being permanent?

Mr. WESTPHAL. I don't know the answer to that question.

Senator VOINOVICH. I wonder, could I ask——

Senator SMITH. Sure. You'll still have the opportunity to give your statement, Dave. Go ahead.

Mr. STRUHS. OK. As I understand it, our permanent shop has actually agreed to work with the designer, so that, as they're designing structures and facilities to be built in the future, assuming that this is authorized and ultimately appropriated, that we are confident that those structures and infrastructure investments will effect the water quality standards.

The other, I think I would point out, is that last legislative session, the Florida Legislature inserted themselves so that would have the ability to early on in the process demonstrate the political support for the State of Florida that they are, in fact, on a component-by-component basis to support these projects, so that, by the

time they get to you, you have more confidence that the entire State of Florida, including the legislature, is on board.

Senator SMITH. Senator Voinovich?

Senator VOINOVICH. As I mentioned, the comprehensive plan does not have the detail associated with it with other feasibility studies.

The issue is, if at all possible, to authorize and fund the pilot projects to see how they work before proceeding to an open-end authorization, if you can get it down to the stuff that you're really sure about and proceed in that fashion.

Mr. WESTPHAL. I think we are very confident about this proposal we are turning over. I think it has a considerable amount of study behind it, a considerable amount of science behind it. I think it's important at this time because it links so many of these projects together into a comprehensive plan, as opposed to a disparate set of different projects.

It's not a blank check, as we have said before, in our presentation. We are going to have to do all the NEPA compliance work, public comments, and all kinds of future and legal requirements are going to have to be met as we proceed along. Of course, it does incorporate as well, this adaptive assessment and management aspect to it. So as we go along, we will assess; we will change course if we need to based on our monitoring work we're doing.

So I think we're presenting you a plan that we are very comfortable with and we think stands the test of the science and the hard work that went into it, but I think we also understand that there may be some changes that come down in the future as we assess and monitor what we are doing.

Senator VOINOVICH. I think another thing that's a concern to me is that the Corps recommends Federal participation in 50 percent of the costs in operating and maintenance of the project, and this is a significant break with the long-standing Federal policy dating back to the Flood Control Act of 1936 and also deviates from the conditions that apply to this project found in the Water Resources Development Act in 1996.

The point is that there are others—say, the Great Lakes, Chesapeake Bay, Puget Sound. Is the Corps going off into a new proposal in terms of paying for the operation and maintenance costs of these things? This is unusual. Why is the administration proposing that in this plan?

Mr. WESTPHAL. Well, it's a proposal. Actually, in my letter of transmittal to the committee, to the Congress, to the Senate and to the House, I indicated that we would looking at this, along with our other Federal partners and State partners, we would be looking at this and making a proposal to you on this matter. So it isn't a final decision, but we are looking at it very seriously.

We think that this is a very unique project in many ways. The Federal Government is a beneficiary of much of what we are going to do here today because of the Everglades National Park, Biscayne Bay, Big Cypress and others.

In addition, as you all pointed out, the Federal Government had a major hand and was a major factor in causing some of these problems. So for those reasons, we are taking this under serious consideration, and we want to be also fair to the State of Florida,

who, I think, is an equal partner in this and is willing to share in significant amount of cost of restoring the Everglades.

Senator VOINOVICH. It gets back again to the money and, if Congress authorizes Federal participation in the ONM, up to 80 million will be required from the general account of the Corps, and a lot of us are concerned about the impact that the proposal will have in the overall program of the Corps of Engineers.

When the administration commented on the Water Resources Development Act of 1999, it was noted that the Corps also had a $27 billion backlog on fund and design and construction.

So one of the things that we have to—the Corps of Engineers has to have the wherewithal in order to operate, and I think that is something that the administration has to give some serious consideration to. I know certainly Congress will.

Mr. WESTPHAL. Right. Senator, I think you're absolutely right, and I think we would all be foolish to hide our heads in the sand and pretend that that this is not an issue, that the money is there, and this is enough of a high priority for everybody that we're going to get it done real easily. No, I agree with you. This backlog issue is something that I have already begun discussions with the House and the Senate committees on, both the appropriators and the authorizers.

Much of this backlog that we talk about are projects that we may need to take a serious look at. They're old. They're sitting as authorized projects dating sometimes back to the 1940's. So we need to look at seriously how much of this $27 billion backlog we are going to build in the future. As you know, we have no year funding so there is a stream of funding that continues.

A lot of our problem is, not so much what we are willing to do or what our capability is to do, as much as it is how we are limited by appropriations every year, by what you're able to appropriate, your allocations in the Appropriations Committee, and what we can do based on those appropriations as we space out these projects.

So it is something we need to address, and we are going to be able to address that if we do that together, if we do that, the Congress and the administration working together trying to figure out a way out of that dilemma.

We don't believe that this is going to exacerbate that problem, but we will work with you, and we will work with the appropriators to try to do that, and I think that's a high priority for me and it's a high priority for the administration to try to resolve.

I do acknowledge what you're saying and I think it's something to consider, but I also think that, if we don't work together to resolve it, it's going to persist.

Senator VOINOVICH. Mr. Chairman, I think it would probably be helpful if we really did spend the time to go through that backlog to see if the projects were real or not real, skinny it down to the real projects.

Mr. WESTPHAL. I think it's something that would really be helpful to both the committee—it is also helpful as you have to decide on future WRDA bills. You know, we passed a WRDA bill that amounts to almost $6 billion last year. You're going to pass another one this year. We don't know what that amount is going to be; but as you make decisions nationwide, I think it's imperative that you

also have a sense of what you're leaving behind and what's being delayed and what has priority.

Senator SMITH. Thank you very much. Let me remind each witness, as well as my colleagues up here, you have been fine. We have got to speak directly into these microphones or the people in the back can't hear. So put it a little closer than you would normally do.

Ms. Doyle?

STATEMENT OF MARY DOYLE, COUNSELOR TO THE SECRETARY, CHAIR, SOUTH FLORIDA ECOSYSTEM RESTORATION TASK FORCE, U.S. DEPARTMENT OF THE INTERIOR

Ms. DOYLE. Thank you, Mr. Chairman. My name is Mary Doyle. I'm counselor to Secretary Bruce Babbitt, whose has honored me today by appointing me to chair the South Florida Ecosystem Restoration Task Force. Today is my first day on the job.

Senator SMITH. Good timing, very good timing.

Ms. DOYLE. Today is my first hearing, Mr. Chairman, just like you, and I'm very happy to start out in this way. Thank you.

Senator SMITH. Well, congratulations.

Ms. DOYLE. Thank you.

Senator SMITH. And good luck.

Ms. DOYLE. Thank you.

I'm a Floridian, as you mentioned. I have lived in Miami about 15 years now where I have served as dean of the University of Miami School of Law; and when these responsibilities are finished, I intend to go back to Miami. So I have a very personal stake in this like the one expressed by Administrator Browner.

With me today are three colleagues who have wide and deep knowledge and experience on these issues. I wanted to acknowledge their presence and they're available to answer any questions you might have.

Donald Berry, who is our Assistant Secretary of Interior for Fish, Wildlife and Parks; Richard Ring, your guide to the Everglades, great superintendent of Everglades National Park; and Colonel Rock Salt, who is the executive director of the task force I chair.

Senator SMITH. That's great.

Ms. DOYLE. Everybody wants to meet him when they find out what his name is.

This committee has asked us to address three issues at this hearing, and I can go through them very quickly. First was the future role of the task force in the overall restoration effort.

The second was the role of the newly created Science Advisory Panel, which advises the task force and which was referred to by my colleague, Michael Davis; and then issues raised in the comprehensive plan for which the National Park Service and the Fish and Wildlife Service have responsibility.

Let me briefly tell you that the task force is made up of representatives of seven Federal agencies, the Miccosukee and Seminole Tribes, the State of Florida, the South Florida Water Management District, and two units of local government. It was established by Congress in 1996. Its responsibility is one of coordination of the efforts of all these various agencies, and the development of consistent plans for overall restoration of the ecosystem.

One of our functions, Senator Voinovich, is to address the issue you raised beyond the Corps' plan, what are our plans for overall restoration, including the elimination of exotics, habitat restoration for endangered species, and so on.

This coming year we are developing a strategic plan which will integrate existing plans and activities throughout the region and serve as the framework for future adaptive management for the next 50 years. We will provide that to you as it is developed.

The task force also oversees the work of the Science Advisory Panel, which has just been created. The Secretary of the Interior and the task force requested the National Academy of Sciences to put together a team of peer review experts. As Michael Davis said, none of these 16 scientists on this panel are currently working in South Florida, except on this project.

They will provide peer review to the Department and the Corps of Engineers as we move forward on issues of monitoring, determining whether intended benefits are actually being realized from pilot projects, and that sort of thing.

The Science Advisory Panel is currently developing its first work plan, which it will present to the task force for its consideration at its next meeting.

Finally, the third topic I was asked to address, issues affecting fish, wildlife and parks in the South Florida ecosystem. I wanted to note for you that the Fish and Wildlife Service last May issued the South Florida Multi-Species Recovery Plan, unprecedented in its scope and scale, which is the comprehensive blueprint for guiding the actions of all relevant parties, public and private, toward recovery of the 68 species that are currently listed as threatened or endangered, species of plants and animals in South Florida.

This Multi-species Recovery Plan is going to be a very valuable asset to the Corps and the rest of us as we implement restoration features in the coming years.

An issue of vital concern to the department and its constituents, agencies, as it is to all the stakeholders is the one Senator Graham identified early in the hearing, and that is the so-called assurances issue.

Chairman Regula and you, Senator Graham, have both been clear that we need up front in the authorizing process a formula to ensure that water is provided for the natural system, whether we are talking about the natural system held under State management or Federal management, in proper quantity, quality, timing and distribution, even in times of stress upon the system.

We are developing proposed language now. We are going to be discussing this with our partners at this meeting. We are aware of Chairman Smith's admonition as to submitting language to this committee, and so the time of facing the assurances issue is now and we are grappling with it.

Mr. Chairman, I will conclude with a statement on behalf of the Department of Interior and the task force of strong support for the Corps of Engineers' comprehensive plan, of admiration for the work of our partners in the Corps, in the State, and in the South Florida Water Management District. I want to assure you that this is a partnership that works and on which you can depend in the authorization and funding of the proposal.

Thank you very much.

Senator SMITH. Thank you very much. Ms. Doyle, you deserve a raise. You hit it within less than 5 minutes.

I have one particular question and then, if either of my colleagues have one, we can ask and then move to the next panelist. David will be next.

You heard me ask Secretary Browner about the mercury contamination. Could you, perhaps, comment on that, as well as the phosphorus problem as far as the impact on wildlife and fish?

Ms. DOYLE. Yes. Maybe I will call on one of my wildlife colleagues.

Senator SMITH. When you come up to the microphone, identify yourself. That's all.

Mr. RING. Mr. Chairman, I'm Superintendent Dick Ring from Everglades National Park. The issue on mercury and phosphorus are that they both have significant impacts on the wildlife in the natural system.

The first is that phosphorus is a nutrient that is pouring into a nutrient-poor system. It's changing the habitat, eliminating periphyton, the algal communities that are the base of the Everglades food chain, and creating dense cattail stands that are changing the habitat for many of the wildlife and displacing them.

The mercury is a lot more insidious. It is being taken up into the tissue of the plants and animals that we have, and truly we have had advisories out on not eating many of the fish in the Everglades that have mercury levels that have accumulated in their tissue and we have had examples where the higher the food chain, for instance, panthers, Florida panther, and other animals that prey on the lower orders have died because of mercury poisoning.

So it is a very significant and widespread issue that needs to be grappled with in the Florida ecosystem.

Senator SMITH. I felt there was somewhat, perhaps, limited, maybe it's unfair to characterize, optimism, but it seemed to me that Administrator Browner was fairly optimistic of containing the phosphorus flow.

Do you share that optimism?

Mr. RING. I think, with the phosphorus, since 1998 when we began to grapple with it——

Senator SMITH. Under the plan, I mean.

Mr. RING.—I think we have come up with an enormously effective plan working with the State. I think that plan is well into execution and the performance of that plan in removing phosphorus from the water that's coming into the Everglades is outperforming the design expectations, and we've got a lot of work to do. We've got about 6 years to go to finish it off, but I'm very optimistic that we are going to pull that off and largely, due to the efforts of the state, our State partners, who are really stepping out to try to tackle this and pull it through to completion.

Senator SMITH. Thank you.

Senator Graham?

Senator GRAHAM. I'm looking at the projects that are on the initial authorization list. The question I have: These represent approximately $1.1 billion of a total project of 7.8, so more or less 12 to 15 percent of the total project is represented by those that are

in the initial list. What would be the consequences if we, in fact, authorized, funded and built the projects that are on your initial list and then stopped? What kind of system would we have? Would it be better, worse, or the same as the system today?

Mr. WESTPHAL. Well, we believe that any work, of course, will advance and will help somewhat. We have projects that are part of an entire ecosystem restoration, which are not necessarily and always interconnected; but if you don't follow through—I mean, the whole basis of what we have put together is a comprehensive plan that's interdependent on all these things coming together and coming together in a timely fashion.

So we believe that, if you don't continue to fund this, if we don't continue to support it within the executive branch, that we will get that report card that has the red on it. We may see a few green spots here and there, but we are not going to get to the solution of this ongoing problem.

We believe this is a very strong national priority. Very significant funding is going into it, very significant amount of work on the part of the Federal agencies and the State, very significant work on the part of the Congress. We believe it's very high priority, not for Florida, but for our nation.

Senator GRAHAM. The Federal Government, not necessarily limited to the environmental area, is replete with examples of where the Congress puts its smallest toe in the water and then withdraws the rest of its anatomy.

My concern about this approach is not that it doesn't make common sense and is probably not the appropriate way to proceed but there has got to be a strong both political and psychological commitment that this is a commitment, not just to these projects, but as a commitment to the totality of the plan.

I believe that the strongest way to make that commitment would be, as Administrator Browner said, to have a funding scheme that doesn't involve the kinds of concerns that Senator Voinovich has raised, which is to put this program into direct competition with every other appropriation for a WRDA project of the Corps of Engineers, but rather has a sustainable, adequate, at least 20-year duration of financial plan to accompany this, even this initial step toward this total project.

Mr. WESTPHAL. That's right, Senator. I agree with you and I've talked very little bit about this subject with the chairman and I have talked with the chairman of the House Senate Committee and I have talked to you about it, and I agree that I think we need to try to locate and find a way to do that.

There are projects like Everglades, perhaps to a lesser scale and perhaps in the future to a larger scale in other parts of the country. We face equal and monumental losses of land in Louisiana. We face issues in other parts of the country that are of similar magnitude. We are going to have to address those in the future, and we are going to face the same problem there.

I think we can reach out and we can find some ways. I think you have got some ideas on that. I think the chairman has got some ideas on it. We are willing and very ready to work with you on doing that.

Ms. DOYLE. Senator Graham, the superintendent, changing the image from anatomy to construction, says it would be like building the foundation of the house, putting two of the walls up and then walking away.

Senator GRAHAM. That probably is a neater analogy than mine.

Senator SMITH. Senator Voinovich, a question of Ms. Doyle?

Senator VOINOVICH. Yes. First of all, I think that it's comforting to know that you have the task force and the fact that you have got the agencies together and you're working together. I'm sure that helps with the preparation of the restudy.

Ms. DOYLE. I wanted to offer the services of the task force to your committee also as we proceed here.

Senator VOINOVICH. I would be interested in any information that you have in terms of the scientific part of this in terms of the specific projects that are on the list that the Senators made reference to and what the scientists think about it in terms of the technology, is it sensible, has it been tested, so forth.

Ms. DOYLE. We are just getting rolling now so we'll keep you very well informed as to what projects they pick.

Senator VOINOVICH. Let's get that input on these projects and the reports from these groups who are monitoring—I would like to see that plan work too.

Senator SMITH. All set?

Secretary Struhs?

STATEMENT OF HON. DAVID B. STRUHS, SECRETARY, FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Mr. STRUHS. Thank you, Mr. Chairman, Senator Graham, Senator Voinovich.

If Governor Bush had been able to join us this afternoon, he would have asked or he would have himself delivered, rather than asking me to deliver, the message that Florida is willing, ready and waiting to forge a new and complete partnership with the Federal Government that weighs out rights and responsibilities as true 50/50 partners.

It was 6 months ago when I was in Washington and joining Vice President Gore, Administrator Browner, and Senator Graham and others that Florida committed to continuing the leadership, continued providing the resources to complete the mission on which, in fact, we have already embarked, a mission that aims at restoring the historic balance between land and water, a critical mission for Florida, certainly, but also a critical mission for the Federal Government, the Federal Government's interests, whether it be the Loxahatchee Refuge, 10,000 Islands, Big Cypress, endangered species, like the manatee, the Cable Sable sparrow, the panther, but perhaps the best known example of the Federal interest is America's Everglades National Park.

That treasure has already been, this afternoon, compared to other treasures in this country, Grand Canyon, Great Lakes, Yellowstone. In fact, America's Everglades National Park actually represents Florida's very first commitment to the Everglades. Florida actually gifted that park to the nation. I think it's fair to say that it's one of those kinds of gifts that keeps on giving.

Since that gift was made in 1947, since the State of Florida made that gift in 1947, we have gone on to spend $3.3 billion on land, restoration and protection activities, and we have acquired almost 3.4 million acres of conservation lands in the Everglades ecosystem.

Having said that, we also recognize that our Federal partners will view, indeed must view, the Everglades as but one project, competing with many others around the country. To that end, you are seeking some solid evidence from us that our historic resolve and commitment will continue.

Frankly, and I say this with all due respect, as a State government, we have the same concerns about the Federal Government. For, while we know that the Everglades are, in fact, our highest environmental priority in the State of Florida, we understand that the Federal Government, at least for the time being, is unable to make that same kind of determination; but what I would like to do is share with you a few examples of how we are going to continue that leadership and that commitment.

The State has acquired or contracted to acquire 80,000 acres of additional conservation land. The State has allocated over $133 million for the acquisition of new lands in the future. The South Florida Management District has already finished construction and is now operating Stormwater Treatment Areas, filtering water, cleansing it before it's released into the Everglades system. Over 17,000 acres of these filter marshes are up and operating now.

Just a couple of weeks ago, the State announced a major new initiative, landmark legislation, in fact, to begin the restoration of Lake Okeechobee, which, in fact, is arguably the head waters of the Everglades.

Despite that commitment, we observe and recognize that there is still much to do, and that is why in this new year, and indeed this new century and millennium, Florida has already committed to a plan to spend another $155 million this year on Everglades protection projects.

Despite this historical commitment, despite the current commitment, despite this future commitment, we also recognize that there are distinct advantages that can be gained from pursuing a more unified and coordinated plan, and that there are real advantages in sharing a binding obligation to provide the money needed to see the project through to completion.

Recognizing this reality, Governor Bush yesterday offered a seven-point test, at least for the State of Florida, as we work over these next couple of months to determine precisely how Florida is going to meet that commitment.

Those seven principles which will underlie our commitment is, No. 1, and most important that the State will commit to fully fund its half of the project costs. More than that, we will make sure that we recognize reality and plan ahead for the peak funding years, recognizing that there are some years that the peaks are going to be higher than some years and we need to plan ahead for that.

We will also seek to and intend to get full credit for all the environmental restoration resources that the State has and will plan to spend on the Everglades in the future, but at the same time make a commitment that we are not going to siphon resources from other

environmental restoration programs around the State to accomplish it.

We're going to share the responsibilities evenly between statewide resources and South Florida resources. We are not going to add significantly to Florida's long-term debt burden.

In closing, we are going to seek a new and really complete partnership with the Federal Government. Yes, the costs for implementing this plan are substantial, but they are certainly within the collective reach of State and Federal Governments working together.

The State Legislature and the South Florida Water Management District, the executive branch of State government, we're all going to work together to make sure that we will completely, predictably and adequately fund the State's share of the costs.

Governor Bush, in a message to this Everglades Coalition yesterday via videotape, said, "There should be no question about Florida's commitment to finish what we have started."

Thank you very much for coming to Florida and allowing us the opportunity to testify.

Senator SMITH. Mr. Secretary, thank you very much. Thank you for finishing on time, too.

Is there some proposal in place now to move this forward in the legislature, the funding? If, for example, if the Federal Government acted with its share, the 1.1 for this, if that should happen in the next fiscal year, your legislation meets until when here, October?

Mr. STRUHS. No. We have a 2-month session in March and April.

Senator SMITH. March and April. What would be the chance of some action being taken by the legislature?

Mr. STRUHS. If I had to rank it on the schedule, a scale, I should say, of one to ten, I would give it a nine and-a-half.

High, yes. Thank you.

Senator SMITH. Senator Graham, any questions?

Senator GRAHAM. We generally prefer those answers to be down to the third decimal point, but we will take that as a rough approximation of your level of optimism.

Mr. WESTPHAL. Senator Graham, if I could clarify a point. What we're seeking is an authorization that would entail approximately that amount of money in appropriations, and, of course, we are going to have to seek that appropriation through Congress down the road, and that appropriation, that 1.1 billion, or 1.2 billion, will extend over an eleven-year period. So it's not 1.2 billion for 2001.

Senator GRAHAM. In other words, the appropriation is not going to be——

Mr. WESTPHAL. Right. So the State, obviously, also might have to come up with that kind of money.

Senator SMITH. Good thing you clarified that.

Senator GRAHAM. Dave, I would like to ask the same question that I asked of Carol Browner about assurances language because that's going to be an important part of this initial authorization. I wonder if you could comment as to what you think from the State's perspective should be the principles relative to assurance to the various stakeholders of their legitimate expectations relative to water quantity, quality, hydroperiod, point of distribution.

Mr. STRUHS. Thank you, Senator Graham. There are important questions and assurances, and I think it's appropriate that we address them and work them out up front before we move forward with authorization.

Assurances, I think, fall into four basic categories, the quantity of the water, the quality of the water, and then the timing and distribution of the water.

I think the one that has, perhaps, become the most important, at least at the moment, is the assurance of the quantity of the water, if I could address that one specifically.

Florida State law, Florida water law, I should say, has a reputation and, in fact, I think it's true as probably one of the most progressive State water laws in the country, and early on it recognized that the first and highest best use of water is to maintain the health of an ecosystem, and we do that under State law through something called minimum flows and levels.

So we would prefer, obviously, as a state to use that really extra level of protection of using State MFLs, minimum flowing levels, to assure the delivery of water.

The other thing I would hasten to point out is that one of the reasons we were not successful in resolving this last year is because we want to make sure that the assurance is not just to one particular piece of real estate within the Everglades ecosystem, but, in fact, we're establishing that minimum flowing level for the entire ecosystem, and I think that is critically important.

There are obviously some portions that are under Federal control and some under the State. Mother nature doesn't recognize those artificial divisions and we want to make sure that minimum flowing level is treating the whole ecosystem fairly.

One other point I would add. The State of Florida has also designated the Florida Everglades as an outstanding Florida water. That is a special designation reserved for only the outstanding Florida waters, but the reason that has relevance is because, with that designation, we are required under law to make sure that, not only is it a minimum flowing level to preserve the ecosystem, but that it is, in fact, adequate to make sure that the water quality is also meeting the standards so that there is an extra level of protection.

Senator SMITH. Senator Voinovich?

Senator VOINOVICH. Want to go one at a time?

Senator SMITH. I'm sorry.

Mr. WESTPHAL. Senator, just so you sleep a little better tonight, we are currently working with the Interior Department and we'll work with David, Secretary Struhs, and the State on language on assurances that we will submit to you, Mr. Chairman, and the committee in our WRDA proposals. We will have that, and we will make sure that we also work with your staff to make sure that we have got the appropriate wording and that we do what we need to do on the assurances. So we are working on that.

Senator VOINOVICH. I think I had raised this question with you informally last night or today, but the comprehensive plan is really responding to adverse impacts on the Everglades from the environment, from development in the State, agricultural development, economics; and it seems to me that some of the adverse effects which

you're projecting in the future are going to have to do with the development growth in the State.

I think that there was some comment that in 20 years if somebody looked at it, I think maybe Carol Browner looked at it and said 20 years from now, the quality would be less than it is today, because of growth and so forth.

So I wonder, is the State undertaking some thought in terms of a more sensible growth of the State; and, second of all, and maybe this is pretty provincial from my point of view, but I've said this to Senator Graham on occasion, I'm a former Governor and we competed with Florida in economic development. Every year we had the site selection magazine and new facilities and planned expansions and new investments and so forth.

Senator GRAHAM. We tried to get Ohio State to play one of our football teams.

Senator VOINOVICH. On that field, forget it. I'd rather stay in the economic development anyhow.

I think one of the concerns is: Are you asking the Federal Government to help pay for the growth costs that you're going to incur in the future in terms of waste treatment, in terms of water supply, and I think that's a consideration.

We're willing to pitch in and help the Everglades, but I think a lot of people are going to be reluctant to get involved in building waste treatment facilities and providing water that should be the responsibility of the citizens of Florida, and I think I mentioned informally to you that you really never get into this whole issue of growth development until you have some tension, and tension occurs when people realize that, if they're going to have uncontrolled growth, that they're going to have to pay for it, either in terms of higher taxes, in terms of water rates, sewer rates, or whatever the case may be; and then all of a sudden they start to pay attention and say, "Hey, wait a second. We need to think about this."

If you can go free and unfettered and not have to pay the cost and things just keep going, then you really don't have that tension that I think is necessary; and as I mentioned in my statement, I think it applies to your State and it applies to my State. We've just got to do a better job on that.

I'm interested in your comments on that, what the Governor thinks about that.

Mr. STRUHS. Thank you, Senator, and I think it is a legitimate and important concern that the Federal Government raises, and I think, if I might, take a little time to expand on it, the answer is no, I think, to the question of, Do we expect the Federal Government to come in and clean up Florida's pollution? The answer is no. That's something that we will be prepared to do on our own in the State as appropriate.

There is another level to your question, which is do we expect the Federal Government to come in and build infrastructure to allow for expanding economic development? There again, the answer is no. That's something that is an appropriate role for a State government and we will take care of that ourselves.

The fact is, if you look at all the project components of Everglades restoration in this comprehensive plan, together what they deliver is best exemplified by those two maps. If we don't do it, in

approximately 50 years, we are going to see the area turn to red, which means that it is no longer Everglades.

If we proceed with all those components, we get the preferred map on the right, which is green, which, in fact, means that remnant of the Everglades system remains intact.

So that's the reason we think it is important and relevant to the Federal Government to be involved with all of those projects because they deliver that result.

Having said that, clearly Everglades restoration is a remarkably good example of how investing in restoring and preserving an ecosystem will have secondary benefits, will have secondary desirable benefits for other things, like future water supply.

I think it's very important to understand, though, that water supply is not a limiting factor for future growth in Florida. The growth is going to occur whether we want to or not. We are one of the fastest growing States in the nation, one of the highest growth rates. Eighty percent of that growth comes from migration, people from other States coming into Florida.

That growth is going to continue; the development pressure is going to continue; and the water will come from somewhere, and we already have proposals in the Tampa area to build what would be the world's second largest desalinization plant. So we eventually as a State will find the water to meet that economic need, but isn't it far preferable instead to join in a partnership with the Federal and State governments working together where we can actually take a lower cost alternative and we'll have the benefit of providing those water supplies in the future, and at the same time, meet the principal objective, which is to restore the ecosystem?

So, a lot of us have talked about examples where environmental and economic interests go hand in hand, and I think this is a premier example of that.

Specifically as to what the State of Florida is doing, though, to get our own house in order in terms of growth management, let me mention three quick examples. A program that has been underway for some time in the Southeastern portion of Florida known as Eastward Ho, we talked about this earlier informally. The term we use in Florida is infill, but it is directly related to Brownfields, directing future growth into areas that are already served by infrastructure and have already been developed and in some cases are in desperate need of that additional economic investment.

Another example, nowhere do you see the pressures of development more quickly and more obviously than you do on an island, and Florida has lots of islands, and best known amongst them are the Florida Keys. The Florida Keys have already and have in place a carrying capacity study, and I think the notion of thinking of it in terms of carrying capacities is an interesting way to address the problem. Captain Collins can expand on that later if you care.

Finally, in closing, we do have a Department of Community Affairs that, in fact, is launching a statewide initiative this very week, aimed specifically at revisiting Florida's growth management laws and programs to see how they might be improved and how they might actually deliver better and more predictable results.

So your question is a fair one, and I would ask you to believe it fully when I tell you that our goal is first and foremost to be a

partner with the Federal Government in restoring the ecosystem. To the extent that there are secondary benefits, that's a good thing, not a bad thing.

Senator SMITH. Captain Collins?

STATEMENT OF MIKE COLLINS, CHAIRMAN, SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Mr. COLLINS. Chairman Smith, members of the committee, I thank you for the opportunity to appear here today. I have got a written comment. You've heard a lot of it before. It mirrors a lot of what Secretary Struhs said. I'm not real good at reading written statements anyway, so I'm not going to use it.

I am and have been for some 25 years now a fishing guide in the Florida Keys. The Guides Association sent me originally in 1976 to ask some questions about changes they had seen in salinity in sea grasses in Florida Bay. They weren't real happy about the answers I came back with, nor was the park at that time.

They elected me president in 1982 and in 1983 sent me to listen to Senator Graham deliver his Save Our Everglades address to this group.

Senator I'd like to thank you now on behalf of myself and everybody else here in Florida for the continued leadership and support of this. You've got a lot of friends down in the guides in the Florida Keys.

I spent a lot of time working for that organization as president, being a thorn in the side of most of the State and the Federal agencies involved, increasingly asking difficult questions and increasingly demanding management that was either not possible or not available.

As an act of revenge, the State and the Federal Government have appointed me chairman of the Keys Critical Stake Concern Resource Planning and Management Committee, a member and chairman of the National Marine Sanctuary Citizen Advisory Council, which was a real war zone, a member of the Technical Advisory Committee and then the Committee for the Water Quality Protection Program for the Sanctuary, a member of the Governor's Commission for a Sustainable South Florida from its first to its last meeting; and an ultimate act of revenge, I now serve as chairman of the Water Management District I've spent most of the last 20 years attacking.

The most depressing part of that probably is, having finally gotten here and in a position to demand the changes that I wanted all along, I find that just changes in management of this system really don't work.

I would submit to you that we, to the best of our ability, involving some of the best technicians, some of the best biologists, and some of the best scientists on the face of the earth, cannot make this system produce what we want it to produce. We balance our competing constitutional and legal requirements on a razor's edge.

I am sued by close, personal friends on a fairly regular basis for things that I basically cannot do very much about. Having said that, we are your partner and we want to be your equal partner.

We seek very zealously to support this plan. It is not a perfect plan. I worked on it from start to finish. I was involved in the con-

ceptual plan very intimately. I was involved through the Governor's Commission in writing a lot of this. I don't believe there ever will be a perfect plan. What I support more than anything else is the process that produced it.

I believe very strongly through the sanctuary process and through a lot of the education I have had beaten into my head over the last dozen years by the public at putting the shareholders at the table, educating them with the best science available, and demanding that they walk in each other's shoes for a while produces the best products. I believe that's what we have got in this plan.

Senator Voinovich, you've asked more than once about the lack of specificity in this plan. It's not a mistake. We did it on purpose. If we have learned one thing from the history of this Southern Florida project, it's that there were very clear indications before we had finished the project that we had made some mistakes.

I don't believe that's cost effective. I don't believe that's the way we should proceed in the future, and our review of performance measures, our production of an annual report card on how well we are doing with all this will be part of our commitment to making sure that we spend our money wisely as we go forward.

We don't know everything we need to know to know of how this is going to impact, and I don't believe we have the ability to commit future generations to a funding plan for something that they're not going to be able to be involved in.

I was a very strong advocate in this administration, almost the only one at the start in continuing some sort of Governor's Commission to provide that forum.

I think the forum of involving the public on some sort of a regular basis, be it the task force, be it the Everglades Coalition, be it the Governor's Commission, is critical to survival. I believe a rolling process of performance reviews that are diligently and religiously scrutinized by both Congress and the legislature is also important to our continued success in this process; but I also believe very strongly, as someone who made a living in an ecosystem that was a recipient of our Everglades policies, that economically there is a whole bunch of South Florida that's not going to survive if we don't do this.

We have no choice in a lot of ways here in this State. We have discussed this for many years as if this were some sort of an option. There is a whole bunch of what is wrapped up in this plan that we are going to have to do one way or another, whether we adopt it as a plan, in a partnership where we go forward together, hand in hand, or whether the State of Florida, to protect its interests, and the Federal Government, to protect its interests, spend their money some other way, this is a question of necessity, and I really believe we are going to have to do it anyway. I would suggest that we do it together, and I thank you for your time.

Senator SMITH. Thank you.

Do either of my colleagues have a question?

Senator GRAHAM. Excellent statement.

Senator SMITH. I assume the captain is because you're a captain of a vessel; is that it?

Mr. COLLINS. A fishing guide. A little boat, paddle it around Florida Bay, try to catch fish. We used to anyway. You should come down some time.

Senator SMITH. Well, thank you very much.

Does anybody else have any final questions at this point?

Senator VOINOVICH. I would like to congratulate Mike and all the people that have had a role in making this possible.

I know, when I was the mayor of the City of Cleveland, people would comment about the change of the city, and I talk about the architecture, but I said, "The really exciting thing is the civic architecture, how people came together, realized they had a symbiotic relationship with each other and put something together." I think all of you in this room have had something to do with it. You should be very proud of yourselves.

Senator SMITH. Excellent testimony. I thank all of you very much.

Before you get up, I think sometimes we forget—we sit here for two and-a-half hours asking questions and listening to testimony—we have a stenographer here who has been taking all this down for two and-a-half hours without a break. So we are going to extend this break for a little bit to allow our stenographer to take a break.

[Recess.]

Senator SMITH. Ladies and gentlemen, I'm going to have to call for order quickly because we have a tight time schedule. So either please be seated or depart, one or the other, but whatever, don't talk anymore.

I ask those who are standing talking to, please, either be seated or step outside, please.

The next panel consists of two representatives from Indian tribes with an interest in Everglades restoration. First is Mr. Jim Shore, a member of the Seminole Tribe of Florida and its general counsel.

We also have a representative of a Miccosukee Tribe represented by its lawyer, Mr. Dexter Lehtinen. Mr. Lehtinen is appearing in lieu of the person listed on the witness list, which was Chairman Billy Cypress.

So I'm delighted to see both of you gentlemen here; and, Mr. Shore, we will begin with you.

STATEMENT OF JIM SHORE, ESQUIRE, GENERAL COUNSEL, SEMINOLE TRIBE OF FLORIDA

Mr. SHORE. Thank you, Chairman Smith, and Senators Graham and Voinovich. My name is Jim Shore. I'm representing Chairman James Billie and the Seminole Tribe of Florida today at this hearing, and I will set the record on brief statements here as we go along, but as——

Senator SMITH. Pull that microphone right up close, will you, Mr. Shore, please. Thanks.

Mr. SHORE. The Seminole Tribe of Florida occupies at least 80,000-plus acres in South Florida, and we are in six different counties, and the Big Cypress reservation is our largest, around 48,000 plus and I guess that's in the environmental sensitive area, and we have at least 900 tribal members that live there, and just like any other group of people, the State, its agencies, the Federal, its agencies, we are as concerned about the pollution of that area

and we have always said that we didn't cause the pollution, but we are here in support of this comprehensive plan, and this plan may not be perfect or may not solve the problem, but we think we should at least start somewhere; otherwise, there will be nothing left to preserve.

So we are here in support of the plan and, along with that, we want to be an active player in any plan that is developed to preserve the South Florida area.

In the past, various plans were implemented without our involvement or without our notice.

The only time we would know about a plan of some sort is when we would be noticed of what we would have to do, but I think we are doing a better job of it now with the State and the Federal agencies, and maybe at this time I would like to thank the Secretary of Interior for providing the Seminole Tribe of Florida a seat on the South Florida Restoration Task Force and also Governor Bush keeping up what the late Governor Chiles started when he appointed the Seminole Tribe to be a member on their commissions, and I think the communication is better, especially with the U.S. Army Corps of Engineer.

We have been having various regular meetings with the staff out of Jacksonville, and I think we have kind of worked out a plan or cooperated with each other to the point where we think the tribe's critical project—we have convinced them or at least we think we have convinced them enough to be able to fund that project for us. So I guess there will be an announcement later on coming regarding that matter.

Even before any plan is in place, the Seminole Tribe is involved in our own internal restoration plan on the water quality and quantity, just like everyone else is concerned about, and even though we only have 40,000 acres or so in that area, what happens to us north will affect us and what we do is going to affect the people in South.

So we are as concerned about the destruction of the Everglades as everyone else is at this meeting here today; and with that comprehensive plan, as I said before, it may not be the perfect plan or the best plan, but I think we should start somewhere and I think what we are doing on our reservation now is kind of like a mini-plan anyhow.

So as long as we are the active players in the process and as long as any of these plans are not initiated or started at our expense, we are in support of the plan; and I have some technical folks with me today that will assist me in answering any question that you have, but with that, I will conclude my comments and I will thank the committee for allowing us to be at this hearing today. Thank you.

Senator SMITH. Thank you very much, Mr. Shore, for being here. We appreciate it.

Mr. Lehtinen?

STATEMENT OF DEXTER LEHTINEN, MEMBER, SOUTH FLORIDA ECOSYSTEM TASK FORCE AND GOVERNOR'S COMMISSION ON THE EVERGLADES

Mr. LEHTINEN. Thank you, Senators. My name is Dexter Lehtinen. I serve on the South Florida Ecosystem Task Force and the Governor's Commission on the Everglades. I previously served as a Florida State representative and Florida State Senator, and as the United States Attorney who filed the so-called Everglades lawsuit that compelled a then-reluctant State Secretary protect to agree to the Stormwater Treatment Areas to deal with Everglades pollution.

I'm proud to represent the Miccosukee Indians, who have filed the Federal challenge under the Clean Water Act that forced a then-reluctant Federal Administrator Carol Browner to apply the Clean Water Act standards to the Everglades Forever Act and do the proper review that the tribe had also just won its S–9 pollution lawsuit for failure to follow the Clean Water Act in Broward County when the Federal Government would not take action; and the group that has passed the federally approved water quality standards for the Everglades that are tougher than anyone else's, ten parts per billion phosphorus applied to its own lands, that it would like to see the State and Federal Government enforce as well.

With that proven record, Chairman Cypress has asked me to make the point that the tribe believes that Everglades restoration is in serious trouble due to misplaced priorities, subordination of fundamental democratic values, such as property rights, including Indian tribe property rights, Federal intransigence and really bureaucratic arrogance and incompetence.

The issue here is not the restoration goal. Senator Graham, among others, helped to establish that goal properly. It's just that that goal for some is just a politically correct goal. They're not really committed to it.

The problems we see are system problems, lack of a system-wide Everglades-wide commitment that's a parochial approach. Many Federal agencies, especially Interior, seek only to protect their piece of the Everglades ecosystem, whether its geographic, such as Everglades National Park, which is less than half of fresh water Everglades we need to protect, or whether it's subject matter such as a single species like the Cape Sable seaside sparrow action, which the Corps has taken in the last month by signing the death warrant of more than 500,000 acres of State Everglades and tribal Everglades as we sit here and speak today.

They're willing to sacrifice and discriminate against State Everglades, tribal Everglades, in favor of their smaller Federal Everglades. The water conservation areas, as I said, are dying due to Federal actions, not taken in the 1800's or the 1940's, taken last year and this year with the knowledge that it will cause destruction of tribal and State Everglades.

There is also process problems, a lack of commitment to the decisionmaking process, a lack of a partnership. The code word Secretary Struhs used was for a new and true partnership. I know he has to word it that way. That means Governor Bush doesn't think he had a partnership before and he didn't think he had a true partnership. I can say that but I know Secretary Struhs is constrained,

but you have to read those code words, kind of like the way General Westmoreland described the Vietnam War.

Many agencies refused to follow the National Environmental Policy Act process. They give lip service to the partnership concept, but we have execution problems. Frankly, the track record in executing specifically directed and congressionally mandated projects since the mid-1980's is abysmal.

Modified water delivery to C–111 projects are examples, passed in 1989, fully NEPA approved in 1992 and approved by Congress with a contract to build it signed in 1994. Not a spade has been turned to date. Modified water delivery money, more than ten million a year, has been appropriated. Where did it go? You need to ask where modified water delivery money is and find out if it's in the Denver Service Center where you guys cut it because of million-dollar toilets.

Modified water delivery is also an example of the breaches of rule of law. The 1989 act said specifically that certain people would be provided flood protection.

Dante Fascell, when he passed that act, were he still in Congress today, would not let that promise be broken. What we have today is that some who are willing to break that promise while saying to us, "Trust the future need for process," Secretary Westphal and Secretary Davis said, "Well, we have to go through these processes but with a direct congressional mandate." They have chosen to ignore that obligation.

I quote what a famous Supreme Court justice said, that is, "That great nations, like great men, should keep their word."

The modified water delivery problem indicates what Senator Voinovich, I think, would say is a concern about lack of detail, a concern about unbridled agency discretion. The agency had no discretion and has still refused to do the project.

So what's going to happen if you give agencies the discretion to pick a project? It's going to be controlled by whatever agency authority at that particular day sees it a particular way.

Let me summarize, I think it's clear that our fourth point would be that Everglades restoration programs, especially the Federal side, are showing an alarming disregard for fundamental private property rights and for the fundamental rule of law.

Flood protection and private rights, when they are demeaned, threaten the rights of every South Floridian and every American, Native American and non-native alike. We believe that that misalignment of values will not prevail, but what will happen if the values are misaligned like this continue to be, what will happen is the public will turn against the restoration that we all want to see take place.

Couple of brief misconceptions. One is that the Everglades is Everglades National Park. The Corps of Engineers just did it today. They said the Everglades is a park. More than half the remaining river of grass is not a Federal park. The Everglades is not a Federal park.

In 1988, just before I left the legislature, we struggled and successfully required that the entire Everglades be saved, and the Federal Government has been fighting us ever since. They want their Everglades saved, nobody else's Everglades.

I will skip over certain other points, but let me make this caution, if I could, out of due respect. Much as George Romney went to Vietnam and got nice briefings for the Federal agencies there, I have received many briefings from Federal agencies and they have tremendous gaps and holes in them.

In Saigon, 1968, Westmoreland said, "No problem. Things are going fine."

That's where we are in the Everglades today. No problem. Things are going fine. You couldn't go to what we as soldiers in Vietnam called Indian country. You couldn't go out to the hamlets because you'd find out when you were at the hamlet that they didn't want you to stay overnight because it wasn't a secured, strategic hamlet. That was called Indian country in Vietnam.

Well, here you can't go to Indian country today because Indian country today, more than 500,000 acres is being drowned. It is a heart-breaking circumstance.

Two weeks ago, they closed gates. They're refusing to let natural water flow go south from the Central Everglades to the South and we're drowning the Central Everglades.

In two or 3 years, this will no longer be an issue because it will be dead, and it won't be from the 1940's.

Let me close with what the Governor's Commission was told several weeks ago by the Florida Fish and Natural Resources. It was renamed, Senator Graham, and I keep forgetting. Florida Game and Freshwater Fish Commission now renamed.

That representative said that water conservation Area 3-A has degraded more in the last 5 years than in the entire 40 years before that. That is 500 some square miles of Everglades. That is during the Federal restoration effort and as a direct product of the Federal restoration parochial attitudes.

The heartbreaking circumstance in 3-A, which is tribal land, not only indicates discrimination against the tribe, but it indicates the chaos that Everglades restoration is in; and I know that any public official who cuts through the chaos, is willing to say, "We are not winning the Vietnam War, we're not winning necessarily the Everglades war," who cuts through it and says, "The emperor has no clothes," will suffer tremendous initial criticism, but it's not a politically correct thing.

That public official will be the one who saves the Everglades and will be the public official for whom future generations, native Americans and non-native alike will be grateful.

I appreciate your time, and I didn't put in the answer, Senator Graham, on the assurances question, but we are prepared to make a brief comment on that, if you like. I mean, you didn't ask everybody, so I won't be insulted if you don't ask us, but we are prepared to.

Thank you very much.

Senator SMITH. Thank you. Let me start with one question for Mr. Shore. Mr. Shore, do you feel that all of the partners in this restoration project have been responsive to your concerns, yours being the Seminole tribe? Have they been responsive to your concerns as this process is played out?

Mr. SHORE. I think, like I said before, we were ignored in this type of process before, and now we are a player in this process. So

I think that the players that are involved in it are listening to us and hearing our concerns, and I think what we can say is that there is an open communication now, which didn't exist before. So I believe maybe, in answer to your question, they are responsive, but I think all we ever wanted was some open communication, so we can have some kind of dialog. So I think we are at that point with the Seminoles.

Senator SMITH. Senator Graham, do you have a question?

Senator GRAHAM. I'd like to ask the question of both witnesses relative to the assurance language. What do you think should be included in an authorization bill at the State or Federal level as relates to the assurance to the different stakeholders in the Everglades on the quality, quantity, hydroperiod and location of water?

Mr. LEHTINEN. OK. Thank you. Dexter Lehtinen with the Miccosukee Tribe.

Well, we think assurance language is appropriate. We think it has to include flood protection and water supply assurances language, No. 1. We think the restudy shows that there is enough water to do it all and that a failure to be willing to balance subordination off the top of property rights means that you don't put flood protection and water supply into the agenda sufficiently and then it's not protected.

Second, you have got to treat all of the natural Everglades equally. The most offensive thing about the Chairman Regula language, with all due respect to the chairman, was that it sought assurances for federally owned land.

Actually, it even eliminated tribal land from which the Federal Government has a trust doctrine and for which the secretary holds bare legal title, tribal trust land; but the assurances language he proposed was to protect national parks.

If I ever saw the Everglades as a national park and we don't care what happens north of Tamiami Trail, that's it.

In 1994, 1995, Federal deliberate water quality practices flooded the water conservation area. I don't use the chart anymore because it offends people in the pictures; but they killed 90 percent of the white-tailed deer herd in water conservation 3-A. In 500 square miles of the Everglades, the entire white-tailed deer herd was wiped out. You saw them floating in the water.

You don't see them floating in the water today with this terrible flooding because it killed them all in 1995.

So the Regula language that sought assurances for the park but allowed the rest of Everglades to be shortchanged was, we think, inappropriate.

I also disagree with Administrator Browner when she said that, until you assure the natural environment, you can't assure the rest.

I think you can assure all of them. I think there's enough water to assure all of them and that this implicit implication that some poor resident who is trying to own a home and have what the American dream, a house and a backyard, a dog, and a cat, is somehow anti-American because that person wants flood protection, that's just wrong.

That's what some people in this process make of the residents of Dade County who want decent flood protection and what I believe,

factually speaking, can easily be provided if you do the right seepage barriers and so forth.

What's happened is the Chairman Regula approach, and he may in the end by his approach—and no approach is perfect to begin with. He may in the end accomplish the goal and we'll thank him for it, but by not requiring assurances for all users and for all parts of the environment, Chairman Regula pitted the Everglades versus the homeowners of Dade County and, if they are pitted together, the homeowners of Dade County will win.

There is no doubt in my mind that two million people are not going to accept being flooded out the way they were in Hurricane Irene because they want to save the Everglades without providing flood protection, which is why we flooded badly in Hurricane Irene.

I want to save the Everglades. We just fill the appropriate barriers. Give all the assurances that we think should be there, and then you don't pit the residents against the Everglades. It is a mistake for certain environmental groups to believe they can use Everglades restoration as a growth tool. Whether I support growth tool or not, the mistake is that it will pit the Everglades against existing residents.

In Miami Lakes, Senator Graham, which is well below needs flood protection, appropriate flood protection.

In the areas where Dan Marino, the quarterback for Miami Dolphins, lives need flood protection.

Whether they should have built there or not is a different issue, but having built there, the flood protection that is their right should not be diminished, and we can protect that Everglades as we do in Weston, I think, come right to the boundary—you've got a home and then you've got the Everglades, where Dan Marino lives—and do it well.

It takes a kind of sometimes politically incorrect statement up front that, "Look, you've got to protect property rights. You've got to provide flood protection. You have got to protect water use, as well as save the Everglades." Then I think we will save them all.

Mr. SHORE. I think on the assurance question, when a new project of this kind, anytime it's been funded by a Federal project, the Seminole Tribe, knowing what we're getting into, will be willing to comply with the requirement of the Federal Government; but our concern would be that we don't want to have the government set unattainable standards and not fund it to the level that it can be achieved and will be, I think, will be defeating the whole purpose.

So as far as it's funded adequately, the standards are according to whatever the technology is of today, and the Seminole Tribe would not have any problems in following the Federal guideline.

Senator SMITH. Thank you, Mr. Shore.

Senator Voinovich?

We have no further questions of the panel, so I think with that we can say thank you for your testimony and look forward to working with you in the future as we move forward on this process.

Mr. LEHTINEN. Staff had properly advised me that I probably should say that I, like others, submitted a written record and submitted the report to the Ecosystem Restoration Task Force that I

serve on and submitted another statement about the Central Everglades drowning in her own tears.

Senator SMITH. Yes, all statements presented to the committee from each witness will be put in the record.

Mr. LEHTINEN. Thank you.

[Recess.]

Senator SMITH. If we can have order in the room, we will begin here.

The final panel includes several important local perspectives on the plan. The Honorable Nora Williams is the county commissioner of Monroe County and Florida Keys, which includes Florida Bay, the southern edge of this ecosystem.

Next is, I'll use the term, Malcolm "Bubba" Wade. That's a great name too. Mr. Wade is senior vice president of U.S. Sugar Corporation. The sugar industry has supported restoration but has raised some concerns about how the plan is being implemented.

Finally, the Honorable Nathaniel Reed. Mr. Reed served Presidents Nixon and Ford as the Assistant Secretary of the Interior. In the years since then, he's served several Florida Governors on Everglades issues, as well as holding important positions with leading environmental and conservation groups.

Lady and gentlemen, welcome. I'm not sure of the protocol, but I'll start with you, Mr. Reed, and go that way. How's that?

Mr. REED. Mr. Chairman, I'm going to make every effort to be at 5 minutes because you all have put in a long day. OK?

Senator SMITH. Deal.

STATEMENT OF HON. NATHANIEL REED, FLORIDA ENVIRONMENTALIST AND FORMER ASSISTANT SECRETARY OF THE INTERIOR

Mr. REED. Your committee's responsibility for the management of the public lands of America and the intrafrastructure of our great land can only be described as awesome. I want to start my brief remarks to pay tribute to the vision and commitment to the dream of a restored Everglades system to Senator Bob Graham of Florida.

Senator Graham initiated the process as Governor of Florida during his second term of office some 17 years ago. His efforts began with what could be the largest environmental restoration process ever undertaken in the world.

We, the advocates of the Everglades restoration project, dream that we will witness congressional authorization of the Everglades Restoration Act in the final session of the 106th Congress.

We hope and pray that the year 2000 will be the year of the Everglades.

Senator Graham has enjoyed the constant support of Senator Connie Mack and the members of the Florida House of Representatives delegation. Especially important to the cause of Everglades restoration are the Members of Congress from South Florida and the distinguished chairman of the House Appropriations Committee, the Honorable Bill Young. His letter is included in today's testimony record.

I am confident that the Florida congressional delegation will make a unified bipartisan commitment to Everglades restoration.

We are also thankful that our energetic Governor, Governor Jeb Bush, has committed his administration to the cause of Everglades restoration.

The Florida legislature will be debating the methods of assuring the Congress of a permanent method of funding the State's share of this expensive but vital project. I am confident the Florida legislature understands the priority of the restoration effort, the need for continuing bipartisan, and a commitment to become an active partner with the Congress as the project unfolds.

Mr. Chairman, you may know I enjoyed a 20-year long friendship with the illustrious Senator John Chafee. We have worked together on many environmental issues. We were simultaneously members of the board of Deerfield Academy and served in the Nixon administration. Our summer homes in Maine were only minutes apart.

I know each of you on the committee miss John Chafee as much as I do. The late chairman supported Everglades restoration's efforts and it's my sincere hope that the Senator's keen interest will be captured by each of you.

I ask myself, what can I add to the vast amount of testimony that has been presented to you today and that is included in my written testimony? How can I influence your views on whether the U.S. Congress should initiate the most difficult, daunting, expensive restoration effort ever undertaken by any country at any time in our history? Why? Because the Everglades is not only the lifeblood of South Florida, it is a unique treasure for all Americans. Everglades National Park is the most threatened park in the great system that is one of America's enduring legacies.

The water conservation areas, including the Loxahatchee, National Wildlife Refuge, not only support unique forms of life but are the recharge areas for Florida's water lifeline. The whole system was once a magical one. It is down in deep distress.

The vast complicated ecological system has been seriously damaged by every known environmental insult. Every effort to manage this ecological system has only damaged it.

I once thought that the damage was terminal, but the Everglades are resilient. I am now convinced that sound decisions can produce an Everglades system that at minimum resembles the original model.

We must accept the fact that we cannot recreate the Everglades that was. We must instead accelerate the extraordinary effort to revitalize what we have left. Then we will be well underway to solving the water problems that have plagued South Florida for more than 100 years. We must face certain facts. Uncertainties are inherent in the largest and most complex restoration project undertaken on this earth.

The Everglades in their extraordinary vastness and ecological complexity will never be wholly understood. The comprehensive plan under your consideration provides a framework for that understanding based on a solid framework of existing science; however, we'd be folly to imagine that we have all the answers. To proceed undaunted with the present prescription for restoration over the next several decades without learning from ecological responses and technological advancements along the way would doom us to failure. That's why adaptive assessment as laid out in the com-

prehensive plan is critical to its success. It will require a fundamentally different way of doing business for the Corps of Engineers. The Corps must become flexible in its approaches to problems. It must learn to trust biologists and ecologists. It must become a good listener, as well as a brilliant engineer.

Stuart Applebaum headed the Corps' restudy team. He proved that the Corps could listen. Whether his successors will continue his suburb effort remains to be seen.

I have spent so much of my life working on solving a full range of environmental problems. I spent a fair amount of that time on the continuing problems within the Everglades. I am admittedly an Everglades "nut."

I admit that I am fascinated with the ecology, the politics, and the prospects for a revised system.

The effort to restore a working productive Everglades ecosystem is the most challenging assignment that Congress and the involved Federal and State agencies have ever attempted.

We face many years of expensive replumbing. We face potential conflict, conflict between the perceived needs of agriculture that demand unlimited irrigation water from Lake Okeechobee and unlimited drainage from the Everglades agricultural area. We face potential conflict from county, city and private water utilities that want to continue to tap the Everglades' water supply, rather than plan for meeting future water needs from other sources.

We face opposition potentially from the residents of the 16 South Florida counties that comprise the tax base of the South Florida Water Management District should they be forced to bear an unfair tax burden. The effort to restore the Everglades must be a joint effort of the taxpayers of South Florida, the citizens of Florida and the American people.

The Governor and the legislature must provide the matching funds, not only for a long, continuous period, but for a dramatically increased cost of annual operations of the enhanced system.

Despite the potential for conflicting views, even opposition, this is the moment, this is the time, this could and should be the year of the Everglades when we initiate this great restoration effort.

What can I add to your long day, a long day when you've displayed great patience and an abiding interest in solving Florida's greatest environmental problem?

I close simply by reciting Marjory Stoneman Douglas' opening paragraph in the River of Grass: "There are no other Everglades in the world. They are, they always have been one of the unique regions of the earth, remote, never wholly known. Nothing anywhere else is like them. Their vast glittering openness, wider than the enormous visible round of the horizon, the racing free saltness and the sweetness of their massive winds, under the dazzling blue heights of space. They are unique in the simplicity, the diversity, the related harmony of the forms of life they enclose. The miracle of light pours over the green and brown expanse of saw grass and water, shining and slowly moving below, the grass and water that is the meaning and the central fact of the Everglades of Florida. It is a river of grass."

Senator Voinovich, let me conclude by saluting you for the hard-nosed questions you asked all of our witnesses today, especially the

emphasis you gave to funding the investment in America. Your distinguished career as mayor and as Governor in many ways is a duplicate of our distinguished Senator Graham. You know what investment in cities, counties, States can be and must be if this country is to continue to prosper.

The vast majority of the projects your committee authorizes and the Appropriation Committee funds are well spent improving the quality of life and environment. Within reason, the Congress should seriously consider a higher level of appropriations for carefully selected projects, the investment in America.

Mr. Chairman, again, our sincere thanks for coming to South Florida and holding this field hearing. Your staff has done an admirable job and it is an honor to appear before you.

Senator SMITH. Well, thank you very much, Mr. Reed. It's an honor to have you here.

Mr. REED. Yes, sir. I, again, have a much longer written statement and I have letters from the President of the Florida Senate, the Honorable Tony Jennings, from the chairman of the Appropriations Committee, the Honorable William Young, and from a personal friend of yours who served with you on the space committee, the Honorable William Nelson, who called me while I was crossing Tamiami Trail at a reckless rate of speed and wanted to make sure that I send you warmest best wishes from him.

Senator SMITH. Brings back a lot of memories. Bill Nelson was very kind to me when he was the chairman of the Space Subcommittee when I was a new Member of Congress, and then he did something crazy and went up on that space shuttle; but he was very good to me as a chairman when I was a new member and I remember him very well and fondly.

Mr. Wade?

STATEMENT OF MALCOLM S. "BUBBA" WADE, JR., SENIOR VICE PRESIDENT, U.S. SUGAR CORPORATION

Mr. WADE. Mr. Chairman, Senators, I'm Malcolm "Bubba" Wade, a senior vice president of United States Sugar Corporation. I am appearing here today as a representative of the South Florida agricultural sector. In developing the views presented, I have attempted to represent a consensus of the Florida agricultural community.

I recently contacted representatives from the Okeechobee dairy area, the Florida Citrus Mutual Group, the Caloosahatchee Basin farmers, the South Dade farming area, the Florida Department of Agricultural, the chairman of the South Florida Water Management District's Agricultural Advisory Committee, the Gulf Citrus Group and other sugar industry interests.

While this is not all of South Florida agriculture, it is a significant representation of it. I believe that most of the South Florida agriculture would agree with the views I will present to you here today.

I must assure you that everyone in the ag. groups that I have talked to throughout South Florida generally support the restudy effort and believe it is needed to assure a sustainable South Florida, both economically and ecologically; however, we in agriculture

recognize the enormous task ahead of all of us to make sure the project is carried out correctly, efficiently and cost effectively.

Although agriculture is generally supportive of the restudy, we have concerns. I would like to focus on those concerns at this time and I will put these in the form of recommendations.

First, Congress should affirm the State comprehensive plan's multi-project purposes contained in WRDA 1996 and, quote, The comprehensive plan should provide for the protection of water quality and the reduction of loss of fresh water from the Everglades. The comprehensive plan shall include such features as are necessary to provide for the related needs of the region, including flood control, the enhancement of water supplies and other objectives of the project.

The balancing of this restudy project purposes is very important to agricultural stakeholders in South Florida.

Next, Congress should approve the comprehensive plan presented in the Jacksonville district feasibility study as a framework to guide future project planning and design and it should not be authorized in the traditional WRDA manner. This is not a final decisionmaking document in the traditional sense of WRDA.

The plan does not need the traditional authorization requirements of other Army Corps of Engineer projects. The plan doesn't include feasibility level engineering, real estate evaluations, economic and environmental investigations and analysis.

Individual restudy project components should be authorized only after the standard feasibility level requirements have been satisfied and reports have been submitted to Congress.

Next, at present there is no plan or agreement for the cost sharing of the project operation and maintenance cost. This is important as landowners and stakeholders in South Florida were concerned that, once an $8 billion project is done, everybody rides off into the sunset but the taxpayers in South Florida are going to be left with a $160 million operation and maintenance cost. The total ad valorem cost of the South Florida Water Management District are approximately 190 million, so you basically would be doubling landowners' cost in South Florida.

Next, Congress should provide assurance to water users that their existing water supplies, and this is my answer to Senator Graham's questions. Congress provide assurance to water users that their existing water supplies will not be taken away from them and given to others in the system before project components are built and proven to be able to provide replacement supplies.

For water users in South Florida, this is one of the most important recommendations I'm probably going to make to you here today.

Next, many of the technologies incorporated in the restudy plan are unproven in South Florida. They consist primarily of aquifer for storage and recovery wells, above-ground storage reservoirs and seepage barriers.

Some people question why reservoirs are unproven technologies. A large above-ground reservoir in South Florida is less than a thousand acres, typically farm retention areas; and they have not proven they can efficiently hold water. In some cases, to implement

the restudy, a single reservoir is about 60 square miles of shallow reservoirs in relatively porous soils.

Congress should authorize the pilot projects to study these technologies so we can develop the best solutions to these problems before we spend millions on engineering, design and construction.

Next, as previously mentioned, project components should be authorized where traditional feasibility level studies required by WRDA have been completed and submitted to Congress. This review function should be retained by Congress and not delegated to the administration. We believe there is far too much uncertainty to allow shortcuts.

In addition, the projects will receive much greater scrutiny from the other States if we ask for shortcuts that their projects are not allowed.

Next, consistent with WRDA 1996 Section 528, incremental justification of projects authorized for consideration should be required. This is a standard requirement for all projects across the Nation for Congress to understand the incremental contribution of each investment to the ecological and economical purposes served by the plan before authorizing its implementation.

Next, a strategic plan, and this was mentioned by the representative from the Department of Interior, does not currently exist and it should exist that identifies all measures and their associated lifecycle costs necessary to achieve restoration and other project purposes, including water quality and exotic species management.

Next, land purchases should be from willing sellers and land already in public ownership where practical; otherwise, the State condemnation process should be followed. If land is condemned, all reasonable costs should be reimbursed to the landowner, which does not happen in the Federal process. This is very important, that the State condemnation process should be used with landowners in South Florida.

Next, and Secretary Browner mentioned this one, water quality requirements involved in each project component should be agreed to by both the Federal and State agencies before a project element is authorized. Water quality is currently not being addressed and, if Congress does not require this, we could spend billions of additional dollars to retrofit the projects to incorporate water quality measures later.

Finally, funding issues must be addressed. The funding for each project element should be reasonably assured from both the State and Federal Government before each project element is authorized. If authorization and funding are not closely tied, we run the risk of condemning land and starting construction only to have unfinished projects for years. A detailed budget should be submitted each year so that Congress and the Florida Legislature have assurances that such problems do not occur.

Before I close, I would like to say that in general, there is a high degree of mistrust for the Federal agencies by the farmers and others in South Florida.

A good example is the Chief's Report that was sent to Congress with the plan on July 1, 1999. After years of public review and input, the 4,000-page comprehensive plan finally was a consensus document.

The Chief's Report was issued with commitments that were totally inconsistent with the comprehensive plan. The most egregious was giving priority to the natural systems for water supply over all other users. This was a highly contested issue during the 6 years of deliberations and the final comprehensive plan stressed balance amongst all users.

A high degree of mistrust is created when years of hard work can be thrown out by the stroke of a pen in the Chief's Report, and there's numerous other examples that stakeholders could tell you about.

I have stated many concerns we have that I hope you will take into account in your deliberations. We are not suggesting that the restudy plan is a bad plan. It is a sound framework to guide individual project element planning to address all of South Florida's water users.

It is by no means a detailed plan that Congress can authorize and say that all justifications have been made and just go build it. The risks of failure and setback are too great to not subject these construction projects to the same detailed preauthorization planning as required of other civil works projects.

Colonel Miller, his Jacksonville team and the South Florida Water Management District team should be commended for their hard work to get us where we are. They are quite capable of completing timely project feasibility studies for Congress' consideration before any construction is authorized, but there is a lot of work to be done.

In closing, there are many, many concerns all stakeholders have, but the restudy project is critical to all of us, including agriculture, for a sustainable South Florida. Agriculture is entirely supportive of these efforts.

The answer to our concerns is that we move forward as fast as possible but we do it in a methodical, balanced and well thought out approach. The approach must satisfy traditional Corps' authorization requirements that include the proper feasibility level engineering, real estate evaluations, economic and environmental investigations and analysis. This is crucial to obtaining and maintaining the buy-in cooperation and support from all stakeholders, including the other States.

Thank you for the opportunity to make these comments and I'd be glad to answer questions.

Senator SMITH. Thank you, Mr. Wade.

I should have said in regard to you, Mr. Reed, that your comments will be entered as part of the record and the statements will also be part of it.

Mr. REED. Thank you, Mr. Chairman.

Senator SMITH. Ms. Williams?

STATEMENT OF HON NORA WILLIAMS, COUNTY COMMISSIONER, MONROE COUNTY, FLORIDA

Ms. WILLIAMS. "Bubba," hand it over.

Mr. Chairman, Senator Voinovich and Senator Graham, it is a pleasure, pleasure, pleasure to appear before you today and a true honor to testify on this critical issue to our future.

As a member of the board of Monroe County Commissioners, I serve as the county's land use liaison to the State of Florida, represent the commissioners on the National Marine Sanctuary's Water Quality Steering Committee, and I also serve on the Governor's Commission for the Everglades.

My county, Monroe, is better known as the fabulous Florida Keys, but it also includes vast tracts of both mainland and Florida Bay Everglades and is the southernmost component of the Everglades ecosystem.

My testimony before you today will be confined to five critical points. One, the restoration of the Everglades is absolutely critical to the future of South Florida and the restudy is our last best chance to restore the Everglades.

This is about more than our water supply. There simply is no South Florida as we know it without the Everglades. We talk a lot about the mainland Everglades today and the river of grass and I will remind you that fully one-third of Everglades National Park is Florida Bay. The shallow body of water between the mainland and the Florida Keys is the nursery ground of the marine creatures that make their homes on the reef, thus serving as the foundation of both our ecosystem and our economy.

Second, we must start right away with authorization. Fragile ecosystems reach a point where no amount of action or money can ever restore what has been lost; and sometimes when I'm walking on the edge of those grassy wetlands, I'm deeply frightened of how close we are to irretrievable loss.

Three, the restudy is an evolving process. I appreciated how many people not only brought that to your attention today but how quick you were to recognize what a valuable element that is. The ability of this process to adapt to what is learned and to change is crucial to making sure we don't commit the kinds of mistakes we have committed in the past.

I would be the last to say this is a document without flaws, but I do believe it's about as close to consensus as we can hope to get.

Four, and frankly this is as much a cautionary note to local governments like my own and the State as it is to you. I firmly believe there need to be assurances in the restudy to make sure that it will not be the basis for future degradation of the Everglades' ecosystem.

Much of the expense of the Everglades restudy is directly traceable to undoing the earlier work of the Army Corps of Engineers, which we did to benefit a single species, largely us. That's a problem, and we need to make sure that the money we spend now is not used to allow us to degrade it some more and end up at the same spot.

Let's not make it better so that we can make it worse again without additional consequences. Let's enter this restudy pledge not to commit the mistakes of the past and determine that we will not balance every step forward with a step back.

Five, funding water quality improvements in the Florida Keys is crucial to the restudy's success. Increasingly, the Army Corps of Engineers has come to see that their job, if responsibly undertaken, isn't just about the movement of water. It's about the quality of the water that is moved, and, yes, I think the language should be in

there very clearly that water quality is an essential part of the program.

That's why I'm deeply distressed that—if I had to call it a special interest, I will, because I think it's special in every sense of the word—a national treasure in and of itself, the Florida Keys has been excluded in the funding proposals within the restudy. You'll find remarkably little mention of the Keys, the enormous wastewater and stormwater challenges we face and no money allocated to help us with those problems.

Senator Voinovich, I am counting on you asking me the question you asked earlier: Is this simply an excuse to avoid dealing with growth management problems? I look forward to it.

The Florida Keys are essentially the southernmost third of the Everglades. What happens in South Florida, to the north of us, ends up in our bay, in our backyards, flowing through to the precious reef tract that's not only the world's number one diving destination, but the boundary of the Everglades ecosystem.

With documented water quality concerns that made headlines in national press across the Nation last year, and let me point out that the illustrious Nat Reed graciously referred to us as the polluted Florida Keys today at lunch, I would like to know how we have emerged completely unfunded from the restudy.

Our wastewater system upgrade costs are higher than anywhere else because we are going through solid rock and we are treating to higher standards than anyone else; and yet with our cost of living among the highest in Florida, our citizens have one of the lower incomes.

We brought these issues formally before the Army Corps during their public hearings to no avail.

A quick side note. I know I'm running out of time. We have a restudy that actually recognizes in its language the water quality crisis in the Florida Keys, that acknowledges that solutions for this crisis are, and I am quoting from the restudy here, beyond the means of many, and yet offers no help for us in its $8 billion budget; and I have wondered, can it simply be about our lack of clout? We are 85,000 residents and 75 on the mainland, over about 150 miles of island. Have we so little voice in the process?

I just don't know. It is my belief and my hope today that it's simply an oversight that you're going to fix.

I will tell you one thing I absolutely do know. Water quality surrounding the Florida Keys is deeply threatened and we cannot bear the burden alone. I am here before you today to ask, whether within the restudy or through a separate appropriation, that you do not forget us. The Florida Keys are a national treasure, a part of the Everglades ecosystem and we, too, are in danger of irretrievable loss and unbearable burdens.

Thank you.

Senator SMITH. Wonderful. Thank you very much, Ms. Williams.

Well, Senator Voinovich, since you have been told which question to ask.

Senator VOINOVICH. I think Nora wants to tell me about her capacity problem. Why don't you answer the question, Ms. Williams.

Ms. WILLIAMS. Thank you. There are two elements. The bad news is there is a long history of growth management we should

be nothing but ashamed of in Monroe County, and frankly the State bears some responsibility for as well. Bad news is, so do you guys. The systems that are the heart and soul of a lot of the problems that we have in the Florida Keys, particularly on the wastewater issue, were systems approved and OKed by the Federal Government, as well as the State.

There is a lot of shared responsibility here; and the folks in the Keys, we finally made that turn, the acceptance that the problem is real, that we have responsibility, and we are willing to bear, frankly, more than what is our share of the cost, if we define share by what it means to most other areas to deal with these issues.

It is a national treasure. It is a federally involved treasure in almost every sense of the word. You were, if you will pardon me for speaking frankly, part of the creation of the problem. You have to help be part of our solution or it simply won't happen, and we will be looking at something like this at some point down the line.

It's crucial to know that we have turned the corner also on growth management.

Senator when we talk about assurances in the language, that we don't use this as an excuse to continue being stupid, to go backward with every step we take forward, we would welcome those assurances in the language.

We are releasing now in unincorporated Monroe less than 200 permits a year. We are critically aware of the problems we face and, frankly, deeply worried, the theory of critical State concern may be lifted and that might further endanger managed and wise growth.

We recognize that we are finite, that we are islands. We will not use this as an excuse to end up in a worse place than we are now, I promise you.

Senator SMITH. Senator Graham.

Senator GRAHAM. I want to say I have been dealing with Monroe County officials for a long, long time and that was a remarkable statement. You, gentlemen, who I hope will have opportunities to have your experience in the Florida Keys, with that experience, will appreciate the significance of what you just heard.

I'd like to ask both Mr. Reed and Mr. Wade, you seem to disagree on the issue of whether we should use a more traditional Corps approach, which means having a fairly high level of detail of what the project is going to be before it is authorized for actual implementation, as opposed to Mr. Reed's support for the critical projects adaptive management concept, which is included in the restudy.

In order to try to get some better assessment of how well a new approach would operate, since 1996 Congress has sanctioned critical projects, which means that the Corps, under certain guidelines, can proceed with a project without having it subjected to the traditional authorization tract.

In fact, I understand, if we don't conclude fairly soon, we are going to miss a ceremony where there will be a document signed authorizing another set of critical projects to be implemented.

The question is: Could you give me each of your assessment of how well the critical project process which has been in place now for four-plus years has, in fact, operated and, based on that experi-

ence, what is your feeling as to confidence level to proceed with the critical projects in the future?

Mr. REED. Senator, in my written testimony, which is much longer than my public testimony today, I answer that question, I think, very affirmatively that I do not know of a single ecologist, environmentalist, biologist who would agree to do it the old-fashioned Corps way.

First of all, we haven't got the time.

Second of all, this adaptive management process. We are going to learn what the reactions are to each phase of this recovery program.

Now, Mr. Wade and I remain friendly in a guarded sense because we are not going to agree, Mr. Chairman, on what he proposes, which is to slow this thing down and drag this thing out as long as possible. I'm going to be brutally frank. I'm at an age where I haven't got a whole bunch of time remaining and we might as well be frank with each other. At the end of the day, I want my drink and I want to see that document signed and I want my dinner and I want to hear the Senator.

Senator GRAHAM. In exactly that order.

Mr. REED. Maybe not in that order.

Senator SMITH. The more drinks you have, the Senator will sound even better.

Mr. REED. When Mr. Wade says we have got to study everything and restudy everything and we got to look out for those reservoirs, what he's talking about is the Talisman reservoir and he wants the product off Talisman as long as he possibly can. I understand that. Everybody in this room who knows anything about the sugar industry understands that perfectly; and we also understand that the American taxpayers bought Talisman and we want to see it go into a reservoir as rapidly as possible, even though the sugar industry does not.

You know, it's much better to get this out on the table in front of you than to have it rumored to you and brought to you; and Mr. Wade is adept at defending himself and offending me, and I will give him that opportunity.

Mr. WADE. I'd like for Nat to go have that drink.

I think the answer—and when Nat says that, the sugar industry's whole motivation here today was to slow down reservoirs, I will remind you that I spoke on behalf of a lot of agricultural groups here today, and I think there is pretty much a consensus on this issue about how the authorization process should work. Just what I told you about the Chief's report, when we have been through a consensus process to have a 4,000-page document that we basically supported and would have supported in Congress, when we find the Chief's Report that comes out that says, "We have totally turned that upside down and we have made commitments that weren't in that report."

To the agricultural industry, that says, "You better not authorize the thing and give the Corps and the Federal agencies the power to go out and make the decisions after you authorize it."

We don't want that. We don't trust it, and that Chief's report was one example of why we don't. What we want is to make sure that

the I's are dotted and the T's are crossed before it's passed by Congress.

Mr. REED. I will just add to this, Mr. Chairman. That letter probably caused more confusion than it was worth, and, if there was a level of mistrust before, the level of mistrust was heightened.

The fact of the matter is, I don't know of a single hydrologist who's examined this product who does not believe that there is adequate water in this system.

Senator Graham, this is very important. To be able to give assurance to existing users that the water quantity that they are presently using will not be impaired in the slightest way, and I have absolutely no problem being very careful with Florida water law to give Mr. Wade and the industry that assurance.

The problem, as you know as Governor, is that every time over the long period of time since 1960 when I returned from the military intelligence system that there has been a division in water, the ecosystem has been the loser, every single time for 40 years.

So I was very justified in trying to find some language that will work, that will persuade "Bubba," Mr. Wade, and his colleagues in the Florida agricultural empire, because it's a huge, huge part of South Florida, that their water is not going to be taken away from them for the birds.

That's what he's scared about; and, yet, on the other hand, the American taxpayer is going to be putting up a heck of a lot of money and wants to make sure that that water goes to a national treasurer, both Everglades National Park and the National Wildlife Refuge, and that's what we're going to have to wrestle with when we come before you with the language on assurances.

Senator SMITH. Thank you very much, Mr. Reed, and thank you, Mr. Wade, and, Ms. Williams.

We have got the hotel in a bit of a bind here. The hotel has a reception in this room now. So in an orderly fashion, vacate as soon as possible.

Hold on a second, please. Vacate as soon as possible through that door.

Let me also state for the record, I think some of these letters have been referenced, but just in case they haven't been, Congresswoman Carrie Meek, Congressman Mark Foley, Congressman Bill Young, Florida Speaker of the House John Thrasher, and Treasurer of the State of Florida Bill Nelson, all have submitted statements and/or letters for the record.

[The referenced letters submitted for the record follow:]

Senator SMITH. Does any other Senator have any other——

Senator GRAHAM. First, I would like to recognize the fact that Lee Constantine, Representative Lee Constantine, has joined us. He is the chairman of the State Legislative Oversight Committee to the Everglades, and I want to thank him for the outstanding work that he has done.

Mr. Chairman, I want to thank you. I think you got off to a good start. It is your first hearing. Well done. We moved forward today and I look forward to continuing to do so in the months ahead.

Senator SMITH. Thank you very much. One final housekeeping—thank you. One final housekeeping note, I am going to keep the record open for 1 week until close of business on Friday, January

14, for any Senator who has a question that he wishes to ask or make some comment for the record.

I want to thank everyone, all the witnesses and all those who were here today for being here and thanks again for the fine hospitality here in Southern Florida. We look forward to working with you.

The hearing is adjourned.

[Whereupon, at 7:45 p.m., the committee was adjourned, to reconvene at the call of the Chair.]

[Additional statements submitted for the record follow:]

STATEMENT OF HON. CAROL BROWNER, ADMINISTRATOR, U.S. ENVIRONMENTAL PROTECTION AGENCY

Good afternoon, Mr. Chairman and Members of the Committee. I am Carol M. Browner, Administrator of the U.S. Environmental Protection Agency (EPA). Thank you for your invitation to be here today—at the very beginning of the new millennium—to talk about something very close to my heart: the Administration's unprecedented efforts to restore the Everglades ecosystem and EPA's role in ensuring that water quality is fully addressed in the restoration efforts.

As many of you know, I grew up in Miami. My childhood "backyard" was the Everglades. This vast expanse that we today call the "River of Grass" has inspired me since my earliest days. I am proud to be part of this Administration, which has worked so hard—and continues to work so hard—to ensure that the heart of the Everglades ecosystem will once again pulse with fresh, clean, abundant water. This Administration's efforts will ensure that the Everglades ecosystem that inspired me as a child will continue to thrive and offer inspiration to my son, to all our children, and to all the generations that follow. And I am happy to be here today to describe EPA's involvement in the Administration's efforts to protect and restore the Everglades ecosystem.

PAST PROGRESS AND CURRENT EFFORTS

The Administration's Comprehensive Everglades Restoration Plan, designed to restore and protect the Everglades ecosystem—from the Kissimmee to the coral reefs—is one of the nation's best examples of the inextricable link between the health of our environment and the health of our economy. The fresh, clean water that is critical to the survival of the Everglades ecosystem also is essential to the existing and future health and welfare of South Florida—its 6.5 million residents, its many thousands of businesses, its economically important agricultural industry, and its $14-billion-a-year tourism industry.

As we enter this new millennium, I'd like to take a moment to reflect on the changes that have come to pass in the Everglades over the past 100 years—how we arrived at this critical juncture. In 1900, the Everglades ecosystem encompassed roughly 2.6 million acres—largely untouched by man. In that same year, the population of the area South of Lake Okeechobee stood at just over 26,000—most of which was in Key West.

Today the population of South Florida alone stands at more than 6.5 million, and is expected to double by the middle of this century (2050). This explosive growth over the past century has led to significant alteration of the Everglades ecosystem and its watershed. Overall, the State of Florida has lost 46 percent of its wetlands and 50 percent of its historic Everglades ecosystem—lost to drainage and encroaching urban and agricultural development. And, along with the loss of this expanse of habitat, nesting populations of wading birds have declined by 90 percent; 68 plant and animal species have become threatened or endangered with extinction; estuarine productivity in Florida Bay has deteriorated at a catastrophic rate; 5 feet or more of organic soil has been lost in parts of the Everglades Agricultural Area; urban and agricultural runoff has produced extensive water quality degradation throughout the region; and future supplies of water for residents, businesses, and agricultural interests in South Florida are threatened.

During the second half of the last century, the existing Central and Southern Florida Project was built to help meet the needs for flood control and water supply at that time. But the explosive growth since then has far exceeded the capacity of the existing system, and has contributed to the decline in the Everglades ecosystem. The current system, while very efficient at draining excess water, by its design and operation severely limits our capability to store excess water when it becomes avail-

able (wet season) so we will have it when it is needed (dry season). Moreover, it is important to remember that the system was designed for flood control and for water supply purposes. Water quality was not a consideration at the time.

Today, with the vision set forth by Vice President Gore in February 1996, this nation has embarked on an ambitious, long-term restoration plan that will bring new hope in this new millennium to the ailing River of Grass. The Comprehensive Everglades Restoration Plan sets forth an extremely challenging agenda to restore the hydrology of the Everglades ecosystem in an effort to balance future development with the preservation of natural areas, and to meet the needs of farmers and urban residents as well as the needs of the natural ecosystem. When fully implemented, the Comprehensive Everglades Restoration Plan components will significantly enhance the ability of the Everglades ecosystem to store excess water so that the projected water supply needs of the natural systems—both freshwater and marine—can be met, as well as the water supply needs of the urban and agricultural components of the Everglades ecosystem.

The Comprehensive Everglades Restoration Plan, which was carefully developed with substantial public involvement over the last several years, was submitted to the Congress by the U.S. Army Corps of Engineers last July. It lays out an ambitious Federal/State joint venture to restore water flows to the Everglades ecosystem while providing flood protection and adequate freshwater supplies to the agricultural industry and to the growing population of South Florida. The Comprehensive Everglades Restoration Plan represents a fundamental change in philosophy.

It is a humble action, recognizing that after the efforts of almost a hundred years to manage this ecosystem, we did not really get it right.

When completed, we believe the Comprehensive Everglades Restoration Plan—in concert with other proposed and ongoing restoration efforts—will result in the delivery of fresh water in the right quantity, of the right quality, and with our best estimate of the right timing and distribution to achieve the desired results to the Everglades ecosystem, including downstream coastal communities all the way to the living coral reefs of Florida. I believe that the demonstrated commitment to adaptive management that this program has shown will incorporate future adjustments, as needed.

EPA strongly supports the Comprehensive Everglades Restoration Plan the Administration provided to Congress for authorization. We believe the Comprehensive Everglades Restoration Plan—in concert with other proposed and ongoing restoration efforts—represents the best way to both restore the ecological integrity of the Everglades ecosystem and to enhance water quality for future generations in South Florida. EPA recommends authorization of the Comprehensive Everglades Restoration Plan in the Water Resources Development Act (WRDA) 2000, and also recommends that WRDA 2000 contain language that specifically identifies improvement of water quality for ecosystem restoration, protection, and preservation as a Central and Southern Florida Project purpose. The inclusion of this provision in WRDA will ensure that Federal cost sharing is available for the water quality related facilities called for in the Comprehensive Everglades Restoration Plan.

The Administration's plan recognizes that the problems facing the Everglades ecosystem come from many corners—and so, too, must our solutions. It is predicated on the understanding that, if we are to make progress at all, we must foster public involvement of all South Florida's diverse communities. We must build strong partnerships involving industry, agriculture, Tribes, environmentalists, and work collaboratively at every level of government to ensure the recovery of the Everglades ecosystem. To achieve our most elemental goals is a truly daunting task—one that requires us to pool our expertise, our dollars and our resources, coordinate our laws, and draw on the energy of the grassroots and the efforts from industry and agriculture.

Our bold and urgent plan expands and accelerates restoration projects in the Everglades ecosystem, and identifies additional research that is needed to ensure that our management decisions and actions are based on sound science. And our efforts are already starting to produce some encouraging results. The completion of the Administration's important acquisition of the Talisman Sugar Plantation in the Everglades Agricultural Area involves more than 61,000 acres, critical new restoration lands in the heart of the system. In addition, changes in agricultural practices are reportedly responsible for achieving a 54 percent reduction in phosphorus discharged from the Everglades Agricultural Area to the Everglades Water Conservation Areas over the past 4 years. And 44,000 acres of Stormwater Treatment Areas are either completed, or underway and due to be completed by 2003, which will greatly enhance our abilities to remove additional phosphorus.

REMAINING CHALLENGES AND FUTURE DIRECTIONS

Despite this progress, we still have a long way to go. The Everglades ecosystem may never be what it once was. But we can—and we must—continue to make bold strides forward to protect the remaining ecosystem and to restore the critical natural functions and structures of the region and its natural community, which are so vital to preserving the quality of life in South Florida.

The Administration's Comprehensive Everglades Restoration Plan offers a comprehensive approach designed to increase water supplies for the region, and to restore and improve the condition of water quality throughout the Everglades ecosystem—from the watersheds of Lake Okeechobee to Florida Bay and other coastal areas of South Florida. EPA will remain vigilant throughout the design, construction, and operation phases of the project to ensure that the Comprehensive Everglades Restoration Plan features will fully comply with all Federal, State, and Tribal water quality standards, as well as all other applicable provisions of the Clean Water Act.

I'd like to mention just a few of the more important activities that EPA is involved in, and how each will help promote water quality and contribute to restoration of the integrity of the Everglades ecosystem.

Stormwater Treatment Areas (STAs) and Water Storage Areas (WSAs)

To improve both water quality and the integrity of the Everglades ecosystem, the Comprehensive Everglades Restoration Plan includes proposals to construct 36,000 acres of wetlands to treat polluted runoff from urban and agricultural areas. These Stormwater Treatment Areas (STAs) will be located throughout South Florida, and will enable us to use the natural filtering capability offered by wetlands ecosystems as a way to treat and improve water quality and, at the same time, contribute to the restoration of the health of the Everglades ecosystem.

The Comprehensive Everglades Restoration Plan also calls for construction of 172,000 acres of Water Storage Areas (WSAs), which will be created to capture excess fresh water flows that now are drained rapidly to the Atlantic Ocean and the Gulf of Mexico. This valuable water, which currently is being "lost to tide," will be captured and used to provide much-needed water for restoration of the Everglades ecosystem and to enhance potable water supplies for the people of South Florida. As with the STAs, the WSAs will render major water quality benefits to both inland and coastal waters and benefits to the wetland habitat of the Everglades ecosystem. It also will be critical to ensure the acquisition of the East Coast Buffer Area because of the continued threat of development that can affect the Everglades. And together these measures will greatly enhance the State's ability to reduce its nonpoint source pollutant loadings consistent with the goals and requirements of the Clean Water Act and the Coastal Zone Management Act, and should contribute to improved implementation of total maximum daily load (TMDL) allocations for impaired watersheds throughout the Everglades ecosystem.

Aquifer Storage and Recovery (ASR) Facilities

Construction of extensive regional Aquifer Storage and Recovery (ASR) facilities is an essential component of the Comprehensive Everglades Restoration Plan. When completed, the ASR facilities are intended to store water during the wet season—freshwater flows that are currently lost to tide. ASR facilities will store these waters in the upper Floridan Aquifer for recovery in dry seasons and for use both to restore the ecological integrity of the Everglades ecosystem, and, at the same time, to enhance future water supplies for urban and agricultural purposes in South Florida.

EPA supports this approach in concept, but is continuing to work with the other State and Federal partners to demonstrate the efficacy of ASRs. WRDA 1999 authorized two large-scale pilot projects at Lake Okeechobee and Palm Beach County, and EPA is now involved with these pilot efforts in the startup phase. EPA recognizes that the ASR approach is bold and entails some uncertainties, and is fully committed to ensuring that these facilities will function in ways that are fully protective of South Florida's drinking water supplies and surface water quality. Regardless of the ultimate feasibility of ASR facilities, the Administration remains committed to finding the same amount of water storage through other means if necessary. Again, I believe that the demonstrated commitment to adaptive management that this program has displayed will incorporate future adjustments, as needed.

Comprehensive Integrated Water Quality Plan

Under the Comprehensive Everglades Restoration Plan, EPA and Florida Department of Environmental Protection (FDEP) will share the lead on behalf of the U.S. Army Corps of Engineers (COE) in developing a Comprehensive Integrated Water Quality Plan. This plan will evaluate water quality standards and criteria from an

ecosystem restoration perspective. It will also make recommendations for integrating existing and future water quality restoration targets for South Florida waterbodies into future planning, design, construction, and operation activities in ways that optimize water quality in inland areas, estuaries, and nearshore coastal waters. The plan also will lead to recommendations regarding water quality programs, including setting priorities for developing both water quality standards and pollution load reduction goals.

Florida Keys Water Quality Protection Program

The Comprehensive Integrated Water Quality Plan will be modeled after another EPA initiative in South Florida. EPA has been actively working with the State of Florida in conjunction with the National Oceanic and Atmospheric Administration (NOAA) to develop a water quality protection program for the Florida Keys National Marine Sanctuary. Located downstream of coastal South Florida, the Sanctuary composes the southernmost portion of the South Florida Ecosystem. The Sanctuary was established to protect the living coral reefs, seagrass communities, mangrove fringed shorelines, and other significant resources of the area from such threats as degrading water quality.

The purpose of the Water Quality Protection Program is to recommend priority corrective actions and compliance schedules addressing point and non-point sources of pollution to restore and maintain the chemical, physical, and biological integrity of the Sanctuary. This includes restoration and maintenance of a balanced, indigenous population of corals, shellfish, fish, and wildlife.

Improving the Wetlands Regulatory Process in Southwest Florida

In recent years, Southwest Florida has experienced the same kind of rapid growth that took place earlier in Southeast Florida. As a result of this fast-paced development, the COE has issued permits to drain and fill 5000 acres of wetlands. And even more requests are expected in the next few years, raising concerns over whether the Corps' review of individual permit requests can adequately address the secondary and cumulative impacts from these many incremental decisions. These events have caused us to think about steps that need to be taken now in Southwest Florida in order to avoid repeating the mistakes made in the last century in Southeast Florida—mistakes we now are trying to remedy through the Comprehensive Everglades Restoration Plan and other parallel efforts to restore the Everglades ecosystem.

EPA has been actively involved in assisting the COE in preparing a Draft Programmatic Environmental Impact Statement (DPEIS), which is designed to improve the section 404 regulatory decisionmaking process in Southwest Florida (Lee and Collier Counties). The COE has the lead for this DPEIS, which was released for public comment on July 7, 1999. EPA prepared two components of this DPEIS: a description of historic water quality in the ten watersheds in the study area; and a comparative analysis of future water quality for two of the COE's alternatives. The model output indicated that, in 2020, the two alternatives show an overall degradation of water quality in the two county area, as well as in most of the individual watersheds.

The comment period for the DPEIS has been extended to January 15, 2000. Following the close of the comment period, EPA will work with the COE to improve the document as it relates to water quality and wetlands protection. We expect the Final PEIS to be released in Spring/Summer 2000, and will focus our efforts on developing NEPA tools that will result in improved wetlands and water quality protection in Southwest Florida under the section 404 regulatory program and other applicable Clean Water Act programs.

ISSUES OF SPECIAL NOTE

I'd like to focus the remainder of my comments today on just a few of the most difficult water quality issues we face today: reducing levels of mercury and phosphorus in the Everglades ecosystem and restoring Lake Okeechobee.

Mercury

Mercury levels in fish in the Everglades ecosystem are very high—so high that State health officials have issued fish consumption advisories warning people either to limit consumption of, or to not eat gamefish from Everglades National Park, Loxahatchee National Wildlife Refuge, Big Cypress National Preserve, and the Miccosukee Tribe of Indians Federal Reservation. In addition, there may be some adverse effects on wildlife. Wading birds, racoons, and alligators have been found to have very high concentrations of mercury—higher than other areas in the U.S. with known mercury contamination. A workshop held in 1999 concluded that, while

there is no clear information regarding effects on the wading bird populations, Everglades wading birds may be suffering sublethal effects in individual birds due to mercury contamination. Clearly, much of the energy and resources we are directing to restoration of the Everglades ecosystem will be compromised if, at the end of the day, the water is fixed but people still cannot eat the fish and the wading bird and other wildlife populations continue to show high concentrations of mercury.

Through our research, and atmospheric modeling, we have learned that atmospheric deposition is the leading source of mercury in the Everglades (more than 98 percent), and that no single source can account for the levels of mercury we are finding. Moreover, uncertainty remains over how much of the mercury is the result of local air emissions sources, re-releases, and global circulation of mercury. Recently imposed controls on local atmospheric emissions are expected to result in a significant decrease in mercury deposition to the Everglades marsh. But, while we believe that reducing the input of mercury to the Everglades ecosystem is likely to reduce the levels of mercury in fish over time, it is not clear how long this will take or how much mercury emissions will need to be reduced in order to protect the uses of the Everglades ecosystem. There is also uncertainty regarding the linkages between atmospheric deposition of mercury and risk to the environment and public health.

While much uncertainty remains, we clearly recognize that designated uses in the Everglades ecosystem are not being met, and there is a pressing need to learn more. To address these challenges, EPA is actively engaged in a comprehensive mercury research program, along with United States Geological Survey (USGS), the FDEP and the South Florida Water Management District, as well as NOAA's work in Florida Bay. Thus far, total research funding is approaching $30 million from all public and private sources, with EPA contributing about one-third of the total ($10 million).

EPA also is working with the State of Florida to develop a pilot mercury TMDL for a parcel of the Everglades ecosystem known as Water Conservation Area 3A. This effort is designed to determine the maximum amount of mercury that could enter the Area each day and still enable the waters to meet water quality standards. The pilot will examine how to "link" the results of air and water computer models in a TMDL application, and will attempt to relate local urban atmospheric emissions to mercury levels in Everglades sediments and fish. We expect to have technical reports on this work for internal EPA review soon, and plan to seek input from stakeholder groups and the public by Summer 2000.

Phosphorus

In 1994, Florida's Everglades Forever Act (EFA) created another ambitious ecosystem restoration plan, which EPA fully supports. The EFA set forth an iterative and adaptive approach to actions needed to reduce phosphorus contamination of the Everglades ecosystem. Much progress has been made since then, including the 54 percent reduction in phosphorus discharged from the Everglades Agricultural Area and the ongoing construction of 44,000 acres of Stormwater Treatment Areas that I mentioned earlier. Despite this progress, however, phosphorus is still one of the chief pollutants that threatens aquatic life and restoration of the Everglades ecosystem. There is much more to be done, and we need to move ahead aggressively.

In May 1999, EPA approved stringent new water quality standards for a portion of the Everglades ecosystem, which, for the first time ever under the Clean Water Act, set a specific protective numerical standard for the Everglades for phosphorus. This protective standard—10 parts per billion (ppb), adopted by the Miccosukee Tribe of Florida for its Tribal waters—is supported by the best science available to EPA. Adoption and approval of this standard represents a significant step forward in protecting the health of the Everglades ecosystem on Miccosukee Tribal lands, and sets a benchmark for how much phosphorus the ecosystem can handle before adverse impacts to native aquatic life begin to occur.

Under the EFA, Florida is now actively engaged in developing a water quality standard for phosphorus for other portions of the Everglades ecosystem. The EFA established a deadline of December 31, 2003, for adopting this standard, but Governor Bush has committed to accelerating this process and to adopting a scientifically defensible standard by no later than December 31, 2002. EPA is providing technical assistance to the State to help meet this ambitious schedule. And, in a related effort to accelerate restoration of the Everglades ecosystem, Governor Bush has asked the South Florida Water Management District to begin incorporating Phase II technology into Phase I of the Everglades restoration. EPA encourages prompt action for both of these efforts, and looks forward to approving a phosphorus standard for the State that will be protective of the entire Everglades ecosystem.

Lake Okeechobee

As the headwaters of the Everglades ecosystem and an important water supply for Southeast Florida, we have a vital interest in the activities that will lead to restoring the water quality of Lake Okeechobee. Water quality in Lake Okeechobee has been degraded by agricultural runoff and by backpumping, and the rate of eutrophication is of major concern because of the impact on both the ecology of the lake and its many other beneficial uses. Over the last 25 years, phosphorus concentrations in the lake have increased 2.5 times, and preliminary evidence indicates that sediments in the lake may be losing their ability to assimilate additional phosphorus loadings. Recent data suggest that the lake may be in a phase of transition from its present eutrophic condition to a higher tropic State.

Since phosphorus is considered the key element that controls the growth of nuisance algae, I am very pleased to report to you that, earlier this week (January 3, 2000), EPA proposed a TMDL for phosphorus for Lake Okeechobee. When it became clear that, under its rulemaking procedures, the State would not be able to meet the court-ordered deadline for establishing this TMDL, EPA assumed responsibility and has proposed a total annual load of 198 metric tons of phosphorus for Lake Okeechobee, including phosphorus deposited from the air (71 metric tons). This is an important step forward because, a TMDL is the maximum amount of a pollutant that a waterbody can receive and maintain water quality standards, and this TMDL sets the restoration goals for Lake Okeechobee. We estimate the proposed phosphorus loading represents a 68 percent reduction from the 1997 load, and will take public comment on the proposed TMDL until March 17, 2000.

But the true test will come with the actual implementation of this TMDL. One thing is very clear: successful implementation will require a collaborative process—one similar to the highly successful collaborative process that has characterized the larger Everglades ecosystem restoration effort. I am pleased to report that, earlier this week, EPA took steps to start a collaborative process that will focus on the implementation of the TMDL for Lake Okeechobee. In the overview of the proposed TMDL, EPA suggested that the Lake Okeechobee Issue Team continue its fine work and form the nucleus of a larger collaborative team that will include representatives of all interested stakeholder groups. This team will be charged with exploring options and developing alternatives for implementing the TMDL to ensure restoration of Lake Okeechobee. We are fully committed to this collaborative process, and intend to be active participants in it. We also recognize that long-term restoration of Lake Okeechobee depends upon a strong Federal commitment to the successful completion of the public works projects called for the in the Comprehensive Everglades Restoration Plan, which are essential to improving and restoring the water quality of the lake.

I would also like to commend the State and the agricultural community for the actions they have taken to begin restoring Lake Okeechobee. Many of the farmers in the watershed have implemented best management practices and have taken other steps to reduce the phosphorus loads entering the lake. And many of the farms on the South side of the levee have ceased backpumping nutrient-enriched water over the levee and into the lake. These actions are to be applauded and encouraged.

Finally, I want to acknowledge Governor Bush's recent announcement that he is supporting new State legislation aimed at restoring Lake Okeechobee. I encourage the State Legislature to act expeditiously on this new legislation, and to follow the blueprint set forth in the Everglades Forever Act by including regulatory programs for phosphorus load reductions, interim and final milestones for action, and whatever tools the State needs to help restore the heart of the Everglades ecosystem: Lake Okeechobee.

CLOSING

As the Administrator of the EPA, my responsibility for the environment and public health spans this country's majestic landscape—from the Atlantic to the Pacific and from the Great Lakes to the Gulf of Mexico. But I—like all of us—have that very special place that serves to remind me what is at stake if we don't prevail in our efforts to protect our natural environment. And for me, that special place is the Everglades on a glorious winter afternoon—the white mountains of clouds suspended above the gently drifting river of grass and a wood stork making lazy circles against the brilliant blue sky. The legacy of this fragile ecosystem—and this image—depends on the actions we take today.

As we enter this new century, we are on our way. We have the will, we have the commitment, we have the technology to reverse the harmful water management practices of the 20th century. We must not rest until the job is finished—until all

our children and their children and the generations to come have the opportunity to grow up with water that is safe to drink, air that is clean, and—here in Florida—with the Everglades once again pulsing with life.

Thank you again for the opportunity to participate in this hearing. We appreciate the leadership and commitment of Chairman Smith and Senator Graham, and look forward to working with the Committee on this important endeavor.

RESPONSES BY CAROL BROWNER TO ADDITIONAL QUESTIONS FROM SENATOR GRAHAM

Question 1: Can you describe water quality issues in the Florida Everglades and explain how the Restudy will maintain appropriate levels of contaminants throughout the system?

Response. Major water quality concerns in the Everglades, as noted in the testimony already provided, include phosphorus enrichment and mercury contamination. As already discussed, a tremendous amount of effort is underway to address the issue of phosphorus enrichment of the Everglades. Other parameters of concern include specific conductance (salts) in water discharged to Loxahatchee National Wildlife Refuge, and occasional detections of pesticides at various locations. The Restudy does not directly address the mercury contamination issue.

Several components of the CERP will result in improved water quality conditions. Over 36,000 acres of treatment wetlands (Stormwater Treatment Areas (STAs)), in addition to those currently being constructed as required by the Everglades Forever Act, will be constructed to treat urban and agricultural water before discharge into public waters. Additionally, 172,000 acres of stormwater storage areas (SSAs) are proposed. Although these areas will be primarily managed to store water, they will simultaneously provide some water cleansing as discussed in the answer to another question. These STAs and SSAs will help water quality in several water bodies, including the Everglades, Lake Okeechobee, and estuarine areas. Another essential feature of the CERP is a Comprehensive Integrated Water Quality Strategy. This Strategy will identify pollution-impaired water bodies, quantify pollution levels, establish pollution load reduction targets, recommend potential source reduction programs, outline monitoring programs and evaluate design and construction of treatment facilities.

Water quality protection and restoration is an essential component of the CERP. It is not possible to get the water right without simultaneously assuring that water quality is adequate for meeting environmental, urban, and agricultural needs. The CERP assumes that Florida's effort to control phosphorus loading to the Everglades is successful by 2006, and other appropriate remediation projects are put in place by state or local governments. However, water quality protection is not an authorized purpose of the Central and Southern Florida Project. EPA recommends that the Water Resources Development Act (2000) contain language that specifically identifies improvement of water quality for ecosystem restoration, protection and preservation as a Central and Southern Florida project purpose.

EPA supports the Army Corps of Engineers' request that project features needed to provide water of adequate quality be included to help in restoring, protecting, and preserving the South Florida ecosystem. EPA recommends that in doing this, applicable Federal water quality standards, and applicable federally approved water quality standards developed by the state or Indian tribes and the plans to implement the standards should be taken into account.

Question 2: This year in the Interior Appropriations bill, Congressman Regula called for the development of "assurances" language that would ensure that the park and natural systems in the Everglades region receive adequate quantities of water. I know that the Administration and the state are working very hard to develop this language for inclusion into the Administration's WRDA proposal. Can you describe for me the basic principles that you feel are critical elements of this language and why?

Response. "Getting the Water Right" (quality, quantity, timing and distribution) is absolutely essential to accomplishing the goal of South Florida ecosystem restoration and the CERP is focused on doing just that. Therefore, EPA strongly supports the development of language that ensures the natural systems in the Everglades region receive adequate and appropriate quantities of freshwater. However, we would defer to the Department of the Army, Department of Interior, and the Corps of Engineers to provide the specific WRDA language addressing this need.

EPA believes it is equally critical that "assurances" language addressing the need to restore and protect the water quality of the natural systems also be incorporated into WRDA. In WRDA 1996, the Project authorization was modified to include Environmental Protection and Restoration. The following language was added:

(b)(4) General Provisions

(A) Water Quality—In carrying out activities described in this subsection and sections 315 and 316, the Secretary

(i) shall take into account the protection of water quality by considering

applicable State water quality standards; and

(ii) may include in projects such features as are necessary to provide water to restore, preserve and protect the South Florida ecosystem.

Although WRDA 1996 added this water quality provision, it is discretionary. It also does not appear to apply to the existing project features. As a result, EPA believes that consideration should be given to amending the basic project purpose to include water quality as a purpose equal to flood control and water supply.

Question 3: In your testimony, you mentioned that the wastewater reuse plants in the Restudy would be eligible for SRF funding. However, these plants are designed to provide water directly to Biscayne Bay National Park, not for municipal wastewater treatment. In that case please clarify if these projects would be eligible for SRF funding.

Response. Generally, the costs of capital upgrades for wastewater treatment are eligible for loans under the Clean Water State Revolving Fund (SRF). It is important to note, however, that local communities typically are responsible for both repaying SRF loans and for covering the costs of annual operation/maintenance for treatment plants. Although projects like this are eligible, other sources of funding are necessary because Miami-Dade County is under no obligation to apply for loans or to improve treatment to a level suitable for Biscayne National Park or the Bird Drive-Everglades Basin wetlands. The purpose of the facilities is to provide clean freshwater to the environment during the dry season when the other restudy components will not have enough extra water available for the Biscayne Bay/Everglades restoration effort.

RESPONSES BY CAROL BROWNER TO ADDITIONAL QUESTIONS FROM SENATOR SMITH

Question 1: I understand that polluted runoff is now being discharged, untreated, through the canal system into Florida Bay and the Biscayne Bay. What does the Administration propose to do to address this problem and ensure that water quality standards are met all the way down to the Florida Keys?

Response. The CERP contains two components that will help prevent the discharge of untreated runoff through the canal system. The Biscayne Bay Coastal Wetlands (feature FFF) include 13,600 acres of wetlands near the Biscayne Bay coast that will be rehydrated in order to reduce pollutant transport into the Bay. Surface water now entering the Bay through canals will be redistributed as surface water sheetflow, restoring or enhancing freshwater wetlands, tidal wetlands, and near-shore bay habitat such as nursery areas for fish and shellfish. The sheetflow through wetlands will also cleanse water before it reaches the Bay while simultaneously reducing abrupt freshwater discharges that stress nearshore bay habitats and aquatic life.

Similarly, the C–111N Spreader Canal (feature WW) will improve water deliveries to Florida Bay by restoring sheetflow and minimizing canal pulse discharges. This feature also includes a stormwater treatment area in case it is needed to assure that clean water is delivered to the Bay. All other water that flows into Florida Bay (the majority of flow to the Bay) is sheetflow that travels up to 30 miles through the pristine marshes within Everglades National Park before reaching Florida Bay. This water is very clean before it reaches the Bay.

The Administration has another major effort underway independent of the CERP to address water quality concerns in the Florida Keys. The Florida Keys National Marine Sanctuary Water Quality Protection Program was initiated by EPA in coordination with the Department of Commerce and the State of Florida, as required by the U. S. Congress in the 1990 Florida Keys National Marine Sanctuary and Protection Act. The Sanctuary includes 2800 square nautical miles of nearshore waters encompassing the Florida Keys. This Program recommends priority corrective actions and compliance schedules to address point and non-point sources of pollution to restore and maintain the chemical, physical and biological integrity of the Sanctuary. It includes restoring and maintaining populations of corals, shellfish, fish and wildlife, while providing recreational activities. Two major components of this program that have been developed are a Wastewater Master Plan that addresses sewage collection, treatment and disposal throughout the Keys, and the Stormwater Master Plan that addresses stormwater runoff to coastal waters throughout the Keys.

Question 2: In your testimony, you stated that the CERP (Comprehensive Everglades Restoration Plan) does not limit the Stormwater Treatment Areas (STA) to the 36,000 acres being proposed. Is more such area needed for additional STAs? Is 36,000 acres not adequate? How many STAs have been completed and how many need to be completed? Please comment on the effectiveness of this method of reducing the levels of pollutants such as phosphorus and mercury.

Response. The STAs proposed in the CERP are included to ensure that the quality of waters to be rerouted/discharged as a result of the numerous drainage and storage modifications anticipated are adequate to protect the quality of the downstream receiving waters. As discussed below, the use of STAs to restore the water quality is based on experience from other Everglades restoration projects in South Florida. The size and general location of the CERP STAs were based on modeling efforts by the COE. But this is intended to be a dynamic process, as additional information is developed, the underlying assumptions may change. As part of the CERP a Comprehensive Water Quality Protection Plan for South Florida is to be developed. Through that effort it is very possible that the need for additional STAs could be identified.

Currently, the only STAs in existence or being designed or constructed are those required to be constructed within the Everglades Agricultural Area under a Federal/State consent decree and the State of Florida's Everglades Forever Act (EFA). Under the EFA, to date, STA 1-West (6,670 acres) and STA 6 (2,280 acres) are operational and construction of STA 2 (6,430 acres) and STA 5 (4,118 acres) is nearing completion. STA 1-East (5,350 acres) and STA 3/4 (16,480 acres) are currently being designed. Once completed the total effective treatment area for all six STAs will be approximately 41,300 acres. The CERP tiers off of these ongoing projects and assumes the EFA projects will be fully implemented.

In accordance with the EFA, which required agricultural Best Management Practices, the STAs are being designed and constructed to achieve an interim target of 50 ppb (parts per billion). To date, the Everglades Nutrient Removal (ENR) Project , the prototype stormwater treatment area, has been effective at removing phosphorus. Results from the ENR Project have validated the premise that treatment wetlands (i.e. STAs) constructed on former agricultural lands can effectively remove total phosphorus from Everglades Agricultural Area runoff and achieve the interim outflow concentration limit of 50 ppb specified in the EFA. In fact, the ENR Project, now part of STA 1-West, is exceeding its performance objective in terms of phosphorus concentration and load reduction. During the first 5 years of operation, the project outflow concentrations have averaged 22 ppb and load reductions have exceeded 82 percent. It should be noted that these reductions in phosphorus loading have occurred during the early stages of STA operation, and they may not be representative of future long-term performance. The evidence to date, however, supports the basic assumptions and design parameters used in planning the STAs, and they are expected to achieve the goals of the EFA.

Methylmercury, a very toxic, organic form of mercury, is produced naturally through biotic processes in Everglades peat soil from some of the inorganic mercury present in stormwater runoff and rainfall. Once converted, methylmercury is accumulated by aquatic organisms. On an annual average basis, during its operational lifetime, the ENR project has removed between 50 percent and 75 percent of the mercury from inflow water. According to findings reported in the 2000 Everglades Consolidated Report by the South Florida Water Management District, "operating the Stormwater Treatment Areas with higher flows and deeper water during high rainfall years is likely to maximize the removal efficiency of both total mercury and methylmercury." However, since more than 95 percent of the recent total mercury load to the Everglades each year is from atmospheric deposition and most of it is downstream from the ENR, the ENR can make only a very limited contribution to reducing mercury levels in fish in the Everglades.

Question 3: In your written statement, you mention that the water storage areas, "will render major water quality benefits to both inland and coastal waters and benefits to the wetland habitat of the Everglades ecosystem." Can you explain what specific benefits you envision? How will storing water in limestone quarries improve coastal water quality? Do you expect that the stored water will effectively be treated in some way through storage?

Response. A pervasive ecological/water quality problem in South Florida is the pulse flows of huge quantities of fresh water to estuaries during wet periods which result in extreme salinity fluctuations and place tremendous stress on the biological community residing in those estuaries. The above ground storage facilities proposed in the CERP would first function to capture large volumes of wet season freshwater flows that would otherwise be directly discharged to the estuaries. The waters could then be released at a later time in a more gradual manner such that the salinity

fluctuation experienced by the estuaries would be significantly reduced. For example, with the above ground and ASR storage facilities proposed in the Lake Okeechobee area, the problematic pulse flows currently experienced by the Caloosahatchee and St. Lucie estuaries are projected to be virtually eliminated.

The operating depth for the vast majority of the above ground storage facilities proposed in the CREP is 6 feet. At this depth it is anticipated that these storage facilities will become populated with a wide variety of submersed and emergent aquatic plants. Along with the physical settling of solids and contaminants associated with those solids we expect the aquatic plant community in the storage facilities to also provide additional water quality treatment to the stored waters. In addition to the water quality improvements associated with the relatively shallow storage facilities, we anticipate that these facilities will offer desirable habitat and attract a wide variety of birds, mammals, fish and reptiles, thus contributing to the biological health and abundance of the region.

An additional water quality benefit that may well be realized by the above ground water storage facilities proposed on the former Talisman properties in the Everglades Agricultural Area is that of peak flow attenuation (flow equalization) for waters entering STA 3/4 (one of the STAs required under the EFA). By providing a more uniform inflow volume to the STAs, it is likely that the treatment capability of the STAs could be enhanced, thus producing a better quality of water to be discharged to the Everglades.

The waters to be stored in the limestone quarries in northwest Miami-Dade County (Lake Belt Area) are expected to provide the same benefits to the coastal estuaries as the above ground storage facilities already discussed. Freshwater that would otherwise be discharged through the canals to Biscayne Bay in a pulsed flow manner, would be stored.

The waters to be stored in the central Lake Belt quarries will come primarily from the nearby Everglades water conservation areas during wet periods and will be returned to the water conservation areas during drier times. The stored water should be of good quality since it originated in the water conservation areas and not need much, if any, treatment prior to its discharge back to the water conservation areas. The ecological benefit derived from this water storage scenario is the water level relief provided to the water conservation areas. High water levels can cause significant damage to the critical tree island habitats and to the animal populations in the water conservation areas. Storing water in the nearby limestone quarries should provide some relief from those high water levels.

The waters to be stored in the limestone quarries in the northern Lake Belt region will come primarily from the nearby urban canals. Obviously, these waters will contain some levels of contaminants. Due to the deep and quiescent nature of the quarries it is anticipated that some of the contaminants will be removed through physical settling. The stored water then will be returned to the canal system where it should help to recharge the Biscayne Aquifer. To ensure that the waters to be discharged are of acceptable quality, contiguous stormwater treatment areas are proposed in the CREP, if needed.

In order to store the water in the quarries, the sides of the quarries will be either lined or have slurry walls installed to prevent the lateral migration of the waters out of the quarries. These liners would also act to prevent the lateral migration of pollutants discharged to the quarries from the urban canals. Lining the bottom of the quarries is not currently proposed, and the extent of vertical migration of the pollutants needs to be further investigated.

The quarries in the northern Lake Belt region which will receive the waters from the urban canals are far enough away from the Miami-Dade County well fields that contamination problems are not anticipated. However, as this storage concept is further refined, more investigative work on that issue will be needed.

Question 4: At the hearing, you seemed unclear about the presence of combined sewer overflows (CSOs) in the State of Florida. Can you clarify for the record whether CSOs pose a problem, particularly in the southern half of the state. Would an increase in population such as that being expected over the next 50 years impact the current system in any manner?

Response. We are not aware of any CSOs in the State of Florida. Unlike most northern cities, the sanitary sewer systems in Florida are relatively new and most were constructed as separate systems. Some time ago the City of Sanford had a combined sewer system which was, in fact, problematic with respect to downstream water quality. Through the use of Construction Grants and local funds those systems were separated a number of years ago.

Approximately 10 years ago a problem with Sanitary Sewer Overflows (SSOs), compounded by a minor contribution from a small area with a Combined Sewer System, was identified in the Metropolitan Miami area. These problems are currently

being corrected as a result of a Federal Consent Decree and a State of Florida Settlement Agreement with the Miami-Dade County Water and Sewer Authority.

Due to the density of development expected with the projected population increases over the next 50 years, we anticipate that most of this development will be served by new or expanded separate sanitary sewers. However, in some of the more isolated or less densely developed areas wastewater treatment and disposal using septic tanks serving single family homes also will occur undoubtedly. Construction of combined sewers is not allowed under state law. Construction and operation of the wastewater collection, treatment and disposal systems to serve this expanded population will continue, as usual, to be expensive and challenging especially with regard to how to reuse or dispose of the treated wastewater.

Question 5: Is EPA concerned that injecting billions of gallons of water into approximately 300 underground storage facilities in the upper Floridan aquifer will result in the concentration of that stored water with the salt water that currently exists in the aquifer? If the storage facilities were to leak and salt water were to intrude, what would be the potential costs to treat the water?

Response. The reason the ASR wells are proposed in the CERP is a recognition of the very critical need to have a system to store water during the wet season for use during the dry season. Because of increased urban and agricultural water needs, and the fact that South Florida has been so extensively ditched and drained, Florida needs more water at different times of the year, and at the same time it has lost a significant amount of its capacity to store water. In general there is either too much water during the wet season or too little water during the dry season. With the construction of the C&SF project the groundwater table over thousands of square miles of South Florida was significantly lowered to alleviate flooding problems in urban and agricultural areas. During the wet season, the C&SF system is operated to rapidly drain off excess water. Because this water is rapidly drained to tide during the wet season, during the dry season there sometimes isn't enough water to satisfy all of the urban, agricultural, and natural system needs of the region. As the area grows these extremes will be exacerbated without the above ground and ASR wet season water storage components proposed in the CERP.

There seems to be a misunderstanding regarding how the proposed aquifer storage and recovery (ASR) facilities would actually work. The proposed facilities would involve injecting a maximum of 5 million gallons/day/well of fresh water from various surface water sources such as Lake Okeechobee and the Caloosahatchee River during the wet season through an injection well into the relatively shallow (1000 to 1500 feet deep) Floridan aquifer. The total capacity of all of the proposed wells would be approximately 1.65 billion gallons/day. Since the Floridan aquifer in the area is brackish, the "storage" concept is that the injected freshwater would form a "bubble" that actually "floats" on top of the denser brackish aquifer water. Therefore, at the interface between the freshwater bubble and the brackish aquifer, the waters would be in direct contact. There are no actual physical facilities (storage tanks) that will be constructed underground to store the injected water. The water is actually stored in the voids (spaces) that exist within the formation materials (limerock). Therefore, there are no physical facilities to "leak." Depending on a number of factors, such as the transmissivity of the aquifer, the amount of interaction/mixing between the brackish and freshwaters will vary. If done properly, however, the mixing should be minimal. This physical solution, which must be engineered in Florida, actually simulates the natural equilibrium that occurs between salt and fresh waters in most coastal areas.

For the 200 wells envisioned to be located around Lake Okeechobee, the proposal is for the waters to be withdrawn from the wells and discharged back into the lake or into nearby surface waters. Since Lake Okeechobee is a freshwater lake EPA would be very concerned if there was significant mixing of the injected waters with the brackish aquifer waters such that the waters to be discharged back to the lake had a high salinity concentration, a low dissolved oxygen level or a significantly different pH. In the CERP, the Corps did provide some cost estimates for minimal water quality treatment facilities, primarily to re-aerate the recovered water, if needed. The cost estimate for re-aerating the recovered water from the Lake Okeechobee ASR wells was $ 3.0 million. The cost estimates are very preliminary. The proposed ASR Pilot Projects should help address the need to treat the recovered water and provide more accurate estimates of the costs of that treatment.

For some of the other proposed ASR wells the water would be withdrawn and pumped directly to drinking water treatment facilities. The Floridan aquifer waters are brackish. If the upper Floridan aquifer was currently used as a source of drinking water, membrane treatment technology would have to be used to treat those waters to produce a finished drinking water. With the injected water, if the "freshwater bubble" is maintained, the pumped water will not be brackish and would not

require significant additional treatment, provided other contaminants are not present. If the "bubble" did not remain intact, the salinity of the withdrawn water would be lower than the Floridan aquifer, but would most likely require additional treatment.

There are 333 ASR wells proposed in the CERP; 200 wells around Lake Okeechobee, 44 wells along the Caloosahatchee River, 30 wells near the proposed Site 1 impoundment, 34 wells along the C–51 Canal, 15 wells near the Ag. Reserve reservoir, and 10 wells along the L–8 Canal. According to the Corps of Engineers, all of the waters to be withdrawn from the ASR wells would first be returned to either the surface water body from which the injected water was originally obtained, or discharged directly to the proposed impoundments/reservoirs. The wells are to be used primarily to store waters that are currently discharged to tide.

In order for the withdrawn waters to be discharged directly back to the surface water bodies, or to existing or proposed reservoirs/impoundments, the salinity concentrations would have to be low enough so that water quality problems/violations would not result. In a few cases, the waters would be discharged to an existing or proposed reservoir that is, or would be, used as a surface water supply for local drinking water treatment facilities. In these instances, through permit conditions, the salinity concentrations would not be allowed to reach problematic levels. Therefore, if the injected waters and the brackish Floridan aquifer waters do mix significantly at specific wells, resulting in high salinity concentrations, those ASR wells could not be used as proposed. In order for the ASR wells to be successful, and useful, the freshwater "bubble" must not mix significantly with the brackish Floridan aquifer waters.

During the development of the ASR storage concept as part of the CERP, several local water utilities did propose the concept of taking the waters withdrawn from the ASR wells directly to existing or new drinking water facilities. In all of these instances, the existing or proposed facilities would use a membrane treatment technology, primarily to satisfy current drinking water criteria and to also remove the chlorides from their brackish, upper Floridan, source waters. It costs approximately $1.30 to $1.40 per thousand gallons for a membrane treatment facility versus $1.00 per thousand gallons for a lime treatment facility.

Question 6: What potential alternatives does the Administration have at this time should the Aquifer Storage and Recovery system not work on the scale proposed by the Comprehensive Plan?

Response. If the ASR components are not as successful as expected, then it is likely that the CERP would be adjusted to include more above ground surface water storage. It is expected that the acreage and volume capacity of currently proposed above ground reservoirs, especially in the vicinity of Lake Okeechobee, could be increased. It is also likely that the depths of the proposed reservoirs could be increased. However, even with this increase in storage capacity the ability to capture and store wet season freshwater flows across South Florida for use in environmental restoration purposes would be reduced if planned ASR facilities are unsuccessful.

Although ASR facilities were first used in Florida in 1982, ASR wells have never been used on such a large scale and in such a variety of geologic conditions as proposed in the CERP. An Aquifer Storage and Recovery Team has been formed to work through the various surface water, hydrogeological, and water quality uncertainties. Since implementation of ASR facilities is expected to occur incrementally over a 20 year period, there will be ample time for re-evaluations. Pilot projects will evaluate the effectiveness of the technology. If ASR use is reduced or eliminated, other features will be substituted.

STATEMENT OF DR. JOSEPH W. WESTPHAL, ASSISTANT SECRETARY OF THE ARMY FOR CIVIL WORKS

Rescuing an Endangered Ecosystem: The Plan to Restore America's Everglades

Mr. Chairman, members of the Committee, I am Joseph Westphal, Assistant Secretary of the Army for Civil Works. Sitting with me today is Mr. Michael Davis, my Deputy Assistant Secretary for Policy and Legislation. Also, with me is Colonel Joe Miller and members of his staff from the Jacksonville District. We are pleased to be here today to present the Administration's and the Army's views on an important national issue the restoration of America's Everglades.

An American treasure is in trouble. Once the Florida Everglades was a vibrant, free-flowing river of grass that provided clean water from Lake Okeechobee to Florida Bay. It was a haven for storks, alligators, panthers and other wildlife and was critical to the health of estuaries and coral reefs. Today this extraordinary ecosystem—unlike any other in the world—is dying.

Over the past half-century, as the population of south Florida has grown, the health and size of the Everglades have steadily declined. Fully half the Everglades have been lost to agriculture and development. And the surviving remnants suffer from a severe shortage of clean, reliable water. In our efforts to guard communities against flooding and to ensure adequate water supplies for drinking and irrigation, we have diverted the natural water flows that are the essence and very lifeblood of the Everglades.

As Marjory Stoneman Douglas said in The Everglades: River of Grass, "There are no other Everglades in the world." Like the tropical rainforest of South America and the giant redwood forest of the west, the Everglades is a unique ecosystem. We must act now, and act aggressively, if we are to save this special place.

On July 1, 1999, the Vice President, on behalf of the Administration, and in partnership with the State of Florida, submitted to Congress a comprehensive plan to restore the South Florida ecosystem, which includes the Everglades, Lake Okeechobee, Florida Bay, and Biscayne Bay. This Comprehensive Everglades Restoration Plan (CERP), which will be implemented over the next 25 years, will:

- Improve the health of over 2.4 million acres of the south Florida ecosystem, including Everglades National Park;
- Improve the health of Lake Okeechobee;
- Virtually eliminate damaging freshwater releases to the estuaries;
- Improve water deliveries to Florida and Biscayne bays;
- Improve water quality; and
- Enhance water supply and maintain flood protection.

The CERP, which was formally known as the "Restudy," is the most ambitious ecosystem restoration project ever undertaken in the United States—if not the world. Its fundamental goal is to capture most of the fresh water that now flows unused to the sea and deliver it when and where it is needed most. Eighty percent of this "new" water will be devoted to environmental restoration, reviving the ecosystem from the Kissimmee River, through Lake Okeechobee, through Everglades National Park, to the coral reefs of Florida Bay. The remaining 20 percent will benefit cities and farmers, enhancing water supplies and supporting a strong, sustainable economy for south Florida. In short, the CERP provides the necessary road map for improving the quantity, quality, timing, and distribution of the water so vital to the health of America's Everglades and the people of south Florida.

The CERP was developed under the leadership of the U. S. Army Corps of Engineers and the South Florida Water Management District. Scores of scientists from many agencies, including the Everglades National Park, two Indian tribes, the Florida Department of Environmental Protection, and many local governments, have helped develop this plan. Extensive input has been gathered from interest groups and the general public. Twelve formal public meetings were held as well as scores of focused interest group meetings.

While the CERP reflects the best available science, we are prepared to refine our thinking as we learn more. Thus the CERP is designed to be flexible, to incorporate and respond to new information as it becomes available. Continuous monitoring and independent scientific review are key components of the CERP. Still, we cannot wait for all the answers to begin. There is too much at stake and little time to act.

The Problem

The Everglades of today are not the same place that Mrs. Douglas wrote about in 1947. Millions of people have encroached upon the ecosystem that once was the domain of panthers, alligators and flocks of birds so vast that they would darken the sky. With the arrival of people came the desire to manage the water, to tame the free flowing river of grass from Lake Okeechobee to the Florida Keys.

The Central and Southern Florida Project was authorized by Congress 50 years ago to provide flood protection and fresh water to south Florida. This project accomplished its intended purpose and allowed people to more easily live on the land. It did so, however, at tremendous ecological cost to the Everglades. While the population of people has risen from 500,000 in the 1950's to more than 6 million today, the numbers of native birds and other wildlife have dwindled and some have vanished. The size of the Everglades has been reduced by half.

Over the past 100 years, excessive drainage of wetlands and changes in the natural variability of water flows have altered the Everglades wetland ecosystem on a regional scale. Today, discharges to the Everglades are often too much, or too little, and frequently at the wrong times of the year. An over-abundance or scarcity of water affects plants and wildlife accustomed to the Everglades' historic range of water flows, levels and seasons. In addition, canals and highways that criss-cross the Everglades have interrupted its historic overland sheet flow.

Water quality throughout south Florida has deteriorated over the past 50 years. More than one-half of the wetlands that act as natural filters and retention areas are gone. Some untreated urban and agricultural storm water is sent directly to natural areas and estuaries. Too much, or too little, water is often sent to estuaries. Too many nutrients are entering the Everglades, with an over-abundance of cattails a visible indicator of the consequences.

Historically, most rainwater soaked into the ground in the region's vast wetlands. As south Florida developed, the canal system built over the past 100 years worked effectively and drained water off the land very quickly. As a result, approximately 1.7 billion gallons of water per day on average is discharged to the ocean. One very significance consequence is that not enough water is available for the environment. Under current conditions, these natural systems cannot recover their defining characteristics and they will not survive. The growing demand for a reliable and inexpensive supply of water for agriculture, industry and a burgeoning population will likely exceed the limits of readily accessible sources. As the needs of the region's natural systems are factored in, as they must be, conflicts for water among users will become even more severe. Water shortages will become more frequent and more severe unless changes to the water management system are made. The health of the ecosystem will continue to decline unless we act.

The Comprehensive Everglades Restoration Plan

First and foremost, the goal of the CERP is to restore, protect and preserve the south Florida ecosystem. The focus of the CERP has been to restore the defining ecological features of the original Everglades and other parts of south Florida ecosystem.

Both the problems with declining ecosystem health and the solutions to Everglades restoration can be framed by four interrelated factors: quantity, quality, timing, and distribution of water. The principal goal of restoration is to deliver the right amount of water, of the right quality, to the right places and at the right time. The natural environment will respond to these hydrologic improvements, and we will once again see a healthy Everglades ecosystem. The CERP consists of over 60 components that work together to accomplish this.

Quantity Significantly less water flows through the ecosystem today compared to historical times. As noted above, on average, 1.7 billion gallons of water that once flowed through the ecosystem is wasted each day through discharges to the ocean or gulf in excess of the needs of the estuaries. The CERP will capture most of this water in surface and underground storage areas where it will be stored until it is needed. Specifically, this water will be stored in more than 217,000 acres of new reservoirs and wetlands-based treatment areas, and 300 underground aquifer storage and recovery wells. These features vastly increase the amount of water available in south Florida.

Quality The quality of water in the south Florida ecosystem has been diminished significantly. Excess phosphorus, mercury, and other contaminants harm the region's surface water and groundwater. The water quality of the Everglades Water Conservation Areas, the coastal estuaries, Florida Bay and the Keys show similar signs of significant degradation. The CERP will improve the quality of water discharged to natural areas by first directing it to surface storage reservoirs and wetlands based stormwater treatment areas. In addition, the CERP recommended the development of a comprehensive integrated water quality plan for the region that will further improve water quality.

Timing Alternating periods of natural flooding and drying, called hydroperiods, were vital to the Everglades ecosystem. These natural hydroperiods have been severely altered by human activities. Restoring these variations in water flows and levels is an integral part of the CERP. Specifically, the timing of water held and released into the ecosystem will be modified by the CERP so that it more closely matches natural patterns. The CERP will reduce the harmful water levels that damage Lake Okeechobee and its shoreline. Improved water deliveries to the Caloosahatchee and St. Lucie rivers will reduce damage to the estuaries caused by too much or too little fresh water. Florida and Biscayne bays will receive improved fresh water flows. In other areas, an operational plan that mimics natural rainfall patterns will enhance the timing of water sent to the Water Conservation Areas, Everglades National Park, and other wildlife management areas.

Distribution The areal extent and movement of water through the system is the final factor in the water equation. Over 50 percent of the original Everglades have been lost to urban and agricultural development. Further, the remaining ecosystem has been separated, or compartmentalized, by canals and levees. To improve the connectivity of natural areas, and to enhance sheetflow, more than 240 miles of levees and canals will be removed within the Everglades. Most of the Miami Canal in

Water Conservation Area 3 will be filled and 20 miles of the Tamiami Trail will be rebuilt with bridges and culverts, allowing water to flow more naturally into Everglades National Park. In the Big Cypress National Preserve, the levee that separates the preserve from the Everglades will be removed to restore more natural overland water flow.

In summary, the CERP will store much of the excess water that is now sent to the sea so there will be enough water to meet the needs of both ecosystem and urban and agricultural users. The CERP includes a number of features to improve the quality of water flowing to the natural environment. It will continue to provide the same level of flood protection for south Florida. The CERP is not perfect no plan could be given the complexity of the ecosystem and the effects of past modifications. We know that we do not have all the answers and that we will have to make adjustments as we learn more. In this regard, the concept of adaptive assessment is an integral part of the CERP. In short, we will monitor, use independent peer review, public input, and make necessary adjustments as we go, utilizing the effective interagency and multi-stakeholder partnerships that allowed us to develop the CERP.

Why Restore the Everglades?

Perhaps first and foremost, the Everglades are an American treasure that is in serious trouble. There is no other wetland system like the "River of Grass" in the world. As with other great natural and cultural resources, we have a responsibility to protect and restore this treasure for generations to come.

Implementing the CERP over the next 25 or so years will cost approximately $7.8 billion. While the cost of the project is substantial, it will be spread over many years and shared equally between the Federal Government and the State of Florida. More importantly, the environmental and economic costs of inaction are enormous. The Everglades will continue to die and water shortages will have real effects on Florida's economy.

The benefits to the Nation of implementing the CERP are tremendous. The entire south Florida ecosystem, including the Everglades, will become healthy, with many of its natural characteristics restored. Urban and agricultural water users will also benefit from enhanced water supplies. Flood protection, so important to hurricane-prone south Florida, will be maintained and, in some cases, improved.

The economic benefits from implementation of the CERP are wide-ranging and are linked with the availability of clean, abundant water in the ecosystem. Not only is water the key to ecosystem restoration, it is also necessary for sustainable agricultural and urban environments. It is important for recreation, tourism and navigation. It plays a significant and obvious role in commercial and recreational fishing.

With the CERP, the distribution of plants and animals will return to more natural patterns as more pre-drainage water flows are restored. The CERP will support the return of the large nesting "rookeries" of wading birds to Everglades National Park, and the recovery of several endangered species, including the wood stork, snail kite, Cape Sable seaside sparrow, and American crocodile. We are confident that implementation of the CERP will allow us to once again witness an abundance of wildlife in the Everglades.

Lake Okeechobee, which is regionally important to fish and wildlife, will once again become a healthy lake. Both the shallow and open water areas within the lake, essential to its commercial and recreational fishery, will be greatly enhanced by improved water levels. This will mean more abundant and healthier fish populations. Water quality in the lake will also be improved significantly by reducing the pollutant loading of water flowing into the lake.

The CERP will also improve fresh water deliveries to Florida and Biscayne bays and the St Lucie and Caloosahatchee estuaries. Appropriate fresh water regimes will result in substantial improvements in aquatic and semi-aquatic habitats, including, mangroves, coastal marshes, and seagrass beds Interacting together to produce food, shelter, and breeding and nursery grounds; these coastal habitat areas will support more balanced, productive fish, shellfish, and wildlife communities.

In short, the CERP will begin to reverse, in a relatively short time, the pattern of ecological degradation that has been occurring in the natural system for many decades. If we start now, the natural wetlands system of south Florida will be healthier by the year 2010.

Like many other public works projects, implementing the CERP is an investment in the nation's future. With this investment, we can restore this unique ecosystem and leave a proud legacy for future generations. If we do not make the investment now, we will suffer the irretrievable loss of the Everglades.

The estimated cost to implement the CERP is $7.8 billion. It will also cost approximately $182 million each year to operate, maintain, and monitor the CERP. Taken together over the more than 20 years needed to implement the CERP, the

annual costs amount to just over $400 million. In general, the Federal Government will pay half the cost and the State of Florida and the South Florida Water Management District will pay the other half.

The Restoration Effort Begins with Authorization in the Water Resources Development Act of 2000

In early 2000, the Administration will ask the Congress to authorize an initial package of projects that will begin implementation of the CERP. This request for authorization will be made through a proposed Water Resources Development Act of 2000. The initial authorization request will include 1) four pilot projects; 2) ten specific project features; and 3) a programmatic authority through which smaller projects can be quickly implemented. Authorization for the remaining 26 proposed projects will be requested in subsequent Water Resources Development Act proposals beginning in 2002.

Pilot projects will address technical uncertainties. Prior to full-scale implementation, six pilot projects, costing about $97 million, will be built to address uncertainties with some of the features in the CERP (two of these pilot project were authorized in the Water Resources Development Act of 1999). These six projects include aquifer storage and recovery in each geographic region that the technology is proposed; in-ground reservoir technology in the lake belt region of Miami-Dade County; levee seepage management technology adjacent to Everglades National Park; and advanced wastewater treatment technology to determine the feasibility of using reuse water for ecological restoration.

Initial set of construction features will provide immediate system-wide water quality and flow distribution benefits and use already purchased land. Ten projects, totaling $1.1 billion, are recommended for initial authorization. These projects were selected because they can provide system-wide water quality and flow distribution benefits to the ecosystem as well as opportunities to integrate these features with other ongoing Federal and State restoration programs. For example, if authorized, we could update the ongoing Modified Water Deliveries Project to make it more consistent with the CERP by taking immediate steps to improve flow distribution through the Tamiami Trail. In addition, the South Florida Water Management District and the U.S. Department of the Interior have already purchased lands, such as the Talisman lands, for a number of CERP components. Authorization of projects that use lands already purchased will ensure that these lands are utilized for restoration as soon as possible.

Programmatic authority will expedite implementation. An authorization will be sought similar to the authorization received in 1996 for Everglades Ecosystem Restoration Projects (Critical Projects). These projects would "produce independent, immediate, and substantial restoration, preservation and protection benefits," and expedite some components of the CERP. The programmatic authority would be limited to those individual components of the CERP that have a total project cost of $70 million or less, with a maximum Federal share of $35 million per project. A total of 27 components of the CERP, with a total combined Federal and non-Federal cost of $490 million, could be implemented in an efficient and expedited manner. Components such as the Arthur R. Marshall Loxahatchee National Wildlife Refuge internal canal structures, the Lake Okeechobee watershed water quality treatment facility and the Florida Keys tidal restoration project could be accomplished under this programmatic authority.

The remainder of the CERP's features to be included in future Water Resources Development Acts. Congress will be asked to authorize the remaining components of the CERP as more detailed planning is completed. At a cost of approximately $6.2 billion, the 26 remaining features will undergo additional studies and analysis before authorization is sought from Congress. Many of these project components are dependent on the results of the proposed pilot projects such as aquifer storage and recovery features and the in-ground reservoirs in Miami-Dade County. Based on the implementation schedule, project reports will be submitted to Congress periodically through the year 2014.

Implementation of the CERP provides flexibility to adapt to new information. No plan can anticipate how a complex ecosystem will respond during restoration efforts. For example, the remaining Everglades are only one-half as large as their original size and current boundaries often do not follow natural ground elevations or habitat patterns. For these and many other reasons, the ways in which this ecosystem will respond to the recovery of more natural water patterns could include some unforeseen outcomes. The CERP anticipates such outcomes. The CERP is designed to allow project modifications that take advantage of what is learned from system responses, both expected and unexpected. Called adaptive assessment, and using a well-focused regional monitoring program, this approach will allow us to maximize environmental benefits while ensuring that restoration dollars are used wisely. The

monitoring program measures how well each component of the plan accomplishes its objectives, and, this, in turn, sets up opportunities for refinement of succeeding components. Independent scientific review through a National Research Council "Science Advisory Review Panel" is an integral part of this process.

Project Implementation Reports bridge the gap between the CERP and detailed design. To continue project implementation, more technical information is needed. Additional plan formulation and engineering and design will be developed. Additional analysis of the impacts of the various projects on the environment, flood protection, water quality, economics and real estate will be developed as will supplemental National Environmental Policy Act documents. Evaluation of component contributions to CERP performance will also provide more information toward the overall process and provide opportunities for the overall refinement or modification to the CERP as needed. The results of these efforts will be documented in a series of Project Implementation Reports. These Project Implementation Reports are designed to bridge the gap between the conceptual level of the Comprehensive Plan and the detailed design necessary to proceed with construction.

Public involvement key to CERP implementation. Continued outreach and public involvement are vital to the successful implementation of the CERP. In this regard, we will engage the public and stakeholder groups fully as each feature of the plan is sited, designed, and evaluated in detail. This will play a key role in shaping the details of numerous features of the CERP.

Conclusion

July 1, 1999, was a historic day for ecosystem restoration. An unprecedented ecosystem restoration plan was presented to Congress for authorization. The CERP represents the best available science and a solid roadmap for restoring an American treasure, the Everglades. The CERP also represents a partnership between many Federal agencies, two Indian tribes, the State of Florida, and many local governments—all who recognize the import of this effort and the consequences of inaction. This partnership is vital to our long-term success and we must all work to ensure that it is sustained.

The CERP is also a reflection of the contemporary Army Corps of Engineers. An agency that has made environmental restoration a priority mission.

Restoration of the Everglades is a high priority for the Clinton/Gore Administration, including the Army Corps of Engineers. It is a high priority for many in Florida, including the Florida Congressional delegation. We must make it a priority for the Nation. The Everglades are America's Everglades and each of us should try to understand better the importance of saving this treasure.

The ecological and cultural significance of the Everglades is equal to the Grand Canyon, the Rocky Mountains or the Mississippi River. As responsible stewards of our natural and cultural resources, we cannot sit idly by and watch any of these disappear. The Everglades deserves the same recognition and support.

We are now at an important crossroad in our efforts to restore this internationally important ecosystem. The future of the CERP now rests with the Congress who must authorize and fund its implementation. If we act now with courage and vision to implement the CERP we will be successful and we will leave a proud Everglades legacy. If we fail to act, our legacy will be one of lost opportunities for all future generations. The world is indeed watching as we make this choice.

Mr. Chairman, that concludes our statement. For the record, we have included a copy of Rescuing an Endangered Ecosystem: The Plan to Restore America's Everglades. This document provides a more detailed summary of the CERP and includes important graphics that help illustrate many of the points made in this statement.

Again, it has been a pleasure to participate in this hearing and we look forward to working with you, Senator Graham, and the rest of the Committee on this important issue. Mr. Davis and I would be pleased to answer any questions you may have.

RESPONSES BY JOSEPH WESTPHAL TO ADDITIONAL QUESTIONS FROM SENATOR SMITH

Question 1. What potential alternatives does the Administration have at this time should the Aquifer Storage and Recovery system not work on the scale proposed by the Comprehensive Plan? What evidence is there to give the Administration confidence that the system will work on the scale being proposed?

Response 1. Aquifer Storage and Recovery (ASR) is generally defined as "the storage of water in a suitable aquifer through a well during times when water is available, and recovery of the water from the same well during times when it is needed." (Pyne, 1995) ASR facilities have been in operation in the United States for about 30 years. According to a report entitled "Aquifer Storage and Recovery Issue Team

Assessment Report and Comprehensive Strategy" prepared for the South Florida Ecosystem Restoration Task Force Working Group in July 1999, the first ASR facility in Florida was permitted in 1982 and the State had six operational ASR facilities, with an additional 12 under construction in February 1998. In Florida, ASR is used to store surplus freshwater during the rainy summer season, for later use during the usually dry winter season. These facilities range in capacity from 1 to 15 million gallons of water per day. Also, a number of raw (untreated) ground water ASR facilities are currently under construction or in process of testing in Florida. Although a number of possible sources of water are available for use with ASR (treated surface and ground water, raw surface and ground water, reclaimed water), the technology itself is the essentially the same for each source.

The use of ASR is increasing nationally since, with appropriate quality of the injected water, it creates few environmental impacts, is less expensive than many other water storage options, and can efficiently store water for later retrieval. Implementation of the planned ASR facilities in the Comprehensive Everglades Restoration Plan (CERP) is expected to take up to 20 or more years. The first stage will be a pilot program to test the ASR feasibility in specific locations such as around Lake Okeechobee. The Corps received authorization for the construction of two ASR pilot projects in the Water Resources Development Act of 1999. These projects included a pilot facility along Hillsboro Canal in southern Palm Beach County and a pilot project at the northern half of Lake Okeechobee. The Administration's legislative proposal will request authorization of a third pilot project along the Caloosahatchee River to complete the ASR testing. As a result of the pilot program and future modeling, the decision to either develop more ASR wells or end the development will be made. If the decision is to continue the development of more ASR wells, periodic evaluations will be made as the program progresses. If the decision is to discontinue ASR development, other options will immediately be evaluated as substitutions for ASR to make-up for performance reductions. Potential alternatives to the proposed ASR components may include: increasing storage quantity by raising water levels in Lake Okeechobee; deepening proposed surface water storage reservoirs or providing additional storage reservoirs in the system; and developing alternative water sources, including water reuse facilities, desalination features, and use of Florida Aquifer water with treatment. After considering the efficiencies, ecological impacts, land requirements, and costs, the ASR was considered the best alternative to achieve the objectives of the CERP.

Question 2. Dr. Westphal, it is my understanding that under the present system, 70 percent of water deliveries are devoted to urban/agricultural use and 30 percent to the environment. The CERP calls for 80 percent of the so-called "new water" that is captured under the plan to be devoted to the environment and 20 percent to urban/agricultural use.

Question 2a. Was the 80–20 split a scientific determination based on what would be most beneficial to the environment?

Response 2a. Yes. Hydrologic performance measures and ecological outputs were developed for each area of the ecosystem based on scientific analysis of ecosystem needs. These performance measures, which involved four interrelated factors: quantity, quality, timing, and distribution of water, were used to evaluate the performance of the CERP. Following that analysis, a water budget analysis of the Plan was conducted. The CERP will capture most of the water that is wasted each day through discharges to the ocean or gulf in surface and underground storage areas where it will be stored until it is needed. Eighty percent of this captured water will be devoted to environmental restoration. The remaining 20 percent will benefit cities and farmers, enhancing water supplies and supporting a strong, sustainable economy for south Florida well into the 21st Century.

Question 2b. Are there safeguards in place to ensure that, indeed, 80 percent of the "new water" will be delivered to the Everglades ecosystem?

Response 2b. The primary and overarching purpose of the Comprehensive Plan is to restore the south Florida ecosystem. Accordingly, to ensure the successful implementation of the Comprehensive Plan, the Corps will continue to work with the Department of the Interior, the Environmental Protection Agency, and other Federal agencies and the State of Florida to develop the necessary assurances to ensure that the natural system benefits are achieved and maintained. The assurances will address the proper quantity, quality, timing, and distribution of water for the natural system.

A major strength of the CERP is that its flexibility allows for opportunities to make further improvements as we refine individual projects and obtain new information. It contains an aggressive adaptive assessment strategy that includes independent scientific peer review and a process for identifying and resolving uncertain-

ties. Operational rules are critical to maintaining the benefits of ecosystem restoration envisioned in the Comprehensive Plan. We will monitor and periodically revise our rules regarding the operation of the Central and Southern Florida Project to ensure that the hydrologic and ecological benefits anticipated in the Plan are maintained. This recurring evaluation of operational rules is appropriate considering that the restoration project is justified on the basis of environmental benefits. Further, the Administration's proposed legislation to authorize the Plan will include assurance language on the future evaluation of project features and to ensure that the benefits to the natural system will be achieved, maintained and preserved.

Question 2c. In the case of a dry year, if an optimal amount of water is not captured, does the split remain 80–20 or does the environment have "first dibs," so to speak?

Response 2c. The distribution of water at any moment in time will be based on the needs of the natural system as identified by a rainfall model. The Everglades naturally experienced dry periods and we would expect to mimic these conditions. Operational rules and procedures established as part of the implementation process for the CERP will ensure that the ecosystem receives water based on the natural system need during dry years. The Administration's proposed legislation will include appropriate assurance language to ensure that the benefit to the natural system will be maintained and preserved.

Question 2d. Would the expected increase in Florida's population or development of urban areas of South Florida impact the proposed delivery of new water?

Response 2d. No. The Comprehensive Plan was formulated and evaluated with full recognition of the anticipated increase in population in south Florida over the next 50 years. Therefore, the Plan will be able to deliver the appropriate amount of water to the ecosystem with an increased population.

Question 2e. How do you respond to criticism that this restoration effort is nothing more than a water supply plan?

Response 2e. The existing Central and Southern Florida Project, which was first authorized in 1948, is a multi-purpose project that provides flood protection, water control, regional water supply for agricultural and urban uses, prevention of salt water intrusion into coastal wellfields, preservation of fish and wildlife resources, and recreation. Regional water supply is provided by the project through the maintenance of ground water levels, recharge of ground waters, and prevention of saltwater intrusion rather than through direct withdrawal of water.

The CERP consists of 68 components. Of the 68 components that comprise the Plan, only 11 components provide direct or indirect water supply for urban or agricultural uses. If the Plan had been developed as a single-purpose ecosystem restoration plan, 10 of those 11 components would not have been significantly different since they would still need to capture and store water needed for restoration. Together these features provide the quality, quantity, timing, and distribution of flows to the ecosystem. [Example, one of the cells in the proposed Everglades Agricultural Area (EAA) reservoir catches EAA runoff that would otherwise flood the water conservation areas. This same cell also releases that water to the EAA for agricultural water supply. That in turn reduces the EAA's reliance on Lake Okeechobee for water supply in the dry season. This reduced reliance of the EAA on Lake Okeechobee ensures that more water is available to the natural system. Thus, this single reservoir area within the EAA provides water supply and water quality to both the Everglades ecosystem as well as to urban and agricultural users.]

Finally, the overarching purpose of the Comprehensive Plan is to restore, preserve, and protect the south Florida ecosystem, while providing for the other water-related needs of the region. The overwhelming majority (80 percent) of "new water" captured by the Comprehensive Plan will be provided to the natural system. This will ensure that the ecosystem will receive the water it needs for restoration.

Question 3a. WRDA 1996 stipulates that Operation and Maintenance (O&M) shall be a non-Federal responsibility. Yet the CERP proposes that the Federal Government assume 50 percent of this cost, estimated to be $182 million a year once all components of the project are implemented. How does the Corps justify this extra Federal expenditure?

Response 3a. Mr. Chairman, I would like to provide clarification on the recommended O&M cost sharing for the Plan. The Jacksonville District's Comprehensive Review Study (Restudy) completed in April 1999 recommended 50–50 cost sharing for annual O&M of the Plan. This recommendation was based on their determination that the Plan will provide substantial benefits to Federal lands. The Chief of Engineers report recommended O&M cost sharing in accordance with the Water Resources Development Act of 1996 that established O&M is a non-Federal responsibility. When I transmitted the CERP to Congress on July 1, 1999, my letter indi-

cated that this is a very important issue that will require further review before I could make a final recommendation. In this regard, the Army's legislative proposal will include my recommendation on O&M cost sharing on behalf of the Administration.

Question 3b. I understand that Everglades National Park, Biscayne National Park, Big Cypress National Preserve, and Loxahatchee National Wildlife Refuge will all benefit from the proposed plan. If that is the case, then shouldn't the Department of Interior be sharing the cost of O&M since these are DOI administered lands?

Response 3b. The CERP will provide benefits to DOI administered lands including Everglades National Park, Big Cypress National Preserve, Loxahatchee National Wildlife Refuge, and Biscayne Bay. The Chief of Engineers recommended that O&M is a non-Federal responsibility in accordance with the Water Resources Development Act of 1996, and therefore, no consideration was given to potential funding for O&M from DOI or other Federal agencies. We are currently engaged in discussions within the Administration on this issue and the Army's legislative proposal will include my recommendation on O&M cost sharing on behalf of the Administration.

Question 4. What would be the effects on the ecosystem if implementation of the Plan were delayed and only pilot projects authorized in WRDA 2000? Alternatively, what if authorization of some of the pilot projects were delayed?

Response 4. The features of the CERP which are recommended for authorization in WRDA 2000 include projects that are necessary to expedite ecological restoration of the Everglades and other south Florida ecosystems. Authorization of these features in WRDA 2000 will ensure maximum integration with ongoing Federal, State, and local ecological restoration and water quality improvement programs. The immediacy for authorization of these select features involves two factors: (1) efficiency with ongoing projects; and (2) realizing the benefits of Federal investments already undertaken. Authorization of these features in WRDA 2000 will maximize the opportunity to integrate them with other ongoing Federal and State programs. It is anticipated that this would ultimately result in substantial cost savings to the Federal Government while expediting the restoration of an ecosystem in serious trouble. Furthermore, the South Florida Water Management District and the U.S. Department of the Interior have purchased lands associated with a number of components of the Comprehensive Plan, including nearly 51,000 acres of land as a result of the purchase and exchange of the Talisman property in the Everglades Agricultural Area (EAA) for water storage. Immediate authorization of the components that use these lands will improve timing of environmental water deliveries to the Water Conservation Areas including reducing damaging flood releases from the EAA to the Water Conservation Areas, reduce Lake Okeechobee regulatory releases to estuaries, meet supplemental agricultural irrigation demands, and increase flood protection within the EAA.

Pilot projects are needed to address technical uncertainties associated with some of the physical features that are proposed in the Comprehensive Plan. To ensure that the Comprehensive Plan is implemented in a timely manner, it is necessary to expedite the pilot projects. These pilot projects are designed to determine the feasibility, as well as optimum design, of the features prior to embarking on the full-scale development of these features. Therefore, any delay in authorizing and implementing the pilot projects will result in an even greater delay in implementing features that are dependent on the result of the pilot project.

Question 5. I believe there is some confusion as to what the process is going to be for authorization of the Comprehensive Plan. For the record, could you break down the different components of the Plan and when the Administration expects to request authorization (i.e. in what WRDA bill?).

Response 5. The process and schedule for authorizing the CERP and its components was developed based on an analysis of the scheduling of plan features and ongoing Federal and State programs, such as the C–111 Project and the Everglades Construction Project. The process for obtaining authorization of the Comprehensive Plan includes:

a. Congressional approval of the CERP as the appropriate framework or roadmap for Everglades restoration;

b. Initial authorization of a specific set of key components in the Water Resources Development Act (WRDA) of 2000;

Projects Recommended for Authorization in WRDA 2000

Project	Cost	Construction Dates
C–44 Basin Storage Reservoir	$112,562,000	6/04–6/07
Everglades Agricultural Area Storage Reservoirs Phase I	$233,408,000	9/05–9/09
Site 1 Impoundment	$38,535,000	9/04–9/07
WCA 3A/3B Levee Seepage Management	$100,335,000	9/04–9/08
C–11 Impoundment & Stormwater Treatment Area	$124,837,000	9/04–9/08
C–9 Impoundment/Stormwater Treatment Area	$89,146,000	9/04–9/07
Taylor Creek/Nubbin Slough Storage and Treatment Area	$104,027,000	1/05–1/09
Raise and Bridge East Portion of Tamiami Trail and Fill Miami Canal within WCA 3.	$26,946,000	1/05–1/10
North New River Improvements	$77,087,000	1/05–1/09
C–111 N Spreader Canal	$94,035,000	7/05–7/08
Adaptive Assessment and Monitoring Program (10 years)	$100,000,000	
TOTAL	$1,100,918,000	

c. Authorization of four pilot projects;

Projects Recommended for Authorization in WRDA 2000

Project	Cost	Construction Dates
Calooshatchee River (C–43) Basin ASR	$6,000,000	10/01–10/02
Lake Belt In-Ground Reservoir Technology	23,000,000	06/01–12/05
L–31N Seepage Management	10,000,000	10/01–10/02
Wastewater Reuse Technology	30,000,000	09/03–09/05
TOTAL	69,000,000	

d. Future Congressional authorization of components in subsequent WRDAs;

Projects Requiring Authorization Beyond WRDA 2000

Project	Cost	Potential WRDA	Construction Dates
L–31N Improvements for Seepage Management and S–356 Structures.	$184,218,000	2002	10/05–10/10
Bird Drive Recharge Area	$124,083,000	2002	12/08–12/13
C–23/C–24 Storage Reservoirs	$369,316,000	2002	6/05–5/09
C–25/Northfork and Southfork Storage Reservoirs	$340,907,000	2004	7/06–5/10
Seminole Big Cypress Water Conservation Plan East & West	$75,288,000	2004	6/05–6/08
C–43 Basin Storage Reservoir & Aquifer Storage and Recovery	$440,195,000	2004	4/05–3/12
C–51 Regional Groundwater Aquifer Storage and Recovery	$132,336,000	2004	9/08–9/13
Palm Beach County Agricultural Reserve Reservoir and Aquifer Storage and Recovery.	$124,099,000	2004	8/09–8/13
Water Preserve Area / L–8 Basin	$415,182,000	2006	9/07–9/14
Site 1 Aquifer Storage and Recovery	$92,844,000	2006	10/10–10/14
Biscayne Bay Coastal Wetlands	$299,583,000	2006	5/12–5/18
Caloosahatchee Backpumping with Stormwater Treatment	$82,895,000	2008	9/11–9/15
Lake Okeechobee Aquifer Storage and Recovery	$1,097,312,000	2008	7/10–6/20
Everglades Agricultural Storage Phase 2	$203,240,000	2010	7/12–12/15
North of Lake Okeechobee Storage Reservoir	$284,854,000	2010	9/11–9/15
Water Conservation Area 3 Decompartmentalization and Sheetflow Enhancement.	$59,204,000	2012	1/15–1/19
Central Lake Belt Storage Area	$489,861,000	2012	2/15–12/36
North Lakebelt Storage Area	$516,061,000	2012	2/16–6/36
Diverting Water Conservation Area 2 and 3 Flows to Central Lake Belt Storage.	$79,657,000	2012	2/14–2/18
West Miami Dade County Reuse	$437,237,000	2014	6/16–6/20
South Miami-Dade County Reuse	$363,024,000	2014	6/16–6/20
TOTAL	$6,211,396,000		

e. A programmatic authority similar to the existing Critical Projects authority contained in WRDA 1996. This authority, if provided by Congress in WRDA 2000 will allow the Corps to expedite implementation of the Comprehensive Plan through

modifications to the Central and Southern Florida Project that are consistent with the CERP and that will produce independent and substantial benefits. The total Federal cost for any project implemented under this authority would not exceed $35,000,000. If Congress provides this programmatic authority, these projects would not require additional authorization but would require appropriate technical analyses and documentation of environmental effects in accordance with the National Environmental Policy Act before work begins.

f. Implementation of some components will not require further congressional action. These include:

Projects Not Requiring Congressional Action

Project	Explanation
Lake Okeechobee Regulation Schedule	Operational change only; implement when appropriate as other facilities come on line
Environmental Water Supply Deliveries to the Caloosahatchee Estuary.	Operational change only; implement when appropriate as other facilities come on line
Environmental Water Supply Deliveries to the St. Lucie Estuary.	Operational change only; implement when appropriate as other facilities come on line
Everglades Rain Driven Operations	Operational change only; implement when appropriate as other facilities come on line
Change Coastal Wellfield Operations	Operational change only
Modified Holey Land Wildlife Management Area Operation Plan.	Implement under existing state process
Modified Rotenberger Wildlife Management Area Operation Plan.	Implement under existing state process
Lower East Coast Utility Water Conservation	Implement under existing state process
Operational Modifications to Southern Portion of L–31N and C–111.	Operational change only; implement as part of C–111 Project

Question 6. How does a Project Implementation Report compare to a Feasibility Study?

Response 6. A Project Implementation Report (PIR) is a new type of reporting document unique to the Everglades and South Florida ecosystem restoration initiative. These documents will bridge the gap between the conceptual nature of the CERP and the detailed design necessary to proceed to construction. A PIR will be similar to a traditional Corps feasibility report in that it will contain detailed information on the planning and design of a component or series of components proposed for implementation. Specifically, PIRs will develop the detailed technical information to implement the project, including additional plan formulation, engineering and design, detailed cost estimates, environmental analyses, flood protection analyses, water quality analyses, economic analyses, siting and real estate analyses, and preparation of supplemental National Environmental Policy Act documents. PIRs will also document a Plan component, or group of Plan components, contribution to the CERP performance and describe any needed refinements and modifications to the CERP resulting from the detailed planning and design efforts.

The purpose of the PIR is to affirm, reformulate or modify a component, or group of components, in the CERP. All planning analyses, including economic, environmental, water quality, flood protection, real estate, and plan formulation, conducted during preconstruction design studies will be documented and included in PIRs. The PIR will be the vehicle to identify, quantify and attempt to resolve any uncertainties surrounding the cost and performance of each major component. These uncertainties are not limited to hydrologic performance of the specific structure component, but also include the uncertainties surrounding the expected ecosystem response to the component. A clear description of the expected environmental outcome of each component will be included in the PIR. PIRs will typically be completed in 18 to 36 months.

The PIRs for those projects recommended for initial authorization, and projects implemented under the programmatic authority, would be reviewed and approved by the Secretary of the Army prior to construction. All other PIRs for future projects would be submitted to the Congress for authorization similar to traditional Corps feasibility reports.

Question 7. What is the Administration's position on authorizing this measure as stand-alone legislation, separate from a WRDA package?

Response 7. Both the Administration and the Congress have committed to the biennial WRDA process as the proper vehicle for authorizing all Army Corps of Engi-

neers water resources projects. We believe that this is the best approach for authorizing the CERP.

Question 8a. Is it reasonable to expect that there is going to be "equity" between states on how much money is expended on Corps Civil Works projects?

Response 8a. Yes, and we believe we are equitable in our distribution of funding. We use no criteria that is designed to favor Civil Works projects in any one state. Ceilings are allocated proportionally to the individual divisions based on workload. The states that expend the most money are the states that have the most pressing needs and/or largest Civil Works projects.

Question 8b. Can you list the ten states that have received the most funding to date?

Response 8b. The ten states that have received the most Construction, General funds over the last 10 years are shown in the table below.

Number	State	Total $
1	CA	1,520,303,640
2	LA	1,472,034,653
3	TX	893,325,572
4	WV	805,291,279
5	IL	776,743,127
6	KY	741,220,454
7	WA	644,700,231
8	OR	561,682,650
9	NJ	448,774,638
10	PA	442,688,415

Question 9a. Regarding the $27 billion backlog, are all the projects in the backlog current? That is, is there a portion of these projects that are poised to be automatically deauthorized under the conditions of the 1986 act?

Response 9a. Yes, there are. Two ongoing projects have two separable elements each that are included in the list of projects that are eligible for deauthorization that the Assistant Secretary of the Army (Civil Works) submitted to the President of the Senate and the Speaker of the House of Representatives on 15 October 1999. $78 million is included on the backlog list for two elements of the Central and Southern Florida project, Martin County Backflow and Martin County Flood Control. Also included on the backlog list is $28 million for two elements of the Ascalmore-Tippo-Opossum and Backwater-Rocky Bayou elements of the Yazoo Basin, Mississippi project.

Question 9b. Does this $27 billion include studies or is it purely from the construction account?

Response 9b. The construction backlog of $27 billion consists of Construction, General and Mississippi River and Tributaries construction projects and does not include studies.

RESPONSES BY JOSEPH WESTPHAL TO ADDITIONAL QUESTIONS FROM SENATOR VOINOVICH

Question 1. Twenty percent of the new water provided by the Comprehensive Plan is for municipal and agricultural water supply. This water supply will accommodate a growth in South Florida population from its present level of 6 million to a projected level of 11 million by 2050. The Water Supply Act of 1958 and Section 103 of the Water Resources Development Act of 1986 make it clear that municipal water supply is to be a 100 percent non-Federal responsibility. What is the rationale for Federal participation on a 50–50 basis in the portion of the Comprehensive Plan attributable to proving water supply for municipal uses and to accommodate future population growth in South Florida?

Response 1. The existing Central and Southern Florida Project, which was first authorized in 1948, is a multi-purpose project that provides flood protection, water control, regional water supply for agricultural and urban uses, prevention of salt water intrusion into coastal wellfields, preservation of fish and wildlife resources, and recreation. Regional water supply is provided by the project through the maintenance of ground water levels, recharge of ground waters, and prevention of saltwater intrusion rather than through direct withdrawal of water.

The Comprehensive Everglades Restoration Plan (CERP) consists of 68 components. Of the 68 components that comprise the Comprehensive Plan, only 11 components provide direct or indirect water supply for urban or agricultural uses. If the Comprehensive Plan had been developed as a single-purpose ecosystem restoration plan, 10 of those 11 components would not have been significantly different since they would still need to capture and store water needed for restoration. Only one component, the Broward County Secondary Canal Improvement component ($12.9 million), might not have been included in a restoration only plan. Most of the components of the CERP are multi-purpose and cannot be categorizes simply in terms of a single intended purpose such as environmental restoration or urban or agricultural water supply. Additional water conservation in the urban areas, which will decrease water supply demand by approximately 6 percent more than the conservation incorporated in the future without project condition, is one of the components of the Comprehensive Plan. [For example, one of the cells in the proposed Everglades Agricultural Area (EAA) reservoir catches EAA runoff that would otherwise flood the water conservation areas. This same cell also releases that water to the EAA for Agricultural water supply. That in turn reduces the EAA's reliance on Lake Okeechobee for water supply in the dry season. This reduced reliance of the EAA on Lake Okeechobee ensures that more water is available to the natural system. Thus, this single reservoir area within the EAA provides water supply and water quality to both the Everglades ecosystem as well as to urban and agricultural users.]

Urban water supply in south Florida is currently met from two sources: local groundwater pumping and deliveries from the regional system (Lake Okeechobee and the Water Conservation Areas). During normal years, the lower east coast draws most of its water supply directly from the Biscayne aquifer. As water levels in the aquifer are drawn down during dry years, water is then released from the Water Conservation Areas to recharge the aquifer. Under more severe drought conditions, water must be brought from Lake Okeechobee to meet the needs of the lower east coast. With the CERP in place, the lower east coast receives less water from the Water Conservation Areas and Lake Okeechobee than under either the existing or future without project conditions. It is important to note that much of the increased demand for future water supply will be met by increased pumping from the Biscayne aquifer.

Here, the vast majority of the water supply comes as an indirect result of increasing water supply to the natural system. Thus, water supply is inextricably linked to restoration, adds little if any additional cost, and, therefore, it was recommended that it be cost shared in the same manner as restoration.

Question 2a. The $1.1 billion of projects proposed for initial authorization are developed only to a conceptual level of detail. Information typically developed before a project is authorized has not yet been developed including the exact location of project feature (reservoir sites for example); the exact size and dimensions of project features (levee heights, dam heights, pump sizes, etc.); the tracts of land that will need to be acquired to construct the project, engineering information such as subsurface exploration, detailed topographic information, and hydrologic modeling; and other design details. Please provide details on how the information developed for the projects proposed for initial authorization studies compares to the information normally developed in feasibility studies.

Response 2a. While the Comprehensive Plan report was written at a level of detail that is less specific in nature than recent projects recommended for congressional authorization, the feasibility report has been completed in accordance with legislation and Army policy and guidance. Further, the Programmatic Environmental Impact Statement (EIS) addresses the potential environmental effects of the actions proposed in the Comprehensive Plan. The Programmatic EIS addresses, at a general level, the alternatives and environmental effects of the overall project.

The Comprehensive Plan presented in the feasibility report is similar in scope to the 1948 Comprehensive Report for the Central and Southern Florida Project. The original plan provided a framework from which all subsequent planning and design could follow. The plan was general in nature and did not identify precise locations of project features. Further, minimal alternative analysis was accomplished. At that time, it was understood that more detailed alternative analysis would be accomplished during subsequent planning and design. Hence, a phased implementation of a comprehensive plan for south Florida was recommended and implemented.

Further, due to the reduced level of detail, prior to initiation of detailed design and construction, Project Implementation Reports will be completed for each project proposed for authorization in WRDA 2000 and any project which will be implemented under the programmatic authority. These reports will be approved by the Secretary of the Army and will document advanced planning, engineering and de-

sign, real estate analysis, and supplemental requirements under the National Environmental Policy Act.

Question 2b. What are the risks if any in authorizing these projects based on only conceptual information?

Response 2b. The Administration believes that there are minimal, if any, risk associated with authorizing the initial ten projects recommended in the CERP. A Chief of Engineer's Report has been completed and these projects have been developed to sufficient detail to support authorization. The CERP is a scientifically and economically sound plan that provides the framework and guide for needed modifications to the Central and Southern Florida Project and related actions that are integrally linked.

The effort to develop the CERP has been an open, collaborative process involving Federal and state agencies, local government and tribal participation. This interagency, inter-disciplinary process ensured that the Plan evolved from a healthy diversity of backgrounds, interests, and agency missions. The project components recommended for authorization have been developed by scores of scientists and engineers from many agencies and extensive input has been gathered from interest groups and the general public. We recognize that there are technical and cost uncertainties associated with some of the components included in the CERP. As each component proceeds toward actual implementation, technical uncertainties will be addressed through pilot projects and more detailed analysis. We will develop contingency plans as necessary during the implementation phase for appropriate components and technologies to ensure that the benefits of the Plan are obtained.

To minimize potential risks associated with the conceptual nature of the CERP, the Administration will propose assurance language in its legislative proposal to address the evaluation and implementation of project features. This language will state that prior to the initiation of construction of project components and features in the CERP, the Secretary of the Army will complete Project Implementation Reports (PIRs), which will be similar to feasibility reports, to address the project(s) economic justification, engineering feasibility, and environmental acceptability, including National Environmental Policy Act compliance. Prior to finalization, these PIRs will be coordinated with appropriate Federal, state and local agencies, tribal governments, public interest groups, and stakeholders. These reports would also be subjected to the normal budgetary review process. The Administration will propose that PIRs for the CERP components and features recommended for authorization in WRDA 2000 be reviewed and approved by the Secretary of the Army. All other PIRs for plan components and features to be implemented in the future will be submitted to the Congress for authorization.

The Plan is designed to be flexible, to incorporate and respond to new information as it becomes available. Continuous monitoring and independent scientific review are key components of the Plan. By acting now, we can reverse the damage of the past and rescue this unique and remarkable landscape.

The risks of not implementing this Plan and authorizing the initial projects are severe. Reductions in the spatial extent of healthy wetlands will continue. Species that require large expanses of natural habitat, such as the Florida panther, snail kite, and wading birds, will increasingly become stressed by the loss of habitats. Losses of organic soils will continue to reduce water storage capacity and ecological productivity throughout the ecosystem. Canals and levees will continue to encourage the introduction and spread of exotic plants and animals. Unnatural fire patterns will increasingly damage the natural landscapes of south Florida. South Florida recreational and commercial fishing will decline, both in freshwater Everglades and Lake Okeechobee, and in the Caloosahatchee and Florida Bay estuaries. Finally, the Everglades will cease to exist as a functional, recognizable "River of Grass."

Question 2c. What precedent will be set in authorizing these projects based on conceptual information?

Response 2c. The Everglades restoration effort is of national and international significance. We consider the CERP as a unique initiative that can be separated from traditional Corps projects. The projects recommended for initial authorization are an integral part of an overall Plan that will begin to reverse, in a relatively short time, the pattern of ecological degradation that has been occurring in the natural system for many decades. We recognize that this is an ecosystem in peril, and time is of the essence. Implementation of the restoration features as scheduled will provide substantial hydrologic, water quality, and ecological benefits to the ecosystem by the year 2010.

Question 2d. Is the Administration prepared to seek authorization of other water resources projects based on a conceptual level of detail?

Response 2d. We are not proposing authorization of a project based on only conceptual level of detail. The CERP, however, is a relatively detailed plan. It is based on extensive analysis of problems and issues and comprehensive modeling of conditions and options to be considered for addressing the environmental restoration, water supply and flood control needs of the region. These efforts have been ongoing for 7 years and included independent scientific review and input from all affected and interested parties. We recognize there are unknowns as to the full effectiveness of some of the proposed actions. To address this, the plan allows early implementation of those actions that will provide clear and significant benefits while other actions are more fully evaluated as to need and scope based on effectiveness of initial actions and pilot projects.

Question 3. The Chief of Engineers Report on the Comprehensive Plan contains a commitment to complete the additional analysis that is necessary to refine the Comprehensive Plan to deliver additional water (approximately 245,000 acre-feet) to Everglades National Park and Biscayne Bay, either by capturing additional runoff from urban areas or by some other means. This additional water was not part of the report of the District Engineer and was added at the Washington level. This commitment was made without coordination with the State of Florida, the Miccosukee tribe, agricultural interests and other members of the South Florida Ecosystem Restoration Task Force. While there is support for examining the potential use of this additional, there is a widespread concern about the economic and environmental feasibility of its use. Can you describe the process that will be used to develop, review and approve the plans for this additional water?

Response 3. In response to the October 1998 draft report on the Comprehensive Plan, the Department of the Interior and other scientists suggested that additional water was needed to ensure restoration of Everglades National Park and Biscayne Bay. The interagency team that developed the Comprehensive Plan evaluated several options and concluded that additional water would provide important benefits to Everglades National Park and Biscayne Bay. The principal remaining questions are how to deliver this water without impacting other parts of the ecosystem (e.g. the Water Conservation Areas), impacts on secondary canals in Palm Beach County, and how much the water would have to be cleaned before it could be delivered to the ecosystem. A discussion of this proposal in general terms was included in the Corps' final report that was released in April 1999. A letter clarifying this issue was distributed with the report last April, and the commitment to further study the delivery of additional water was discussed with and endorsed by the Task Force. The Chief of Engineer's Report commits that the Corps will prepare a Project Implementation Report by 2004 to determine how much of the 245,000 acre-feet is necessary to restore Everglades National Park and Biscayne Bay. The evaluation will include more detailed studies, an Environmental Impact Statement, and full public review. Once this has been completed, a final executive branch decision will be made and a proposal will be forwarded to Congress for consideration in a Water Resources Development Act of 2004. Congress would then have the opportunity to discuss and debate the proposal. In short, construction would not start on this proposal until it has been studied fully and congressional authorization is obtained.

RESPONSES BY JOSEPH WESTPHAL TO ADDITIONAL QUESTIONS FROM SENATOR GRAHAM

Question 1. In your brief testimony, I know you did not have an opportunity to discuss the restoration work that the Army Corps has already conducted on the Everglades project. Can you describe these projects and their status?

Response 1. There are a number of significant and important restoration projects currently underway in South Florida. I will briefly summarize these projects below:

a. The Kissimmee River Restoration Project involves the ecosystem restoration of the historic floodplain to reestablish wetland conditions resulting in the restoration of 27,000 acres of wetlands and riverine habitat in the Kissimmee watershed. The project will be accomplished through the backfilling of 22 miles of canal C–38, modifications to the operation of the lakes, modification or removal of several structures and canals, and excavation of about 9 miles of new river channel. Construction was initiated in the fall of 1997 and is scheduled to be completed in September 2009.

b. The West Palm Beach Canal Project (C–51) provides water quality treatment, reduction of damaging freshwater discharges to Lake Worth, and increased water supply for the Loxahatchee National Wildlife Refuge, the Everglades and other users. Construction was initiated last year. The eastern basin works are complete and work continues in the western basin, which is scheduled for completion in March 2003.

c. Another project underway is the South Dade County Project (C–111). Canal C–111 normally discharges into Florida Bay via overland flow across the eastern panhandle of ENP and discharges into Taylor Slough which ultimately also flows to Florida Bay. The project will not only maintain existing flood protection to the southeast coast urban areas, but will also minimize the need for damaging freshwater discharges to Barnes Sound, restore more natural hydrologic conditions to the Taylor Slough Basin in Everglades National Park and restore historic freshwater flows to Florida Bay. Project construction was initiated in Aug 1996 and is scheduled for completion in May 2003.

d. The Corps/DOI/South Florida Water Management District partnership for Modified Water Deliveries to Everglades National Park will make structural modifications and additions to the Central & Southern Florida Project (C&SF) enabling water deliveries for the restoration of more natural hydrologic conditions in Everglades National Park's Northeast Shark River Slough basin. Project construction is scheduled for completion in Nov 2003.

e. Section 528 of WRDA 96 provided authority for Critical Restoration Projects that would provide immediate, independent and substantial restoration benefits. Last year we executed the first Project Cooperation Agreement with the State of Florida for a carrying capacity study of the Florida Keys and on 7 January 2000 the Corps executed 7 more Project Cooperation Agreements with the South Florida Water Management District and one with the Seminole Tribe of Florida to implement the following projects:

Project	Total Costs
East Coast Canal (C–4)	$1,300,000
Tamiami trail Culverts	$8,336,000
Western C–11 Water Treatment	$9,630,000
Seminole Big Cypress Water Conservation	$49,332,000
Southern CREW/Imperial River Floodway	$12,021,000
Lake Okeechobee Water Retention/Phosphorus Removal	$16,360,000
Ten Mile Creek Water Preserve Area	$29,066,000
Lake Trafford	$17,540,000
Florida Keys Carrying Capacity Study[1]	$6,000,000
TOTAL	$149,585,000

[1]PCA executed in Fiscal Year 1999

Design activities are currently underway, with the first construction contracts scheduled for award later this year. All projects are scheduled to be complete by September 2004.

f. Further studies underway will examine alternatives available for protecting wetlands outside the remaining Everglades, as well as coastal estuaries such as those in the St. Lucie estuary, Indian River Lagoon and Biscayne Bay.

These ongoing projects were all considered in the development of the Comprehensive Everglades Restoration Plan (CERP). Each will contribute to the overall goals to restore the quantity, quality, distribution and timing of water to more natural conditions. As the CERP is implemented, the current ongoing projects will be monitored to ensure that they are optimally integrated into the overall effort.

Question 2. How are these initial projects similar or different than what is being proposed in the Restudy?

Response 2. For the purposes of developing the CERP, the Restudy team assumed that authorized/ongoing projects were in place and operating. This assumption provided a basis for developing the future "Without Project Condition" which all alternative plans were compared against. Since these projects had already been authorized, no attempt was made to reevaluate the merits of these on going projects. Instead, the team utilized data and reports developed for these projects to determine if modifications were necessary.

Generally, the team determined that these projects provide an important first step toward ecosystem restoration of the Everglades. However, there are some projects, such as the Modified water Deliveries Project, that will need to be modified based on the Comprehensive Plan. To implement these modifications, the Restudy Team is working closely with the Modified Water Deliveries team and other project teams to ensure integration of these modifications. Further, to facilitate and expedite these modifications, the Corps is recommending immediate authorization of features that will have an impact to ongoing projects. This initial authorization will ensure the

development of comprehensive solutions that otherwise could not be pursued under existing authorities.

With regard to the Everglades and South Florida Ecosystem Restoration, the Water Resources Development Act (WRDA) of 1996 authorizes the Secretary of the Army to expeditiously implement restoration projects that are deemed critical to the restoration of the south Florida ecosystem. These projects are referred to as "Critical Projects." This authority resulted in an expedited study to identify projects that would meet the criteria set forth in the authorizing legislation. A total of 35 projects were nominated as Critical Projects under this authority by the Working Group of the South Florida Ecosystem Restoration Task Force. This nomination process involved considerable input from the Governor's Commission for a Sustainable South Florida and the public. Based on the priorities developed during the nomination process, the Corps of Engineers conducts an abbreviated study and produces a letter report that is transmitted to the Secretary of the Army to obtain approval for construction of the project. All Critical Projects were considered as described above and included as features for future implementation under the CERP due to funding limitations under the Critical Projects authority.

Question 3. Can you describe the impact to the Everglades and surrounding ecosystems if we move forward with this project?

Response 3. The entire south Florida ecosystem, including the Everglades, will become healthy, with many of its natural characteristics restored. Urban and agricultural water users will also benefit from enhanced water supplies. Flood protection, so important to hurricane-prone south Florida, will be maintained and, in some cases, improved.

Economic benefits from the implementation of the Comprehensive Plan are wide-ranging and are linked with the availability of clean, abundant water in the ecosystem. Not only is water the key to ecosystem restoration, it is necessary for a sustainable agricultural and urban environment. It is important for recreation, tourism and navigation. It plays a significant and obvious role in commercial and recreational fishing.

The Comprehensive Plan will provide for ecosystem restoration. First and foremost, the goal of the Comprehensive Plan is to restore, protect and preserve a natural treasure the south Florida ecosystem. The focus of the Plan has been to restore the defining ecological features of the original Everglades and other parts of south Florida. In response to this substantial improvement, the characteristic animals will show dramatic and positive responses. The numbers of animals—crayfish, minnows, sunfish, frogs, alligators, herons, ibis, and otters—at virtually all levels in aquatic food chains will markedly increase. Equally important, the natural distribution of plants and animals will return to more natural patterns as more pre-drainage water flows are restored.

The Plan will support the return of the large nesting "rookeries" of wading birds to Everglades National Park, and the recovery of several endangered species to more certain and optimistic futures. Wading birds, such as herons, egrets, ibis and storks, are symbolic of the overall health of the Everglades. As recently as the 1950's and 1960's, large "super colonies" of nesting waders remained in the Park. Today there are none. Wading birds, perhaps more than any other animal, "assess" the quality of the entire basin of south Florida wetlands, before making "decisions" about where and when, or even whether, to nest. The recovery of the super colonies will be a sure sign that the entire ecosystem has made substantial progress toward recovery. Of the endangered species, the wood stork, snail kite, Cape Sable seaside sparrow, and American crocodile, among others, will benefit and increase. We are confident that implementation of the Comprehensive Plan will once again allow us to witness what is now only a fading memory of the former abundance of wildlife in the Everglades.

Lake Okeechobee will once again become a healthy lake. Both the shallow and open water areas within the lake, essential to the its commercial and recreational fishery and other aquatic species, will be greatly enhanced by the improved water levels as a result of the Comprehensive Plan. This will mean more abundant and healthier fish populations. Water quality in the lake will also be improved significantly by reducing the pollutant loading of water flowing into the lake. Lake Okeechobee provides huge regional benefits to wildlife, including waterfowl, other birds, and mammals.

Major benefits will be provided to the Caloosahatchee and St. Lucie estuaries, and Lake Worth Lagoon. The Comprehensive Plan eliminates almost all the damaging fresh water releases to the Caloosahatchee and most detrimental releases to the St. Lucie and makes substantial improvements to Lake Worth Lagoon. As a result, abundant favorable habitats will be provided for the many aquatic species that de-

pend on these areas for food, shelter, and breeding grounds, thereby enhancing the productivity and economic viability of estuarine fisheries.

The Plan will also improve fresh water deliveries to Florida and Biscayne bays. Appropriate fresh water regimes will result in substantial improvements in aquatic and semi-aquatic habitats, including, mangroves, coastal marshes, and seagrass beds Interacting together to produce food, shelter, and breeding and nursery grounds, these coastal habitat areas will support more balanced, productive fish, shellfish, and wildlife communities.

Question 4. Can you describe the impact to the Everglades and surrounding ecosystems if we do not move forward with this project?

Response 4. Although some level of ecological improvement will occur in the south Florida ecosystem as a result of implementation of projects currently planned outside of the CERP, the cumulative, regional benefits from these projects would not result in a sustainable south Florida ecosystem. Specifically, based on an evaluation of conditions in the year 2050 without the Comprehensive Plan, the overall health of the ecosystem will have substantially deteriorated. Analyses conducted during the feasibility study show that making modifications to only some portions of the C&SF Project in order to achieve sustainable natural systems will not succeed. Conditions without the Comprehensive Plan in 2050 fail to meet the basic needs of the south Florida ecosystem.

Demands placed on Lake Okeechobee result in damaging water levels and extreme harm to the littoral zone. Damaging fresh water discharges into the Caloosahatchee and St. Lucie estuaries result in major harm to fisheries. Damaging high flows alter salinity balances in Lake Worth Lagoon. Hydropatterns predicted for the Water Conservation Areas are harmful to tree islands. Everglades National Park does not receive enough freshwater flow to maintain important aquatic habitat in Shark River Slough. Low flows to Florida and Biscayne bays also result in harm to the resources in these areas. These ecological problems would not be corrected solely by implementation of currently planned or ongoing projects.

Question 5. Based on your view of how the Restudy authorization process will move forward, will Congress' action in WRDA 2000 be the first phase in a multi-stage authorization process or will this year be the only time this project comes before Congress?

Response 5. No, this will not be the last time Congress is asked to authorize CERP projects. The process and schedule for authorizing the Comprehensive Plan and its components was developed using a phased approach based on an analysis of the scheduling of plan features and ongoing Federal and State programs, such as the C–111 Project and the Everglades Construction Project. The process for implementing the Comprehensive Plan through Congressional action assumes:

a. Congressional approval of the CERP in WRDA 2000 as the appropriate framework for restoration;

b. Initial authorization of a specific set of key components and pilot projects in the WRDA 2000;

c. A programmatic authority in WRDA 2000 similar to the existing Critical Projects authority contained in WRDA 1996;

d. Future Congressional authorization of components in subsequent WRDAs through 2014; and

e. Implementation of some components without further Congressional action.

Question 6. Can you describe the consequences of beginning this project without completing it?

Response 6. The Comprehensive Plan was designed using a set of discrete project components that together work synergistically to restore the Everglades ecosystem. Using your analogy, Everglades restoration is like heart surgery—once you start you got to complete it. While implementation of each component allows us to incrementally improve conditions, restoration will not be achieved without the entire project being completed.

Question 7. This year in the Interior Appropriations bill, Congressman Regula called for the development of "assurances" language that would ensure that the park and natural systems in the Everglades region receive adequate quantities of water. I know that the Administration and the state are working very hard to develop this language for inclusion into the Administration's WRDA proposal. Can you describe for me the basic principles that you feel are critical elements of this language and why?

Response 7. The Department of the Army's legislative proposal will include assurance language addressing two issues: (1) the evaluation and implementation of CERP project features; and (2) assuring project benefits to provide clarity and cer-

tainty not only to natural system managers but to the South Florida Water Management District in the discharge of its water-use permitting function.

Regarding the evaluation and implementation of project features, the Army is proposing legislation stating that prior to initiation of construction of project components and features in the Comprehensive Plan, the Corps will complete Project Implementation Reports (PIRs) to address the project(s) cost effectiveness, engineering feasibility, and environmental acceptability, including National Environmental Policy Act compliance. During development, such reports shall be coordinated with appropriate Federal, state and local agencies, tribal governments, and the public. PIRs for features of the CERP authorized under this legislation will be reviewed and approved by the Secretary.

Assurance language will also be included in the legislative proposal to ensure that benefits to the natural system are achieved and maintained. The primary and overarching purpose of the CERP is to restore the south Florida ecosystem while meeting the other water related needs of the region such as water supply and flood protection. The Plan must be implemented in a manner that ensures that the natural system benefits are achieved and maintained. These assurances must address the proper quantity, quality, timing and distribution of water for the natural system, while taking into account water supply and flood protection.

Question 8. As you described in your testimony, some of the projects submitted to Congress for authorization in WRDA 2000 will not have the traditional, detailed feasibility study completed. Can you provide justification for authorization given that situation?

Response 8. The features of the Comprehensive Plan which are recommended for authorization in WRDA 2000 include projects that are necessary to expedite ecological restoration of the Everglades and other south Florida ecosystems. Authorization of these features in WRDA 2000 will ensure maximum integration with ongoing Federal, State, and local ecological restoration and water quality improvement programs. These features consist of pilot projects, initial construction features and an adaptive assessment and monitoring program.

The immediacy for authorization of these select features involves two factors: (1) efficiency with ongoing projects; and (2) realizing the benefits of Federal investments already undertaken. This authorization will allow for detailed development of future projects under the Comprehensive Plan while maximizing the opportunity to integrate those features with other ongoing Federal and State programs, including the Modified Water Deliveries Project and the Everglades Construction Project. This integration will allow development of comprehensive solutions to ongoing Federal projects, such as the Modified Water Deliveries Project, that could otherwise not be pursued under existing authorities. It is anticipated that this would ultimately result in substantial cost savings to the Federal Government.

Furthermore, the South Florida Water Management District and the U.S. Department of the Interior have purchased lands associated with a number of components of the Comprehensive Plan, including nearly 51,000 acres of land as a result of the purchase and exchange of the Talisman property in the Everglades Agricultural Area (EAA) for water storage. Immediate authorization of the components that use these lands will ensure that these lands will be utilized and the benefits accrued as soon as possible.

Question 9. Can you compare other projects authorized by Congress that do not have a traditional detailed feasibility study with the Restudy?

Response 9. Each feature of the Comprehensive Plan proposed for authorization requires completion of a Project Implementation Report reviewed and approved by the Chief of Engineers and the Secretary before implementation. The detail of evaluations in the PIR is comparable to a Chief of Engineers report. The Congress has included many project authorizations in recent WRDAs which require completion of either a Chief of Engineers report or other comparable report that is reviewed and approved by the Secretary before implementation.

Question 10. Regarding the property purchased by the Federal Government in the Talisman transaction in 1998, can you identify what benefit the use of these lands as a reservoir will bring to the restoration project? Are these benefits wholly dependent on construction of additional features called for by the plan? Are the benefits dependent on use of the entire Talisman property or can use be phased-in? Based on authorization of this reservoir in the initial suite of projects, when do you anticipate the reservoir will be operating?

Response 10. The EAA Storage Reservoir component includes above ground reservoir(s) with a total storage capacity of approximately 360,000 acre-feet located on land associated with the Talisman Land purchase in the EAA. The design for the reservoir(s) assumed 60,000 acres, divided into three, equally sized compartments

with the water level fluctuating up to 6 feet above grade in each compartment. The Implementation Plan proposes to construct this component in two phases. The first phase would include construction of the first two compartments on lands purchased with Department of Interior Farm Bill funds, with South Florida Water Management District funds, and through a series of exchanges for lands being purchased with these funds. This phased approach was developed consistent with the Farm Bill land acquisition lease agreements.

The first phase of this component will improve timing of environmental deliveries to the Water Conservation Areas including reducing damaging flood releases from the EAA to the Water Conservation Areas, reduce Lake Okeechobee regulatory releases to estuaries, meet supplemental agricultural irrigation demands, and increase flood protection within the EAA. Further, this component will reduce the need to make damaging regulatory releases from Lake Okeechobee to the St. Lucie and Caloosahatchee estuaries and will help meet EAA irrigation needs while increasing flood protection in the area.

Compartment 1 of the reservoir would be used to meet EAA irrigation demands. The source of water is excess EAA runoff. Overflows to Compartment 2 could occur when Compartment 1 reaches capacity and Lake Okeechobee regulatory discharges are not occurring or impending. Compartment 2 would be used to meet environmental demands as a priority, but could supply a portion of EAA irrigation demands if environmental demands equal zero. Flows will be delivered to the Water Conservation Areas through Stormwater Treatment Areas 3 and 4.

This feature is currently scheduled for construction initiation in September 2005 with completion in September 2009. The scheduled construction start is based on the existing lease agreements that were part of the Farm Bill land acquisition agreement.

Question 11. The Chief of Engineer's Report indicates that the Corps will prepare a Project Implementation Report by 2004 analyzing the impact of adding 245,000 acre-feet to Biscayne Bay and the Everglades National Park. Can you explain the scope of that report and indicate whether it will be circulated for public review and comment?

Response 11. The Project Implementation Report will determine how much of the 245,000 acre feet is necessary to restore Everglades National Park and Biscayne Bay. The evaluation will include more detailed studies, an Environmental Impact Statement, and full public review. Once this has been completed, a final executive branch decision will be made and a proposal will be forwarded to Congress for consideration in a Water Resources Development Act of 2004. Congress would then have the opportunity to discuss and debate the proposal. In short, construction will not start on this proposal until it has been studied fully and congressional authorization is obtained.

Question 12. The Chief Engineer's Report indicates that the Corps intends to provide 245,000 acre-feet of additional water to the Everglades National Park and Biscayne Bay. What is the anticipated benefit from the addition of this water?

Response 12. In response to the October 1998 draft report on the Comprehensive Plan, the Department of the Interior and other scientists suggested that additional water was needed to ensure restoration of Everglades National Park and Biscayne Bay. The interagency team that developed the Comprehensive Plan evaluated several options and concluded that additional water, would provide important benefits to Everglades National Park and Biscayne Bay. The principal remaining questions are how to deliver this water without impacting other parts of the ecosystem (e.g. the Water Conservation Areas), impacts on secondary canals in Palm Beach County, and how much the water would have to cleaned before it could be delivered to the ecosystem. A discussion of this proposal in general terms was included in the Corps' final report that was released in April 1999. Letters clarifying this issue were part of the public record that was available for review last April.

Question 13. Is the Corps planning to accelerate the completion of the North Lake Okeechobee and Central Lake Belt storage areas? How is the Corps planning to implement this goal? When does the Corps plan to have these storage areas completed?

Response 13. The Corps has committed to investigating the potential of accelerating the implementation of these project components to maximize early ecosystem restoration benefits. These features provide significant storage capacity that significantly improves the ecologic health of Lake Okeechobee and the Everglades. The North Lake Okeechobee Storage Area is currently scheduled for completion in 2014. This feature will help reduce eutrophication of the Lake and provide significant water quality improvement and ecologic restoration of the lake. The existing schedule for completing the first phase of the Central Lake Belt Storage Area is 2021.

However, the Corps has committed to working with industry and local government to identify ways to expedite this feature. Accelerating this feature will reduce ecologically damaging high water levels in the Water Conservation Areas and will help restore flow into Everglades National Park.

Question 14. The Chief Engineer's Report indicates that an additional 245,000 acre-feet will be captured from urban runoff or by some other means. If the Corps adds 245,000 acre-feet of water captured from urban runoff to the Everglades system, will the PIR address potential environment hazards from this water? What would the potential method be for removing any contaminants?

Response 14. The Project Implementation Report will fully assess the environmental impacts of capturing urban runoff and evaluate potential treatment strategies. The types and extent of contaminants and the potential methods for removing them can not be assessed until the studies are completed.

Question 15. In Senator Voinovich's remarks, he mentioned the Corps' "backlog" of projects in the state of Florida. Can you provide me with a definition of the term backlog, a list of all such projects in each state in the nation, and, for the Florida projects, the legislative history including authorization and follow-on changes to the authorization.

Response 15. The $27 billion backlog of construction projects represents the unfunded, unconstructed portion beyond fiscal year 2000 for all the active, authorized projects. Tables showing the backlog list (encl. 1) and the authorities for the Florida projects (encl. 2) are attached.

STATEMENT OF MARY DOYLE, COUNSELOR TO THE SECRETARY, DEPARTMENT OF THE INTERIOR

Mr. Chairman, my name is Mary Doyle. I am Counselor to Secretary of the Interior Bruce Babbitt. Secretary Babbitt has recently appointed me to serve as Chair of the South Florida Ecosystem Restoration Task Force. The Task Force is an interagency and intergovernmental entity created by the Congress in the 1996 Water Resources Development Act (WRDA) to guide the restoration of the South Florida ecosystem. I am pleased to have the opportunity to address you today and I thank the Committee for its leadership and true bipartisanship throughout this effort.

Restoring the South Florida ecosystem is in its essence comprised of numerous inter-related partnerships. It is a partnership between agencies and departments of the Federal Government the Army Corps of Engineers, the Department of the Interior, and the Environmental Protection Agency, among others. It is a partnership between the executive branch and Congress; the executive branch and the Seminole and Miccosukee Tribes; the executive branch and the State of Florida, including its people and State and local levels of government. And it includes the active involvement of concerned environmental and citizen advisory groups. As demonstrated by the dynamic and well attended conference where we meet today, these multiple partnerships reflect the significance of the entire restoration effort for the future of South Florida and the superlative natural resources located here.

An undertaking of this outstanding size, scope and ambition, consisting as it does of numerous whirring parts or partnerships is not simple or easy. These complex inter-relationships are required because the effort here spans the entire ecosystem 18,000 square miles of land and water stretching from the Chain of Lakes south of Orlando to the coral reefs off the Florida Keys. The natural system within the region contains areas with special designations such as outstanding Florida waters, a national marine sanctuary, an international biosphere reserve and numerous State and Federal parks, preserves and national wildlife refuges, all of which are interconnected. The built environment is equally complex, with more than 6.5 million residents, 37 million tourists every year and a $200 billion economy, as well as 16 counties and 150 municipalities. All of which depend upon clean and plentiful supplies of fresh water produced by the natural system.

The goals of the effort, as you know, are three: (1) get the water right: that is, to restore a more natural water flow to the region while providing adequate water supplies, water quality and flood control; (2) restore and enhance the natural system protecting natural habitats and reestablishing threatened and endangered species; and (3) transforming the built environment to develop lifestyles and economies that do not degrade the natural environment and improve the quality of life in urban areas. Our vision for the future is a landscape whose health, integrity, and beauty are restored and nurtured by its interrelationships with South Florida's human communities.

For many of the public agencies committed in this effort, both Federal and State, the challenge of working on an ecosystem-wide basis, with a dynamic and unfolding

understanding of the interconnectedness of the vast system, is new and unprecedented. Each of these agencies has come to this partnership with its own set of authorities, constituencies, traditions and funding sources. While inevitably we have seen conflicts among these diverse partners at times, overall and overtime the partnerships have brought a great deal of progress toward the goal. For example, with the $200 million provided to us by Congress in the 1996 Farm Bill, the Department of the Interior, together with the State, has recently completed the acquisition of approximately 92,000 acres of land within the ecosystem, including the Talisman acquisition, that is critical for increasing regional water storage capacity and improving water quality and habitat. In addition, the Fish and Wildlife Service, working with over 200 experts from Federal, State, and local agencies, conservation organizations, and private industry, developed a Multi-Species Recovery Plan for the imperilled plants and animals of South Florida, representing a comprehensive blueprint for restoring native plants and animals throughout the Florida Everglades. Unprecedented in scope or scale, covering over 26,000 square miles in Florida's 19 southernmost counties, this plan will guide the actions of all parties toward the recovery of the 68 federally listed threatened or endangered species of plants and animals in South Florida.

I think all of us fortunate enough to be involved in this great effort of restoration know that the ecosystem-wide approach, the need to renew and resume ancient natural connections, is the call of the new century. Restoration—a fuller understanding of how it is defined and implemented—is the hallmark of a new era in natural resource management and environmental policy. The pioneering quality of this great effort in South Florida inspires each of us working within the complex public and private partnership with a powerful motivation to succeed. We must succeed, not only to secure the values sought in South Florida, but in order to show others the way.

In July of last year, the Army Corps of Engineers, with local sponsorship by the South Florida Water Management District, submitted to Congress its Central and Southern Florida Project Comprehensive Review Study (now known as the Comprehensive Everglades Restoration Plan or Comprehensive Plan) to restore America's Everglades. The Comprehensive Plan is a conceptual framework for structural and operational changes to the Central and South Florida Project that will result in restoration of the ecosystem over the next 20 years. The Corps deserves enduring credit for working constructively with all parties in developing the Comprehensive Plan. The Department of the Interior fully supports the Comprehensive Plan with the assurances provided in the Chief of Engineer's report accompanying its submission to Congress. We believe the Comprehensive Plan provides a practical and effective approach to ensure the long-term restoration of the South Florida ecosystem while meeting future water supply and flood control needs. We are eager to work with this committee and other Members of Congress to obtain the necessary authorizations and funding to allow the Corps of Engineers to proceed with implementation of the Comprehensive Plan.

This Committee has asked the Department of the Interior to address three issues in this hearing: (1) The future role of the South Florida Ecosystem Restoration Task Force in the overall effort; (2) The role of the science advisory panel recently created by the National Academy of Sciences at Secretary Babbitt's request to advise the Task Force; and (3) Issues raised in the Comprehensive Plan for which the National Park Service and the Fish and Wildlife Service has responsibilities.

The Future Role of the Task Force

The Task Force first took life in 1993 through an inter-agency agreement among the seven Federal agencies with key roles to play in the Everglades ecosystem. The idea was for these Federal Agencies to coordinate their plans and activities; the Department of the Interior was designated as chair. The experience of the next few years, however, during which the Corps of Engineers and the South Florida Water Management District were developing the Comprehensive Plan, showed the need for broader consultation and coordination among all the public entities engaged in restoration planning. So in the Water Resources Development Act of 1996, Congress established the Task Force in its present form to include seven Federal agencies, the Seminole and Miccosukee Tribes, the State of Florida, the South Florida Water Management District, and two representatives of local government. It is directed to coordinate the development of consistent policies and plans for the ecosystem restoration, facilitate the resolution of interagency and intergovernmental conflicts along the way, and coordinate scientific research associated with the restoration of the South Florida ecosystem. In the 1996 legislation, Congress also directed the Task Force to establish a Florida-based Working Group including representatives of its member agencies and entities, as well as other governmental entities as appro-

priate. Today's Working Group has a membership of 29, including representatives of State and local government agencies with expertise to bring to the restoration effort. Over the past several years, the Task Force and its Working Group have worked closely with the Corps, providing advice on all aspects of the Comprehensive Plan, and facilitating the development of agreement among its members on significant issues addressed in the Comprehensive Plan.

The Task Force will address several key issues in the future. First, the Task Force will continue its consultation role with the Corps to assist in timely implementation, as authorized by Congress, of the Comprehensive Plan. Second, the Task Force, along with its Working Group, will continue its traditional role of providing a forum for planning and coordination among its member agencies. An extremely important element of this continuing interagency planning will be its work with the recently established Science Advisory Panel to ensure that implementation of the Comprehensive Plan and the adaptive assessment process will benefit at every stage from sound science. Third, the Task Force is developing an Integrated Strategic Plan that will synthesize existing plans and activities throughout the region and serve as the framework for future adaptive management for the next 50 years. In this strategic planning process, the Task Force is engaging community leaders and decisionmakers at all levels of government as well as the private sector in an effort to achieve a common vision and set of goals that will reflect the interrelationships of the natural environment, the economy and society, as well as stressing the dependence of each element upon the others. The Department expects to submit this Integrated Strategic Plan to the Congress by July 31, 2000. Finally, the Task Force will continue to report on a biennial basis to Congress on, among other things, progress made toward restoration.

The Science Advisory Panel

For many decades, science has been the motivating engine in alerting us to the environmental problems associated with the Central and Southern Florida Project and in describing the needs and values of Everglades restoration. Scientists have guided the establishment of restoration goals and have identified approaches to achieve them. In his 1993 speech to the Everglades Coalition, Secretary Babbitt declared his strong commitment to science as the foundation upon which the restoration effort would be built. Similarly, Congress directed the Task Force to ". . . coordinate scientific and other research associated with the restoration of the South Florida ecosystem." Accordingly, with the help from increased funding provided by Congress, agency scientists have identified key gaps in our understanding of how the ecosystem functioned and recommended a coordinated research program to address long-term restoration requirements. Overall, we believe that research and applied science will allow us to evaluate the effectiveness of management actions, enable future outcomes and promote common understandings of ecological success. And it is extremely important that we make use of the best available science and take full advantage of peer review processes.

To that end, with the completion of the Comprehensive Plan and at the request of the Task Force for peer reviewed science, Secretary Babbitt requested the National Academy of Sciences to provide additional scientific input on Plan implementation. The science advisory panel, which has now renamed itself the Committee on Restoration of the Greater Everglades Ecosystem, or "CROGEE", began its work last month. It is composed of 16 scientists representing a broad range of expertise including biology, ecology and hydrology. They also bring an objective scientific viewpoint, as none of them are presently involved in South Florida research and monitoring.

The purpose of CROGEE is to provide scientific advice to the agencies responsible for implementing the restoration and preservation plan for the South Florida ecosystem. The Comprehensive Plan is predicated upon the concept of "adaptive assessment," which calls for careful scientific monitoring over the entire 20-year period of implementation to assure that restoration goals are being met as planned projects come on line, and where the goals are not being achieved to devise science-based approaches in response to emerging needs. CROGEE is currently drafting its initial work plan, which will be submitted for discussion and approval to the Task Force at its meeting next month.

Fish, Wildlife and Parks Issues in the Comprehensive Plan

The development and drainage of South Florida over the last 50 years has pushed the natural system to the brink in many ways, threatening or endangering plants, animals, national wildlife refuges and national parks dependent on the natural quantity, quality, timing, and distribution of water, the driving force in South Florida's ecosystem. The Comprehensive Plan holds the promise of substantial restora-

tion, with large benefits not only for the plants, animals, refuges, and parks, but also for the human beings of South Florida and the nation. The U.S. Fish and Wildlife Service and the National Park Service have provided their expertise to the Corps in the development of the Comprehensive Plan, and will continue to consult and coordinate after authorization in the Comprehensive Plan's implementation.

This final plan incorporates significant changes from the 1998 draft plan, based on comments from the Department of the Interior and others, that improves the prospects for long-term ecosystem restoration. For example, the final plan includes a process for targeting water deliveries to Everglades and Biscayne National Parks that would approximate 90 percent of the pre-drainage volumes, compared to only 70 percent of such volumes in the draft plan. The Department believes that the additional 245,000 acre feet of water per year for these parks will be critical to restoring natural habitats and we look forward to working with the Corps and others in the planning effort to provide this additional water. As another example, the final plan accelerates implementation of Comprehensive Plan components, providing for completion of two-thirds of the projects by 2010, so that more environmental benefits can be realized earlier in the process than proposed in the draft plan. As a last example, the final plan improves upon the draft plan by making maximum use of available acreage in the Everglades Agricultural Area for water storage and providing for a comprehensive water quality plan.

The primary and overarching purpose of the Comprehensive Plan is to restore the South Florida ecosystem on which fish, wildlife, refuge, and park resources depend. The promise of the Comprehensive Plan depends on effective implementation to ensure that the natural system benefits are achieved in a timely manner and maintained for the long-term. These assurances must address the proper quantity, quality, timing, and distribution of water for the natural system, even in times of stress on the water system. We need assurances that benefits promised in the Comprehensive Plan are provided. The Department strongly encourages the initial authorization for the Comprehensive Plan includes assurances to guarantee sufficient quantities of clean fresh water at the right place and the right time for the environment.

We have an historic opportunity to address the negative environmental impacts of past activities and save a national treasure for our future generations while at the same time ensuring South Florida's future viability. We are trying to do things that have never before been attempted, certainly not at this scale. This effort has always enjoyed bipartisan support and reflects a level of partnership among the State of Florida, the Federal Government and concerned citizens that we wish to emulate elsewhere.

We appreciate the leadership and commitment by Chairman Smith and Senator Graham have shown in helping us achieve the many accomplishments I have mentioned today. If we are to truly succeed, that commitment will need to continue for many years to come, and we look forward to working with you and Congress as we proceed.

Mr. Chairman, that concludes my statement. Thank you for the opportunity to address the committee on this important effort and I will be pleased to answer any questions you or the other members of the committee may have.

STATEMENT OF DAVID B. STRUHS, SECRETARY, FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Chairman Smith and distinguished members of the Committee on Environment and Public Works: Good afternoon and welcome to Florida. Though unable to be with us today due to a special session of Florida's legislature, Governor Bush has asked me to communicate to the members of the committee the message he delivered to the Coalition yesterday—we are ready, willing and waiting to take action.

Just 6 months ago, I had the privilege of again representing Governor Bush and our State by joining Vice-President Gore, Administrator Browner, Senators Graham, Rack and one of my mentors, Senator John Chafee, along with a Florida Legislative Delegation to present the Central and Southern Florida Project Comprehensive Review Study, formerly known as the Everglades Restudy, to Congress.

It was a significant moment. On July 1, 1999, the State made a commitment to act boldly, decisively, and responsibly. We pledged to act. We pledged to continue doing our part to restore the world's most unique ecosystem, Not only to replenish the Everglades, but to restore the historic balance between lard and water, protecting critical habitats and dramatically improving water quality. We pledged our resources to remove levees and reclaim billions of gallons of fresh water, yet provide necessary flood protection for what will soon be the nation's third most populous State.

The State has long understood that our Federal partners would want to see vivid demonstrations of the notion "actions speak louder than words" Florida's leadership in preserving the Everglades is deafening. Since 1947, the State has purchased almost 3.4 million acres of conservation lands in the greater Everglades ecosystem at a cost of over $1.1 billion. This is in addition to the $2.2 billion that has been spent on restoration and protection activities. This year alone, the State will spend almost $155 million on Everglades protection efforts.

But what have we accomplished since jumping into action on July 1? Over the past 6 months:

The State has acquired, or has a contract to acquire, 80,000 acres of conservation land.

The State has allocated over $133 million for acquisition of lands identified in the Restudy. Most notable are funds for East Everglades, Belle Meade, Southern Golden Gate Estates and Southern Corkscrew Regional Ecosystem Water Projects.

The South Florida Water Management District has completed construction on Everglades Stormwater Treatment Areas 2 and 5 and now have 17,248 acres of filter marshes to cleanse the waters flowing into the Everglades.

Just 2 weeks ago, the State announced landmark legislation to begin the restoration of Lake Okeechobee, the headwaters of the Everglades. The initial program, to be backed with $30 million in funding, will dramatically reduce Phosphorus loads in the lake. Priority projects are part of the Restoration Plan and have also been identified as priorities by the South Florida Ecosystem Restoration Working Group and Florida Audubon.

However, we recognize there is still much to do. Governor Bush stressed yesterday the need for a set of standards, a test if you will, that each plan put forth for successful and complete restoration of the Everglades must meet.

First, we must continue building consensus with as many interests as possible. We have made significant progress in this area. The recent activity surrounding Lake Okeechobee is a good example of this.

Second, decisions need to be data-driven and science based. Physical science, not political science, must guide our decisions. It is more important to get it right rather than getting it first.

Finally, there needs to be financial accountability. We have a fiduciary responsibility to the people of Florida and the Nation as a whole. Tax dollars must be spent both wisely and efficiently. .

There are 7 principles behind the funding of Florida's portion of the Everglades Restoration. These principles will be discussed in depth in the coming weeks but I would like to highlight three of them today.

First, Florida's funding commitment will be adequate to fully fund Florida share of the project. Second, Florida's funding commitment will not siphon resources from other statewide environmental restoration programs. And finally, Florida's funding commitment will not add to Florida's long term debt.

While the costs to implementing the Comprehensive Plan are substantial, they are within the collective reach of State and Federal Governments, working together. The State legislature, the South Florida: Water Management District and the executive branch of State government will work together to fund the State's share of the costs. As Governor Bush said yesterday "There should be no question about Florida's commitment to finish what we have begun."

Florida has been and will continue to be a leader in the preservation of this unique and historic area. There is no greater example of our commitment than Everglades National Park, just a short distance from here, whose 1.6 million acres is comprised mostly of state-donated land.

In 1948, just after President Harry Truman signed the legislation authorizing construction of the C&SF project, Senator and former Governor Spessard Holland remarked, "The whole Florida delegation has stuck together in this matter and will, I am sure, continue to do so, and each member of the delegation is entitled to his full share of the credit. The Florida citizens, industries, and public units have also cooperated to the fullest degree as has the Republican delegation. I want you to remember that this is not a partisan project and should continue to merit the united efforts of all our people."

That quote is as applicable in the year 2000 as it was in 1948. We are all in this together. The stakes are high, but the rewards are even greater.

Thank you.

RESPONSES BY DAVID B. STRUHS TO ADDITIONAL QUESTIONS FROM SENATOR SMITH

Question 1. Mr. Secretary, could you please provide the Committee with a copy of the State's funding Plan for the Comprehensive Everglades Restoration Plan? What assurances can the State of Florida provide to demonstrate to the Federal partners its commitment to finance the non-Federal share of the project?

Response. Governor Bush recently announced his funding commitment of $1.25 billion of statewide funding which, along with resources from south Florida willfully fund the local sponsor's share. We will have mechanisms that anticipate peak year funding needs and will not siphon resources from other statewide environmental restoration programs. Florida has the fiscal capability to fully fund its share without adding to Florida's long term debt burden.

Question 2. Regarding "new water" captures, are there safeguards in place, particularly under state law, to ensure that 80 percent of the "new water" will be delivered to the environment and not for urban/agricultural use?

Response. Florida Water Law (Chapter 373, F.S.) provides many safeguards to ensure the proper quantity, quality, timing and distribution of "new water" over time. These safeguards are as follows:

Water reservations: Provides broad authority to the water management districts to identify quantizes of water to protect fish and wildlife. Water reserved for fish and wildlife cannot be allocated to any consumptive user. Reservations are adopted by rule, cannot be changed without participation by all stakeholders, including the Federal and environmental interests and are not limited to water quantizes provided during the initial creation of a national park, such as the Everglades.

Florida's water management district's must identify the point at which further withdrawals would be significantly harmful to the water resources. This concept, known as minimum flows and levels, are another layer of protection for natural systems and are used most effectively to restrict consumptive use withdrawals during droughts, when the natural systems may be most threatened.

Question 3. If the population of Florida indeed doubles over the next 50 years, will this 80–20 percent delivery remain intact?

Response. Yes. While it may not be a precise 80–20 split, full implementation of the Comprehensive Everglades Restoration Plan will meet the water supply needs of the natural system and the projected population in south Florida of 12 million people in the year 2050.

Question 4. How do you respond to criticism that this restoration effort is nothing more than a water supply plan for the State of Florida?

Response. Performance measures developed to determine the effectiveness of the Restudy indicate that implementation of the Restudy will provide phenomenal restoration results. Most areas of the remaining natural system will have their natural hydroperiods restored. . Large portions of the remnant ecosystem will be reconnected. The coastal estuaries will be protected from the frequent catastrophic releases of excess freshwater that currently occur about every 3 years. As a result of the Comprehensive Everglades Restoration Plan, habitat for wildlife will improve. An ancillary benefit of keeping this water in the system is that there is also an increase in available water supply. If the Restudy is not implemented, there is a high probability that new water supply demands will be met with alternative sources; yet the restoration of the natural system would be lost.

Question 5. How do you see the Everglades Restoration effort being impacted by the economic development that is nothing short of the inevitable in the State of Florida?

Response. Everglades restoration and economic development are not mutually exclusive. Most of the anticipated development on the East Coast will occur through urban redevelopment. The excellent land acquisition efforts of the state and water management district have resulted in an extensive network of conservation lands and buffers that are protected from future development.

RESPONSES BY DAVID B. STRUHS TO ADDITIONAL QUESTIONS FROM SENATOR GRAHAM

Question 1. Can you describe the impact to the Everglades and surrounding ecosystems if we move forward with this project.

Response. The performance measures demonstrate that essentially every part of the natural system from Lake Okeechobee to Florida Bay will show dramatic improvements. Conditions will be improved for the recovery of large wading bird populations. Populations of endangered species including the wood stork, snail kite, Cape Sable seaside sparrow, and American crocodile will benefit from the improved habi-

tat as a result of the recommended plan. We also expect great improvements in water quality throughout the system. Observable beneficial changes are:

- Substantial reduction in the number and severity of ecologically damaging extreme high water and low water events on Lake Okeechobee, resulting in protection of the Lake's littoral wetlands and deep water zones and associated ecological And fisheries resources.
- Reduced inputs of excessive nutrients into Lake Okeechobee.
- Substantial reduction or elimination of damaging flows of excessive nutrients, pesticides, and suspended materials to the Caloosahatchee and St. Lucie estuaries due to improved water quality and water depths in Lake Okeechobee.
- Recovery of desirable salinity ranges in the Caloosahatchee and St. Lucie estuaries, benefiting ecological and fisheries resources.
- Recovery of more natural volume and timing patterns offlow between Lake Okeechobee and the northern Everglades.
- Recovery of more natural volume and timing patterns offlow into the eastern Big Cypress basin, including improved habitat conditions for the endangered Cape Sable Seaside Sparrow.
- Reduced inputs and distribution of excessive nutrients in the Everglades.
- Substantial recovery of more natural hydroperiods, surface water distribution and timing patterns in the Everglades, resulting in recovery of more healthy Everglades ecosystems and the characteristic animals of these wetlands.
- Substantial recovery of more natural flow patterns and volumes into Florida Bay, including recovery of natural salinity ranges, resulting in recovery of ecological and fisheries resources.
- Substantial increase in the spatial extent of healthy wetlands in the southern Everglades.
- Substantial improvements in reaching desired salinity range and timing offlows for Lake Worth Lagoon, and recovery of healthy fisheries.
- Recovery of more natural flow distribution patterns and in desired salinity range for Biscayne Bay, and recovery of healthy near-shore ecological and fisheries resources.
- Increased spatial extent, hydropatterns and quality of southern Miami-Dade wetlands.

Question 2. Can you describe the impact to the Everglades and surrounding ecosystems if we do not move forward with this project?

Response. If we don't move forward, the evaluation tools used in the Restudy indicate that virtually every part of the natural system will decline and be imperiled in the year 2050. The consequences of not moving forward are great. The health of the natural system is directly linked to the economy of Florida and the nation. Observable negative consequences of not moving forward are:

- Reductions in the spatial extent of healthy wetlands will continue.
- Species that require large expanses of natural habitat, such as the Florida panther, snail kite, and wading birds, will increasingly become stressed by the loss of habitats.
- Losses of organic soils will continue to reduce water storage capacity and ecological productivity throughout the Everglades.
- Canals and levees will continue to encourage the introduction and spread of exotic plants and animals.
- Unnatural fire patterns will increasingly damage the natural landscapes of south Florida.
- South Florida recreational and commercial fishing will decline, both in the freshwater Everglades and Lake Okeechobee, and in the St. Lucie, Caloosahatchee and Florida Bay estuaries.
- Endangered species will continue to decline, and some species may be irreversibly lost in south Florida.
- The Everglades will cease to exist as a functional, recognizable "River of Grass."

Question 3. Based on your view of how the Restudy authorization process will move forward, will Congress' action in WRDA 2000 be the first phase in a multistage authorization process or will this year be the only time this project comes before Congress?

Response. The State of Florida would like to see the Restudy authorized through a stand-alone Everglades bill. This legislation should direct the Army Corps of Engineers, in conjunction with its State partner, proceed expeditiously in implementing the Central and Southern Florida Restudy "restoration" in accordance with the implementation plan developed and submitted to Congress on July 1, 1999. Otherwise, WRDA 2000 action will begin a series of authorizations to be taken in future

WRDAs for a number of years. Based on the current implementation schedule, authorizations for construction would be requested through WRDA 2014.

Question 4. Can you describe the consequences of beginning this project without completing it?

Response. In general, most ecological and biological restoration targets for sustainable natural systems will not be reached. Because restoration must proceed far enough to get critical ecological components and processes past some minimal "threshold " level of health, it is possible that little in the way of long-term recovery will occur. Fresh water flows may be inadequate to counter the adverse effects of sea level rise and sinking shorelines; of special concern, degrading coastal forests may eventually be "overtopped " by future hurricanes, resulting in substantial increases in flooding. Partially recovered wetland systems may exhibit unnatural fluctuations in ecological conditions, thus maintaining unstable and unpredictable habitat conditions for native animals and plants.

Question 5. This year in the Interior Appropriations bill, Congressman Regula called for the development of "assurances" language that would ensure that the park and natural systems in the Everglades region receive adequate quantities of water. I know that the Administration and the state are working very hard to develop this language for inclusion into the Administration's WRDA proposal. Can you describe for me the basic principles that you feel are critical elements of this language and why?

Response. The State of Florida's basic principles are:

- Distribution of "new water" should be dictated by sound science.
- Best way to ensure the proper quantity, distribution and timing of water to the natural system is to develop design criteria for each project component to achieve the targets set forth in the natural systems model.
- Existing Florida Water Law is very protective of the natural system and should be considered in Federal legislation.

Question 6. Can you elaborate on the Florida DEP's plan for ensuring that the quantities of water generated by the Restudy meet water quality standards of their intended uses?

Response. The Department of Environmental Protection is an active member of the Restudy Team. Our strategy from the beginning has been to actively participate on the Restudy implementation team and through this participation demand the incorporation of water quality features into the design of each and every Restudy project component. We also stand committed to permit the construction and operation of the individual project components only if the Army Corps of Engineers and South Florida Water Management District can provide reasonable assurance that the structures will meet all water quality standards.

Question 7. What actions is Florida DEP taking to ensure that actions surrounding Lake Okeechobee do not degrade water quality in the system?

Response. The Department supports proposed Comprehensive Lake Okeechobee legislation. The Lake Okeechobee legislation commits the State to a long-term effort to construct new stormwater containment and treatment structures and to better control phosphorous at its source. The water containment and treatment structures are also project components of the Restudy. The legislation will provide the state's funding for two of the treatment areas and provides a schedule for the construction of the remaining stormwater treatment areas. The cleanup of Lake Okeechobee is critical to the restoration of the Everglades.

STATEMENT OF MICHAEL COLLINS, CHAIRMAN, GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Mr. Chairman, honorable members of the committee, I am Michael Collins, Chairman of the Governing Board of the South Florida Water Management District. It is a pleasure to stand before you today to talk about restoration of the Everglades and to support the roadmap for getting there the Comprehensive Plan.

Before being appointed by Governor Bush to serve on the governing board of the Water Management District, I served as a member of the Florida Keys National Marine Sanctuary Water Quality Protection Program Steering Committee and the Governor's Commission for a Sustainable South Florida. I have been a member of the Florida Keys Fishing Guides Association since 1976, serving as president from 1982–1997.

I have spent countless hours on the waters of Florida Bay. I have watched the population of South Florida grow and the health and size of the Everglades steadily decline. I can speak from experience about the inextricable link between the health

of our environment and the health of our economy. The survival of the Everglades is indeed essential to residents, and there are 6.5 million of us. It is essential to business and agriculture. And, it is essential to the $13-billion-a-year tourism industry.

Today many talk about the importance of our partnership with the Federal Government and I would like to underscore the importance of the partnership. It was not an accident that Governor Bush appointed me to the governing board of the Water Management District. This administration is committed to restoration of the Everglades. The State of Florida has demonstrated this commitment through several changes in administrations and through several changes in political party leadership. Indeed Everglades Restoration is a bipartisan effort. I remember back in 1983 then Governor Bob Graham started the Save Our Everglades Program. Sir, we are fortunate to have your knowledge and leadership in Washington. We are especially fortunate that you now serve on the committee that will make the decision to authorize the Comprehensive Plan. The State of Florida has also benefited from the strong relationship between our two Senators and the united front taken on behalf of the Everglades. The State of Florida, under the leadership of Governor Bush intends to continue this dedication and commitment to Restoration and to the partnership we have with the Federal Government.

Speaking of the partnership between the State and the Federal Government. I would like to point out that this is a very established partnership. The Federal Government has played an integral role in the development of the area encompassed by the Comprehensive Plan to restore the Everglades for almost exactly 100 years, when the U.S. Army Corps of Engineers' began surveying the Kissimmee/Okeechobee/Caloosahatchee water system to assess ways to improve navigation. Recognizing its temperate climate and good soil, the State became extremely interested in draining the land of water. It created the Everglades Drainage District as well as a funding mechanism that funded construction of a system of canals around Lake Okeechobee. However, following two devastating hurricanes that killed thousands of people south of Lake Okeechobee, in the late 1920's, the Corps, in conjunction with a newly created State agency (the Okeechobee Drainage District), improved the region's flood control ability by adding major levees.

Being an area of extremes, this region experienced major droughts for close to 15 years, followed by more devastating hurricanes in 1947. It became apparent that a master plan would have to be developed that balanced the demands for flood protection as well as reliable water supply. Congress authorized the Central and Southern Florida Flood Control Project in 1948. The South Florida Water Management District now serves as local sponsor to the Corps for this massive project, which includes some 1800 miles of canals and levees that run through 16 counties.

The system that was requested by the State, built by the Federal Government and is now operated and maintained by the Water Management District accomplished its intended purpose. It allowed people to live and prosper on land in South Florida. Unfortunately, it did have unintended consequences for the environment. You will hear a lot today about the four interrelated factors necessary to restore the Everglades ecosystem: quantity, quality, timing, and distribution of water. Getting the water right, striking a balance and sharing adversity among the urban, agricultural and environmental demands will define success.

The fundamental concept upon which implementation of the Comprehensive Plan rests "adaptive assessment" is the key to achieving this success. This approach will allow for continuous refinements as more is learned through scientific monitoring over the 20 to 25-year period of implementation.

The importance of the adaptive assessment approach can not be over emphasized. While the Plan was developed under the leadership of the U.S. Army Corps of Engineers and the South Florida Water Management District, countless scientists from many agencies, including the Everglades National Park, two Indian tribes, and many local governments, participated in development of the Plan. Overall, the Plan enjoys broad-base support. However, there are still issues close to certain interests that must be worked out along the way. And, based on the past 50 years, we know enough to know that we don't have all of the answers today.

The Comprehensive Plan before you for consideration is not the ultimate perfect plan for restoration of the Everglades. The perfect plan does not exist. As we debate the merits of the Plan before you the health of the Everglades continues to decline. It is time to move forward and we must do it together. The Plan is flexible enough to allow for needed adjustments along the way.

To fully appreciate the Plan before you for consideration you must appreciate the dynamics of the complexities involved in creating an ecosystem-wide restoration plan and realize that the interconnectedness of this vast system. The coordination efforts in developing a Plan such as this one are enormous. Within the boundaries

of the Plan there are 16 counties, 150 municipalities, 2 Indian Tribes, a multitude of State and Federal agencies, utilities, agricultural interests, and environmental interests. Overlay these dynamics over the scientific complexities associated with getting the water right for a natural system that is home to an international biosphere reserve, four national parks and wildlife refuges, a national marine sanctuary, areas of special designations such as outstanding Florida waters, and numerous State parks, preserves and wildlife refuges. Developing a plan with broad base support appears insurmountable. Yet, we did it. How? It was accomplished through a comprehensive inclusive process.

The Restudy now referred to as the Comprehensive Everglades Restoration Plan was developed by multi-agency teams and through the efforts of groups like the Governor's Commission for a Sustainable South Florida. I believe so strongly in the merits of the role the Governor's Commission played in development of the Plan that I was instrumental in the Governor Bush's decision to continue this type of process by creating the Governor's Commission for Everglades Restoration. I contend that decisions about implementation of the Comprehensive Plan should not be made outside of the process that has proven to work. Any attempt to bypass the process will only create distrust on many fronts.

The Comprehensive Plan provides the best opportunity for solving the region's environmental and waters resource problems within the region. The South Florida Water Management District strongly supports the Comprehensive Plan and the process used for developing this product. We believe the Plan is the roadmap for providing adequate water for a healthy, sustainable Everglades ecosystem as well as for maintaining urban and agriculture use.

Finally, I would like to emphasize the uniqueness of Everglades Restoration. Many of the comments today will highlight the uniqueness of the ecosystem. The international attention this ecosystem receives certainly validates this fact. As I previously stated the process used to develop a plan to restore the Everglades is also unique. And, finally the State of Florida and the local sponsor standing head to head with the Federal Government ready to implement this plan are also unique.

Since 1947 the State of Florida has acquired 3.4 million acres of conservation lands at a cost of $1.1 billion. In addition, the State has spent approximately $2.2 billion in other restoration activities. The State Florida and the local sponsor to the Comprehensive Plan for restoring the Everglades will pay 50 percent of the cost of implementation. As equal partners we will be looking for your approval for the Federal Government to also share the operation, maintenance and monitoring costs associated with this Plan estimated to be $175 million annually.

The South Florida Water Management District in addition to serving as local sponsor for the Comprehensive Plan is also local sponsors for the Kissimmee River Restoration Project and the C–111 Project in South Dade. In addition, our agency is solely responsible for a major restoration project designed to address water quality issues in the Everglades. This estimated cost of this long-term project known as the Everglades Construction Project is estimated over $800 million.

Today, after this hearing, there is a signing ceremony for eight critical projects. You will remember that this Committee authorized Critical Projects to allow for a jump-start on Everglades Restoration, thank you! The South Florida Water Management District will sign a project cooperation agreement with the U.S. Army Corps of Engineers to serve as local sponsor for seven of the eight projects. The total estimated cost for our contribution is approximately $47 million. Are we committed? You bet we are! Are we in it for the long haul? With the investments made to date it would be irresponsible not to be!

In closing, I would like to reiterate that as we go through the legislative process toward authorization, the Committee will here many challenges to the Comprehensive Plan suggesting that more studies are needed. I strongly contend it is time to move forward and you have before you a Plan that has incorporated the flexibility to do just that in a cost effective, scientifically based way.

We the South Florida Water Management District have set a budget reserve account dedicated to the implementation of the Comprehensive Plan to the tune of $"X" annually. We will work with the State to obtain the remainder of the necessary funds to achieve implementation. We urge you approval for the Federal Government to move forward on this unprecedented ecosystem restoration plan and for the U.S. Army Corps of Engineers to be given the flexibility to do so in a way that maximizes environmental benefits while ensuring the other needs of the region are maintained.

With that Mr. Chairman I conclude my remarks. Thank you and the committee members for the opportunity to speak today. And, thank you Mr. Chairman for your leadership and commitment to Everglades Restoration.

RESPONSES BY MICHAEL COLLINS TO ADDITIONAL QUESTIONS FROM SENATOR SMITH

Question 1. Regarding the Stormwater Treatment Areas, do you have good scientific evidence to demonstrate that these areas have been effective and will be effective in achieving seater quality standards for phosphorus'? Can these areas really treat the volume of water that the Comprehensive Everglades Restoration Plan (CERP) envisions being redirected through the Everglades systems What happens then? Do you foresee the need for additional treatment and if so, at what cost?

Response. Regarding the Stormwater Treatment Areas (STAs), we have good scientific evidence from the two initial constructed wetlands that the STAs will achieve their design goal of 50 pars per billion. However, eve do not have good scientific evidence that they alone will be able to achieve the long-term water quality standard for phosphorus, assumed for planning purposes to be around 10 parts per billion. In addition to researching ways to optimize STA performance, we are investigating advanced treatment technologies to be incorporated with the STAB, and also looking at ways we enhance the phosphorus load reduction at the farm level. Additional details are found in the Everglades Consolidated Report (SFWMD January 2000). Additional treatment measures will be required to work in concert with the additional components of the Comprehensive Everglades Restoration Plan. Depending on the treatment measure implemented, the costs will vary. At this time, insufficient information exists to estimate these additional treatment costs.

Analysis conducted during the development of the Comprehensive Everglades Restoration Plan indicated that the performance of the STAs would be enhanced with the construction of storage facilities in the Everglades Agricultural Arca. Lois is due to the fact that the reservoir is able to capture large discharges of water during periods of high rainfall which is then released to the STA's for treatment when there is a downstream environmental demand in the Water Conservation Areas throughout the year.

Question 2. Concerning He "adaptive assessment program" which is at the heart of the CERP, there has been criticism that this plan essentially equates to the Federal Government writing a blank check for the restoration effort. Can you respond to those criticisms and recommend safeguards we can put into place to balance the concepts of flexibility and oversight? Was there such flexibility in place for the original Central and Southern Florida Project? What were the ramifications?

Response. The Army Corps of Engineers Civil Works pro&rams have built-in safeguards that respond to this question. The primary safeguard is that a project cannot overrun its costs by more than 15 percent without the Corps returning to Congress for further authorization Additionally, the Congress funds Cows programs on a year-to-year basis.

The concept of adaptive assessment is new to the current Comprehensive Plan. The C&SF Project has, however, had numerous authorizations over the Scars since 1948 when the project was initially authorized. Each authorization addled to the project. If one looks at a map of the current project, one can see that there are parts of the project that were authorized to be constructed, but for varying reasons, never were constructed. It could be argued that the project has, in effect, been managed "adaptively" since it was first constructed.

Question 3. What would be the effects on the ecosystem if implementation of the Plan revere delayed and only pilot projects authorized in WRDA 2000? Alternatively, what if authorization of some of the pilot projects Acre delayed?

Response. Authorization of only pilot projects would help to answer questions regarding those technologies that have uncertainty in their application in the Comprehensive Everglades Restoration Plan. However, delaying the authorization of an initial set of projects for construction would set the implementation schedule back for key elements of the Water Preserve Area. In addition the construction of storage and treatment facilities that would have positive affects on the quality of water flowing into Lake Okeechobee and the St. Lucie Estuary as well as the quantity and timing of waler flowing to the Everglades would be delayed.

If pilot projects were delayed key questions regarding the uncertainties of these technologies ant their full scale application would be delayed, thus delaying many key projects which would accrue significant restoration benefits.

If implementation of the Plan were delayed, the state's on-going restoration program would achier intermediate goals. Florida's 1994 Everglades Forever Act requires that all waters discharging to the Everglades Protection Area must achieve and maintain compliance with all water quality standards by December 31, 2006. In addition, the Everglades Forever Act requires that the volume of inflows to the Everglades Protection Area should be increased by over 25 percent. The District and other State agencies are conducting research and are preparing to implement these

long-term solutions, although the 2006 timeframe is ambitious. At this time no funding has been designated or allocated for these long-term measures.

Question 4. What is the SFWMD's position on authorizing this measure as stand-alone legislation, separate from a WRDA package?

Response. The South Florida Waler Management Districts Governing Board has nor taken a position on stand-alone legislation, however Governor Bush has taken a position in support of stand-alone legislation.

RESPONSES BY MICHAEL COLLINS TO ADDITIONAL QUESTIONS FROM SENATOR BOB GRAHAM

Question 1. Can you describe the impact to the Everglades and surrounding ecosystem if we move forward with this project?

Response. Substantial reduction in the number and severity of ecologically damaging extreme high water and low water events on Lake Okeechobee, resulting in protection of the lockets littoral wetlands and deep water zones and associated ecological and fisheries resources.

- Reduced inputs of excessive nutrients into Lake Okeechobee.
- Substantial reduction or elimination of damaging flows of excessive nutrients, pesticides and suspended materials to the Caloosahatchee and St. Lucie estuaries due to improved water quality and water depths in Lake Okeechobee.
- Recovery of desirable salinity ranges in the Caloosahatchee and St. Lucie estuaries, benefiting ecological and fisheries resources.
- Recovery of more natural volume and timing patterns of flow between Lake Okeechobee and the northern Everglades.
- Recovery of more natural volume and timing patterns of flow into the eastern Big Cypress basin, including improved habitat conditions for the endangered Cape Sable Seaside Sparrow.
- Reduced inputs and distribution of excessive nutrients in the Everglades.
- Substantial recovery of ashore natural hydroperiods, surface water distribution and timing patterns in the Everglades, resulting in recovery of more healthy Everglades ecosystems and the characteristic animals of these wetlands.
- Substantial recovery of more natural flow patterns and volumes into Honda Bay, including recovery of natural salinity ranges. resulting in recovery of ecological and fisheries resources.
- Substantial increase in the spatial extent of healthy wetlands in the southern Everglades.
- Substantial improvements in reaching desired salinity range ant timing of flows for Lake Worth Lagoon, and recovery of healthy fisheries.
- Recovery of more natural flow distribution patterns and in desired salinity range for Biscayne Bay, and recovery of healthy near-shore ecological and fisheries resources.
- Increased spatial extent, hydropatterns and quality of southern Miami-Dade wetlands.

Question 2. Can you describe the impact to the Everglades and surrounding ecosystems if we do not move forward with this project?

Response. Reductions in the spatial extent of healthy wetlands will continue. Species that require large expanses of natural habitat, such as the Florida panther, snail kite, and wading birds, will increasingly become stressed by the loss of habitats.

- Losses of organic soils will continue to reduce water storage capacity and ecological productivity throughout the Everglades. Canals and levees will continue to encourage the introduction and spread of exotic plants and animals. Unnatural Ore patterns will increasingly damage the natural landscapes of south Florida. South Florida recreational and commercial fishing will decline, both in the freshwater Everglades and Lake Okeechobee, and in the St. Lucie, Caloosahatchee and Florida Bay estuaries. Endangered species will continue to decline, and some species may be irreversibly lost in south Florida. The Everglades will cease to exist as a functional, recognizable "River of Grass."

Question 3. Based on your view of how the Restudy authorization process will move forward. will Congress' action in WRDA 2000 be the first phase in a multi-stage authorization process or will this year be the only tithe this project comes before Congress?

Response. WRDA 2000 action will begin a series of authorizations to be taken in future WRDA s for a number of years. Based on the current implementation schedule, authorizations for construction would be requested through WRDA 2014.

Question 4. Can you describe the of beginning this project without completing it?

Response. In general, most ecological and biological restoration targets for sustainable natural systems will not be reached. Because restoration must proceed far enough to get critical ecological components and processes past some minimal "threshold" level of health, it is possible that little in the way of long-term recovery will occur. Fresh water flows may be inadequate to counter the adverse effects of sea level rise and sinking shorelines; of especial concern, degrading coastal forests may eventually be "overtopped" by future hurricanes, resulting in substantial increases in flooding. Partially recovered wetland systems may exhibit unnatural fluctuations in ecological conditions, thus maintaining unstable and unpredictable habitat conditions for native animals and plants.

Question 5. Is the majority of the runoff that enters the canal system from urban or agricultural use?

Response. The answer to this question depends on what part of the canal system we are referring to. In the lower east coast urban area, much of the runoff reaching the canal system is a direct result of providing drainage to people who live in that area. Compared to the natural condition, the runoff discharged by the canal system in the urban areas has increased substantially. The contribution to runoff from the relatively small agricultural acreage in the urban area is estimate.

STATEMENT OF JIM SHORE, ON BEHALF OF THE SEMINOLE TRIBE

Introduction

On behalf of the Seminole Tribe of Florida, I wish to join the other Floridians participating in this hearing in providing a warm welcome to our Federal legislators from the north. I hope you enjoy the warm breezes of our Florida winter.

I am Jim Shore, General Counsel of the Seminole Tribe of Florida. I am honored to represent our Chairman, James Billie, who was unable to join us today, and the almost 3000 members of the Seminole Tribe of Florida.

The Seminoles have been active participants in the multi-faceted efforts to restore the South Florida Ecosystem and to provide a healthy future for people of Florida, as well as for the natural environment, including the Everglades, that draws so many more people to visit and move here. We appreciate being invited to share our views with Senators Smith, Voinovich, and Graham on the Restudy presented to Congress last July. The Tribe supports the Restudy.

In this testimony, I will discuss, briefly, who we, the Seminole Tribe of Florida, are; our general philosophy regarding ecosystem restoration in South Florida; the Tribe's contribution to the restoration; and specific comments on the Restudy. I will be happy to entertain your questions at the conclusion of my remarks.

The Seminole Tribe of Florida

The Seminole Tribe lives in the South Florida ecosystem. The Big Cypress Reservation is located in the Everglades about 60 miles east of here, directly north of the Big Cypress Preserve. The Immokalee Reservation is approximately 30 miles northeast of here, near the Big Cypress Preserve. The Brighton Reservation is located on the northwestern shores of Lake Okeechobee. Tribal headquarters in located on the Hollywood Reservation on the east coast. The Tribe relies on all aspects of a healthy ecosystem, including the Everglades which provide many of our tribal members with their livelihood. Our traditional Seminole cultural, religious, and recreational activities, as well as commercial endeavors, are dependent on a healthy South Florida ecosystem. In fact, the Tribe's identity is so closely linked to the land that Tribal members believe that if the land dies, so will the Tribe.

Die ring the Seminole Wars of the lath (century, our Tribe found protection in the hostile Everglades and Big Cypress Swamp. But for this harsh environment filled with sawgrass and alligators, the Seminole Tribe of Florida would not exist today. Once in the Everglades and Big Cypress, we learned how to use the natural system for support without doing harm to the environment that sustained us. For example, our native dwelling, the chickee, is made of cypress logs and palmetto fronds. It protects its inhabitants from sun and rain, while allowing maximum circulation for cooling. When a chickee has outlived its useful life, the cypress and palmetto return to the earth to nourish the soil.

In response to social challenges within the Tribe, we looked to our Tribal elders for guidance. Our elders taught us to look to the land, for when the land was ill, the Tribe would soon be ill as well. When we looked at the land, we saw the Everglades and supporting ecosystem in decline. We recognized that we had to help mitigate the impacts of man on this natural system. At the same time, we acknowledged that this land must sustain our people, and thereby our culture. The clear message

we heard from our elders and the land was that we must design a way of life to preserve the land and the Tribe. Tribal members must be able to work and sustain themselves. We need to protect our Tribal farmers and ranchers.

Seminole Everglades Restoration Projects

Recognizing the needs of our land and our people, the Tribe has developed a plan to mitigate the harm to the land and water systems within our Reservations while ensuring a sustainable future for the Seminole Tribe of Florida. The Big Cypress Reservation is the first of our Reservations for which this plan has been implemented. The Tribe is in the early stages of developing a plan with similar goals on the Brighton Reservation.

On Big Cypress, the restoration plan will allow Tribal members to continue ongoing farming and ranching activities while improving water quality and restoring natural hydroperiod to large portions of the native lands on the Reservation and ultimately, positively affecting the Big Cypress National Preserve and Everglades National Park. Construction activities on the western side of the Reservation have been identified as a "Critical Project" under section 528 of WRDA 1996. The Tribe is working closely with the NRCS to identify appropriate programs to complete construction of the project on the eastern side of the reservation. Two Wetland Reserve Projects are currently underway.

The Seminole Tribe is committed to improving water quality and flows on Big Cypress and has expressed that commitment by dedicating significant financial resources to our environmental programs and projects, as well as estimates of 9,000 acres of land to support the projects on Big Cypress alone.

General Comments on Everglades Restoration

The Seminole Tribe participates in the task forces, working groups, commissions, and committees too numerous to list. In these various fore, stratified levels of detail are debated and discussed. Throughout our involvement, the Tribe has applied the following guidelines to the many proposals and plans that have been produced and vetted. Our resources limit our specific comments to portions of the plans that will directly affect our lands. Our "philosophy," so to speak. however, can be applied to all of the plans.

Shared adversity. No one place or group of people should be required to shoulder more than their proportional cost of the fix to the problem caused by the Federal project created to help all Floridians.

If you messed it up, you clean it up. While all should share in the corrections to the built system to provide for sustainability, if an entity has created a specific problem, that entity is responsible for correcting the problem. For example, the Big Cypress projects are designed to improve the quality of the water that the Tribe discharges.

- Get the science right. The Tribe recognizes the complexity of the Everglades ecosystem. Understanding these complexities and the developing the applied scientific principles is critical to saving the ecosystem.

Adaptive management. While, in the perfect world, the scientists would have all the answers to provide the design engineers building the projects needed to improve water quality, quantity, flows, and levels, in the real world, some projects need to proceed on the best available information. Best professional judgment must be executed in the design and implementation projects for which there is an absence of all needed data points. However, it is crucial that monitoring and data analysis continues for such projects and required adjustments to the design and/or operation of the projects be undertaken in a timely way. In this way, adaptive management allows important restoration projects to proceed.

Specific Comments on the Restudy

The Seminole Tribe supports the Restudy and its goals of addressing environmental restoration and adequate flood protection and water supply. The Tribe reviewed and commented on all drafts of the Restudy. Rather than provide extensive comments here, I will highlight our four most significant concerns:

Ecological models and monitoring. While computer-generated models are useful and necessary analytical tools, the information they provide is not reality. It is important to recognize their limitations—limited to current knowledge, contain assumptions, and subject to computational constraints—and to deal with project planning accordingly. In addition, the Restudy computer models were designed so that many of the Tribe's lands are outside or at the edges of the models. This situation has forced the Tribe to infer the likely effects of the selected alternative on its lands. Because the predicted behavior of the model may not be accurate, the Tribe urges that project authorization include ongoing data gathering and monitoring.

Adaptive management. The Tribe strongly supports the Restudy's incorporation of the adaptive management concept. The Tribe urges Congress to incorporate in the authorization of the initial projects the flexibility needed to allow for the application of adaptive management.

- Federal funding for water quality improvements. The Tribe believes that the Federal Government shares the responsibility for improving water quality. WRDA 2000 should incorporate the WRDA 1996 provision requiring 50/50 Federal/local cost share for water quality projects.
- Critical projects and programmatic authority. Should any of the projects identified as "critical projects" under WRDA 1996 section 528 fail to be implemented due to lack of Federal appropriations, programmatic authority under WRDA 2000 should renew authorization for the projects.

Conclusion

Thank you for the opportunity to share the views of the Seminole Tribe of Florida with you. While the Tribe is a strong supporter of the Restudy, we will continue to be vigilant in our review of its implementation. We look forward to a continued partnership on a government-to-government basis in the challenging effort to save our Everglades.

STATEMENT OF DEXTER LEHTINEN, ON BEHALF OF THE MICCOSUKEE TRIBE

My name is Dexter Lehtinen. I serve on the South Florida Ecosystem Restoration Task Force and the Governor's Commission for the Everglades. I previously served as a Florida State Representative and State Senator where I helped author the Surface Water Improvement and Management Act, which established the goal of saving the entire Everglades, whether federally, State, or tribally owned. I also served as U.S. Attorney for the Southern District of Florida, where I filed the so-called "Everglades lawsuit". I represent the Miccosukee Tribe of Indians of Florida, the Dade County Farm Bureau, and many residents of west Miami-:Dade County, Florida.

My main point is that Everglades restoration is in serious trouble due to misplaced priorities, subordination of fundamental democratic values, Federal intransigence and bureaucratic arrogance and incompetence.

Let me emphasize at the outset that the issue before this committee and the Congress as a whole is not whether Everglades restoration is a proper goal or whether restoration is worth the effort. Those who have struggled for years to achieve the primacy of Everglades restoration as a goal, including Senator Graham on your panel (and, if I may be so bold, I would add myself and others here at the Everglades Coalition to that group), have achieved at least the nominal commitment, or (perhaps more correctly described) the "politically correct" commitment, to that stated goal.

But the harder questions relate generally to "implementation." These questions include:

(1) Restoration Goal: What does "restoration" mean? Are agencies really committed to Everglades restoration as the No. 1 priority?

(2) Natural Conditions—As odd as it may sound: Do agencies really want natural conditions? And, what do "natural" conditions mean?

(3) "Everglades" Scope—Perhaps odder sounding still: Which Everglades do we restore? Whose Everglades do we save?

(4) Execution—How do we achieve it? Does the Restudy Plan achieve it? Does the Restudy process achieve it?

(5) Fundamental Values—Are we really prepared to sacrifice fundamental property rights and the rule of law in favor of unbridled agency discretion?

Many current problems stem from the deep-seated (though hidden) disagreements over the answers to these questions, illustrating many misconceptions about Everglades restoration, These problems include:

A. System Problem (Lack of a System-wide, Everglades-wide Commitment: Parochial Approach).—Many agencies (particularly DOI agencies) seek only to protect their piece of the Everglades ecosystem (whether it be geographic, such as the Everglades National Park, or subject-matter, such as a single species), deliberately sacrificing other parts of the Everglades. These agencies readily discriminate against State-owned and tribal-owned Everglades, despite the congressional and Florida legislative mandate that these areas be preserved in their "natural state" and despite the Federal Trust responsibility owed to the Tribe.

The Federal Government is sacrificing the State and tribal Everglades in favor of the smaller Federal Everglades (ENP and LNWR). The Water Conservation Areas (especially WCA 3-A) are dying due to Federal actions.

Examples include: (i) flooding WCA 3-A for sparrow (resulting in destruction of WCA 3-A and damage to Florida Bay through uneven freshwater pulses); (ii) blocking Modified Water Deliveries with the effect of destroying WCA 3-A; and (iii) Chief's Letter rejection of Restudy water volumes, favoring ENP with adverse effect on WCA 3-A and Florida Bay; and (iv) blocking S–332D implementation in C–111 Project.

Recommendation—The committee should establish the guideline that no part of the Everglades Protection Area (including Everglades National Park) should be treated more favorably than any other part with respect to hydrology (water volume and timing).

B. Process Problems (Lack of Commitment to Decision-making Process; Lack of "Partnership"; Low Inter-agency Cooperation; pro Forma Use of Task Force).—Inter-agency cooperation (particularly by Department of the Interior agencies) remains low and many agencies refuse to commit to the overall Restudy process. In addition, many agencies refuse to implement programs which, have been finalized through the NEPA (National Environmental Policy Act) and EIS (environmental impact statement) processes. Furthermore, the South Florida Ecosystem Restoration Task Force seems to serve the main purpose of giving the appearance of oversight or coordination, while avoiding serious matters or defects in the restoration process.

The present Federal approach is little more than lip-service to so-called "partnership". Deals are made in Washington, informing the public, the Tribes, and the State afterwards.

Examples include: (i) Chief's Letter rejection of Restudy process (closed door meetings after Restudy complete); (ii) improper use of Endangered Species Act to override regular State role in water management (Corps actions on sparrow); (iii) exclusion of all-but-favored private groups (exclusion of State and tribes) from sparrow meetings; (iv) disregard of NEPA public process on sparrow, Modified Water Deliveries, and elsewhere (iv) DOI lobbying anti-State and anti-Tribe agenda on WRDA and Appropriations Bills; and (v) South Florida Ecosystem Restoration Task Force unresponsiveness to members' questions.

Recommendation—The Committee should ensure as follows:

(a) The Federal Government and its agencies should recognize the State's right of control over its lands and waters and right to equal involvement in the Everglades restoration policymaking process.

(b) Congress and all agencies should disregard the Chief's Letter to the Restudy as exceeding the scope of the Chief's authority, procedurally infirm, and unacceptable.

C. Execution Problems (Inability or Failure to Execute Specific Projects).—Frankly, the track record to date in implementing or executing specific congressionally directed and approved projects, from the mid-1980's to date, is abysmal ("shocking" is probably a better word). Stalled "Critical Projects" include Modified Water Deliveries and the C–111 Project, both held up for a decade. These projects are assumed by the Restudy and by Congress be completed, a starting point for the restudy as the next step. The "immobilisma", agency incompetence, and outright refusal of agencies to execute any plan which the agency doesn't like even if it has been approved through the appropriate process, raises serious doubts about the wisdom of entrusting these agencies with the authority and funds involved in restoration.

Neither Federal nor State government agencies are held accountable for gross errors and intentional deviations from law. In essence, the rule of law has ceased to be a relevant concept in Everglades restoration.

Examples include: (i) failure to conduct required annual reviews of Test Iteration 7 of Experimental Water Deliveries Program; (ii) permit/test 7 violation at G–211 structure in West Dade prior to Hurricane Irene; (iii) excessive groundwater levels in West Dade prior to Hurricane Irene; (iv) failure to follow public meetings law by SFWMD (local option to Modified Water Delivery); (v) Corps failure to follow Restudy procedures; (vi) failure to follow Regulation Schedule for WCA 3-A; (vii) failure to follow NEPA for WCA 3-A; (viii) failure to implement Modified Water Deliveries Project; and (ix) failure to implement C–111 Project.

Recommendation—The committee should ensure that both the Florida Legislature and the U.S. Congress hold their agencies and employees responsible for errors and accountable for delays in implementing policy and for deviations from and violations of law.

D. Problems with Fundamental Values (Disregard of Fundamental Rights and Values of Liberty: Basic Property Rights and the Rule of Law).—Everglades restoration programs, at least their implementation by the Federal Government, is showing an alarming disregard for fundamental values (property rights and the rule of law). Everglades restoration must not be achieved at the expense of fundamental concepts of liberty, including property rights. The right to private property is so fundamental

to ordered liberty and freedom that its sacrifice is simply not justified (and its sacrifice is also not necessary for Everglades restoration). A closely related concept is the legitimacy of government provided flood protection. When flood protection and private property rights are demeaned, the core rights of the average American are threatened. Such misalignment of values will not prevail but the ultimate rejection of this misalignment by the public will destroy the viability of restoration.

Examples include: (i) The Corps actions for the sparrow (increasing flooding of lands in South Dade, West Kendall, 8.5 Square Mile Area, and WCA 3-A); (ii) increasing water levels in Dade under Test Iteration 7 of Experimental Water Deliveries without implementing concomitant flood protection; (iii) failure to implement Modified Water Deliveries Project protection for property; and (iv) failure to implement C–111 Project.

Recommendation—The committee should reaffirm as follows:

(a) Private property and flood protection are legitimate social values and neither property rights nor flood protection should be diminished in any respect in the course of Everglades restoration.

(b) The triple goals of environmental protection, flood protection, and water supply must each be met without undue sacrifice. Plans which seek Everglades restoration at the expense of flood protection or urban and agricultural water supply are unacceptable. Plans which seek to transform Everglades restoration into a tool for "no growth", "growth management", or urban planning are unacceptable, because these matters raise different issues and involve different social values.

From a review of these problems, several major misconceptions about Everglades restoration are apparent, including:

(i) The "Everglades" is "Everglades National Park"—The misconception that the term "Everglades" means and is the same as "Everglades National Park" leads to sacrificing the central Everglades, which are the jewels of the famous "River of Grass". The Florida and Miccosukee-owned Everglades north of Tamiami Trail are just as important and Federal and State policy call for the entire Everglades to be saved.

(ii) Everglades Restoration is the Number One Federal Priority in the Everglades—This is clearly not the case in fact, although often stated in words. This unexamined misconception allows the Federal Government to place the Everglades second or even lower in priority while putting other goals first. The latest example is the flooding and destruction of the central Everglades by maintaining unnaturally high water levels in WCA 3-A and "unnaturally" low water levels in ENP, by closing structures along an unnatural barrier (Tamiami Trail), for the purpose of protecting a 10 percent subpopulation of a subspecies of bird which moved recently into the area (outside of its critical habitat) when water was unnaturally low. The stated policy is to maintain the Everglades unnaturally dry in parts and unnaturally wet in parts for the goal of protecting the bird; clearly, preserving the natural Everglades is not a No. 1 priority.

(iii) At Least We're Making Progress/What We're Doing is Helping—While we're making some progress, especially in water quality issues in the Everglades Agricultural Area (EAA), elsewhere we're deteriorating badly. The Florida Fish and Wildlife Conservation Commission said less than a month ago that "WCA 3-A has degraded more in the last 5 years than in the previous 40 years together". This ongoing degradation of Florida and Tribal lands is a direct result of parochial Federal water policies, which the Federal Government shows no signs of changing.

(iv) Everglades restoration is a Federal/State/Tribal Partnership—The partnership is in name only, with Federal agencies constantly end-running the established process whenever they don't get their way. The history of Federal relations with the Miccosukee Tribe, the Federal sacrifice of tribal lands and breaking of environmental commitments, is just another saga on the trail of Tears on which the Federal Government has sent its Native Americans.

(v) The Problem in Everglades Restorable is Funding—The idea that the Everglades "problem" is a new version of the old approach of throwing Federal dollars at whatever problem is perceived to exist. But is also has the effect of ignoring real issues in restoration. A related misconception is that additional Finding can't hurt. But more than just wasting money, could actually result in damaging the Everglades more than if the money wasn't available.

Many of these issues were discussed more thoroughly in my report accompanying the 1999 Report of the South. Florida Ecosystem restoration Task Force, on which I am a Member. It is interesting that the Task Force staff regularly distributes their glossy-print report without distributing the minority report which I filed as a Task Force Member. I have attached my April 1999 report. entitled Facing Up to Problems in Everglades Restoration (An Additional View): Supplement to "Maintaining the Momentum, 1999 Report of the South Florida Ecosystem Restoration Task

Force" (Exhibit A) for the committee's use. I have also attached my April 27, 1999 testimony to the House of Representatives, entitled South Florida modified Water Delivery: A Case of Agency Obstructionism (Exhibit B), my September 23, 1999 statement, entitled Statement of Dexter Lehtinen Regarding Backwood Deals on the Everglades (Exhibit C), and my November 10, 1999 testimony, entitled Putting People Last: Excessive Groundwater Levels in West Dade (Exhibit D).

In addition to the recommendations identified with particular issue above, I recommend the following regarding general Everglades restoration and resource management:

I. Create a Cabinet Agency For Indian Affairs—The discrimination against tribal lands and their destruction to serve Department of the Interior interests shows how Interior sacrifices Indian interests to serve other agency goals.

II. Reduce Role of the Depart of the Interior—The role of Interior in Everglades restoration should be reduced to that of any landowner. The most destructive special interest in Everglades policy today is the U.S. Department of the Interior.

III. Shift Chair of South Florida Task Force to Corps. The Task Force should be chaired by the Corps of Engineers, which is otherwise responsible for the overall Central and Southern Florida Project and for Water Resources Development Acts in general. The Task Force is now used to further parochial Interior (not general) interests.

IV. Fund Everglades Restoration Through Corps of the State, Rather Than Interior. Interior improperly uses its role in funding to achieve collateral, parochial goals of the agency. Channeling Farm Bill (land acquisition) and Modified Water Deliveries money through Interior, for example, was a mistake.

In conclusion, the current chaos, agency parochialism, and agency arrogance are threatening the viability of Everglades restoration, as is the subordination of fundamental property values and the rule of law. The public officials who ignore this reality in a "politically correct" assertion, but "everything is going well in the Everglades" are in effect the enemies of the Everglades. On the other hand, the public officials who recognize the reality, cut through this chaos, and suffer initial criticism from those who either don't want to admit problems or don't avant their parochialism to be unmasked, will be the heroes of Everglades restoration to whom future generations of Americans (Native Americans and non-Native Americans) will be eternally grateful.

RESPONSES BY DEXTER LEHTINEN TO ADDITIONAL QUESTIONS FROM SENATOR SMITH

Question 1. Can you describe the impact on the Miccosukee Tribe if we go forward with this project as currently proposed?

I. Summary: Vagueness Renders Conclusions Premature

The outcome or impact on the Tribe could be very negative or very positive (or somewhere in between), depending upon how the "project.' is eventually defined and executed. Until the project components are each developed in greater detail, there is insufficient detail to determine whether the vague and ambiguous goals of the Plan will be met or whether certain elements might actually cause harm.

II. Ambiguities and Dangers in the Comprehensive Plan

The Comprehensive Plan (April 1999) is ambiguous in certain essential points and relies on inadequate models in several critical issues, leaving room for numerous areas of potential harm. In addition, the Chief's Transmittal Letter contradicts the Comprehensive Plan and raises serious concerns.

1. Defining the "Project".—More Details Needed on Project Components—The Comprehensive Plan (Restudy, April 1999) is still vague and ambiguous on many essential elements, so that current assumptions or conclusions about its utility or impact on the Tribe or even the greater Everglades ecosystem are premature at best. Such premature assumption could even be dangerous and counter-productive, because they could lead to unbridled agency discretion, lax oversight, poor planning, and sub-optimal outcomes (outcomes which destroy part of the Everglades while helping other parts).

2. Inadequate Modeling.—The possibility of adverse impacts Has discussed above) is magnified by the alarming admission within the restudy that two critical models are inadequate for the analytical tasks at hand. Ha) First, the "natural Systems Model" (NSM)uses very large grids ((2x2 miles) and does not have accurate topographic data in its data base. Accurate topographic data must be obtained and incorporated before predictions can be used with any reasonable assurances See p. 7–73. (b) Second, the "South Florida Water Management Model". (SFWMM or WMM) is inadequate to predict flood control outcomes. See "Flood Control" entry, pp. 7–

65 and 7–62. Before project components are designed in detail and approved by Congress, these models must be upgraded.

3. Potential Adverse Effects.—Within the scope of the Restudy, several possible adverse effects could develop if future detailed planning does not adequately address certain hydroperiod and water quality issues. These include, but are not limited to, the following: (a) excessive water levels in Water Conservation Areas ("flooding" the central Everglades); (b) discharging polluted water into the central Everglades (essentially using the central Everglades to clean up water pollution before it reaches Everglades National Park to the south'; (c) discrimination against Water Conservation Area 3-A (treating the central Everglades less favorably than Everglades National Park); (d) discriminatory treatment of minority Americans (Hispanics, African-Americans, and Indians); and (e) flooding in residential and commercial land outside the Everglades <where the Tribe and tribal members, as well as many Miami-Dade County residents, own property)

4. Dangers in the Chief's letter.—In addition, the Chief's Letter could be very harmful, as it contradicts part of the April Restudy by approving additional water deliveries which could be both unnecessary and harmful, and erodes flood protection commitments (among other problems) The Tribe urges Congress to reject the Chief as Letter, both on the merits and because it was developed behind closed doors without public input, after the April 1999 Comprehensive Plan was completed.

III. Beyond the Comprehensive Plan: Prior Projects and Future Planning

Congress must look beyond the Comprehensive Plan itself, toward both prior projects which are essential to restoration but have been blocked by bureaucratic logjams and future planning to produce detailed plans for component projects.

1. Failure to Implement Modified Water Deliveries Project—One of the most important elements of Everglades restoration, with the greatest impact on the Tribe, is the Modified Water Deliveries Project, authorized by Congress in 1989 (P.L. 101–229, section 104). The MUD Project is "assumed" by the Restudy to be in place (a pre-Restudy condition), yet bureaucratic stalling, agency selfishness, and gross ineptitude have blocked the execution of this Project for 10 years. If the MAD Project is not carried out as Congress directed (P.L. 101–229, sec. 104), much of the subsequent Restudy is rendered moot and pointless.

2. Inappropriate Assumption that Restudy is Itself a Definable "Project"—By referring to the Comprehensive Plan as a "Project", the question makes the assumption that the Comprehensive Plan is itself an identifiable "Project", with sufficient planned details to allow analysis of impacts or effects. In fact, however, the Comprehensive Plan is general in nature, identifying components which themselves must now be planned and developed in detail.

3. Dangers of Programmatic Authority—The Tribe believes that various project components, which are themselves really the "projects" regarding which analysis of impacts is appropriate, must be planned in greater detail before definitive conclusions regarding impacts or effects can be reached. For this reason, the Tribe is reluctant to grant "programmatic authority", instead urging that each project component be planned in greater detail before being individually approved.

Question 2. What will be the impact if nothing is done?

Response. The Tribe believes that perhaps half of the solution to Everglades restoration lies in implementing projects which are already authorized and assumed to be in place as pre-existing conditions to the Restudy. These projects include the Modified Water Deliveries Project (restoring NE Shark River Slough and protecting residential lands), the C–111 Project (restoring Taylor Slough and protecting adjoining agricultural and residential lands), and the Everglades Construction Project (pollution clean-up of water entering the Everglades south of the Everglades Agricultural Area, from north of Bake okeechobee, the Lake itself, and the EAA).

The failure to implement these projects is more damaging than the failure to move forward at this time with the Restudy (which is supposed to follow these projects). Of course, the Tribe would prefer that both the existing projects and the Restudy go forward (assuming the Restudy is refined to specific component projects before final authorization), but the biggest danger or harm is in not executing existing projects.

STATEMENT OF NATHANIEL P. REED, FORMER SECRETARY OF THE INTERIOR

Introduction

Mr. Chairman, my name is Nathaniel Reed of Hobe Sound, Florida. I want to welcome you to South Florida and say that we are greatly encouraged by the reports of your support and enthusiasm for restoring the Everglades. We look forward to

working with you to restore, preserve, and protect South Florida's contribution to America's natural heritage—the Everglades ecosystem. From Lake Kissimmee to Florida Bay and the Florida Keys coral reef tract, this complex, delicate and endangered natural wonder needs all the friends it can find.

Fifty years ago the Federal Government we undertook two parallel and conflicting actions—the establishment of Everglades National Park and the construction of the Southern and Central Florida Project (C&SF Project). Like all National Park designations, the Everglades were supposed to be protected and preserved for the benefit and enjoyment of future generations. However, the series of canals, levees, and other flood control structures constructed by the C&SF Project disrupted the lifeblood of the Everglades—the flow of clean fresh water—and has imperiled its fate.

Whether or not future generations will benefit of enjoy the Everglades will depend on the outcome of the coming congressional debate on the very solid plan put forth by the Army Corps of Engineers last July. I respectfully appear before you today to urge you to make Everglades restoration your highest priority. The Everglades have suffered enough, this year should be the year in which we end the suffering and begin making amends for our past mistakes.

My testimony addresses three overarching issues of Everglades restoration that I believe are central to the questions that you and your colleagues must consider. They are cooperation between State and Federal Partners; the benefits of Everglades restoration; and, the central issues related to the Everglades Restoration Project.

Will It Work?

Will the Comprehensive Everglades Restoration Plan be successful in restoring a healthy Everglades ecosystem, and recover the biological power to a once-magnificent locational Park? I am convinced that the answer to this huge question is an unequivocal "yes!" While the reasons for my confidence are numerous, they can be summarized as "Good Science" and "Good Process." Let me explain!

Good Science

The scale and organization of the scientific contribution to the Everglades restoration plan is unprecedented. Scientists from every Federal and State agency that has a major stake in the future of the vital connections between the natural and human environments in south Florida have worked together in teams to design the Everglades plan. Overall, more than 125 local and regional scientists participated in this effort.

The fact that so much science has become integrated into the Comprehensive Plan is, in itself, a remarkable accomplishment. Perhaps because we are still too close to what is going on, the significance of this science integration has, I believe, not been fully recognized. The integrated effort has elevated the vital communications that must go on between science and management from the traditional intra-agency linkages to a new, inclusive inter-agency process. Now it is teams of scientists from many agencies that are speaking with teams of managers, as a means of maximizing the role that the Comprehensive Plan will have in achieving the numerous, complimentary objectives of each of the participating agencies.

For the past 3 years the scientific teams have focused their coordinated efforts on developing a consensus opinion on the specific ecological and hydrological problems that must be solved by the restoration plan. They brought the full range of scientific disciplines and the best understandings of the natural systems to the debate. What emerged from this prolonged effort was strong scientific consensus. With broad agreement on the nature of the problems, the scientists then led the way us evaluating alternative plans to determine which would be most successful in recovering the environmental health to both natural and human systems in south Florida. The Comprehensive Plan before you is that plan.

Recently these same scientists have raised the level of optimism by offering an answer for a question that eve all have asked. Are we too late? Can an ecosystem as badly damaged as the Everglades ever recover? By examining the way that these wetlands have recently responded to several years of high rainfall, the scientists have been able to tease out understandings of the potential success of restoration. The higher rainfall has provided a hint of the wetter and healthier hydrological patterns that will come from the Comprehensive Plan. What the scientists have learned from this high rainfall event is most encouraging: the beginnings of healthier seagrass beds in Florida Bay, increased nesting by egrets in the central and northern Everglades, better production of fish in the mangrove estuaries.

The scientists are also using their knowledge of the south Florida wetlands to answer another key question. How do we define success? What should the future Everglades Lake Okeechobee and Florida and Biscayne Bays look like if else Comprehen-

sive Plan is successful, and what is it about these systems that we should be measuring to track the progress of the restoration program? The answers that scientists are giving us to these questions add greatly to my confidence that we know what we are attempting to achieve with the restoration program. We will be watching the results closely, and will be continually adjusting our efforts so that we stay focused on our gods.

Good Process

Some aspects of the good process used to create the Comprehensive Everglades Restoration Plan have already been revealed in my comments about the good science. The key point to be made here is that the tremendous complexity of the Everglades restoration program has required new ways of doing business. The large number of participating agencies, the expansive and complex ecological scales of the program, and the fact that the information and expertise that is required to design and implement such a program are scattered both in time and place, are all essential reasons for coming up with entirely new strategies.

I believe the agencies, both Federal and State, have recognized this need, and together have been remarkably successful in developing the multi-agency processes that are required. The multi-agency teams have created a common vision of the restoration goals, and have brought the combined technical skills to the task of designing a program that can achieve these goals. The good worlds of the multi-agency planning team for the Central and Southern Florida Project "Restudy", and the Governor's Commission for a Sustainable South Florida, testify to the success of the new strategies. The integration of time and knowledge by many people from many agencies and institutions has been achieved because all parties ultimately have known that the regional water problems in south Florida must be resolved by means of this Comprehensive Plan.

New processes and teams for achieving the integration of effort during the implementation of the Comprehensive Plan are now being established. The new teams should be even more successful, because they build on the considerable experience that has come from the earlier, multi-agency planning teams.

Key among the new teams is an Adaptive Assessment Team, which will have lead responsibility for reporting on how the natural and human systems actually respond as the plan is implemented. This new team will use a regional monitoring program to determine how well the plan achieves its objectives and where unexpected or undesirable responses appear. Monitoring is also a valuable way of adding to our understanding of the nature system! The Adaptive Assessment Team will use all of the information that comes from the monitoring program to recommend improvements in the Comprehensive Plan during the implementation period. five mill build as we learn, and learn as we build!

Cooperation Between State and Federal Partners

An absolutely critical element to the Everglades restoration project is the relationship and cooperation between the State of Florida and the Federal Government, Senator Graham has already characterized this as a marriage, and that every successful marriage depends on communication and compromise between partners. What a splendid analogy!

It does not mean it will be easy. The Federal and State partners in Everglades restoration have different mandates, management responsibilities, and approaches. That means they will approach issues differently and have different ideas of how to solve the same problem. That is natural and these approaches and ideas will reflect their mandates. The Federal Government will attempt to ensure that its responsibility, to preserve and protect South Florida's national parks, wildlife refuges, and marine sanctuary is fulfilled. The State of Florida and the South Florida Water Management District Drill attempt to balance its three responsibilities—provide flood protection, ensure water supply, and protect the environment. Finally, local governments will also be at the decisionmaking table depending on the issue.

This process has worked, although to the casual observer it could appear to be full of conflict and controversy. This perception is the result of a very public, inclusive, and consensus-based decisionmaking process. However, what is impressive is how these differing perspectives have consistently been rewelded to produce a final decision that meets the common objective of restoring the Everglades and allows the process to move forward.

I believe this approach has worked because of the bipartisan cooperation of our congressional delegation and of every Governor since Senator Graham began the Save our Everglades program during his tenure in Tallahassee. I believe that the progress on Everglades restoration in the 1990's has been extraordinary and it is

the result of bipartisanship and intergovernmental cooperation. This is not surprising because history demonstrates that adversity breeds unity.

Those of us who grew up in Florida in a different era can tell stories of a Florida that barely exists anymore. Ire my lifetime, eve have drained and paved South Florida in the name of progress based on a set of values reflective of the time. We now know of the humble consequences that the Everglades has paid, but we are fortunate that we still have a resource that is savable. Let there be no question that it is worth saving.

We have a rare opportunity to give back to our children and grandchildren an opportunity to experience what my generation of Floridians was fortunate enough to enjoy—a pristine Everglades. It is enormously important to Florida, and it is equally important to the catalog of American treasures that many of us have worked so hard to protect. That's why, I believe, the State and Federal Governments have worked so hard to get us to this point and it is why I urge Congress to continue to insist on such an arrangement while meeting its statutory mandate to make this a project worthy of its name—Everglades restoration.

The Benefits

Restoration of the greater Everglades Ecosystem will yield long-lasting human and environmental benefits. Although the project is geared toward protecting and enhancing Federal lands including two national parlors, one national preserve, national marine sanctuaries and several wildlife refuges, spin-off benefits are also substantial. In terms of environmental benefits, the restoration effort fill, at its conclusion, provide the proper timing, distribution, quantity and quality of water to ensure a sustainable natural environment. In addition, the project. at its completion, will provide sufficient clean water to supply groveling urban needs as well as irrigation water for the substantial agricultural interests that will help filet South Florida's economy well into the future.

In South Florida, the environment is the economy. In addition to meeting the water needs of the region, the restoration will ensure a healthy ecosystem. The four major tropical estuaries in the area (Florida and Biscayne Bays, Indian River Lagoon, and the Caloosahatchee) will receive adequate amounts of clean water at the right tunes. This will allow for these water bodies to come back into balance, thus restoring Me commercial and recreational value that they were once renowned for. It will also help to stabilize our reef tract, allowing this Wile resource to remain the world's top diving destination. In addition the Everglades will be restored and maintained, so that they remain a place of awe-inspiring beauty that draws millions of visitors each year. Lake Okeechobee will also benefit immensely. Lake Okeechobee will no longer serve as the water reservoir of the region. Water levels will be stabilized, and the lake will be restored to its past glory, once again becoming a haven for multitudes of wildlife, and a world class boating and bass-fishing mecca.

Specific ecological restoration benefits include:

Kissimmee River Basin—Historically, the Kissimmee River was a slowly meandering shallow river. It flowed 103 miles from Lake Kissimmee south to Lake Okeechobee. Major channelization of the river was completed in the 1960's, converting the river system into a fast flowing canal and draining tens of thousands of acres of marshy floodplain. The restoration project will restore 43 continuous miles of meandering river channels and restore 40 square miles of river floodplain. This plan will also be protective of the existing ranch and dairy operations in the basin.

Lake Okeechobee—Lake Okeechobee is 730 square miles in size. It is the second largest freshwater lake in the continental United States, with an average depth of only 9 feet. Historically the lake had no direct connections to the ocean, but now is directly connected to the Gulf of Mexico through the Caloosahatchee Canal, and to the Atlantic Ocean by the St. Lucie Canal. In addition, the lake is surrounded by the Hoover Dike, cutting the lake off from its productive marshes and floodplain. Lake Okeechobee currently serves as a reservoir with widely fluctuating water levels. The restoration project includes significant above and below ground water storage features that will allow for more natural lake level fluctuations, and will reduce reliance on the lake for water supply needs. This will help to stabilize the lake and return it to a more natural system that will support a multitude of wildlife as well as becoming a recreational boating and fishing: mecca once again.

Caloosahatchee and St. Lucie Estuaries—Currently, as lake levels rise, there is no place to store excess water Therefore, when Lake Okeechobee reaches maximum stages, water is dumped into both the Caloosahatchee and St. Lucie Estuaries. This water dumping turns these brackish estuaries into muddy, freshwater systems with devastating results to the fish and other species that use these systems. Therefore these estuaries are in a constant state of disruption with a concomitant decrease in productivity. The restoration plan will provide water storage and natural water

cleansing features which will ameliorate the adverse effects of dumping water into the estuaries, and will have the added benefit of holding water upstream until these brackish bays need flows of freshwater, particularly in the dry season.

Southern Everglades and the Big Cypress—The majority of the federally protected lands in South Florida lie south of Lake Okeechobee and the Everglades Agricultural Area. Being at the end of the system, these lands are most greatly affected by water manipulations. In general, these lands receive too much water flow during the rainy season (summer) and too little if any water flow during the dry season (winter). This ecosystem adapted to the wet and dry season over thousands of years. The flora and fauna in most cases require the wet and dry cycles to complete their life cycles. Water mismanagement has disrupted many of these life cycles. These disruptions, and the loss of habitat to agriculture and development have directly caused the declines of numerous populations, and have driven almost 70 species to the brink of extinction. The flora and the fauna depended on the cyclic flow of water through the Everglades. Currently, the natural cyclic flows are gone. Instead of water flow changing through the seasons, the Everglades now receives abnormal flood stages or drought. The restoration initiative will reintroduce the cyclic nature of water flow into the Southern Everglades and Big Cypress National Preserve. With the restoration of proper timing, distribution, quantity and quality of water to the remaining Everglades, the system will rebound in a sustainable manner, providing habitat for species recovery ant providing the recreation and tourism dollars to sustain the economy.

Biscayne Florida Bays, and the reef tract—Historically, both Biscayne and Florida Bays, major components of our National Park System, had upwellings of freshwater rejuvenating them during the wet season. Now Biscayne Bay receives most of its freshwater flows through canals passing through urban and agricultural areas. Florida Bay receives very little freshwater flow at all. Florida Bay has collapsed along with a major portion of the fishing and tourism industry that it once supported. Point source discharges and water quality problems plague Biscayne Bay. These two bays, along with the reef tract and the Keys are at the end of the system. They receive much of the brunt of the ecological devastation that is wrought by the mismanagement of water in South Florida. The restoration project will act the water back into more normal cycles. By doing this, and assuring proper water quality, these national treasures will also rebound, helping to both sustain the economy and the environment of South Florida.

The Restoration Project

The following is lied first among the principles used to develop and guide the restoration project (page 9–1 of the Final Feasibility Report and PEIS).

"The overarching objective of the Comprehensive Plan is the restoration, preservation and protection of the south Florida ecosystem while providing for other water related needs of the region" (USAGE, 1999)

To achieve this primary objective, the restoration plan development team had to develop a plan that would capture water resources that are presently lost to tide and treat the water to levels that are suitable for discharge into the Everglades, use the stored water to restore more natural flows through the Everglades, and where necessary, physically restore natural landscapes.

The restoration plan employs a great deal of contemporary and cutting-edge technologies for water storage, water treatment, and controlling exotic/invasive species. Likewise, ongoing research efforts and pilot projects are intended to provide realtime input to restoration projects. The research, the findings, and the application of the newly found knowledge have been and continue to be subject to review by government agencies, independent scientists engineers, and other professionals, and the general public. In general, the development of this restoration plan has been a remarkably inclusive process.

Water Storage and Treatment

The restoration project team developed a plan that would "capture" approximately 20 percent (further analysis may demonstrate greater riveter savings) of the nearly 1.4 trillion gallons of water that are presently discharged to Florida's coastal waters for the purposes of flood protection.

The mechanisms that are proposed for capturing these "lost resources" include approximately 204,000 acres (approximately 530 billion gallons of storage) of conventional water reservoirs (in-ground excavations), impoundments (above-ground pools), and stormwater treatment areas (treatment wetlands). Also proposed in the restoration plan are contemporary aquifer storage and recovery (ASR) facilities, intended to provide in the vicinity of 1 million gallons of multi-year water storage deep below the ground (approximately 800 to 1,000 feet below land surface) in the Floridan Aq-

uifer. Many ASR facilities exist and are successfully operating in Florida, but at much smaller scales, indicating that this form of water storage is viable, In general, these storage and treatment components are intended to capture and treat water resources presently low to tide and detain those resources so that they are available to the natural system in adequate quantities and at appropriate times.

Some key storage and treatment components are proposed for the vicinity of Lake Okeechobee and are necessary to reduce stresses on Lake Okeechobee, the St. Lucie Estuary, and the Caloosahatchee Estuary ecosystems. Together, the components encompass approximately 180,000 acres of storage and treatment areas. Notable components include 20,000 acres of storage norm of Lake Okeechobee, 20,000 acres of storage west of Lake Okeechobee, 39,000 acres of storage east of Lake Okeechobee In addition, 60,000 acres of land (the Talisman Land Exchange) has been purchased south of Lake Okeechobee for the purposes of water storage in the restoration project.

Restoration of Flows

Once the water is captured and treated to levels that are appropriate for the natural plants and animals of the Everglades, it must be delivered to the Everglades and other natural areas in appropriate quantities and at appropriate times. In essence, the restoration project proposes to restore natural flows to the remaining Everglades.

To restore more natural flows to the Everglades and other natural areas, the restoration plan has numerous components that aim to decompartmentalize the Everglades by removing canals and levees from within the remaining Everglades. In addition, measures for mug seepage beneath levees (water seeping out of the Everglades) have been proposed that would allow for the restoration of more natural flows in the Everglades, while ensuring that existing levels of flood protection and water supply would not be decreased.

Habitat Restoration

In addition to modifying the regional hydrologic system (storage and treatment facilities, canals and levees, and other water management infrastructure) the restoration project includes several projects that aim to restore habitat.

To ensure that Florida's unique ecosystem is restored to sustainable levels, the restoration project development team recognized a need to physically restore and improve important habitat areas so that Florida's plants and animals have adequate "breathing space." bootable restoration components include the restoration of Lake Trafford, C–111 Basin pineland and hardwood hammock restoration, as well as various exotic/invasive species removal projects just to name a few.

11Conclusion

Once again, thank you for the opportunity to testify today. I conclude where Marjorie Stoneman Douglas began her tale in the River of Grass. "There are no other Everglades in the world." For 100 years we have, in the finest American tradition, attempted to tame nature. We successfully tamed the Everglades, but it has come at an enormous ecological and economic cost. Taming nature is Me value of America's past, and I believe the values of our fixture are to live in harmony with nature. That legacy has to start some where, ant I believe if eve are to save the Everglades it starts here today.

STATEMENT OF MALCOLM S. (BUBBA) WADE, JR. , SENIOR VICE PRESIDENT, ADMINISTRATIVE SERVICES GROUP, U.S. SUGAR CORPORATION.

Introduction

Mr. Chairman, members of the committee, I am Malcolm Wade, a Senior Vice President of U.S. Sugar Corporation. I am appearing today as a representative of the South Florida agricultural sector. In developing the views presented today, I have attempted to represent the consensus of the Florida agriculture community. I am sure the committee would welcome receipt of additional perspectives, however.

I will summarize my remarks and ask that my prepared statement be included in the hearing record.

I want to thank the committee for coming to South Florida and for its work in the past. After all, this committee and its predecessors authorized the Central and Southern Florida Project that freed this part of the State from its seasonal cycle of floods and drought and has allowed the region to flourish. I want to particularly single out Senators Graham and Mack, and others in our House delegation who have done the difficult balancing act between the various interests and done it successfully in a way that would challenge the Flying Wallendas on the high wire.

The Central and Southern Florida Project is one of the world's great engineering accomplishments and has been critical to the development of a large and vibrant agricultural economy which benefits every consumer in America. In addition, it has allowed millions of people to live along the Coasts of Florida with the security of a reliable water supply and extensive flood protection.

The unanticipated adverse project impacts on the ecosystem as well as continuing population and economic growth in South Florida require that new investments be made. We have participated extensively in the Federal/State Restudy process that has produced the comprehensive plan we are discussing today, and we expect to continue to participate as the process moves forward. We are prepared to support major improvements to the water management system. However, we insist that project modifications be based on sound science, be the product of analysis, and be implemented in an orderly way that ensures that the needs of existing landowners and businesses are met.

Role of Agriculture in the South Florida Economy

All but 3 of the top 13 Florida agricultural production counties, as measured by total cash receipts in 1991, are within the area studied by the Corps of Engineers to develop its comprehensive plan. All but 2 of the study area's 16 counties are in the top half of Florida's counties when ranked by 1991 agricultural production cash receipts.

The economy of the Everglades Agricultural Area (EAA), the area between Lake Okeechobee and the Everglades, is based on agriculture. The primary centers for the economies of the area are the towns of Clewiston, South Bay, Belle Glade, and Pahokee. Besides being the hometowns of most of the permanent labor force, they support much of the agriculturally related supply and processing activities and are the headquarters of many of the agricultural enterprises. They also support the businesses oriented to serving recreational use in the southern part of Lake Okeechobee. Agriculture in the EAA encompasses over 500,000 acres of rich muck soils irrigated, drained and under cultivation. The dominant crops are sugarcane, vegetables, sod and rice. Farm employment in the EAA is seasonal because of the seasonal nature of crop production and harvest activity, although somewhat less so now that sugar cane is mechanically harvested. Jobs attributable to agriculture in the EAA have been estimated up to 40,000 jobs.

While the vegetables are packed and shipped fresh and are not subject to extensive processing, sugar cane is locally processed which adds considerably to its value and the local output of the industry. Six sugar mills in the EAA process all the cane produced in South Florida, both inside and outside the EAA. All sugar cane is grown under contract for processing at these mills. A significant portion of the raw sugar produced by the mills is processed outside of Florida. Implementation of the Jacksonville District's recommended comprehensive plan will have a direct economic impact on agriculture in South Florida with hundreds of thousands of acres of agricultural land taken out of production by the conversion to storage and other Restudy uses. The EAA is one of several areas that will lose tens of thousands of acres of prime agricultural land.

Agricultural production in the study area beyond the EAA consists almost entirely of winter vegetables, tropical fruits, vegetables, citrus and nursery crops. Florida is the national leader in citrus fruit production and the manufacture of processed citrus products and accounts for over 80 percent of the nation's citrus production. Florida is the world leader in the production of grapefruit, accounting for nearly a third of the world's annual supply, and ranks second in the world production of oranges, accounting for almost one fifth of the world's supply. Florida produces 100 percent of the nation's tangelos and over 95 percent of its limes. Florida also is the second ranking State in the production of fresh vegetables. South Florida shares significantly in this agricultural productivity.

Agriculture as an Environmental Steward

Agriculture in South Florida is highly dependent on the quality of the land and water resources, which provide the inputs necessary for profitable production. The sugar cane, citrus, tropical fruits and the wide variety of vegetables that supply the nation's tables, as well as the extensive ornamental plant nurseries, all benefit from the rich soils and high quality water supplies that are essential elements of successful farming practices. South Florida Agriculture has long recognized the value of environmental stewardship to the larger community as well.

Landowners north of Lake Okeechobee have been subjected to special regulations to protect water quality for the last decade. The dairy industry has been reduced by 25 percent and the remaining dairies have invested hundreds of thousands of dollars each to comply with water quality regulations enacted in 1989. The EAA im-

plemented a Best Management Practices program in 1995 that has resulted in a 50 percent reduction in phosphorus in the stormwater runoff leaving the EAA.

Overview of the Jacksonville District's Recommended Comprehensive Plan

Section 528 of the Water Resources Development Act of 1996 directed the Secretary of the Army to develop "a proposed comprehensive plan for the purpose of restoring, preserving, and protecting the South Florida Ecosystem." Section 528 also directed that the comprehensive plan is to, "include such features as are necessary to provide for the water-related needs of the region, including flood control, the enhancement of water supplies, and other objectives served by the Central and Southern Florida Project."

The Jacksonville District's Recommended Comprehensive plan, completed in April 1999, responds to the requirements of Section 528 by developing a conceptual plan and framework for future structural and operational modifications to the Central and Southern Florida Project that will provide for both ecological and economic demands for water for South Florida for the next 50 years. This conceptual plan was developed by an interagency, inter-disciplinary team of experts, and subjected to extensive public review and comment.

The agricultural groups I have talked to throughout South Florida are generally supportive of the Restudy and believe it is needed to assure a sustainable South Florida, both economically and ecologically. However, we in agriculture recognize the enormous task ahead of all of us and want to make sure the project is carried out correctly, efficiently and cost effectively to the greatest extent possible. Although agriculture is supportive of the Restudy, we have concerns which we will address in the following paragraphs.

I should note here that a number of groups ranging from the Sierra Club to Citizens for a Sound Economy share many of the concerns that I will lay out. Of course, we differ with each of these groups on some items, as well. For example, we are broadly supportive of the Restudy, while CSE, with which we agree on issues such as tort reform and taxes and have supported in the past, has become broadly opposed. But there is a consensus spanning the political spectrum that many of the concerns I will discuss need much more careful consideration than they have received to date.

We recognize that the District's study was abbreviated in both scope and depth to ensure that the July 1, 1999, deadline for transmission of the comprehensive plan to Congress could be met. While referred to as a feasibility report, the Central and Southern Florida Project Comprehensive Review Study does not contain the engineering, real estate, economic and environmental analyses that normally support recommendations for authorization of Civil Works projects. Moreover, there simply was not sufficient time to integrate water quality and quantity considerations or to make the usual calculations of the economic benefits and costs associated with the conceptual plan.

In addition to abbreviated engineering and other data collection and analytical shortcuts, there is an extraordinarily high level of uncertainty with the plan because of its reliance on undemonstrated technologies and the evolving understanding of the science of ecosystem restoration. These uncertainties are frankly acknowledged in the report in the following ways: 1) the clear statement that the ecological changes that will occur in the Everglades as a result of the restudy cannot be forecast at this time, 2) the recommendation for construction of $100 million of pilot projects to demonstrate the technology, and: 3) the commitment to the principle of "adaptive management." Adaptive management essentially means: "build projects, operate them and evaluate their performance; if the results are not as intended, try something else."

The Administration has taken the important step of contracting with the National Research Council of National Academy of Sciences to form an advisory committee. The Committee on Restoration of the Greater Everglades Ecosystem will provide a scientific overview and technical assessment of the many complicated, inter-related activities and plans that are occurring at the Federal, State, and local governmental levels. In addition, the National Research Council will provide advice on technical topics of importance to the restoration efforts.

Congress needs to recognize the extraordinary scientific, analytical and technological uncertainties associated with the comprehensive plan. Extra prudence and discipline are essential in the authorization and implementation of this unparalleled series of massive investments in the future of South Florida. Otherwise, we will continue to experience the delays, continuing reconfigurations of project design and operations, and cost increases that presently plague the Everglades National Park Modified Water Deliveries Project.

Agriculture's Benefits from Successful Implementation of the Jacksonville District's Comprehensive Plan

Florida Agriculture has a vital interest in the successful implementation of the Comprehensive plan. Without continuing investments in water storage, the Corps' Restudy predicts that water availability for agriculture will decline as environmental restoration and urban growth place greater demands on the existing system.

New storage facilities associated with Lake Okeechobee, such as those north of the lake and Lake Okeechobee aquifer storage and recovery, will enable the lake to remain an important source of water supply while keeping lake stages at more ecologically desirable levels and avoiding damaging flood releases to the coastal estuaries. Additional storage facilities built throughout the system will diversify sources of water for many users and enable continued economic growth and environmental restoration.

The Report of the Chief of Engineers

The June 22, 1999, Report of the Chief of Engineers on the Restudy and the July 1, 1999, Assistant Secretary of the Army for Civil Works' letter which transmitted this report to Congress, radically departed from the Jacksonville District's April 1999 Report and from the draft report of the Chief of Engineers which was sent to the Governor of Florida and the Federal agencies on April 19, 1999. Rather than affirming the draft Chief's Report which endorsed the recommendations of the Jacksonville District Engineer and the South Atlantic Division Engineer, the final Chief's Report made several major new commitments which dramatically changed the Restudy Plan's priorities and scale, its concept of operation and assurances to water users. Paragraph 31 of the Chief's Report makes 13 specific new commitments including:

- "The Corps proposes to deliver additional water (approximately 245,000 acre-feet) to ENP and Biscayne Bay by either capturing additional runoff from urban areas or by some other means."
- "The primary and overarching purpose of the Comprehensive plan is to restore the South Florida ecosystem. Accordingly, to ensure the successful implementation of the Comprehensive plan, the Corps will work with the Department of the Interior, the Environmental Protection Agency, and other Federal Agencies and the State of Florida to develop the necessary assurances which will address the proper quantity, quality, timing and distribution of water for the natural system. Such assurances will not, to the extent practicable, impact other existing legal water uses and flood protection."

These two are among the most egregious examples of new recommendations that were made without the benefit of any additional NEPA analysis or opportunity for public review and comment. The first is an increase in total water supplied by the project for all purposes by more than 20 percent. Remarkably, no increase in the cost of the Comprehensive plan is identified to collect, store, treat and deliver this additional water. Moreover, this idea of 245,000 additional acre-feet was rejected in the Jacksonville District's analysis because of its adverse impacts to vast stretches of state-owned Everglades.

The second commitment abandons the balanced multipurpose nature of the comprehensive plan called for by Section 528 of the Water Resources Development Act of 1996 that authorized the development of the plan. The new commitment unequivocally subordinates the claims of economic users in time of drought to those of restoration without any evaluation of the economic or the environmental impacts of such a decision. Extreme climatic conditions sometimes call for difficult operational decisions. These decisions are best made in light of the environmental and economic conditions prevailing at the time.

The addition of these commitments has led to litigation in Federal Court. The complaint is supported by a broad spectrum of Florida interests, including the Miccosukee Tribe and several agricultural producers. Its purpose is to seek injunctive relief to prevent the Army Corps of Engineers from implementing them in subsequent planning and design activities in furtherance of the Comprehensive plan. The agricultural community strongly opposes the inclusion of any of the 13 additional commitments in the Chief's Report in any congressional authorization of the comprehensive plan.

Florida Agriculture's Recommendations for WRDA 2000 Authorizations

- Affirm the statement of the Comprehensive plan's multiple project purposes contained in the WRDA 1996 authorization.

Florida agriculture supports the statement of Plan purposes contained in Section 528 of The Water Resources Development Act of 1996: "The comprehensive plan shall provide for the protection of water quality in and the reduction of the loss of

freshwater from, the Everglades. The comprehensive plan shall include such features as are necessary to provide for the water-related needs of the region, including flood control, the enhancements of water supplies, and other objectives served the Central and Southern Florida Project." Congress should affirm this fundamental statement of purposes and priorities in authorizing the comprehensive plan.

- Approve the Comprehensive Plan presented in Jacksonville District's Feasibility Study as a framework to guide future project planning and require periodic updating.

Florida agriculture believes that the Jacksonville District's recommended comprehensive plan is an appropriate guide and framework for the continued plan formulation and detailed technical analysis necessary to achieve the environmental and economic purposes served by the Central and Southern Florida Project for the next half-century. Congress should approve the plan as the framework for future planning and design of the new Central and Southern Florida Project elements and operational modifications.

In approving the comprehensive plan, Congress should require it to be revised periodically based on (1) new scientific knowledge, (2) the results of the pilot projects discussed below, (3) the results of the three feasibility studies recommended in the District's report, (4) the actual benefits and other impacts resulting from newly completed features and changed operational rules and (5) the projected benefits and other impacts of further proposed modifications and additions to the Central and Southern Florida Projects. Such revisions are essential to maintain the comprehensive plan as a current framework guiding future project investments and operational changes over the two-decade implementation period.

Without doubt, integration of the feasibility studies of Florida Bay and Florida Keys, of Southwest Florida, and of the Comprehensive Integrated Water Quality Plan, the actual results received from the completion of feasibility level studies of new construction elements as well as implementation and evaluation of the pilot projects will result in substantial modifications to the plan. Such changes must be anticipated and provided for in congressional action on the comprehensive plan in 2000. A revised comprehensive plan should be submitted to Congress whenever future recommendations for further project authorizations are requested.

- Authorize cost sharing for project operation and maintenance that reflects the unique combination of project purposes served by the Comprehensive Plan.

Congress must recognize that a substantial share of the costs of operating and maintaining the new structures needed to implement the comprehensive plan are associated with ecosystem restoration and with Everglades National Park, specifically. The benefits of restoration are enjoyed across the nation, and indeed internationally, in the case of migrating species and rare and endangered species unique to South Florida. These costs are properly borne by the Federal Government.

- Authorize reallocation of present water users' supplies only when comparable replacement supplies are available to those users.

Florida agriculture supports the Jacksonville District's recommended comprehensive plan because it recognizes that ecological and economic health of South Florida is at risk, and implementation of the plan is essential to restoring and maintaining that health. As an industry which contributes very little to the increase in demand for water over the next 50 years, we are concerned that our existing supplies not be taken from us and given to other users before replacement supplies are in place. Authorize the pilot projects not authorized in WRDA 1999.

Florida agriculture supports the authorization of the five remaining pilot projects recommended in the comprehensive plan which were not authorized previously. Implementation of the $100 million in pilot projects is essential to demonstrate the technology underlying the comprehensive plan. Until we are confident this technology will perform as anticipated and at the projected cost, we can not be confident that the comprehensive plan can serve as the ultimate blueprint for meeting our future water demands.

- Authorize construction projects only when supported by feasibility level studies that have been formally transmitted to Congress by the Administration.

The Restudy has succeeded in producing a conceptual plan that enjoys broad support; however, it is not at the level of detail necessary to define specific construction projects with any reasonable degree of certainty as to their costs, their benefits or even their physical impacts and performance; therefore, the Comprehensive Plan should not be authorized in its entirety. The large geographic area, project scope and complexity of issues have precluded the conduct of studies at the level of detail that normally supports Corps of Engineers construction authorizations. Congress should not authorize construction projects unless feasibility level studies have been completed and the report has been officially transmitted to Congress after full public and interagency review.

The need for strict adherence to this rule is particularly important in the case of these projects because of the uncertainties of restoration science and the complex interaction among individual projects. We are painfully aware that even when projects are authorized after a full feasibility investigation,—in the case of South Florida, the Modified Water Deliveries Project for Everglades National Park—these projects can become mired in design problems and scientific uncertainty and their implementation delayed for years. The comprehensive plan is too important to South Florida and the Nation, to prematurely authorize land acquisition and project construction. Florida agriculture urges Congress to authorize project construction only when a feasibility study has been completed and transmitted by the executive branch. It is also essential that this authorization function be retained by the Congress and not delegated to the executive branch.

- Require incremental justification of projects authorized for construction.

We recommend that Congress require the Corps of Engineers to describe the benefits of each project in the feasibility report supporting project construction. Consistent with Section 528 of WRDA 1996, we are not suggesting that an economic justification be required for projects which do not supply water for economic purposes. However, we believe it is essential that each project be formulated in accordance with the 1983 Principles and Guidelines for Water and Related Land Resources Implementation Studies of the U.S. Water Resources Council and that the contribution of each project to the objectives of the comprehensive plan be described. We believe it is important for Congress to understand the incremental contribution of each investment to the ecological and economic purposes served by the plan before authorizing its implementation. This is a standard requirement for other projects across the nation, and there should be no exception for modifications to the Central and Southern Florida Project.

- Require development and periodic updating of a strategic plan identifying all measures (and their associated life-cycle costs) necessary to achieve restoration and other project purposes including water quality and exotic species management. We share the concerns articulated in the Conference Committee report accompanying the fiscal year 2000 Interior Appropriations Act. The costs of restoration far exceed the $7.8 billion identified as the cost of the comprehensive plan. Moreover, there are several uncompleted projects, including Modified Water Deliveries to Everglades National Park, which will have important impacts on the South Florida Ecosystem. Congress should require the maintenance of the Strategic plan which would integrate all activities, including management of exotic species relating to restoration and a full identification of all restoration related measures and their life-cycle costs.

- Projects should use land acquired from willing sellers and land already in public ownership where practical; otherwise the State condemnation process should be followed.

The Comprehensive Plan calls for acquisition of approximately 248,000 acres of land needed for the various components of the Plan. Most of these acres will be targeted in the rural agricultural areas. To minimize the impact on one segment of the economy, the acquisitions should be focused to the greatest extent practical on willing sellers and government owned land. No one basin or sector of the economy in South Florida should bear a disproportionate burden if land is required to be taken though condemnation.

Agriculture also feels that if condemnation is required, then the State of Florida's condemnation law should be followed which allows the landowner whose land is being taken to be reimbursed for all reasonable costs expended. We believe it is unfair to take someone's land and not reimburse the landowners reasonable costs, such as legal costs and appraisal costs, as is done in the Federal condemnation process.

- Water quality requirements should be agreed to by the Federal and State agencies before any project element is authorized.

Currently, there is no requirement that the Federal or State agencies must present to Congress and the Florida Legislature how water quality standards will be met upon completion of a project component. Water quality must be an integral component of the Restudy. If we don't assess how water quality requirements will be met, we run the risk that we will spend millions and billions of dollars only to discover that we built systems that are albatrosses and must be retrofitted with many more billions of dollars to meet water quality standards. If water quality is not totally integrated with the flood control and water supply aspects of the project we run the risk that the project will be a failure or that the project will ultimately be too costly to complete. By addressing water quality during the authorization process, we will help assure that we build the most efficient systems at the outset and thus the overall success of the project.

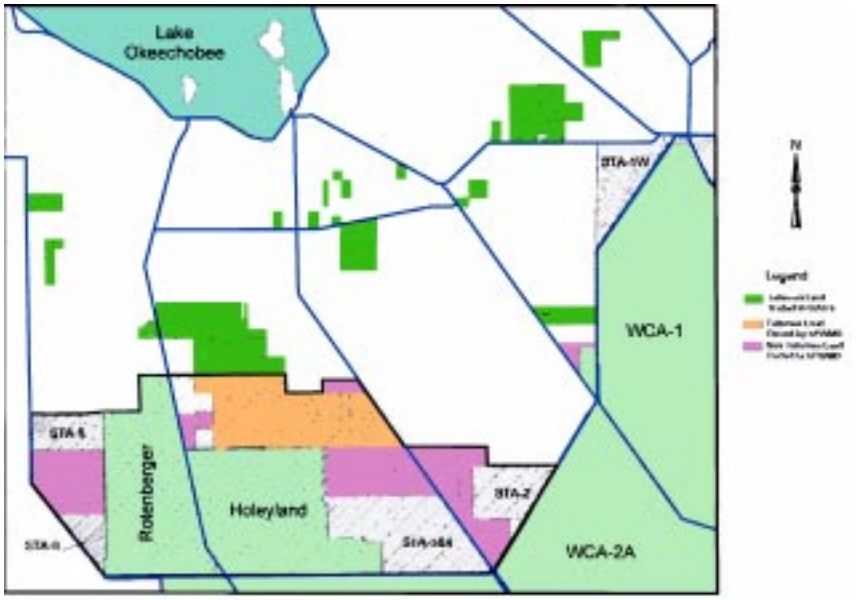
- Funding issues must be resolved.

In the recent past, the Federal Government has had difficulty funding projects such as the Kissimmee River Restoration, the C–111 Project, Stormwater Treatment Area 1-East, etc. The State has not yet found a dedicated source of funds to fund the Restudy projects. Each Restudy project element should have reasonably assured funding from both the State and Federal Government before it is authorized. If authorization and funding commitments are not closely tied, we run the risk of condemning agricultural land and starting construction only to have projects unfinished for years.

Conclusions and Summary of Proposed Principles to Guide Further Authorizations of the Comprehensive Plan

I thank the Committee for this opportunity to present the views of Florida Agriculture on the results of the Central and Southern Florida Project Comprehensive Review Study. Successful implementation of the comprehensive plan is essential to the ecological and economic health of all of South Florida during the next century. The agricultural community is a vital element of the economy of South Florida and will benefit greatly from ensuring that additional water is made available to restore South Florida ecosystems and to provide for a growing urban population.

Congress should affirm the multiple purpose nature of the comprehensive plan and direct its use as a framework and guide to future project planning and design, provided it is regularly updated. It should assure existing water users that their supplies would not be reallocated without replacement water being available on comparable terms. It should act quickly to reduce the uncertainties associated with the proposed comprehensive plan by authorizing and funding the pilot projects as soon as possible. It should not authorize any construction projects that are not based on the same level of engineering, economic and environmental analysis that is required of other projects nationwide.



RESPONSES OF MALCOLM WADE TO ADDITIONAL QUESTIONS FROM SENATOR SMITH

Question 1. What is the contribution that the sugar industry is making in the Everglades restoration effort?

Response. Florida's sugar farmers are paying approximately $12 million a year in special "Agricultural Privilege Taxes" mandated by Florida's 1994 Everglades Forever Act. (This is the only place in the country where farmers are taxed for the "privilege" of farming). These taxes will provide at least $233 million, which is more than 100 percent of the project costs associated with cleaning farm water. The sugar

farmers are the only stakeholders that are currently paying a tax in excess of general ad valorem taxes for the restoration.

Forty thousand acres (60 square miles) consisting primarily of sugar cane farm land were taken out of production to build Stormwater Treatment Areas (STAB) to filter farm, urban and Lake Okeechobee water before it enters the Everglades system.

In addition, sugar farmers contributed $1 million to help build the experimental prototype filter marsh, the Everglades Nutrient Removal Project.

In addition, farmers have spent tens of millions of dollars on the farms to implement a series of Best Management Practices (BMPs)—soil and water management techniques which clean the water before it leaves the farms. These BMPs have been quite successful, reducing phosphorus levels an average of 50 percent a year since 1994, which is twice the legal requirement.

In addition, the farmers formed a special environmental taxing district that has generated about $2,500,000 annually since 1989, used exclusively for environmental restoration within the Everglades ecosystem.

U.S. Sugar also contributed more than 6 years of a top executive's time and expertise serving on the Governor's Commission for a Sustainable South Florida. This commission developed consensus support for the U.S. Army Corps of Engineers Restudy of the Central and South Florida Flood Control System. Sugar farmers continue to support the Restudy in public forums across the country.

In addition, sugar farmers, as large property owners, also pay over $200,000 a year for Everglades Construction as part of property taxes levied by the South Florida Water Management District.

Members of management in all of the major sugar companies have participated in a proactive way on all of the significant committees in the Everglades restoration process, including:

- Governors Commission on the Everglades;
- Governors Commission for a Sustainable South Florida;
- SFWMD Lower East Coast Water Supply Committee;
- SFWMD Lower West Coast Water Supply Committee;
- SFWMD Caloosahatchee River Advisory Committee;
- SFWMD Agriculture Advisory Committee;
- Everglades Forever Act Technical Mediation Group Everglades Technical Advisory Committee;
- Lake Okeechobee Technical Advisory Committee.

Question 2. What have been the effects of the Federal sugar program on the Everglades ecosystem?

Response. The Federal sugar program has had a positive effect on the Everglades ecosystem. It has enabled farmers to continue to keep these environmentally sensitive lands in agriculture. Sugarcane farming has been determined to be the best possible use for land in the Everglades Agricultural Area (EAA). Sugarcane is basically a tropical grass—it needs very little in the way of fertilizers or chemicals. If sugar farmers shifted from sugar to other crops the phosphorus run-off would be at least 200 percent greater.

Other options for these 500,000 acres of land—located near Lake Okeechobee and less than an hour's drive from both east and west coasts—would be development or production of alternative crops. Development would be disastrous for the Everglades, and other crops require many times more fertilizer and pesticides.

There are no subsidy payments to sugar farmers, and the Federal sugar program has operated at no cost to the Federal Government for many years. Reforms to the sugar program in the 1996 Freedom to Farm Bill removed government price supports, which have resulted in sugar prices dropping to 20-year lows. Yet, Florida's sugar farmers are efficient and have been vertically integrating, adding refining operations to compete in an increasingly competitive sugar market.

The Federal sugar program is a response to predatory trading practices by foreign governments who heavily subsidize sugar production in their own countries. Absent the sugar program's import restrictions, this heavily subsidized foreign sugar would flood our markets, driving efficient American producers out of business. Farmers in the EAA would be forced to alternative uses for their land, with many negative consequences for the Everglades.

The option (and ultimate goal of environmental extremists) of the Federal Government buying almost half a million acres of private land and returning it to nature is simply unrealistic. Money for purchasing the land aside, just managing such an expanse would be nearly impossible given the rapid invasion of exotic species on other government-owned land in the South Florida ecosystem. The government would also have to operate and maintain hundreds of pumps (currently owned and operated by the farmers) to move water from Lake Okeechobee south into the Ever-

glades to maintain the water supply for South Florida as the natural contours of the land have changed over the last 50 years.

Question 3. In what capacity is the Talisman property currently being used by the sugar industry?

Response. The transaction that gave the government the title to the "Talisman Property" was a complex package of trades with, and lease-backs to, several agricultural companies. The former Talisman tracts that were traded to consolidate the government ownership are now owned, and are being farmed, by the companies who participated in the trades. These properties are shown in dark green on the attached sketch.

The land that is now owned by the government (the South Florida Water Management District), whether it was originally owned by Talisman (shown in orange on the attached map) or another company (shown in pink on the attached map), is being farmed under leases held by the SFWMD. The understanding during the negotiations of the Talisman agreements was that this land would continue to be farmed until the government needed the property for the construction of the water projects envisioned in the Restudy. Essentially all of the land now controlled by the government in anticipation of it being found suitable for use as part of the EAA reservoir project is encumbered with leases that allow farming at a minimum through 2005 or 2008, depending on the specific parcel, with a maximum term of 20 years.

The parcels that were owned by a company other than Talisman, but are now part of the government holdings, are under lease to the original owner and are still being farmed and are shown in pink on the attached schedule. The government owned land that formerly belonged to Talisman is leased to the companies who participated in the land exchange. Because of the cropping cycles associated with sugar cane the government agreed to give the lessees a 30-month notice prior to requiring them to vacate the land.

The attached sketch illustrates the government land holdings as a result of the Talisman transaction and the related lease expiration dates.

Question 4. How does this change once the Everglades Agricultural Area Storage Reservoirs are put into place?

Once it is determined how much land is needed for reservoirs and where these reservoirs will be located, there will be no use by the sugar companies. The water storage projects will become components of the Central and Southern Florida Project and will be owned and operated by the SFWMD. It is worth noting that the location of the EAA storage facilities modeled in the Restudy does not match the real estate the SFWMD now controls as a result of the Talisman transaction.

It will be necessary to reformulate the reservoir plan during the design process to determine the final configuration, operation, cost and feasibility of the facilities.

RESPONSES BY MALCOLM WADE TO ADDITIONAL QUESTIONS FROM SENATOR BOB GRAHAM

Question 1. This year in the Interior Appropriations bill, Congressman Regula called for the development of "assurances" language that would ensure that the park and natural systems in the Everglades region receive adequate quantities of water. I know that the Administration and the state are working very hard to develop this language for inclusion into the Administration's WRDA proposal. Can you describe for me the basic principles that you feel are critical elements of this language and why?

Response. 1. Assurance provisions should be incorporated into WRDA 2000 that are consistent with the Restudy purposes expressed in WRDA 1996 that, through implementation of the Comprehensive Everglades Restoration Plan, both environmental needs and other water related needs of the region will be met in a balanced way.

The goals and purposes of the Proposed Comprehensive Plan include meeting not only environmental needs but the other water related needs as well. The South Florida Water Management District, as local sponsor of the C&S Florida Project is relying on the Comprehensive Plan to meet not just environmental water needs but other water supply and flood protection needs for urban and agricultural areas.

Consequently, providing assurances that both environmental and economic needs will be met is fully consistent with the goals of the overall Comprehensive Plan of the Restudy. The current assessment of the Restudy team is that to meet all needs, roughly 80 percent of the new water will be used for the environment and the remaining 20 percent for other needs.

2. Assurance that all needs will be addressed in a balanced way must also be provided through a clearly defined authorization process for plan components which

will rely upon the Project Implementation Reports now proposed by the Restudy's Implementation Plan.

The Proposed Comprehensive Plan is highly conceptual and based on hydrologic models that will be further refined and are likely to produce changing environmental restoration targets. The currently proposed project components are based on these model results, not on engineering designs or evaluations of operating efficiency or cost-effectiveness. The pilot projects may also reveal the need for substantial changes to the proposed Plan. These uncertainties are acknowledged within the Restudy Report of April 1999.

Consequently, each project implementation report should be required to identify the increase in, or reallocation of water supplies that would result from the project component and the uses to be served upon completion of the component. When Congress authorizes the component, it would then also affirm the assurances as to the uses that would receive the benefits of the component's implementation.

This continuing process will meet the goals and objectives of the Everglades Restudy in a more direct and quantitative way and can be used to provide specific guarantees to all interests that individual project components will provide measurable and enforceable contributions to the Comprehensive Everglades Restoration Plan objectives.

Question 2. You have raised some concerns regarding this authorization of the Restudy without a detailed feasibility study. Can you explain why you feel the Restudy should not move forward without this level of detail?

Response. Our position has never been that the Restudy should not move forward. We have been active players in the formulation of the Comprehensive Plan and now support its approval (without the additional commitments in the Chiefs Report) by Congress as a framework for continued planning and design of future project modifications. We supported the Critical Projects process authorized in 1996, and we supported expediting the two ASR Pilot Projects authorized in 1999. We support authorization of the additional Pilot Projects in WRDA 2000. Congressional direction regarding the comprehensive plan and construction of the pilot projects are essential if the restoration process is to proceed as quickly as Federal and State resource limitations will allow. We support funding of all restoration activities at the Corps' capability level in fiscal year 2001 and beyond and note the Corps presently has the authority to continue preconstruction planning and design of additional project elements.

We believe that the Restudy should move forward without delay at both the state and Federal levels. We do not, however, support construction authorization by Congress for major Restudy components in the absence of the basic engineering, economic and environmental analysis that details the project's cost, performance and feasibility. Premature authorization will not speed up the final construction or operational date for any project. In fact, it may become an obstacle to the process if the detailed analysis leads to a significant deviation from the conceptual plan that would be authorized in WRDA 2000. We believe that all parties should work together to find a process that allows the Restudy to move forward without delay while the needed final engineering analysis is completed. Our position is no different from the long-standing position of several administrations concerning water project authorizations, and we note that this position was affirmed by President Clinton as recently as his signing statement for WRDA 99.

In addition, the detailed feasibility studies, referred to as Project Implementation Reports (PIR) in the Restudy, are the most appropriate vehicles for providing the assurances to Congress and other interested parties that the benefits projected to flow from the Comprehensive plan will actually be obtained. These reports will document and quantify how each component will work, what the restoration goals are and how much water can be expected to be provided to the ecosystem and other uses. This information can form the basis of binding water allocations to the environment and to other users that can be tied to completion of the component and the resulting change in systems operation. Water quality and other environmental and economic considerations will also be clarified.

STATEMENT OF NORA WILLIAMS, MONROE COUNTY COMMISSIONER, MARATHON, FL

Mr. Chairman and members of the Committee, I want to thank you for this opportunity to testify before the Senate Committee on the Environment and Public Works on the important issue of the Everglades Restudy.

Mr. Chairman, as a member of the Board of Monroe County Commissioners, I serve as the County's Land Use Liaison to the State of Florida, and I represent the Commissioners on the National Marine Sanctuary's Water Quality Steering Com-

mittee. I am also a recent appointment to the Governor's Commission for the Everglades. My county, Monroe, is better known as the Florida Keys, but it also includes vast tracks of the mainland Everglades and is the southernmost component of the Everglades ecosystem.

My testimony before you today will be confined to five critical points:

ONE: The restoration of the Everglades is absolutely critical to the future of South Florida and the Restudy is our last best chance to restore the Everglades. This is about more than our water supply—there simply is no South Florida as we know it without the Everglades. Fully one third of Everglades National Park is Florida Bay, the shallow body of water between the mainland and the Florida Keys. It is the nursery ground of the marine creatures that make their homes on the reefs of the Florida Keys, thus serving as the foundation of both the Florida Keys' ecosystem and its economy.

TWO: We must start right away. The Restudy really must be authorized in the year 2000. The condition of the Everglades is not stagnant, but is getting steadily worse over time, and can be expected at some point to reach ecological collapse. And there often isn't recovery from collapse. Fragile ecosystems reach a point where no amount of action can ever restore what has been lost And sometimes when I'm walking along the edge of the grassy wetlands of the Everglades, I'm deeply frightened of how close we are to irretrievable loss.

THREE: The Restudy is an evolving process. When you examine the Restudy, you're definitely looking at a flawed document—there can be no question about it. There's a paragraph for just about every vested special interest in the State—with one major exception I will mention later—and the plan is fundamentally compromised repeatedly on one side or the other. But, as it stands, it's as close as we're likely to get to consensus with something this mighty, this expensive and this complex. Please recognize that your approval of the Restudy begins a process of refinement of these expressed objectives and plan—work to be done not before the passage of the Restudy but as the approved and funded Restudy evolves.

FOUR: The Restudy must not be the basis for further degradation of the Everglades ecosystem. Much of the expense of the Everglades Restudy is directly traceable to undoing the earlier work of the Army Corps of Engineers this century in Florida. Work to control and direct the flow of water for the convenience and profit of a single species is rarely wise, even when that species is us—and we're now finding the cost of single species ecosystem manipulation is not only expensive, its devastating and almost always harmful even to the single species it is designed to benefit. Let's enter this Restudy pledged not to commit the mistakes of the past and determined that we will not balance every step forward with a step back.

FIVE: Funding water quality improvements in the Florida Keys is crucial to the Restudy's success. Increasingly, the Army Corps of Engineers has come to see that their job, if responsibly undertaken, isn't just about the movement of water—it's about the quality of the water that is moved. That's why I'm deeply distressed by the one special interest I know of that didn't get included in this Restudy you'll find remarkably little mention of the Florida Keys, the enormous wastewater and stormwater challenges we face, and no money allocated to help with those problems.

The Florida Keys are essentially the southernmost third of the Everglades. What happens in South Florida to the north of us ends up in our Bay, in our backyards, flowing through to the precious reef tract that is not only the world's No. 1 dive destination, but the boundary of the Everglades ecosystem. With documented water quality concerns that made headlines in national press across the Nation last year, how could we have emerged completely unfunded from the Restudy? Our wastewater system upgrade costs are higher than anywhere else because our islands are solid rock, and the water quality standards to which we are being held are higher than anywhere else. And yet, with our cost of living among the highest in Florida, our citizens have one of the lowest incomes. We brought these issues formally before the Army Corps of Engineers during their public hearings to no avail.

I can't accept the argument I hear most frequently for our exclusion—that the Restudy is a delicately balanced Christmas tree, already heavily laden with special interest and specific project ornaments—that one more may topple this precious tree. Ignoring what the Keys face, and those impacts on the Everglades ecosystem, is like saying the tree is finished before you put the star on top.

We have a Restudy that recognizes the wastewater crisis in the Florida Keys, that acknowledges that solutions for this crisis are, and I'm quoting here, Beyond the means of Tanya and yet offers no help for us in its $8 billion budget. We're not left out because the problem isn't recognized, and we're not left out because our problems and their expense pale in comparison with those that were selected for funding inclusion.

Can it simply be about our lack of clout? With only 85,000 people spread across 150 miles of islands, have we so little voice in the process? I just don't know. But I can tell you with absolute conviction something that I really DO know—water quality surrounding the Florida Keys is deeply threatened and we cannot bear the burden alone. I am here before you today to ask, whether within the Restudy or through a separate appropriation, that you don't forget us. The Florida Keys are a national treasure, a part of the Everglades ecosystem, and we too are in danger of irretrievable loss and unbearable burdens.

The Everglades Restudy is our last, best chance to recover something we can't afford, in any sense of the word to lose, and the time for the Restudy's approval is now. Let us acknowledge that the Restudy is flawed and that it will evolve over time. And let us pledge to one another that the Restudy will be committed to movement forward! not used as an excuse for allowing additional degradation of the Everglades. And let me beg that you not forget the place I'm so proud to call home the Florida Keys.

STATE OF FLORIDA,
Office of the Attorney General, January 3, 2000

The HONORABLE BOB SMITH, *Chairman,*
Senate Committee on Environment and Public Works,
Dirksen Senate Office Building,
Washington, DC 20510–6175.

DEAR SENATOR SMITH: It is a privilege and a pleasure to welcome you to Florida as part of the review of Everglades legislation by the Senate Committee on Environment and Public Works.

Few issues are more important, or more galvanizing, for Florida than the fate of the Everglades. I am sure your committee colleague Senator Bob Graham has on more than one occasion described to you the splendor of the Florida Everglades and the crucial role played by the Everglades system. Senator Graham's efforts to protect and restore the Everglades system, begun when he was our Governor, remain at the top of Florida's agenda. In a newspaper survey just this week, Florida's eight living Governors unanimously agreed that the environment—led by the Everglades—is the central issue facing our state in the 21st Century.

The Everglades restoration legislation under review by your committee is desperately needed to ensure the long-term protection of this vital environmental resources. In welcoming you to our state, I strongly urge you to lend you full support to the legislation.

Sincerely,

ROBERT A. BUTTERWORTH, *Attorney General.*

FLORIDA HOUSE OF REPRESENTATIVES,
Tallahassee, Florida 32399–1300, January 5, 2000.

The HONORABLE BOB SMITH, *Chairman,*
Senate Committee on Environment and Public Works,
Dirksen Senate Office Building,
Washington, DC 20510.

DEAR SENATOR SMITH: Allow me to take this opportunity to welcome you and the members of the Committee on Environment and Public Works to Florida.

We are pleased to have the opportunity to reiterate the state's longstanding commitment to the restoration of Florida's Everglades. The Everglades are a uniquely valuable natural resource and well worth our best efforts to assure that restoration is ultimately successful. What we have in the Comprehensive Plan for the Restudy is an overall strategy for restoration. Now that it is time to begin implementation, it is imperative that we closely examine each planned project to determine those that maximize ecosystem benefits. Moreover, it is our responsibility to see that the public dollars available for Everglades restoration are put to their best use.

Rest assured that Florida is committed to continuing our partnership with the Federal Government to restore the beauty and vitality of the Everglades ecosystem. file will be following your committee's actions with great interest and look forward to working with you.

Sincerely,

JOHN THRASHER, *Speaker.*

STATEMENT OF HON. CARRIE P. MEEK, U.S. REPRESENTATIVE FROM THE STATE OF FLORIDA

Mr. Chairman, I bid you a heartfelt welcome to this part of the Sunshine State. I want you to know that I am a native Floridian. For this reason, I am honored to participate in these proceedings that, I hope, will finally lead to a sensible and realistic legislation in the Congress as soon as possible.

In the interest of time, I will be brief but succinct in my remarks, knowing full well that we have among us today a group of the most committed and erudite witnesses whose resilient dedication to the Everglades has withstood the challenges of the times. I also would like these remarks to be included in the proceedings of this hearing.

Mr. Chairman, from my perspective I want to focus on one basic issue: The Comprehensive Plan that should define our legislation for the restoration of our precious Everglades should include specific elements designed to ensure equitable treatment of all segments of South Florida's population in order to prevent disproportionate negative impacts on minority populations due to the implementation of specific engineering projects.

In light of this issue, I see two glaring consequences of the Everglades restoration on inner city residents.

1. The implementation of market-driven initiatives of the State of Florida that are linked to Everglades restoration will redirect development and growth to communities where African-Americans live and will result in their displacement and dislocation and thereby diminish their quality of life.

As is usually assumed, growth is not always synonymous to progress.

2. Whatever comprehensive plan that will emerge from the Everglades restoration will alter the South Florida landscape in a manner that creates opportunities for the kind of excesses we Floridians have experienced over the last half-century.

It is not tenable to then say those results—unintended consequences, for the most part—were not also the responsibility of those who devised and supported the Plan. And if the genuine measure of a society is how it takes care of the least of its members, the disenfranchised, the young and the old, the poor and, the sick, then in order for the Everglades restoration to be the success we all want it to be, the Comprehensive Plan must include, as part of its essential thrust, measures that address environmental justice and community revitalization. It will not long succeed unless all of us are included in this Plan.

Mr. Chairman, it is my understanding that this project carries along with it some $8 billion. It is easily the largest public works project not only in the United States, but throughout the world.

Accordingly, I would like to issue a call to action to the proponents of this project not to summarily exclude our inner city residents—African-Americans and other minorities—whose lives will surely be affected by it.

Let us not be oblivious of one other Federal program that masqueraded as "urban renewal," whose glaring effects resulted in the disingenuous dislocation of many African-American families in the inner cities.

Rather, let us be inclusive and responsive by aggressively engaging these very same affected residents via a comprehensive program designed to teach them on strict environmental clean-up standards, train them on environmental rehab and health safety projects, as well as job creation criteria.

Finally, Mr. Chairman, as we discuss, debate and think through the various phases of any plan to restore the pristine beauty and strengthen the longevity of our precious Everglades, indeed the most crucial and challenging undertaking in this new millennium, I would like all of us to hearken to the wisdom of the 1987 United Nations' World Commission on Environment and Development Report. Though written more than a decade ago, its timeliness is as salient today.

It defined sustainable development as ". . . development which meets the needs of the present without endangering the ability of future generations to meet their own needs."

That definition rests on three principles:

1) that the future must not be sacrificed to the demands of the present;

2) that humanity's economic is linked to the integrity of the natural systems; and

3) that protecting the environment is impossible unless improve the economic prospects of the Earth's poorest people.

Mr. Chairman, thank you once again for this opportunity and I look forward to working with you in the Congress for the good of my fellow Floridians, for the good of our nation, and for the longevity of Mother Earth.

U.S. HOUSE OF REPRESENTATIVES,
Washington, DC, January 6, 2000

The HON. BOB SMITH, *Chairman,*
Committee on Environment and Public Works,
410 Dirksen Building,
Washington, DC 20510

DEAR BOB: As the Dean of the Florida Congressional Delegation, let me welcome you to Florida for your hearing on the Everglades restoration project.

As you know, this project is a top priority for our entire delegation as well as our Governor Jeb Bush. However, restoring the Everglades is more than a state priority, it is a national priority. As you will see and hear during your visit, the Everglades is a unique ecosystem and the decisions we make about its future are critical and very complicated.

One of the principal witnesses who will testify before your Committee tomorrow is Nat Reed, who has long beers a very good friend of mine. His resume lists his many distinguished accomplishments including his service at the Department of Interior. What his resume does not say is how widely respected he is throughout our state and throughout the environmental community. He has devoted himself to the Everglades project and I know you will find his thoughts to be very compelling.

Again, welcome to Florida and I look forward to any thoughts you might have about the Everglades project when you return. With best wishes and personal regards, I am

Very truly yours,

C.W. BILL YOUNG,
Member of Congress.

TREASURER OF THE STATE OF FLORIDA,
January 4, 2000.

The HONORABLE BOB SMITH,
Dirksen Senate Office Building,
Washington, DC 20510.

DEAR SENATOR SMITH: I wish to welcome you and your committee to sunny, southwest Florida and to thank you for holding a field hearing regarding the proposed Everglades restoration. Florida is honored to act as host to your committee.

I have been a long-time advocate of restoring the Florida Everglades ecosystem and support you and your committee in your efforts toward this worthy goal.

Sincerely,

BILL NELSON.

STATEMENT OF HON. MARK FOLEY, U.S. REPRESENTATIVE FROM THE STATE OF FLORIDA

First and foremost, I want to thank Chairman Smith for this hearing. It is the first one in his capacity as chairman of the Senate Committee on Environment and Public Works—and, by that virtue alone, sends a strong signal on the importance of restoring the vitality of the Florida Everglades.

Thanks to the support of congressional colleagues such as the Chairman, all of us who are part of the Florida congressional delegation have been able to bring the issue of the Everglades into the national spotlight. It is now recognized across America—as it long has been by Floridians—as a national treasure that needs to be protected.

It also is now widely recognized that it is a treasure in need of help.

The good news is that we know the cause of its problems: more than 50 years of diverting the natural ebb and flow of water—the lifeblood of the Everglades—from the Kissimmee River north of Lake Okeechobee to the Park's boundaries in Florida Bay. This diversion has often left the Everglades with too much or too little water, endangering the native plant and wildlife accustomed to the Everglades historic water flows.

In order to preserve the Everglades, we need to restore its natural flow of water—and that will take a tremendous and vital partnership between Federal, state and local governments. That is why I so welcome Chairman Smith's committee here today, to officially begin our congressional review of the recommendations contained in the Restudy, which was presented to Congress last July.

The Restudy is vital to reestablishing the Everglades' traditional water flow while maintaining existing levels of flood control and improving urban and agricultural water supplies.

Ever since the U.S. Army Corps of Engineers began the Restudy effort to reevaluate the damage done by its old public works projects, we have learned that drainage improvements designed to supply water and protect us from devastating floods also have caused the decline of much of the South Florida ecosystem.

Nowhere is this more evident than the St. Lucie River in my own congressional District.

The St. Lucie River has long been a vital part of our local economy. Aside from the obvious draw of our beaches, tourists from all over come to Florida for boating, fishing, and other water-related activities. The St. Lucie River has always attracted many of these tourists because of its clear waters rich in fish and surrounding wildlife. Historically, this pristine ecosystem was supported by the slow natural drainage system of creeks and wetlands in central Martin and southern St. Lucie counties.

As demand for agricultural and residential development grew, however, the advent of drainage canals caused dramatic changes in this fragile ecosystem, especially in the past few years. With each heavy rainfall in South Florida' the St. Lucie River has had to absorb billions of gallons of phosphorus-laden excess water from Lake Okeechobee, stressing the mix of saltwater and freshwater needed by marine life in the river. This situation has begun to have a devastating effect not only on the river, but on the economies derived by local fishermen and from tourism.

Thankfully, the mission outlined by the Restudy will help us restore not only the Everglades National Park but also the St. Lucie River, which needs to return to its historic, pristine state. By addressing water storage problems on a regional scale, recommendations in the Restudy will mitigate future freshwater releases into the St. Lucie River.

I look forward to working with Chairman Smith and my colleagues in the House to move forward with the Restudy this year. We must do everything we can to restore a national treasure place bit as precious and unique as the Grand Canyon and Yosemite National Park.

West Palm Beach, FL, January 6, 2000

DEAR HONORABLE SENATORS: I have asked Mr. Reed to add my message in with the materials that accompany his testimony before your subcommittee.

My message is an ancient one: people, not governmental bodies, do the work. People like yourselves and those who are before and behind you are the engines that power action.

We are blessed that the remnant Everglades still exists, in part due to the actions taken by brave individuals nearly a century ago. In 1905, Audubon conservation officer Guy Bradley was shot dead while protecting wildlife in the Everglades. His death—the first conservationist to die tragically in the line of duty—rallied others to take action to protect the Everglades. It saddens fine to add that many others have died tragically in the Everglades and elsewhere in the world while protecting nature from our greed. I have included materials on some of those who have died tragically while working in the Everglades.

We are now on the brink of destroying what our ancestors worked so hard to protect for us and for those who will follow us, If they were with us today, how would those ancestors react to our inaction? How will our children children judge our actions?

Our offspring are facing a paved wasteland overrun by invasive exotic plants and animals because of our inaction. Future generations will see the evidence of many hearings and words ire The Congressional Record, but that is not action. What you do or not do is most important to future generations, but they cannot be here before you to make their pleas.

This past May I was also privileged to be the developer/coordinator of the first South Florida Restoration Science Forum. The online forum registry has the names of nearly 400 people who registered. It is estimated that hundreds more also participated in the no-charge 3 day event. Now, thousands participate in the forum as it continues on the Internet (http://sofia.usgs.gov/sfrsf/). I have included several pages on the forum exhibits, so that you can see how the forum focused on the science reseeded for resource management decisionmaking actions.

Presently, I'm part of a collaborative effort to build a web-based "virtual village" to connect the many disparate and often disconnected Internet sites for the efforts that are vital for balancing the needs of nature and man in southern Florida.

Evergladesvillage is organized to provide knowledge by regional location and by specific interest. It eliminates the need to jump between the web sites of numerous organizations to find what each is contributing. I have attached informational cards about Evergladesvillage. It's Internet address is http:/fwww.evergladesvillage.net.

I thank you for the opportunity to be part of your work. Best wishes in your decisions and your actions,

Respectfully submitted,

ROBERT MOONEY,
P.O. Box 222154,
West Palm Beach, FL 33422–2154

RESPONSE OF THE LAKE WORTH DRAINAGE DISTRICT TO THE COMPREHENSIVE REVIEW STUDY

Executive Summary

On July 1, 1999 the United States Army Corps of Engineers (Corps) submitted the Final Report of the Central and Southern Florida Project Comprehensive Review Study (Restudy) to Congress. The Restudy Plan recommends wholesale changes to the water management system in south Florida to provide for urban, agricultural and ecosystem sustainability through the construction of $7.8 billion worth of new water projects. The emphasis is on creating new water storage features to provide for growing environmental and urban demand.

The Restudy Plan recommends several project features within or adjacent to the Lake Worth Drainage District (LWDD). Although these will necessitate structural changes to the LWDD facilities, of more concern are the significant operational changes that will be needed to incorporate new sources of water, which will include numerous Aquifer Storage and Recovery (ASR) systems and new above ground reservoirs.

The LWDD has participated in the process to develop the Restudy Plan and strongly supports congressional action to continue the process. Like many in south Florida we acknowledge the need to modernize the Federal water management system to promote both restoration of the ecosystem and continued economic prosperity. For the Restudy to succeed, the implementation phase must demonstrate that the technological solutions that are proposed will work, are affordable and will be constructed in a sequence that minimizes disruptions to existing activities and investments. There was broad consensus on these concepts throughout the development and publication of the Draft Plan last fall.

Unfortunately, as soon as the public comment period was closed the Department of Interior expressed its dissatisfaction with the plan they had been instrumental in developing and demanded expensive, impractical changes to meet a narrow set of objectives. This led to a hurried ad hoc analysis by the Restudy planners of new features to pump large quantities of urban stormwater from West Palm Beach all the way to Everglades National Park. The structural changes necessary to make this possible are overwhelming. It would require the complete reorientation of a major portion of the LWDD system. Canals would have to be enlarged onto property that now holds hundreds of houses, business and major highways. The costs would be staggering. These costs are not included in the current $7.8 billion price tag.

The process that led to this revised plan has reinforced a general discomfort with the Federal process controlling the Restudy. Local government staff and various public groups worked with the Corps over several years to develop a balanced plan that most people understand, only to have an elite group within one Federal agency attempt to obtain major changes without any public participation. The Corps has legitimized this closed door process by committing, in the Chief of Engineers' Report, to water diversions that cannot be made with the facilities in the Recommended Plan. Unless Congress insists on an open process to implement a plan that is based on sound engineering and economics the restoration of the Everglades will not have the support of the people of Florida.

Conclusions

1. The Comprehensive Review of the Central and Southern Florida Flood Control Project is timely and necessary to assure the protection of the Everglades and future water supply for the people of south Florida.

2. The Recommended Plan presented in the Draft Integrated Report, although dependent on the large-scale application of untested technologies, nevertheless provides a reasonable framework to begin a deliberate program to accomplish the objectives.

3. Due to doubts about the viability of several of the most important Restudy Plan components, Congress should authorize and fund the pilot projects necessary to prove the feasibility of the new technologies and a few critical projects for which the engineering, economic and social impacts are not an issue.

4. Diverting urban runoff from West Palm Beach through the LWDD canal system to Water Conservation Area 2 is not practical, and may not even be possible, given the number of existing public and private facilities that would have to be abandoned or significantly modified.

5. The commitment by the Chief of Engineers to provide 245,000 acre-feet of additional flow to Everglades National Park, above the unprecedented increases already provided by the Recommended Plan, is a breach of faith with those who participated in the development of the Plan and should be flatly rejected by Congress.

6. The recommendation by the Chief of Engineers that the Federal Government pay none of the future operations and maintenance costs, when the process has been controlled to favor the agendas of Federal agencies at the expense of local interests, will eliminate any chance of the Plan being accepted by the people of Florida.

Introduction

The Lake Worth Drainage District (LWDD)(see Figure 1) was established June 15, 1915 to provide water management to a 218 square mile area of eastern Palm Beach County. The mission has evolved as the area developed such that the LWDD now provides essential groundwater recharge to support 23 public water utilities serving over six hundred thousand people. For the last 45 years the District has relied on water supply deliveries from the Central and Southern Florida Project to recharge public water supply wellfields, maintain canal levels to prevent saltwater intrusion and provide irrigation and drainage to a vital agricultural area.

In 1992, The United States Army Corps of Engineers (Corps) was authorized by Congress to develop a plan to reconfigure the water management system in south Florida to provide for urban, agriculture and ecosystem sustainability. On October 13, 1998, after 3 years of multi-agency effort to develop a plan, the draft Comprehensive Plan of the Central and Southern Florida Comprehensive Review Study Project was released for public comment. Public meetings were held around south Florida to present the Dratt Plan and receive public testimony. December 31, 1998 marked the conclusion of the public comment period and the Corps subsequently began preparation of the final Plan considering responses to the draft by the public and other agencies.

The Final Plan presents a conceptual outline of $7.8 billion worth of capital projects to rebuild the water management system in south Florida. It is a plan that requires all interest groups to place their faith for ecosystem restoration and reliable water supplies in a process that will unfold over the next 20 years. Federal commitments to early investments in restoration are accompanied by assurances to existing water users that the transition to new technologies will not deprive them of the water supply and flood protection they now enjoy. Questions about the feasibility of the new technologies are to be answered by a series of up front pilot tests of field scale prototypes.

Given enough time, money and sustained good faith by all involved parties the Restudy has the potential to provide a healthy ecosystem and economy for generations to come. Unfortunately the door was barely closed on the public comment period when the Department of Interior began demanding changes to the Plan which would add hundreds of millions of dollars to the cost of the plan.

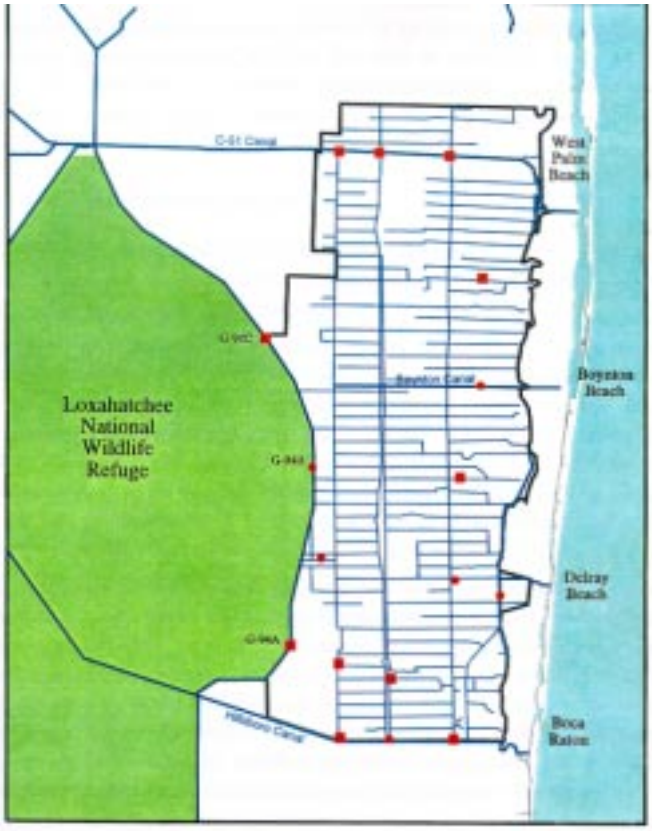


Figure 1. Canal Network and water control structures of the Lake Worth Drainage District.

On December 31, 1998, the last day to submit written comments to the Corps, the staff of the National Park Service delivered a 70 page indictment of the $7.8 billion plan. They concluded that there was insufficient evidence to claim the recommended plan would result in the recovery of a healthy, sustainable ecosystem. "Rather, we find substantial, credible, and compelling evidence to the contrary" their report stated.

This response by a lead Federal agency involved in the study prompted an immediate, closed door, redesign process to see if the plan could be amended to satisfy the Park Service. This process has had a significant impact on the recommendations contained in the Chief of Engineers' Report to Congress, without having been exposed to public review and comment.

The Lake Worth Drainage District

The LWDD water management system provides flood protection to 20,000 acres of prime agricultural land and 100,000 acres of urban development. Facilities include over 511 miles of canals and 20 water control structures.

Protecting private property and public facilities from flooding has always been an essential service provided by the LWDD. This is accomplished by a well-designed and maintained network of canals and control structures capable of removing excess stormwater without over draining the land or wasting valuable water. The present system is functioning at its build out capacity and new developments are required to hold water onsite and elevate roads and buildings so the present discharge capabilities are not exceeded. It is essential that any new facilities added to accomplish Restudy goals recognize the constraints inherent in the existing flood protection mission and capabilities of the LWDD.

In the 1950's the Corps of Engineers connected the LWDD canal network to the water storage features of the Central and Southern Florida Project. (Figure 2) This transformed the drainage and water conservation system of the LWDD to an integrated water management system capable of supplying dry season recharge to urban wellfields supplying water to hundreds of thousands of people. Water delivered by the LWDD system is used to satisfy the needs of public utilities, golf courses, residential landscaping and a diverse and economically important agricultural economy. It is also essential to protect water supply wells from salt water intrusion during droughts. (See Figure 3)

(1) Quoted from a report entitled "Comments of Everglades National Park on the Programmatic Environmental impact Statement and Alternative D13R" December 31, 1998.

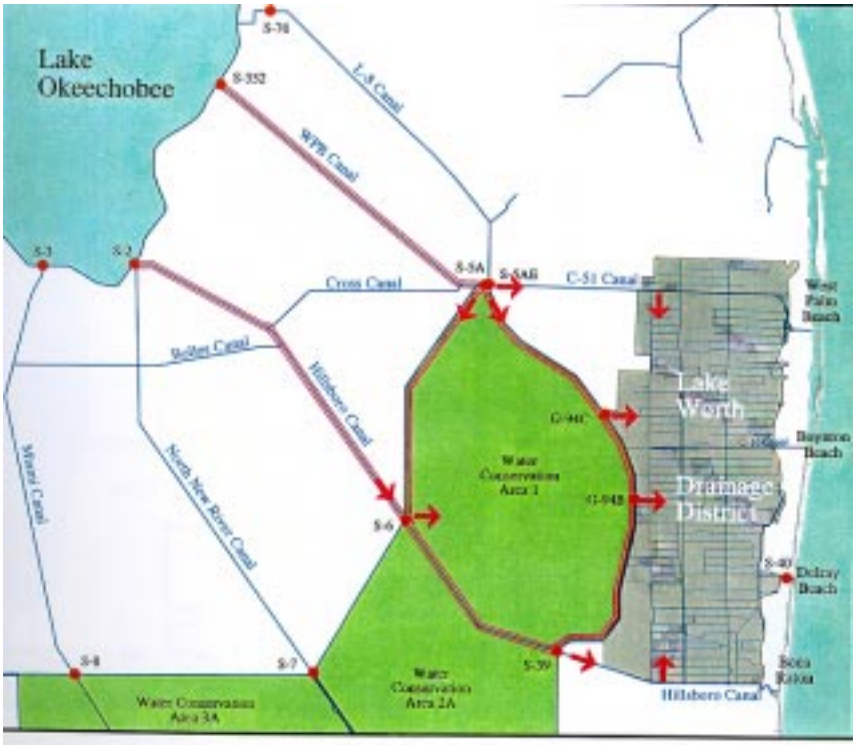


Figure 2. Connection of the Lake Worth Drainage Facilities to the federal project facilities constructed in the 1950s. The District recharges urban water supply wells in Palm Beach County by receiving water from Water Conservation Area 1 and Lake Okeechobee during dry periods.

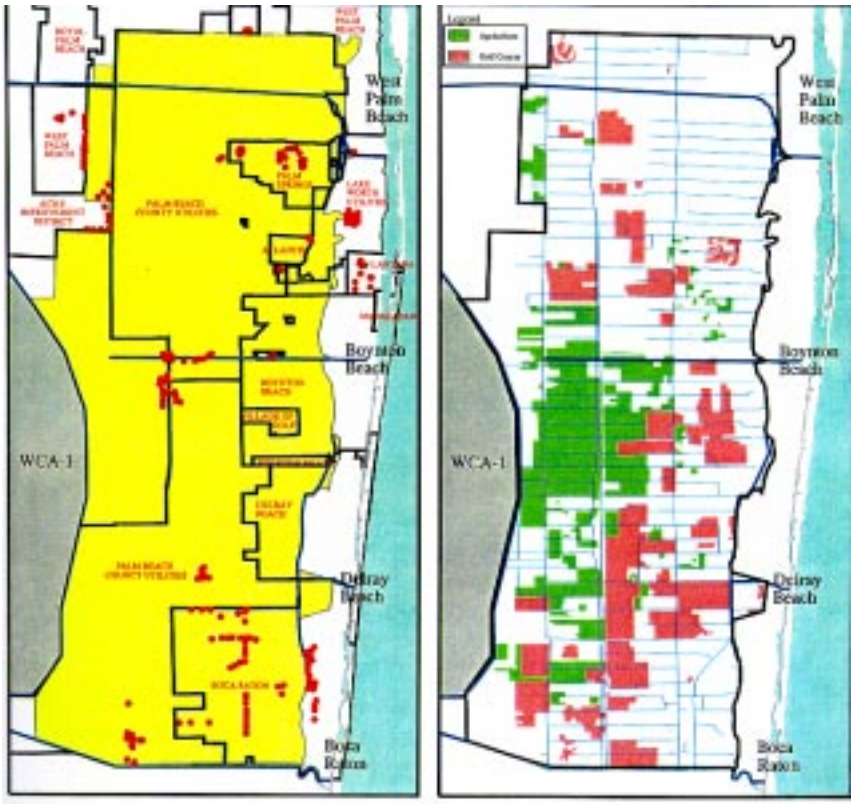


Figure 3. Urban water utilities (left) and agricultural and golf course water users supplied by the Lake Worth Drainage District.

The Restudy Recommended Plan

General Overview

Four of the proposed 68 components in the Recommended Plan will directly affect LWDD facilities; however, because of the interactions between most Plan components, the Corps' analysis has shown that operational or structural changes in any of the main components can potentially affect the rest of the system. For that reason it has been necessary for the LWDD to actively monitor and participate in Restudy activities to assure that water supply and flood protection are not impaired. Figure 4 is a conceptual drawing of the major structural features of the Recommended Plan.

Table I lists the estimated capital and operations and maintenance costs for the Plan components in or adjacent to the LWDD. If these components are constructed and function as projected in the Corps computer model they will reduce the dependency of water users within the LWDD on the existing Federal project and make them more dependent on the new Federal features proposed -for construction. This has the effect of allocating most water from existing sources to environmental uses while new, expensive projects are required to meet the existing and future needs of the developed area.

Restudy Plan Component	Capital Cost (millions)	O & M Cost(1) (millions per year)	Construction Start Year
C-51 Backpumping and Treatment	$ 32.6	$ 1.1	2005
Hillsboro Impoundment and ASR	$ 131.5	$ 2.05	2004
Agricultural Reserve Reservoir	$ 124.1	$ 1.02	2009
Water Preserve Area / L-8 Basin	$ 415.2	$ 2.27	2007
Total	$ 712.3	$ 6.44	

Table 1: Restudy Components in or adjacent to the Lake Worth Drainage District as described in the Recommended Plan submitted to Congress.

(1) Annual Operations and Maintenance Costs

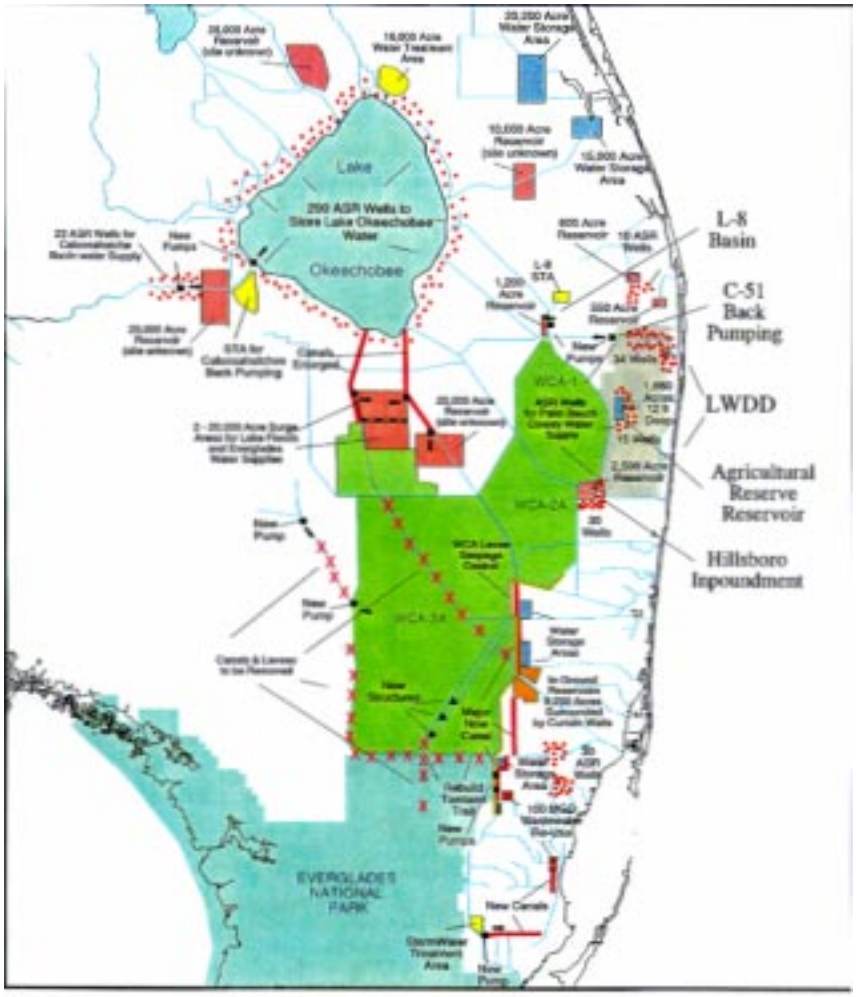


Figure 4. Conceptual diagram of the major features of the Recommended Plan in the Restudy.

Appendix A gives a brief description of each of the projects listed in Table 1. The Agricultural Reserve Reservoir is the most significant project proposed within the LWDD boundary. This project will store local runoff that is now released to the ocean and make it available for local uses during dry periods. It is a worthwhile proposal in concept but there are important engineering details that must be resolved before the feasibility of the project can be assessed.

The Corps has recommended a reasonable approach to implementation of the Agricultural Reserve Reservoir. They have committed to producing a detailed engineering, economic and environmental evaluation prior to returning to Congress for specific authorization to construct the reservoir. If this approach is followed for all the major components of the Plan continuing public support should be forthcoming.

Doubts About the Final Report

The Draft Comprehensive Plan was broadly circulated to all interested parties, numerous public hearings were held in south Florida and written comments were

accepted through December 31, 1998, a period of 1 1 weeks from the first release of the 3,000 page report on October 13. In most cases written comments were summarized by the Corps staff, and brief responses were drafted and included in an appendix to the Final Integrated Report.

The comments from the National Park Service were treated much differently however. On the last day to submit comments, December 31, 1998, the staff of Everglades National Park submitted a 70 page criticism of the Recommended Plan, even though the same staff was involved on a daily basis during every step of the plan development process. The Park Service threatened to withhold support for the Restudy unless significant last minute changes were made to the plan.

The chief complaint of the Park Service was that the plan would not guarantee enough of an increase in flow to Everglades and Biscayne National Parks and that the time it would take to implement the components providing the most environmental benefits was not acceptable.

In response, the computer modeling team began an expedited analysis to increase the water supply to Everglades National Park and Biscayne Bay. One of the premises of the Restudy Planning effort from the beginning was to avoid any proposal that would discharge urban runoff into the Everglades. With the Park Service requesting as much as 500,000 acre feet per year of additional flow above what was provided by the Draft Plan, it became necessary to abandon that premise. In addition, since one of the demands was to provide more water to Biscayne Bay, the new water could only be obtained by diverting stormwater from coastal urban areas as far north as West Palm Beach.

Impacts to LWDD

The modifications that would have to occur within and around the LWDD to accommodate Park Service demands (Figure 5) included:

- Stormwater runoff from the West Palm Beach Canal would be pumped uphill through the Lake Worth Drainage District's primary canal running along the Florida Turnpike. From there it would be pumped again into the Agricultural Reserve Reservoir.
- From the Agricultural Reserve Reservoir, water would then be discharged south into another Lake Worth Drainage District canal and pumped again into the Hillsboro Impoundment.
- The Hillsboro Impoundment would be modified to accept the runoff from West Palm Beach and from the Hillsboro Canal which drains the cities of Boca Raton and Deerfield Beach. The Hillsboro Impoundment will require significant design and operational modifications to accommodate this inflow and treatment of urban runoff. The water would then be allowed to flow into Water Conservation Area 2A.

The end result of these and other changes to the Plan was a conclusion that as much as 250,000 acre feet per year of additional water could be sent to the National Parks on top of the 62 percent increase projected with the Recommended Plan.

Unresolved Technical Issues

The proposed changes to the plan to satisfy the Park Service were forced into the hydrologic computer model without time to verify that the model's representation was accurate or whether the ideas were even feasible in the field. Questions include:

- How will urban runoff be cleaned to a sufficient degree to allow its release into the Everglades and how much will the treatment facilities cost?
- Is the re-routing of the stormwater from West Palm Beach even possible? The concept requires that two primary flood control canals that are already operating at the limit of their design capacity be enlarged to accommodate roughly a tripling of the hydraulic capacity. These primary canals currently share a narrow right of way with the Ronald Reagan Florida Turnpike with dense suburban development on both sides.
- How will the LWDD be able to provide flood protection to the landowners in their western service area? This plan would require the complete redesign of the western one third of the LWDD canal system. A system that works now by gravity flow would have to be retrofitted to connect to a primary canal controlled by large pump stations.

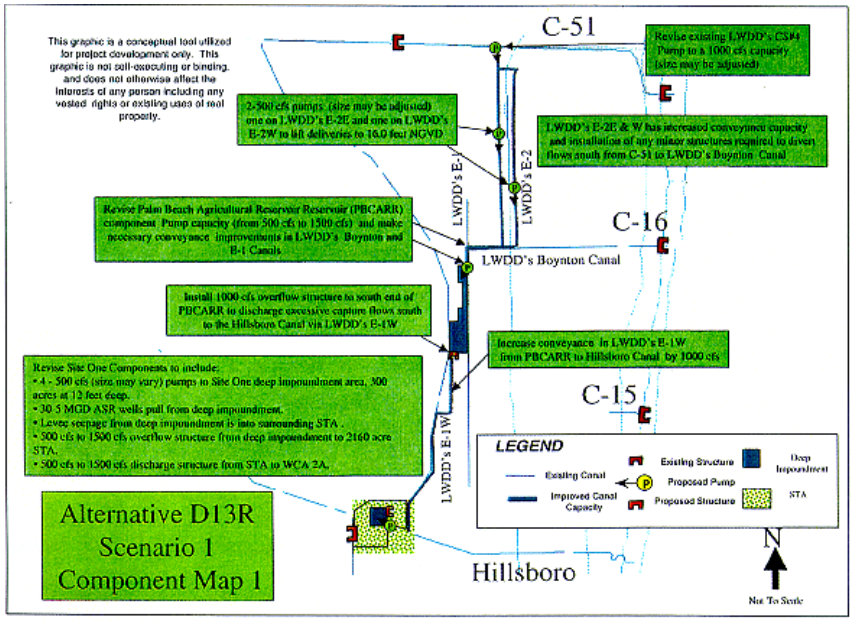


Figure 5. Sketch of the proposed changes to the LWDD system necessary to provide the additional flow demanded by the National Park Service.

- Who would pay to build and operate this system? Even if Congress agrees to pay 50 percent of the initial cost a significant new source of funding would have to be found to pay the other half of the capital costs and all of the operating expenses. The LWDD does not have the tax base or legal authority to take on even a fraction of these extreme costs. Even though these extremely expensive structural changes are being proposed solely to satisfy the demands of the National Park Service, The Corps of Engineers Report recommends that all operation and maintenance costs be born by non-Federal entities in south Florida.

APPENDIX A

Features of the Restudy Recommended Plan That Will Have a Direct Impact on the Facilities or Operations of the Lake Worth Drainage District

The following pages give a brief description of several projects proposed by the restudy which will have a direct impact on the facilities or operation of the Lake Worth Drainage District. The sketches are extracted directly from the Restudy web site or the Final Integrated Report submitted to Congress on July 1, 1999 and are conceptualizations of the principle elements of each component.

The Restudy Plan seeks to achieve its regional ecosystem goals through a combination of interrelated projects, some of which are large scale, such as 200 ASR wells around Lake Okeechobee and have distinct regional operational impact. Others are smaller in scope with most direct impacts limited to a local area. Although the components of most interest to the LWDD fit into this latter category, the performance of the entire mix of regional and local elements will determine the final performance of the Plan.

C–51 Backpumping to West Palm Beach Water Catchment Area

Description and Purpose

The purpose of this component is to reduce water supply restrictions in Northern Palm Beach County by providing additional flow to the West Palm Beach Water Catchment Area and to enhance Loxahatchee Slough. Figure 6 illustrates the conceptual features.

Potential Impacts and Concerns for the LWDD

The C–51 Canal receives flood flows from the LWDD system. The relocation of the S155A structure will reverse the direction of flow for this segment of the canal and must be accomplished in a way that preserves the flood control function of the existing canal.

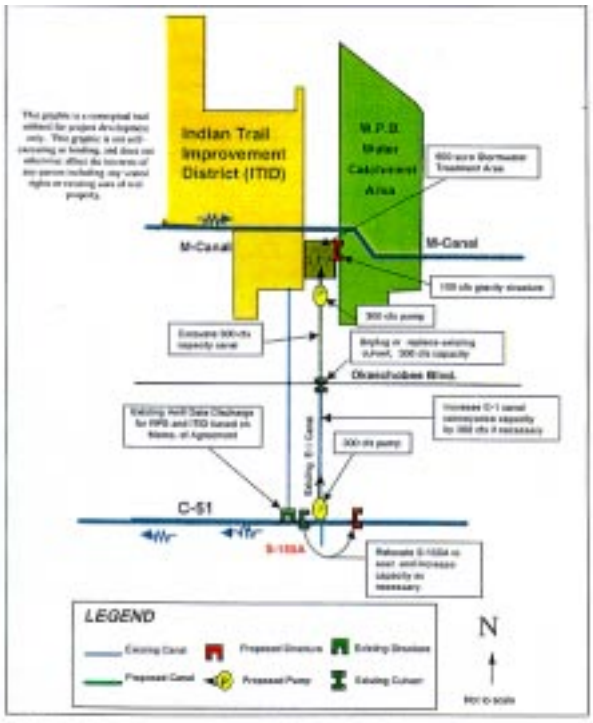


Figure 6: C-51 Backpumping to West Palm Beach Water Catchment Area. The E-1 Canal, a north-south canal connected to C-51 is an important LWDD facility that will be affected by this Restudy Component.

Hillsboro Impoundment and ASR

Description and Purpose

The purpose of this component is to provide a water supply storage reservoir to supplement water deliveries to the Hillsboro Canal during the dry season. The 2,460 acre reservoir with a maximum depth of 6 feet will be located both north and south of the Hillsboro Canal. Thirty Aquifer Storage and Recovery (ASR) wells with a total injection and recovery capacity of 150 MOD will be used to enhance the storage capabilities of the project. Figure 7 illustrates the details of its conceptual features.

Potential Impacts and Concerns

The Hillsboro Impoundment receives excess water from the Hillsboro canal during the wet season and releases that water back for water supply during the dry season. The operation and design of the reservoir must be implemented in a manner that preserves the water supply and flood control function of the LWDD existing canal system. If properly implemented, the LWDD will benefit from the storage capabilities of this component. However, care must be taken to ensure that the LWDD's existing sources are not impacted until the storage capabilities including ASR are a proven reliable source.

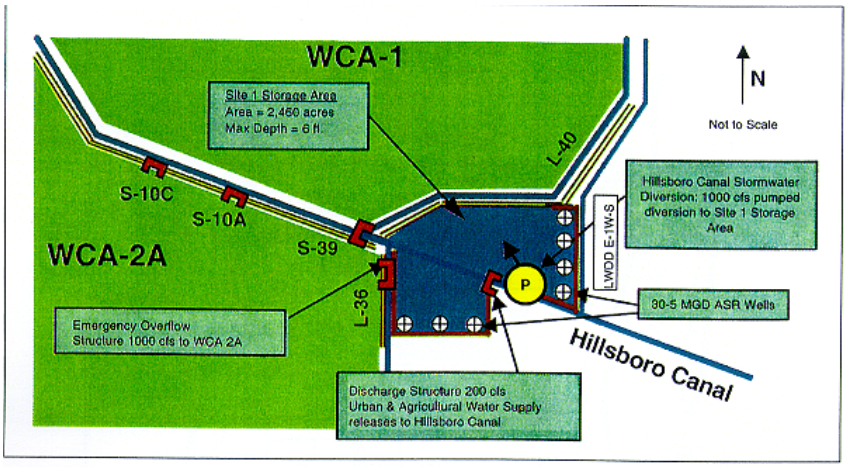


Figure 7: The Hillsboro Impoundment will directly affect the LWDD north-south E-1W-S canal. The operational plan for this component can also affect the performance of the southern network of LWDD canals including the E-1 and E-2.

Palm Beach County Agricultural Reserve Reservoir

Description and Purpose

The Agricultural Reserve Reservoir will supplement water supply for central and southern Palm Beach County by capturing and storing water currently discharged to tide. These supplemental deliveries will reduce demands on Lake Okeechobee and Water Conservation Area 1. Runoff from the western portion of the LWDD will pump into the 1660 acre 12 foot deep reservoir during wet periods and receive water from the reservoir during the dry season. Fifteen Aquifer Storage and Recovery (ASR) wells totaling 75 MOD of injection and recovery were added to this component to increase its storage capabilities. Figure 8 illustrates the detail of its conceptual features.

Potential Impacts and Concerns

This component will impact the LWDD operations requiring a pumped, rather than a gravity system for flood protection. It will require the installation of two new pumps in addition to improving several existing LWDD canals. Potential flood impacts from the 12 ft. deep above ground reservoir need to be addressed. As with the Hillsboro Impoundment, the LWDD will benefit from the storage capabilities of this component; however, care must be taken to ensure that the LWDD's existing sources are not reallocated until this is proven to be a reliable substitute. The cost to construct and operate this facility is beyond the means of the LWDD.

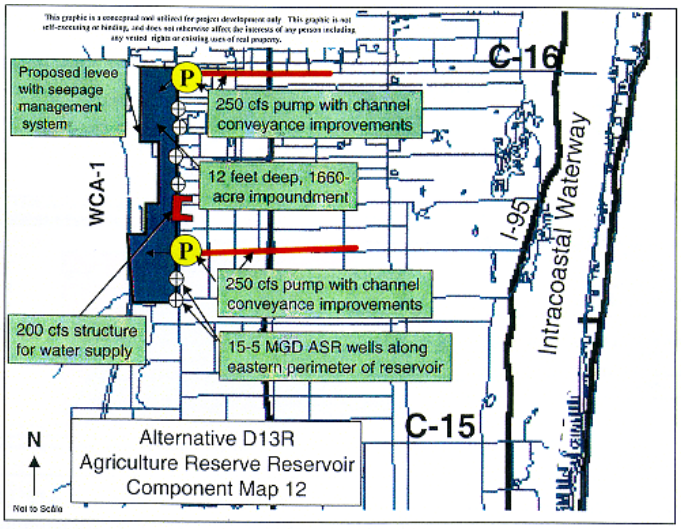


Figure 8: The implementation of the Agricultural Reserve Reservoir will require substantial changes to the LWDD. It will require the installation of two new 250 cfs pumps at the western end of the existing Boynton and Lateral 30 canals. It will also require improving these canals to handle the additional routing of water to the storage area.

Water Preserve Area / L–8 Basin

Description and Purpose

This component involves the combination of two separate components in the Restudy. The first being the L–8 Project enhancements and the second being the C–51 and Southern L–8 Reservoir. The combination these two components is intended to enhance the Loxahatchee Slough, increase base flows to the Northwest Fork of the Loxahatchee River and reduce water supply restrictions in the Northern Palm Beach County Service Area. This is accomplished by capturing more of the wet season discharge from portions of the southern L–8, C–51 and C–17 basins and routing this water to the West Palm Beach Catchment Area and C–51 and 1,200 acre 40 foot deep Southern L–8 Reservoir. Figure 9 illustrates the detail of its conceptual features.

Potential Impacts and Concerns

The LWDD can benefit from this component if it is used to supply water to the C–51 canal during dry periods. Although the Final Plan mentions that this component will provide water to the LWDD, the quantity and timing of these deliveries is unclear.

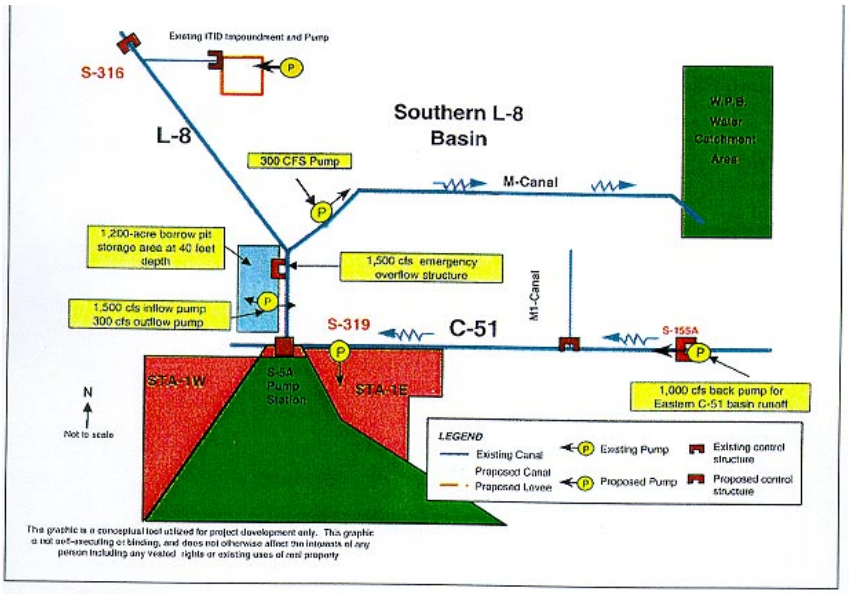


Figure 9. The Southern L-8 Basin Plan may benefit LWDD if it includes the ability to make additional water available during the dry season.

EVERGLADES RESTORATION

THURSDAY, MAY 11, 2000

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

The committee met, pursuant to notice, at 9:34 a.m. in room 406, Senate Dirksen Building, Hon. Bob Smith (chairman of the committee) presiding.

Present: Senators Smith, Graham, Chafee, Voinovich, Reid, Baucus, Warner, and Lautenberg.

Also present: Senator Mack.

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

Senator SMITH. The hearing of the Environment and Public Works Committee on the Everglades will please come to order.

I would like to say to my colleagues that due to the fact that we are having a vote approximately somewhere in the 10 vicinity, and Governor Bush has to leave at 10:30, I am going to dispense with opening statements, including my own, so that we can start right off the Governor's testimony.

So let me start, Governor, by welcoming you. We are glad to see you here and our two colleagues, Senator Graham and Senator Mack. I am not sure how you want to do this. I think the two Senators are going to introduce the Governor, but welcome.

[The prepared statement of Senator Smith follows:]

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

Good morning. Four months ago, the committee held a hearing in Naples, Florida on the Everglades. It was my first hearing as Chairman of the committee. I said then, and reiterate now, that the passage of a bill to restore the Everglades is my top priority for the committee this year.

The purpose of today's hearing is to receive comments on the Administration's Everglades proposal, submitted as part of its "Water Resources Development Act of 2000" request. The hearing is divided into morning and afternoon sessions. In the morning session, we will start with Governor Jeb Bush of Florida. I would like to extend my congratulations to Governor Bush, who just successfully shepherded legislation through the Florida legislature to implement the Everglades restoration plan which, I might add, passed both bodies unanimously. We will also hear from representatives of two impacted Indian Tribes, and from the South Florida Water Management District.

The afternoon session will begin with a panel of witnesses from the "Federal Family" the Army Assistant Secretary for Civil Works, the General Counsel of EPA, and the leader of the Administration's Everglades Task Force from the Department of Interior. They will be followed by representatives of the agriculture and environmental communities. I welcome all of our witnesses, and thank them for their testimony today.

We all know that the Everglades face grave peril. The unintended consequence of the 1948 Federal flood control project is the too efficient redirection of water from Lake Okeechobee. Approximately 1.7 billion gallons of water a day is needlessly directed out to sea. This project was done with the best of intentions—the Federal Government simply had to act when devastating floods took thousands of lives prior to the project. Unfortunately, the very success of the project disrupted the natural sheet flow of water through the so-called "River of Grass," altering or destroying the habitat for many species of native plants, mammals, reptiles, fish and wading birds.

The purpose of our January hearing was to receive comment on the "Central and South Florida Comprehensive Review Study," popularly known as the "Restudy." Congress mandated the Restudy to preserve the Everglades in previous Water Resources Development Acts, and the Administration submitted the Restudy to Congress on July 1, 1999, as WRDA 1996 required.

The Restudy includes a "programmatic" environmental impact statement; as such, it serves as a road map for the future restoration of the Everglades. All journeys need a road map. We will look to the Restudy as the roadmap for general guidance on restoring the Everglades, but we know in advance there maybe both unanticipated detours, and hopefully a few time-saving shortcuts, along the road we are about to travel. This inherent flexibility to adapt and change as future circumstances dictate is an integral part of the Restudy's approach to restoration. The risks of waiting much longer to reverse the Everglades' decline far outweigh the risks of starting now even as we continue to study and modify the plan. "Adaptive Assessment" means that we can move forward now, even in the face of some uncertainty.

Everyone has had 10 months to evaluate the Restudy. Senators Voinovich, Graham and I visited Florida in conjunction with the January hearing on the Restudy. We are now at the next step of the process. As I have mentioned repeatedly, it is my top priority to pass a bill this year to begin restoration the Everglades. I want to applaud Senators Mack and Graham for their leadership on this issue. Over the next few weeks I look forward to working with them and Senators Voinovich and Baucus to draft a bill that takes into account the comments that we hear today. The goal that I have set for the committee is to report Restudy implementation legislation next month. Everglades may be part of a larger WRDA bill, or it may move as a stand-alone bill. I will follow whichever path that gives an Everglades bill the best chance of becoming law this year.

As we proceed, I want to let everyone know that I will approach any problems with an open mind. We have studied these issues for a long time and we are ready to move forward. Some of the issues are complex, but I want my colleagues on the committee to know that it is my priority to get this bill ready for committee consideration expeditiously. The window of opportunity to have the bill considered on the Senate floor is closing rapidly.

Today I am asking our witnesses to provide constructive comments on the Administration's proposal in order to make real progress, not just to hear a recitation of "positions." For example, we need to find a principled basis we can use to determine how much, if anything, the Federal government should contribute to Operations & Maintenance of the completed Restudy. Another example—even if wastewater treatment proves technically feasible, is it cost-effective as compared to other means to provide water? Further, do we, as a national policy matter, want to encourage the return of treated wastewater back into the natural system? Should the Congress authorize the initial set of 10 projects now, or wait until the project implementation reports are complete, as some will testify today? These and many other issues need to be addressed thoughtfully in the next few weeks, and we seek your constructive comments.

In preparing the hearing I directed staff to invite representatives from the sugar industry and the Citizens for a Sound Economy. In Naples last January, I promised representatives from Citizens for a Sound Economy, which voiced concerns about the costs of the Restudy, that they would have an opportunity to testify at a future hearing to raise their concerns. They were invited today but declined to testify in person.

As for the sugar industry, we did invite them to testify today but they would not provide a witness. Though it is true that the sugar industry testified last January in Florida, it is unfortunate that they would not testify on the Administration's proposal. I had hoped to question a representative from the sugar industry in depth on several issues that I know they consider important. Among the issues that I wanted to question them about are: the extent of their support for the April 1999 Restudy; the rationale for their opposition to authorizing the 10 initial projects; and details regarding continued farming on the Talisman property if authorization is delayed. They should be here.

The April 1999 Restudy was unanimously agreed to by the South Florida Ecosystem Restoration Task Force members. It was unanimously approved by the Governor's Commission for a Sustainable Florida, which included all of the major public and private interest groups. Since the Task Force and Commission attained that landmark effort in consensus building, it seems that some of the parties have backed away from the deal that was struck. The Administration may have started this, as the Chief's Report that transmitted the Restudy to the Congress made additional "commitments" that went well beyond the Restudy itself. Also, some in the agriculture industry seem to have backed away from key Restudy components that were included in the Plan the Gov's Commission unanimously approved on March 3, 1999. As we move forward, I hope to refocus our legislative efforts on the groundwork that Congress laid with the 1992 and 1996 Water Resources Development Acts, and the agreement that you all reached on the Restudy in April 1999. Let's stop backtracking, stop trying to sweeten the deal, and get on with the fairly straightforward task of implementing the Restudy.

I am afraid too often people forget that the Everglades is a national environmental treasure. Restoration benefits not only Floridians, but the millions of us who visit Florida each year to behold this unique ecosystem. We also need to view our efforts as our legacy to future generations. As I said in Naples last January, many years from now I hope that we will be remembered for putting aside partisanship, narrow self-interest and short-term thinking by answering the call and saving the Everglades while we still could.

I look forward to the testimony from our witnesses.

Senator Graham?

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

Senator GRAHAM. Thank you, Mr. Chairman and members of the committee. In deference to the time constraints, I will be brief in my introductory comments.

I want to first thank you, Mr. Chairman, for convening this almost full day of hearing on the Everglades. This is a very momentous occasion for the Nation and for this important environmental treasure.

It was approximately 52 years ago that this committee first authorized the Central and South Florida Flood Control Project, which started the largest public works project in the history of the Nation, since the Panama Canal.

That project is now, for the first time in its history, being subject to a comprehensive reexamination. In 1992/1996, the Congress, through the Water Resource Development Act, directed the Corps of Engineers to undertake the basis of the study.

In July 1999, the Corps. submitted its plan to the Congress in accordance with the congressional deadlines. And today, we commence the process of reviewing that Corps of Engineers report.

This project has had several characteristics during the time of the preparation for this Restudy. And one of them has been its bipartisanship. This has been supported by Republican Presidents and Republican Congresses and Democratic Presidents and Democratic Congresses; and in Florida, by Republican and Democratic Governors and legislatures. This is a project that represents the best of the American political process, trying to deal with an extremely complex environmental and economic issue.

I am pleased that today one of the persons who has continued this tradition of bipartisanship, our current Governor, Governor Jeb Bush, is here to present the primary presentation on behalf of the State of Florida as an indication of the great importance that this issue has for our State.

The Governor demonstrated his commitment by spearheading two critical pieces of legislation through the just-adjourned Florida legislature, one of those related to Lake Okeechobee, a major clean-up, providing funding for the restoration of that extremely important water body, and the Everglades funding package that provides funding for the State share of this 50/50 partnership for Everglades restoration.

The State of Florida has now accepted its part of responsibility for this partnership. The challenge is now here at the Federal level. I look forward to working with you and the other members of the committee in discussing, understanding and, I hope before this Congress is over, authorizing this new restoration of the Florida Everglades.

Thank you, Mr. Chairman.

Senator SMITH. Thank you, Senator Graham.

Senator Mack?

STATEMENT OF HON. CONNIE MACK, U.S. SENATOR FROM THE STATE OF FLORIDA

Senator MACK. Thank you, Mr. Chairman, and members of the committee. Thank you for holding this hearing today, and for allowing me to attend, and to speak on behalf of the Everglades. I am especially honored to introduce my friend, and Florida's Governor, Jeb Bush.

Today is an important day. It is important because we stand at an historic juncture between planning and action. It is important because now, at long last, we have a realistic chance at restoring and protecting for future generations a unique environmental treasure that is fractured, starved for water, and in a state of steady decline.

It is an important day because the document before you represents the cumulative efforts of all those who did the work, not the least of which are the efforts of my friend and colleague, Senator Graham, on the largest and most significant environmental restoration project in our Nation's history.

Why does this matter? Why are the Everglades deserving of Congress' time and effort? Let me offer a few reasons.

This restoration matters because in the last century, a wonderful, pristine, natural system has been systematically robbed of its beauty and its uniqueness in the name of short-term human interests. The restoration matters because America's Everglades are a national treasure, unique in the world, and deserving of a better fate than what is currently written for it in the laws of this county.

The restoration matters because we Floridians, after years of acrimony and conflicting goals, have come together behind a balanced plan that fully reconciles the needs of the natural system with those of the existing water system for water users. And the restoration matters to us as legislators, because Congress, in the past, caused the problem, and we should fix it.

It has been well documented how Congress acted under the pressures of the day, and authorized the systematic destruction of the Everglades in the nature of flood control, urban development, and agriculture. That is history, and we can not change that.

Instead, we must respond to the needs and priorities of our own generation, as well as generations to come, and pass this plan to restore America's Everglades.

Mr. Chairman, passing this plan is all that remains between the long years of study and the actual restoration of the Everglades. The Administration has done their part in devoting a tremendous amount of time and effort on the document before you.

To Governor Bush's credit, the State of Florida has already written this plan into Florida's laws, and arranged funding for Florida's share of that cost. There is only one task remaining. We, in Congress, must pass this plan this year, and let the work of restoration begin.

I want to especially highlight the commitment of Governor Bush. He has consistently demonstrated with both words and actions that Florida is and will remain a full partner with us. He has instructed the members of his administration to provide valuable technical support to the Congress, during our efforts here.

He has worked with Florida's legislature to set up a legal framework for the Everglades restoration. And he has assembled an impressive coalition of legislatures and local government officials to fully fund Florida's share of the cost.

Mr. Chairman, again, it gives me great pleasure to present Governor Bush to the committee. Thank you.

Senator SMITH. Thank you very much, Senator Mack.

Governor Bush, welcome; we are delighted to have you. We thank you and your staff for all of the help that you have provided us, over the past several months, since I was in Florida for the Everglades hearing.

I just want to say to my colleagues that as soon as Governor Bush completes his statement, I would like to have one question for each member, in the order that they came in, simply because we will have a vote in the vicinity of 10, and Governor Bush has to leave at 10:30. If we get a second round, we will go to a second question.

Governor, welcome.

STATEMENT OF HON. JEB BUSH, GOVERNOR, STATE OF FLORIDA

Governor Bush. Thank you, Senator Smith. And Senator Baucus, thank you. I want to also say hello to Senator Chafee, who I went to high school with. And it is a joy to see you here on the same committee as your father, who was a great supporter of this project, I might add.

Senator SMITH. And we want to keep him here.

Governor Bush. Yes, we do.

[Laughter.]

Governor Bush. It is a joy to be here to have the opportunity to speak about one of our true national treasures, America's Everglades. And I want to thank Senator Graham and Senator Mack for being here and introducing me. It is a real privilege to be here. I would like to have my extended written statement, if you do not mind, included in the record.

I am here to bring some good news, some hard truths, and a challenge. This year, together, we will begin this massive, yet essential, undertaking of restoring the Everglades.

Restoring America's Everglades builds on the very American ideal that there are unique landscapes that we, as a Nation, believe are worth preserving. It is also an idea that is now worthy of action.

First, the good news, last Friday, and I can tell you personally the good news, as another couple of Governors are here, when legislative sessions finish, Governors are always very happy. And in this case, last Friday, Florida concluded its annual legislative session.

I can proudly report to the Congress that our commitment to the Everglades is solid. In fact, it is more than solid. As of next Tuesday, it will be the law.

As part of our State budget, the Florida legislature has appropriated an unprecedented level of funding to begin the implementation of the Restudy; more than $136 million in the first year alone. These dollars will be matched by local governments in the South Florida Water Management District, for a total of $221 million to begin this important work.

Next week, I will be joined by Federal, State, and local leaders to sign into law Florida's Everglades Restoration Investment Act, a measure that passed the Florida Senate and the Florida House of Representatives, unanimously. There was not one dissenting vote. Republicans and Democrats, alike, support this bill.

With this new law, Florida will contribute over $2 billion to the Restudy project over the next 10 years. It will not only codify our long term monetary commitment to the Everglades, but it will also create a Save Our Everglades trust fund, that will enable Florida to save money for peak spending years on the horizon.

In fact, the $221 million that will be invested this first year in the trust fund will not be spend. We are preparing, on the long term, to be able to buildup, because this project has many different projects inside of it, and the funding patterns go up and down, we are making a long-term commitment, from the get-go, to have a stable source of funding that will allow us to make this budget process work.

Second, the hard truths; this is not the first time that Florida has gone first. Since 1983 when then-Governor Bob Graham created the Save Our Everglades Program, the State of Florida has spent over $2.3 billion, and acquired more than one million acres of land to avoid further destruction and degradation of the river grass.

All of this is to say that the time has come for a legitimate and equal partnership with the Federal Government. For us, we have made this commitment, and we are looking to be an active partner with the Federal Government to carry out this project.

I believe it will require Washington to think anew, to think a little bit differently about this; maybe less as a water project, and more as the protection of a national treasure.

Too often in the past, the partnerships of this nature between the Federal and State Governments have been anything but partnerships. At their worst, they have been master/servant arrange-

ments. The Administration's bill that you are considering today, I believe, is an example of this. And I have to admit, we are disappointed about their recommendations for a government structure.

This has been a consensus plan, all along, by all parties, and I can assure you that this has not been an easy thing to accomplish. Senator Graham can attest to the fact that back home there are a lot of people, and Senator Mack can certainly agree, there are a lot of people that have very divergent views on this subject.

They have been in the court, up until the last couple of years, for most of the decade of the 1990's. There was broad consensus on both the governance and the course of action for the Restudy. And we believe it is important to maintain that delicate balance. And the governance issue, I think, is one that is quite important.

The Administration bill seeks to redefine the project purpose; to establish Federal agencies as the principal managers of South Florida's water resources; and to be the sole arbiter of differences that exist. And they will exist on a project of this magnitude. I believe we must rebalance this relationship into a true and equal partnership.

Water Resources Develop Act projects typically require 20 to 30 percent financial commitment from the States. Yet, Florida now stands ready to deliver with a 50 percent commitment. In exchange, we seek a new structure of governance.

Because of the importance of this project and the enormity of the task ahead, Florida believes that it should be on equal footing with the Federal Government, not only in terms of financing, but in managing and governing and operating this project, as well.

Working as equal partners not only makes business sense, but it also makes good public policy sense. Disputes will be resolved quickly and fairly. Opportunities for cost savings will be more readily identified and pursued, and both partners will reap the benefits of cooperation and consensus.

Finally, the challenge: Florida needs your commitment. It is apparent that Americans across the country support restoring America's Everglades the same way we protected Yellowstone and the Grand Canyon.

Foremost, we need to put Washington's financial commitment on the table. Congress should not delay in providing funding to match, dollar for dollar, Florida's commitment.

Congress should also pass a stand-alone Everglades bill if it possible; one that demonstrates your own dedication to this endeavor. And Congress should, in cooperation with the Administration and the State of Florida, craft a project authorization that for the first time puts Florida and the Federal Government on equal footing.

With this commitment from Washington, our Federal, State, and local governments will protect 68 federally Endangered Species that call America's Everglades their home.

We will recapture 1.7 billion gallons of water that are now channeled out to sea, and use it to help restore our natural systems. And we will, in the tradition of Theodore Roosevelt, continue America's legacy of stewardship.

Mr. Chairman and members of the committee, let your own legacy be that of saving America's Everglades. All the elements are

in place. All that remains is your steadfast response; first through authorization, then through appropriation.

We have done everything possible to make it as easy as it humanly can be for something of this magnitude to say yes. The State of Florida is now ready, willing, and able to be your partner to restore America's Everglades.

Thank you very much.

Senator SMITH. Thank you very much, Governor. I will start off with the first question, and then we will rotate through and see where we are with the time.

First of all, I want to say to Senators Mack and Graham and to you, Governor, that it is not very often, and I think both the Senators sitting next to you can attest to this, that we see a situation where a State puts up its matching money, first, in anticipation of the Federal Government.

So it certainly is a tremendous gesture on the part of the citizens of Florida, and the Governor, and the legislature. So that certainly adds considerably, I think, to the equation. And certainly, it adds a lot to us moving forward on this legislation.

There has been controversy, and in fact, it is probably one of the most contentious issues in the project, Governor, about the authorizing in the year 2000, the initial 10 projects, if you will, that we have to start, because the project implementation reports will not be complete.

Because of that, usually the committee does not authorize these projects without that kind of completion. So basically, the committee is being asked to reauthorize 10 projects, the first 10, which is what those dollars are for that you talked about in the comprehensive plan.

So I guess the question is why the State believes that we should proceed differently by authorizing this year these 10 projects.

Governor Bush. Well, I truly believe that this is different than a typical water resource development project. If you visit, as I know you have, Senator, the Everglades and have seen its majesty, this is on par with the Grand Canyon, or other great monuments of nature in our country. And I believe we need to have a sense of urgency about this.

Our State did not just start funding projects to protect the Everglades. This has been an ongoing efforts for a generation. In fact, Washington has provided support in land purchasing and other areas, as well.

In our State, we believe that there should be a sense of urgency about this. We are prepared, unlike other Water Resource Development Act projects, to put up 50 percent of the money. The money is in place.

There is a consensus. The water management District, whom you will hear from, and the Chairman will talk later today, I believe, will describe the efforts they have done to totally re-prioritize their spending, so that they can have resources available to take care of their responsibility.

At the State level, we are spending more on the purchase of endangered lands than any State in the country; I believe more than national government's budget in this regard. So we have made a

commitment that I believe shows that we need to accelerate this project.

The Restudy, itself, had lots of input. There was a tremendous amount of debate over the last year. And I would just respectfully say that it is time to move on.

Senator SMITH. Thank you.

Senator BAUCUS. Yes, thank you.

Governor, I was interested in your comments about management. Could you go into that in a little more detail, please. What is in the Administration's proposal that you think is good with respect to management; and then what problems you might have; and why? If you could just go into that in a little more detail, so I can get a better flavor.

Governor Bush. In a public works projects of this magnitude, I think it is important to have clear lines of authority, and a means to mitigate disputes.

If this was not a Government project, and we just closed our eyes and assumed that this was a private sector development of some kind, we would have a Board of Directors, if you will. There would be clearly established, when there are disputes, how you would resolve them. It would not be done unilaterally.

The Administration's governance proposal, in my opinion, does not allow us to be partners. The Governor, I believe, the way it was described, consults.

If we are putting up half the money, we have a shared interest in this. We have a plan that has received the full support of all of the parties. It seems to me that we ought to have a means where we share in innovations that and where we discuss major decisions along the way.

Senator BAUCUS. I was just curious though, as I understand it, a lot of the science is not yet complete on the project. And undoubtedly, there are going to be differences of opinion as to what to do with one portion of the project, and so on and so forth.

I am just curious, how you envisioned, under the proposal that you would like to see adopted, those disputes being resolved. Like I said, the Governor of Florida says well, it should be (a), and whoever it is says, well, no, it should be (b). And if we have equal sharing, how are you going to work that out?

Governor Bush. Well, I think it would be a better way of resolving the dispute to have a shared vision than to have a disagreement, where you default automatically to the Department of the Interior, which is the Administration's position on this.

The other element of the governance issue that is important was that the foundation for the Restudy was that there would be an equal commitment to the natural system, to flood protection, and to water supply. And as I understand it that, too, has shifted.

It is important to have this delicate balance between the interests that are all impacted. And this is a fully integrated project. You can not separate one from the other.

Our own State laws give primacy to the natural system. So we are not suggesting that the natural system is not the principal purpose for doing this. But that is an example of, if the underlying policy changes by unilateral decision, that creates problems for the State being able to maintain the support that we have for this

project, which is now near unanimous. I mean, it is strong, because people know that we are going to have a say in the implementation of it.

Senator BAUCUS. Thank you.

[The prepared statement of Senator Baucus follows:]

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

Thank you, Mr. Chairman. I would like to join you in welcoming our witnesses here today. I'm pleased to be here today to welcome our Florida witnesses, including the distinguished Governor, Jeb Bush.

The Comprehensive Everglades Restoration Plan has been many years in the making. In the 1970's, the State of Florida began looking at the adverse impacts the Central and South Florida project was having on the Everglades.

Under the leadership of my current colleague from Florida, Senator Graham, who was Governor Graham in the early 1980's, the Governor's Save Our Everglades Program recognized that the health of the entire ecosystem was in jeopardy and that efforts were needed to protect and restore it. Ever since, he has worked tirelessly to get to the point where we find ourselves today—that is, having a comprehensive plan that will restore this valuable ecosystem.

The Everglades is a national treasure, and I know, it holds a particularly special place in the hearts of Senator Graham.

Like most plans, the Comprehensive Everglades Restoration Plan isn't perfect and everyone didn't get everything they wanted. But the Administration, under the leadership of the Corps of Engineers and with the cooperation of the Department of the Interior and the Environmental Protection Agency are to be commended for bringing all of the effected parties to the table to develop a plan that can work for all of them—the State of Florida and the ecosystem.

I thank our witnesses for the time and energy they have put into the Everglades restoration effort. I look forward to hearing from them today and to working with the Chairman to move this plan forward.

Senator SMITH. Senator Voinovich?

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

Senator VOINOVICH. First of all, I would like to welcome you. It is nice to see you, again. And I think it is significant that your two senators are with you, and that this proposal is coming from Florida on a bi-partisan basis. And I congratulate the State of Florida for their moving forward in terms of doing their share of this project.

I would also like to congratulate the Chairman of this committee. Ordinarily, this hearing would have been held before the subcommittee of the Environment and Public Works Committee, the Transportation and Infrastructure. And the Chairman thinks so much of this project that he has called a meeting of the full committee to hear this proposal. And he should be congratulated for doing that. That shows the high priority that he places upon this initiative.

The Comprehensive Everglades Plan that we are considering has a cost of about $7.8 billion, of which we are talking a 50/50 share. During the peak years of the Everglades Comprehensive Plan, this will require a yearly appropriation of about $200 million a year.

The State of Florida has a current backlog of active authorized projects of about $1.5 billion. We have about a $30 billion backlog right now, and the State of Florida has got about $1.5 billion of that backlog. These are authorized projects that are already in the pipe.

In addition to the South Florida restoration, this includes beach nourishment projects, harbor deepening, and flood control. In the

President's fiscal year 2001 budget, the construction requests for the State of Florida is about $176 million.

My question is that in view of the fact that during the 1990's, the core construction appropriation is, on the average, $1.6 billion, how do you anticipate the Federal share of this to be funded? In other words, you have got $1.5 billion on the books now. In order to do this project, it is going to take an average of $200 million a year. And we only appropriate about $1.6 billion.

The question is, have you thought about that at all, and have some concern about whether the Federal money is going to be available so that you can move forward with this project?

Governor Bush. I think about it a lot. I certainly do not have much control over the budget process up here. What we have tried to do is to say, let us make this a high priority in our own State.

Last year, we passed Florida Forever, which is a continuation of Preservation 2000, which I believe is the most ambitious land purchasing program of any State in the country, where we spend $300,000 a year purchasing pristine lands to keep them out of the path of development, and provide support for the natural systems.

This year, we have continued that, as well as we are spending a 140 percent increase in water projects in our own State. So we have tried to make it easier for Washington to recognize that we are stepping up to the plate, as well. We are not asking for something and not making a commitment ourselves.

We have limited resources, like any government. And we are saying that these water projects, in general, have a high priority, because it is an investment in the long term future of our State.

We are a fast growing State. We have development encroaching into the natural systems. We are redefining our heritage, if we do not watch it. So we are stepping up to the plate on these projects. And we would encourage the Congress to prioritize their spending toward these projects, as well.

With all due respect, Senator, I do not know where the money comes from up here, other than from our pockets. We give it to you all, and we would hope that you would spend it on the things that are of high priorities for Americans.

Senator VOINOVICH. I would hope that the next Administration would recommend doubling the amount of money in the Water Resources Bill, so that we can move forward and deal with this $30 billion backlog of projects. And the prospect of reimbursing Florida for our share of it would be more realistic.

I would like to just ask one other question. You are asking for a fast track authority here, to move with this. And you are talking about an even playing field. But, in effect, what you would like to do is move forward with this project.

Anticipating that we do not get the money on the Federal level to do the Federal share of this, is it your thought, and maybe some of the other witnesses may shed some light on this, that you would just move forward with this project? And then, ordinarily, on this type of project, you only can move forward, based on whether or not you have got the Federal authorization.

I think this plan anticipates that you will move with this, and that down the road, you will spend this money, and then come back

and ask that it be reimbursed. And the understanding is on a 50/50 basis.

If this authority is granted, would the State give any consideration of maybe even a larger share of paying for it? In other words, projects like this need to have the authorization from Congress to go forward. So we will give you the money, and we are giving you credit for land purchase and a lot of other things, as a special kind of permission that you would be getting, that is different than what we do on other projects.

If we let you fast track this project, would the State give any consideration to perhaps changing the participation on it? Is my question clear?

Governor Bush. It is clear, and I hope it is hypothetical.

[Laughter.]

Governor Bush. We have worked very hard. The back-home people believe that there has been strong support for a 50/50 partnership in this, and that we hope that that will continue on to be the case.

We are committed to restoring this treasure. And we would like to do it as an equal partner with the Federal Government, which I consider to be quite unique, given the history of these projects, where the States have been asked to make smaller commitments.

We are here to say that we are prepared to make larger commitments. And this is a tradition that has been in existence long before I was Governor. And we are asking for Washington to continue to provide the kind of support that we would hope would make this project work.

[The prepared statement of Senator Voinovich follows:]

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

Good morning, Mr. Chairman, and let me start out by thanking you for holding this hearing today on the future of the Everglades. I consider this to be of tremendous importance to this nation and I am pleased to be here.

Mr. Chairman, I am no stranger to the Everglades.

When I was Governor of Ohio, in response to my interests in the Everglades and thanks to the courtesy the Florida Fish and Wildlife Conservation Commission, I spent a day observing the environmentally impacted areas of the Everglades by helicopter and airboat.

In addition, my wife Janet and I have made many visits to Florida including trips to the Loxahatchee National Wildlife Refuge and Everglades National Park. I have enjoyed fishing in the Florida Bay and fishing for snook in the Everglades.

This past January, I had the opportunity to participate with you, Mr. Chairman, and our colleague, Senator Graham, in this Committee's Everglades field hearing in Naples, Florida.

While I was there, I had the opportunity to fly over portions of the ongoing water quality restoration efforts associated with the stormwater treatment areas of the Everglades Construction Project. I also got the chance to revisit the Loxahatchee National Wildlife Refuge and tour it by airboat.

I mention all of this to emphasize that I have invested a lot of time on the Everglades, and in particular, the Comprehensive Restoration Plan.

I am unequivocally committed to the fact that the Everglades are a national treasure that must be protected and restored. Having said that, my detailed review of the Comprehensive Plan has also convinced me that the Everglades Comprehensive Restoration Plan was rushed to this Congress for its consideration.

At a cost of $1.1 billion, the plans for the 10 initial projects that Congress has been asked to authorize are only conceptual and do not even begin to meet the standards that this Congress has set for project authorizations.

There are some who will say that the Administration is only responding to what Congress requested back in 1996 when it called for a Comprehensive Plan by July 1,1999. However, the clear words of the 1996 Act call for a feasibility report.

Feasibility studies have not been completed on any portion of the comprehensive plan, and yet the Administration is seeking a $1.1 billion authorization based on a "conceptual" plan that does not contain any meaningful level of detail regarding costs, benefits, environmental analysis, design, engineering or real estate.

To authorize projects without this information would be a radical departure from the past oversight of the Corps' program by this Committee, and would make it very difficult to enforce historic standards of this Committee for authorization of Corps projects in this, and future, Water Resources Development Acts.

This does not mean we cannot act on the Everglades Comprehensive Plan.

I think we can and should act to advance the critical national issue of Everglades restoration. We can certainly endorse the Comprehensive Plan as a framework and guide for future action. We can authorize pilot projects to obtain the information we need to move forward.

I am sure that under Chairman Smith's leadership, we can agree on some process that will advance the authorization of the initial projects while assuring that Congress has an opportunity to review and approve feasibility-level reports on these projects before they are implemented.

Mr. Chairman, in addition to my service on the Environment and Public Works Committee, I also serve on the Government Affairs Committee where we are concerned about issues of Government efficiency, effectiveness and coordinated activity. I can't leave the topic of the Everglades restoration without this one observation.

Homestead Air Force base is located only 8 miles from Everglades National Park, one and one half miles from Biscayne Bay and just north of the Florida Keys National Marine Sanctuary. The Air Force is seeking to transfer property at the Homestead Air Force Base in accordance with the recommendations of the Base Realignment and Closure Commission.

The Air Force has prepared a draft Supplemental Environmental Impact Statement that presents as the proposed action, the reuse of the airbase as a regional commercial airport.

I am very concerned that the noise, air quality impacts, water quality impacts and developmental pressure of commercial airport operations may not be compatible with the adjacent National Parks and Sanctuary.

I believe it would be irresponsible for the Federal Government to approve an investment of billions of taxpayer dollars in restoration of the south Florida ecosystem, while at the same time, approving a reuse plan for Homestead Air Force base that is incompatible with such restoration objectives.

I urge the Administration to pursue consistent objectives in South Florida's restoration and assure that the actions of the Air Force and Federal Aviation Administration are coordinated with the Federal, state, tribal and local agencies, and groups making up the South Florida Ecosystem Restoration Task Force.

Finally, I would like to touch on the Everglades restoration in the context of the total, nationwide program of the Corps of Engineers.

We cannot talk about the Everglades restoration in a vacuum. Currently the Corps of Engineers has a project backlog totaling about $30 billion needed to design and construct over 400 active authorized projects.

These are not old outdated projects but projects that have been recently funded, which are economically justified and supported by a non-Federal sponsor. This backlog includes $1.5 billion worth of work within the State of Florida. The State of Florida work represents about 5 percent of the backlog.

The President's 2001 budget includes a construction funding request for the State of Florida of about $176 million—more than 10 percent of the nationwide construction account. This is before consideration of construction funding for the Comprehensive Everglades Restoration Plan, which will require construction appropriations of $200 million a year during the peak years of construction.

Mr. Chairman, I do not mean to single out the State of Florida, but rather, to emphasize that with construction appropriations for the Corps of Engineers averaging about $1.6 billion a year in the 1990's there is not enough money to accomplish all of the proposed work in the State of Florida and address the water resources needs of the rest of the Nation.

Unless the Corps' construction appropriations is substantially increased to meet these needs, the State of Florida in particular and the Nation in general are going to have to make some very painful decisions on priorities. I believe this is a very critical issue for this committee as we consider the Water Resources Development Act and I plan to explore it further in a Subcommittee hearing on May 16.

So, once again, I appreciate you calling this hearing this morning, Mr. Chairman, and I look forward to what I believe will be a lively discussion on some very topical issues.

Senator SMITH. I need to move forward. We are going to try one question, and then come back around, because of the vote. Senator Graham, you were here, and you are a member of the committee, too. Do you have a question from either that seat or up here?

Senator GRAHAM. Mr. Chairman, I have a lot of questions. But I think I will defer to the Governor's time, and the fact that I get an opportunity to pepper the Governor on a more frequent basis.

Governor Bush. And if you can clean up after me, if I said something wrong, that would be good.

[Laughter.]

Senator GRAHAM. No, I think the Governor has articulated the policy rationale and the State's position extremely well. So I would defer to the other members of the committee for their questions at this time.

Senator SMITH. Senator Chafee?

Senator CHAFEE. As Governor Bush said, we went to high school together. I have not seen in 29 years.

Governor Bush. The statute of limitations has run out.

[Laughter.]

Senator CHAFEE. But you mentioned in your statement the sense of urgency, and I will certainly do all I can to be supportive on my level here. It is a great project, and we wish to move forward.

Senator SMITH. There is no question? You would not do that to an old high school mate, would you?

Senator Warner?

OPENING STATEMENT OF HON. JOHN W. WARNER, U.S. SENATOR FROM THE COMMONWEALTH OF VIRGINIA

Senator WARNER. Welcome Governor, and I would just like to talk a little bit about the history of this committee. I have been on it, out of my 22 years in Senate, about 12 or 14. And I am referring to the Water Resources Development Act of 1998, which contains the statement, and this statement has been in every single committee report since 1986. I will read from page 3.

"Since 1986, it has been the policy of the committee to authorize only those construction projects that conform with cost sharing and other policies established in the Water Resources Development Act of 1986. In addition, it has been the policy of the committee to require projects to have undergone full, final engineering, economic, and environmental review by the Chief of Engineers, prior to project approvals by the committee."

As I read through your petition, you are asking us to waive a policy which has guided this committee since 1986. And that is a very significant precedent.

I also wish to make an observation. You said, "Roosevelt's legacy of stewardship." And how well you understand, coming from a very historic family that has provided leadership for this Nation for so long, that there are the 50 States, and that we all compete among each other for the scarce moneys to preserve those portions within our States which relate to Roosevelt's Stewardship Program.

Shortly after I came to the Senate, and specifically in 1984, I joined with marvelous Senator, Senator Mac Mathias, and we de-

vised the legislation to begin the preservation and the restoration of the Chesapeake Bay. That magnificent watershed serves seven States in the immediate touching of the bay, and the migratory birds, fish, waterfowl, in many, many, many other States.

We have worked very hard with the Federal/State partnership. And since 1984, we have gotten only $150 million from the Federal Government, and several States have applied $300 million, to show you a comparable project and the funding levels that we have received and struggled each year to get, bit by bit.

So as strongly as I feel about this project, I must tell you that I feel that I have a stewardship and a trusteeship to my State and seven other States and the balance of the States, as we look at the very significant cost of this project, which could, in the estimate of some, go as high as $12 billion.

So that concerns me that this committee is being asked to approve construction of 10 projects for $1.1 billion, without the information being completed, in sharp contrast to our policy.

The project implementation reports will not be done for another 18 months or more, and construction is not scheduled until 2004, at the earliest.

I know that your State has taken significant financial steps to participate in this restoration, as you have so stated today. You have acquired significant acreage that will be important to improving water flows into the Everglades. I am aware that legislation has been enacted to provide $100 million over 10 years for this restoration effort.

However, the same level of progress can be made on these 10 projects, with the Corps. continuing planning, engineering, and design for the next 2 years. By the time the 2000 bill comes up, Congress would have the benefit of the project implementation reports on these 10 projects, and then be ready for construction authorization. This approach would not delay the construction of any of these projects now tentatively set for 2004.

I really feel that the policy which has guided us these many years has to be protected. And I will just finish. Basically, I am stating in candor, before my two very dear friends and colleagues here who are supporting you, the concerns that this one Senator has.

Now there is a provision in the legislation relating to the distribution of water flow from the project. It seems that the restoration of the Everglades is only one feature of the project. Others involve flood protection and water supply for urban/suburban areas, and for agriculture uses.

In light of the complexity and the cost of the restoration effort, I want to be sure that Federal dollars are used to restore our national assets, Everglades Park, Big Cypress Preserve, and other wildlife refuges.

We must have a guarantee, and I underline that, that these properties will receive the amount of water they need when they need it, and carefully be sure that the environmental restoration of the Everglades gets water over and above the commercial, urban, and agricultural uses that will come.

So that is my statement, Mr. Chairman and our distinguished witness. I do not want to put a few raindrops on this parade, but that is about it.

Governor Bush. We need a little rain down in the Everglades, so that would not be too bad.

Senator WARNER. I do not want to be a constructive partner, but I must go back to Roosevelt's stewardship program, and it is for 50 States. And I gave you one example of something that has been very dear to my heart for these many years that I have been privileged to serve in this body.

Mr. Chairman, I think given the vote and the Governor's schedule, I have said my piece.

Senator MACK. Mr. Chairman?

Senator SMITH. Certainly, Senator Mack.

Senator MACK. Let me just make a comment or two. I understand Senator Warner's concern about making sure that the Federal interest is protected.

I think one of the very unique things that has happened in this plan is the coming together of all the different interests in the State of Florida that have worked together on this project to, at this point, superimpose on that, that there is a No. 1 objective that we are going to establish that does not take into consideration the working relationship among the entities in our State. I think that could be disastrous for this effort.

Senator WARNER. I am not sure I follow exactly what you mean. I commend the Governor, his leadership, and the State entities to come together.

Senator MACK. If we now say, though, that the primary objective is the water for the park, as opposed to all other interests, then the political dynamics that have brought people together to be able to support this plan, both nationally and within our State; and within our State, the commitment that the State legislature has made unanimously for over $100 million, plus what is going to be done by the Water Management District of over $200 million totally, what I am saying to you is, if we superimpose the No. 1 objective established up here, that does not take into consideration the other interests, and I find that that could be troublesome.

Senator WARNER. But, you know, Senator, I see estimates of $12 billion of taxpayers' money for this project. Do disavow those?

Senator SMITH. No, it is not that much.

Senator WARNER. All right, well, I am sorry, that was the figure that was given to me. We have already put in $500-plus million on this project.

Senator SMITH. It is a 50/50 cost split, between the Federal Government and the State government. The highest estimate that I have seen is $5 billion to the Federal side, over the 36 year life of the plan.

Governor Bush. And if I could just add, the question of primacy of one use over the others, our State law requires minimum levels and flows that gives primacy to the natural system.

Without doing this plan, we can not implement that. We need to find ways to capture water, not allow it to go out to tide. And you can not separate these projects, one from the other. They are fully

integrated to be able to achieve the desired result. So that would be one point.

The second point is, this is a federally created problem, which may be different than other projects such as Beautiful Chesapeake Bay. The mess that has been created was created by well-intended engineers, that engineered a system that now we need to completely re-engineer. And so I think that makes it a little bit different.

I would just argue that while this is not a typical water resource development project, we are not typically putting up the 20 percent, either. We are putting up 50 percent, and we are putting it up in advance. And we are putting it in a trust fund that can not be touched. We are making our commitment a long-term commitment, which does distinguish our State's commitment from other States that have come and respectively asked for cooperation and money from the Congress.

Senator SMITH. Senator Warner, you are correct, that the policy of the committee is as indicated. Normally, the policy is that the study would be complete, the PIRS. However, it is not a policy that we have been rigidly sticking to. As you know, we authorize projects on a regular basis here, contingent upon the later completion of a favorable report. And if those reports are not favorable, then we do not approve it.

So I think, under the adaptive management concept that we have outlined here throughout this plan, we certainly would have the opportunity to pull the plug, should something not come out the way we would anticipate it, in my view.

Senator SMITH. Mr. Chairman, the $12 billion figure I used has been discussed with staff, with the GAO. Apparently, it is $7.8 billion that would be expended over 30 years for the project. The balance in the $12 billion is land acquisition costs and other things like that, I am told.

Senator SMITH. But that is split between the Feds and——

Senator WARNER. That is correct. But, again, you know, $7.8 billion is quite significant, in contrast to what I have been able to achieve for the Chesapeake Bay.

Senator SMITH. Let me just make a 10 second comment here. We have got 3 minutes left on the vote, and we have at least five Senators here that need to go down there. So if you have another comment, go ahead.

Senator WARNER. No, I am finished. I am fine, Mr. Chairman. I have rained enough on this parade.

Senator SMITH. Senator Chafee, do you have any other questions or comments?

Senator CHAFEE. No.

Senator SMITH. Does anybody else?

[No response.]

Senator SMITH. Well, Governor, I think it would probably be a good time to make the break here, and to thank you for, again, your support and your help, and Senators Mack and Graham, as well, will be proceeding along the line.

The objective here is to have this hearing, meet with you and the respective Senators, and the Administration, and the committee,

and try to put a bill together that I think comes as close to that agreement as possible.

I am sure there are going to be a few bumps in the road, but we are going to try to do that. And I am going to try to do it soon, within the next 30 days, if we can pull it off, so that we can get it considered before the Senate.

So thank you very much for being here.

Governor Bush. Thank you, Mr. Chairman.

Senator SMITH. Let me just say, I am going to recess for about 15 minutes or so, while I go down and vote. And the next panel will come up, as soon as I return, which should be in about 15 minutes. The hearing is recessed.

[Recess.]

Senator SMITH. The committee will come to order, please.

I would ask the second panel to please come to the table: Ms. Patricia Power, on behalf of the Seminole Tribe; and Dexter Lehtinen, on behalf of the Miccosukee Tribe. So it is the Miccosukee Tribe and the Seminole Tribe.

Because of the fact of the Governor's schedule, we had to take his remarks and questions early. I am going to take this opportunity to give a brief opening statement, and any other member who wishes to have an opening statement may do so, and then we will move directly to the testimony of the two witnesses.

I might just say to the Clerk that these opening statements should be put in the record, ahead of Governor Bush's testimony.

The committee held a hearing on this issue in Naples, Florida. It was the first hearing that I had, as the Chairman of the committee. And I said then, and I believe now, that we need to restore the Everglades. It is a top priority for the committee this year.

I say that, recognizing that there are differences on various components of the plan. But I am committed to work those differences out, and pass a bill out of committee on the Everglades restoration.

The purpose of today's hearing is to receive comments on the Administration's proposal, submitted as part of its Water Resources Development Act 2000 request. We have two sessions, one this morning and one in the afternoon.

We have already had Governor Bush. And I want to just extend my congratulations to Governor Bush, who just successfully shepherded legislation through the Florida legislature, unanimously, to implement the Everglades Restoration Plan.

We will hear from two representatives of the Indian tribes of South Florida, and the South Florida Water Management District this morning. And then the afternoon session will begin with a panel of witnesses from the "Federal family": The Army Assistant Secretary for Civil Works, the General Counsel of the EPA, and the leader of the Administration's Everglades Task Force from the Department of Interior. And they will be followed by representatives of the agricultural and environmental communities.

I certainly welcome all of the witnesses today. I know some of you traveled a long distance, and we appreciate you being here.

We all know, whatever our views are on the specifics of the plan, that the Everglades faces great peril, the unintended consequence of the 1948 Federal Flood Control Project is the too efficient redi-

rection of water from Lake Okeechobee. Approximately 1.7 billion gallons of water a day are needlessly directed out to sea.

It was done, this project in 1948, with the best of intentions, but the results were not good. The Federal Government simply had to act when devastating floods took thousands of lives.

But, unfortunately, the success of the project disrupted the natural flow of the water, the so-called "river of grass," altering or destroying the habitat for many species of animals, birds, reptiles, and fish.

The purpose of the January hearing was to receive comment on the Central and South Florida comprehensive review study, properly known as the Restudy. And Congress mandated the Restudy to preserve the Everglades in previous WRDA acts, and the Administration submitted the Restudy to Congress on July 1, 1999, as the WRDA 1996 required it to do.

The Restudy includes a programmatic environmental impact statement. As such, it serves as a road map for the future restoration of the Everglades. All journeys should have a road map, if you want to know where you are going.

We will look to the Restudy as the road map for a general guidance on restoring the Everglades. But we know in advance, there are going to be unanticipated detours and, hopefully, a few time-saving shortcuts, as well, along this road.

That does not mean that we should not take the journey. And I want to repeat that. It does not mean that we should not take the journey. We can deal with the detours. And, hopefully, we can even have shortcuts.

This inherent flexibility to adapt the adapted management concept and change, as future circumstances dictate, is an integral part of the Restudy's approach to restoration. Some think that this plan, once it is passed, is locked in and we can not change it, we can not adapt to any new science or any new information. That is simply not true.

The risks of waiting much longer to reverse the Everglades's decline far outweigh the risks of starting now, even as we continue to study and modify the plan. Adaptive assessment or adaptive management means we can move forward now, even in the face of some uncertainty; even in the face of not having every single bit of information that we might like to have.

Everyone has had 10 months to evaluate the Restudy. Senators Voinovich, Graham, and I visited Florida, in conjunction with the January hearing on the Restudy, and we are now at the next step of the process.

As I have said before, and I will say it again, it is a top priority for me, and I believe the committee, to pass a bill to begin the restoration of the Everglades. I applaud Senators Mack and Graham for their leadership over the next few weeks. I look forward to working with them and Senators Voinovich and Baucus to draft a bill that takes into account the comments that we hear today.

The goal that I have set for the committee is to report Restudy implementation legislation next month. The Everglades may be part of a larger WRDA bill, or it may move as a standalone bill. I will follow whichever path it takes to give the Everglades restoration the best chance of becoming law this year.

I want to just make one comment about cost. There have been a lot of numbers thrown around. This fiscal year, the cost would be in the vicinity of $100 million. The 14 year cost of the 10 initial projects would be in the vicinity of $1.1 billion. And that would be split between the State and the Federal Government.

If you break it down into something a little simpler, in terms of the entire cost, it is about 50 cents a person, per year. So if you find a cheap Coke machine, it costs you a can of Coke a year for the restoration of the Everglades. That is not a high price to pay.

As we proceed, I want to let everyone know that I have an open mind on these issues. I am not locked into any plan or any study or any detail. We have studied these issues for a long, long time. But we can not study them forever if we are going to save the Everglades. Sometimes, we have to act around this place, and I am prepared to do it.

I want my colleagues on the committee to know that it is my priority to get this bill ready for the committee, and to get it done expeditiously. If we have problems, we are going to resolve them. And if we have to take a vote to resolve them, then we will take a vote and resolve them, if we have differences.

The window of opportunity to have the bill considered on the Senate Floor is closing, and it is closing rapidly. The leader has already told us that Appropriations bills are expected to be completed perhaps as early as the August recess.

That perhaps might be a little bit too rosy, but it may happen. And if it does, the window is going to close even faster. So we do not have a lot of time.

So I am asking our witnesses today to provide constructive comments on the Administration's proposal, in order to make real progress; not just to hear a recitation of positions. We have your written statements. But we need to find a principal basis that we can use to determine how much, if anything, the Federal Government should contribute to O&M, operation and maintenance, of the Restudy.

Another example, even if waste water treatment proves technically feasible, is it cost effective, as compared to other means, to provide water further? Do we, as a national policy matter, want to encourage the return of treated waste water back into the natural system? That is another key question.

Should the Congress authorize the initial set of 10 projects now, or wait until the project implementation reports are complete? You heard comments from both Senator Warner and, I believe, Senator Voinovich; but, certainly, Senator Warner a little while ago on that issue.

These and many other issues need to be addressed thoughtfully in the next few weeks, and we seek your constructive comments. That is the only way we are going to be able to work it out.

In preparing the hearing, I asked the staff to invite representatives from the sugar industry and the Citizens for a Sound Economy, both of whom were down in Florida last January. I promised the representatives from Citizens for a Sound Economy, who had some concerns about the cost of the Restudy, that they would have an opportunity to testify. They were invited, and declined. So I want to put that on the record.

As for the sugar industry, we did invite them to testify today, but they also declined. Though it is true that the sugar industry did testify last January in Florida, it is unfortunate that they would not testify on the Administration's proposal, because I believe it would have been helpful in clarifying some of the differences that they have.

Among the issues that I wanted to question on were, the extent of their support for the April 1999 Restudy; the rationale for their opposition to authorizing the 10 initial projects; and details regarding continued farming on the Talisman property if authorization is delayed. They should be here. They should testify, and they are not here.

The April 1999 Restudy was unanimously agreed to by the South Florida Ecosystem Restoration Task Force members. It was unanimously approved by the Governor's Commission for a sustainable Florida, which included all of the major public and private interest groups.

Since the Task Force and Commission attained that landmark effort in consensus building, it seems that some of the parties have backed away from a deal that was struck. Maybe the administration started this as the Chief's Report that transmitted this Restudy made additional "commitments" that went well beyond the Restudy, itself.

Also, some in the agriculture industry seem to have backed away from the key Restudy components that were included in the plan.

As we move forward, I want to refocus our legislative efforts on the groundwork that Congress laid with the 1992 and 1996 Water Resources Development Act, and the agreement that you all reached, that everybody reached, in the Restudy in April 1999. That does not mean that you agreed with everything in it, but you agreed to a plan.

So we need to stop backtracking and start focusing; not looking to sweeten the deal, but we need to get on with the fairly straightforward task of implementing this Restudy. And not testifying, frankly, is not a good way to do it. It is certainly not a good way to endear yourself to me.

I am afraid too often people forget that the Everglades is an environmental and a national treasure. Restoration benefits not only Florida, but the millions of us who visit Florida each year, and the probably millions more, Senator Graham, who want to retire there at some point.

As I said in Naples last January, many years from now, I hope that we will be remembered for putting aside partisanship, putting aside differences as to the cost of this project, or the date of this project or that project, and that we sit down, put aside narrow self interests and short-term thinking, and we are willing to sit down at the table, and work out a deal that will save the Everglades.

This is about the next generation. It is not about the next election, and it is not about some petty bickering. It is about the next generation, as to whether or not we, in this Congress, are prepared to stand up in the year 2000 and begin the process of saving the Everglades.

We are not going to save it with one act or one bill this year. We are going to start a process that we can adapt to on a year-to-year

basis to begin the process and find out whether or not we are willing to make the commitment to do this.

Will it work? We are not 100 percent certain. We know one thing, though. If we do not do anything, we will lose the Everglades. So the risk is worth taking.

I am committed to the restoration. I am open minded about how we do it, and I am willing to listen.

Senator Graham?

Senator GRAHAM. Mr. Chairman, prudence would say to be quiet after that statement.

[Laughter.]

Senator GRAHAM. And I will be as close to quite as I can.

I would like to submit, for the record, a letter from the Corps of Engineers in response to the issue of the total cost of this restoration. This was a letter dated March 30.

Senator SMITH. Without objection, it will be admitted into the record.

Senator GRAHAM. Excuse me, I misspoke. It actually is a letter from the U.S. Department of Interior, John Berry, Assistant Secretary.

[The referenced documents follow:]

U.S. DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, DC, March 30, 2000.

Honorable RALPH REGULA, *Chairman,*
Subcommittee on Interior and Related Agencies,
Committee on Appropriations,
House of Representatives,
Washington, DC 20515

DEAR MR. CHAIRMAN: On March 8, 2000, the Department submitted a report to you on the total cost estimate to restore the South Florida ecosystem.

This provides a revised cost estimate report.

The total cost of $14.8 billion has not changed, nor has the $8.4 billion estimated to be the responsibility of the State of Florida. Total Federal costs have been revised from $6.4 billion to $6.5 billion (+$25.0 million) to reflect revised estimates for the Department of the Interior land acquisition needs.

As a result of this revision, $424.0 million is estimated as the balance to complete Department of the Interior funding, subject to the availability of appropriations. Through fiscal year 2000, $915.0 million has been appropriated for the Department of the Interior.

Again, the Department appreciates the significant support and funding that this Committee has provided for the South Florida Ecosystem Restoration Initiative.

Similar letters have been sent to the Honorable Norman Dicks, Ranking Minority Member; the Honorable Slade Gorton and the Honorable Robert C. Byrd, Chairman and Ranking Minority Member respectively, of the Subcommittee on the Department of the Interior and Related Agencies, Committee on Appropriations, U.S. Senate.

Sincerely,
JOHN BERRY, *Assistant Secretary for Policy, Management and Budget.*

I. Introduction

The Conference Committee Report language accompanying the Department of the Interior and Related Agencies Appropriations Act for Fiscal Year 2000, Public Law 106–113, requested that the Department submit information, to be updated biennially, on the total cost of the effort to—restore the South Florida ecosystem. In relevant part, the report language states:

It would be useful to have a complete estimate of the total costs to restore the South Florida ecosystem. The House and Senate Committees on Appropriations believe that this new estimate will exceed the $7,800,000,000 estimate that has been used over the last 5 years. This recalculated estimate should include all three goals

of this initiative, namely, (1) getting the water right, (2) restoring and enhancing the natural habitat, and (3) transforming the built environment. The Congress and the American people are committed to this project. Over $1,300,000,000 has been appropriated to date; however, and the public deserves to know how much this project will truly cost. This information should be submitted to the House and Senate Committees on Appropriations no later than February 1, 2000, and should be updated biennially.

The purpose of this report is to provide the House and Senate Appropriations Committees with the Department's best estimate for the total costs to restore the South Florida ecosystem. The estimate provided in Part V of this report reflects state and Federal costs to date for major on-going programs that advance the goals of the restoration effort, as well as future estimated costs to complete this work or associated with planned or proposed activities that are not yet underway. The estimate exceeds the $7.8 billion figure representing the costs to construct project features associated with the implementation of the Army Corps of Engineers' Central and Southern Florida Project Comprehensive Everglades Restoration Plan presented to Congress on July 1, 1999. The Department believes that the actual costs to construct the Comprehensive Plan may be lower or higher depending upon a variety of factors, such as congressional authorization for project features that will undergo further site specific studies and analyses prior to initiating construction. The Department will update this report biennially to reflect any future changes.

Although some of the activities included in the Department's total cost estimate began well before the emphasis in the last decade on ecosystem restoration (e.g., state land preservation efforts, the Modified Water Deliveries Project for Everglades National Park, the State of Florida's Everglades Construction Project), and may well have occurred without such increased emphasis, the Department is including the non-recurring costs for these activities as their completion is integral to the overall success of the restoration of the South Florida ecosystem Not included in the Department's estimate, however, are the normal recurring operating costs—or "agency mission" costs—for state and Federal agencies. For example, National Park Service costs to operate and maintain Everglades National Park, Fish and Wildlife Service costs to provide for Endangered Species Act consultation, and South Florida Water Management District costs to operate and maintain its water delivery infrastructure are not included. Although the Department has cited such figures in the past, as included in the Task Force's annual cross-cut budget, to describe its total funding in support of the South Florida ecosystem restoration effort, the Department believes that it is proper to exclude these agency mission costs and focus primarily on the increased funding devoted to this effort that occurred or is planned to occur due to specific restoration needs or goals.

To provide context for the total cost estimate, Part II of this report provides a brief background on the South Florida ecosystem; Part III summarizes major ongoing state and Federal efforts key to the restoration that preceded the establishment of the South Florida Ecosystem Restoration Task Force (Task Force) and the 1992 congressional authorization and direction for the Army Corps of Engineers to complete its Restudy for the Central and Southern Florida Project; Part IV briefly describes future efforts; and Part V provides the Department's best estimate to date for the total costs to restore the South Florida ecosystem. The programs and associated costs included in Part V are arranged according to the three goals for the restoration effort; Federal and state costs are noted accordingly. Federal costs are further subdivided according to individual agencies.

In accordance with the Committee's directive, this report will be updated biennially as more information becomes available and current plans and cost estimates are updated in response to lessons learned and new information. The Department believes that expanding knowledge of ecosystem restoration requirements in South Florida and Me process of adaptive management for implementation of the Comprehensive Plan will result in changes to the total cost estimate presented in Part V.

II. Background—South Florida Ecosystem

In its natural state, the South Florida ecosystem was connected by the flow of water south from Lake Okeechobee through vast freshwater marshes—known as the Everglades—to Florida Bay and on to the coral reefs of the Florida Keys. The Everglades covered approximately 18,000 square miles and were the heart of a unique and biologically productive region, supporting vast colonies of wading birds, a mixture of temperate and tropical plant and animal species, and teeming coastal fisheries.

During the last century, efforts were made to drain the Everglades and make the region habitable. This culminated in the construction of the Central and Southern

Florida Project, a flood control project jointly built and managed by the Army Corps of Engineers and the South Florida Water Management District. In response to periods of drought and extreme floods, which left 90 percent of South Florida under water, this project was authorized by Congress in 1948 and succeeded in draining half of the original Everglades, allowing for the expanded development of cities on the lower east coast of Florida and the farming area south of Lake Okeechobee known as the Everglades Agricultural Area (EAA). Although historically most rainwater soaked into the region's wetlands, the Central and Southern Florida Project canal system, comprised of over 1,800 miles of canals and levees and 200 water control structures, now drains the water off the land such that an average of 1.7 billion gallons of water per day are discharged into the ocean. Additionally, phosphorus runoff from agricultural operations has polluted much of the remaining Everglades and Lake Okeechobee and caused fundamental, and negative, ecological change.

As a result, not enough clean water is available for the environment, resulting in long-term problems for the Everglades and the communities in the region. Examples include: (i) 90 percent reductions in wading bird populations; (ii) 68 species listed as endangered or threatened; (iii) reduced fisheries in Biscayne and Florida Bays; (iv) loss of over five feet of organic soil in the EAA; (v) degraded water quality in inland and coastal areas; (vi) infestation and spread of invasive exotic plant species on over 1.5 million acres; (vii) damaging fresh water releases into the St. Lucie, Caloosahatchee, and many other estuaries; (viii) loss of wetlands that provide important species habitat and ground water recharge; (ix) loss of tree islands and damaging ecological effects in the state managed water conservation areas. Without significant infrastructure modification, these problems have the potential only to get worse and water shortages are a certainty in future years as water demands continue to grow.

Today, South Florida is home to 6.5 million people and the population is expected to double by 2050. The region receives over 37 million tourists annually and supports a $200 billion economy. Restoration is an imperative—not only for ensuring a sustainable South Florida economy to guarantee clean fresh water supplies for all future needs—but also to protect the ecological health of the Everglades that has been nationally and internationally recognized as like no other place on Earth.

III. Major On-Going State and Federal Efforts to Protect and Restore the South Florida Ecosystem

Over the last decade, and prior to the establishment of the South Florida Ecosystem Restoration Task Force in 1993, significant efforts have been made at both the Federal and state level to reverse the trend of environmental degradation in the Everglades. These efforts include: (i) improving water quality and reducing pollutants entering Lake Okeechobee and the Everglades from agricultural interests; (ii) restoring more natural hydropatterns in areas such as Everglades National Park and the Kissimmee River Basin; (iii) acquiring land for Federal and state conservation areas, regional water storage capacity, habitat and recreation; and (iv) management and protection of the coral reef through the trusteeship of the National Oceanic and Atmospheric Administration's (NOAA) Florida Keys National Marine Sanctuary. Although other activities are included in the total cost estimate, a brief summary of the most significant projects follows:

Improving water quality: In the late 1970's, the State of Florida and the South Florida Water Management District began investigating ways to improve ecosystem water quality, including the Lake Okeechobee Works of the District, farm Best Management Practices, and a cattle buy-out program. By 1988, design had begun on the 3,700-acre Everglades Nutrient Removal Project. In 1988, the Federal Government sued the State of Florida for its failure to enforce state water quality standards on pollution discharges from the EAA into the Everglades. This lawsuit was settled in 1991 and a judicially enforceable Consent decree ordered the state to take a series of remedial measures, including the construction of stormwater treatment areas (STAB) on former farms in the EAA to help clean up farm runoff. The technical plan in the original Consent decree was expanded significantly after mediation with stakeholders. In 1994, the Florida legislature enacted the Everglades Forever Act, which codified proposed modifications to the consent decree as and provided for other measures to improve overall water quality, including funding mechanisms and construction timetable for a comprehensive program of six STAB, implementation of best management practices, additional research, establishing water quality criteria and implementation of advanced water quality treatment measures.

Among the most important of these measures is the completion of the Everglades Construction Project, a series of six STAs presently under construction and located between the EAA and the natural areas to the south. Of the six STAB, five are funded by the State of Florida and the sixth, STA 1-E, is federally funded to im-

prove water quality discharges into Loxahatchee National Wildlife Refuge. The Everglades Construction Project is expected to cost approximately $696 million in capital costs to complete, of which $505 million is being financed by the State of Florida and $190 million by the Federal Government (of which $46 million was appropriated to the Department of the Interior in fiscal year 1998 for land acquisition within STA 1-E). Construction of the STAs are proposed to be complete in December 2006. Although that date has yet to be approved by the court, which retains jurisdiction over this matter, the projects called for by the Consent decree are implemented by the South Florida Water Management District.

Additionally, as a result of the Everglades Forever Act, the South Florida Water Management District established the Everglades Stormwater Program, which includes two main components in the form of an EAA phosphorus reduction program and the Urban and Tributary Basins Program. The EAA phosphorus reduction program includes regulatory programs developed to reduce phosphorus loads from the EAA by reducing phosphorus on the surrounding farms and other adjacent land prior to discharging offsite. Landowners in the EAA have implemented a series of best management practices that have effectively reduced the phosphorus loads to the Everglades. Over the last 3 years, the total cumulative loads attributable to the EAA have been reduced by 44 percent. The Urban and Tributary Basins Program was developed to ensure that all basins discharging into, from or within the Everglades, other than those included in the EAA, meet state water quality standards. Costs associated with this program are not included in this report at this time as additional strategies, in the form of regulatory changes and construction, are still being developed.

Generally, the STAs and farm Best Management Practices are expected to reduce overall phosphorus levels to 50 parts per billion (ppb), thus improving water quality from EAA discharges and other sources compared to current levels. However, the Everglades Forever Act requires the state to adopt a numeric criterion for phosphorus by 2003 so that all discharges into the Everglades will meet Federal and state water quality standards by 2006. If the state does not adopt a numeric criterion, the Everglades Forever Act sets a default standard of 1O ppb. It appears that additional measures will likely be needed to further enhance the performance of the STAs to meet these requirements; however, the costs to make such modifications are not known at this time. The South Florida Water Management District is presently conducting research into advanced treatment technologies to enhance the performance of the STAB, and also to be potentially applied to other tributaries of the Everglades. Although funding for the implementation of advanced treatment has not been appropriated, to date $10 million has been budgeted by the South Florida Water Management District toward that research. Once completed, these efforts are expected to significantly improve water quality for the region.

As part of the effort to improve water quality in Lake Okeechobee, the South Florida Water Management District is conducting the Lake Okeechobee Sediment Removal Feasibility Study. The purpose of the study is to identify a feasible method of removing sediment that will reduce the internal phosphorus loading and balance the lake's nutrient assimilative capacity. Costs to implement this program are not known at this time.

In addition to these measures, and in recognition of the critical role of water quality in maintaining coral reef natural resources, the Florida Keys National Marine Sanctuary and Protection Act of 1990 required the Secretary of Commerce, the Environmental Protection Agency, and the State of Florida to develop a Water Quality Protection Program for the Sanctuary.

Restoring more natural hydropatterns: More natural hydropatterns are presently being restored in Everglades National Park and the Kissimmee River Basin. In 1989, Congress enacted the Everglades National Park Protection and Expansion Act (Act) to expand Everglades National Park and to restore more natural sheet water flows to the park and Shark River Slough. To restore more natural sheet water flows to the park, the Act authorized the construction of the Modified Water Deliveries Project. That project is 100 percent federally funded by the Department of the Interior and is presently scheduled for completion in 2003, depending upon the availability of Federal funding and completion of ongoing planning. The estimated total cost for this project is between $133.5 million and $212 million. The range of costs is based upon alternative design scenarios for certain project features that are presently undergoing supplemental National Environmental Policy Act (NEPA) compliance. The project is undergoing supplemental NEPA compliance because: (i) the original project authorization was amended in 1994; and (ii) completion of both the C-111 project design and the Comprehensive Everglades Restoration Plan expanded agency knowledge that raised questions concerning the original 1992 design for the 8.5 Square Mile Area flood mitigation component of the Modified Water Deliveries

Project. This led to technical disagreements among the relevant agencies and stakeholders over the appropriate course of action and alternatives are being explored under the NEPA process. If a locally preferred option for the 8.5 Square Mile Area component of this project is chosen the project will be cost shared between the Federal Government and the South Florida Water Management District. For the purposes of this report, a range of costs is presented for this project, although this does not indicate a decision by the Federal Government or the South Florida Water Management District to proceed with any of the alternatives presently being evaluated under NEPA.

Authorized by Congress in 1992, the Kissimmee River Restoration project is intended to reverse the environmental devastation of earlier efforts to channel the once 103 mile free flowing river into a 56 mile canal, destroying nearly 43,000 acres of wetlands and important habitat. The project involves restoring about 40 square miles of the historic habitat in the Kissimmee river floodplain north of Lake Okeechobee, as well as restoring water-level fluctuations and seasonal discharges from Lakes Kissimmee and in the upper basin lakes. This project is estimated to cost approximately $518 million, is equally cost shared with the South Florida Water Management District, and is expected be complete in 2010.

The C–111 project comprises modifications to the Central and Southern Florida Project to provide more natural hydrologic conditions in Taylor Slough and the panhandle of Everglades National Park and to minimize damaging flood releases to Barnes Sound and Manatee Bay. Restoring natural hydrologic conditions in Taylor Slough is integral to restoring fresh water flows to Florida Bay. The project was initially authorized by Congress in 1991 at a cost of 5155 million, including land, and a completion date of 2001. Reauthorized by Congress in 1996, the Army Corps is directed to consider state water quality standards and incorporate the necessary features into the C–111 project implementation. The 1996 authorization states that all project costs, including land, are to be shared equally between the Army Corps and the South Florida—Water Management District. A supplement to the 1994 C–111 General Reevaluation Report will include actual land acquisition costs, a water quality strategy, redistribution of funding responsibilities and a revised implementation timeline, all of which may result in a revised cost estimate.

In addition to improving water quality, certain components of the Everglades Construction Project described above will restore more natural hydropatterns in the northern Everglades presently severed by the Central and Southern Florida Project. The STA 1-E/C–51W Project will provide flood control for the western C–51 basin and will restore a portion of the historic Everglades flows to Loxahatchee National Wildlife Refuge. The current project was reauthorized by Congress in 1996; project construction is 15 percent cost shared with the South Florida Water Management District, with the District providing all lands, easements and rights-of-way, with the exception of those lands that are incorporated into STA 1-E, as discussed below, which is 100 percent federally funded and for which the Department of the Interior provided $46 million, through a grant to the South Florida Water Management District, toward land acquisition costs. The Department has just learned that the costs to complete land acquisition for STA 1-E will be higher, but does not have a revised estimate at this time. It is estimated that the STA 1-E/C–51W project will cost $210 million when complete in 2003, although this number will change once final land acquisition costs are known.

Land Acquisition: The Federal and state governments have expended significant funds to acquire and protect lands in the region. Land acquisition is a critical part of ecosystem restoration as acquired lands are needed to protect key Federal and state conservation areas, create and restore additional water storage capacity and recharge areas to help increase overall water supplies and restore natural hydrology, and for habitat protection and enhancement and for recreation. As described above, some lands are also used to improve overall water quality (e.g. STAB).

Significant actions taken to protect South Florida's natural resources since the establishment of Everglades National Park in 1947 and its expansion in 1989 (together protecting 1.4 million acres of the remaining Everglades) include: (i) Florida's 1972 Land Conservation Act, 1981 Save Our Rivers Program, 1990 Preservation 2000 Act, and the Florida Forever Act that dedicate state funding for land acquisition at state parks and preserves in the ecosystem; (ii) the 1996 Federal Agriculture Improvement and Reform Act (Farm Bill) that provided the Department with $200 million for ecosystem restoration, including land acquisition; and (iii) numerous annual Interior Appropriations Acts that have funded land acquisition at parks and refuges in the region, as well as additional state land acquisition assistance funds. The state assistance funds provided by the Department of the interior have, for the most part, been targeted toward acquisition of lands that create additional opportu-

nities for water storage and are generally expected to be incorporated into a Comprehensive Plan project feature.

Through these efforts, it is estimated that $1.6 billion has been spent to date (of which $1.1 billion is state funding and $0.5 billion is Federal) for the acquisition of 4.7 million acres. It is estimated that about 638,000 non-Federal acres remain to be acquired in South Florida at an estimated cost of $2.2 billion. These figures do not include the 220,000 acres of lands needed for the Comprehensive Plan implementation, which are included in the overall cost estimate for the Comprehensive Plan.

Critical Restoration Projects: Pursuant to the Water Resources Development Act of 1996, the Army Corps and the South Florida Water Management District have entered into agreements to undertake nine critical restoration projects that will provide immediate and substantial benefits for the ecosystem. The Corps and the Seminole Tribe have entered into a similar agreement for one critical project. The ten projects have a total cost of $150 million, half of which will be paid for by the Federal Government. These projects, although small and including such features as improving flows under the Tamiami Trail, have immediate environmental benefits that will assist in achieving the goals of the restoration.

Exotic Species Control: Commensurate with land acquisition is proper land management and efforts to eradicate and prevent the spread of invasive exotic plant species. More than 200 species of exotic plant species have invaded the Everglades. The majority of these species occur in limited areas, and do not pose a direct threat to native plant communities. However, plants like melaleuca, Brazilian pepper, Australian pine, and Old World climbing fern, are causing widespread damage throughout the South Florida ecosystem, and are considered species of primary concern. The South Florida Water Management District, state, and Federal Government are all directing resources to combat this problem. While areal coverage for some species will decrease with vigilant management efforts—which has been the case with melaleuca—new species could invade without additional management initiatives. The history of this problem indicates that management efforts will only intensify with time and should be considered a perpetual management requirement in the Everglades region.

IV. Proposed Future Everglades Restoration Efforts

Despite the on-going efforts described above, it is widely recognized that full restoration of the South Florida would require an overhaul of the 1948 Central and Southern Florida Project. To this end, in the 1992 and 1996 Water Resources Development Acts, Congress directed the Army Corps of Engineers to conduct a comprehensive review study (now known as the Comprehensive Plan) of the entire project with a focus on making changes that would restore, preserve and protect the environment, while also providing clean and adequate fresh water supplies and flood protection to communities. Completion of the Comprehensive Plan was an interagency and intergovernmental effort consisting of an inclusive and open process with opportunity for input from all stakeholders.

The Comprehensive Plan was submitted to Congress on July 1, 1999. Comprised of over 60 structural and operational elements, the Comprehensive Plan proposes a conceptual Stonework to store water for critical uses; manage water to improve the quality, quantity, timing and distribution of flows to the Everglades; improve wildlife habitat; and create wetlands to filter runoff. The estimated non-recurring capital cost, including real estate acquisition and construction of project features, for the Comprehensive Plan is $7.8 billion, of which 50 percent is proposed to be provided by the state, with the remainder provided by the Federal Government. . Operating costs, or those costs that recur on an annual basis, are estimated at $172 million per year at full build out and are not included in the total cost estimate as they resemble agency mission costs that were excluded for other programs. The Administration shortly expects to submit its authorization proposal for an initial suite of projects to implement the Comprehensive Plan. It is expected that the Comprehensive Plan will take more than 20 years to complete, with the Army Corps of Engineers providing nearly all of the Federal funding. Its completion is integral to achieving two of the three goals of the restoration effort, discussed further below, and it is the single largest cost component of the restoration effort.

Also in 1996, in an effort to encourage appropriate Federal and state agencies to work more closely together, the Congress established the South Florida Ecosystem Restoration Task Force (Task Force), chaired by the Secretary of the Interior, with the mandate to guide the restoration of the South Florida ecosystem. To this end, the Task Force established degree goals: (1) getting the water right: that is, to restore a more natural water flow to the region while providing adequate water supplies, water quality and flood control; (2) restore and enhance the natural system,

protecting natural habitats and reestablishing threatened and endangered species; and (3) transform the built environment to develop lifestyles and economies that do not degrade the natural environment and improve the quality of life in urban areas.

The Task Force is presently developing a Strategic Plan, to be submitted to Congress by July 31, 2000, that will integrate on-going efforts with future proposed actions like the Comprehensive Plan. The Strategic Plan will outline how the overall restoration of the South Florida ecosystem will occur, identify the resources needed to accomplish restoration objectives, assign accountability for accomplishing actions, and link the goals established by the Task Force to outcome-oriented goals. At this time, and based upon input from State of Florida stakeholders, the state is reviewing Goal 3, "transforming the built environment," including state proposals for managing growth. Because implementation of Goal 3 is largely viewed as a state responsibility and the State of Florida is considering how to address this issue, the Department is including only estimated Federal costs in support of the present goal. The Department expects that the completion of the Strategic Plan will result in an improved ability to report on costs to implement this goal.

V. Estimated Total Costs for the Restoration of the South Florida Ecosystem

This section presents the Department's best estimate for the total costs for South Florida ecosystem restoration. As noted earlier, these costs are comprised of: (1) major on-going programs; and (2) future planned activities that may change, based uponsite specific designs and new information, or may require future Federal and/or state legislative authorization.

Finally, this report may not have captured all of the costs that could be categorized by some as meeting the goals of Everglades restoration. A sustainable environment will also need a diverse and balanced economy. The regional economy should continue to support traditional industries such as agriculture, tourism, development, fishing and manufacturing. It must ensure that these resource-dependent industries are compatible with restoration goals and will maintain or enhance the quality of life in built areas. It is difficult to quantify the costs of responsible development that would include such characteristics as redeveloping declining urban areas, roads, utilities, services, and light rail, to name a few.

Managing growth and development problems cannot be solved by each local government acting alone. Roads do not stop at city and county boundaries. Our major natural resources and ecosystems frequently encompass parts of many local jurisdictions. A decision by one local government to construct a major public facility or permit private development can have a significant impact on an entire region, and the collective decisions of all local governments affect the entire state.

Among its recommendations to Congress in July 1999, the Comprehensive Plan recommended a feasibility study to identify the dominant water and environmental resource issues in southwest Florida in view of robust population growth in the region and to develop potential solutions to any problems that may be identified. The Southwest Florida Study is being conducted by the Army Corps and the South Florida Water Management District. The study area includes all of Lee County, most of Collier and Hendry Counties, and portions of Charlotte, Glades and Monroe Counties. It encompasses approximately 4,300 square miles and includes two major drainage basins. It is likely that this feasibility study could recommend programs and costs that would support any of the goals of the restoration effort. At this time, however, no costs are included as they are not yet known.

In accordance with the Committee's direction, the Department expects to provide updates of this information on at least a biennial basis, or more frequently should it be desired, so that all parties involved are aware of the significant Federal, state and local investments that are being made in this important effort. Following are estimated total costs, arranged according to the ecosystem restoration goals:

South Florida Ecosystem – Total Cost Report (Revised 3/27/00)

($ in millions)

	Federal Costs	State Costs
Goal 1: Getting the water right		
Ongoing projects	1,197	1,044
Comprehensive Plan	3,900	3,900
Goal 2: Restore and enhance the natural system		
Land acquisition	584	3,405
Other	713	34
Goal 3: Transforming the built environment	59	to be determined
Total	**6,453**	**8,383**

Goal 1: Getting the water right to restore a more natural water flow to the region while providing adequate water supplies, water quality and flood control

($ in millions)

Ongoing Project/Agency	Total Cost	$ Thru FY00	$ Balance to Complete
Modified Water Deliveries for Evg. Nat'l Park /see note 1			
National Park Service	135-212	63	72-150
Kissimmee River Restoration			
Army Corps of Engineers	225	64	161
SFWMD	293	183	110
C-111 /see note 2			
Army Corps of Engineers	85	40	45
SFWMD	96	96	to be determined
C-51/STA-1E /see note 3			
Army Corps of Engineers	205	107	98
DOI (FY 98, STA-1E)	[46]	[46]	to be determined
SFWMD	35	35	0
Army Corps Critical Restoration Projects			
Army Corps of Engineers	75	14	61
SFWMD	75	14	61
Everglades Construction Project /see note 4			
SFWMD	506	246	260
Ecosystem Restoration Monitoring /see note 5			
NOAA/NOS	83	4	79

Federal Assistance for ecosystem land acquisition: /see note 6			
DOI (1996 Farm Bill)	193	193	N/A
DOI (P.L. 103-219)	4	4	N/A
DOI (FY 94 Supp.)	5	5	N/A
DOI (FY 95)	5	5	N/A
DOI (FY 98)	[46]	[46]	N/A
DOI (FY 99)	60	60	N/A
DOI (FY 00)	45	45	N/A
Lake Okeechobee Rest. Plan /see note 7			
SFWMD	39	0	39
Future Projects:			
Comprehensive Everglades Restoration Plan	[7,800]		
Federal	3,900	0	3,900
Non-federal	3,900	0	3,900
Subtotal, Goal 1	10,041	1,178	8,864

Notes on Goal 1:

1. Range of costs for the Modified Water Deliveries Project represents uncertainties associated with the on-going NEPA process for project components, including the 8.5 Square Mile Area, and does not represent a final agency decision to select any alternative that is presently being studied.
2. C-111 is undergoing a GRR supplement. The original project estimate was $155; however, this will increase based upon the final alternative selected. The Water Resources Development Act of 1996 provides for a 50 percent cost share.
3. STA1-E/C-51W is reported separately, as it is a Federal responsibility. Further, an additional amount is required to complete land acquisition. That cost estimate is being developed.
4. Costs for STA1-E, which is a Federal part of the Everglades Construction Project, are shown separately.
5. Assumes 20 year restoration effort beginning in 2002.
6. FY 1998 funds for state assistance are included within estimate for C-51/STA 1-E project as the $46 million appropriated was used to fund land acquisition costs for STA 1-E; the number is shown here as a non-add. Future DOI Federal funding assistance for state assistance, including the FY 01 budget request for $47 million, is included within the future estimate for the Comprehensive Plan or State of Florida SOR/CARL land acquisitions, as lands that would be acquired would likely target implementation of these programs.
7. Does not include funds for sediment removal for Lake Okeechobee; cost estimate not yet developed.

Goal 2: Restore and enhance the natural system protecting natural habitats and reestablishing threatened and endangered species

($ in millions)

Ongoing Project/Agency	Total Cost	$ Thru FY00	$ Balance to Complete
Federal land acquisition for parks and refuges: /see note 1			
NPS:			
East Everglades Addition	104	104	0
Big Cypress Addition	43	43	0
Big Cypress Preserve	195	185	10
FWS:			
Archie Carr NWR	105	11	94
J.N. Ding Darling NWR	29	9	20
Pelican Island NWR	30	9	21
Lake Wales Ridge NWR	8	4	4
Florida Panther NWR	12	12	0
Florida Keys NWR	43	33	10
Crocodile Lake NWR	15	14	1
State land acquisition efforts /see note 2			
DEP/SFWMD	3,405	1,155	2,250
Exotic Species			
NPS, Hole in the Donut	75	12	63
DOI 1996 Farm Bill, Melaleuca Quarantine Facility	6	6	0
SFWMD /see note 3	4	4	0
Multi-species Recovery Plan			
FWS	26	8	18
Manatee Pass Gates			
Army Corps of Engineers	12	3	9
Biscayne Bay Study			
Army Corps of Engineers	6	2	4

Florida Keys Water Quality EPA	410	12	398
Comprehensive Water Quality Protection Plan EPA	3	1	2
Research, including Cooperative Ecosystem Restoration Studies Initiative /see note 4 NPS (CESI)	39	39	to be determined
NOAA/NMFS	86	10	76
NOAA/NOS	50	11	39
SFWMD	30	8	22
Subtotal, Goal 2	4,736	1,695	3,041

Notes on Goal 2:

1. For FY 01, $0.2 million is requested to complete Florida Panther, NWR. The number does not show due to rounding.
2. These lands were acquired using state dedicated funding sources such as Save Our Rivers, Preservation 2000 and the Florida Forever Act, but do not include acreage or costs associated with donation of lands for Everglades National Park and Biscayne National Park.
3. Includes advanced treatment technologies research, research and research monitoring, and modeling for Florida Bay and adjacent waters and wetlands.
4. CESI research needs are being determined as part of the Strategic Plan; NOAA costs assume 20 year restoration effort.

Goal 3: Transform the built environment to develop lifestyles and economies that do not degrade the natural environment and improve the quality of life in urban areas

Note: As described in the text, this goal is being revised due to input from State stakeholders and no state cost data is available. However, Federal costs supporting the concept of this goal are shown below.

($ in millions)

Ongoing Projects	Total Cost	$ Thru FY00	Balance to Complete
Brownfield Redevelopment Grants EPA	13	3	10
Waste Water Treatment Facilities NPS, Everglades NP	38	5	33
Future Projects:			
Southwest Florida Programmatic EIS re: Clean Water Act Section 404 permits /see note 1 Army Corps of Engineers	to be determined	to be determined	to be determined
Southwest Florida Feasibility Study Army Corps of Engineers SFWMD	4 4	3 3	1 1
Subtotal, Goal 3	59	14	45

Notes on Goal 3:

1. This EIS is ongoing; costs to implement future recommended actions are not included at this time.

U.S. DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, DC, March 8, 2000.

Honorable RALPH REGULA, *Chairman,*
Subcommittee on the Department of the Interior and Related Agencies,
Committee on Appropriations,
House of Representatives,
Washington, DC 20515.

DEAR MR. CHAIRMAN: The Conference Committee Report language accompanying the Department of the Interior and Related Agencies Appropriations Act for Fiscal Year 2000, Public Law 106–113, requested that the Department submit information, to be.updated biennially, on the total cost of the effort to restore the South Florida ecosystem. In relevant part, the report language states:

It would be useful to have a complete estimate of the total costs to restore the South Florida ecosystem. The House and Senate Committees on Appropriations believe that this new estimate will exceed the $7,800,000,000 estimate that has been used over the last 5 years. This recalculated estimate should include all three goals of this initiative, namely. (1) getting the water right, (2) restoring and enhancing the natural habitat, and (3) transforming the built environment. The Congress and the American people are committed to this project. Over $1,300,000,000 has been appropriated to date; however, and the public deserves to know how much this project will truly cost. This information should be submitted to the House and Senate Committees on Appropriations no later than February 1, 2000, and should be updated biennially.

The $7.8 billion figure cited in the report language represents the estimated costs to construct project features associated with the implementation—over the next 20 years or so—of the Army Corps of Engineers' Central and Southern Florida Project

Review Study (Restudy). The Restudy, now known as the Comprehensive Everglades Restoration Plan, or Comprehensive Plan, was submitted to the Congress on July 1, 1999 and is integral to achieving two of the three goals of the restoration: (1) "getting the water right" to restore more natural water flows to the ecosystem, while guaranteeing regional water supplies and flood control; and (2) restoring and enhancing the natural system. Because congressional authorization is required for the Comprehensive Plan's proposed project features, and individual project features must undergo additional site specific studies and analyses, the Department believes that the overall cost to implement this significant and important component of the restoration effort could be lower or higher depending upon future analyses and site specific studies. Nothing in this report changes the present estimate of $7.8 billion to complete the Comprehensive Plan, for which the State of Florida will provide half, or $3.9 billion, of the cost.

To develop the total cost estimate, the Department included the cost of the Comprehensive Plan, as well as certain on-going programs that pre-date the emphasis on ecosystem restoration that developed since the establishment of the South Florida Ecosystem Restoration Task Force in 1993. This includes several projects authorized prior to and independent of the Comprehensive Plan. For example, the Congress and the State of Florida have enacted legislation requiring the appropriate agencies to take certain steps toward restoration. The Department has included the costs for these measures because they actively promote overall restoration goals and establish baseline conditions for the Comprehensive Plan. An example of this type of cost is the Everglades Construction Project, authorized by the State of Florida's 1994 Everglades Forever Act and undertaken by the South Florida Water Management District as a direct result of a judicially enforceable consent decree settling water quality litigation brought by the United States against the South Florida Water Management District in 1988. The Everglades Construction Project is designed to significantly improve overall regional water quality through the construction of stormwater treatment areas.

The Department has excluded certain "agency mission" costs, which are generally recurring in nature, including the operation and maintenance costs for the Central and Southern Florida Project, and operational costs for national parks and national wildlife refuges because the Department believes that these costs would occur without any additional emphasis on ecosystem restoration.

In response to the Committee's request, the Department submits the enclosed report with its best estimate for the total costs to restore the South Florida ecosystem. As noted in the report, the Department's total cost estimate is $14.8 billion, of which $8.4 billion are solely the responsibility of the State of Florida and $6.4 billion are Federal costs. This total cost estimate represents state and Federal costs to date for major on-going programs that advance the goals of the restoration effort, as well as future estimated costs associated with planned or proposed activities that require congressional authorization or are in the preliminary planning stages. Of the Federal costs included in this report, $1.3 billion is estimated to be Department of the Interior funding supporting Goals 1 and 2; of which $907 million represents funding through fiscal year 2000, and $405 million is estimated as the balance to complete, subject to the availability of future appropriations. A tabular display, by goal, of this cost estimate follows on the next page:

As noted in Part V of this report, the Department has limited information concerning state programs affecting Goal 3, "transforming the built environment." The state programs affecting Goal 3 are under review at this time in response to recent state proposals to manage growth and—may be slightly revised, thus the Department is including information on Federal programs that it believes support this goal. Updated information concerning Goal 3 will be included in the Strategic Plan due this July, and a revised cost estimate for Goal 3 will be provided at that time.

The Department appreciates the significant support and funding that this Committee has provided for the South Florida Ecosystem Restoration Initiative. The Department notes that the State of Florida has recently committed to fund its share of the Comprehensive Plan and the Department looks forward to working with the Committee to secure the necessary funding and legislative authorization that will be required to continue our important work in this effort, protect the Federal investments made to date in national parks and national wildlife refuges, and most importantly, save America's Everglades. The Department would be pleased to discuss this report and its contents with you further. Similar letters have been sent to the Honorable Norman Dicks, Ranking Minority Member; the Honorable Slade Gorton and the Honorable Robert C. Byrd, Chairman and Ranking Minority Member respec-

tively, of the Subcommittee on the Department of the Interior and Related Agencies, Committee on Appropriations, U.S. Senate.

Sincerely,

JOHN BERRY, *Assistant Secretary Policy, Management and Budget.*

I. Introduction

The Conference Committee Report language the Department of the Interior and Related Agencies Appropriations Act for Fiscal Year 2000, Public Law 106–113, requested that the Department submit information. to be updated biennially, on the total cost of the effort to restore the South Florida ecosystem In relevant part, the report language states:

It would be useful to have a complete estimate of the total costs to restore the South Florida ecosystem. The House and Senate Committees on Appropriations believe that this new estimate will exceed the $7,800,000,000 estimate that has been used over the last 5 years. This recalculated estimate should include all three goals of this initiative, namely. (1) getting the water right, (2) restoring and enhancing the natural habitat, and (3) transforming the built environment. The Congress and the American people are committed to this project. Over $1,300,000,000 has been appropriated to date; however, and the public deserves to know how much this project will truly cost. This information should be submitted to the House and Senate Committees on Appropriations no later than February 1, 2000, and should be updated biennially.

The purpose of this report is to provide the House and Senate Appropriations Committees with the Department's best estimate for the total costs to restore the South Florida ecosystem. The estimate provided in Part V of this report reflects state and Federal costs to date for major ongoing programs that advance the goals of the restoration effort, as well as future estimated costs to complete this work or associated with planned or proposed activities that are not yet underway. The estimate exceeds the $7.8 billion figure representing the costs to construct project features associated with the implementation of the Army Corps of Engineers' Central and Southern Florida Project Comprehensive Everglades Restoration Plan presented to Congress on July 1, 1999. The Department believes that the actual costs to construct the Comprehensive Plan may be lower or higher depending upon a variety of factors, such as congressional authorization for project features that will undergo further site specific studies and analyses prior to initiating construction. The Department will update this report biennially to reflect any future changes.

Although some of the activities included in the Department's total cost estimate began well before the emphasis in the last decade on ecosystem restoration (e.g. state land preservation efforts, the Modified Water Deliveries Project for Everglades National Park, the State of Florida's Everglades Construction Project), and may well have occurred without such increased emphasis, the Department is including the non-recurring costs for these activities as their completion is integral to the overall success of the restoration of the South Florida ecosystem. Not included in the Department's estimate, however, are the normal recurring operating costs—or "agency mission" costs—for state and Federal agencies. For example, National Park Service costs to operate and maintain Everglades National Park, Fish and Wildlife Service costs to provide for Endangered Species Act consultation, and South Florida Water Management District costs to operate and maintain its water delivery infrastructure are not included. Although the Department has cited such figures in the past, as included in the Task Force's annual cross-cut budget, to describe its total funding in support of the South Florida ecosystem restoration effort, the Department believes that it is proper to exclude these agency mission costs and focus primarily on the increased funding denoted to this effort that occurred or is planned to occur due to specific restoration needs or goals.

To provide context for the total cost estimate, Part II of this report provides a brief background on the South Florida ecosystem; Part III summarizes major ongoing state and Federal efforts key to the restoration that preceded the establishment of the South Florida Ecosystem Restoration Task Force (Task Force) and the 1992 congressional authorization and direction for the Army Corps of Engineers to complete its Restudy for the Central and Southern Florida Project; Part IV briefly describes future efforts; and Part V provides the Department's best estimate to date for the total costs to restore the South Florida ecosystem. The programs and associated costs included in Part V are arranged according to the three goals for the restoration effort; Federal and state costs are noted accordingly. Federal costs are further subdivided according to individual agencies.

In accordance with the Committee's directive, this report will be updated biennially as more information becomes available and current plans and cost estimates are

updated in response to lessons learned and new information. The Department believes that expanding knowledge of ecosystem restoration requirements in South Florida and the process of adaptive management for implementation of the Comprehensive Plan will result in changes to the total cost estimate presented in Part V.

II. Background—South Florida Ecosystem

In its natural state, the South Florida ecosystem was connected by the flow of water south from Lake Okeechobee through vast freshwater marshes—known as the Everglades—to Florida Bay and on to the coral reefs of the Florida Keys. The Everglades covered approximately 18,000 square miles and were the heart of a unique and biologically productive region, supporting vast colonies of wading birds, a mixture of temperate and tropical plant and animal species, and teeming coastal fisheries.

During the last century, efforts were made to drain the Everglades and make the region habitable. This culminated in the construction of the Central and Southern Florida Project, a flood control project jointly built and managed by the Army Corps of Engineers and the South Florida Water Management District. In response to periods of drought and extreme floods, which left 90 percent of South Florida under water, this project was authorized by Congress in 1948 and succeeded in draining half of the original Everglades, allowing for the expanded development of cities on the lower east coast of Florida and the farming area south of Lake Okeechobee known as the Everglades Agricultural Area (EAA). Although historically most rainwater soaked into the region's wetlands, the Central and Southern Florida Project canal system, comprised of over 1,800 miles of canals and levees and 200 water control structures, now drains the water off the land such that an average of 1.7 billion gallons of water per day are discharged into the ocean.

Additionally, phosphorus runoff from agricultural operations has polluted much of the remaining Everglades and Lake Okeechobee and caused fundamental, and negative, ecological change.

As a result, not enough clean water is available for the environment, resulting in long-term problems for the Everglades and the communities in the region. Examples include (i) 90 percent reductions in wading bird populations, (ii) 68 species listed as endangered or threatened, (iii) reduced fisheries in Biscayne and Florida Bays; (iv) loss of over five feet of organic soil in the EAA, (v) degraded water quality in inland and coastal areas, (vi) infestation and spread of invasive exotic plant species on over 1.5 million acres; (vii) damaging fresh water releases into the St. Lucie, Caloosahatchee, and many other estuaries, (viii) loss of wetlands that provide important species habitat and ground water recharge; (ix) loss of tree islands and damaging ecological effects in the state managed water conservation areas. Without significant infrastructure modification, these problems have the potential only to get worse and water shortages are a certainty in future years as water demands continue to grow.

Today, South Florida is home to 6.5 million people and the population is expected to double by 2050. The region receives over 37 million tourists annually and supports a $200 billion economy Restoration is an imperative—not only for ensuring a sustainable South Florida economy to guarantee clean fresh water supplies for all future needs—but also to protect the ecological health of the Everglades that has been nationally and internationally recognized as like no other place on Earth.

III. Major On-Going State and Federal Efforts to Protect and Restore the South Florida Ecosystem

Over the last decade, and prior to the establishment of the South Florida Ecosystem Restoration Task Force in 1993, significant efforts have been made at both the Federal and state level to reverse the trend of environmental degradation in the Everglades. These efforts include: (i) improving water quality and reducing pollutants entering Lake Okeechobee and the Everglades from agricultural interests; (ii) restoring more natural hydropatterns in areas such as Everglades National Park and the Kissimmee River Basin; (iii) acquiring land for Federal and state conservation areas, regional water storage capacity, habitat and recreation; and (iv) management and protection of the coral reef through the trusteeship of the National Oceanic and Atmospheric Administration's (NOAA) Florida Keys National Marine Sanctuary. Although other activities are included in the total cost estimate, a brief summary of the most significant projects follows:

Improving water quality: In the late 1970's, the State of Florida and the South Florida Water Management District began investigating ways to improve ecosystem water quality, including the Lake Okeechobee Works of the District, farm Best Management Practices, and a cattle buy-out program. By 1988, design had begun on the

3,700-acre Everglades Nutrient Removal Project in 1988, the Federal Government sued the State of Florida for its failure to enforce state water quality standards on pollution discharges from the EAA into the Everglades. This lawsuit was settled in 1991 and a judicially enforceable Consent decree ordered the state to take a series of remedial measures, the construction of stormwater treatment areas (STAs) on former farms in the EAA to help clean up farm runoff. The technical plan in the original Consent decree was expanded significantly after mediation with stakeholders. In 1994, the Florida legislature enacted the Everglades Forever Act, which codified proposed modifications to the consent decree as and provided for other measures to improve overall water quality, including funding mechanisms and construction timetable for a comprehensive program of six STAs, implementation of best management practices, additional research, establishing water quality criteria and implementation of advanced water quality treatment measures.

Among the most important of these measures is the completion of the Everglades Construction Project, a series of six STAs presently under construction and located between the EAA and the natural areas to the south. Of the six STAB, five are funded by the State of Florida and the sixth. STA 1-E, is federally funded to improve water quality discharges into Loxahatchee National Wildlife Refuge. The Everglades Construction Project is expected to cost approximately $696 million in capital costs to complete, of which $505 million is being financed by the State of Florida and $190 million by the Federal Government (of which $46 million was appropriated to the Department of the Interior in fiscal year 1998 for land acquisition within STA 1-E). Construction of the STAs are proposed to be complete in December 2006. Although that date-has yet to be approved by the court, which retains jurisdiction over this matter, the projects called for by the Consent decree are implemented by the South Florida Water Management District.

Additionally, as a result of the Everglades Forever Act, the South Florida Water Management District established the Everglades Stormwater Program, which includes two main components in the form of an EAA phosphorus reduction program and the Urban and Tributary Basins Program The EAA phosphorus reduction program includes regulatory programs developed to reduce phosphorus loads from the EAA by reducing phosphorus on the surrounding farms and other adjacent land prior to discharging offsite. Landowners in the EAA have implemented a series of best management practices that have effectively reduced the phosphorus loads to the Everglades. Over the last 3 years, the total cumulative loads attributable to the EAA have been reduced by 44 percent. The Urban and Tributary Basins Program was developed to ensure that all basins discharging into, from or within the Everglades, other than those included in the EAA, meet state water quality standards. Costs associated with this program are not included in this report at this time as additional strategies, in the form of regulatory changes and construction, are still being developed.

Generally, the STAs and farm Best Management Practices are expected to reduce overall phosphorus levels to 50 parts per billion (ppb), thus improving water quality from EAA discharges and other sources compared to current levels. However, the Everglades Forever Act requires the state to adopt a numeric criterion for phosphorus by 2003 so that all discharges into the Everglades will meet Federal and state water quality standards by 2006. If the state does not adopt a numeric criterion, the Everglades Forever Act sets a default standard of 10 ppb. It appears that additional measures will likely be needed to further enhance the performance of the STAs to meet these requirements; however, the costs to make such modifications are not known at this time The South Florida Water Management District is presently conducting research into advanced treatment technologies to enhance the performance of the STAs, and also are potentially applied to other tributaries of the Everglades. Although funding for the implementation of advanced treatment has not been appropriated, to date $10 million has been budgeted by the South Florida Water Management District toward that research. Once completed, these efforts are expected to significantly improve water quality for the region.

As part of the effort to improve water quality in Lake Okeechobee, the South Florida Water Management District is conducting the Lake Okeechobee Sediment Removal Feasibility Study. The purpose of the study is to identify a feasible method of removing sediment that will reduce the internal phosphorus loading and balance the lake's nutrient assimilative capacity. Costs to implement this program are not known at this time.

In addition to these measures, and in recognition of the critical role of water quality in maintaining coral reef natural resources, the Florida Keys National Marine Sanctuary and Protection Act of 1990 required the Secretary of Commerce, the Environmental Protection Agency, and the State of Florida to develop a Water Quality Protection Program for the Sanctuary.

Restoring more natural hydropatterns: More natural hydropatterns are presently being restored in Everglades National Park and the Kissimmee River Basin. In 1989, Congress enacted the Everglades National Park Protection and Expansion Act (Act) to expand Everglades National Park and to restore more natural sheet water flows to the park and Shark River Slough. To restore more natural sheet water flows to the park, the Act authorized the construction of the Modified Water Deliveries Project. That project is 100 percent federally funded by the Department of the Interior and is presently scheduled for completion in 2003, depending upon the availability of Federal funding and completion of ongoing planning. The estimated total cost for this project is between $133.5 million and $212 million. The range of costs is based upon alternative design scenarios for certain project features that are presently undergoing supplemental National Environmental Policy Act (NEPA) compliance. The project is undergoing supplemental PAPA compliance because: (i) the original project authorization was amended in 1994, and (ii) completion of both the C–111 project design and the Comprehensive Everglades Restoration Plan expanded agency knowledge that raised questions concerning the original 1992 design for the 8.5 Square Mile Area flood mitigation component of the Modified Water Deliveries Project. This led to technical disagreements among the relevant agencies and stakeholders over the appropriate course of action and alternatives are being explored under the NEPA process. If a locally preferred option for the 8.5 Square Mile Area component of this project is chosen the project will be cost-shared between the Federal Government and the South Florida Water Management District. For the purposes of this report, a range of costs is presented for this project, although this does not indicate a decision by the Federal Government or the South Florida Water Management District to proceed with any of the alternatives presently being evaluated under NEPA.

Authorized by Congress in 1992, the Kissimmee River Restoration project is intended to reverse the environmental devastation of earlier efforts to channel the once 103 mile free flowing river into a 56 mile canal, destroying nearly 43,000 acres of wetlands and important habitat. The project involves restoring about 40 square miles of the historic habitat in the Kissimmee river floodplain north of Lake Okeechobee, as well as restoring water-level fluctuations and seasonal discharges from Lakes Kissimmee and in the upper basin lakes. This project is estimated to cost approximately $18 million, is equally cost shared with the South Florida Water Management District, and is expected be complete in 2010.

The C–111 project comprises modifications to the Central and Southern Florida Project to provide more natural hydrologic conditions in Taylor Slough and the panhandle of Everglades National Park and to minimize damaging flood releases to Barnes Sound and Manatee Bay. Restoring natural hydrologic conditions in Taylor Slough is integral to restoring fresh water flows to Florida Bay. The project was initially authorized by Congress in 1991 at a cost of $155 million, including land, and a completion date of 2001. Reauthorized by Congress in 1996, the Army Corps is directed to consider state water quality standards and incorporate the necessary features into the C–111 project implementation. The 1996 authorization states that all project costs, including land, are to be shared equally between the Army Corps and the South Florida Water Management District. A supplement to the 1994 C–111 General Reevaluation Report will include actual land acquisition costs, a water quality strategy, redistribution of funding responsibilities and a revised, implementation timeline, all of which may result in a revised cost estimate.

In addition to improving water quality, certain components of the Everglades Construction Project described above will restore more natural hydropatterns in the northern Everglades presently severed by the Central and Southern Florida Project. The STA 1-E/C–51W Project will provide flood control for the western C–51 basin and will restore a portion of the historic Everglades flows to Loxahatchee National Wildlife Refuge. The current project was reauthorized by Congress in 1996; project construction is 15 percent cost shared with the South Florida Water Management District, with the District providing all lands, easements and rights-of-way, with the exception of those lands that are incorporated into STA 1-E, as discussed below, which is 100 percent federally funded and for which the Department of the Interior provided $46 million, through a grant to the South Florida Water Management District, toward land acquisition costs. The Department has just learned that the costs to complete land acquisition for STA 1-E will be higher, but does not have a revised estimate at this time. It is estimated that the STA 1-E/C–51W project will cost $210 million when complete in 2003, although this number will change once final land acquisition costs are known.

Land Acquisition: The Federal and state governments have expended significant funds to acquire and protect lands in the region. Land acquisition is a critical part of ecosystem restoration as acquired lands are needed to protect key Federal and

state conservation areas, create and restore additional water storage capacity and recharge areas to help increase overall water supplies and restore natural hydrology, and for habitat protection and enhancement and for recreation. As described above, some lands are also used to improve overall water Quality (em. STAs).

Significant actions taken to protect South Florida's natural resources since the establishment of Everglades National Park in 1947 and its expansion in 1989 (together protecting 1.4 million acres of the remaining Everglades) include (i) Florida's 1972 Land Conservation Act, 1981 Save Our Rivers Program, 1990 Preservation 2000 Act, and the Florida Forever Act that dedicate state funding for land acquisition at state parks and preserves in the ecosystem, (ii) the 1996 Federal Agriculture Improvement and Reform Act (Farm Bill) that provided the Department with $200 million for ecosystem restoration, including land acquisition; and (iii) numerous annual Interior Appropriations Acts that have funded land acquisition at parks and refuges in the region, as well as additional state land acquisition assistance funds. The state assistance funds provided by the Department of the Interior have, for the most part, been targeted toward acquisition of lands that create additional opportunities for water storage and are generally expected to be incorporated into a Comprehensive Plan project feature.

Through these efforts, it is estimated that $1.6 billion has been spent to date (of which $1.6 billion is state funding and $0.5 billion is Federal) for the acquisition of 4.7 million acres. It is estimated that about 638,000 non-Federal acres remain to be acquired in South Florida at an estimated cost of $2.2 billion. These figures do not include the 220,000 acres of lands needed for the Comprehensive Plan implementation, which are included in the overall cost estimate for the Comprehensive Plan.

Critical Restoration Projects: Pursuant to the Water Resources Development Act of 1996, the Army Corps and the South Florida Water Management District have entered into agreements to undertake nine critical restoration projects that will provide immediate and substantial benefits for the ecosystem. The Corps and the Seminole Tribe have entered into a similar agreement for one critical project. The ten projects have a total cost of $150 million, half of which will be paid for by the Federal Government. These projects, although small and including such features as improving flows under the Tamiami Trail, have immediate environmental benefits that will assist in achieving the goals of the restoration.

Exotic Species Control: Commensurate with land acquisition is proper land management and efforts to eradicate and prevent the spread of invasive exotic plant species. More than 200 species of exotic plant species have invaded the Everglades. The majority of these species occur in limited areas, and do not pose a direct threat to native plant communities. However, plants like melaleuca, Brazilian pepper, Australian pine, and Old World climbing fern, are causing widespread damage throughout the South Florida ecosystem, and are considered species of primary concern. The South Florida Water Management District, state, and Federal Government are all directing resources to combat this problem. While areal coverage for some species will decrease with vigilant management efforts—which has been the case with melaleuca—new species could invade without additional management initiatives. The history of this problem indicates that management efforts will only intensify with time and should be considered a perpetual management requirement in the Everglades region.

IV. Proposed Future Everglades Restoration Efforts

Despite the on-going efforts described above, it is widely recognized that full restoration of the South Florida would require an overhaul of the 1948 Central and Southern Florida Project To this end, in the 1992 and 1996 Water Resources Development Acts. Congress directed the Army Corps of Engineers to conduct a comprehensive review study (now known as the Comprehensive Plan) of the entire project with a focus on making changes that would restore, preserve and protect the environment while also providing clean and adequate fresh water supplies and flood protection to communities. Completion of the Comprehensive Plan was an interagency and intergovernmental effort consisting of an inclusive and open process with opportunity for input from all stakeholders.

The Comprehensive Plan was submitted to Congress on July 1, 1999. Comprised of over 60 structural and operational elements, the Comprehensive Plan proposes a conceptual framework to store water for critical uses; manage water to improve the quality, quantity, timing and distribution of flows to the Everglades; improve wildlife habitat; and create wetlands to filter runoff. The estimated non-recurring capital cost, including real estate acquisition and construction of project features, for the Comprehensive Plan is $7.8 billion, of which 50 percent is proposed to be provided by the state, with the remainder provided by the Federal Government Operat-

ing costs, or those costs that recur on an annual basis, are estimated at $172 million per year at full build out and are not included in the total cost estimate as they resemble agency mission costs that were excluded for other programs. The Administration shortly expects to submit its authorization proposal for an initial suite of projects to implement the Comprehensive Plan. It is expected that the Comprehensive Plan will take more than 20 years to complete, with the Army Corps of Engineers providing nearly all of the Federal funding. Its completion is integral to achieving two of the three goals of the restoration effort, discussed further below, and it is the single largest cost component of the restoration effort.

Also in 1996, in an effort to encourage appropriate Federal and state agencies to work more closely together, the Congress established the South Florida Ecosystem Restoration Task Force (Task Force), chaired by the Secretary of the Interior, with the mandate to guide the restoration of the South Florida ecosystem. To this end, the Task Force established three goals: (1) getting the water right: that is, to restore a more natural water flow to the region while providing adequate water supplies, water quality and flood control; (2) restore and enhance the natural system, protecting natural habitats and reestablishing threatened and endangered species; and (3) transform the built environment to develop lifestyles and economies that do not degrade the natural environment and improve the quality of life in urban areas.

The Task Force is presently developing a Strategic Plan, to be submitted to Congress by July 31, 2000, that will integrate on-going efforts with future proposed actions like the Comprehensive Plan. The Strategic Plan will outline how the overall restoration of the South Florida ecosystem will occur, identify the resources needed to accomplish restoration objectives, assign accountability for accomplishing actions, and link the goals established by the Task Force to outcome-oriented goals. At this time, and based upon input from State of Florida stakeholders, the state is reviewing Goal 3, "transforming the built environment," including state proposals for managing growth. Because implementation of Goal 3 is largely viewed as a state responsibility and the State of Florida is considering how to address this issue, the Department is including only estimated Federal costs in support of the present goal. The Department expects that the completion of the Strategic Plan will result in an improved ability to report on costs to implement this goal.

V. Estimated Total Costs for the Restoration of the South Florida Ecosystem

This section presents the Department's best estimate for the total costs for South Florida ecosystem restoration. As noted earlier, these costs are comprised of: (1) major on-going programs; and (2) future planned activities that may change, based uponsite specific designs and new information, or may require future Federal and/or state legislative authorization.

Finally, this report may not have captured all of the costs that could be categorized by some as meeting the goals of Everglades restoration. A sustainable environment will also need a diverse and balanced economy. The regional economy should continue to support traditional industries such as agriculture, tourism, development, fishing and manufacturing. It must ensure that these resource-dependent industries are compatible with restoration goals and will maintain or enhance the quality of life in built areas. It is difficult to quantify the costs of responsible development that would include such characteristics as redeveloping declining urban areas, roads, utilities, services, and light rail, to name a few.

Managing growth and development problems cannot be solved by each local government acting alone. Roads do not stop at city and county boundaries. Our major natural resources and ecosystems frequently encompass parts of many local jurisdictions. A decision by one local government to construct a major public facility or permit private development can have a significant impact on an entire region, and the collective decisions of all local governments affect the entire state.

Among its recommendations to Congress in July 1999, the Comprehensive Plan recommended a feasibility study to identify the dominant water and environmental resource issues in southwest Florida in view of robust population growth in the region and to develop potential solutions to any problems that may be identified. The Southwest Florida Study is being conducted by the Army Corps and the South Florida Water Management District. The study area includes all of Lee County, most of Collier and Hendry Counties, and portions of Charlotte, Glades and Monroe Counties. It encompasses approximately 4.300 square miles and includes two major drainage basins. It is likely that this feasibility study could recommend programs and costs that would support any of the goals of the restoration effort. At this time, however, no costs are included as they are not yet known.

In accordance with the Committee's direction, the Department expects to provide updates of this information on at least a biennial basis, or more frequently should it be desired, so that all parties involved are aware of the significant Federal, state

and local investments that are being made In this important effort. Following are estimated total costs, arranged according to the ecosystem restoration goals:

($ in millions)

	Federal Costs	State Costs
Goal 1: Getting the water right		
Ongoing projects	1,197	1,044
Comprehensive Plan	3,900	3,900
Goal 2: Restore and enhance the natural system		
Land acquisition	559	3,405
Other	713	34
Goal 3: Transforming the built environment	59	to be determined
Total	**6,428**	**8,383**

Goal 1: Getting the water right to restore a more natural water flow to the region while providing adequate water supplies, water quality and flood control

($ in millions)

Ongoing Project/Agency	Total Cost	$ Thru FY00	$ Balance to Complete
Modified Water Deliveries for Evg. Nat'l Park /see note 1			
National Park Service	135-212	63	72-150
Kissimmee River Restoration			
Army Corps of Engineers	225	64	161
SFWMD	293	183	110
C-111 /see note 2			
Army Corps of Engineers	85	40	45
SFWMD	96	96	to be determined
C-51/STA-1E /see note 3			
Army Corps of Engineers	205	107	98
DOI (FY 98, STA-1E)	[46]	[46]	to be determined
SFWMD	35	35	0
Army Corps Critical Restoration Projects			
Army Corps of Engineers	75	14	61
SFWMD	75	14	61
Everglades Construction Project /see note 4			
SFWMD	506	246	260

Ecosystem Restoration Monitoring /see note 5			
NOAA NOS	83	4	79
Federal Assistance for ecosystem land acquisition /see note 6			
DOI (1996 Farm Bill)	193	193	N/A
DOI (P.L. 103-219)	4	4	N/A
DOI (FY 94 Supp.)	5	5	N/A
DOI (FY 95)	5	5	N/A
DOI (FY 98)	[46]	[46]	N/A
DOI (FY 99)	60	60	N/A
DOI (FY 00)	45	45	N/A
Lake Okeechobee Rest. Plan /see note 7			
SFWMD	39	0	39
Future Projects:			
Comprehensive Everglades Restoration Plan	[7,800]		
Federal	3,900	0	3,900
Non-federal	3,900	0	3,900
Subtotal, Goal 1	10,041	1,178	8,864

Notes on Goal 1:

1. Range of costs for the Modified Water Deliveries Project represents uncertainties associated with the on-going NEPA process for project components, including the 8.5 Square Mile Area, and does not represent a final agency decision to select any alternative that is presently being studied.
2. C-111 is undergoing a GRR supplement. The original project estimate was $155; however, this will increase based upon the final alternative selected. The Water Resources Development Act of 1996 provides for a 50 percent cost share.
3. STA1-E/C-51W is reported separately, as it is a Federal responsibility. Further, an additional amount is required to complete land acquisition. That cost estimate is being developed.
4. Costs for STA1-E, which is a Federal part of the Everglades Construction Project, are shown separately.
5. Assumes 20 year restoration effort beginning in 2002.
6. FY 1998 funds for state assistance are included within estimate for C-51/STA 1-E project as the $46 million appropriated was used to fund land acquisition costs for STA 1-E; the number is shown here as a non-add. Future DOI Federal funding assistance for state assistance, including the FY 01 budget request for $47 million, is included within the future estimate for the Comprehensive Plan or State of Florida SOR/CARL land acquisitions, as lands that would be acquired would likely target implementation of these programs.
7. Does not include funds for sediment removal for Lake Okeechobee; cost estimate not yet developed.

Goal 2: Restore and enhance the natural system protecting natural habitats and reestablishing threatened and endangered species

($ in millions)

Ongoing Project/Agency	Total Cost	$ Thru FY00	$ Balance to Complete
Federal land acquisition for parks and refuges: /see note 1			
NPS:			
East Everglades Addition	104	104	0
Big Cypress Addition	41	41	0
Big Cypress Preserve	207	185	22
FWS:			
Archie Carr NWR	99	11	88
J.N. Ding Darling NWR	18	7	11
Pelican Island NWR	22	7	15
Lake Wales Ridge NWR	4	4	0
Florida Panther NWR	13	13	0
Florida Keys NWR	35	31	4
Crocodile Lake NWR	15	14	1
State land acquisition efforts /see note 2			
DEP/SFWMD	3,405	1,155	2,250
Exotic Species			
NPS, Hole in the Donut	75	12	63
DOI 1996 Farm Bill, Melaleuca Quarantine Facility	6	6	0
SFWMD /see note 3	4	4	0
Multi-species Recovery Plan			
FWS	26	8	18
Manatee Pass Gates			
Army Corps of Engineers	12	3	9

Biscayne Bay Study Army Corps of Engineers	6	2	4
Florida Keys Water Quality EPA	410	12	398
Comprehensive Water Quality Protection Plan EPA	3	1	2
Research, including Cooperative Ecosystem Restoration Studies Initiative /see note 4 NPS (CESI) NOAA/NMFS NOAA/NOS SFWMD	 39 86 50 30	 39 10 11 8	 to be determined 76 39 22
Subtotal, Goal 2	4,710	1,688	3,022

Notes on Goal 2:

1. For FY 01, $0.2 million is requested to complete Florida Panther, NWR. The number does not show due to rounding.
2. These lands were acquired using state dedicated funding sources such as Save Our Rivers, Preservation 2000 and the Florida Forever Act, but do not include acreage or costs associated with donation of lands for Everglades National Park and Biscayne National Park.
3. Includes advanced treatment technologies research, research and research monitoring, and modeling for Florida Bay and adjacent waters and wetlands.
4. CESI research needs are being determined as part of the Strategic Plan; NOAA costs assume 20 year restoration effort.

Goal 3 Transform the built environment to develop lifestyles and economies that do not degrade the natural environment and improve the quality of life in urban areas

Note: As described in the text, this goal is being revised due to input from State stakeholders and no state cost data is available. However, Federal costs supporting the concept of this goal are shown below.

($ in millions)

Ongoing Projects	Total Cost	$ Thru FY00	Balance to Complete
Brownfield Redevelopment Grants EPA	13	3	10
Waste Water Treatment Facilities NPS, Everglades NP	38	5	33
Future Projects:			
Southwest Florida Programmatic EIS re: Clean Water Act Section 404 permits /see note 1 Army Corps of Engineers	to be determined	to be determined	to be determined
Southwest Florida Feasibility Study Army Corps of Engineers SFWMD	4 4	3 3	1 1
Subtotal, Goal 3	59	14	45

Notes on Goal 3:

1. This EIS is ongoing; costs to implement future recommended actions are not included at this time.

It points out that the $7.8 billion figure that we are talking about is the cost to complete the plan, which the Corps of Engineers has submitted.

There are other costs that will be incurred by the Federal Government in the Everglades, whether we decided to go forward with this plan or not. We are operating a major national park in the midst of the Everglades. And there will be costs associated with that, that are unrelated to the restoration.

It is those costs and other similar items that were added to the $7.8 billion, in order to arrive at the larger number that was suggested. I think the letter that I will submit will detail how those numbers were arrived at.

In the testimony that the Governor gave on panel one, I thought he did an outstanding job of elaborating, as you have just done, Mr. Chairman, the theory behind what we are doing.

I would only seek to add one item. And that is that we are about to embark on the largest environment restoration, certainly in the history of this country, and probably in the history of the world. It is not, by any means, the last major environmental restoration which this country will undertake.

So part of the rationale for what we are doing and part of the rationale for some of the techniques that are going to be suggested is that this is a learning process which will be looked to as a laboratory for other restoration projects that America will be doing in the 21st century.

I think that is an important part of the rationale for what we are doing, and an explanation for some of the techniques that are being used. We are going to learn more about the science of unique environmental systems, and we are going to learn more about the public administration for how to go about the governance and the financing and administration of these projects, as we go forward, and there will be great benefit from that.

Mr. Chairman, as we start these hearings, again, I want to thank you for the tremendous personal commitment that you have made to understanding this complicated initiative and the leadership which you just indicated that you intend to provide.

Senator SMITH. Thank you, Senator Graham.

Senator Voinovich?

Senator VOINOVICH. Thank you. It is interesting that the three of us were together in Florida. And it is almost a repeat of the visit that we had there. I, too, am pleased that so many people from Florida came here today for this hearing.

Mr. Chairman, as you know, I am no stranger to the Everglades. When I was Governor of Ohio, in response to my interest in the Everglades and thanks to the courtesy of the Florida Fish and Wildlife Conversation Commission, I spent a day and a half observing the environmentally impacted area of the Everglades by helicopter and by airboat.

In addition, my wife, Janet, and I have made many visits to Florida, including trips to the Locks Hatchery National Wildlife Refuge in Everglades National Park. I enjoyed fishing in the Florida Bay and fishing for snook in the Everglades.

This past January, as I mentioned, we were all together in Florida, and had a wonderful opportunity to again see the Everglades and the problems that are connected with it.

I mentioned all of this to emphasize that I have invested a lot of time in the Everglades and, in particular, the Comprehensive Restoration Plan, and intend to continue to do so. I am unequivocally committed to the fact that the Everglades are a national treasure that must be protected and restored.

Having said that, my detailed review of the comprehensive plan has also convinced me that the Everglades Comprehensive Restoration Plan was rushed to this Congress for its consideration.

At a cost of $1.1 billion, the plans for the 10 initial projects that Congress has been asked to authorize are only conceptual, and do not even begin to meet the standards that this Congress has set for project authorizations. I think Senator Warner, in his testimony this morning, made reference to the word "act" and the specificity that is required in terms of projects that this committee authorizes.

There are some who will say that the Administration is only responding to what Congress requested, back in 1996, when it called for a comprehensive plan by July 1, 1999. However, the clear words of the 1996 act call for a feasibility report.

Feasibility studies have not been completed on any portion of the comprehensive plan, and yet the Administration is seeking a $1.1 billion authorization, based on a conceptual plan that does not contain any meaningful level of details regarding costs, benefits, environmental analysis, design, engineering, or real estate.

To authorize projects without this information would be a radical departure from the past oversight of the Corps. program by this committee, and would make it very difficult to enforce the historic standards of this committee for authorization of Corps. projects in future Water Resource Development Acts.

This does not mean that we can not act on the Everglades Comprehensive Plan. I think we can and should act to advance the critical national issue of Everglades restoration.

We can certainly endorse the comprehensive plan as a framework and guide for future action. We can authorize pilot projects to obtain the information we need to move forward.

I am sure that under Chairman Smith's leadership, we can agree on some process that will advance the authorization of the initial projects, while assuring that Congress has an opportunity to review and approve feasibility level reports on these projects before they are implemented.

Mr. Chairman, in addition to my service on the Environment and Public Works Committee, I also serve on the Government Affairs Committee, where we are concerned about the issues of Government efficiency, effectiveness, and coordinated activity.

I can not leave the topic of the Everglades restoration without one observation. Homestead Air Force Base is located only eight miles from the Everglades National Park, one and-a-half miles from Biscayne Bay, and just north of the Florida Keys National Marine Sanctuary.

The Air Force is seeking to transfer property at Homestead Air Force Base, in accordance with the recommendations of the Base Realignment and Closure Commission. The Air Force has prepared a draft supplemental environmental impact statement that presents as a proposed action the reuse of the air base as a regional commercial airport.

I am very concerned that the noise, air quality impacts, water quality impacts, and developmental pressures of commercial airport operations may not be compatible with the adjacent national parks and sanctuary.

I believe it would be irresponsible for Federal Government to improve an investment of billions of dollars in restoration to the South Florida ecosystem, while at the same time approving a reuse plan for Homestead Air Force Base that is incompatible with such restoration objectives.

I urge the Administration to pursue consistent objectives in South Florida's restoration, and assure that the actions of the Air Force and Federal Aviation Administration are coordinated with the Federal, State, tribal, and local agencies in groups making up the South Florida ecosystem restoration task force.

Finally, I would like to touch on the Everglades restoration in the context of the total nationwide program of the Corps of Engineers. I mentioned earlier that we can not talk about the Everglades in a vacuum. We do have an enormous backlog, $30 billion

worth of projects. The backlog includes $1.1 billion in Florida. And as I mentioned, the President's budget only includes $176 million for this project.

The point I want to make, and I will make it very quickly, Mr. Chairman, is we have to be realistic about what we can or can not do.

If we are going to be supportive of this project and other projects that are so important to the future of this Nation, then as a Congress, we need to reevaluate our priorities here, and do something about this $30 billion backlog. So the people that are here, the people that are anticipating that something is going to happen, know that it will occur; that the money will be there.

If we do not do that, and we continue to provide $1.4 billion every year, then it seems to me that we ought to look at what the Administration is proposing and say to the people in Florida, this is an important project, go forward with it, and work out some other kind of arrangement where they can be compensated for the Federal share, and get it over a period of time; but allow this project to move forward.

Now that is going to be an enormous thing for this Congress to do, because traditionally, you move forward, based on the amount of money that is made available to you in the authorization bill.

So this is something that, I think, Mr. Chairman, we need to talk about. It would be rather difficult, I think, to get it done, but it might be something that we ought to give consideration to. Thank you.

Senator SMITH. Thank you.

Senator Chafee, do you have an opening statement?

OPENING STATEMENT OF HON. LINCOLN CHAFEE, U.S. SENATOR FROM THE STATE OF RHODE ISLAND

Senator CHAFEE. I would just like to thank the Chairman for convening the hearing, and your interest in the subject, your passion for it, and for former Governor and now Senator Graham, your leadership through the many years to restore the Everglades. And I look forward to the testimony.

Senator SMITH. Let me thank both witnesses for being here. Let me say, first of all, and it will apply to the remaining panels, as well, that all of your prepared statements, as you know, will be submitted for the record.

Again, I want to repeat that as you can tell from the comments made here, we are far from being totally in accord on the project itself on the details. But, today, your testimony will be able to address the Administration's plan. This is a plan that has evolved, frankly. You can go all the way back to WRDA in 1996.

It started with the Restudy in April 1999, and that was a consensus document. It then moved forward to the Chief's Report, which took some of the consensus and set it aside, and made changes that are not supported by all the parties.

Then you have the current proposal, the WRDA proposal. New processes and roles are detailed for implementing the study, with an expanded role for the Department of the Interior.

So each of you has 5 minutes to testify. And I would just encourage you to leave an impression with the committee on two issues:

what do you like about the plan, and what do you not like about it? What specifically are you telling us that is just not acceptable to you and why? And if you can leave us with that, that would be very, very helpful as we deliberate on putting this together.

So let me start with you, Ms. Power, welcome. I know you represent the Seminole Tribe, and we are glad to have you here.

STATEMENT OF MS. PATRICIA POWER, ON BEHALF OF THE SEMINOLE TRIBE OF FLORIDA

Ms. POWER. Thank you. Good morning. My name is Patty Power. And it is an honor for me to be here today to talk with you on behalf of the Seminole Tribe of Florida. A previously scheduled tribal counsel meeting prevents both Chairman James Billy and Joint Counsel Jim Shore from being here with you this morning. The Seminole Tribe welcomes this opportunity to share its views on S. 2437 with the Environment and Public Works Committee.

As you know, we participated in the committee's Naples field hearing on the Comprehensive Everglades Restoration Plan or CERP. While the Tribe is a strong supporter of the CERP, we oppose the approach proposed by the Administration, as embodied in 2437.

The Seminole Tribe of Florida has been an active participant in the multi-faceted efforts to restore the South Florida ecosystem. As such, we have seen the value of our participation to the Tribe in being able to educate policymakers about the Tribe's concerns and needs.

We have also found value in working with other stakeholders to formulate and refine policy positions. The Tribe applauds the committee's approach in developing its legislation by listening to the input of stakeholders in Florida, as well as the Federal policymakers.

A program developed through consensus will earn the support of South Florida, and have an improved prospect for a successful restoration of the natural system and stability in flood control and water supply for South Floridians.

The Tribe's great concern about Section 3 of S. 2437 is that it lacks the balance necessary for successful implementation. The environmental crisis in South Florida was brought about by the Central and Southern Florida project so efficiently achieving its congressionally mandated goals of providing flood protection and water supply to the farms and families of Florida, without fully appreciating the resulting impacts on the natural system.

As the damage to the natural environment became evident, all entities began to recognize the interdependence of the natural system and the built environment.

Congress, in directing the Corps of Engineers to complete the comprehensive plan, described the plan's purposes as protecting water quality and reducing loss of fresh water from the Everglades.

Congress also noted in WRDA 1996 that the comprehensive plan "provide for the water-related needs of the region, including flood control, the enhancement of water supplies, and other objectives served by the Central and Southern Florida project."

The Restudy, as developed with input from a wide array of stakeholders, recognized the importance of addressing the water needs

in a balanced approach. Section 3 of S. 2437 abandoned the balanced approach and reverts to the myopic direction of the half century old project authorization by stating that the purpose of the CERP and the historic Central and Southern Florida project is solely for the protection of the natural system.

We urge the committee to take a balanced approach to Section 3 by providing protection to the natural systems, the people, and the agricultural communities that share the South Florida ecosystem.

The Tribe also has serious concerns about Section 3(i), regarding assuring of project benefits. The Tribe's water law is based upon a water rights Compact, codified in tribal, State, and Federal law, the implementation of which is based on Florida State water law.

The approach contemplated in Section 3(i), attempting to Federalize water allocation decisions, blatantly disregards the existing body of Florida water law. With Florida water laws thrown into disarray by this approach, the implementation of the Tribe's Water Compact is jeopardized.

The Tribe has proposed an alternative approach to Section 3(i), and the Tribe also supports the approach taken in the recently passed Florida Everglades legislation.

Shared adversity is a guiding principle of the Tribe's approach to water rights, and a basis of the Water Rights Compact. Consistently, in commenting throughout the development of the Restudy, the Tribe supported the application of shared adversity.

While S. 2437 acknowledges that the rights of the existing user should be preserved, S. 2437 does not define existing use. Limiting existing use to the water being used today fails to take into account long term, permanent rights to water that may not be presently used.

In comments on the lower East Coast Regional Water Supply Plan, the National Park Service defined "existing use" as that amount of water being used on April 13, or the day the plan is to be adopted. That interpretation, we believe, would lead to a moratorium on water use, including capping the use of permitted, but not currently used water, as well as future water use.

The Tribe's economic development has been such that the Tribe is not yet using all of its entitlement water. The inability to use its water rights would stunt the Tribe's economic development.

We urge the committee to ensure that S. 2437 incorporates the concept of shared adversity, and clearly define the existing use to prevent a water use moratorium in South Florida.

Thank you for the opportunity to share the views of the Seminole Tribe with the committee. While the Tribe is a strong supporter of the restoration of the South Florida ecosystem, we will continue to be vigilant in our review of its implementation.

We look forward to a continued partnership on a government-to-government basis, in meeting the challenging effort to save the Everglades.

Senator SMITH. Thank you very much, Ms. Power.

Mr. Lehtinen, representing the Miccosukee Tribe, welcome, sir.

STATEMENT OF DEXTER LEHTINEN, ON BEHALF OF THE MICCOSUKEE TRIBE

Mr. LEHTINEN. Thank you. I am General Counsel for the Miccosukee Tribe. I serve on the Governor's Commission and the South Florida Task Force as former State Representative/State Senator and United States Attorney.

The Miccosukee Indians are the only people who live within the Everglades, and have adopted federally approved Clean Water Act standards, which exceed all other standards. To understand our WRDA positions, you have to know that the Tribe believes that the Everglades restoration is in trouble, due to misplaced priorities, subordination of fundamental Democratic values, and Federal bureaucratic intransigents.

There are two examples that suffice. First, the Central and Tribal Everglades is given second class status, despite specific legal protections and the fact that the Central Everglades is the largest remaining fresh water Everglades. It is a gross misconception, encouraged by the park, that the Everglades is the same as Everglades National Park.

Second, the 1989 modified water delivery project is stalled by bureaucratic selfishness, causing destruction of the Central Everglades. Agencies spend their time trying to seize the homes of the politically weak minority residents, who were guaranteed protection in 1989.

It is curious that the Tribe stands up for these minorities more than Government. Undoubtedly, that is because Indians who have been targets of land grabs themselves recognize it when they see it. If Government can take their land, then it can take the Tribe's land, and it can take your land, too.

Specifically on WRDA, first, the bill would implement the July Chief's Report, rather than the April Restudy, which was the product of the consensus process. The Chief's Report makes new and contradictory commitments, behind closed doors, including the 245,000 additional acre fee, even though the Restudy specifically rejected this proposal known as D13R4, as destructive of other parts of the Everglades.

This is an outstanding example of politicization by Washington's civil interference, with the process to bend to placate groups with which the Administration is close.

The Administration denials of this ring hollow, in light of recent documents: for example, e-mails from Assistant Secretary Davis stating that, "The Chief's Report captures the Restudy plan, plus the substantial subsequent commitments," and also cautioning, "Please keep close hold, and do not distribute outside your agency."

There was a Corps' e-mail that said, "We need to keep these groups on board," but it then goes on and says, "We are uneasy about changing what is in the report." There was a DOI letter sent to the Corps stating, "We appreciate the following additional commitments, additional water." And there was an e-mail I just reviewed from the Corps that states that we want to include some of the commitments we made after the Restudy was completed, including additional water.

Second, the bill gives the Interior Department a veto on water deliveries, essentially Federalizing water laws, the Seminoles say.

DOI is one land owner among others, including the State, the tribes, and private citizens, and nobody should have a veto.

Corps. policy processes can certainly protect Federal interests. And if the DOI does not trust the Corps. then why should the Miccosukee Tribe or the State or private citizens?

Third, the proposal abandons the balance approach, giving the natural system, as the Seminoles mentioned, a higher priority. That is just plain wrong. It is not necessary. It destroys public support, and it breaks prior legal commitments.

Even the April Restudy report says that flood control models were inadequate and that, "For those areas that are expected to be adversely impacted, further studies are recommended."

Fourth, the proposal grants broad programmatic authority for no real reason, other than to avoid congressional scrutiny. While some programmatic authority in pilot projects might be appropriate, the other programmatic authority is excessive: $100 million for adaptive monitoring, with no actual plan; $250 million for other program authority, when no projects specified at all. These are just cash cows.

The Restudy admits to a "high level of technical and implementable uncertainties." Besides flood control, erroneous assumptions of the natural system model are admitted in the Restudy. "Discrepancies in topographic data," if consistent topographic assumptions were used, target depths would be shallower and less water would be needed. We just need to know these before we go forward.

Fifth is a proposal on environmental justice. It should prohibit discrimination and disparate impacts on minorities. The League of United Latin American Citizens has already found minority discrimination in the modified waters project, where DOI is trying to forcibly remove more than 300 largely Hispanic residents.

Let me just say what is not in WRDA in one sentence. It shortchanges tribal roles. The Tribe needs to be mentioned in all parts. It need to go forward and protect the entire Everglades with an equal protection clause for the whole Everglades. It needs to require implementation of mod. water deliveries. It needs to protect private property rights by continuing flood protection that is not reduced, and it needs to protect equal assurances.

In conclusion, the Tribe does generally agree with the comments of Senator Voinovich in his letter to GAO. It generally agrees with the comments of Senator Warner, if we interpret those as being that he is committed, but just wants good feasibility reports. And we do, however, point out that you have got to save the entire Everglades and have equal balance. I would not endorse, perhaps, those other remarks of Senator Warner.

In conclusion, what the Tribe really wants is fairness, nondiscrimination, and sound planning, and it does want quality control in Everglades restoration.

Thank you.

Senator SMITH. Thank you very much, Mr. Lehtinen.

Let me just suggest to the members, and there are only four of us here, I think we should feel free to interject a question, if we wish, and not necessarily have too rigid a rule here among mem-

bers. So if you are so inclined to ask a question or followup any particular point, please feel free to do it.

Senator Graham, did you wish to start? Do you have any questions?

Senator GRAHAM. I guess a baseline question, you both raised a series of concerns about the plan. There is the fundamental option that is available to us, which is not to proceed with the Restoration Plan. What would be the consequences to the parties that you represent of a Federal policy of non-restoration of the Everglades?

Mr. LEHTINEN. Well, we want the Everglades restored.

Senator GRAHAM. The question was, would you outline what would be the consequences to the parties that you represent of the Federal Government not participating in this restoration effort?

Mr. LEHTINEN. Well, I am assuming you mean ever participating, and not Senator Voinovich's comment that we could do something this year, and we can endorse restoration, but we do not have to do certain projects.

If you are talking about it at the macro level, the problem today is that mod. water deliveries, which is not part of this plan, which was an 1989 act, if you do not implement that and other elements of the plan, you end up destroying, through water quality damage and through misdelivery of water, water conservation area 3(A), which is virtually as large a fresh water Everglades as the fresh water parts of the park, excluding things worth saving, the Florida Bay, which is salt water and the salt water estuaries, the transition zones.

So Everglades restoration is important to the Tribe. I will say, however, that Everglades restoration has to be done right. If modified water deliveries, which are not part of this named Restoration Plan; it is a precursor, C1–11, and the quality aspects of the Everglades Forever Act up around the EAA, the Everglades construction project, would be implemented, it is important that these add-on projects in this plan not be done wrong.

What the Tribe needs is restoration done right. But if it is done prematurely, and water is delivered incorrectly, you will do damage. In other words, I guess what I am saying is this. It is not simply the case that anything we do will help. We want this plan implemented, but we want it implemented slowly with feasibility reports. Because if it is implemented wrong, it will do more damage than we currently have.

In summary, we need restoration because of water quality and because of misdeliveries. It is essential that Congress participate in this program, one way or the other. But we tend to believe that it does not require the macro programmatic authority that you could pass very substantial bills on this without that.

Senator SMITH. Do both of you still support the negotiated language in the April 1999 agreement?

Ms. POWER. Yes.

Senator SMITH. You do, Ms. Power?

Do you, Mr. Lehtinen?

Mr. LEHTINEN. Yes, we generally support that.

Ms. POWER. Senator Graham, if I could address your question, I think the State and the tribal and local governments would con-

tinue with their projects to improve the environment in the Everglades.

However, if the Federal Government does not step up to its role, it will slow the whole process down, possibly to the point of causing irreversible damage.

Mr. LEHTINEN. Could I add, Senator Smith, one thing about the April report, we support that report. We still support that report strongly.

We were always told, however, that certain editorial comments in the report about how this would be implemented were going to be up to Congress, meaning we wanted the components of the April report, and so forth. But we never intended to endorse any editorial comments that said, we will go and get programmatic authority.

We are very afraid of this adaptive programmatic management, which really means that you can do whatever you want, mess it up, come back and say, well, that is all right, because we did not have a plan. That is why we endorse April 1999, but we think it requires the planning of each of those components, rather than very, very broad programmatic approaches.

Senator VOINOVICH. Mr. Chairman?

Senator SMITH. Sure, go ahead.

Senator VOINOVICH. Mr. Lehtinen, on April 6, is that what you are talking about, the Corps of Engineers general reevaluation report and environmental impact statement on alternatives for providing flood mitigation to the 8.5 square mile area, in conjunction with implementing the modified water deliveries project. Is that what you are referencing to?

Mr. LEHTINEN. No, I am referring to the April 1999 Restudy, seven or eight volumes.

Senator VOINOVICH. The question that I have got is in regard to the testimony, that the modified water deliveries project is essential to the Everglades restoration. And I guess that has been mired in controversy.

As you mentioned in your testimony, the modified water delivery project is essential to the Miccosukee's interest in Central Everglades restoration. Besides the authorized general design memorandum plan for flood mitigation, which is opposed by the Department of Interior environmentalists, is there any plan which at least partially would address the concern of property owners and be acceptable to the Department of Interior and the environmental interests? Is there any way that this can be worked out?

Mr. LEHTINEN. I think the Department of Interior is using the mantle of restoration to achieve buffer zones in national parks around the county.

I think the Department of Interior's goal, when the Corps of Engineers constantly says, in this 100 percent federally funded plan, that there is no substantial difference among any alternatives in the restoration of the slew, and they must have said that four times a week and a half ago, in their oral presentation, and they say it in their last EIS, I think the Department of Interior is just holding the money hostage. I do not think they have got an environmental reason.

Now when Dante Fascell passed the bill, the Congressman, with the help of the Senate and President Bush, signed it, that added

107,000 acres to the park, and sought to protect a mere 6,000 acres that were higher than Miami International Airport in ground elevation. Granted, if you now go in and condemn those people's land, you get 6,400 more acres, so that is the way they are analyzing it now. They agreed to the boundary line then, and now they want the boundary line changed.

I do not know of any compromises that would make a whole lot of sense there, in that high ground area. The law was passed to protect 6,000 acres, in return for turning over 107,000 acres to the park, and it is only mired in controversy in the Department of the Interior.

Senator VOINOVICH. Ms. Power, do you have language that you think would deal with your problem, that you would like to have the committee recognize or receive?

Ms. POWER. We submitted language in our written testimony to address the assurances provisions in the bill. And our concerns with the approach taken by the Administration in Subsection I on assuring project benefits is that it would not result in a supportable balanced approach on water allocations.

There are actually two different positions that the Tribe could support. The one that we outlined in our testimony would require the Task Force to prepare a report and recommendations to Congress, the Florida legislature, and both tribal counsels, to recommend policy decisions on how to allocate water that is created by the project features in the CERP. Those recommendations would then be acted on by each of the separate legislative bodies, and enacted into law.

The other approach would be that taken in the recently passed State legislation, which would use the PIR process outlined in the Restudy to identify the increase in water created by the new project features, and then use the existing State Florida water law to determine how the allocation of that new water should be determined.

Senator VOINOVICH. Would that take care of it, Mr. Lehtinen? Would you feel comfortable with what Ms. Power just made reference to?

Mr. LEHTINEN. I think the general approach, I mean, the devil is in the details in the writing of that. But we think that there are ways to protect everybody's interest that she has alluded to.

Senator VOINOVICH. Well, what I have heard is that the Florida legislature tackled this, and came back with what you consider to be some reasonable language. And I suspect they are giving this a lot more attention than maybe we possibly could. And what I would like to know is that if we were able to adopt that language, would you be satisfied?

Mr. LEHTINEN. We generally support, as did the Seminoles, the Florida legislation.

Ms. POWER. The other benefit of using the Florida approach is that there would be consistency between the State and Federal law, which would avoid confusion in implementation and potential lawsuits, which would result in delays, as that law is interpreted.

Senator VOINOVICH. Thank you. There is just one more question for me, and if you could both respond to this, on the assurances language.

Are you opposed to the DOI/Army Corps. issuing regulations, based on the violation of a tribal water compact only, or do you have other objections to this, in terms of the reach of the Federal Government into the regulations? Could you clarify that for us, as to what your position is on that?

Ms. POWER. Clearly, our concerns are over the strength of the Compact, which has been in place for 13 years, and functioning without any issues. That would be our primary concern, although we would have general concerns about Federalizing water allocation decisions in Florida, whether it be the Corps. doing it or Interior and the Corps.

Senator VOINOVICH. Is that your position, Mr. Lehtinen?

Mr. LEHTINEN. Well, the Miccosukees do not have a Water Compact. They rejected it because of elements that they were opposed to.

Our position is that the Department of the Interior and national parks, as important as they are, are not more important than Federal trust tribal land. They are not more important than State land. And in all honesty, in this country, they are not more important than private property of private landowners.

This is not the kind of country that says, if the Fed. holds title to a piece of property, that that is supposed to somehow, under our 14th Amendment, Equal Protection Clause, be greater of property value than the other landowners.

What we believe is that you can protect everybody's rights, and should protect everybody's rights. But if you give the Department of Interior a veto, then what you do is, in terms of systems analysis and theory, you simply remove any duty or any motivation to make the water right for everybody by saying, well, we are supposed to try to make it right for everybody. But if we satisfy one interest, that is enough. You have to have a goal in terms of satisfying all needs, or else you immediately subordinate and disregard the other goal.

Now Interior, they are important, but they are a landowner. And as a landowner, they will act strictly with regard to their land, and they should. We should be happy, because Federal Indian trust land is supposed to be guarded by Interior. But if you talk to probably 500 tribes, and you are not going to find that Interior pays much attention to Federal Indian trust land.

Interestingly enough right here, it is Federal Indian trust land, 500,000 acres of Federal Indian Country, that is historic fresh water Everglades. The Marjorie Stoleman Douglas is equal in size to the park.

Their whole program is to save the 500,000 of fresh water acres in the park, and the tribal fresh water Everglades can go to pot. So we do not trust any process that gives one landowner a veto, no matter what id card they carry. Now we do not want the State to have a veto, or the Tribe. But we think the Corps of Engineers should issue regulations, taking input from everybody.

So it is not just tribal water compacts or anything like. It is really a fundamental principle of equality among all citizens of the United States, including Indian citizens.

Senator SMITH. Does anyone else have a further question of this panel?

[No response.]

Senator SMITH. I might just ask you to just recap for me, two or three points.

One, what are the two issues that you object to most, from the transition or the evolution from the April 1999 agreement to where we are today, with what we are hearing, and what we are debating this morning.

Mr. LEHTINEN. The two most in the Chief's Report?

Senator SMITH. Right.

Mr. LEHTINEN. That is risky, but it is a 245,000 additional acre feet that is not properly studied, and will actually do positive damage to most of the Everglades, especially when the NSM topographic data is admitted in the same report to be inadequate.

Senator SMITH. OK.

Mr. LEHTINEN. No. 2, it is the reduction of water supply and flood control to "as is practicable." And in that context, you can solve both of these with specific language in a bill, but it also illustrates why a broad programmatic system is subject to abuse, even by good people.

Most of the people who legitimized this process in the Chief's Report did so out of good faith efforts. And perhaps they would not be serving their client's interests if they had not taken advantage of their special inside clout.

If there was a different Administration and I had the clout, I ought not be able to use it in that fashion, either. We need a neutral process.

Senator SMITH. Thank you.

Ms. Power, do you agree with those two top points?

Ms. POWER. I do not think those would be the ones that I would select.

The first one would be, as I spoke about earlier, restoring the balance to protection to the natural systems, the people, and the agricultural communities. And the second would be to create a better approach to assuring project benefits.

Senator SMITH. I am sorry, would you repeat that last one.

Ms. POWER. To create a different and better approach to assuring projects, and also to restore balance in that area.

Senator SMITH. Thank you very much. I appreciate you both being here today. I know you traveled a long distance, and I thank you for that.

We are in the Senate, and we have another recorded vote. So I apologize to the next witness of panel three, but we will take a 5 or 10 minute break, just so I can run down and vote. I will be right back. So we will recess for 10 minutes.

[Recess.]

Senator SMITH. The hearing will come to order, please.

I am pleased to welcome Captain Mike Collins, the chairman of the South Florida Water Management District. It is nice to see you again, Captain Collins.

Captain Collins. It is a pleasure, also.

Senator SMITH. I liked that term "Captain" when it applies to a fishing vessel. That is my kind of captain.

Let me say the same thing I said before. I would like you to outline for, after your remarks or in your remarks, which are made

a part of the permanent record, whatever views you have on the plan, as it has evolved, as to where you support it and where you do not; or, if you support it all, then so indicate.

I have read through your testimony. And that will be made a part of the permanent record. I apologize for the delay. You may proceed.

STATEMENT OF CAPTAIN MIKE COLLINS, CHAIRMAN, SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Captain Collins. Mr. Chairman, thank you; it is a pleasure to be here. And it is a pleasure to hear your continued support for our ambitious program to save the Everglades.

I am going to skip the remarks about the history. You have heard all of that. And I want to just sort of point out that the process that we entered into, on the Governor's Commission and on the Federal Task Force was to develop a comprehensive plan to reserve, preserve, and protect the ecosystem.

Under Congress' direction, that plan was supposed to include features necessary to provide for all the water-related needs of the region, including flood control, enhancement of water supplies, and other objectives.

We are never going to be able to protect the natural system if we do not deal with the issues related to other competition for that system.

The plan submitted to you in July 1999 is that plan. Is it comprehensive to answer all the problems? No, it is comprehensive because it was developed by a consensus process among all the competition users, and in recognition of the interconnectedness that we all have in that system.

Overlying the dynamic of the interest with scientific complexities associated with getting the water right, you begin to understand how hard it was to build that consensus. As a member of the Governor's Commission that works hard on developing that consensus, I still stand behind that original plan.

As the head of an agency who will serve as the local sponsor for the State's portion of that plan, I can tell you that the Agency still stands behind that Plan.

We believe very strongly that attempts to alter, after that deal was cut, any significant portion of that dynamic balance stands a very serious risk of destroying the support that we have been able to build, and that the Governor has provided the leadership to move through our legislature. That support is still unanimous.

I can not address the issues that may exist for the sugar industry. I can only tell you one thing. I share your concern. And I have an agreement that I struck with Stewart Strall, who is the President of the Florida Autobahn, who is also a member of the Governor's Commission; and Malcolm Wade, who is Executive Vice President under U.S. Sugar, and myself, to go to the editorial boards of the South Florida newspapers, within the next 2 weeks, to reiterate our support for that plan.

In their support, they have raised issues at various times. They did it in the Governor's Commission. But I think, like you, it is important now that the people who struck those deals originally stand up and stand behind the plan that has been submitted to Congress,

so that at least you know where we stand. And I am going to try to help you with that.

The South Florida Management District still supports this plan and the process that we used for developing this. It is the best opportunity for solving the regions' environmental and water resource problems.

We believe this plan provides a successful road map for providing adequate water, for a healthy sustainable Everglades system, as well as maintaining urban and agricultural use.

Is it perfect? No, it is not perfect. The adaptive and controversial adaptive management section of this is an admission that over the 20 year period of this, we do not know enough to know exactly what is going to happen. Is it a solid enough framework for us to proceed? Yes, I believe it is.

In April, I submitted some testimony that sort of touched on our desire for the cost of operating and maintaining the comprehensive plan to be shared by the Federal Government. The Administration's bill calls for a 60/40 split. I urge you to stick to the 50/50 that we originally discussed.

You can invent all sorts of formulas that allocate certain portions of the water to the Federal side or the State side. I think all you are doing is setting the ground for future arguments. The basic thing that I believe in the strongest is that we are partners.

If we are going to be successful partners, 50/50 is the only way that is really going to work. It should be just as true of the O&M, as it is of the plan and the funding for that portion of it, too.

I think it eliminates the possibility for a whole lot of future arguments, based on shifts in whatever formula we may try to draw up. It just makes sense to me.

And, again, just in closing, I would like to State that we have provided, I believe, evidence that we have the expertise. We have been the partners of the Federal Government, and the agency I represent, for 50 years. Whatever mistakes were made, we have made in concert. The effort to improve this, we have made in concert.

I believe we have demonstrated our commitment, in terms of funding. And I believe that the Governor of Florida showing up here, and then the remarks he made, reiterated every forum where he has been presented the opportunity to provide his leadership on this issue.

I would urge you very strongly to continue to support this, and pass a bill that gets this moving.

Thank you.

Senator SMITH. Thank very much, Captain Collins. I appreciate it. You indicated in your statement that the plan submitted to you in July, 1999, was comprehensive, but it does not provide all the answers to all the problems.

Mr. COLLINS. No, sir.

Senator SMITH. And I think it is good to go back, and it was not sitting at the table, of course, but I think it is fair to say that in coming to that agreement, that people probably did not get everything they wanted, but it was viewed as a compromise plan; is that correct?

Captain Collins. I do not know any one of the 43 or 44 people that sat at that table on the Governor's Commission, or any of the people that I witnessed on the Federal Task Force that left with the impression that they had gotten every single thing they wanted.

It is very hard to describe how many years we took in reaching that consensus. It was very difficult for people like the Florida Autobahn and U.S. Sugar, you know, to reach agreement. So it was very hard for fisherman, who had been fighting to save estuaries to reach agreement with Ag. people.

It was a realization over a period of years, that if we were going to survive, we were going to have to do it together; that is if we were going to survive, we were going to have to recognize each other's needs. I believe that is in that plan.

I also believe very strongly that it is in Florida water law. And to relate some of the comments that Senator Voinovich made, we believe that should be the foundation for whatever level of what is currently described as assurances takes place.

I believe Florida water law, and particularly the minimum flows and levels section of that, provide better natural system assurances than anything that currently exists in Federal law.

Senator SMITH. Is there any one of any of the stakeholders that you are personally aware of, other than the obvious one, which is EPA or the Administration, whose plan is considerably different than the original plan?

Captain Collins. Yes, sir.

Senator SMITH. Is there any other stakeholder that you are aware of who has taken a position now of moving away from the plan, as originally agreed to in 1999?

Captain Collins. It depends on how you describe stakeholders. You know, we did not have every single individual at the table. We had representatives of agriculture. We had representatives of the environmental community.

A lot of the background noise that I have had to deal with in my position, since the plan came out, has been from people who are representatives, perhaps of those communities, who were not at the table. You know, there were national environmental organizations that were not part of the consensus process, that have problems with it.

I am not aware of people that were at the table that we sat at, when we drew it up. There has been a certain amount of slippage. The Chief's letter was tremendously destructive, in terms of trust. There were reasons why it was done. It was done in good faith. But I am going to tell you that I have spent a lot of time, and had to make a lot of public pronouncements because of the lack of trust that created.

I think we can heal that. People have slipped a little bit, yes. I am going to start trying to pull some of the people that I worked with back together, and make them stand up in public and make some commitments.

Senator SMITH. You, very aggressively in your statement, support the 50/50 O&M, operation and management, split on the project. You are aware that this is contentious, because of the fact that normally the O&M portion is a non-Federal responsibility.

What in your view makes this different than other water resources development projects in the past, where traditionally we have gone without the 50/50 split, but rather the total non-Federal participation?

Captain Collins. I think the 50/50 cost share and everything else creates a certain atmosphere. I think the fact that what we are dealing with here are massive Federal investments and massive State investments in a natural system creates an atmosphere that just sitting as the Chairman of the Water Management District, I can just tell you that right now, when issues come up, there is a certain amount of parochial latitude that these are State interests; these are Federal interests.

You know, the law sort of keeps us on line as far as protecting both of them equally. Florida water law does.

I think you set the stage, at least. And in doing this, and I have been at it for many years, when I leave, I want to have the feeling that we have not set the stage for future battles.

There are going to be demands made by Federal family members, Department of Interior, in particular, on the operations of the system. I think it is basically only fair.

I mean, there are going to be differences of opinion. You build a very weak foundation for some of them, if they are not paying any of the costs of operation and maintenance. Those are significant. They create, I think, just an atmosphere that will lead to disputes in the future.

You build a better case for the idea. And also, like the Governor, I believe in an absolute sense that this needs to be a partnership to succeed.

Senator SMITH. Captain Collins, the South Florida Water Management District is expected, as I understand it, and correct me if I am wrong, to provide about $100 million from the State, and $100 million from the South Florida Water Management District.

Can you tell me, at this point, what the plans are for coming up with that share, and where we are on that part?

Captain Collins. Yes, that has been a lot of fun. We went back and did a basic probably not a zero line budget, but as close to it as any agency of our kind ever has.

We have identified a significant portion of it. You know, how much of it, I can not really say until we get through the budget process.

In the process, what we discovered was, there were a large number of local projects that are being done by the counties, and some of them with State money, that we were not really getting credit for, because they were not captured within that process. The State spent $78 million or something like that on those projects. A number of them are going to be caught up in that.

It would be hard to say that we have got a full $100 million, but we are very, very close right now. And we have a process that is ongoing, through our budget process, that we will do between now and September to identify the rest of it. I am pretty confident that we are going to get there.

Senator SMITH. I have just a couple more questions. When does your board intend to announce the preferred alternative for the modified waters project?

Captain Collins. We will be voting at the next general board meeting which, I believe, is June 15. It is the second Thursday in June.

Senator SMITH. Do you expect a final decision there?

Captain Collins. Yes.

Senator SMITH. Is there anything right now in the plan that we are now hearing on, the Administration plan, that is an absolute deal breaker for you? And you can hedge on that a little bit, if you want to.

Captain Collins. I think if there is no role, I think if it continues to state that this will be Federal decisions on disputes, I think it will be very, very difficult for any governing board of the Water Management District to proceed on the investment of State taxpayers money without some kind of a guarantee that some role for those taxpayers would be guaranteed in disputes. I think that is a deal killer.

Senator SMITH. What about the Department of Interior portion on regulating the water?

Captain Collins. Well, I am going to tell you that I went on record as having stated that the money that was encumbered with the last language that Congressman Regula submitted would prevent us from accepting that money. So I can not speak for the board.

I can tell you personally that it is my opinion that if we had accepted it, it would have been very difficult for us to comply with Florida's constitution regarding the way we are supposed to balance water.

You know, you are creating a whole new statutory world. We are used to being partners with the Army Corps of Engineers, and having to consult and consider the Department of Interior. I think we would be very hesitant to get ourselves in a position where the Department of Interior had veto authority over water supply for the people of South Florida.

Senator SMITH. Well, I want to thank you for coming again to testify, and adding to the testimony that you gave to us in South Florida a few months ago. We appreciate you coming.

Captain Collins. Thank you, sir.

Senator SMITH. And we anticipate, as I said before, getting to the point where we can markup an Everglades restoration bill, hopefully within the next 30 or 40 days. It is a tough challenge, but if you guys could get together on a plan, we should be able to get together as a committee.

I am going to leave the record open only until tomorrow afternoon at 5. Members had plenty of notice to be here. And so if they have questions that they want to submit for the record, we will close that out at 5 tomorrow for questions. So if any of the witnesses, yourself or any others, Captain Collins, get any questions, if you would just respond to them as quickly as possible, for the record.

Captain Collins. We will do that. Thank you, sir.

Senator SMITH. Thank you.

Let me just state for the benefit of those watching and listening that we will reconvene this hearing at 2 this afternoon.

At that time, the panels will be the Honorable Joseph Westphal, the Assistant Secretary for the Army (Civil Works) U.S. Army Corps.; the Honorable Gary Guzy, General Counsel of the U.S. EPA; Ms. Mary Doyle, the Acting Assistant Secretary of the Office of Water and Science, and the Chair of the South Florida Ecosystem Restoration Task Force from the Department of Interior; Mr. Ken Keck, Director of Legislative and Regulatory Affairs, Florida Citrus Mutual; and Dr. David Guggenheim, President, the Conservancy of Southwest Florida, and the Co-Chair of the Everglades Coalition.

So we will start again at 2. The hearing is recessed.

[Whereupon, at 12:04 p.m., the committee was recessed, to reconvene at 2:00 p.m. the same day.]

EVERGLADES RESTORATION

THURSDAY, MAY 11, 2000—AFTERNOON SESSION

The committee met, pursuant to notice, at 2:00 p.m. in room 406, Senate Dirksen Building, Hon. Bob Smith (chairman of the committee) presiding.

Senator SMITH. The hearing will come to order. I welcome all of the witnesses. This is the second half of the hearing. And it actually kind of works a little better that way, to get a 2-hour break for lunch. It gives everybody a chance to catch their breath.

I want to welcome the three panelists this morning: the Honorable Joseph Westphal, the Assistant Secretary of the Army for Civil Works, U.S. Army Corps of Engineers; the Honorable Gary Guzy, General Counsel of the United States Environmental Protection Agency; and Ms. Mary Doyle, the Acting Assistant Secretary of the Office of Water and Science, and the Chair of the South Florida Ecosystem Restoration Task Force from the Department of Interior.

We are glad you are here. As you know, your statements are all part of the record formally. And if you could give an overview of those in 5 minutes or so, it would be appreciated.

I just want to make a couple of comments regarding this morning, and try to bring it into focus a little bit, if we could. We heard from the Florida State and tribal governments this morning. And this afternoon, we kind of shift the focus to the Federal Government, to two important stakeholders, both the agricultural and the environmental community, as well as the Department of Interior.

There were several criticisms that the morning witnesses raised about the Administration proposal, specifically, the proper role for the Department of Interior in managing the Restudy; concern about the additional commitments in the so-called Chief's Report, that is, the additional 245,000 acre feet of water, that it might upset the balance achieved in the Restudy on how the water would be distributed.

Also, there was concern that the initial authorization of 10 projects prior to completion of the project implementation reports could be a concern, and the amount of Federal contribution to operations and maintenance.

All these were raised by the first panel. And I think it would be good if in your oral testimony you could address those. I think it would be fair of the Administration witnesses here today to ask how the Administration's plan to restore the Everglades evolved and changed. I mean, I think this, as you could tell this morning, was a bit of a controversy, and I think it is something that we are going to have to come to grips with.

First came the Restudy, and the April 1999 consensus document approved unanimously by the South Florida Task Force and the Governor's Commission. Then came the Chief's Report in July 1999 that made changes to the Restudy plan that are not supported by all the parties that agreed to that original Restudy.

Now there is the WRDA proposal, the Water Resources Development Act proposal, which includes its Everglades proposal, which

specifies new processes and roles for implementing the Restudy, with an expanded role for the Department of Interior now.

As I indicated, I am trying to keep an open mind on this, and to work this through. But I think we are going to have to clarify some of these issues. We did hear a fair amount of concern. I do not know if the words, "broke the deal" was used. But certainly there was a lot of concern about the change in the plan.

Perhaps you might say that the changes are merely technical. But the fact is that the Administration substituted an alternative that was rejected by the Restudy team when it added the 245,000 feet of water. I am not taking any position on that, one way or the other, other than the fact that it was a change in the Restudy.

So we would like to hear from the Administration on these changes. It would be helpful, if you can, to focus specifically on them in your oral testimony.

Senator Baucus, did you have any opening remarks?

Senator BAUCUS. No, I am fine. I would just like to hear the witnesses.

Senator SMITH. Let us start with you, Dr. Westphal.

STATEMENT OF HON. JOSEPH WESTPHAL, ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS), U.S. ARMY CORPS OF ENGINEERS

Mr. WESTPHAL. Thank you, Mr. Chairman and Senator Baucus. I am delighted to be here before your committee, again. I am very excited about talking with you about this comprehensive plan.

As you know, Mr. Chairman, on July 1999, as you mentioned, on behalf of the Administration and in a partnership with the State of Florida, we submitted to Congress a comprehensive plan to restore the South Florida ecosystem by modifying the existing Central and Southern Florida project.

The plan, which we expect to be implemented over the next 25 years will, we believe, improve the health of over 2.4 million acres of South Florida ecosystem, including the Everglades National Park. It would improve the health of Lake Okeechobee.

It will virtually eliminate damaging fresh water releases to the estuaries, improve water deliveries to Florida and Biscayne Bay, improve water quality, enhance water supply, and maintain flood protection.

On April 10, 2000, on behalf of the President, I submitted to Congress a comprehensive legislation proposal that would allow the implementation of the comprehensive plan.

This legislation, if enacted, will accomplish a number of important objectives to include: one, a congressional endorsement of the importance of restoring the Everglades, and that such a restoration is a national priority; two, a congressional endorsement of the CERP, the comprehensive plan, as a technical sound blueprint for the Everglades restoration; third, an authorization of an initial package of projects, including four pilot projects and 10 of 68 project features; fourth, the authorization of a program authority to allow the expeditious implementation of smaller project features; fifth, language that would ensure that project benefits are achieved and maintained for as long as the project is authorized; and sixth, provisions that recognize the importance of outreach to socially and

economically disadvantaged individuals and business owners in the South Florida ecosystem.

It is important that Everglades restoration becomes a priority, and that the Nation recognizes that a national treasure, the American Everglades, is at great risk.

Our legislation would allow the Congress to declare, like the Administration, the importance of this unprecedented national resource. Our legislation would have Congress affirm that the comprehensive plan is a technically sound blueprint for restoring the Everglades.

With its extensive public involvement and adaptive assessment approach, the plan would lead to a healthy and sustainable ecosystem.

It is important that the comprehensive nature of the plan be maintained, and that the temptation to pick and choose various parts and features be avoided. The 68 plan features work together, and each provides an important benefit to the ecosystem.

Prior to full scale implementation of the plans, six pilot projects will be built to address uncertainties for some of the planned features. These pilot projects include aquifer storage and recovery, in ground reservoir technology in the lake belt region, levy seepage management technology, and advanced waste water treatment technology to determine the feasibility of using re-use water for ecological restoration.

Ten projects totaling $1.1 billion are recommended for initial authorization. These projects were selected for initial authorization based on the following four criteria: first, the ability to provide immediate water quality and flow distribution benefits to the ecosystem; second, the ability to utilize lands already purchased; third, the linkage to ongoing restoration projects; and fourth, maximizing the benefits of Federal investment already undertaken.

For example, if authorized, we will update the ongoing modified water deliveries project to make it more consistent with the CERP, by taking immediate steps to improve flow distribution through the Tamiami Trail. In addition, the South Florida Water Management District and the U.S. Department of Interior have already purchased lands such as the Talisman lands for a number of CERP components.

Authorization of projects that use lands already purchased will ensure that these lands are utilized for restoration as soon as possible.

To expedite the completion of certain smaller features, an authorization is being sought similar to the critical projects authority in Section 528(b)(3) of the Water Resources Act of 1996. These projects will produce independent, immediate, and substantial restoration, preservation, and protection benefits, and expedite some of the components of the CERP, as well.

The programmatic authority will be limited to those individual components of the CERP that have a total project cost of $70 million or less, with a maximum Federal share of $35 million per project.

Our legislation makes it clear that Congress will be asked to authorize the remaining components with the CERP in subsequent water bills. At a cost of approximately $6.2 billion, these 26 re-

maining features will undergo additional studies and analysis before authorization is sought from Congress.

Before any construction starts on any of the 68 features of the comprehensive plan, detailed design, engineering, and environmental review will be completed. Specifically, prior to implementing any authorized project feature, a project implementation report for each project will be completed to address its cost effectiveness, engineering feasibility, and potential environmental impacts.

These project implementation reports will include public review and comment that will bridge the gap between the programmatic level design contained in the comprehensive plan that you have before you, and the detailed design necessary to proceed to construction.

These project implementation reports will not be different from the feasibility reports that this committee receives on other water resource projects. That is, you will receive the same level of information that you traditionally receive on every other project.

Both the natural and human environment benefits substantially from the implementation of the comprehensive plan. Ensuring that these benefits are achieved and maintained is an important part of our legislation.

Further, our legislation ensures that existing legal users are not harmed, and that the overall authorized levels of flood protection are maintained and enhanced.

Specifically, our legislation provides that the primary and overarching purpose of the plan is to restore, preserve, and protect the natural system within the South Florida ecosystem, and directs that the plan be implemented in such a way as to ensure that the benefits of the natural system and the human environment, in the form of proper deliveries of clean, fresh water, at the proper time, in distribution are achieved and maintained for as long as Central and Southern Florida is authorized.

To meet our assurances objectives, our legislation creates a four-part tiered approach. The first part is the legislation itself, which makes it clear that Congress intends for the benefits to be achieved and maintained.

The second part involves the development of a programmatic regulation to identify, in greater detail, the amount of water to be dedicated and managed for the natural system and the human environment. This regulation would serve as a bridge between the legislation, the project implementation reports, and the project specific operating regulations.

We believe that this will help maximize the unnecessary debates 10 to 20 year from now, when the projects are being completed.

The third part or tier is the detail design, engineering, and environmental work that would be completed for each feature before construction starts. This will also give the public, interest groups, the State, and the tribes substantial opportunities to influence the final characteristics of each feature.

The final part of our approach is the project-specific regulations that will be developed for each feature. These regulations will be developed based on public review and comment, and in consultation with other Federal agencies, the tribes, and the State. These regu-

lations will prescribe in greater detail how each feature will provide its intended benefits.

Restoring the Everglades will require a large investment on the part of the Nation's taxpayers. We believe that it is important to disclose fully how the restoration is going over the next 30 years.

In this regard, we have developed a reporting program. Specifically beginning in October of 2005, the Secretaries of the Army and Interior, in consultation with other agencies and the State, will jointly submit a report to Congress that describes the implementation of the comprehensive plan.

The report will include a determination of the benefits to the natural system and the human environment that have been achieved as of the date of the report.

In conclusion, Mr. Chairman, I would like to say that this is a true partnership with the State and the tribes. We very much believe that the State has done a tremendous job in not only helping in participating and preparing the plan itself, but in their role in delivering the plan to you, and in their role in hopefully subsequently getting this plan approved through Congress.

I, personally, commend the Governor for his efforts in the State, through the legislature, and his efforts to secure the funding; but also to give the appropriate support that he has given to the plan, and I thank him for it.

I would also like to mention, Mr. Chairman, if I could, that this past Monday, May 8, the Restudy team, which consisted of maybe 100 people in all the Federal agencies in the State, the South Florida Water Management District, and others, received a very prestigious award from the American Association of Engineering Sciences and the Autobahn Society, a joint award called the Palladium Award, for their work in bringing together both the engineering sciences and the environmental sciences toward this environmental restoration project.

I know that Stu Applebaum is here sitting behind me. Stu, raise your hand. He is one of the study team leaders. And Tom Teets received an award for everybody else. And I just wanted to congratulate them for that efforts. And thanks for allowing me to take time to do that, Mr. Chairman.

Senator SMITH. Certainly, and thank you, Dr. Westphal.

Let us move to you, Mr. Guzy.

STATEMENT OF HON. GARY GUZY, GENERAL COUNSEL, U.S. ENVIRONMENTAL PROTECTION AGENCY, ACCOMPANIED BY RICHARD HARVEY, DIRECTOR OF EPA SOUTH FLORIDA OFFICE

Mr. GUZY. Good afternoon, Mr. Chairman, Senator Baucus, Senator Graham. I am Gary Guzy, General Counsel of the U.S. Environmental Protection Agency. I greatly appreciate the invitation to appear here today, along with my colleague and on behalf of the Administration, to present the Clinton/Gore Administration's proposed legislation to authorization restoration of the Everglades.

This bill represents an historic effort, in part, because of the ambition of the proposed endeavor, and the vastness of the replumbing effort; in part, because of the significance, and in once sense, the sheer humility of the change we are seeking—recognizing that

the natural Everglades are dying, that they are critical to our Nation's future; and that based on what we now know, we got it wrong. Our past intensive management of the Everglades must be fundamentally re-thought and re-ordered for the good of everyone.

We recognize that we must reinstill a balance to what remains of this ecosystem, and have based this work on an unprecedented, inclusive process that garnered widespread support for this effort.

The Administration's proposal and the challenge now before this committee represents a culmination of sorts. It is a recognition—slow perhaps in coming—that the Everglades is a national, biological treasure to be cherished, on a par with the great mountains or the deep canyons of our land, and that it is, in fact, America's Everglades.

Without this effort, the natural system could well collapse. It is choked by cattails and polluted water. It is inhospitable to its own natural inhabitants. It is unable to store or filter water the way it used to.

In so collapsing, it could take with it, as well, much of South Florida's human potential, from drinking water supplies to tourism to fisheries.

I, personally, have been fortunate enough to witness first hand, over the years, several key steps that have brought all of us to this new recognition.

I remember vividly sitting in a courtroom in Florida 10 years ago, then as part of the Justice Department's Everglades litigation team, witnessing the courage of Governor Chiles, who despite years of hard-fought and costly litigation, despite being surrounded by lawyers with, as he put it, ''a battlefield that was littered with swords and the work of swords.''

He conceded that the Everglades were, in fact, polluted, and that we should be about bringing the State and the Federal Government together, to work toward a real and lasting solution.

I recall being in Everglades National Park in 1996, when the Vice President, joined by Senator Graham and many others, set forth the Clinton/Gore Administration's framework for Everglades restoration.

That called for three critical elements: first, developing the replumbing plan so that the heart of the Everglades would once again pulse with fresh, clean water; second, acquiring critical lands for water storage and restoration; and third, providing enhanced funding to accomplish this work.

The Administration, working with Congress, has delivered on each of these commitments to the Everglades, submitting to you a science-based comprehensive plan that is at once bold and yet obvious, acquiring the Talisman Tract, nearly tripling our funding for Everglades restoration.

I think of the most recent instance, when I accompanied Administrator Browner to the January field hearing in Naples, where Chairman Smith made it abundantly clear that he would continue former Chairman Chafee's strong bipartisan leadership on behalf of Everglades restoration.

Each of these acts required looking beyond the horizon and exercising leadership. We now ask Congress to take this next step with the Administration and with the State of Florida. From EPA's per-

spective, there are several critical elements of the approach the Administration is forwarding.

First, we urge this committee promptly to move forward and have Congress pass the Administration's proposal, to authorize the Comprehensive Everglades Restoration Plan as a blueprint for Everglades preservation and restoration, to ensure that the Everglades has clean, abundant water to supply and sustain environmental, as well as human needs.

By recapturing the vast amount of water now lost, that water can be managed for the benefit of everyone, and re-approximate natural flows, including the quantity and quality, timing and distribution within the remaining natural system.

That must be the test for what Congress authorizes; whether it will accomplish that change. And this is precisely what Congress asked the Corps of Engineers to do in WRDA 1996, in developing that plan.

Second, EPA, as the keeper of our Nation's Clean Water Law, and as an entity charged with the whole ecosystem perspective and, I might point out, working in an area in South Florida that is truly defined by its water, EPA is committed to working to ensure that the critical goal of protecting water quality is fully integrated into each step of the restoration effort.

While the State continues to bear important responsibilities to meet water quality standards from polluted agricultural run-off into the Everglades under a separate Federal court degree and under existing State law, we must also more broadly assure that getting the water right, as part of the comprehensive plan, includes making sure it is clean.

Ee believe EPA's unique perspective should be formalized in the legislation for an independent role in evaluating the continuing success of this effort.

Third, we must ensure that the very purpose of the Central and South Florida project is reflected in this new legislation, and that it reflects our new collective understanding of the importance of the natural system, and we must eliminate forever the risk that attention to the natural system will simply be placed at the end of the pipe, and that the natural system will be provided only what remains, regardless of how much, how clean, when or where that water might be. And this is fundamental and critical for Congress to clarify this change in the project.

We also believe that this change can be accomplished while respecting current urban and agricultural water users. But this new purpose should be assured through clearly defined principles of shared adversity for all users. Congress and the public deserve the assurance that the anticipated benefits to the natural system and the human environment are achieved and maintained.

Fourth, we believe that WRDA should provide for implementing the comprehensive plan in its totality. While the many individual projects will be phased in over time, and they ultimately will reflect what we learn along the way, WRDA 2000 should include a framework that guarantees continuity, because each part of this is highly interdependent.

Our joint efforts in the Everglades represent an unprecedented, holistic, science-based approach to ecosystem restoration, and we

should commit, at the outset, to make this entire plan a success. Last, the Everglades have waited simply too long and their current condition is too dire.

The Administration's proposal sets forth several critical projects that should go forward in this authorization cycle, particularly the acquisition and engineering of critical lands such as the Talisman tradelands, for water quality restoration and water flow management. These are essential to starting the recovery effort off on a sound footing.

Mr. Chairman, that concludes my statement on behalf of Administrator Browner. I thank you and Senator Baucus, as well as Senators Graham and Mack, again, for your leadership on these issues. We look forward to working with you on these matters, as well as on finding a long-term reliable source of funding for the Everglades—another critical issue.

With me today is Mr. Richard Harvey, Director of EPA South Florida Office. We would be pleased to answer any questions that the committee may have. Thank you.

Senator SMITH. Thank you, Mr. Guzy.

Ms. Doyle?

STATEMENT OF MARY DOYLE, ACTING ASSISTANT SECRETARY OF THE OFFICE OF WATER AND SCIENCE; CHAIR, SOUTH FLORIDA ECOSYSTEM RESTORATION TASK FORCE, U.S. DEPARTMENT OF THE INTERIOR

Ms. DOYLE. Mr. Chairman, Senator Baucus, thank you for the opportunity to address this hearing, and thank you for holding this hearing. And Mr. Chairman, thanks for agreeing to come to the Everglades Task Force meeting tomorrow.

I would like to begin by displaying for you this map, the upper map there, which is a map of South Florida, on which are marked the Federal parks, wildlife refuges, and sanctuaries located in the South Florida ecosystem.

There are three national parks and 16 national wildlife refuges in the area, along with Big Cypress Natural Preserve and the Florida Keys Natural Marine Sanctuary.

The total of federally owned and managed land and waters stands at about 5.7 million acres or about 40 percent of the remaining Everglades ecosystem. As you may know, Everglades National Park is the largest park in the lower 48 States. It is the largest remaining subtropical wilderness in the United States, and it receives ever year over a million visitors from all over the world.

This park and the other Federal assets pictured on the map are national treasures of incalculable value. And as you well know, these treasures of our Nation are threatened as the entire ecosystem is threatened by environmental harm that is being experienced at increasingly rapid rates. You know the gory details of the environmental harm, so I will skip over those.

This comprehensive Everglades Restoration Plan, developed over several years by the Army Corps. working closely together with the South Florida Management District, the Interior, EPA, and the tribes is a detailed, long-term ecosystem-wide plan to restore America's Everglades. The Department endorses the plan and believes

that it adopts a practical and effective approach to ensuring long term restoration.

Someone asked me the other day to define restoration. Restoration means recovery. The defining characteristic of a restored natural system is the re-emergence of what is now lacking; the return of the waiting birds as the food chain is rebuilt through restoring more natural waterflows, the redemption of species now threatened or endangered, the reduction of invasive exotics, and proliferation of natural vegetation once more, rebounding fisheries and returning wetlands. All these aspects of recovery are within our grasp today.

Now Mr. Chairman, you started by asking us to address some of the issues that were raised this morning, so I thought I would depart from my text and go right to those issues. And in particular, you raised the question about the role of the Department of Interior in the Administration's bill. And I would like to add to that the related issue of the role of the State of Florida or the Governor of Florida in the implementation of the project.

As you may know, the bill provides for the establishment of what we have termed "programmatic regulations" by the Department of the Army. And the bill provides that these programmatic regulations are to be adopted with the concurrence of the Secretary of the Interior.

I would just like to tell you what our concept was in providing for these programmatic regulations. This is a provision for a process to quantify the amount of water needed to restore and preserve the natural system. And here I am talking not just about the federally managed natural system, but the tribally and State managed aspects of the interrelated ecosystem.

Although the programmatic regulations are intended to provide a process for this quantification, a process that would include all stakeholders, it would use rainfall driven modeling to develop a set of ranges for the delivery of water to the various portions of the natural system in dry, normal, and wet years.

The idea is to lay down at the beginning of the implementation a notion of overall what quantities of water need to be delivered to the natural system, Federal, State, and tribal, so that when all these elements, these 68 project features, come on line over a period of 20 years, we can look back and see that the sum of the parts adds up to delivering the benefits promised.

The way our bill reads, the regulations that establish the detail design features for each of the 68 projects would be adopted by the Secretary of the Army, in consultation with the Department of Interior, but the concurrence rule would not be present there. The idea is that the project specific feature regs would have to be shown to be consistent with the programmatic regs that set aside the quantities of water for the natural system.

I do not want to go into too much detail here. I would be very happy to answer questions. But ideally, we would like to see the State using its water statute, which is a very progressive one, and adopt essentially a mirror set of regulations that by State law made the same set-aside with what we had determined.

The rule of the Secretary of the Interior in concurring on these basic set-aside regulation seems to us appropriate for several rea-

sons. One is that the Interior Department, the Fish and Wildlife Service and the Park Service are one of, if not the major, environmental clients of this project, and need to be closely consulted, therefore, on the basic fundamental set-aside decision.

No. 2, the Federal investment in this project is justified by the preservation of these Federal assets. And No. 3, the Department has, over this century, developed expertise and experience to bring to bear in making this kind of decision.

We do not view it as a veto role for the Secretary of the Interior, but rather a close collaboration in the establishment of this basic set of regulations to quantify the amount of water to the natural system.

Finally, on the role of the State or the Governor in developing regulations that implement this project, and I think Dr. Westphal stated this, and I think all of us agree with Governor Bush and his statement this morning, that this is a work of a partnership. And it, in fact, is an unprecedented work of a Federal/State partnership. It has been, up until now.

We want to commend the State on not only promising, but actually delivering on their promise for financial support for the project.

The Federal Government has enjoyed excellent relationships with the Governors of Florida, at least going as far back as when Senator Graham was Governor, and I am sure before that, too. And we enjoy a very good working relationship with Governor Bush at this time.

We have had a number of discussions with the State on the question of the role of the State in crafting the regulations for this project. Time ran out on us before we were able to nail down the issue.

Our lawyers have advised us that there are some constitutional issues raised by giving the Governor of the State a concurrence role in a Federal statute. The lawyers in the Justice Department are working through this issue right now.

I want to pledge to you that we want to continue negotiations with the State, because I personally believe we can find a way to arrive at language that passes muster legally, and expresses this unique partnership that is the basis of this project.

Thank you, Mr. Chairman.

Senator SMITH. Thank you very much, Ms. Doyle.

Let me just comment, since you just had a brief comment or two on programmatic regulations. I am trying to understand your reasoning here, without getting into a judgment, one way or the other, but just to understand it.

It seems to me that in the adaptive assessment or adaptive management approach that we are trying to place into this, that when you suggest a one time regulation, only 2 years after the date of enactment of a plan, then you take away the flexibility of the Corps., and you take away the flexibility of the entire adaptive management process for a system that may not be fully functioning over perhaps as early as 20 or 30 years.

So I do not understand the logic there, if you could just explain that to me.

Ms. DOYLE. Yes, I would be happy to try. It was never our contemplation that the programmatic regs would be inviolate or not susceptible to alteration as we gain scientific knowledge, which is the essence of adaptive management.

We felt very strongly that as you go to begin the design of the individual components of the project, you have to have some sort of benchmark or notion of how much water, in the present state of scientific knowledge, that we need to deliver to the natural areas in order to achieve the restoration. Otherwise, you just start piecemealing it, without reference to sort of a baseline.

Florida has a similar system now in its statutes. It does a water supply plan before it decides how many permits it is going to issue for what quantity of water, and it does that by assessing how much water is available. And this would be something along that line.

Senator SMITH. But how do you accomplish that with a one-time regulation? You can not be that specific.

Ms. DOYLE. No, it would be established, I would hope, fairly soon, like in a couple of years, and then it would be susceptible to being modified. It would also come through in a set of ranges. We are applying these rainfall-driven models to establish a set of ranges for the delivery of water.

Senator SMITH. If each one of you could respond to just this question, then I will be happy to yield to my colleagues.

The language in WRDA 1996 says, "The Secretary shall develop a plan for the purpose of restoring, preserving, and protecting the South Florida ecosystem." That was the language that was agreed to, again, without passing any judgment on the proposed change, which is how I understand it.

Now the new language in the Administration plan says, "The overarching purpose of the plan is to protect, preserve and restore the natural system."

I think this is different language. It does have different ramifications. And I guess I need to understand the purpose of moving from the language that everyone agreed to, and then changing that language to take on a different perspective here. What is the rationale behind that? And let me just ask you, first, Dr. Westphal, and just go right down the table.

Mr. WESTPHAL. Well, remember, the comprehensive plan that you have before you has been the subject of a considerable amount of study and reevaluation since 1996, since you passed the WRDA bill.

The work of the Task Force and the work of the scientists in developing the plan simply resulted in a much more comprehensive view of what needed to be done, both in terms of what the State wanted to do, as well as what the Federal Government and its entities wanted to do.

So I think that is why you are seeing some variation in the theme. The theme is still there, that was presented in 1996 and mandated by Congress. What we have done is, we have just amassed so much research and so much study and so much evaluation. And we have come up with so many different opportunities to protect and to save and enhance and restore the natural environment, that it results in this comprehensive plan.

Senator SMITH. But if you allow your position to evolve, then you have to allow the other stakeholder's positions to evolve, as well, do you not? Is that reasonable?

Mr. WESTPHAL. I think so. And, again, the adaptive part of this plan and the fact that every single project, whether you are talking about the programmatic authority, that you were talking about a minute ago, or whether you are talking about other features of the plan, everything has got to go through a feasibility study.

Everything is going to have to have a cost sharing agreement between the State and Federal Government. Everybody is going to have a chance to veto, to check, to modify, to evaluate and reassess where we are going.

What we are presenting you is a blueprint; a blueprint that is based on a lot of research and a lot of work. We have a programmatic feasibility study for the whole piece. What we are saying to you is, we have given you a blueprint from which you can decide today. But you will be deciding every year from now on, as we present new reports to you.

Senator SMITH. Well, I am going to ask for your response, Mr. Guzy. I would just say, again, the difficulty that it places on the committee and on all of us who are trying to draft the bill is that there may very well be justification for your position.

There may be justification for others. But we have now removed ourselves from an original agreement, for whatever reason. It may be a good reason. But we have done that, and that complicates things, in the sense that we have got to go back to all stakeholders and get them to reagree, if you will, which makes it very complicated.

Mr. Guzy, is your position the same?

Mr. GUZY. Well, just very quickly, Mr. Chairman, we believe that the heart of the 1996 legislation was a direction to the Administration to develop a plan that would ensure that, in fact, the Everglades would once again pulse with clean water; water that would be provided when needed, where needed, at the times and places where it was needed.

So that understanding, that when you talk about providing a plan for restoring the Everglades, you are talking about, as its central feature, as its critical component, a plan that provides a means for restoring the natural system.

We do not think that there is any fair debate about what the committee and, ultimately Congress, asked the Administration and the Corps. specifically to do in developing this plan.

I think the challenge comes only if one believes that you can not do that; in other words, respect the natural system. At the same time, you also can respect the needs of agriculture and the needs of the urban water users in the area.

Our belief is the fundamental feature of this plan is recapturing water that is now lost. And it provides, in fact, far more water than currently is available to the system. The result of that means that, in fact, there is the ability to satisfy the needs of the natural system, as well as existing users and the potential that they would have for growth in their needs, also.

So we believe that, in fact, this seeming conflict can be reconciled, and this is completely consistent with the approach that Congress took in 1996.

Senator SMITH. Would you like to comment, Ms. Doyle?

Ms. DOYLE. Yes, please, Senator Smith, just to followup on Mr. Guzy's last point, I think it is a false dichotomy, serving the environment versus the needs of water users for secure water supply and flood protection.

This plan calls for building a tremendous amount of flexibility into the system, and a tremendous amount of storage that is not there now, which is going to ultimately rebound not only to the benefit of the natural system, but to those people at risk of flood. And it is going to secure water supplies for urban users in ways that have not, heretofore, been possible.

Senator SMITH. Senator Baucus?

Senator BAUCUS. Thank you, Mr. Chairman. I would like to ask Dr. Westphal a question. And that is just to clarify whether the list of 27 projects contained in the Chief's Report is the total universe of programmatic authority projects; are there more or are there fewer? Are others going to come along, or is 27 it, under the programmatic authority?

Mr. WESTPHAL. Under the programmatic authorities, what we have studied to date and we think are feasible today, we can not predict the future. There may be a need to do other things in the future. There may be a need not to do some of those things in the future. But I think that that is what our best guess is today, based on all the study and research, that those 27 are what flies.

Senator BAUCUS. Will you come back and ask for more programmatic authority; more than 27?

Mr. WESTPHAL. We have no intention to do that today.

Senator BAUCUS. What is the likelihood?

Mr. WESTPHAL. I really can not predict that. I really can not tell you what the likelihood of that is. I can not answer that question, today.

Senator BAUCUS. With respect to the project implementation report, will each of the projects under the programmatic authority also have the full scope and review of the project implementation report like other components of the plan?

Mr. WESTPHAL. Right, they will.

Senator BAUCUS. They will?

Mr. WESTPHAL. There will be a feasibility study. We are calling it something different, because of the nature of this particular set of projects. But they are, essentially, feasibility studies.

Senator BAUCUS. Well, how will they differ from the project limitation reports?

Mr. WESTPHAL. They do not differ. They are the same thing. They are feasibility studies, just like for any other project. And they go through the same level of analysis and work that we do on any other project.

Senator BAUCUS. You know, I want to tell everybody, I am for restoring the Everglades. I do not know anybody who really is not.

This is a huge project, here. And so far, I am a little uneasy, and I will tell you why. First, in 38 years, I do not know of a single defense system that takes that long, from beginning to end. I am

worried about cost overruns, particularly over 38 years. And particularly, when I hear the words "tremendous amount of flexibility" that goes all kinds of different directions.

I worry about seeing on the evening news, a year or two or three from now, the "fleecing of America" or "it is your money" or something like that, which certainly does not help the Everglades. It does not help our goal, here.

I am also concerned, frankly, because of the testimony I have heard thus far, it is all just kind of plans and reports and so forth.

I have seen nobody, Mr. Chairman, here who can stand up and say, well, here is what is going on in the Everglades, here are the basic ideas, and here are some of the things that we think are going to work, and here are some of the problems that we have not yet solved, and just be kind of honest about it. I have not seen that.

I have this funny feeling that I might be buying something that sounds good, but on down the road, I am going to leave to my successors here a huge, huge problem. And the problem is, my gosh, we have spent all this money of the Federal taxpayers' dollars on the Everglades. And my gosh, it is not working like it was supposed to work.

Well, we have gone this far. Gee, it is like a Vietnamese War, in a sense. We have just got to keep on pouring more money in it, because we have gone this far. And what is our exit strategy?

I am not saying that is going to happen. I hope it does not happen. But my very strong view, based upon what I have seen thus far, is that you have not made a sufficient case. And I may be just one person, one Senator, who is not sufficiently familiar and has not studied this nearly as much as have others.

I am a Senator who is sitting on this committee, and I only know what I know. And what I know is the testimony I hear, the words I hear.

Nobody here yet so far, and maybe they have down in Florida, Mr. Chairman, when you had your hearing down there, but nobody here in Washington at a hearing where I have heard, has really provided a compelling case that this plan is going to work. I have not seen it. And I would like you to dissuade me of my views, if you could, please.

Mr. WESTPHAL. Well, let me start with just a couple of points. First of all, there is ongoing work. Second of all, the pilot projects that we are proposing in this plan are essentially to test some of the assumptions about which we are basing the longer term solutions to the problems, aquifer storage, sheet flow kinds of studies and work to be done to determine whether or not the things that we are proposing, in fact, will work.

Those pilot projects are critical. We authorized two last year. We are asking for authorization for an additional four this year.

So there is ongoing work. There are ongoing activities now. We have tested some of these assumptions. We are proposing to test others.

Senator BAUCUS. If I might ask, what are the cutoff points here? That is, is there a period during which, you know, Congress spends this money, hundreds of millions of dollars, but which there is sort of a self-contained set of projects, where this is all the further we can go, and it will not jeopardize what has been spent and the

projects that have received dollars thus far? Are there discrete parts of this, is what I am asking, or is it all necessarily tied together? And frankly, either answer is fraught with problems, as you well know.

Mr. WESTPHAL. Right.

Senator BAUCUS. But I am trying to get a sense of what is going on here.

Mr. WESTPHAL. Well, to some extent, it is all very much interrelated. That is why it is a comprehensive plan, because we believe all these elements are tied together and, to some extent, depend on each other.

Mr. GUZY. Senator Baucus, if I may try and address your broader question, I think we all share the sense of frustration that this is a plan that takes so long and that costs so much money. In part, that reflects really the scale of human intervention that has occurred up to now in the Everglades.

Senator BAUCUS. No doubt; I agree.

Mr. GUZY. You know, when you look at a plan that involves removing 200 miles of canals, that involves altering interstate highways over a 20 mile stretch to allow waterflows, that involves capturing 1.7 billion gallons of water that is now just shunted out to the ocean, I think it is fair to say that the essential elements of the plan that you need to recapture and store the water that is now lost so that it can, in fact, be provided to the system.

You need to have flexibility in how that water can get distributed, so that it can approximate the natural system much more in terms of the timing, where it is, when it is there, the levels of water—so that you can begin to recreate that natural system; and then also can provide for the growing needs of the urban water users, such as flood control needs and agriculture.

Those essential elements do not seem to be particularly in dispute that that is what is needed for this system. What we would invite in the long years over which this carried out is constant scientific scrutiny. And we have proposed setting up a premier peer review process that will help to guarantee the accuracy of this complex ecosystem, as well as extensive congressional oversight to ensure that, in fact, this money is being spent wisely and appropriately.

Senator BAUCUS. In a certain sense, you are putting Congress in a box by saying it is all or nothing. It is 7.8 or it is zero, or at least that is how I hear it, thus far.

Why not first, stage one, $2 billion? And that is a discrete, separate set of projects which, if there are no further funds, does help to some degree address the problem.

Then if you want to go farther, you can let another Congress and let them decide at a later point to put another couple billion dollars in. So if the first stage seems to be working, and then we have better science, and the gaps in the science are filled. Then we can address the next part.

I am just very, very nervous to buy everything, at this point, when I do not feel good enough about this. Again, you know, you all know a lot more about this than I do. I am just telling you my gut sense.

Ms. DOYLE. Senator, what we are asking Congress to authorize is an initial suite of projects. My understanding is they are mainly water storage projects. The site of these projects, the location of them has been identified. The neighborhood where they need to be located has been identified in the plan.

They will help immediately the system, which now has no storage capability, except for Lake Okeechobee. And when these initial suite of projects are up and running, we will have to come back to you for authorization of the next phase of the project. So I think what is contemplated here is quite consistent.

Senator BAUCUS. So are you asking for 7.8?

Ms. DOYLE. No.

Mr. GUZY. No.

Senator BAUCUS. Oh, how much are you asking for?

Ms. DOYLE. 1.2.

Senator BAUCUS. I see, OK.

Mr. GUZY. Senator, I would just add that the Administration has approached this by trying to really reconcile the fact that you want to have a set of limited, clearly defined approaches in the short term, and not ask Congress for authorization for every single thing that might happen way out, 30 years into the future.

It makes little sense to do that, unless there is the kind of broad vision; unless there is a framework for how those individual projects will fit into accomplishing the ultimate goals; unless there is accountability and a test for what you hope to achieve. It makes little sense to go down this road unless you have an ultimate vision of where the road is going.

That understanding, that the natural system can work in harmony with the built system and the needs of the people of South Florida, is really what is represented in the plan.

Senator BAUCUS. Well, do not misunderstand. I want this to work. And I am just asking tough questions with the view of hoping to make it work. So far, it does not totally pass the "smell test" if you want the honest truth. There are parts of this that just do not click in and lock in the way I like it to feel, at this point.

Ms. DOYLE. Senator, we would be happy to provide you a more detailed briefing in a helicopter, if you would like to.

Senator BAUCUS. Well, I am sure you would, and I am sure I would like to do that. But there are only so many hours in a day and days in the week. And I am right here, this is the hearing on this subject, and this is what I have, thus far.

Mr. WESTPHAL. Well, again, this is a large blueprint that incorporates a lot of different features. And what we are saying to you is, give us your commitment to work toward the accomplishment of the overall objective through these series of steps.

Again, every year the appropriators will have to appropriate the money. We are asking for an appropriation of over $1 billion, but that is over a number of years. As these projects come on line, we expect that operation and maintenance requirements are not really going to kick in for another 15 years or so, until some of these projects come to completion.

So we have got a lot of steps in the process. But we have looked at this in a very broad fashion with the State. And the State is putting up 50 percent of the money. So they are committed to this.

Senator BAUCUS. That is not O&M?

Mr. WESTPHAL. No, they are putting up 50 percent of the cost on everything. Well, on the O&M, it is 60 percent, but on the construction part it is 50 percent.

Senator BAUCUS. Which is contrary to the rule.

Mr. WESTPHAL. Right.

Senator BAUCUS. Well, this comes down to trust, both ways. And I just think we need to work on that.

Thank you, Mr. Chairman.

Senator SMITH. Senator Graham, would you mind if I made a comment in response to this? I apologize for interrupting you.

First of all, I think all three of the witnesses responded very well to your points, Senator Baucus. And I think it is important that we understand here, we are not authorizing $7.8 billion. We are not even authorizing even $1.1 billion, if we pass this proposal anywhere along the lines we are talking about.

We are talking about perhaps $100 million this fiscal year, or the fiscal year that it passes in. The $1.1 billion for the 10 projects discussed here are over a 14 year period.

The truth of the matter is, we can not sit here and say, with 100 percent accuracy, that everything we do is going to work, because we have destroyed an ecosystem that we have to restore.

So the point is, through the policy that is laid out in the overall plan here of adaptive assessment or adaptive management, we will be able to have the flexibility on almost a year by year basis to look at what we are doing and make adjustments.

For example, the Army Corps. can not do one project beyond a 20 percent increase in what we think the cost would be without coming to us. So there is tremendous control there. And so, again, it is a long process. And it is very unique and unusual in the sense that it is 34 or 35 years.

This is an ecosystem that we can not predict how long it is going to take. I wish we could say that it could be done for "x" number of dollars over 15 years. But, again, we are not committing to anything, other than a step-by-step process, which is laid out in the plan.

So I think it is important to point that out. Your questions and your points are valid points. But I really feel strongly that whatever form the plan takes, I think, as the witnesses have very well stated, we are not accepting an overall dollar amount here.

We are accepting a concept that says that we think we can do this. And if it turns out 2 years from now or 3 years or 4 years or 10 years from now, that what we are doing is not right, we can make adjustments. And that is, I think, the uniqueness of the plan.

Senator Graham?

Senator GRAHAM. I have been listening to the very good questions that my colleagues, and particularly Senator Baucus, have been raising. And it reminds me that this year we are celebrating the 200 anniversary of the movement of the Capital of the United States to Washington, D.C.

That was a bold action. The Capital was functioning perfectly well in New York. It was a large city. People were comfortable there. But they recognized that the Nation, a new Nation less than

a dozen years old, was faced with some almost intractable problems, which were likely to force it to fly apart.

One of those is that the southern States did not feel comfortable in New York. They wanted a site that was closer to home. The other was that the northern States were burdened with the State debts that had been taken on to fight and win the Revolutionary War.

Well, that is the stuff of a political compromise. The compromise was the Federal Government took on the debts, and the capital moved from New York to the banks of the Potomac. And that political compromise probably saved the Nation from disintegration over those disputes. It was a leap of faith, that coming here in 1800, that would save the Nation.

I think most people today would say, given what the likely alternative, to have not moved to Washington, D.C. was, it was a good decision.

I think in some ways we are at that point with the Everglades. We can predict with a great deal more certainty what the consequences of inaction will be than what the consequences of action will be.

The consequences of inaction will be a continued disintegration of one of the great international environmental system; one of the few which, for instance, the United Nations has placed on its list of world treasures. It will probably lead to the first de-certification of a national park in the history of the country, and to adverse effects on a large and important geographic and population area of America.

Are there risks to going forward? Of course, there are. One of the things that is unique about the Everglades is, it is unique. Marjorie Stoleman Douglas, in her great book "Rivers of Grass" said that there is only one Everglades.

You can look around the world, and maybe the Pontanole in Brazil is somewhat analogous to the Everglades, but not quite. Maybe there are places in Africa that are similar to the Everglades, but not quite.

We are dealing with a unique system. That means that we can not look to other places in the world and say, how did they deal with the same problems that we are trying to deal with, to restore a sick and broken unique system? We are going to be on a rapid curve of increased knowledge, as we get into this process.

Frankly, if there are not changes in this plan over the next 38 years, it is a statement of our ineptitude. If we do not learn something engaging in this, over the next three or four decades, that is not going to be a stamp of our intelligence or ingenuity.

The Senator asked a very good question about what are some of the things that are going to give us confidence that this is going to work. One, I happen to have a lot of confidence in the Corps of Engineers. I think it is a phenomenally effective organization, and has done great things for this Nation.

If you walk down a few blocks and look at the Library of Congress, it was designed and built and the interior constructed by the U.S. Corps of Engineers. That is a fairly phenomenal structure. I think it is the most beautiful building; a product of the Corps of Engineers.

We also have got a State partner, which is going to be looking over our shoulder throughout this. And the State of Florida has an annual budget of approximately $50 billion to $60 billion. It is going to put up $200 million a year for this project. The Federal Government has an annual budget of about $1.8 trillion, and it is going to put up $200 million.

So proportionately, the State has got a lot bigger share of its treasury that is going to be invested in this than the national government. And so it is going to be very concerned. And it is sitting there every day, watching what is happening. I suspect that if there is a feeling that this has gone offtrack, the cell phones, faxes, and e-mails will quickly alert us to those concerns.

Next, the process is very similar to what the Senator was suggesting it should be. Today, we are being asked to look at first an overall road map of how to get to this goal of a renewed Everglades that will protect the natural system, taking into account the human systems, as well.

The implementation will be in a series of short bursts, starting with 10 out of 68 to be authorized in this legislation; many of those 10 projects taking themselves a number of years to complete, starting with land acquisition, more detailed design, and then actual construction.

I anticipate that for the foreseeable future, every 2 or 4 years, we are going to be asked to evaluate how well the Corps. is doing on the set of projects that we sanctioned in the past, and to take on another set of projects, as the first groups are moved to completion.

Finally, I believe that we need to recognize that what we are doing here is not only going to be beneficial to the Everglades, but we are going to learn a lot about the public administration, the organization and the financing, as well as the science of environmental restoration.

I mentioned the Pontanole in Brazil. I can tell you from a recent visit to Brazil that they are very interested in what we are doing in the Everglades, and hope that they will be able to take advantage of some of our learning.

A year ago, I was in New Mexico on the banks of the Rio Grande River, which is an environmental system that has got a lot of problems. And the people in New Mexico were looking to what is happening in the Everglades as maybe a model of how to deal with the issues of the headwaters of the Rio Grande.

So we are going to be making contributions on a national and even global basis, as we go through this process. That is the end of my editorial.

Senator BAUCUS. Thank you.

Senator GRAHAM. And also, we do hope that you will come and look at it from a helicopter.

Senator BAUCUS. Not from a helicopter; I want to see it from the ground.

Senator GRAHAM. We have all forms of transportation: ground, aquatic, air.

Senator SMITH. And if he does not support it, we will leave him down there.

[Laughter.]

Senator GRAHAM. There will be one happy alligator down there. [Laughter.]

Senator GRAHAM. Now I am moving from the editorial page to the front page.

About a third of the questions that have been asked thus far have related to this issue of, is the planning for the first 10 projects that were being asked, is it at a level of maturity that is appropriate for us to authorize, or should we wait until there has been further engineering done of those projects?

I wonder, Dr. Westphal, if you might respond as to why the Corps. feels that these 10 projects are at a point that they are ready to be authorized by the Congress.

Mr. WESTPHAL. Well, we feel very strongly that we have done the necessary work for you to authorize these projects. They are integral to starting us down this path of enhancing the overall quality of the environment. We believe the science is firmly behind the work we have done to get to that level.

We picked these 10 projects because I think they provide a tremendous amount of enhancement to investments we have already made, both in the purchasing of land, as well as testing features of the overall set of projects that are critical to doing now, and not waiting until later.

So we believe it is both essential, from a timing standpoint, as well as a resource investment standpoint, that we go forward with these, that we are confident that we have got the science and the research and the study done, that gives us confidence that you can be assured that we are embarking on the right path here.

Senator GRAHAM. Ms. Doyle or Mr. Guzy, did you have anything to add to what Dr. Westphal has just said?

Ms. DOYLE. Well, only to reinforce a point he made, there were hundreds of scientists involved in the development of the plan and the designation of the initial suite of features; scientists from the State agencies and from all the Federal agencies. The science was subject to peer review. And I think everybody I have talked to is very confident in the results.

Mr. GUZY. I would just add, Senator Graham, that considering the pace of environmental degradation in the Everglades, we look to be opportunistic in the best sense of the word, to find places where relatively rapid action could be taken, where you could capitalize on those resources that the Federal Government or the State Government had already established, and you could take some very early steps and achieve significant results. And that is what really those 10 projects represent.

Mr. WESTPHAL. One more point, Senator, is we have got to remember that the State has also made some great investments here. And for us to delay going forward really is an affront to that investment that the State has made, as well as the Federal Government. We have got almost two-thirds of the land already purchased for these projects, so we are well under way.

Senator GRAHAM. Thank you, Mr. Chairman.

Senator SMITH. Thank you, Senator Graham.

I just want to make a couple of comments, and then let me ask one final question. I guess it would be for you, Dr. Westphal, before I make a couple of comments.

On these 10 projects, do you feel very confident, relatively confident, or extremely confident that we can expect these project implementation reports to be completed on time, which I assume is in a 12 to 18 month period? Is that about right?

Mr. WESTPHAL. Do you see any heads nodding behind me here?

Senator SMITH. Let me see some heads nodding.

[Laughter.]

Mr. WESTPHAL. Are they nodding? They are the guys that have to do this.

Senator SMITH. What is the answer back there?

Mr. WESTPHAL. The answer better be yes.

Senator SMITH. All right.

[Laughter.]

Mr. WESTPHAL. And the adjective is extremely confident.

Senator SMITH. I want to make a couple more points regarding some of the questions that were raised by Senator Baucus and some of the comments that were made this morning.

We all know that this is not exact in terms of dollars. I think anybody who would say that would be wrong, and it would be misleading to the public.

I do not think there is anybody in the Senate, and maybe there is, but I have not met him or her yet, who is more conservative than I am with the taxpayer dollars. I do not want to waste a penny of it, because they all belong to all of us.

I think it is important to understand here that this project is worth the risk. It is worth the risk perhaps more than many other projects in various other aspects of the budget that we fund.

I want to go on record as saying that I am willing to take that risk. And if it comes back 50 years from now that Senator Graham and I sat here, and we were wrong, because we did not do enough and the Everglades failed, we can at least say or at least our grandchildren can say, they tried. And we have to try.

It is simply wrong to try to exact this thing down to the last dollar, before we begin the implementation of the plan. We have the flexibility to make adjustments so if we get to the point where we say, this is hopeless; we are going to lose the Everglades, we do not have to spend the rest of the money.

On the other hand, if it starts working, and we can begin to make assessments and adaptations to the process, then we can do that. And perhaps we will save money, and maybe it will cost a few million more.

Let me just point out, we are being asked to authorize about $28 million in 2001, and about $47 million, or rounded off, say, $50 million in 2002, in addition to the $1.4 billion over that 14 year period for those projects, half of which is paid for by the State of Florida.

Let us look at why we are doing this. You have got a situation in this ecosystem where 90 to 95 percent of the wading bird population in this ecosystem is gone. That is 90 to 95 percent.

Second, the Everglades covers less than half, and that is the ecosystem, not the park, of the area it did 50 years ago. A billion and a half or a billion, seven gallons of water a day are pumped out to sea, critically disrupting the estuaries, the health of those estuaries. And 68, at last count, animal and plant species are on the

endangered list, including the Florida panther, which is probably the most prominent one.

So it is worth the risk. And I am simply not going to allow a situation where we are going to get down and we are going to have to say that right down to the last penny of every dollar that we spend here has got to be accounted for before we embark on one of these projects.

We have the flexibility. And I am going to encourage members to read the plan, so that they understand that there is the flexibility and the adaptive responses here to make changes as we go.

That is what I like about it. It is not exact. And we need to understand that. And if anybody says that they want this to be exact, then I guess they should not be for the restoration of the Everglades, and they can live with that, maybe. I could not live with it.

So we are going to be proceeding on this in concept, but also looking at those dollars where we can. But even if we fail, and I hope we do not, and I pray that we do not, we have to fail trying.

It is worth the risk. And I believe that based on all of the science that I have seen and the people that I have talked to, and many people shared a lot of information, including some of the people here, that it looks pretty good that we can make a positive impact on that system.

Now we do have differences. And that concerns me very much. I would just conclude on this, and if you want to respond to it, fine.

I am concerned that these changes were made, not because some of them may not be good, because some of them, I am sure, are. But now we have got to go back and reopen this. If we take the Administration plan as it is presented, we have to reopen the whole situation, because other people, other entities and stakeholders are going to want to be reassessed, as well.

We had an agreement. Now we do not have an agreement, if we adopt this plan. And I would just say to you, look, if we go back to the original assessment agreement that we had in July 1999, we can say, if we adopt that, and I am not necessarily taking that position at this point, but I am saying if we did, we still have the flexibility to adapt to make some of the suggestions that you have all talked about, if we want to. So let us not forget that.

I hope we do not get hung up in a big argument over specific proposals that we want to place in, that some of us want to place in. That is why I am concerned. And I think I want to complement all three of you, because you have done a great job in defending not only the plan, but the system and the project, in general.

I do not mean to imply anything else, other than to say, I think it is regrettable that we now have to reopen the can and start all over again. It is going to make our job very difficult. And I hope it does not just die the death of other WRDA projects.

This is not just another Water Resources Development Act project. It is not. If we are to throw it in there with, and I do not want to pick out anything specifically, but we all know how many of these there are.

I have 100 projects and a number of letters from other Senators who want their project in a Water Resources Development Act bill. And I am prepared, if I have to, to pull this one out of there, and

run it through separately, as a separate proposal, and let the Congress make a judgment.

So the American people and those who support the Everglades, and I think that is a vast majority of the American people, will have the opportunity to know who is for it and who is not. Because if I have my way about it, there will be a vote.

I do not care where the party lines fall. I do not think it is a party line issue, as you can see from the debate here today.

We will have a vote, if I have anything to say about it, on a proposal of some kind, to restore the Everglades. And I think the American people deserve that, and I think the American people deserve to know who is for it, and who is not, and who is willing to take the risk and who is not.

Does anybody here have a comment before we go to the next panel; yes?

Mr. WESTPHAL. Mr. Chairman, I do not know on the changes if you are referring, for example, to the addition of water for the environment.

Senator SMITH. That is what, 245?

Mr. WESTPHAL. Yes.

Senator SMITH. That is one.

Mr. WESTPHAL. On that point, please remember that the report from the district that went to the Chief of Engineers including that feature is calling for a study of that.

All we are proposing to do is to study the ability to get that additional amount of water, without having any impact on the 20 percent of the water that goes to municipal and industrial uses. So we are not advancing a proposal to do it. We are advancing a proposal to study the feasibility of doing that.

The other point that I would make is that, you know, we have talked a lot about partnerships with the State, the tribes, and each other here. But we really have a partnership with Congress with this. Because the American people have to vote on every feature of this plan down the road and on all the appropriations.

Senator SMITH. It is step by step.

Mr. WESTPHAL. So, really, our requirement will be to really link up with you, your committee, and the rest of the members here and in the House to make sure that we give you the best and all of the information required for you to make judicious decisions for the American people.

Senator SMITH. Senator Baucus' point on trust is a good point. It does involve trust. And we are going to have to, I think, demonstrate to the American people that we can work that way; that you can bring this project to us, and you can say, here is where we are and here is why we can not approve it yet, or here is the reason we can approve it.

Mr. WESTPHAL. Absolutely.

Senator SMITH. I think that is going to take a lot of work together, and I believe we can do that.

Mr. WESTPHAL. Mr. Chairman, I am confident that whatever Administration follows the Clinton/Gore Administration, they will sit together here, and they will tell you the same things we are telling you, commitment to it and support for it and willingness to work with you.

Mr. GUZY. Mr. Chairman, we really respect and appreciate your commitment to move this process forward. And, obviously, the Administration will work with you anyway that we can to accomplish the appropriate authorization.

Senator SMITH. I do not know if you were in the room when I made the comment to the first panel this morning, but let me just repeat it.

The process after we finish this hearing would be to work together with the Administration and the Corps. and the Department of Interior, as well as Senator Graham and Senator Mack and the committee members, Senator Baucus and Senator Voinovich, of course, who chairs the subcommittee, to try to come up with a some kind of a compromise, if you will, or legislation in the next weeks, so that we can get it on the Floor before the end of the summer. That is the goal.

Senator SMITH. Thank you all.

Ms. DOYLE. Thank you, Mr. Chairman.

Senator SMITH. Senator Graham?

Senator GRAHAM. Senator Smith, there are a couple of letters, one from Dr. Westphal, and another from General Ballard, which attempt to clarify this issue of the 245,000. And I would like to ask if those could be submitted for the record.

Senator SMITH. Certainly, without objection.

[The referenced documents follow:]

U.S. SENATE,
Washington, DC, July 30, 1999.

Lt. Gen. Joe N. Ballard,
Chief of Engineers,
Department of the Army,
Washington, DC 20314.

DEAR GENERAL BALLARD: We are writing to you regarding the Restudy which you released to Congress on July 1, 1999. We appreciate all the hard work by the Army Corps in developing this comprehensive plan for restoration of the Everglades and in ensuring that it was unanimously supported by the stakeholders in Florida.

The Restudy submission capped a lengthy process of coordination among many stakeholders with vital interests in the future of the Everglades watershed. The draft Restudy was subjected to extensive review and comment—a factor that we believe contributed to the remarkable coalition assembled in support of its authorization.

We have received some questions regarding the transmittal letter accompanying the Restudy. This letter contained some significant new recommendations that were not reflected in the Restudy itself. For example, your letter included a commitment to deliver 245,000 acre feet of water beyond that recommended in the Restudy to the Everglades National Park and Biscayne Bay National Park. We understand that this recommendation did not go through the same rigorous public review and comment as did the Restudy itself.

We know that the inclusion of a transmittal letter from the Army Corps with this type of report to Congress is standard practice. This letter reflects the views of the Secretary as they relate to the project recommendations and technical analysis contained in the Chief's report. These views are taken into account by Congress as it considers proposals for project authorization. In every case, the final decision on the content of the authorization is determined by Congress, normally through a Water Resources Development Act.

We appreciate the comments in the transmittal letter and will consider them as we move to authorize the Restudy. Please clarify in writing that the transmittal letter for the Restudy will function in the same manner as all other transmittal letters, as recommendations for consideration by Congress.

Again, we appreciate your hard work on the Restudy, and we look forward to hearing from you.

Sincerely,

CONNIE MACK, *U.S. Senate.*
BOB GRAHAM, *U.S. Senate.*

DEPARTMENT OF THE ARMY,
OFFICE OF THE CHIEF OF ENGINEERS,
PLANNING DIVISION, EASTERN PLANNING MANAGEMENT BRANCH,
Washington, DC, September 27, 1999.

Honorable CONNIE MACK,
U.S. Senate,
Washington, DC 20510.

DEAR SENATOR MACK: This is in response to your letter dated July 30, 1999, which was cosigned by the Honorable Bob Graham, U.S. Senate, concerning the Central and Southern Florida Project Comprehensive Review Study ("Restudy") submitted to Congress by the Assistant Secretary of the Army for Civil Works on July 1, 1999.

As you know, over a 6-year period involving over 30 Federal, State, and local agencies, tribal leaders, stakeholders, other interested parties, and the general public and through extensive coordination with the Governor's Commission for a Sustainable South Florida and the South Florida Ecosystem Restoration Task Force, a Comprehensive Plan for restoring the Everglades and south Florida ecosystem has been developed. Due to the magnitude and complexity of the project, the level of multi-agency involvement, political and public interest, and the comprehensive nature of the Plan, a decision was made during the final policy review at the Washington level that the draft Chief of Engineers report released for State and agency review in April 1999 needed to be expanded to include the findings, conclusions, and recommendations of the Restudy efforts. Though the report is lengthy and includes extensive information, it does present the complete and the latest information on refinements to the Comprehensive Plan and its implementation strategy for consideration by the Administration and the Congress.

In furtherance of the Comprehensive Plan, numerous commitments were made by the restoration team during public review of the Comprehensive Plan, subsequent coordination with other Federal, State, and local agencies, and the South Florida Water Management District to significantly improve the implementation plan. Many of these commitments, like the Corps decision to complete the additional analysis to evaluate the proposal to provide an additional 245,000 acre-feet of water that may be required to southern Everglades and Biscayne Bay are reflected in the Jacksonville District's Final Comprehensive Restudy. Other commitments stemmed from the public review period on the draft Comprehensive Plan and implementation plan in October 1998 and January 1999, respectively and the numerous meetings, correspondence, and intense coordination efforts during finalization of the Comprehensive Plan.

The Corps is committed to implementing the final plan in a manner that provides more water for the Everglades National Park (ENP) and Biscayne Bay. Up to about 245,000 acre-feet of additional water may be available from urban sources. Assuming this water can be treated to acceptable standards and does not result in unacceptable adverse impacts to other areas of the natural system, this water may be used to enhance overland flow and ecological conditions in ENP and Biscayne Bay. As a matter of clarification, the Corps has only committed to completing the evaluation on the additional 245,000 acre-feet of water that may be required for southern Everglades and Biscayne Bay. The ultimate amount of additional water recaptured, its distribution, and resolution of water quality issues, requires much more detailed study, analysis, coordination, and public review before any recommendation is finalized and a report submitted to Congress for authorization. The development of the Comprehensive Plan involved a historic partnership among Federal, State, local governments, interested groups and the general public, and therefore, I determined that including the Restudy team's commitments was necessary to provide the Administration and the Congress with all the information that helped shape the Comprehensive Plan and the complexity of restoring this significant natural resource.

Thank you for your continued interest in this project. I will continue to keep you advised on the progress of this project as we proceed with implementation of the Comprehensive Plan.

Sincerely,

JOE N. BALLARD, *Lieutenant General,*
U.S. Army Chief of Engineers.

U.S. SENATE,
Washington, DC, November 9, 1999.

Dr. JOSEPH WESTPHAL, *Assistant Secretary,*
Department of the Army (Civil Works),
The Pentagon,
Washington, DC 20310–0108.

DEAR DR. WESTPHAL: We are writing to you to followup on some correspondence we exchanged with Lieutenant General Joe Ballard regarding the Restudy which you released to Congress on July 1, 1999. In this exchange, we requested clarification that the transmittal leper that accompanied the Restudy would function as a recommendation for consideration by Congress.

We know the inclusion of a transmittal letter from the Army Corps with this type of report to Congress is standard practice. This letter reflects the views of the Secretary as they relate to the project recommendations and technical analysis contained in the Chiefs report. These views are taken into account by Congress as it considers proposals for project authorization. In every case, the final decision on the content of the authorization is determined by Congress, nominally through a Water Resources Development Act.

In Lieutenant General Ballard's response of September 27, 1999, he indicates that, "numerous commitments were made by the restoration team during public review of the Comprehensive Plan, subsequent coordination with other Federal, State, and local agencies, and the South Florida Water Management District to significantly improve the implementation plan. Many of these commitments, like the Corps decision to complete the additional analysis to evaluate the proposal to provide an additional 245,000 acre-feet of water that may be required to southern Everglades and Biscayne Bay are reflected in the Jacksonville District's Final Comprehensive Restudy."

He goes on to say that, ". . . the Corps has only committed to completing the evaluation on the additional 245,000 acre-feet of water that may be required for southern Everglades and Biscayne Bay."

Please clarify the following points:

1) Were commitments made by the Restudy team to provide a full additional 245,000 acre-feet of water to the natural system? If so, through what process?

2) Does the transmittal letter indicate a commitment by the Corps to provide this water or a commitment to evaluate the potential to provide this water?

We appreciate your hard work on the Restudy and look forward to working together on its authorization. However, we believe that the interpretation of the intent of the transmittal letter is a lingering issue that we wish to resolve before the end of calendar year 1999.

We look forward to your response.

Sincerely,

BOB GRAHAM, *United States Senator.*
CONNIE MACK, *United States Senator.*

DEPARTMENT OF THE ARMY,
OFFICE OF THE SECRETARY FOR CIVIL WORKS,
Washington, DC, 20310–0108, January 24, 2000.

Honorable BOB GRAHAM,
U.S. Senate,
Washington, DC 20510.

DEAR SENATOR GRAHAM: Thank you for your letter of November 9, 1999, co-signed by Senator Connie Mack, regarding the Chief of Engineers Report on the Comprehensive Everglades Restoration Plan (CERP). Specifically, you asked me to clarify the Chief's Report provision concerning the additional 245,000 acre-feet of water that may be required for Everglades National Park (ENP) and Biscayne Bay.

First, let me state that our commitment is to completing the evaluation that is necessary to determine how much of the 245,000 acre feet is necessary to restore ENP and Biscayne Bay. This evaluation will include more detailed studies, an Environmental Impact Statement, and full public review. Once this has been completed, a final executive branch decision will be made and a proposal will be forwarded to Congress for consideration in a Water Resources Development Act of 2004. Congress would then have the opportunity to discuss and debate the proposal. In short, construction will not start on this proposal until it as been studied fully and congressional authorization is obtained.

In regard to the process that led to the Chief's Report provision on the 245,000 acre-feet, let me offer the following history. In response to the October 1998, draft of the CERP, Department of the Interior and other scientists suggested that additional water was needed to ensure restoration of the ENP and Biscayne Bay. The interagency technical team that developed the CERP evaluated several options and concluded that an additional 245,000 acre-feet of water is available, that it would provide important benefits to the ENP and Biscayne Bay and that it is conceptually feasible to deliver the water to the ENP. The principal questions were how to deliver the water to the ENP without impacting other parts of the ecosystem (e.g., WCAs and farmland) and how much the water would have to be cleaned before it could be discharged into the ENP. Contrary to some reports, this was discussed in general terms in the final CERP released in April 1999. Further, letters clarifying this issue were part of the public record that was available for review last April.

While we believe that restoration of the greater South Florida ecosystem is our principle objective, ensuring effective restoration of the ENP is also very important. We are confidant that the CERP in general, and the 245,000 acre-feet provision in particular, were developed with the health of the overall ecosystem, including the human environment, in mind. We are very much aware of the need to look beyond the ENP boundary to ensure that other important parts of the ecosystem like the estuaries and the WCAs are protected and restored.

I appreciate your leadership on this important national issue—restoration of America's Everglades. I look forward to working with you this year to obtain authorization of the CERP.

Sincerely,

JOSEPH W. WESTPHAL,
Assistant Secretary of the Army (Civil Works).

Senator SMITH. We thank the panel.

The next panel is Mr. Ken Keck, who is the Director of Legislative and Regulatory Affairs of the Florida Citrus Mutual; and Dr. David Guggenheim, the President of the Conservancy of Southwest Florida, and the Co-Chair of the Everglades Coalition.

Welcome, gentlemen, and I appreciate you being here. I think you two also traveled a long distance to be here, and we appreciate it.

We do try to take the hearings out of town once in a while, and we did have one down there. But the hearing, as you know, in Florida, was specifically on the issue itself, and this is on the Administration proposal or legislation, so it is a little bit different.

Mr. Keck, we will start with you. I appreciate your being here. Again, as I indicated before, your entire testimony is part of the record, both of you. If you could summarize in 5 minutes or so, and also kind of indicate to me where your problems are with the plan, as opposed to the agreement that you had initially, that helps me to focus a little bit on trying to build some type of coalition of support.

Mr. Keck?

STATEMENT OF KEN KECK, DIRECTOR OF LEGISLATIVE AND REGULATORY AFFAIRS, FLORIDA CITRUS MUTUAL

Mr. KECK. Thank you, Chairman Smith, and Senator Graham, thank you very much.

Mr. Chairman and members of the committee, my name is Ken Keck. I am employed by Florida Citrus Mutual as the Director of Legislative and Regulatory Affairs. Florida Citrus Mutual, as you may know, Senator Graham, is a voluntary grower association of about 11,500 growers throughout Central and South Florida.

While historically we raised citrus more in the central part of the State, because of the freeze events in the 1980's, fully half of the

citrus grown in Florida now is within the boundaries of the Restudy.

Let me let the committee know that in preparing our testimony, and I say "our" in the sense of a broad coalition of ag groups in South Florida, I will, if I could, submit for the record, Mr. Chairman, the list of groups who do support our testimony, today.

Senator SMITH. That will be made a part of the record.

[The referenced document follows:]

ATTACHMENT TO THE TESTIMONY OF KEN KECK

These organizations have endorsed the attached statement of concerns with the Administration's legislative proposal relating to Everglades Restoration (Section 3 of S. 2437) as of May 9, 2000.

Florida Farm Bureau
Florida Citrus Mutual
Gulf Citrus Growers Association
Sunshine State Milk Producers
Florida Fruit and Vegetable Association
Florida Fertilizer and Agri-Chemical Association
Florida Sugar Cane League, Inc.
Sugar Cane Growers Cooperative of Florida
Miami-Dade County Farm Bureau
Palm Beach County Farm Bureau
Western Palm Beach County Farm Bureau
Lake Worth Drainage District

FLORIDA AGRICULTURE'S CONCERNS WITH ADMINISTRATION'S WRDA 2000 PROPOSAL

This paper summarizes eight fundamental problems with the Administration's proposal based on the concepts, authorities and processes that would shape future water management in South Florida under this draft legislation. We are not, at this time, listing all of the specific problems we have with many of the provisions. In all cases, specific legislative language can be suggested.

1. Problem:—The bill modifies the balanced purposes for the existing C&S Florida Project and, by amending the balanced purposes that were re-affirmed in WRDA 96, eliminates this balance for the future of this entire project.

Fix:—The balanced purposes for both the existing and modified C&SF Project should be reaffirmed while providing that the primary purpose of the Comprehensive Plan is ecosystem restoration, preservation and protection.

2. Problem:—The assurance provisions preempt Florida law governing water allocations and reservations and preclude comprehensive water management by the local sponsor. They fundamentally alter current Federal policy. These provisions establish unprecedented Federal authority and control of water quality and quantity.

Fix:—Assurances can be provided by utilizing the Project Implementation Reports for each project component under the Plan which can, by agreement of the Secretary and local sponsor, and consistent with State law: (1) allocate and reserve the new water supply made available, (2) otherwise provide for the allocation of any other benefits and (3) establish the component's operating criteria necessary to provide the allocations and other benefits.

3. Problem:—The bill's provisions regarding Project Implementation Reports have much less content and are inconsistent with descriptions of those Reports in the Comprehensive Plan. These provisions are also inconsistent with representations from the Restudy team that these Reports will contain all the information needed for a full feasibility report and more. These Reports provide an opportunity to address assurance issues with a more complete decisionmaking document.

Fix:—These Reports should meet the requirements of the U.S Water Resources Council's Principles and Guidelines and provide all information needed to support congressional authorization, approval under state law, and answer all questions regarding the allocation of benefits and achievement of Project and Comp Plan purposes.

4. Problem:—The bill authorizes specific project components and undefined other components "consistent with the plan." These are all project components whose value, cost-effectiveness and benefits have not been demonstrated by feasibility level

engineering, economic and environmental studies. There are no reliable cost estimates on which to base authorization for appropriations.

Fix:—Authorize project modifications after Congress has been able to review a completed and fully coordinated feasibility or Project Implementation Report.

5. Problem:—The bill references the Chief's Report of June 22,1999 that includes additional commitments that were not part of the Plan reviewed in consultation with the State and were included without notice or opportunity for public comment. If implemented, these conditions would have substantial adverse impacts on State interests and substantially increase on project costs.

Fix:—All references to the Chief's Report should be deleted from the Bill, confirming that the Plan is based on the Recommended Plan in the document of April 1999.

6. Problem:—The way the Bill approves the Comprehensive Everglades Restoration Plan.

Fix:—Approve the Comprehensive Plan as a guide and framework for a continuing planning process to answer remaining environmental and technical questions, requiring periodic updates at the time further congressional authorizations are requested.

7. Problem:—The bill acknowledges the need for but does not provide a full and equal partnership between the State and Federal Governments.

Fix:—In addition to deleting provisions by which Federal allocation of water preempts state law, the bill should provide for (1) equal cost sharing of the C&S Florida project including construction of project components and operations and maintenance and (2) equal decisionmaking for operating protocols in PIR agreements.

8. Problem:—Compliance with water quality requirements is not ensured.

Fix:—Require that, prior to authorization, project components include features necessary to ensure that all discharges meet applicable water quality standards and water quality permitting requirements.

Mr. KECK. Please allow me to name these, just knowing in the first panel this morning, there was some question: Florida Farm Bureau, Gulf Citrus Growers Association, Sunshine State Milk Producers, Florida Fruit and Vegetable Association; Florida Fertilizer and Agri-Chemical Association, Florida Sugar Cane League, Inc., Sugar Cane Growers Cooperative of Florida, Miami-Dade County Farm Bureau, Palm Beach County Farm Bureau, Western Palm Beach County Farm Bureau, and Lake Worth Drainage District.

We responded to Senator Graham and Senator Mack's staff who asked for a response to the Administration's proposal. Through a series of meetings, phone calls, faxes, e-mails, we came up with our core eight concerns with the Administration's bill.

Let me start by saying that all of the groups do support the plan; that is, the plan that was submitted to Congress in April 1999. However, the implementation of that plan, which of course was not subject to review by the groups is what we primarily have the difference with.

Florida ag participated extensively in that Federal/State Restudy process that produced that plan, and we expect to continue to participate in that process, just to make that clear to the committee. We are prepared to support major improvements to the water management system.

However, we believe that the importance of the Everglades restoration and the other vital project purposes demand that project modifications be based on, and this is no secret, sound science, be the product of objective analysis, and be implemented in an orderly way. All of this is hopefully to ensure that the needs of our growers, landowners, and businesses are met.

Because of the precedent setting nature, the policy issues raised by S. 2437 should be the concern of every member, obviously, of this committee, as well as the Congress. Because the plan is the first large Federal water project with ecosystem restoration as its

primary objective, we see this being modeled perhaps throughout the country, in other areas of environmental distress.

Our profound disappointment with the Administration's bill makes us hope that the committee can start with a fresh beginning, and that the committee does not feel bound or tied to the Administration's approach.

We see the problems in the Administration continually at this table, seeking to insist on the projects with no feasibility studies, and ultimately, the Administration attempts to undo the balanced purposes of the existing CS&F project.

Moving on to our top three specifics, the bill eliminates the balanced purposes of the existing modified CS&F project that were affirmed in the WRDA 1996. So to have that Section 528 of WRDA 1996 reinserted into this committee's product would be a real high priority for us.

We think the balanced purposes that tie into the assurances language in that we advocate that the Feds enter into agreements with the State, as to what benefits will specifically come out of out each project; what water quantities will specifically come out of each project; and where those will be channeled. We think that these balanced purposes can get reflected, or I should say, would subsume the assurances issue.

Second, we really have concerns about this committee giving blanket authorizations, and not project-by-project authorizations. I think ultimately your constituencies and taxpayers who will look for things like flood protection ultimately will not favor such a process that has a blanket authorization.

And, of course, my written testimony lists some of the other concerns, but I point out those as priorities. Thank you, Mr. Chairman.

Senator SMITH. Thank you, Mr. Keck.

Mr. Guggenheim?

STATEMENT OF DR. DAVID GUGGENHEIM, PRESIDENT, THE CONSERVANCY OF SOUTHWEST FLORIDA, CO-CHAIR, THE EVERGLADES COALITION

Mr. GUGGENHEIM. Thank you, Mr. Chairman, good afternoon. I am David Guggenheim, the Florida Co-Chair of the Everglades Coalition, and President and CEO of the Conservancy of Southwest Florida in Naples.

I am representing the Everglades Coalition, which is 40 national, State, and local organizations, working together on behalf of protecting and restoring the Everglades.

I first want to acknowledge, Mr. Chairman, your leadership and your very eloquent remarks following the previous panel. It is very much appreciated. And Senator Graham, of course, your ongoing leadership on this issue is also very much appreciated.

Today, America's Everglades are this Nation's most endangered ecosystem. Our lack of foresight over the past century has resulted in a devastated ecosystem, threatening not only the wildlife that lives within it, but also a way of life for millions in South Florida, who call South Florida and will call South Florida their home.

Today, the status quo represents the greatest risk to the Everglades ecosystem and to taxpayers. We are pushing the ecosystem

and the endangered species that live there to the brink with unknown consequences. With every passing day, restoration becomes more uncertain and more expensive.

Severe habitat loss and fragmentation of that habitat throughout South Florida continues at a very rapid pace, threatening 68 species, including the Florida panther, the wood stork, the Cape Sable seaside sparrow, among many others. And these species continue to decline.

We have disrupted fresh waterflows, which has led to too little fresh water in some cases, and too much fresh water in others. And it is a profoundly tragic irony that in a system that is often terribly thirsty for water, we have also managed to make fresh water a pollutant.

Just earlier this week, Lee County has filed an injunction, or has moved forward to file an injunction, against the Water Management District concerning excessive fresh waterflows down the Caloosahatchee, as an attempt to reduce water levels in Lake Okeechobee. And I think that just very dramatically illustrates how the system is being operated under emergency conditions. And we are trading impacts in one part of an ecosystem for impacts in another on a regular basis.

I think, Mr. Chairman, as you stated earlier today, we do need to act this year. This is the year of the Everglades. And like you, the Coalition strongly believes that Congress should move forward this year to enact legislation that truly results in the restoration of America's Everglades.

We believe that the Restoration Plan submitted by the Corps. clearly contains numerous strong points. For example, the legislation appropriately establishes the priority of restoring the ecosystem first, with water supply and flood protection goals concurrent but subsidiary.

The legislation also includes initial authorization of 10 projects that will provide critical benefits for the natural system. However, the coalition believes that the legislation should be improved in a number of areas to ensure that it achieves its intent of restoring the Everglades.

We have a couple of overarching comments, and then eight very specific and brief comments about the legislation.

First, as I mentioned, the legislation contains 10 specific projects for authorization. The Everglades Coalition believes approval of all 10 of these is absolutely essential. These projects were specifically chosen for their ability in concert to provide significant restoration benefits within the first decade of this restoration effort.

Included in that list of 10 projects is the Talisman Water Storage Reservoir. This project represents one of the highest priorities, in our opinion, because it begins the process of recapturing water and seasonally storing water that is currently wasted.

It will provide immediate relief from the current crisis conditions by giving water managers the very badly needed flexibility to manage that water. And this directly relates to the issue with Lee County.

We also have eight specific and brief comments on the legislation. First and foremost, this effort is about restoring the ecosystem. The principal goal is to restore the natural functioning of

the greater Everglades ecosystem. And this project also has secondary benefits of flood control and water supply, which must be compatible with the principal goal.

No. 2, the Department of Interior and the Corps. must be coequal partners in developing the design, plan, and regulations for at least those new project features that are intended to provide benefits for federally managed lands.

No. 3, the authorization should institutionalize the peer review process led by the National Academy of Sciences, to review and provide recommendations to the agencies on a restoration process for its entire duration.

Such a body would also provide Congress with an independent source of expertise, and enable it to better evaluate the progress of restoration and its associated activities. And that also includes the development of performance measures.

No. 4, the authorization should include a process that will ensure the coordination of other Federal actions in and around the Everglades ecosystem with regard to the restoration effort. It is counterproductive to have other Federal agencies working at odds with each other. And I think such a provision could have avoided the conflict that we are now experiencing with regard to the Homestead Air Force Base.

No. 5, there should be no irreversible or irretrievable commitments of resources to the project that rely upon pilot projects for their justification. For example, the development of land in the L–31N project area should not proceed until the completion of the pilot project in that critical project feature.

No. 6, the authorization should be crystal clear about what benefits it intends to provide for America's Everglades. This will ensure that this bill to restore the Everglades actually will restore the Everglades.

No. 7, the authorization should provide a process to expeditiously purchase lands necessary for wildlife habitat and projects that are under extreme development pressure in and around the ecosystem.

Finally, the authorization should require agency reports to Congress concerning the progress of the restoration every 2 years, not every 5 years, as currently proposed. The 2-year report requirement would be consistent with the WRDA cycle, and enable more engaged and effective review by Congress and the National Academy of Sciences.

Summer camp gets under way at the Conservancy in about 2 weeks. It is a time when I reflect on education. And, Mr. Chairman, as you mentioned earlier, this is very much about the next generation.

Many of these kids are rather disturbed to hear that when I was their age, the Everglades were in trouble, and that they are still in trouble today. And I think it is a commitment that we owe them and their children.

We have a tremendous opportunity before us. We stand at the brink of a point in time where we can truly restore America's Everglades. And our success depends on swift and decisive action this year.

On behalf of the Everglades Coalition, thank you for the opportunity to speak, and thank you again for your leadership on this issue.

Senator SMITH. Thank you for your testimony, Dr. Guggenheim.

Senator Graham, you may go ahead, if you have some questions.

Senator GRAHAM. Well, I come back to the continuing issue of whether there is a sufficient amount of detail in the Corps. plan to justify moving forward this year.

Mr. Keck, there are 10 specific projects that are being recommended for authorization to proceed. Are there any of those 10 projects that you think are mature enough to justify going forward?

Mr. KECK. Senator, yes, but in many cases, and this is the problem with blanket authorization, many of the feasibility studies have not even begun, as of today.

So if I am looking to plan investments or capital as a citrus grower, then I might be concerned if I picked up my paper and saw that there could be something happening in a certain area, for instance, land purchases for reservoirs, et cetera. It might damage or not help my planning process as a businessman.

Senator GRAHAM. Well, there are 10 specific projects outlined in the legislation, the first of which is the C–44 basin storage reservoir. And as Ms. Doyle indicated, most of the 10, or at least a majority of the 10, are similar to that, in that they are water storage purposes.

I am not certain whether it was you or Dr. Guggenheim that mentioned that there may well be a suit now by Lee County against the South Florida Water Management District. As I understand it, the basis of that suit is that the Water Management District had so much water stored in Lake Okeechobee that it was having an adverse effect on the habitat of the lake and the fish in the lake.

And, therefore, they released water out of Lake Okeechobee. Under the current options, they had a limited number of places to release it.

One of those is down the Caloosahatchee River. It ends up in Lee County. As it has done many times in the past, it caused environmental damage by having that surge of fresh water hit the salt water. Bad things have happened, and it may now end up in more litigation.

So there are 10 of these projects, of which several, including that first one, have as their specific objective to try to avoid those kind of surge releases. So there is some sense of urgency to get on with those projects so we do not have more examples in Lee County, on the Gulf Coast, and around the Steward area on the East Coast being affected by these surge releases.

So I guess the question is, taking that first one, the C-44 basin storage reserve or reservoir, do you feel that one is mature enough that the Congress could proceed in 2000 to authorize that project?

Mr. KECK. As long as there was some provision, perhaps, to come back to the Congress when feasibility has been better explored or nailed down.

Senator GRAHAM. I wonder if you might suggest what you think would be a set of sort of gates that should be erected between authorization and actual proceeding to either purchase land or com-

mence design or start construction that should be created. And on these 10 projects, if you could almost rate them as to which ones you think are closet to being mature, and those that are the furthest away from being ready to be authorized.

Mr. KECK. And Senator, on that latter part of your question, I would ask to submit that for the record at a later point, just with more specificity.

The Restudy submitted to the Congress back in April had a definition of PIRS that is very different from the bill that the Administration presents to this committee today. So in other words, I would ask this committee and the committee staff to go back to the Restudy, itself. Because we are very confident that that PIR system that we all agreed to would be ideal.

Mr. GUGGENHEIM. I think we are discussing two issues here. One deals with the process. And it is the view of the Coalition obviously, that there is extreme urgency to take action.

We also respect the need for congressional oversight. And we would just ask, respectfully that however Congress decides to solve this issue, it not be an excuse to hold up authorization this year; that there is some sort of set of oversight that can be achieved to allow these projects to move forward.

The other issue that is, I think, embedded in this discussion is the one of scientific uncertainty. You know, speaking as a scientist, I should be the one that says we should do more studying. But at the same time, there is a practical side of this. And I think we run the risk, quite literally, of studying the Everglades to death.

We need to take action, which means that there is uncertainty in the Comprehensive Restoration Plan. The first thing is, how do we evaluate whether the plan is going to work? I heard Senator Baucus ask that question earlier.

Well, in order to get a grasp on the success, the Corps. has simulated the behavior of the system under different strategies through computer modeling. And as a modeler, myself, that is something that I understand and appreciate.

There are two fundamental questions that I ask, when I look at a computer model. The first question is, is this a robust system? In other words, as you tweak different variables in the system, will the whole house of cards fall apart?

Well, the Corps. convinced me that this is a robust system; that it is not fragile in that sense, and would not fall apart immediately, if things did not turn out quite the way we planned.

Second is, is the model flexible? Is the system being modeled flexibly? When we apply this in the real world, the real world is always somewhat different than the computer simulated world.

Will the system provide flexibility, for example, to store more water in one location than in another, as we had originally assumed? And the answer is, yes. Those two components, the robustness and the flexibility, are underlying components. And that gives us some reassurance that as we deal with this uncertainty, that we can move forward.

The real key is then in the role of the peer review panel. The peer review panel has a very important role. And that is to make sure that the goals of the restoration are translated into some meaningful performance targets for congressional oversight, so that

we can evaluate where we are at each step of the way, and make sure that this project is, indeed, doing what it is supposed to do.

I think they would be working closely with the Corps. and overseeing very closely what the Corps. does along those lines.

Senator SMITH. Mr. Guggenheim, this is a big assumption, but assuming the results of the waste water pilot project are good, do you favor putting this advance treated waste water into the natural system?

Mr. GUGGENHEIM. It is not an ideal solution. But I think we would have to look carefully at the water quality. That is ultimately what matters to the system. We are talking about an ecosystem that relies on exceptionally low levels of nutrients.

We would prefer a means of getting water to the system that does not involve using waste water. But it could be conceivably acceptable. But I think we would need to look at that carefully.

Senator SMITH. You would need to take a look at it carefully, yes. I feel the same way.

I want to ask you the same question I asked the previous panel. As you know, the Administration proposal changes or basically substitutes natural system for ecosystem. Well, let me just read it back for you, in case you did not hear it.

Under WRDA 1996, "The Secretary shall develop a plan for the purpose of restoring, preserving, and protecting the South Florida ecosystem." That was in the agreement that came to us in April or July 1999. And then the language is changed in the Administration proposal to say, "The overarching purpose of the plan is to protect, preserve, and restore the natural system."

I would assume that you would probably prefer the later language. But is the first language acceptable to you, at least in terms of getting the project started? I know it was, initially, but have you changed your position?

Mr. GUGGENHEIM. I do not believe we have changed our position on that at all, no. If you are talking about the WRDA 1996 language, then we are comfortable with that.

Senator SMITH. Because I think the Army Corps. or someone on the panel, when I asked that question, said, well, you know, things change. But I do not know that anything specific was brought up.

I am not trying to entrap anybody here. I am just trying to get my own understanding, as we try to work this through, as to what the thought process was at the time.

Mr. Keck, again, going back to the April Restudy, the 10 initial projects that were authorized there, that is prior to the PIRs being completed. You know, agriculture was part of this, and it was a unanimous agreement. Do you still stand behind all of the agreement that was made in the April Restudy?

Mr. KECK. I would just point out, Mr. Chairman, that agriculture did not have, nor did any other party have, a chance to agree on the chapter on implementation. So the overall plan, the concept, the theory, yes, agreement was there. But just keep that in mind as your committee goes forward.

Senator SMITH. OK, I am a little fuzzy on the details of the details of the condition of Talisman lease. Your testimony, Dr. Guggenheim, was excellent.

I wish we could show it, for the benefit of those who are watching on camera. But the location of that area of the Talisman property, of course, just south of Okeechobee, is very important to the whole study, which is why that is the prime piece of property that is in dispute here.

Mr. GUGGENHEIM. Yes.

Senator SMITH. But Mr. Keck, do you know the details of that lease? In other words, can you tell me the agriculture interest in paying to lease the land; and what, if any, problems will occur if you are asked to vacate, in accordance with that lease agreement?

Mr. KECK. Mr. Chairman, I do not know the details of that. I would not be able to speak to that. But certainly we would be able to provide from the record, from the ag groups.

Senator SMITH. All right, we will take that for the record. Of course, if the sugar industry were here to testify, they could answer that question, which is also regrettable.

Mr. KECK. But I might point out, this militates perhaps a shored up EIR process, as is in the Restudy. Perhaps some of these things might be avoided at this point.

Senator SMITH. Does anyone else have any other comment that you wish to make, that we may have omitted or left out, or do you want to respond to anything else?

Mr. GUGGENHEIM. I would just add on that issue of the Talisman Tract that another element here that underscores the urgency of acting this year is the fact that there are some notification requirements in the contract for those lands that are currently leased by the agricultural interests. And those notification requirements are such that notification must be given by October, 2002.

If not, then the lease would continue for another 3 years. And that would continue to delay the process of getting restoration under way and using those lands. So there is some very real, immediate pressure to move forward with the Talisman property.

Senator SMITH. As I understand it, that had ample public comment, correct?

Mr. GUGGENHEIM. I believe so.

Senator SMITH. I do not have any further questions.

Do you have any further questions for this panel, Senator Graham?

Senator GRAHAM. No, Mr. Chairman.

Senator SMITH. Well, let me thank the panel very much for taking the time to come up here. We appreciate it.

Mr. GUGGENHEIM. Thank you very much.

Senator SMITH. At this point, I would just say that the record will be kept open until the end of business tomorrow for any Senators that might wish to ask questions of any witnesses. And if you could provide the information on the lease for the record, Mr. Keck, I would appreciate it.

I want to thank everyone in the audience. At this point, the hearing is now adjourned.

[Whereupon, at 3:57 p.m., the committee was adjourned, to reconvene at the call of the Chair.]

[Additional statements submitted for the record follow:]

STATEMENT OF HON. JOHN WARNER, U.S. SENATOR FROM THE COMMONWEALTH OF VIRGINIA

I join my colleagues in welcoming you to the Committee this morning. The restoration of the South Florida Ecosystem, and particularly the restoration of our national parks and wildlife refuges in the area, is an enormous job that will require a strong Federal, state local Government and private sector partnership.

As I look at the magnitude of the Federal commitment the Congress is being asked to approve, I the issues in this way.

First, we must be sure that the science fully supports the investment of Federal dollars. We must know that projects we build will work.

Second, we must be sure that the Congress fully exercises its responsibilities to examine the technical, economic and environmental merits of each of the individual construction projects before they are authorized for construction.

Third, we must be sure that Federal funds are used to restore the natural system, particularly our Federal projects, and not use limited Federal funds to accelerate growth and development in South Florida. Those are not Federal responsibilities.

Fourth, we must develop a reasonable implementation schedule for the restoration plan, recognizing that there are many critical water resource needs across this nation ranging from navigation, lock and dam improvements which are critical to moving American's manufacturing goods and farm products to worldwide markets. The efficient transportation of these goods is essential if we are to compete in a one-world market.

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

Mr. Chairman, thank you for the opportunity to review the Comprehensive Everglades Restoration Plan.

The Everglades are one of our nation's most important natural treasures and we have a responsibility as a nation to preserve them, just as we do the national parks in New Jersey and elsewhere.

Senator Graham has done an outstanding job in bringing the Everglades to the attention of our Committee.

The Everglades of today are not the same place that they were in 1947. I think we can all agree that restoration of the Everglades is necessary. The current predicament of the Everglades is due in large part to mistakes that were made because we lacked the knowledge we have today about the harm that humans can impose on the natural environment.

But we must be cautious not to compound one man-made problem with another.

During the past 52 years Congress has selected choices for the Everglades based on the state of the science at the time. I am pleased to see that the Plan before us has sufficient flexibility to address new information obtained during the Implementation process. I just want to raise a few concerns.

First, how do we assure that the so-called "new" water captured under the plan will be provided to the environment in a quantity sufficient to restore the Everglades and ensure that it thrives? I was astounded to learn that, on average, 1.7 billion gallons of water that once flowed through the ecosystem is wasted every day through discharges to the ocean and gulf.

So I'm concerned that, as the demands for water increase in the future, we have protections in place to ensure that the needs of the plants and animals will continue to be met.

Secondly, how can we justify the 40–60 cost sharing for Operation and Maintenance of this project? Usually, operations and maintenance costs are the sole responsibility of the non-Federal sponsor.

In my state, the Port users and the State of New Jersey are paying 100 percent of the costs of similar public works projects in good faith. I look forward to learning more about this funding arrangement.

Thank you, Mr. Chairman.

STATEMENT OF HON. JEB BUSH, GOVERNOR, STATE OF FLORIDA

Chairman Smith, Senator Baucus, Senator Graham and members of the committee, thank you for this opportunity to speak about one of our true national treasures, America's Everglades. Thank you also to Senator Mack for making the special effort to join us. I would like to have my extended written statement included in the record.

I am here to bring you some good news, some hard truths and a challenge. This year, together, we will begin the massive, yet necessary, undertaking of restoring the Everglades. Restoring America's Everglades builds on the very American ideal that there are unique landscapes that we as a nation believe are worth preserving. It is also an ideal that is now worthy of action.

First, the good news. Last Friday, Florida concluded its annual legislative session. I can proudly report to the Congress that our commitment to the Everglades is solid. In fact, it is more than solid. As of next Tuesday, it will be the law. As part of our State budget, the Florida Legislature has appropriated an unprecedented level of funding to begin the implementation of the Restudy more than $136 million in the first year alone. These dollars will be matched by local governments and the South Florida Water Management District for a total of $221 million to begin this important work.

Next week, I will be joined in South Florida by Federal, State and local leaders to sign into law Florida's Everglades Restoration Investment Act—a measure that passed the Florida Senate and House of Representatives unanimously. With this new law, Florida will contribute over $2 billion to the Restudy project over the next 10 years. It will not only codify our long-term monetary commitment to the Everglades, but will create the Save Our Everglades Trust Fund that will enable Florida to save money for peak spending years on the horizon. No other State has made such a substantial financial commitment to a project yet to be authorized by the Federal Government.

Second, the hard truths. This is not the first time Florida has "gone first." Since 1983, when then-Governor Bob Graham created the Save Our Everglades program, the State of Florida has spent over $2.3 billion and acquired more than 1 million acres of land to avoid further destruction and degradation of the River of Grass. All of this is to say that the time has come for a legitimate and equal partnership with the Federal Government. I believe this project will require Washington to think anew. Too often in the past, partnerships of this nature between Federal and State governments have been anything but partnerships. At their worst, they have been master/servant arrangements. The Administration's bill that you are considering here today is a particularly egregious example of this. What had been a consensus plan among all the parties both State and Federal for restoring the Everglades would be recast. The Administration's bill seeks to redefine the project purpose; to establish Federal agencies as principal managers of South Florida's water resources; and to be the sole arbiter of differences. We must rebalance the relationship into a true and equal partnership.

Water Resources Development Act projects typically require a 20 or 30 percent financial commitment from the States. Yet Florida now stands ready to deliver with a 50 percent commitment. In exchange, we seek a new structure of governance. Because of the importance of this project and the enormity of the task ahead, Florida believes that it should be on equal footing with the Federal Government not only in terms of financing, but in managing, governing and operating this project.

Working as equal partners not only makes business sense, but also makes for good public policy. Disputes will be resolved quickly and fairly. Opportunities for cost savings will be more readily identified and pursued. And both partners will reap the benefits of cooperation and consensus.

Finally, the challenge. Florida needs your commitment. It is apparent that Americans across the country support restoring the America's Everglades the same way we have protected Yellowstone and the Grand Canyon. Foremost, we need to put Washington's financial commitment on the table. Congress should not delay in providing funding to match dollar for dollar Florida's commitment. Congress should also pass a stand-alone Everglades Bill, one that demonstrates your own dedication to this endeavor. And Congress should, in cooperation with the Administration and Florida, craft a project authorization that for the first time puts Florida and the Federal Government on equal footing.

With this commitment from Washington, our Federal, State and local governments will protect 68 federally endangered species that call America's Everglades home. We will recapture the 1.7 billion gallons of water that are now channeled out to sea and use it to help restore natural systems. And we will, in the tradition of Theodore Roosevelt, continue America's legacy of stewardship.

Mr. Chairman and members of the committee, let your own legacy be that of saving America's Everglades. All of the elements are in place. All that remains is your steadfast response. First through authorization, then through appropriation. We have done everything possible to make it easy for you to say yes. The State of Florida is now ready and willing to be your partner to restore America's Everglades.

Thank you Chairman Smith for your leadership.

ADDITIONAL STATEMENT SUBMITTED BY GOVERNOR JEB BUSH

FEDERAL RESOURCES AT RISK

The Central and Southern Florida Project was authorized by the U.S. Congress over 50 years ago to provide flood protection and fresh water to south Florida. The Federal project:

- Encompasses 18,000 square miles;
- Covers 16 counties; and
- Includes 1,000 miles of canals, 720 miles of levees, and almost 200 water control structures.

These alterations accomplished their intended purpose, but at tremendous ecological cost to America's Everglades.

There are numerous Federal trust resources now at risk in the south Florida ecosystem because of the construction of the Central and Southern Florida Project, including:

- Everglades National Park;
- Biscayne Bay National Park;
- Big Cypress National Preserve;
- Loxahatchee National Wildlife Refuge;
- Ten Thousand Islands National Wildlife Refuge;
- The Florida Panther National Wildlife Refuge; and
- Sixty-eight endangered or threatened plant and animal species listed by the U.S. Fish and Wildlife Service, including the Florida Panther and West Indian Manatee.

These Federal interests are threatened because alterations to the natural system have resulted in the following:

- A reduction of approximately 70 percent less water flowing into the Everglades today than during the 1800's;
- High nutrients entering the ecosystem from the watersheds to the north;
- A disruption of the timing and duration of water in the natural Everglades, Lake Okeechobee and coastal estuaries; and
- A reduction or elimination of habitat.

THE COMPREHENSIVE EVERGLADES RESTORATION PLAN

The Comprehensive Everglades Restoration Plan provides the framework for restoring and protecting America's treasure the Everglades. The Restoration Plan will restore the natural hydroperiod of the south Florida ecosystem, disrupted by the Central and Southern Florida Project, by addressing four fundamental issues: the quantity, quality, timing, and distribution of water.

The Restoration Plan now before Congress will result in the recovery of a healthy, sustainable Everglades ecosystem by restoring the major characteristics that defined the historic Everglades its large size and its interconnected water system. By removing many miles of levees and canals and capturing water currently funneled to sea, the Restoration Plan will reestablish the essential defining features of the historic Everglades over large portions of the remaining area.

The basic approach of the Restoration Plan is to capture 1.7 billion gallons of water per day that on average go to the ocean because of over-drainage by the Central and Southern Florida Project. The stored water will be used to the benefit of the natural system and other water-related needs of the regions. Some of the benefits are:

- Water will be stored in surface and underground storage areas until it is needed to supply the natural system as well as urban and agricultural needs.
- The timing and distribution of water to the ecosystem will be modified to more closely approximate pre-drainage patterns.
- Wetlands-based stormwater treatment areas will be built to improve the quality of water discharged into the natural system.
- Many miles of levees and canals will be removed to improve the connectivity of natural areas.

The Restoration Plan is remarkably sound. It balances environmental restoration, water supply, and flood control.

BENEFITS OF RESTORATION

Implementation of the Restoration Plan will:

- Improve the health of over 2.4 million acres of the south Florida ecosystem, including Everglades National Park and other federally and State managed lands;

- Improve the health of Lake Okeechobee;
- Virtually eliminate damaging fresh water releases to the estuaries;
- Improve water deliveries to Florida and Biscayne Bays;
- Improve water quality;
- Enhance water supply and maintain flood protection; and
- Provide enough water for the ecosystem and urban and agricultural users by the year 2050.

FLORIDA'S COMMITMENT TO THE EVERGLADES

The State of Florida's long-standing commitment to the Everglades dates back to 1947 when the State donated the majority of the lands to the Federal Government for what is now Everglades National Park. Since that initial donation, Florida has:

- Spent $3.3 billion on land, restoration, and protection activities in the south Florida ecosystem;
- Acquired almost 3.4 million acres of conservation land in the Everglades ecosystem;
- Donated nearly 43,000 acres of land to the National Park Service in the Everglades National Park expansion area;
- Acquired and contributed or leased to the Federal Government:
- 908,931 acres in Everglades National Park;
- 237,287 acres in the Big Cypress National Preserve;
- 144,842 acres in the Loxahatchee National Wildlife Refuge;
- 74,139 acres in Biscayne Bay National Park; and
- Acquired, for future transfer to the National Park Service, approximately 20 percent of the 146,117 acre Big Cypress National Preserve Expansion Area; and
- Established a 10-year funding plan that provides over $2 billion of State and local sources to fund Florida's share of Everglades restoration costs.

SUMMARY

In closing, the Restoration Plan has broad support from Federal, State, tribal and local governments, environmentalists, industry, public utilities, and the agriculture community. It is a comprehensive solution for ecosystem restoration, water supply, and flood control. The State of Florida is ready, willing and waiting to forge a new, complete partnership with the Federal Government to protect national interests by restoring America's Everglades.

RESPONSES BY GOVERNOR JEB BUSH TO ADDITIONAL QUESTIONS FROM SENATOR SMITH

Question 1. Can you please comment on the State's position regarding assurances language and what the State would alternatively propose as a mechanism to assure the natural system is the primary beneficiary of this plan?

Response. The Administration's proposed language deviates from the primary purposes of the Water Resources Development Act of 1996 and is not consistent with the assurances language in the Comprehensive Plan. The assurances language as proposed by the Administration's bill provides only for the natural system and precludes the other water-related needs of the region. The proposed language also fails to recognize that Florida water law provides full protection of natural systems through the establishment of minimum flows and levels and reservations. We believe that authorizing legislation should not undermine protective Florida water law. The State of Florida proposes language that clarifies the water for the natural system will be managed to meet the natural systems spatial and temporal needs, but does not limit dedication and management to just the natural system. The State's approach is to require the Project Implementation Reports (PIR) to identify new water made available from each project component for the natural system and other water uses and then implement water reservations for the natural system and allocations for other water uses in accordance with State law.

Question 2. Are you supportive of the project component that would take advanced treated wastewater and return it to the natural system?

Response. There are two project components that reclaim advanced treated wastewater for restoration purposes. The State of Florida is a leader nationally in the beneficial uses of reclaimed wastewater. However, any discharge of wastewater into surface waters will require advanced treatment and will be subject to rigorous regulatory requirements. The State will continue to work with the Army Corps of

Engineers to investigate other sources of water for natural system restoration, but we still consider reuse water a viable option for restoration purposes.

Question 3. Can you describe the Everglades funding measure that just passed the Florida State legislature?

Response. The Legislature established a 10 year funding plan that provides over $2 billion of State and local sources of funds for the Comprehensive Everglades Restoration Plan. The legislation also establishes a dedicated trust fund to invest funds for future peak funding years and to accrue interests that will be reinvested in the restoration effort. The Florida Legislature appropriated the first year contribution of $105 million. This is the first time a State has ever made such a commitment of this magnitude prior to Federal authorization.

Question 4. On March 2 and 3, the Governor's Commission for a Sustainable South Florida unanimously approved the version of the Plan that became the April 1999 Restudy. Ken Keck of Florida Citrus Mutual testified that the members of the Governor's Commission did not have a vote on the implementation of the Plan. This is contrary to what Section 10 of the Restudy says, as well as what the minutes of the meeting document. Can you clarify?

Response. The Governor's Commission for a Sustainable South Florida unanimously approved a report in support of the Implementation Plan and provided recommended assurances language to the Army Corps of Engineers with no dissenting votes (as documented by the Governor's Commission for a Sustainable South Florida meeting minutes dated March 3, 1999). Roll call votes were not taken during Governor's Commission for a Sustainable South Florida meetings. Instead, there was a call for dissenting votes.

Question 5. As you know, it is the non-Federal sponsor's responsibility to purchase land. What would the impact be on the land acquisition process in Florida if the Federal Government did not authorize the initial suite of ten projects this year?

Response. This is not a typical Water Resources Development Act project and we challenge the traditional Federal and non-Federal project responsibilities. The State of Florida seeks a true 50/50 partnership that would allow for the Federal Government to share in the cost of lands and correspondingly allow the non-Federal project sponsor share in the design and construction of project components. Having said that, the State of Florida has already acquired large areas needed and has a plan that ensures that the State of Florida and South Florida Water Management District will continue to buy land for restoration purposes in South Florida. However, in order to meet the timetables set forth in the implementation plan, the local sponsor is expected to purchase $750 million worth of land in the first 3 years alone. Without an authorized project, this puts the local sponsor at great financial risk to invest this sum of money with no guarantee that there will be any Federal participation.

Question 6. Are there other important reasons to move forward with authorization of this initial set of ten projects this year? Can you describe what the impacts of delay would mean for the ecosystem?

Response. Performance measures developed to determine the effectiveness of the Comprehensive Plan indicate that implementation will provide phenomenal restoration results. Most areas of the remaining natural system will have their natural hydroperiods restored. The coastal estuaries will be protected from the frequent catastrophic releases of excess freshwater that currently occur about every 3 years. If authorization is delayed, there is a high probability that catastrophic harm will continue to Lake Okeechobee, the coastal estuaries, and the Everglades Protection Area.

Question 7. Would you be supportive of a safeguard mechanism, perhaps comparable to the process Congress approved in the Water Resources Development Act of 1999 for the Challenge 21 program, which would allow these projects to be authorized, but give the Congress appropriate oversight?

Response. The appropriations process will exert the ultimate authority regarding the level of the Federal Government's participation in Everglades restoration. Our hope is the Federal Government will remain a full partner from the beginning to the end of the entire restoration process. From a practical perspective, Project Implementation Reports (PIR) approved by the Secretary of the Army prior to construction will be a useful way for Congress to track and assess progress. However, we are receptive to appropriate congressional oversight of Federal agency participation as long as it does not cause delays in implementation.

RESPONSES BY GOVERNOR JEB BUSH TO ADDITIONAL QUESTIONS FROM SENATOR CRAPO

Question 1. Does the State of Florida consider any part of the Comprehensive Everglades Restoration Plan as establishing new or additional Federal water rights or altering State water sovereignty? Does the State of Florida believe that the plan will result in increased Federal control of water in the State?

Response. The Comprehensive Plan does not establish new or additional water rights or alter State water sovereignty; however, the proposed Administration's bill would. The Administration's proposal is unacceptable to the State. We have provided alternative "assurances" language to committee staff that recognizes Florida water law, which provides protection of natural systems through the establishment of minimum flows and levels and reservations. We strongly believe that authorizing legislation should not undermine protective Florida water law. The State of Florida's approach is to require the Project Implementation Reports (PIR) to identify new water made available from each project component for the natural system and other water uses and then implement water reservations for the natural system and allocations for other water uses in accordance with State law.

Question 2. Should the State of Florida take the lead in coordinating and managing the plan to eliminate any potential conflicts or duplication of activities by State, Federal, local, and tribal authorities?

Response. The State seeks to be a full and equal partner in implementation of the plan and will continue to work with the Army Corps of Engineers to improve cooperative project implementation. In a business sense, the State of Florida welcomes the opportunity to serve as the managing partner in the implementation of the Comprehensive Plan.

Question 3. Can a restoration plan that does not infringe upon the agricultural community's future water allocation rights be successful? If yes, how can this be managed? If no, why not?

Response. Yes. The Federal legislation should require the Secretary of the Army to ensure that the implementation of the Comprehensive Everglades Restoration Plan, including physical or operational modifications to the Central and Southern Florida Project, will not interfere with existing legal water uses and will not adversely impact existing levels of service for flood protection or water use. The plan can be implemented in a way that provides assurances to existing users that their existing water supply will not be eliminated or transferred from existing legal sources of water supply, including those for agricultural water supply, water for Everglades National Park and the preservation of fish and wildlife, until new sources of water supply of comparable quantity and quality are available to replace the water to be lost from existing sources.

RESPONSES BY GOVERNOR JEB BUSH TO ADDITIONAL QUESTIONS FROM SENATOR GRAHAM

Question 1. Can you describe the impact to the Everglades and surrounding ecosystems if we move forward with this project?

Response. The performance measures demonstrate that essentially every part of the natural system from Lake Okeechobee to Florida Bay will show dramatic improvements. Conditions will be improved for the recovery of large wading bird populations. Populations of endangered species including the wood stork, snail kite, Cape Sable seaside sparrow, and American crocodile will benefit from the improved habitat as a result of the recommended plan. We also expect great improvements in water quality throughout the system.

Question 2. Can you describe the impact to the Everglades and surrounding ecosystems if we do not move forward with this project?

Response. If we do not move forward, the evaluation tools used in the Restudy indicate that virtually every part of the natural system will decline and be imperiled in the year 2050. Without Plan implementation, there will be widespread water shortages throughout the entire South Florida region causing negative effects on the economy of Florida and the Nation.

Question 3. Can you describe the Everglades funding bill, which you introduced and which passed the Florida legislature on Friday?

Response. The Florida Legislature established a 10 year funding plan that provides over $2 billion of State and local sources of funds for the Comprehensive Everglades Restoration Plan. The legislation also establishes a dedicated trust fund to invest funds for future peak funding years and to accrue interests that will be reinvested in the restoration effort. The Florida Legislature appropriated the first year

contribution of $105 million. This is the first time a State has ever made such a commitment of this magnitude prior to Federal authorization.

Question 4. How will the Lake Okeechobee legislation that passed the Florida legislature last week impact the water quality in the Lake?

Response. The Lake Okeechobee legislation commits the State to a long-term effort to construct new stormwater containment and treatment structures and to better control phosphorous at its source. The water containment and treatment structures are also project components of the Restudy. The legislation provides the State's funding for two of the treatment areas and provides a schedule for the construction of the remaining stormwater treatment areas. As the headwaters of the Everglades, the cleanup of Lake Okeechobee is critical to its restoration. This year's approved State budget includes $38 million for Lake Okeechobee restoration projects. Of the $38 million, $8 million are for acquiring lands to be used to construct Comprehensive Everglades Restoration Plan projects and will be credited to the local sponsor as part of the Federal match requirements.

Question 5. Can you elaborate on the State's plan for ensuring that the quantities of water generated by the Restudy meet water quality standards for their intended uses?

Response. The Department of Environmental Protection is an active member of the Comprehensive Everglades Restoration Plan Team. Our strategy from the beginning has been to actively participate on the implementation team and through this participation, demand the incorporation of water quality features into the design of each and every Restudy project component. We also stand committed to permit the construction and operation of the individual project components only if the Army Corps of Engineers and South Florida Water Management District can provide reasonable assurance that the structures will meet all water quality standards.

Question 6. Do you feel that the Administration's language accurately reflects the purpose of the Comprehensive Everglades Restoration Plan as set forth in WRDA 1996?

Response. The Administration's language dramatically deviates from the primary purposes of Water Resources Development Act of 1996. There was broad support for the Restudy because the primary purpose was to restore the natural system while meeting the other water related needs of the region including enhancing water supplies and flood control. The Federal draft language skews the purpose to restoration first and the other water related needs if possible. The State feels strongly that this is not an either/or scenario and the assurances language should reflect the consensus approach outlined in the Restudy. The Federal draft language provides only for the dedication and management of water for the natural system. The State language clarifies that the water for the natural system will be managed to meet the natural systems spatial and temporal needs, but does not limit dedication and management to just the natural system.

Question 7. What is the State's position on the Administration's assurances language?

Response. Assurances language by the Administration fails to recognize Florida water law that provides full protection of natural systems through the establishment of minimum flows and levels. Federal legislation should not undermine protective Florida water law. The Federal draft language provides only for the dedication and management of water for the natural system. The State prefers the consensus language that clarifies that the water for the natural system will be managed to meet the natural systems spatial and temporal needs, but does not limit dedication and management to just the natural system.

RESPONSES BY GOVERNOR JEB BUSH TO ADDITIONAL QUESTIONS FROM SENATOR MACK

Question 1. Do you support applying section 902 of the 1986 Water Resources Development Act to all features of the Comprehensive Plan before us today? [This provision requires a congressional review if a project exceeds 120 percent of authorized cost]

Response. Yes and we seek to find additional ways to control costs with shared incentives between the Army Corps of Engineers and the local sponsor.

Question 2. Do you support congressional committee review and approval of the feasibility level of engineering and design work before any construction can begin on the initial suite of ten projects in the Comprehensive Plan?

Response. A requirement to have the Project Implementation Reports (PIR) approved by the Secretary of the Army prior to construction will meet the State of

Florida's oversight needs. We believe the PIR process provides an efficient review that will keep the Congress informed. If Congress seeks an additional review and approval role prior to the participation of Federal agencies involved in the initial ten projects, our hope is it will not unnecessarily delay their participation in the restoration effort.

Question 3. Do you support requiring full feasibility studies before any other projects are authorized under the Comprehensive Plan?

Response. Yes. After authorization of the 10 initial projects, Project Implementation Reports (PIR) should be detailed and thorough enough to fulfill the requirements of a full feasibility study.

Question 4. Do you support modifying the definition of the South Florida Ecosystem to make clear the system includes the lands and waters within the boundaries of the South Florida Water Management District as they existed on July 1, 1999?

Response. Yes. This change will make clear the precise scope and boundaries of the Comprehensive Everglades Restoration Plan.

Question 5. Do your support a provision making clear the Corps of Engineers is only authorized to study the question about providing an additional 245,000 acre-feet of water to the natural system?

Response. We believe the adaptive assessment process will allow for future refinements to project components and we are committed to continue to work with the Army Corps an Department of Interior to find appropriate quantities of water for the natural system. We believe it is an error to assume the 245,000-acre feet of water identified in the Chief's Report is the appropriate quantity and source of water.

Question 6. Do you support language making clear that the Corps must work with the State of Florida to ensure all groundwater discharges resulting from the Comprehensive Plan meet all applicable water quality standards and water quality permitting requirements?

Response. Yes and the language should be expanded to authorize water quality features needed for the implementation of the project components.

Question 7. Do you support replacing the project purposes language stated in (c)(1) of the administration's draft with language restating the purpose of the Comprehensive Plan developed and passed in WRDA 1996?

Response. Yes. There was broad support and agreement to the purposes of WRDA 1996.

Question 8. Do you support additional programmatic authority for the Corps to construct projects of limited cost but are in keeping with the Plan's purposes and have independent and substantial benefit to Everglades restoration?

Response. Yes. Additional programmatic authority will allow the South Florida Water Management District, who possess an unusual amount of technical expertise not usually found in Corps project sponsors, to expedite the planning, engineering and design phase of work for many project components.

Question 9. Do you support a 50/50 cost share between the Federal Government and the State of Florida on operation and maintenance of the project? If not, please state the cost share you believe to be appropriate and why.

Response. Yes. The high degree of benefits to Federal trust resources dictates a 50/50 cost share of operation and maintenance. The project benefits Federal trust resources such as Loxahatchee National Wildlife Refuge, Big Cypress National Preserve, Ten Thousand Islands National Wildlife Refuge, Florida Panther National Wildlife Refuge and Everglades National Park and many federally listed protected species are well documented.

Question 10. Please provide your thoughts on the definition of Project Implementation Reports found in the Administration's language. Do you support this definition? If not, please provide suggestions as to how you would define these reports.

Response. The Administration's language narrows the focus and requirements of a Project Implementation Report. We support the language that was contained in the April 1999 Final Feasibility Report. Additionally, language should be added clearly stating that the PIR will identify new water from each project component that will be made available for reservations and allocations under State law.

Question 11. Do you believe the Department of Interior and the State of Florida should be on equal footing in developing any regulations related to assurances? If not, why?

Response. We do think that new regulations related to assurances are not necessary or appropriate. The plan to require the Project Implementation Reports (PIR) to identify new water made available from each project component for the natural

system and other water uses and then implement water reservations for the natural system and allocations for other water uses in accordance with State law will accomplish assurances in a way that does not require new Federal regulations.

Question 12. Do you support the reporting requirement in the administration's bill? If not, how would you amend the reporting requirements?

Response. The reports should be subject to concurrence from the Governor of the State of Florida.

RESPONSES BY GOVERNOR JEB BUSH TO ADDITIONAL QUESTIONS FROM SENATOR VOINOVICH

Question 1. My question is that in view of the fact that during the 1990's the Corps construction appropriation has only averaged $1.6 billion and there are many worthy projects nationally competing for these dollars, how will the Federal share of this work be funded and still meet other national needs? Stated another way, is Florida willing to give up its other Corps Federal funding for beaches, harbors and flood control in order to have the Federal funds to restore the Everglades? If not, what is the solution?

Response. The quality of the Florida projects for beach renourishment, flood protection and harbors stand on their own merit. We will continue to seek Federal funding for these projects where appropriate.

The restoration of America's Everglades is an urgent national priority. A review of historically authorized Corps projects around the country reveals a long list of projects never constructed and no longer needed. A formal review with de-authorization of no longer needed projects may significantly reduce the so-called current backlog.

Question 2. If sufficient Federal appropriations are not forthcoming is it the State of Florida's intention to use State funds to make up the shortfall and then seek Federal appropriations to reimburse the State for the Federal share or stated another way, does the State intend to pursue a set schedule for Everglades restoration regardless of the Federal appropriations and then seek reimbursement? If the implementation of Comprehensive Plan is accomplished largely by the State of Florida with reimbursement of the Federal share, would the State be willing to incur a larger than 50 percent share of the project costs or, stated another way, take less than a full reimbursement?

Response. The State of Florida has already accepted the premise that it will receive less than full reimbursement for this project. Most Water Resource Development Act projects are funded at a 70 to 80 percent Federal contribution. Florida has already committed to a full 50 percent share. This is particularly remarkable since there are more Federal interests affected by Everglades restoration than any other Corps project around the country. The State of Florida expects the Federal Government to meet its minimum 50 percent share as a full and equal partner in implementing the Comprehensive Everglades Restoration Plan.

STATEMENT OF PATRICIA POWER, SEMINOLE TRIBE OF FLORIDA

Introduction

The Seminole Tribe welcomes the opportunity to share our views on the Water Resources and Development Act of 2000 legislation, S. 2437, with the Environment and Public Works Committee. As you know, we participated in the committee's Naples field hearing on the Comprehensive Everglades Restoration Plan (CERP) and provided our general comments on Everglades Restoration and the Federal Government's plan to achieve restoration of a healthy Everglades through a balanced approach. While the Tribe is a strong supporter of the CERP, we oppose the approach proposed by the Administration, as embodied in S. 2437.

The Seminole Tribe of Florida has been an active participant in the multi-faceted efforts to restore the South Florida Ecosystem. As such, we have seen the value of our participation to the Tribe in being able to educate policymakers about the Tribe's concerns and needs. We have also found value in working with other stakeholders to formulate and refine policy positions. The Tribe applauds the committee's approach to developing its legislation by listening to the input of the stakeholders in Florida, as well as the Federal policy makers. A program developed though consensus will earn the support of South Florida and have an improved prospect for successful restoration of the natural system and stability in flood control and water supply for South Floridians.

This testimony describes the Tribe's concerns with S. 2437 and offers alternative approaches to addressing the needs of the South Florida Ecosystem and the people

that populate it. Our general statements on the CERP still hold and can be applied to an analysis of S. 2437. The Seminole Tribe believes the restoration should seek to provide a healthy future for people of Florida, as well as for the natural environment, including the Everglades, that draws so many more people to visit and move to South Florida. A balanced approach is critical to success of the restoration effort.

The Seminole Tribe of Florida

The Seminole Tribe lives in the South Florida ecosystem. The Tribe relies on all aspects of a healthy ecosystem, including the Everglades, which provide many of our tribal members with their livelihood. Our traditional Seminole cultural, religious, and recreational activities, as well as commercial endeavors, are dependent on a healthy South Florida ecosystem. In fact, the Tribe's identity is so closely linked to the land that Tribal members believe that if the land dies, so will the Tribe. During the Seminole Wars of the 19th Century, the Tribe found protection in the hostile Everglades and Big Cypress Swamp. But for this harsh environment filled with sawgrass and alligators, the Seminole Tribe of Florida would not exist today. Once in the Everglades and Big Cypress, tribal members learned how to use the natural system for support without doing harm to the environment that sustained them. For example, the Seminole native dwelling, the chickee, is made of cypress logs and palmetto fronds. It protects its inhabitants from sun and rain, while allowing maximum circulation for cooling. When a chickee has outlived its useful life, the cypress and palmetto return to the earth to nourish the soil.

In response to social challenges within the Tribe, tribal leaders looked to the tribal elders for guidance. Our elders taught us to look to the land, for when the land was ill, the Tribe would soon be ill as well. When we looked at the land, we saw the Everglades and supporting ecosystem in decline. We recognized that we had to help mitigate the impacts of man on this natural system. At the same time, we acknowledged that this land must sustain our people, and thereby our culture. The clear message we heard from our elders and the land was that we must design a way of life to preserve the land and the Tribe. Tribal members must be able to work and sustain themselves. We need to protect our tribal farmers and ranchers.

Seminole Everglades Restoration Projects

Recognizing the needs of our land and our people, the Tribe has developed a plan to mitigate the harm to the land and water systems within our Reservations while ensuring a sustainable future for the Seminole Tribe of Florida. The Big Cypress Reservation is the first of our Reservations for which this plan has been implemented. The Tribe is in the early stages of developing a plan with similar goals on the Brighton Reservation.

On Big Cypress, the restoration plan will allow Tribal members to continue ongoing farming and ranching activities while improving water quality and restoring natural hydroperiod to large portions of the native lands on the Reservation and ultimately, positively affecting the Big Cypress National Preserve and Everglades National Park. Construction activities on the western side of the Reservation have been identified as a "Critical Project" under section 528 of WRDA 1996. The Tribe is working closely with the NRCS to identify appropriate programs to complete construction of the project on the eastern side of the reservation. Two Wetland Reserve Projects are currently underway.

The Seminole Tribe is committed to improving water quality and flows on Big Cypress and has expressed that commitment by dedicating significant financial resources to our environmental programs and projects, as well as estimates of 9,000 acres of land to support the projects on Big Cypress alone.

General Comments on S. 2437

The Tribe's greatest concern about Section 3 of S. 2437 is that it lacks the balance necessary for successful implementation. The environmental crisis in South Florida was brought about by the Central & Southern Florida Project so efficiently achieving its congressionally mandated goals of providing flood protection and water supply to the farms and families of Florida, without fully appreciating the resulting impacts on the natural system. As the damage to the natural environment became evident, all entities began to recognize the interdependence of the natural system and the "built" environment. Congress, in directing the Corps of Engineers to complete the Comprehensive Plan, described its purposes as protecting water quality and reducing loss of fresh water from the Everglades. Congress also noted that the Comprehensive Plan "provide for the water-related needs of the region, including flood control, the enhancement of water supplies, and other objectives served by the Central & Southern Florida Project." (See Section 528(b)(1)(A)(i) of WRDA 1996.) The Restudy, as developed with input from a wide array of stakeholders, recognized the importance of addressing water needs in a balanced approach. Section 3 of S.

2437 abandoned the balanced approach and reverts to the myopic direction of the half-century old project authorization by stating that the purpose of the CERP and the historic Central & Southern Florida project is for the protection of the natural system. We urge the committee to take a balanced approach to Section 3 by providing protection to the natural systems, the people, and the agricultural communities that share the South Florida Ecosystem.

The Tribe also has serious concerns about Section 3(i) regarding assuring of project benefits. More detailed comments regarding this section are provided below; however, our concerns are significant enough to list twice. The Tribe's water law is based upon a Water Rights Compact, codified in tribal, State, and Federal law, the implementation of which is based on Florida State water law. The approach contemplated in Section 3 (i) attempting to federalize the water allocation decisions blatantly disregards the existing body of Florida water law. With Florida's water law thrown into disarray by this approach, the Tribe's Water Compact is jeopardized. The Tribe has proposed an alternative approach to Section 3 (i), and the Tribe also supports the approach taken in the recently passed Florida Everglades legislation.

Shared adversity is a guiding principle of the Tribe's approach to water rights. Shared adversity is the principle upon which the Water Rights Compact is based, and support for including shared adversity was one of the Tribe's consistent comments throughout the development of the Restudy. While S. 2437 acknowledges that the rights of existing users should be preserved, S. 2437 does not define existing user. Limiting existing user or existing use to the water being used today fails to take into account long-term permitted rights to water that may not be presently used. In comments on the Lower East Coast Regional Water Supply Plan, the National Park Service defined existing use as that amount of water being used on April 13, 2000, or on the day the Plan is to be adopted. That interpretation, we believe, would lead to a moratorium on water use in excess of that used on April 13 or the adoption date. A moratorium would apply to permitted, but not currently used existing use, as well as future new users. The Tribe's economic development has been such that the Tribe is not yet using its all its water entitlement. The inability to use its water rights would stunt the Tribe's economic development. We urge the committee to ensure that S. 2437 incorporates the concept of shared adversity and clearly define "existing use" to prevent a water use moratorium in South Florida.

Specific Comments and Recommendations on S. 2437

Assuring Project Benefits

Upon review of Section 3(i) of S. 2437, it was immediately clear that the assuring project benefits language was problematic. The bill would require that Federal regulations direct how all Central & Southern Florida project features (essentially all Corps of Engineers (COE) projects in South Florida) would contribute water to the "natural system." The bill requires the Federal agencies to "consult" with the State. The Tribes are not addressed.

There are numerous, complex issues related to allocating any additional water that projects built pursuant to the Restudy recommendations brings to the South Florida ecosystem. In fact, resolution of all issues to the satisfaction of all stakeholders is impossible to reach in the time period that exists to produce a WRDA 2000 bill. S. 2437 creates the regulatory structure of programmatic regulations produced in 2 years, to be followed by project specific regulations as needed. The main problem with this approach is that it bestows on the Corps of Engineers (COE) and the Department of Interior (DOI) the sole decision making authority regarding how much water the "natural system" should receive from all COE projects. While S. 2437 requires consultation, it ignores established Florida water law and limits the potential role the Tribe should play in making decisions on future water rights.

Furthermore, the assurances language appears to attempt to alter the purpose of the original authorization of the Central & Southern Florida Project, as defined in previous Acts of Congress since Section 203 of the Flood Control Act of 1948. In the section entitled, "Dedication and Management of Water," the COE is required to dedicate and manage all water "made available" from all C&SF project features, built under all prior authority and WRDA 2000, "for the temporal and spatial needs of the natural system." Absent from this requirement is, of course, the flood control and water supply needs of the people of South Florida in both agricultural and developed areas.

Given that S. 2437 was drafted by the COE and DOI, leaving the final decisions on the allocation of any of South Florida's water uses to the COE and DOI appears to leave all but the natural system under-represented. This approach seems to guarantee that the real decisions will be made in court. Litigating water rights is an expensive and time consuming process that will only serve to delay and increase the cost of an already expensive, long-term project that the people of South Florida need

now. In addition, the confusion likely to result from litigation would delay the Tribe's ability to realize fully its water rights under the Compact.

The recently passed State legislation is significantly different from this Federal proposal. Differing Federal and State law on water assurances guarantees conflicts and delays as well. This issue is of particular importance to the Tribe because the Tribe's Water Rights Compact is based on the functionality of the State system. The proposed legislation will throw the State's water allocation system into turmoil because it does not mesh with the regulatory structure created by the 1972 Florida Water Resources Act (FL Stat. Chapter 373).

As a result of the Tribe's concerns, we offer the following proposal which was designed to eliminate, or at least reduce, these concerns:

The objective of the process to develop a water supply and flood control allocation policy in South Florida is to develop a consensus on water assurances that can be the basis of consistent Federal, State, and tribal law.

The Task Force shall prepare a report and recommendations to Congress, the Florida Legislature, and the Seminole and Miccosukee Tribal Councils regarding the dedication and management of the water made available from project features authorized pursuant to the Comprehensive Everglades Restoration Plan. Included in the report and recommendations shall be a legislative proposal that can be adopted in identical form by the Congress, the Florida Legislature, and the Seminole and Miccosukee Tribal Councils.

The Task Force shall seek public comment in the formulation and final presentation of this report and recommendations. The Task Force shall operate under the consensus provisions, as described in its Working Group's Charter. This report shall be presented to Congress, the Florida Legislature, and the Tribal Councils within 2 years of enactment of WRDA 2000.

Upon receipt of the report and recommendations, the Congress shall enact authorizing legislation in coordination with the Florida Legislature and the Seminole and Miccosukee Tribal Councils.

This proposal also would eliminate opportunities for confusion, and ultimately litigation, by requiring that the enacting legislation be identical. Finally, this proposal would give all people of South Florida a greater role in the water allocation decisions, which would build greater support for the projects over time and help to ensure construction and operation of all the Restudy project features.

A provision similar to this will need to be adopted in State and tribal law, as well. The Federal law cannot require the State and the tribes to legislate. The State and tribal provisions should also direct the State and tribal Task Force members to prepare a report and recommendations through a consensus process.

Alternatively, the Tribe has reviewed the Everglades Restoration and Funding legislation (HB 221) recently passed by the Florida Legislature. Given that the State legislation relies upon established State water law, including the Tribe's Water Rights Compact, to determine the allocation of new water benefits created by CERP project features, the Tribe would support incorporating this approach into Federal law. Again, it has been the Tribe's experience over the 13 years that the Water Rights Compact has been in place that consistency among Federal, State, and tribal law contributes to the elimination of legally actionable conflicts.

Other Comments

The following provides detailed comments on Sections 3, 6, and 12, in the order in which the provisions appear.

Definitions (Section 3(a)). The definition of "Comprehensive Everglades Restoration Plan" includes the controversial Chief's Report. The Chief's Report is not a consensus document agreed upon by members of the South Florida Restoration Task Force and will undoubtedly meet with opposition to implementation. The definition of "Natural System" should be clarified to specifically exclude tribal lands.

Findings (Section 3(b)). The Tribe supports inclusion of the principles of adaptive assessment in the implementation of the CERP project features, as referred to in (b)(5). Also, the tribes should be included as local sponsors along with the State in Section 3(b)(7). The tribes and the State are not treated as equal partners throughout the draft legislation although they are each separate sovereigns.

Comprehensive Everglades Restoration Project (Section 3(c)). The Tribe specifically supports the pilot project defined in Section 3(c)(2)(c)(5), due to the potential flood control benefits for the Hollywood reservation.

Additional Program Authority (Section 3(d). The Tribe supports the use of the COE's use of program authority to speed the implementation of crucial project features. The authority provided by this section is similar to the critical projects authority provided in Section 528 (b) of WRDA 1996. The Tribe has worked closely with our Federal and State partners to authorize the Tribe's Big Cypress critical

project under the WRDA 1996 authority. The critical project authority provided by Congress in 1996 has allowed the Tribe to expedite this project and ultimately will bring the Tribe and the region restoration benefits years earlier than otherwise contemplated under the standard project authorization process. In addition, we anticipate that both the Tribe and the Federal budgets will appreciate savings as a result of the abbreviated process. As a result of our experience, we endorse this expansion of that authority and recommend that Congress provide more guidance regarding the process for project criteria and project selection.

Cost Sharing (Section 3(f)). There needs to be a distinction for O&M purposes between which features are authorized under this Act and which features are part of the original CS&F Program for cost share purposes. This confusion results because the legislation references the CS&F project. In addition, the Tribe recommends that the Critical Projects authorized by WRDA 1996 be subject to the 60/40 cost share for operations and maintenance. The critical projects, by definition, were so crucial to ecosystem restoration that the projects needed to be initiated prior to this bill. Project priority, as well as equity, require that the critical projects be afforded the same O&M cost share as all CERP projects.

Evaluation of Project Features (Section 3(g)). The Tribe should not merely be "coordinated with" on the development of Project Implementation Reports (PIR) for the project features, particularly regarding the availability of additional water. The Tribe should consistently be part of the decision making process at a minimum on the same level as the State. Thus, the Tribe should have sign off authority on all PIR's.

Also, Section (g)(2) addressing project justification must be clarified regarding how to analyze project benefits where one project feature has both water supply and water quality benefits. We understand that segregating such benefits would be difficult.

Socially and Economically Disadvantaged Individuals (Section 3(h)). The full citation for the reference in 3(h)(2)(B) is 15 U.S.C. 637(d)(3)(c).

Assuring Project Benefits (Section (3)(i)). The definitions of "substantial adverse impacts" and "existing legal water uses" need to be developed in Sec. (3)(i)(3). As discussed above, the term "existing legal water users" can have a number of different interpretations with wide-ranging impacts. On April 13, 2000, in comments provided to the South Florida Water Management District on the Lower East Coast Regional Water Supply Plan, DOI, through the National Park Service, recommended that:

"[E]xisting legal use" and existing legal user" refer to the quantity of water currently withdrawn and put to a reasonable-beneficial use under a statutory exemption or under terms of a valid water use permit. Any future use in excess of the quantity currently being withdrawn or pursuant to a new or renewed water use permit is not an "existing legal use." New permits for additional withdrawal shall not be issued until water reservations for the natural system are in place. The period for defining existing legal users should be defined as April 13, 2000 or the date when the LEC plan is adopted by the SFWMD Governing Board.

The above definition, as put forth by DOI, who has concurrence authority on the programmatic and project-specific regulations to make allocation decisions, would effectively place a moratorium on water use in South Florida. When permitted but not currently used water would be available after the water reservations for the natural system is highly uncertain. This approach threatens the vested rights the Tribe has to use water in the future under the Compact. This definition would effectively render State permits already issued for future consumptive use void. It is also inconsistent with the Tribe's water allocation rights set forth under the Compact.

Tribal Partnership Program (Section 6). A section should be added stating that this is supplemental authorization of funding for tribal water resource development projects. This section should not affect the ability to obtain funding for these project types under other legislative acts. Also, the $5,000,000/$1,000,000 limitation in Sec. 6(e) is too low and should be raised.

Reburial and Transfer Authority (Section 12). As a general principle, the Tribe believes that tribal remains should be treated with the utmost respect. The Tribe is not affected specifically by this section.

Conclusion

Thank you for the opportunity to share the views of the Seminole Tribe of Florida with the committee. While the Tribe is a strong supporter of the restoration of the South Florida Ecosystem, we will continue to be vigilant in our review of its implementation. We look forward to a continued partnership on a government-to-government basis in the challenging effort to save our Everglades.

RESPONSES BY PATRICIA POWER TO ADDITIONAL QUESTIONS FROM SENATOR SMITH

Question 1. Why is it important to move forward with authorization of this initial set of ten projects this year? Can you describe what the impacts of delay would mean for the ecosystem?

Response. The Seminole Tribe has not taken a firm position on the authorization of the initial set of ten projects. We presume that the committee seeks justification for authorization without completion of a feasibility study, and we support the committee's careful oversight. We believe that sufficient cause for going forward can exist, and offer that some middle ground approach, authorization contingent upon a specified Corps action for example, may address the concerns expressed by some stakeholders.

However, the Tribe strongly supports the authorization of the eleventh item in the list of initial authorizations, which is the Adaptive Assessment and Monitoring Program. The Tribe has consistently noted that the Restudy analysis rests on assumptions and computer modeling, of which most of the Tribe's lands lie on the perimeter. While the Tribe's hydrological review has provided a basis of the Tribe's general support for the Restudy components, our comments have always been tempered by our inability to fully assess the impact of project features because our lands are either at the edges or outside of the computer models. In addition, nature can prove the assumptions and models wrong and it is critical that project implementation be continuously monitored and assessed for the purpose of making corrections promptly, if needed.

Finally, the Tribe also supports the inclusion of programmatic authorization for smaller project features that produce independent and substantial restoration, preservation, or protection benefits to the South Florida ecosystem. The Tribe signed a project coordination agreement with the Corps of Engineers last January, which authorized the Tribe's Big Cypress Reservation critical project. Critical project authorization is similar to the programmatic authorization contemplated in Section (3)(e). It has been our experience, to date, that programmatic authorization works to expedite critical restoration projects, resulting in efficient delivery of project benefits.

In addition, we recommend that the committee consider incorporating report language that discusses the process of selecting the projects to be authorized under this authority. WRDA 1996 designated the criteria that each critical project should meet, but was silent on the selection/prioritization process for the critical projects. An effective, consensus based process was initiated by the Corps, in open cooperation with other Federal agencies, and tribal, State, and local government participants in the Task Force, Working Group, and Governor's Commission. Business interests, along with agricultural and non-governmental organizations, were represented on the Governor's Commission and participated actively in the Task Force's and Working Group's evaluation and ranking. While not every interest got all that they were supporting, the inclusiveness and openness of the process validated the outcome and built broad, general support for the final outcome. A similar process should be required for the programmatic authority projects. We would be happy to provide appropriate language at your request.

Question 2. Please describe the "assurances language" contained in the State's recently passed measure and what the Seminole Tribe's position is on this language.

Response. The Everglades Restoration Investment Act [CS/CS/H221] amended the Florida Water Code (Chapter 373, FL Stat.) by adding section 373.470. Section 373.470(3)(c) provides that prior to executing a project coordination agreement (PCA) with the Corps of Engineers, the South Florida Water Management District (SFWMD) shall complete a project implementation report (PIR) (as defined in the Implementation Plan of the Restudy). The PIR is to identify increased water supply resulting from the construction and operation of the CERP component. Any additional water supply identified by the PIR will be allocated or reserved by the SFWMD under Chapter 373, the Florida Water Code.

The Seminole Tribe supports this Florida law because it maintains the functionality of existing Florida water law, upon which the Tribe's Water Rights Compact is based. In addition, this approach is consistent with the consensus Restudy document supported by the Tribe last year. The PIR process as described in the Restudy's Implementation Plan provides for broad participation in the evaluation of project components. Furthermore, requiring the SFWMD to allocate or reserve the benefits created by the new project component according to State law is consistent with the process currently implemented by the Corps.

RESPONSES BY PATRICIA POWER TO ADDITIONAL QUESTIONS FROM SENATOR GRAHAM

Question 1. What will the impact be to the Seminole Tribe of Florida if we do not move forward with this plan?

Response. Failure to enact authorizing legislation will reinforce the perception of many stakeholders in South Florida that the Federal Government is not supporting its share of the partnership to restore the South Florida ecosystem. The State has enacted the Everglades Restoration Investment Act to supplement its ongoing restoration and land acquisition programs. The Seminole Tribe is implementing its Everglades Restoration Initiative through its own and Corps of Engineers and Natural Resources Conservation Service programs. Local governments are taking independent actions. All of this activity will go forward regardless of Federal action. Without Federal action, however, the projects will proceed at a slower pace and restoration will occur at a slower pace. Slowing the pace of restoration activities may cause irreparable harm to parts of the ecosystem.

Question 2. Can you describe the impact if we do move forward with the Restudy?

Response. Authorizing the framework of the Restudy is critical to maintaining the public support necessary for a public works project of this size and scope. Authorizing the consensus based Restudy as a framework for future project authorizations will provide the predictability for all parties to continue planning, design, engineering, and construction activities necessary to set a pace to ensure ecosystem restoration.

Question 3. Do you feel that the Administration's language accurately reflects the purpose of the Comprehensive Everglades Restoration Plan as set forth by Congress in WRDA 1996?

Response. No. Although we understand that the Administration did not intend to move away from the WRDA 1996 purpose of the Comprehensive Everglades Restoration Plan (CERP), the Tribe reads the language of S. 2437 to shift the purpose of the project components of the CERP, and all previously authorized Central & Southern Florida project components, to be for the protection of the natural system. Balance in purpose and participation is crucial to the success of the CERP. The Tribe strongly supports maintaining the legislative purposes of the CERP as described in WRDA 1996.

Question 4. What is your position on the Administration's assurances language? What are the key elements that this language must contain to accommodate the Seminole Tribe's needs?

Response. The Tribe is opposed to the Administration's assurances language because it abandons the balance in the CERP project purposes as outlined in WRDA 1996, Federalizes Florida water law, and places a priority on water use for the natural system above all other water uses, thereby abandoning shared adversity. If the natural system is provided with its assurances in a process apart from the consideration of the needs of all other stakeholders, then the process is inequitable and flawed.

The Tribe requires that Federal assurance language work consistently (or at the least not conflict) with State water law and the Tribe's Water Rights Compact, that all water uses, including those of the natural system, be balanced among each other, and that the Tribe be given a role to meaningfully participate in the assurances decisions. State law provides that when water is set aside for the environment, the water management district must also prepare a recovery or prevention strategy to ensure that environmental water supplies are restored or maintained. A critical element of the recovery or prevention strategy is a timetable which provides a mechanism to accomplish environmental objectives while analyzing and minimizing the effects of meeting such objectives on all other stakeholders. State law also provides that the recovery or prevention strategy include water resource development projects such as CERP to increase the available supply for both human natural uses. Thus State law provides an objective approach for establishing scientifically based environmental water needs, and a practical and balanced implementation strategy that takes all uses, human and natural into account.

Question 5. Can you describe the existing Tribal Water Compact, in terms and conditions, and how it deals with water requirements for the natural system if at all? In particular, can you elaborate on the role of State law in execution of the Tribal Water Compact?

Response. The Seminole Tribe's Water Rights Compact provides for a process for the Tribe and the State, through the South Florida Water Management District (SFWMD), to resolve water supply and flood protection issues, on a government-to-government basis. The Compact provides procedures for the Tribe and State to agree on the amount of surface water to which the Tribe is entitled. The Tribe does

not get permits from the SFWMD; however, the Tribe works closely with the SFWMD on its land and water use issues through a work planning process.

The Compact does not address water quantity requirements of the natural system directly. However, protection of the natural system is inherent in the implementation of the Compact. Through the Compact, the Tribe has a role in the process to determine the availability of water not otherwise dedicated to existing uses and the allocation of such available water. When the allocation of water needed for environmental benefits needs to be adjusted, the Tribe is consulted and contributes to the decisionmaking process.

The Tribe's Compact depends on the State water code's determination of all stakeholders' water use. Although the Compact provides for entitlements for the Tribe's water supply and flood protection, any amendments to that entitlement is determined on the basis of availability, which is determined by the effects of supply by the demands of other water users. In other words, under the Compact, the Tribe must compete with other users for water supply and flood protection. If Federal law supersedes State law, and the natural system is provided with all of its demands (as determined by whom?), State water law would then be applied to allocate and reserve the balance. With what we assume to be a smaller amount of water, the Tribe's ability to compete for water will be negatively affected.

Our review of the CERP projects indicated that none of the CERP projects would increase water supply on any of the Seminole Tribe's reservations for either human or environmental use. Any water allocation or reservation dedicated to the environment near a reservation will inevitably reduce the Tribe's ability to compete for water supply. Therefore, merely providing "hold harmless" language in WRDA would not protect the Tribe's rights under the Compact.

Finally, a Compact-like device forged among the Federal, State, and tribal governments may provide an appropriate mechanism to address the needs of the natural system in the South Florida ecosystem, while assuring existing users a role in the allocation and reservation of water.

RESPONSES BY PATRICIA POWER TO ADDITIONAL QUESTIONS FROM SENATOR MACK

Question 1. Do you support applying section 902 of the 1986 Water Resources Development Act to all features of the Comprehensive Plan before us today? [This provision requires a congressional review if a project exceeds 120 percent of authorized cost.]

Response. The projects authorized pursuant to the Comprehensive Everglades Restoration Plan (CERP) through the standard congressional authorization process should not be treated any differently than any other congressionally authorized Corps of Engineers projects. If incorporating a congressional review of cost overruns will delay project implementation, then the Tribe would oppose the review. One exception may be that if the adaptive management process triggers a project revision sufficient enough to cause an excess of 120 percent of authorized cost, then congressional review may be appropriate. The Tribe strongly supports adaptive management and would be interested in addressing the concerns of those stakeholders and Senators worried about the effect applying adaptive management may have on total project cost.

Question 2. Do you support congressional committee review and approval of the feasibility level of engineering and design work before any construction can begin on the initial suite of ten projects in the Comprehensive Plan?

Response. The Seminole Tribe has not taken a firm position on the authorization of the initial set of ten projects. We presume that the committee seeks justification for authorization without completion of a feasibility study, and we support the committee's careful oversight. We believe that sufficient cause for going forward can exist, and offer that some middle ground approach, authorization contingent upon a specified Corps action for example, may address the concerns expressed by some stakeholders.

Question 3. Do you support requiring full feasibility studies before any other projects are authorized under the Comprehensive Plan?

Response. Yes, with the following two exceptions. The Tribe strongly supports the authorization of the eleventh item in the list of initial authorizations, which is the Adaptive Assessment and Monitoring Program, without feasibility review. The Tribe has consistently noted that the Restudy analysis rests on assumptions and computer modeling, of which most of the Tribe's lands lie on the perimeter. While the Tribe's hydrological review has provided a basis of the Tribe's general support for the Restudy components, our comments have always been tempered by our inability to

fully assess the impact of project features because our lands are either at the edges or outside of the computer models. In addition, nature can prove the assumptions and models wrong and it is critical that project implementation be continuously monitored and assessed for the purpose of making corrections promptly, if needed.

The Tribe also supports the inclusion of programmatic authorization for smaller project features that produce independent and substantial restoration, preservation, or protection benefits to the South Florida ecosystem. The Tribe signed a project coordination agreement with the Corps of Engineers last January, which authorized the Tribe's Big Cypress Reservation critical project. Critical project authorization is similar to the programmatic authorization contemplated in Section (3)(e). It has been our experience, to date, that programmatic authorization works to expedite critical restoration projects, resulting in efficiently delivering project benefits. We recommend that the committee consider incorporating report language that discusses the process of selecting the projects to be authorized under this authority.

Question 4. Do you support modifying the definition of the South Florida Ecosystem to make clear the system includes the lands and waters within the boundaries of the South Florida Water Management District as they existed on July 1, 1999?

Response. Yes, because such a definition provides consistency with the Restudy and the CERP.

Question 5. Do you support a provision making clear the Corps of Engineers is only authorized to study the question about providing an additional 245,000 acre-feet of water to the natural system?

Response. Yes. Delivering an additional 245,000 acre-feet of water to Everglades National Park was not part of the consensus-built Restudy sent to Washington in April 1999. The full implications of changing the Restudy model must be studied before authorizing additional dedicated water deliveries.

Question 6. Do you support language making clear that the Corps must work with the State of Florida to ensure all groundwater discharges resulting from the Comprehensive Plan meet all applicable water quality standards and water quality permitting requirements?

Response. This is a complicated question. The Tribe supports the protection of all water, including the drinking water supplies from groundwater. The Tribe supports regulations to protect groundwater, but the Tribe is concerned that existing regulations not designed to address ASR water quality issues may prevent the use of ASR.

Fortunately, technology, primarily reverse osmosis, provides a reliable and affordable treatment system for drinking water supplied by groundwater. This technology makes groundwater previously not potable, available to drinking water systems. When water is pumped out of an aquifer for surface use, the aquifer must be recharged to maintain its quality. Basically, the water quality of the aquifer degrades in relation to the reduction of the water quantity.

Unfortunately, Federal regulations applicable to groundwater available for drinking water, written many years ago, have not kept pace with technology. Groundwater regulations were written to protect actual or potential drinking water sources from toxic contamination; ASR contemplates the injection of storm water, not hazardous waste. The regulations provide that water discharged to groundwater meet drinking water standards. It is expensive to treat water to meet drinking water standards. To avoid the cost, aquifers are not recharged. When the groundwater is not recharged, groundwater quantity and quality degrade. Because the existing regulations discourage aquifer recharge, we do not support the application of existing regulations to groundwater discharges for the CERP projects.

The water storage components of the CERP are heavily dependent on Aquifer Storage and Recovery (ASR) projects, and the success of the CERP is dependent on increased storage. It is critical that the ASR project incorporate water quality elements and that the water quality requirements reflect current technology.

Question 7. Do you support replacing the project purposes language stated in (c)(1) of the administration's draft with language restating the purpose of the Comprehensive Plan developed and passed in WRDA 1996?

Response. Yes. The WRDA 1996 language incorporated a balanced, consensus-based approach to the purpose of the CERP projects.

Question 8. Do you support additional programmatic authority for the Corps to construct projects of limited cost but are keeping with the Plan's purposes and have independent and substantial benefit to Everglades restoration?

Response. As stated in our answer to question 3, the Tribe supports additional programmatic authority.

Question 9. Do you support a 50/50 cost share between the Federal Government and the State of Florida on operation and maintenance of the project? If not, please state the cost share you believe appropriate and why.

Response. Yes. A 50/50 cost share for operations and maintenance mirrors the cost share for design and construction for CERP projects. Given the extent of the benefits delivered to Federal lands (the natural system) from CERP project features, cost sharing operations and maintenance is equitable and appropriate.

In addition, the WRDA 2000 legislation should apply the 50/50 cost share for operations and maintenance retroactively to the critical projects authorized by WRDA 1996. The critical projects were selected through a broad-based consensus process as so crucial to ecosystem restoration that the projects needed.

STATEMENT OF DEXTER LEHTINEN, GENERAL COUNSEL, MICCOSUKEE TRIBE OF FLORIDA

EVERGLADES RESTORATION AND WRDA 2000: HOPE FOR THE FUTURE, IF WE LEARN FROM THE PAST

My name is Dexter Lehtinen. I'm General Counsel to the Miccosukee Tribe of Indians of Florida, and a member of the Governor's Commission on the Everglades and the South Florida Ecosystem Restoration Task Force. I previously served as a member of the Florida House of Representatives and Florida State Senate and as United States Attorney for the Southern District of Florida. In these capacities I helped write the State law which declared the goal of saving the entire Everglades and filed the lawsuit against pollution of the Everglades which led to the Florida Everglades Forever Act.

MICCOSUKEE TRIBE OF INDIANS IN THE EVERGLADES

I want to provide some information about the Miccosukee Tribe of Indians of Florida and the Tribe's role in the Everglades:

- The Miccosukee Tribe is a federally-recognized Indian Tribe, and Miccosukee Indian Country is within the Everglades.
- Its members are the only people to live within the Everglades (Indian or non-Indian) and the only Tribe with land in the Everglades.
- The Tribe is a leader in Everglades protection, having won several critical lawsuits against pollution, and having set federally-approved water quality standards for the Everglades (including phosphorus) with its State status under the Clean Water Act.
- The Tribe's members are guaranteed by Congress the right to live traditionally within Everglades National Park and Big Cypress National Preserve.

RESTORATION FAILURES: TWO EXAMPLES

The Miccosukee Tribe believes that Everglades restoration is in serious trouble due to misplaced priorities, subordination of fundamental democratic values, Federal intransigence, and bureaucratic arrogance and incompetence. While we all have hope for the future, Everglades restoration is clouded by a past of discrimination and failure.

Let me emphasize at the outset that the issue before this committee is not the legitimacy of restoration as a goal, but rather the false use and twisting of that goal to serve narrow parochial interests in the name of restoration.

Two examples will be sufficient. First, the central Everglades (including tribal Everglades) is given second-class status. This discrimination occurs: (i) despite the Federal Indian trust obligation; (ii) despite the 1982 congressional promise (in the Florida Indian Land Claims Settlement Act) that the central Everglades will be preserved in natural conditions; and (iii) despite the fact that the central Everglades is the largest remaining freshwater Everglades. [Exh. F.] It is a gross misconception that the Everglades is the same as Everglades National Park (encouraged by the Park).

Second, pre-existing authorized restoration projects are stalled. The Modified Water Deliveries Project was directed by 1989 congressional Act to relieve flooding in the central Everglades and restore flows to the Park through Northeast Shark River Slough. But bureaucratic ineptitude and selfishness has blocked the project, causing destruction of tribal Everglades. And, despite guarantees of flood protection to an area known as the 8.5 square mile area, agencies are always trying to seize or condemn the minority residents' land. [Exhs. E & G.] The Miccosukee Tribe knows that taking the homes of these minorities is not necessary for restoration, and that the minorities are attacked because they are politically weak. I find it curi-

ous that the Miccosukee Tribe stands up for these minorities more than government agencies—undoubtedly that's because Indians have been targets of land grabs themselves and recognize it when they see it. And it's because minorities must stick together—if government can take their land, then it can take tribal land (and it can take your land, too).

PROPOSED WRDA 2000: WHAT'S IN IT

The Tribe has several points regarding what's in the Administration's proposed WRDA bill.

1. Chief's Report (Inappropriate Commitments)—The bill would implement the Chief's Report (July) rather than the Comprehensive Everglades Restoration Plan (CERP/April). [Subsec. 3(a)(3) and 3(c)(2)(A)]. The multi-volume CERP was the product of a public consensus building process with broad support, but the Chief's Report substantially changed critical elements behind closed doors without public notice [Exh. B]. New commitments were made, contradicting CERP, such as 245,000 additional acre feet of water to the Park (over and above the increases in the April Plan), even though the April Plan specifically considered and rejected this proposal (known as D13R4) as destructive of other parts of the Everglades (including tribal lands) [Exh. C]. CERP picked D13R, reporting that "after looking at 10 alternative plans and over 25 modeling scenarios, including D13R4, alternative D13R is by far the best of the alternative plans" [Exh. C-1]. Yet the Chief's Report switched to D13R4 without any notice. The Report also downgraded flood protection and water supply with the phrase "to the extent practicable".

This is an outstanding example of the politicization of the Corps and Washington civilian interference which bends the process to placate the demands of groups with which the Administration is close (as well as the interference which Senator Voinovich referred to in his recent letter to GAO).

Although the Administration tries to downplay changes in the Chief's Report, it keeps seeking to enact the Report, which itself demonstrates that there must be something different in the Report. Furthermore, Administration claims of Chief Report neutrality ring hollow in light of recently obtained documents [Exh. A], such as:

(i) A June 8 e-mail message from Deputy Asst. Sec. Michael Davis, stating that "the Chief's Report captures the Restudy Plan plus the subsequent commitments", also cautioning "please keep close hold and do not share outside your agency".

(ii) A June 11 e-mail within the Corps, referring to "the need to get these groups on board", but being "uneasy about changing what was in the report that has been reviewed at SDA and RO's".

(iii) A June 17 e-mail within the Corps referring to "the Michael Davis. . . OOPS, SORRY. . . Chief's Report. . .".

(iv) A June 17 e-mail to the Jacksonville Corps, stating "modification of the implementation plan, particularly in the case of D13R4, is not a small matter"; and Jacksonville's response, stating "you need to add the PIR for determining how to deliver the additional 245,000 acre-feet of water" and "this will affect the scheduling for components associated/affected by D13R4".

(v) A June 29 letter from DOI to Col. Miller (Jacksonville), stating "we appreciate the following additional commitments conveyed in the Chief of Engineer's Report: to deliver additional water (approximately 245,000 acre feet). . .".

Congress should reject the Chief's Report and the politicization of the process that it represents; instead, WRDA should refer only the CERP itself, dated April 1999.

2. Interior Department Veto on Water Deliveries—The bill gives the Interior Secretary a veto on water deliveries, essentially federalizing Florida water law. [Subsec. 3(i)(2)(B)]. DOI is one landowner among many, including the State, the Tribes, and private citizens. Water should be allocated fairly by the Corps without any party having a veto. Corps policy processes can certainly protect Federal interests; and if the DOI will not trust Corps processes, then why should the State, or the Miccosukee Tribe, or private citizens trust it? This approach uses a double standard and is a DOI power grab to politicize water deliveries.

3. Abandoning Balanced Approach (Downgrading Supply and Flood Protection)—The proposal abandons the balanced approach of WRDA 1996 by giving natural systems water first place, and water supply and flood protection second place. [Subsec. 3(i)(1)]. A quick list of problems here include: (i) It's just plain wrong to deny people flood protection and water supply; (ii) It's not necessary because we can achieve all goals; (iii) By downgrading one goal, a license is given to stop trying to reach that goal and maximum effort to reach all goals is lost; (iv) The public consensus for Everglades restoration is built on congressional and State promises of a balanced approach, and this consensus will evaporate when homes and cars are flooded; and (v)

Previous laws committed to equal treatment of all goals, so how could the public trust any law when they can be disregarded so easily? In short, we can and should "get the water right—for everybody", not adopt new policies that will send many people off the planet in their outrage. The current project purposes are environmental protection, water supply, and flood protection, and we should grant adequate assurances for each.

Even with a balanced approach mandated by WRDA 1996 and other laws, flood protection analysis was virtually overlooked. CERP reports that flood analysis was "not quantified" because models for flood control analysis were inadequate ("limited evaluation of impacts since model not designed for flood studies") [Exh. D-1]. "Studies to estimate the flooding impacts of the alternative restoration plans were limited due to the resolution of the model." For "areas that are expected to be adversely affected, further studies were recommended" [Exh. D-3]. If this is "equal" treatment, then "second class" treatment" would mean virtually elimination. These models need to be improved and the studies completed before project authorizations that could flood existing homes.

4. Programmatic Authority—The proposal grants broad programmatic authority for no real reason except to escape congressional scrutiny [subsec. 3(c)(2)(B), (C), & (D)] and uses vague references to "a programmatic manner" and "adaptive assessment" [subsec. 3(b)(5)]. Perhaps the "Pilot "Projects" [3(c)(2)(B)] (which are tests for later bigger projects) could be justified, but the "Other Projects" [3(c)(2)(C)] should have Feasibility Reports before authorization. For example, there's $100 million for "adaptive assessment and monitoring" with no actual plan, so the money could be spent on virtually anything, any study, any scientist—essentially "vote buying". It's just a big pot of money with no controls. And there's $250 million for "other program authority" [3(c)(2)(D)] where no projects are specified and no controls exist at all. These are "cash cows" where the Administration can do whatever it wants—either invent new projects you've never heard of; or substantially change projects which you have heard of, any way they want, as long as they keep the same name.

The CERP admits to a "high level of technical and implementability uncertainties" [Exh.C-4]. These include flood control (discussed above) and the known erroneous assumptions of the Natural Systems Model (NSM), particularly "discrepancy in the topographic data". ". . . [I]f consistent topographic assumptions were used [in NSM]. . . , target depths. . . would be shallower. . . and less water would be needed" [Exh.C-3]. Let's get those assumptions right before authorization.

Programmatic authority is particularly inappropriate when CERP itself admits to inadequacies in flood control models and the Natural System Model (NSM). Instead of programmatic authority, each project should be explored in depth through feasibility reports before authorization. This is too important to just throw money at it and then look away, hoping for the best.

5. Environmental Justice/Minority Rights—The proposal shortchanges environmental justice, minority rights, and discrimination concerns by referring only "socially and economically disadvantaged persons" and then only requiring that "impacts. . . are considered". [Subsec. 3(h)(1)]. This is insufficient. The bill should prohibit discrimination and disparate impacts on minorities and socially disadvantaged persons in implementation. The League of United Latin American Citizens has already found minority discrimination in the Modified Water Deliveries Project, where the DOI seeks to forcibly remove largely Hispanic residents from more than 300 homes [Exh. E], despite congressional guarantees to these people and Corps findings that it makes no substantial difference to the restoration of Northeast Shark River Slough (flowing into the Park).

PROPOSED WRDA 2000: WHAT'S NOT IN IT

Now let me comment on what's not in the proposed bill.

A. Tribal Roles—The Tribes are left out in every part except the "Findings" [subsec. 3(b)(7)]. They should be incorporated in the definition of natural system lands and waters [3(a)(4)], the regulatory process [3(i)(2)(B]) & (C)], etc.

B. Protecting the Entire Remaining Everglades/Comprehensive Definition of Everglades/Equal Protection for Everglades—No portion of the remaining Everglades (such as the southern Everglades in ENP) should receive more favorable treatment than any other portion (such as the central Everglades in WCA 3-A and Miccosukee Indian Country) in hydrology (water quantity and timing). An "Everglades Equal Protection Clause" should provide that all parts of the remaining Everglades receives equal hydrological treatment.

C. Meeting Prerequisites and Demonstrating Competence: Implementing the Modified Water Deliveries Project—Component projects of the Everglades Restudy should not be authorized or funded until the Federal agencies show the competency

to implement the Modified Water Deliveries Project as directed by Congress (PL 101-229, section 104, including subsection 104(c)), which is categorized by law as a predecessor to the Restudy and assumed by the Restudy to have been implemented. [Exh. G.] The failure to implement the Modified Water Deliveries Project since its authorization in 1989 (PL 101-229) and approval of the 21992 General Design Memorandum (GDM) by Congress is nothing short of scandalous.

D. Protecting Property Rights: Limiting Eminent Domain and Assuring Flood Control—Property rights are fundamental to a free society. Federal and State agencies shall make every effort to avoid taking private property through eminent domain actions, and continued flood protection must be assured. Regarding eminent domain, privately-owned land should not be condemned through State or Federal eminent domain procedures unless there is no other feasible alternative for achieving the specific project goals. It should be a defense to an eminent domain action that there is a feasible alternative other than condemnation of the property in question and increased costs alone shall not render an alternative infeasible. Regarding flood control, Congress should require that no project may proceed until and unless the established C&SF Project levels of flood protection against a SPF (standard project flood) has been assured and certified by the Corps. The CERP states that its models "were inadequate to determine flooding effects", which must be remedied before projects are designed. Flooding has increased in urban areas recently because the water deliveries to the Everglades have been increased without providing the protections mandated by the same laws which authorized the increased deliveries (e.g., Experimental Water Deliveries, etc). [Exh. H.]

E. Eliminating Collateral Attack: Determination that Provisions of Collateral Federal Statutes Have Been Met—Because the Everglades Restoration effort is a comprehensive overall plan to maximize Everglades restoration and environmental values over a broad range of parameters, collateral Federal statutes which focus on single parameters should be deemed to have been met by operation of law. Such collateral statutes (e.g., the Endangered Species Act, the Fish and Wildlife Coordination Act) shall not be grounds for separate determinations or legal actions in connection with the construction or operation of Everglades restoration projects.

F. Avoiding Holding Funds Hostage: Fund Projects Through Corps or State (Not Through DOI)—Previous Everglades funding channeled through the DOI has been held or diverted to achieve DOI goals beyond the scope of the appropriation. Projects should be funded by congressional appropriations to the Corps of Engineers or to State agencies or to the Tribe, not through the Department of the Interior, so as to avoid the improper withholding of funding to influence or block implementation outside of accepted processes. If project funds are funnelled through DOI, Congress should specify the precise purpose of the appropriation and prohibit withholding of funds when the legal criteria for proceeding have been met.

G. Assurances: Environmental Protection, Water Supply, and Flood Protection—Assurances for environmental protection, flood control, and water supply must be provided so that no segment of people or interest group is pitted against another. Without equal assurances, the consensus basis for Everglades restoration will be destroyed. Assurances should be given that:

(i) Sufficient Everglades Water—Sufficient water will be provided to the Everglades (including WCAs, Miccosukee Indian Country, and ENP) so as to maintain its natural state.

(ii) Excess Everglades Water—Excessive water levels (flooding) will not be allowed in the WCAs (including Miccosukee Indian Country) so as to maintain its natural state.

(iii) Flood Protection—Flood protection will not be diminished (no project may proceed until and unless the established C&SF Project levels of flood protection against a SPF has been certified by the Corps).

(iv) Water Supply—Water supply for urban, residential, and agricultural uses will not be diminished and every reasonable effort will be made to expand such supply to meet future needs.

(v) Conflict/Shared Adversity—If water supplies are insufficient to meet all goals or goals otherwise conflict, then each goal (water supply, environmental protection, and flood protection) shall be met through operation of the C&SF Project components to the maximum extent practicable so that the deficiencies in reaching each goal are relative equal or proportionate to the deficiencies in meeting the other goals ("shared adversity").

(vi) Miccosukee Everglades Equal Protection—Whatever assurances are provided to Federal lands or interests shall include equal assurances to Miccosukee Indian Country (the only Tribe with lands in the Everglades Protection Area), defined as the Miccosukee Indian Reservation and Perpetual Leased Lands in WCA 3-A pursu-

ant to PL 97-399 (1982) (definition of Federal lands and interests must include tribal lands and interests).

PROBLEM SUMMARY: LEARNING FROM EXPERIENCE

A summary list of problems and lessons would include:

A. System Problem (Lack of a System-wide, Everglades-wide Commitment; Parochial Approach). The Federal Government is sacrificing the State and tribal Everglades in favor of the smaller Federal Everglades (the Park). The Water Conservation Areas (especially WCA 3-A) are dying due to Federal actions.

B. Process Problems (Lack of Commitment to Decision-making Process; Lack of "Partnership"; Low Inter-agency Cooperation; Pro Forma Use of Task Force)—In addition, many agencies refuse to implement programs which have been finalized. The present Federal approach is little more than lip-service to so-called "partnership".

C. Execution Problems (Inability or Failure to Execute Specific Projects)—Stalled "Critical Projects", including Modified Water Deliveries, both held up for a decade. Agency incompetence, and outright refusal to execute any plan which the agency doesn't like, causes continuing damage to tribal lands and raises serious doubts about the wisdom of entrusting these agencies with the programmatic authority in restoration.

D. Problems with Fundamental Values (Disregard of Fundamental Rights and Values of Liberty; Basic Property Rights and the Rule of Law)—Everglades restoration programs, at least their implementation by the Federal Government, is showing an alarming disregard for fundamental values (property rights of both the Tribe and non-tribal residents, and the rule of law).

PRIOR TESTIMONY

The Tribe presented more general testimony describing these problems in detail to this committee in Naples in January 2000, to which it commends the committee's attention for further discussion.

CONCLUSION

In conclusion, the Miccosukee Tribe seeks fairness, non-discrimination, sound planning, and quality control in Everglades restoration. The Tribe is opposed to any approach which elevates the Department of the Interior over the Tribes or the State. The Corps can save the whole remaining Everglades; the Interior Department will save only its small part while sacrificing the other parts.

STATEMENT OF OF MICHAEL COLLINS, GOVERNING BOARD CHAIRMAN, SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Mr. Chairman, Senator Baucus, Senator Graham and members of the committee: I am Michael Collins, Chairman of the Governing Board of the South Florida Water Management District.

Thank you for this opportunity to comment on the Administration's bill to authorize the Comprehensive Everglades Restoration Plan (CERP). This Comprehensive Plan a series of environmental improvements over 20 years that will be the most ambitious ecosystem restoration ever undertaken in the United States.

Please indulge me while I touch on a few historical facts to provide the proper context for my comments. The existing Central and Southern Florida Project was created in 1948 and encompasses 18,000 square miles. This water management system for South Florida includes 1,000 miles of canals and 200 water control structures. It is the largest public works project in the country. As South Florida's water management system it provides water supply, flood protection and other benefits to South Florida.

Recognizing the need to modernize this 50-year old system to address its negative consequences on the environment, Congress authorized a "re-look" at this system to determine if such a task was feasible and in the Federal Government's interest. The Corps was asked to develop a comprehensive plan for the purpose of restoring, preserving, and protecting the South Florida ecosystem. Congress further directed that this plan shall include such features as are necessary to provide for the water-related needs of the region, including flood control, the enhancement of water supplies, and other objectives served by the Central and Southern Florida Project.

The Plan submitted to you in July of 1999 is that plan. Is it "comprehensive" in that it provides all answers to all problems? No. It is comprehensive because it was developed recognizing the complexities involved in creating an ecosystem-wide restoration plan and realizing the interconnectedness of the vast water management

system commonly known as the Central and Southern Florida Project. The coordination efforts alone were heroic. Overlay the dynamic of the interests with the scientific complexities associated with getting the water right and you begin to understand that the Plan submitted to you by consensus, the Plan that enjoys broad-based support, was only possible through an inclusive process. Any attempt to modify the concepts embraced by consensus has the potential to erode this broad-based support.

The South Florida Water Management District strongly supports this Plan and the process used for developing this product as the best opportunity for solving the region's environmental and water resource problems within the region. We believe that this Plan is the roadmap for providing adequate water for a healthy, sustainable Everglades ecosystem as well as for maintaining urban and agriculture use. As Chairman of the Governing Board for the agency that serves as local sponsor for the Central and Southern Florida Project, I urge you to authorize the Plan submitted to you last July. The Administration's bill deviates from this Plan and the direction given by Congress in the authorization to modernize our 50-plus year old system to address unintended consequences to the environment.

Is it the perfect plan? No. The perfect plan will never exist but the Plan is strong. It is flexible enough to allow for improvements along the way and the Corps needs to be given the flexibility to make refinements as more is learned through scientific monitoring over the period of implementation. The Administration's bill provides for such refinement.

In Naples, I submitted testimony that touched on our desire for the costs for operating and maintaining the Comprehensive Plan to be shared by the Federal Government. The Administration's bill calls for a 60/40 split of such costs. I urge you to go the next step. Codify our partnership by authorizing a 50/50 sharing of all costs. There are countless ways to try and analyze a formula that makes sense. I submit to you that all the potential formulas are flawed in that none are capable of factoring in the interconnectedness of a system that operates like dominos on a table. Any opportunity for decisions to be made for any other reason than for what is good for the resource will only hurt the resource. A 50/50 cost share provides for accountability, cost effectiveness, equal influence in decisions and I would argue objectivity. It makes sense!

I will close by emphasizing the unprecedented nature of this restoration by highlighting the unprecedented contribution of the State of Florida and the unique resources that we as local sponsors bring to the table, especially when compared to other local sponsors around the country. We bring history, expertise and knowledge of the construction and operation of the system, ecological and modeling expertise and overall project management experience. Successful implementation will depend on the ability to utilize the best from a scientific, engineering and research pool of experts that are made up of Federal and non-Federal staff. We support the Administration's bill as it relates to in-kind credit. It is not our intent to construct without authorization. We simply want to be given credit for work that we intend to participate in doing. In fact, we propose a more frequent balancing of the books to ensure that both the Federal and non-Federal sponsor stay closely aligned in terms of spending. Neither of us should get too far out ahead of the other.

Finally, I must applaud our Governor. The State of Florida has a long-standing commitment, spanning several administrations and changes in political party leadership. Everglades Restoration is a bipartisan effort. History has proven this as fact. Back in 1983 then Governor Bob Graham started the Save Our Everglades Program. Sir, we are fortunate that you, with your historical knowledge and continued leadership serve on the committee that will make authorization decisions. Senator Connie Mack has been a force in the support of restoration in Washington and Florida has benefited from the strong relationship between our two Senators.

Our State is now under the leadership of Governor Jeb Bush. Many touted uncertainty of his commitment despite his continued verbal commitments and appointments of leaders known for their individual commitment to restoration like myself. Governor Bush has done more than talk about commitment to restoration. As he stated in his testimony, he led the team of a broad spectrum of people who worked tirelessly to achieve passage of a funding bill to pay the State's share of restoration. That is what I call Leadership! I hope that such a leader is one you want as a partner a full partner—an equal partner.

RESPONSES BY MICHAEL COLLINS TO ADDITIONAL QUESTIONS FROM SENATOR SMITH

Question 1. Does the Water Management District, as the non-Federal sponsor of the Plan, have a recommendation for how to better "assure" the benefits to the natural system?

Response. The South Florida Water Management District supports the congressionally established policy concerning State primacy instituted in the Clean Water Act.

Question 2. As I understand it, the State will provide approximately $100 million a year to the CERP and the SFWMD is expected to provide the other $100 million. Can you describe for the committee how the WMD will come up with this share of the non-Federal sponsor's commitment without raising taxes?

Response. The financial commitment of the South Florida Water Management District and the State of Florida to restore the Everglades is well documented. The Governor has very publicly voiced the commitment of the State of Florida to fund its share of the Comprehensive Everglades Restoration Plan. This commitment was validated by the Florida Legislature with the passing of the Everglades Restoration Investment Act. The South Florida Water Management District will also meet its obligations under this commitment.

Question 3. As you know, it is the non-Federal sponsor's responsibility to purchase land. What would the impact be on the land acquisition process in Florida if the Federal Government did not authorize the initial suite of ten projects this year?

Response. The current arrangement is for the local sponsor to act as the land acquisition agent for the project. Approximately 2/3 of lands required for the initial suite of ten projects have been acquired. If authorization of these projects does not occur it will jeopardize the continuation of land acquisition for these projects.

Question 4. Why is it important to move forward with authorization of this initial set of ten projects this year?

Response. The initial set of ten projects will provide immediate system-wide benefits to the ecosystem including natural hydroperiod restoration, and protection from frequent catastrophic releases of excess freshwater to coastal estuaries. Authorization will also allow utilization of lands already purchased. Additionally, authorization now will ensure increased efficiencies by integrating detailed engineering and design work with ongoing Federal and State projects. On the resource side, there is a high probability that delay in authorization of these projects will result in continued harm to Lake Okeechobee, coastal estuaries and the Everglades Protection Area. From a program management perspective uncertainty will make it difficult to appropriately staff and budget for the construction phase of projects. In addition, it will be difficult to justify continued planning and design efforts if projects are not authorized. The SFWMD is currently well positioned for CERP design and construction due staff available from the Everglades Construction Project. Construction on this project will be completed in 2003 which fits well with shifting staff for the initiation of a number of construction projects associated with CERP. Delays in authorizations and subsequent appropriations would make it difficult for the SFWMD to justify maintaining this staffing level necessary to meet the aggressive implementation schedule. Delays in authorization may also make it difficult to maintain a consistent level of State funding for the Restoration Plan.

Question 5. On March 2 and 3, the Governor's Commission for a Sustainable South Florida unanimously approved the version of the Plan that became the April 1999 Restudy. Ken Keck of Florida Citrus Mutual testified that the members of the Governor's Commission did not have a vote on the implementation of the Plan. This is contrary to what Section 10 of the Restudy says, as well as what the minutes of the meeting document. Can you clarify?

Response. Answer: On March 3, 1999 the Governor's Commission for a Sustainable South Florida was presented the final draft of the Restudy. The Commission unanimously approved a report that proposed modifications to the draft and recommended assurances language to the Army Corps of Engineers. Most of the suggested changes proposed by the Commission were incorporated in the Final Report that was transmitted to Congress. A copy of the minutes for the referenced meeting is attached.

RESPONSES BY MICHAEL COLLINS TO ADDITIONAL QUESTIONS FROM SENATOR GRAHAM

Question 1. One of the proposals that have been discussed among various constituencies is the use of State water law and regulatory processes to issue assur-

ances to the natural system and the human environment. The State has had Chapter 373 authority to issue consumptive use permits, minimum flows and levels, and reservations for the natural system for almost 30 years. To date, the State has only issued consumptive use permits. If Congress chose to use the State water law and regulatory processes to issue assurances, how can we be sure the State process would ever move forward?

Response. While the authority has been on the books the actual tools necessary to accomplish change has been cumbersome. The current infrastructure to move water throughout the State is a Federal project the Central and Southern Florida Project. Modifying a Federal project requires congressional authorization, which explains the critical importance of the Comprehensive Everglades Restoration Plan. Further, to evoke change and then successfully enforce change requires the State be in good standing from a planning and scientific perspective and that those stakeholders which will be impacted by changes are part of the process. The State of Florida has all of this behind us now. In 1997 a State statutory mandate to develop water supply plans that serve as a road map for quantifying and protecting environmental water supplies was adopted by the Florida Legislature. The Governing Board of the South Florida Water Management District at the May meeting adopted these regional water supply plans. And, the regional water supply plans are dovetailed with the Comprehensive Everglades Restoration Plan. We are moving forward.

Question 2. One of the definitions under discussion in the assurances debate is the definition of the term "existing water user". What is your impression of how this term should be defined to provide adequate protection to existing permitted users and to the natural system?

Response. An existing water user is a user of water that holds a valid State permit to use a specific amount of water from a specified source for a specific duration.

Question 3. Can you describe the impact to the Everglades and surrounding ecosystems if we move forward with this project?

Response.

1. Substantial reduction in the number and severity of ecologically damaging extreme high water and low water events on Lake Okeechobee, resulting in protection of the Lake's littoral wetlands and deep water zones and associated ecological and fisheries resources.
2. Reduced inputs of excessive nutrients into Lake Okeechobee.
3. Substantial reduction or elimination of damaging flows of excessive nutrients, pesticides, and suspended materials to the Caloosahatchee and St. Lucie estuaries due to improved water quality and water depths in Lake Okeechobee.
4. Recovery of desirable salinity ranges in the Caloosahatchee and St. Lucie estuaries, benefiting ecological and fisheries resources.
5. Recovery of more natural volume and timing patterns of flow between Lake Okeechobee and the northern Everglades.
6. Recovery of more natural volume and timing patterns of flow into the eastern Big Cypress basin, including improved habitat conditions for the endangered Cape Sable Seaside Sparrow.
7. Reduced inputs and distribution of excessive nutrients in the Everglades.
8. Substantial recovery of more natural hydroperiods, surface water distribution and timing patterns in the Everglades, resulting in recovery of more healthy Everglades ecosystems and the characteristic animals of these wetlands.
9. Substantial recovery of more natural flow patterns and volumes into Florida Bay, including recovery of natural salinity ranges, resulting in recovery of ecological and fisheries resources.
10. Substantial increase in the spatial extent of healthy wetlands in the southern Everglades.
11. Substantial improvements in reaching desired salinity range and timing of flows for Lake Worth Lagoon, and recovery of healthy fisheries.
12. Recovery of more natural flow distribution patterns and in desired salinity range for Biscayne Bay, and recovery of healthy near-shore ecological and fisheries resources.
13. Increased spatial extent, hydropatterns and quality of southern Miami-Dade wetlands.

Question 4. Can you describe the impact to the Everglades and surrounding ecosystem if we do not move forward with this project?

Response.

1. Reductions in the spatial extent of healthy wetlands will continue.

2. Species that require large expanses of natural habitat, such as the Florida panther, snail kite, and wading birds, will increasingly become stressed by the loss of habitats.

3. Losses of organic soils will continue to reduce water storage capacity and ecological productivity throughout the Everglades.

4. Canals and levees will continue to encourage the introduction and spread of exotic plants and animals.

5. Unnatural fire patterns will increasingly damage the natural landscapes of south Florida.

6. South Florida recreational and commercial fishing will decline, both in the freshwater Everglades and Lake Okeechobee, and in the St. Lucie, Caloosahatchee and Florida Bay estuaries.

7. Endangered species will continue to decline, and some species may be irreversibly lost in south Florida.

8. The Everglades will cease to exist as a functional, recognizable "River of Grass."

Question 5. What is the current plan of action related to the 8.5 square mile area?

Response. On June 15, the South Florida Water Management District Governing Board will decide whether or not there is an appropriate role for the water management district as local sponsor. Thereafter, the Army Corps of Engineers will have the responsibility to accept or reject a locally preferred option, should one be chosen. Ultimately, it is the Army Corps of Engineers' responsibility to complete the EIS process and to meet the mandate required by the Modified Water Delivery project.

Question 6. Can you elaborate on the environmental benefits that the modified water delivery project is seeking to achieve?

Response. The Modified Water Delivery (MWD) project is an essential and critical element in the larger restoration effort for the Florida Everglades. The primary environmental benefit that will result from implementation of the MWD is to provide more natural water flows in the Northeast Shark River Slough portion of Everglades National Park. Completion of the MWD project provides the basis and starting point for further restoration efforts to be implemented under the Comprehensive Everglades Restoration Plan (CERP). The success of several Critical Restoration Projects and other scheduled restoration elements under the CERP can not proceed or would be significantly delayed in their implementation until the completion of the MWD. The MWD project has been further identified as a critical element in a Biological Opinion (February 1999) issued by the U.S. Fish and Wildlife Service for the Cape Sable Seaside Sparrow. Completion of the MWD project is required by 2003 as a condition to avoid potential jeopardy and is a compliance requirement under the Reasonable and Prudent Alternative.

Question 7. Do you believe that the SFWMD will be able to resolve this issue prior to implementation of the Comprehensive Everglades Restoration Plan?

Response. The responsibility to resolve this issue does not rest solely with the South Florida Water Management District. It is important to recognize that the Modified Water Delivery (MWD) project was initially considered to be a 100 percent Federal project, the persistent disagreement among the Federal agencies as to how best to accomplish the implementation has delayed progress. The water management district's role has been to facilitate a public process to identify common ground on the issue of the 8.5 square mile area and to determine if there is an appropriate role for the water management district. Any alternative selected that is different from that initially proposed by the Corps of Engineers is considered a locally preferred option. The Governing Board has requested a reevaluation of the alternatives to identify a mitigation plan that is sustainable for the long term and accomplishes the restoration objectives. The Governing Board is committed to making a recommendation about how to move forward and about an appropriate role for this agency based on sound science and what is best for the resource, including the timely implementation of the MWD project.

RESPONSES BY MICHAEL COLLINS TO ADDITIONAL QUESTIONS FROM SENATOR MACK

Question 1. Do you support applying section 902 of the 1986 Water Resources Development Act to all features of the Comprehensive Plan before us today? [This provision requires a congressional review if a project exceeds 20 percent of authorized cost]

Response. Yes, additionally we propose an equal spending arrangement as implementation of the project's progress. Using periodic accounting as opposed to rectifying the books at the end would increase accountability.

Question 2. Do you support congressional committee review and approval of the feasibility level of engineering and design work before any construction can begin on the initial suite of ten projects in the Comprehensive Plan?

Response. The delegation to the Secretary of the Army for approval of Project Implementation Reports (PIR) is adequate oversight. The water management district does not oppose additional congressional committee review and approval. We would caution against any process that would result in significant delays to implementation as these projects are submitted for approval now because of their immediate benefits to the natural system.

Question 3. Do you support requiring full feasibility studies before any other projects are authorized under the Comprehensive Plan?

Response. Yes, Project Implementation Reports (PIR) mirror the requirements of a feasibility study. The water management district supports requiring PIRs for construction of projects included in the Comprehensive Plan.

Question 4. Do you support modifying the definition of the South Florida Ecosystem to make clear the system includes the lands and waters within the boundaries of the South Florida Water Management District as they existed on July 1, 1999?

Response. Yes. Modifying the definition of the South Florida Ecosystem makes it clear that the precise scope and boundaries of the Comprehensive Everglades Restoration Plan consist of the lands and waters within the boundary of the South Florida Water Management District, including the Everglades, the Florida Keys, and the contiguous near-shore coastal waters of South Florida.

Question 5. Do your support a provision making clear the Corps of Engineers is only authorized to study the question about providing additional 245,000 acre-feet of water to the natural system?

Response. The water management district maintains that the adaptive assessment process will allow for future refinements to project components and we are committed to continue to work with the Army Corps and Department of Interior to establish an allocation of water that is healthy for the Park. It is an error in judgment to predetermine that 245,000-acre feet is the additional amount of water needed for Everglades National Park.

Question 6. Do you support language making clear that the Corps must work with the State of Florida to ensure all groundwater discharges resulting from the Comprehensive Plan meet all applicable water quality standards and water quality permitting requirements?

Response. Yes and the language should be expanded to authorize water quality features needed for the implementation of the project components.

Question 7. Do you support replacing the project purposes language stated in (c)(1) of the administration's draft with language restating the purpose of the Comprehensive Plan developed and passed in WRDA 1996?

Response. Yes. There was broad support and agreement to the purposes of WRDA 1996.

Question 8. Do you support additional programmatic authority for the Corps to construct projects of limited cost but are in keeping with the Plan's purposes and have independent and substantial benefit to Everglade's restoration?

Response. Yes. Programmatic authority is consistent with the congressionally authorized critical project authority in WRDA 96.

Question 9. Do you support a 50/50 cost share between the Federal Government and the State of Florida on operation and maintenance of the project? If not, please state the cost share you believe to be appropriate and why.

Response. Yes. The project benefits to Federal trust resources such as Loxahatchee National Wildlife Refuge, Big Cypress National Preserve, Ten Thousand Islands National Wildlife Refuge, Florida Panther National Wildlife Refuge and Everglades National Park and many federally listed protected species are well documented. In fact, the Federal Government manages approximately 75 percent of the protected lands and waters within the South Florida ecosystem that will benefit from the Comprehensive Plan. The high degree of benefits to Federal trust resources dictates a 50/50 cost share of operation and maintenance.

Question 10. Please provide your thoughts on the definition of Project Implementation Reports found in the Administration's language. Do you support this definition? If not, please provide suggestions as to how you would define these reports.

Response. The primary issue with the PIR is not in the definition of the PIR but in the process by which it is developed and implemented. The water management district maintains that this critical process should be a joint State/Federal initiative and not one undertaken solely by Federal agencies.

Question 11. Do you believe the Department of Interior and the State of Florida should be on equal footing in developing any regulations related to assurances? If not, why?

Response. We do not think that new regulations related to assurances are necessary or appropriate. The water management district supports the proposal to require that Project Implementation Reports (PIR) identify the new water made available from each project component for the natural system and other water uses. Implementation of water reservations for the natural system and allocations for other water uses in accordance with State law will accomplish assurances in a way that does not require new Federal regulations.

Question 12. Do you support the reporting requirement in the administration's bill? If not, how would you amend the reporting requirements?

Response. The reports should be subject to concurrence from the Governor of the State of Florida.

RESPONSES BY MICHAEL COLLINS TO ADDITIONAL QUESTIONS FROM SENATOR VOINOVICH

Question 1. I would like to ask you the same question I asked Dexter Lehtinen, given the importance of completing the Modified Water Delivery Project, has the South Florida Water Management District identified any plan for flood mitigation for the most developed portion of the 8.5 square mile area that would be acceptable to environmental interests?

Response. The South Florida Water Management District has embarked on a very public process to identify common ground on the issue of the 8.5 square mile area. The Governing Board is committed to making a recommendation about how to move forward and about an appropriate role for this agency based on sound science and what is best for the resource, including the timely implementation of the MWD project.

Question 2. In response to previous questions by this committee, the South Florida Water Management District has indicated that the Stormwater Treatment Areas that are being constructed as part of the Everglades Construction Project and the additional Stormwater Treatment Areas proposed in the Comprehensive Plan will result in significant reductions in the phosphorus levels but that there is not good scientific evidence that they will be able to achieve the long term water quality standard for phosphorus estimated at 10 part per billion. You further indicated that at this time there was insufficient information to estimate the additional costs required to meet the long-term standard. If those additional costs turn out to be significant and result in a substantial increase in the cost of the Comprehensive Plan, who should pay for these additional costs? Should they be a Water Management District cost or should they be shared with the Corps?

Response. The project underway to ultimately achieve the long-term water quality standard is being implemented at the expense of the State of Florida. Further, this project is considered a "without project condition" in the Comprehensive Everglades Restoration Plan. If in the future of this State, it is determined that additional measures are needed to address water resource issues, then at that time, Federal agencies and Congress will have an opportunity to determine if there is a Federal interest in implementing any such proposal.

STATEMENT OF DR. JOSEPH W. WESTPHAL, ASSISTANT SECRETARY OF THE ARMY FOR CIVIL WORKS

Mr. Chairman, members of the committee, I am Joseph Westphal, Assistant Secretary of the Army for Civil Works. I am pleased to be here today to present the Administration's views on an important national issue the restoration of America's Everglades and legislation critical to the implementation of the Comprehensive Everglades Restoration Plan (CERP) submitted to the Congress on July 1, 1999. As requested I will discuss the CERP legislation contained in the Department of the Army's legislative proposal for the Water Resources Development Act (WRDA) of 2000 submitted to the Congress on April 10, 2000.

An American treasure is in trouble. Once the Florida Everglades was a vibrant, free-flowing river of grass that provided clean water from Lake Okeechobee to Florida Bay. It was a haven for storks, alligators, panthers and other wildlife and was critical to the health of estuaries and coral reefs. Today this extraordinary ecosystem—unlike any other in the world—is dying.

Over the past half-century, as the population of south Florida has grown, the health and size of the Everglades have steadily declined. Fully half the Everglades have been lost to agriculture and development. And the surviving remnants suffer from a severe shortage of clean, reliable water. In our efforts to guard communities against flooding and to ensure adequate water supplies for drinking and irrigation, we have diverted the natural water flows that are the essence and very lifeblood of the Everglades.

As Marjory Stoneman Douglas said in The Everglades: River of Grass, "There are no other Everglades in the world." Like the tropical rainforest of South America and the giant redwood forest of the west, the Everglades is a unique ecosystem. We must act now, and act aggressively, if we are to save this special place. Enactment of the legislation submitted to you on April 10, 2000 is a critical next step.

On July 1, 1999, on behalf of the Administration, and in partnership with the State of Florida, I submitted to Congress a comprehensive plan to restore the South Florida ecosystem by modifying the existing Central and Southern Florida project. The South Florida ecosystem includes the Everglades, Lake Okeechobee, Florida Bay, and Biscayne Bay and the Florida Keys. The CERP, which will be implemented over the next 25 years, will:

- Improve the health of over 2.4 million acres of the south Florida ecosystem, including Everglades National Park;
- Improve the health of Lake Okeechobee;
- Virtually eliminate damaging freshwater releases to the estuaries;
- Improve water deliveries to Florida and Biscayne Bays;
- Improve water quality; and
- Enhance water supply and maintain flood protection.

The CERP, which was formerly known as the "Restudy," is the most ambitious ecosystem restoration project ever undertaken in the United States—if not the world. Its fundamental goal is to capture most of the fresh water that now flows unused to the sea and deliver it when and where it is needed most. Eighty percent of this "new" water targeted for capture will be devoted to environmental restoration, reviving the ecosystem from the Kissimmee River, through Lake Okeechobee, through Everglades National Park, and out to the coral reefs of Florida Bay. The remaining 20 percent will benefit cities and farmers, enhancing water supplies and supporting a strong, sustainable economy for south Florida.

In short, the CERP consists of over 60 components that work together to restore, preserve, and protect the South Florida ecosystem by delivering the right amount of water, of the right quality, to the right places and at the right time. The Army's legislative proposal approves the CERP as a scientifically sound blue print for restoration and provides authority to implement the initial increment of the improvements described in the report of the Chief of Engineers on the Central and Southern Florida Project Comprehensive Review Study, dated June 22, 1999.

While the CERP reflects the best available science, we are prepared to refine our thinking as we learn more. Thus the CERP is designed to be flexible, to incorporate and respond to new information as it becomes available. Continuous monitoring and independent scientific review are key components of the CERP. Still, the CERP provides a sound basis to move forward immediately. There is too much at stake and little time to act.

The Problem

The Everglades of today are not the same place that Mrs. Douglas wrote about in 1947. Millions of people have encroached upon the ecosystem that once was the domain of panthers, alligators and flocks of birds so vast that they would darken the sky. With the arrival of people came the desire to manage the water, to tame the free flowing river of grass from Lake Okeechobee to the Florida Keys.

The Central and Southern Florida Project was authorized by Congress 50 years ago to provide flood protection and fresh water for the people of south Florida. This project accomplished its intended purpose and allowed people to more easily live on the land. It did so, however, at tremendous ecological cost to the Everglades. While the population of people has risen from 500,000 in the 1950's to more than 6 million today, the numbers of native birds and other wildlife have dwindled and some have vanished. The size of the Everglades has been reduced by half and several wildlife species are threatened or endangered.

Over the past 100 years, excessive drainage of wetlands and changes in the natural variability of water flows have altered the Everglades wetland ecosystem on a regional scale. Today, discharges to the Everglades are often too much, or too little, and frequently at the wrong times of the year. An over-abundance or scarcity of water affects plants and wildlife accustomed to the Everglades' historic range of

water flows, levels and seasons. In addition, canals and highways that criss-cross the Everglades have interrupted its historic overland sheet flow.

Water quality throughout south Florida has deteriorated over the past 50 years. More than one-half of the wetlands that act as natural filters and retention areas are gone. Some untreated urban and agricultural storm water is sent directly to natural areas and estuaries. Too much, or too little, water is often sent to estuaries. Too many nutrients are entering the Everglades, with an over-abundance of cattails a visible indicator of the consequences.

Historically, most rainwater soaked into the ground in the region's vast wetlands. As south Florida developed, the canal system built over the past 100 years worked effectively and drained water off the land very quickly. As a result, approximately 1.7 billion gallons of water per day on average is discharged to the ocean. One very significance consequence is that not enough water is available for the environment.

Under current conditions, these natural systems cannot recover their defining characteristics and they will not survive. The growing demand for a reliable and inexpensive supply of water for agriculture, industry and a burgeoning population will likely exceed the limits of readily accessible sources. As the needs of the region's natural systems are factored in, as they must be, conflicts for water among users will become even more severe. Water shortages will become more frequent and more severe unless changes to the water management system are made. The health of the ecosystem will continue to decline unless we act now.

The Comprehensive Everglades Restoration Plan

First and foremost, the goal of the CERP is to restore, protect and preserve the south Florida ecosystem. The focus of the CERP has been to restore the defining ecological features of the original Everglades and other parts of south Florida ecosystem while providing for other water related needs of the region.

Both the problems with declining ecosystem health and the solutions to Everglades restoration can be framed by four interrelated factors: quantity, quality, timing, and distribution of water. The principal goal of restoration is to deliver the right amount of water, of the right quality, to the right places and at the right time. The natural environment will respond to these hydrologic improvements, and we will once again see a healthy Everglades ecosystem.

Quantity

Significantly less water flows through the ecosystem today compared to historical times. As noted above, on average, 1.7 billion gallons of water that once flowed through the ecosystem is wasted each day through discharges to the ocean or gulf in excess of the needs of the estuaries. The CERP will capture most of this water in surface and underground storage areas where it will be stored until it is needed. Specifically, this water will be stored in more than 217,000 acres of new reservoirs and wetlands-based treatment areas, and 300 underground aquifer storage and recovery wells. These features vastly increase the amount of water available in south Florida.

Quality

The quality of water in the south Florida ecosystem has been diminished significantly. Excess phosphorus, mercury, and other contaminants harm the region's surface water and groundwater. The water quality of the Everglades Water Conservation Areas, the coastal estuaries, Florida Bay and the Keys show similar signs of significant degradation. The CERP will improve the quality of water discharged to natural areas by first directing it to surface storage reservoirs and wetlands based stormwater treatment areas. In addition, the CERP recommended the development of a comprehensive integrated water quality plan for the region that will further improve water quality.

Timing

Alternating periods of natural flooding and drying, called hydroperiods, were vital to the Everglades ecosystem. These natural hydroperiods have been severely altered by human activities. Restoring these variations in water flows and levels is an integral part of the CERP. Specifically, the timing of water held and released into the ecosystem will be modified by the CERP so that it more closely matches natural patterns. The CERP will reduce the harmful water levels that damage Lake Okeechobee and its shoreline. Improved water deliveries to the Caloosahatchee and St. Lucie rivers will reduce damage to the estuaries caused by too much or too little fresh water. Florida and Biscayne bays will receive improved fresh water flows. In other areas, an operational plan that mimics natural rainfall patterns will enhance the timing of water sent to the Water Conservation Areas, Everglades National Park, and other wildlife management areas.

Distribution

The areal extent and movement of water through the system is the final factor in the water equation. Over 50 percent of the original Everglades have been lost to urban and agricultural development. Further, the remaining ecosystem has been separated, or compartmentalized, by canals and levees. To improve the connectivity of natural areas, and to enhance sheetflow, more than 240 miles of levees and canals will be removed within the Everglades. Most of the Miami Canal in Water Conservation Area 3 will be filled and 20 miles of the Tamiami Trail will be rebuilt with bridges and culverts, allowing water to flow more naturally into Everglades National Park. In the Big Cypress National Preserve, the levee that separates the preserve from the Everglades will be removed to restore more natural overland water flow.

In summary, the CERP will store much of the excess water that is now sent to the sea so there will be enough water to meet the needs of both ecosystem and urban and agricultural users. The CERP includes a number of features to improve the quality of water flowing to the natural environment. It will continue to provide the same level of flood protection for south Florida. The CERP is not perfect no plan could be given the complexity of the ecosystem and the effects of past modifications. We know that we do not have all the answers and that we will have to make adjustments as we learn more. In this regard, the concept of adaptive assessment is an integral part of the CERP. In short, we will monitor, use independent peer review, public input, and make necessary adjustments as we go, utilizing the effective interagency and multi-stakeholder partnerships that allowed us to develop the CERP.

Why Restore the Everglades?

Perhaps first and foremost, the Everglades are an American treasure that is in serious trouble. There is no other wetland system like the "River of Grass" in the world.

As with other great natural and cultural resources, we have a responsibility to protect and restore this treasure for generations to come.

Implementing the CERP over the next 25 or so years will cost approximately $7.8 billion. While the implementation cost of the project is substantial, it will be spread over many years and shared equally between the Federal Government and the State of Florida. More importantly, the environmental and economic costs of inaction are enormous. If we do not act now, the Everglades will continue to die and water shortages will have real effects on Florida's economy.

The benefits to the Nation of implementing the CERP are tremendous. The entire south Florida ecosystem, including the Everglades, will become healthy, with many of its natural characteristics restored. Urban and agricultural water users will also benefit from enhanced water supplies. Flood protection, so important to hurricane-prone south Florida, will be maintained and, in some cases, improved.

The economic benefits from implementation of the CERP are wide-ranging and are linked with the availability of clean, abundant water in the ecosystem. Not only is water the key to ecosystem restoration, it is also necessary for sustainable agricultural and urban environments. It is important for recreation, tourism and navigation. It plays a significant and obvious role in commercial and recreational fishing.

With the CERP, the distribution of plants and animals will return to more natural patterns as more pre-drainage water flows are restored. The CERP will support the return of the large nesting "rookeries" of wading birds to Everglades National Park, and the recovery of several endangered species, including the wood stork, snail kite, Cape Sable seaside sparrow, and American crocodile. We are confident that implementation of the CERP will allow us to once again witness an abundance of wildlife in the Everglades.

Lake Okeechobee, which is regionally important to fish and wildlife, will once again become a healthy lake. Both the shallow and open water areas within the lake, essential to its commercial and recreational fishery, will be greatly enhanced by improved water levels. This will mean more abundant and healthier fish populations. Water quality in the lake will also be improved significantly by reducing the pollutant loading of water flowing into the lake.

The CERP will also improve fresh water deliveries to Florida and Biscayne bays by increasing the flow and reduce the water lost to tide through the St Lucie and Caloosahatchee estuaries. Appropriate fresh water regimes will result in substantial improvements in aquatic and semi-aquatic habitats, including mangroves, coastal marshes, and seagrass beds interacting together to produce food, shelter, and breeding and nursery grounds; these coastal habitat areas will support more balanced, productive fish, shellfish, and wildlife communities.

The CERP will begin to reverse, in a relatively short time, the pattern of ecological degradation that has been occurring in the natural system for many decades. If we start now, the natural wetlands system of south Florida will be healthier by the year 2010.

Like many other public works projects, implementing the CERP is an investment in the nation's future. With this investment, we can restore this unique ecosystem and leave a proud legacy for future generations. If we do not make the investment now, we will suffer the irretrievable loss of America's Everglades.

As noted above, the estimated cost to implement the CERP is $7.8 billion. It will also cost approximately $182 million each year to operate, maintain, and monitor the CERP. Taken together over the more than 20 years needed to implement the CERP, the annual costs amount to just over $400 million. In general, the Federal Government will pay half the construction cost and the State of Florida and the South Florida Water Management District will pay the other half. We are proposing that the State pay 60 percent of the cost to operate and maintain the project.

The Restoration Effort Begins with Authorization in the Water Resources Development Act of 2000

On April 10, 2000, on behalf of the Administration, I submitted to Congress a comprehensive legislative proposal that will allow the implementation of the CERP. Our legislation would accomplish several important objectives, including the following:

1). a congressional endorsement of the importance of restoring the Everglades and that such restoration is a National priority;

2). a congressional endorsement of the CERP as a technically sound blue print for Everglades restoration;

3). the authorization of an initial package of projects, including four pilot projects and ten of the 68 project features;

4). the authorization of a program authority to allow the expeditious implementation of smaller project features;

5). language that will ensure that project benefits are achieved and maintained for as long as the project is authorized; and

6). provisions that recognize the importance of outreach to socially and economically disadvantaged individuals and business owners in the South Florida ecosystem.

A more detailed discussion of each of these objectives as well as additional information on our legislative proposal is provided below.

Recognizing the Importance of Everglades Restoration. It is important that Everglades restoration becomes a priority and that the Nation recognizes that a national treasure—America's Everglades—is at great risk. Our legislation would allow the Congress to declare, like the Administration, the importance of this unprecedented natural resource.

The CERP—a Technically Sound Blue Print for Restoration. Our legislation would have Congress affirm that the CERP is a technically sound approach for restoring the Everglades. With its extensive public involvement and adaptive assessment approach, the CERP will lead to a healthy and sustainable ecosystem. It is important that the comprehensive nature of the CERP be maintained and that the temptation to pick and choose various parts or features be avoided. The 68 CERP features work together and each provides important benefits to the ecosystem.

Authorization of Pilot projects will address technical uncertainties. Prior to full-scale implementation, six pilot projects, with a total cost of $97 million, will be built to address uncertainties with some of the features in the CERP (two of these pilot project were authorized in the Water Resources Development Act of 1999). In our legislation we have proposed authorization of the four remaining pilot projects at a total cost of $69 million. These four projects include: aquifer storage and recovery in the Caloosahatchee River Basin; in-ground reservoir technology in the lake belt region of Miami-Dade County; levee seepage management technology adjacent to Everglades National Park; and advanced wastewater treatment technology to determine the feasibility of using reuse water for ecological restoration.

Authorization of an Initial set of construction features will provide immediate system-wide water quality and flow distribution benefits and use already purchased land. Ten projects, totaling $1.1 billion, are recommended for initial authorization. These projects were selected for initial authorization based on the following four factors: 1) the ability to provide immediate water quality and flow distribution benefits to the ecosystem; 2) the ability to utilize lands already purchased; 3) the linkage with on-going restoration projects; and 4) maximizing the benefits of Federal investments already undertaken. For example, if authorized, we could update the ongoing Modified Water Deliveries Project to make it more consistent with the CERP by taking immediate steps to improve flow distribution through the Tamiami Trail. In ad-

dition, the South Florida Water Management District and the U.S. Department of the Interior have already purchased lands, such as the Talisman lands, for a number of CERP components. Authorization of projects that use lands already purchased will ensure that these lands are utilized for restoration as soon as possible. We have previously provided the committee detailed information on each of the ten projects proposed for authorization.

Implementation of the CERP provides flexibility to adapt to new information. Since no plan can anticipate exactly how a complex ecosystem will respond during restoration efforts, our legislation proposes an extensive monitoring program. For example, the remaining Everglades are only one-half as large as their original size and current boundaries often do not follow natural ground elevations or habitat patterns. For these and many other reasons, the ways in which this ecosystem will respond to the recovery of more natural water patterns could include some unforeseen outcomes. The CERP anticipates the possibility of such outcomes. The CERP is designed to allow project modifications that take advantage of what is learned from system responses, both expected and unexpected. Called adaptive assessment, and using a well-focused regional monitoring program, this approach will allow us to maximize environmental benefits while ensuring that restoration dollars are used wisely. The monitoring program, which will cost approximately $10 million per year, will measure how well each component of the plan accomplishes its objectives, and, this, in turn, sets up opportunities for refinement of succeeding components. Independent scientific review through a National Research Council panel, the Committee on Restoration of the Greater Everglades Ecosystem or "CROGEE", is also an integral part of this process.

Programmatic authority will expedite implementation. To expedite the completion of certain smaller features, an authorization is being sought similar to the "critical projects" authority in Section 528(b)(3) of the Water Resources Development Act of 1996. These projects would "produce independent, immediate, and substantial restoration, preservation and protection benefits," and expedite some components of the CERP. The programmatic authority would be limited to those individual components of the CERP that have a total project cost of $70 million or less, with a maximum Federal share of $35 million per project. A total of 27 components of the CERP, with a total combined Federal and non-Federal cost of $490 million, could be implemented in an efficient and expedited manner. Components such as the Arthur R. Marshall Loxahatchee National Wildlife Refuge internal canal structures, the Lake Okeechobee watershed water quality treatment facility and the Florida Keys tidal restoration project could be accomplished under this programmatic authority.

The remainder of the CERP's features are to be included in future Water Resources Development Acts. Our legislation makes it clear that Congress will be asked to authorize the remaining components of the CERP in subsequent WRDA bills. At a cost of approximately $6.2 billion, these 26 remaining features will undergo additional studies and analysis before authorization is sought from Congress. Many of these project components are dependent on the results of the proposed pilot projects such as aquifer storage and recovery features and the in-ground reservoirs in Miami-Dade County. Based on the implementation schedule, project implementation reports will be submitted to Congress periodically through the year 2014.

Cost sharing. Consistent with the Water Resources Development Act of 1996, the non-Federal share of the cost of implementing the projects is 50 percent. Our legislation directs the non-Federal local sponsor to be responsible for the acquisition of lands, easements and rights-of-way, and relocations, and provides credit for such acquisitions toward the non-Federal share. In a change from the Water Resources Development Act of 1996, we have recommended that operations and maintenance costs be shared 60 percent non-Federal and 40 percent Federal. We believe that this is an appropriate allocation of costs in light of the benefits to Federal lands that will be achieved by implementation of the CERP.

Project Implementation Reports bridge the gap between the CERP and detailed design. Before any construction starts on any of the 68 features of the CERP detailed design, engineering, and environmental review will completed. Specifically, prior to implementing any authorized project feature, a Project Implementation Report (PIR) for each project will be completed to address its cost-effectiveness, engineering feasibility, and potential environmental impacts. The PIR, which will include public review and comment, will bridge the gap between the programmatic-level design contained in the CERP and the detailed design necessary to proceed to construction. The purpose of the PIR is to affirm, reformulate or modify a component or group of components in the recommended CERP. PIRs for each project will identify any additional water to be made available by that project for the natural system, existing legal users and other water related needs, consistent with pro-

grammatic regulations governing the dedication and management of water to be issued.

Recognition of socially and economically disadvantaged individuals. Recognizing that a large percentage of the population of the south Florida ecosystem is made up of minority groups (e.g., 20.5 percent Hispanic), our proposed legislation would establish a program to ensure that socially and economically disadvantaged individuals within the south Florida ecosystem are informed of the CERP and have a meaningful opportunity to review and comment on its implementation. In addition, the legislation requires that a program goal be established that not less than 10 percent of the amounts made available to construct projects be expended with small business concerns owned and controlled by socially and economically disadvantaged individuals within south Florida.

Assuring that CERP Benefits are Achieved and Maintained. Both the natural and human environment benefits substantially from the implementation of the CERP. Ensuring that these benefits are achieved and maintained is an important part of our legislation. Further, our legislation ensures that existing legal users are not harmed and that overall authorized levels of flood protection are maintained.

Specifically, our legislation provides that the primary and overarching purpose of the CERP is to restore, preserve and protect the natural system within the South Florida ecosystem and directs that the Plan be implemented in such a way to ensure that the benefits to the natural system and human environment in the form of proper deliveries of clean fresh water at the proper time and distribution are achieved and maintained for so long as the Central and Southern Florida is authorized.

To meet our assurances objectives, our legislation creates a four part, tiered approach. The first part is the legislation itself, which makes it clear that Congress intends for the benefits to be achieved and maintained.

The second part involves the development of a programmatic regulation to identify, in a greater detail, the amount of water to be dedicated and managed for the natural system and the human environment. This regulation would serve as a bridge between the legislation and the project specific regulations discussed below. We believe that this will help minimize unnecessary debates 10 to 20 years from now when projects are being completed. The programmatic regulation would be issued with the concurrence of the Secretary of the Interior and after consultation with the Governor and other agencies. In addition, the public would have the opportunity to review and comment on the proposed regulations.

The third part or tier is the detailed design, engineering, and environmental work that will be completed for each feature before construction starts. This will also give the public, interest groups, the State, and the Tribes substantial opportunities to influence the final characteristics of each feature. Further, the non-Federal sponsor will have a lead role with the Corps for each feature. This will be codified in a project cooperation agreement that will be developed for each feature.

The final part of our approach is the project specific regulations that will be developed for each feature. These regulations will be developed based on public review and comment and in consultation with other Federal agencies, the tribes, and the State. These regulations will prescribe in greater detail how each feature will provide its intended benefit(s). Further, all project specific regulations will be consistent with the programmatic regulations, based on the best available science, and assure that quantity, quality, timing, and distribution issues are addressed.

CERP Implementation Reports to Congress. Restoring the Everglades will require a large investment on the part of the Nation's taxpayers. We believe that it is important to disclose fully how the restoration is going over the next 30 plus years. In this regard, we have developed a reporting program. Specifically, the Secretaries of the Army and the Interior, in consultation with the Environmental Protection Agency, Department of Commerce and the State of Florida, will jointly submit reports to Congress, beginning on October 1, 2005 and ending on October 1, 2036 that describe the implementation of the CERP. The report will include the determination of each Secretary concerning the benefits to the natural system and the human environment that have been achieved as of the date of the report.

Conclusion

July 1, 1999, was a historic day for ecosystem restoration. An unprecedented ecosystem restoration plan was presented to Congress for authorization. The CERP represents the best available science and a solid roadmap for restoring an American treasure, the Everglades. The CERP also represents a partnership between many Federal agencies, two Indian tribes, the State of Florida, and many local governments—all who recognize the import of this effort and the consequences of inaction. This partnership is vital to our long-term success and we must all work to ensure that it is sustained.

The CERP is also a reflection of the contemporary Army Corps of Engineers. Our agency has made environmental restoration a priority mission.

Restoration of the Everglades is a high priority for the Clinton/Gore Administration, including the Army Corps of Engineers. It is a high priority for many in Florida, including the Florida Congressional delegation. We must make it a priority for the Nation. The Everglades are America's Everglades and each of us should try to understand better the importance of saving this treasure.

The ecological and cultural significance of the Everglades is equal to the Grand Canyon, the Rocky Mountains or the Mississippi River. As responsible stewards of our natural and cultural resources, we cannot sit idly by and watch any of these disappear. The Everglades deserves the same recognition and support.

We are now at an important crossroads in our efforts to restore this internationally important ecosystem. The future of the CERP now rests with the Congress who must authorize and fund its implementation. If we act now with courage and vision to implement the CERP we will be successful and we will leave a proud Everglades legacy. If we fail to act, our legacy will be one of lost opportunities for all future generations. The world is indeed watching as we make this choice.

Mr. Chairman, that concludes our statement. Again, it has been a pleasure to participate in this hearing and I look forward to working with you and the rest of the committee on this important issue. With me today is Mr. Michael Davis, my Deputy Assistant Secretary for Policy and Legislation, and Mr. Stu Applebaum from the Army Corps of Engineers Jacksonville District. We would be pleased to answer any questions you may have.

RESPONSES BY JOSEPH WESTPHAL TO ADDITIONAL QUESTIONS FROM SENATOR SMITH

Question 1. Can you describe the formula your office used in devising the 40–60 Operations and Maintenance split and justify why the Federal Government should be assuming this percentage of O&M costs.

Response. The Corps analysis shows that 80 percent of the new water obtained under the Comprehensive Everglades Restoration Plan (CERP) will be used to benefit the natural system environment and the remaining 20 percent will benefit regional water supply for urban and agricultural users. The 40–60 cost sharing was derived as follows:

Cost share 80 percent of the new water for the natural system as environmental restoration at 50 percent—Federal; 50 percent—Non-Federal. Cost share 20 percent of regional water supply at 100 percent non-Federal, or

Cost Sharing Formula:

Non-Federal 0&M = 0.80 (.50) + 0.20 (1.00) = 60 percent
Federal 0&M = 0.80 (.50) + 0.20 (.00) = 40 percent

The Administration supports Federal cost sharing of the restoration portion of the O&M since the CERP will provide benefits to Department of the Interior administered lands including Everglades National park, Big Cypress National Preserve, Loxahatchee National Wildlife Refuge, and Biscayne Bay.

Question 2. Is there precedence for the Federal Government to share in this O&M cost?

Response. No. The Everglades restoration effort is of national and international significance. The Administration considers the CERP as a unique initiative that can be separated from traditional Corps projects. In addition, Federal lands, including Everglades National Park, Big Cypress National Preserve, Biscayne Bay National Park, and the Loxahatchee National Wildlife Refuge, administered by the Department of the Interior, would substantially benefit for the project. Further, the south Florida ecosystem is a unique and complex national treasure.

Question 3. Can you provide the committee with the cost-per-unit of water that would be derived from wastewater reuse as opposed to water derived from other sources in the Plan.

Response. Unit costs for water are cliff cult to compare between alternative features since these facilities have benefits that are not accounted for in a simple, unit cost comparison, nor does the analysis account for flood or water quality aspects of reservoirs. For example, aquifer storage and recovery provides multi-year recovery that is not possible with surface storage. Wastewater reuse is unique in that is available during both dry and wet seasons. Notwithstanding the difficulty of directly comparing the unit costs, following is a listing of the unit cost for these features:

Feature	Unit cost (per 1,000 gallons)
Wastewater Reuse	$1.71 to $1.76
Aquifer Storage and Recovery	$1.27 to $2.50
Surface Storage	$0.85 to $1.31

(Note: Unit costs include annual O&M)

Question 4. Can you comment on the desirability of wastewater as a source of water for the natural system?

Response. The reclaimed water from wastewater treatment plants provides an opportunity to capture an additional source of water to achieve the ecosystem restoration goals in south Florida This new source of water is unique in that it is available during both dry and wet seasons. Further, unlike other regions in south Florida, the Southern Everglades, Florida Bay and Biscayne Bay all have a demand for water during the wet season that exceeds the levels presently provided by the Central and Southern Florida Project system.

Question 5. When I read the provision on Programmatic Regulations, my initial reaction was that this concept is completely contrary to the flexibility the Corps is trying to build into the Plan with Adaptive Assessment and is entirely premature. How can you suggest issuing a one-time regulation, 2 years after date of enactment of the Plan, for a system that will not be fully functioning for 20–30 years?

Response. The Administration believes that the programmatic regulations are needed and flexible to identify, in a greater detail, the amount of water to be dedicated and managed for the natural system and the human environment. This regulation would serve as a bridge between the legislation and the project specific regulations that will be developed as we proceed with each Project Implementation Report. We believe that this will help minimize unnecessary debates 10 to 20 years from now when projects are being completed. These regulations could be adjusted over time based on our extensive monitoring and adaptive assessment program.

Question 6. What was the rationale behind making the project-specific regulations consistent with the programmatic regulations as opposed to with the Comprehensive Everglades Restoration Plan (April 1999 document)?

Response. Project specific regulations will be developed based on public review and comment and in consultation with other Federal agencies, the tribes, and the State. These regulations will describe in greater detail how each feature in the CERP will provide its intended benefit(s). Further, all project specific regulations will be consistent with the programmatic regulations, based on the best available science, and assure that quantity, quality, timing, and distribution issues are addressed. Also, these regulations, like the programmatic regulations, could be adjusted over time based on our extensive monitoring and adaptive assessment program.

Question 7. Section 902 of WRDA 1986 requires the Corps to seek congressional approval if a project's costs are going to exceed the authorized amount by 20 percent. Are the 68 components of the Comprehensive Plan included in the Administration's WRDA proposal subject to this provision? Do you think it would be more or less cost-effective to instead institute an overall project cap, that is, a cap of the entire Plan, rather than on the individual components.

Response. Each of the project components in the CERP, when authorized, are subject to the conditions, regarding allowable increases in cost, established in Section 902 of the Water Resources Development Act of 1986. The Army believes that it is not appropriate to apply the Section 902 funding cap to a program based upon a conceptual design. Historically, the 902 cap has been applied to projects as they are individually authorized. In this case, each of the proposed components will undergo further evaluation, refinement, and detailed design, during preparation of the Project Implementation Reports. While the Comprehensive Restoration Plan takes a conservative approach toward cost uncertainties, including contingencies to account for uncertainties, more accurate cost assessments will be developed and included in the PIRs. Since the most accurate cost estimates will be available for individual components at the completion of the PMs, the most cost-effective approach to the 902 cap question would be to apply it to individual components as they are authorized.

Question 8. Why is it important to move forward with authorization of this initial set of ten projects this year? Can you describe what the impacts of delay would mean for the ecosystem?

Response. These 10 initial projects will provide immediate system-wide water quality and flow distribution benefits to the ecosystem, utilize lands already purchased, and maximum integration with ongoing Federal and State projects. These projects will begin reversing the ecological damage in the Everglades and other south Florida ecosystems, which is still continuing Initiating project construction in 2004 requires authorization prior to the spring of 2002. Immediate authorization of these components will improve the timing of environmental water deliveries to the Water Conservation Areas including reducing damaging flood releases from the Everglades.

The risks of not implementing this Plan and authorizing the initial projects are severe. Reductions in the spatial extent of healthy wetlands will continue. Species that require large expanses of natural habitat, such as the Florida panther, snail kite, and wading birds, will increasingly become stressed by the loss of habitats. Losses of organic soils will continue to reduce water storage capacity and ecological productivity throughout the ecosystem. Canals and levees will continue to encourage the introduction and spread of exotic plants and animals. Unnatural fire patterns will increasingly damage the natural landscape of south Florida South Florida recreational and commercial fishing will decline, both in freshwater Everglades and Lake Okeechobee, and in the Caloosahatchee and Florida Bay estuaries.

Question 9. Would you be supportive of a safeguard mechanism, perhaps comparable to the process Congress approved last year for the Challenge 21 program, which would allow these projects to be authorized, but give the Congress appropriate oversight?

Response. Yes. The Army supports congressional committee review of the project implementation reports prior to initiation of construction on the initial ten projects recommended for authorization in the Administration's bill.

Question 10. When is a Record of Decision expected on the Modified Waters Delivery Project?

Response. The authorized Modified Water Deliveries to Everglades National Park project (MOOD) Record of Decision (ROD) was signed on May 13, 1993. Currently in the design phase, there are three additional Supplements to the Environmental Impact Statement (EIS) underway. They are the 8.5 Square Mile Area, Conveyance and Seepage Control features, and Tamiami Trail modifications. The projected ROD dates on these are September 2000, May 2001, and June 2001, respectively. In addition, it is envisioned that an operational EIS will be initiated on the MOD and C–111 projects.

The Jacksonville District is also working on an EIS to cover the interim operations until the MOD project is in place. This EIS will cover the operations necessary to meet the interim targets outlined in the U.S. Fish and Wildlife Service's Biological Opinion dated February 19, 1999. These interim targets are necessary to assist in the recovery efforts on the Cape Sable Seaside Sparrow.

Question 11. In regard to credit for in-kind service, is this a special privilege only being extended to the non-Federal Comprehensive Everglades Restoration Plan, or are there other major projects with similar provisions? Does the Corps have a general policy on credit for in-kind service? Is credit being provided for unauthorized projects? How does providing this credit to the South Florida Water Management District for authorized projects enhance the efficiency of Everglades restoration? Would there be any cost savings associated with this efficiency?

Response. The general policy of the Army is that credit is not Afforded for in-kind services unless there is clear statutory language to do so. Congress has authorized credit for in-kind services in an increasing number of programs and projects over the years. For example, non-Federal interests must pay 50 percent of the cost of feasibility studies. By law, half of that contribution may be in the form of in-kind services (33 USC 2215). A broad number of general authorities permit non-Federal interests to build all or a portion of specified types of projects. Examples include Section 215 of the Flood Control Act of 1968, as amended (42 USC 1962d-Sa), Section 104 of the Water Resources Development Act of 1986 (33 USC 2214), Section 204 of the Water Resources Development Act of 1986 (22 USC 2232), and Section 211 of the Water Resources Development Act of 1996 (33 USC 701b–13), to name a few. A number of environmental infrastructure programs that Congress has authorized beginning with the Water Resources Development Act of 1992 have contained provisions providing for the non-Federal interests to provide all or part of the project work. In other words, full reimbursement has been authorized. Examples include the program for South Central Pennsylvania (Section 313 of the Water Resources Development Act of 1992, as amended), the program for Southern and Eastern Kentucky (Section 531 of the Water Resources Development Act of 1996), and the programs for Mississippi, Central New Mexico, Ohio, and Rural Nevada and Montana,

all authorized in the Water Resources Development Act of 1999 in Sections 592–595, respectively. Additionally, Congress has also authorized credit for work in-kind performed by non-Federal interests in several environmental restoration programs. Examples include projects authorized under Section 1135 of the Water Resources Development Act of 1986, as amended (33 USC 2309a), and Section 206 of the Water Resources Development Act of 1996, as amended (22 USC 2330). In the former instance, the non-Federal interest may provide up to 80 percent of the required non-Federal share through in-kind services. Under the latter authority, the non-Federal interest may be reimbursed for all project related expenses. Finally, there have been a number of specific projects over the years where Congress has authorized credit or reimbursement for in-kind services performed by non-Federal interests. Recent examples from the Water Resources Development Act of 1999 include Section 318 concerning Lake Michigan, Illinois, Section 338 addressing Arthur Kill, New York and New Jersey, Section 339 addressing Kill Van Kull and Newark Bay Channels, New York and New Jersey.

Regarding the questions concerning credit for in-kind services for "unauthorized projects", we assume the question refers to projects under the Continuing Authorities Program (CAP). Again, to the extent authorized by law, the Army affords credit for in-kind services. As stated above, the Section 1135 and 206 program are considered part of CAP in that the specific projects are not separately authorized by Congress. Yet, as already indicated, Congress has enacted legislation to provide credits or reimbursement. It should also be noted that pursuant to Section 208 of the Water Resources Development Act of 1999, specific authority was provided to allow the non-Federal interests participating in the Everglades Critical Restoration program to receive credit for work-in-kind performed on each individual project, including full reimbursement. Similar to the CAP, none of the Critical Restoration Projects was separately authorized by Congress.

The South Florida Water Management District (SFWMD) has great expertise in many of the areas that will be called upon in order to implement the Everglades restoration. The Army believes it can leverage that expertise by working in partnership with the SFWMD throughout the design, construction and operation and maintenance of the restoration project(s). To the extent that the SFWMD has capabilities it is efficient from the standpoint of scheduling and use of resources, as well as cost effective and equitable to permit the SFWMD to provide all or portion of its financial obligations through in-kind services. Allowing for the use of in-kind services in lieu of a cash contribution may also ease some of the cash-flow issues for the SFWMD associated with percent cost sharing on this ambitious project.

Question 12. I understand that there is a list of projects under the original Central and Southern Florida Project that can be Reauthorized once the CERP is enacted. Can you provide the committee, for the record, a list of these projects, their estimated costs, and why the project would be slated for deauthorization?

Response. All or portions of the following separable elements of the C&SF Project are unprogrammed:

Separable element	$1,000's
Martin County	$110,733
Herbert Hoover Dike Levee and Revetment	$69,000
Shingle Creek Basin	$18,291
Everglades National Park	$18,582
St. Lucie Canal	$31,114
Bolles & Cross	$24,474
Water Conservation	$99,755
C–111	$761
Martin County Flood Control	$77,682
Martin County Backflow	$55,530
Lake Okeechobee	$324,232
Lake Okeechobee Rec	$40,439
Port Mayaca	$2,429
Kissimmee Basin	$25,659
St. Lucie County	$3,596
C–103S	$1,854
Total	$904,131

Note: This does not include the $7,363 for the Upper St. John River Basin separable element.

The CERP does not address de-authorization of existing portions of the C&SF Project, therefore, authorization of the CERP will not in and of itself provide justification for de-authorization of the above mentioned separable elements or portions thereof. The determination of the need for these already authorized features of the C&SF Project will in some cases be addressed during the PIR process as part of the implementation plan. As you are aware, the PIRs are subject to the National Environmental Policy Act compliance, agency and public review, as well as congressional review and approval. De-authorization of other portions of the C&SF Project would require separate de-authorization action.

RESPONSES BY JOSEPH WESTPHAL TO ADDITIONAL QUESTIONS FROM SENATOR BAUCUS

Question 1. Concerns were raised at the hearing regarding the Modified Water Delivery Project. Please describe the history of this project, the type arid cause of problems that have been encountered in implementing it, and what actions the Corps is taking to resolve any remaining problems and expeditiously complete this project.

Response. The Modified Water Deliveries Project was authorized as a part of the Everglades National Park Protection and Expansion Act of 1989 (P.L. 101–229 Section 104). This Act authorized the Secretary of the Army to construct modifications to the Central and Southern Florida (C&SF) Project to improve water deliveries to Everglades National Park (ENP). The act also authorizes the Secretary to construct a flood mitigation system for the residential area in the East Everglades (known as the 8.5 Square Mile Area) and adjacent agricultural lands if the Secretary determines that those areas will be adversely affected by project operations. This Act led to the preparation of a General Design Memorandum by the U.S. Army Corps of Engineers to evaluate alternatives for improving water deliveries to the ENP and providing flood mitigation, where needed. This GDM was completed in 1992 and approved. It recommended a plan for improving water flows to the ENP and mitigating the impacts to the 8.5 SMA and agricultural lands.

The Project has been under design and construction by the Corps since then. Funding is provided through the Department of Interior. The Corps has completed construction of the S–155A & B structures on the southern end of Water Conservation Area (WCA) 3B and the construction of the flood proofing plan for the Tigertail Indian Camp on Tamiami Trail. The acquisition of the land needed for the mitigation plan for the 8.5 SMA has also been completed.

Several issues have surfaced during the design of the remainder of the project. These concerns have resulted in additional evaluations: 1) A conveyance and seepage analysis that is examining the plan for reconnecting WCA 3A and WCA 3B and seepage management from WCA 3B to restore more natural waterflow; 2) An analysis of Tamiami Trail to examine the impacts of higher water levels and flow diversions on the function and maintenance of the highway, and; 3) An analysis of the 8.5 SMA conducted at the request of the local sponsor for this portion, the South Florida Water Management District, to examine alternatives to the mitigation plan for the 8.5 SMA as developed and approved in the 1992 GDM These evaluations are ongoing and are scheduled to be completed this year. Multi-agency teams have been established to expedite completion and resolution of issues to these problems. The current schedule calls for completion of the overall project by December 2003. The ultimate solution to the Tamiami Trail may take longer to implement.

RESPONSES BY JOSEPH WESTPHAL TO ADDITIONAL QUESTIONS FROM SENATOR VOINOVICH

Question 1. The Administration's Comprehensive Everglades Restoration Plan proposal provides for authorization for construction of 10 projects at a total cost of about $1.1 billion. These projects are proposed to be authorized in accordance with the June 22, 1999 report of the Chief of Engineers and subject to review and approval by the Secretary of a Project Implementation Report for each project. The Chief's Report and the April 1999 report of the District Engineer provide only a conceptual plans for these 10 initial projects that does not contain any meaningful level of detail on costs, benefits, environmental analysis, design, engineering or real estate. Your authorization proposal for these projects means that Congress will authorize $1.1 billion of work without ever reviewing the normal information usually contained in a feasibility report and for these projects is delegating all of the review and approval responsibility for these 10 large expensive projects to the Secretary.

Is it going to be the standard practice of this Administration to seek congressional authorizations of Corps projects based on conceptual plans? Do you think it is appropriate for the Congress to abrogate its usual oversight role in authorizing these 10 projects with a feasibility level of detail?

Response. While the Comprehensive Plan report was written at a level of detail that is less specific in nature than recent projects recommended for congressional authorization, the feasibility report has been completed in accordance with legislation and Army policy and guidance. The Administration believes that there are minimal, if any, risk associated with authorizing the initial ten projects recommended in the CERP. A Chief of Engineers' Report has been completed and these projects have been developed to sufficient detail to support justification.

The Administration is not proposing authorization of a project based on only conceptual level of detail. The CERP, however, is a detailed plan. It is based on extensive analysis of problems and issues and comprehensive modeling of conditions and options to be considered for addressing the environmental restoration, water supply and flood control needs of the region. These efforts have been ongoing for 7 years and included independent scientific review and input from all affected and interested parties. We recognize there are unknowns as to the full effectiveness of some of the proposed actions. To address this, the plan allows early implementation of those actions that will provide clear and significant benefits while other actions are more fully evaluated as to need and scope based on effectiveness of initial actions and pilot projects.

The Army supports appropriate congressional oversight prior to initiation of construction.

Question 2. On the same subject of appropriate authority to be delegated to the Secretary of the Army in implementing the plan, the Administration's proposal for the Comprehensive Plan includes the authority for the Secretary of the Army to approve projects without specific congressional authorization that have a cost of up to $70 million and a Federal share up to $35 million. Under this authority up to 27 projects with a combined cost of up to $500 million could be constructed without any further authorization action by Congress. On a nationwide basis the upper limits of the Corps programmatic small project authority is projects with a Federal cost of $7 million. Could you explain the basis of this extraordinary level of programmatic authority for the Comprehensive Everglades Restoration Plan?

Response. The recommendation for the programmatic authority is modeled after Section 528 of the Water Resources Development Act of 1996 which authorizes the Secretary of the Army to expeditiously implement restoration projects that are deemed critical to the restoration of the south Florida ecosystem. These projects are referred to as Critical Projects. Critical Projects were defined as those projects which would "produce independent, immediate, and substantial restoration, preservation, and protection benefits. " A similar programmatic authority is recommended to help expedite implementation of certain components in the Comprehensive Plan. It is proposed that projects included under the programmatic authority will be those components that are part of the Comprehensive Plan and have a total project cost up to $70, 000, 000 with a maximum Federal cost of $35, 000, 000. Under this authority, 27 projects could be expedited at a total cost of $489, 885, 000.

Question 3. The Chief of Engineer recommended that the State of Florida be responsible for 100 percent of the operation and maintenance costs of the Comprehensive Plan in accordance with the provisions of the Water Resources Development Act of 1996. The Administration has recommended that operation and maintenance costs be shared on a 60 percent non-Federal and 40 percent Federal basis. The Federal role is justified by the fact that much of the water supplied by the plan benefits Federal properties including Everglades and Biscayne Bay National parks. However, as proposed, the Federal share of the operation and maintenance costs for the Comprehensive Plan is coming from the budget of the Corps of Engineers. Why shouldn't the Federal share of the operation and maintenance costs come from the Department of the Interior?

Response. The Administration's proposed legislation includes language that the Federal share of operation and maintenance costs shall be 40 percent. This legislation does not specify that the 40 percent share would be funded by the Corps of Engineers.

Question 4. The Administration proposal for the Everglades Comprehensive Plan allows credit or reimbursement for the South Florida Water Management District for any approved work performed by the South Florida Water Management District to implement the Comprehensive Plan. If the Federal appropriations for the Comprehensive Plan design and construction are not forthcoming or if the level of Federal appropriations are lower than needed to maintain efficient schedules, will you

approve design and construction by the South Florida Water Management District to the extent that there is a large commitment on the part of the Federal Government to reimburse the South Florida Water Management District for the Federal share?

Response. The ASA(CW) has executed an agreement with the SFWMD that would preclude the local sponsor from exceeding the 50 percent of the total project design or getting substantially ahead of the Federal share of actual total expenditures at any time. It is not the Corps intent to create a reimbursable situation with the SFWMD in design and construction of the project.

Question 5. The Stormwater Treatment Areas that are being constructed as part of the Everglades Construction Project and the additional Stormwater Treatment Areas proposed in the Comprehensive Plan will result in significant reductions in the phosphorus levels but that there is not good scientific evidence that they will be able to achieve the long term water quality standard for phosphorus estimated at 10 parts per billion. There is currently insufficient information to estimate the additional costs required to meet the long term standard. If those additional costs turn out to be significant and result in a substantial increase in the cost of the Comprehensive Plan, who should pay for these additional costs? Should they be a Water Management District cost or should they be shared with the Corps?

Response. The Everglades Construction Project (ECP) is a without project condition for the Comprehensive Everglades Restoration Plan. The ECP includes a series of six stormwater treatment areas (STAB) totaling more than 44, 000 acres north of the Everglades designed to capture and treat runoff to ensure that water quality standards are met. The objective of the ECP is to produce flows to the Everglades which contain an average total phosphorus concentration of 50 parts-per-billion (ppb). This is the interim target for the Everglades established by the Settlement Agreement to the Federal Everglades lawsuit. A final numeric phosphorus standard (an average concentration that is not expected to create an imbalance in natural populations of aquatic flora and fauna) is to be established by the Florida Department of Environmental Protection (FDEP) by December 31, 2003. In the event that no standard is established by FDEP by this deadline, the default will be 10 ppb. However, based on recent studies, it is expected that the standard will be in the range of 10–20 ppb. Supplemental treatment technologies will be incorporated into the design and operation of the ECP to ensure that flows to the Everglades meet the final numeric standard by December 31, 2006. The costs for designing and implementing supplemental treatment technologies necessary to meet the final numeric phosphorus standard will be the responsibility of the State of Florida (except for the C–51/STA 1 East Project, which is cost-shared between the U.S. Army Corps of Engineers and South Florida Water Management District).

Additional water quality treatment is not anticipated to be imposed beyond what was considered in the CERP planning work. The interagency water quality subteam specifically considered this question with regard to the Everglades (Water Conservation Areas and Everglades National Park). Although the CERP, when implemented, will modify flows into the Everglades STAs constructed by the South Florida Water Management District and the U. S. Army Corps of Engineers, it was demonstrated by William W. Walker, Ph.D., that changing the timing and location of flows into the Everglades through the STAs to meet ecological targets would not adversely affect the design and expected performance of the STAB. Whatever supplemental technology is incorporated into the STAs to meet the yet-to-be established numeric phosphorus standard for the Everglades should be capable of being adapted to modified flows as contemplated in the CERP.

Moreover, the CERP provides an opportunity to enhance the design flexibility and performance of the Everglades STAB. Therefore, it is not expected at this time that CERP will result in any significant additional expenditures to achieve adequate water quality in the Everglades Protection Area beyond that which has already been committed to by the South Florida Water Management District and the Federal Government.

The 35, 600 acres of additional STAs included in the CERP, coupled with the 181, 000+ acres of additional surface storage included in the CERP and the more than 44, 000 acres of STAs with supplemental treatment technology being implemented by the South Florida Water Management District should provide water of adequate quality for ecosystem restoration of the Everglades and other South Florida natural systems. It is important to note that most of the STAs included in the CERP treat surface waters that are to be delivered to areas outside the Everglades. As a cost-effective measure, the interagency team formulated the CERP to segregate natural system water that has extremely low levels of nutrients and contaminants from urban and agricultural runoff water, which would require extensive treatment before being discharged into the Everglades. Therefore, the CERP includes STAs to

meet water quality needs for ecosystem restoration of other regions of the CERP planning area, notably Lake Okeechobee, the Indian River Lagoon/St. Lucie River Estuary, Caloosahatchee River Estuary, and urban areas in Palm Beach, Broward, and Miami-Dade Counties.

Question 6. The Comprehensive Plan includes a project for the State of Florida Pal-Mar and J.W. Corbett Wildlife Management Areas that is 76 percent land acquisition, a project for Loxahatchee National Wildlife Refuge that is 93 percent land acquisition and a project for the Southern Corkscrew Area that is 90 percent land acquisition. In total these projects involve the acquisition of about 11,000 acres of land that is not needed for water storage or treatment. Are these primarily land acquisition projects appropriate to be cost shared with the Corps of Engineers as part of the Comprehensive Plan or should they be accomplished by the State of Florida and /or the Department of Interior?

Response. These projects involve hydrologic modifications that will provide significant environmental restoration benefits and as such should be accomplished under the Corps of Engineers Environmental Restoration authority.

RESPONSES BY JOSEPH WESTPHAL TO ADDITIONAL QUESTIONS FROM SENATOR CRAPO

Question 1. Has the Corps of Engineers or Department of Interior made recommendations for or undertaken actions that are consistent with a modified reconnaissance or feasibility study for the projects contained in the comprehensive Everglades restoration plan?

Response. The Corps of Engineers completed a Reconnaissance Report for this project in November 1994 The Feasibility Report was completed in April 1999 and was transmitted to Congress on 1 July 1999. While this feasibility report was written at a level of detail that is less specific in nature than recent projects recommended for congressional authorization, the feasibility report has been completed in accordance with legislation and Army policy and guidance. Project implementation reports (PIRs) will be used to bridge the gap between the CERP feasibility report and detailed design. These PIRs do not differ from traditional Corps feasibility reports. Because we have completed the feasibility phase as directed by the Congress, the Army decided to distinguish the subsequent documents that tier off the CERP by calling them PIRs.

Question 2. If not, would the Corps and Department be willing to follow the traditional schedule of studies and reviews before undertaking each project within the plan?

Response. Although the feasibility report has been completed in accordance with HO USA CE policy and guidance, due to the scale of the project, the level of feature design is not as detailed as some traditional Corps feasibility reports. Therefore, prior to initiation of construction, project implementation reports will be completed for each project. These reports will document advanced planning, engineering and design, real estate analysis, and supplemental requirements under the National Environmental Policy Act. These studies will be conducted over the next few years. For the projects authorized in WRDA 2000, it is anticipated that these reports will be approved by the Secretary of the Army without need for further congressional action unless major changes to the Comprehensive Plan are recommended. Project implementation reports will also be prepared for the other projects. These will be transmitted to Congress for specific project authorization. Subsequent to the approval or congressional authorization of the project implementation report, recommended projects will progress to detailed design and construction.

Question 3. If yes, would this be a divergence from the Corps' long-held policy of requiring reconnaissance and feasibility studies prior to undertaking a project?

Response. There has been no divergence from the Corps of Engineers policy requiring the completion of reconnaissance and feasibility studies.

Question 4. Has a full modeling of the costs and benefits of each project been performed?

Response. The evaluation of the Comprehensive Plan included: (1) the NED costs (in monetary terms), (2) the anticipated environmental benefits resulting from restoration measures (in non-monetary terms), (3) the positive and adverse NED effects expected to occur in the following economic impact categories: agricultural water supply, municipal and industrial water supply, commercial navigation, recreation, and commercial fishing (in monetary and non-monetary terms) and (4) the positive and adverse regional economic effects (RED) resulting from project implementation.

The Corps of Engineers ecosystem restoration policy has been formulated in recognition of the practical limits of available economic tools to value environmental

resources. As specified in Corps of Engineers ecosystem restoration policy (EC 1105–2–210: Ecosystem Restoration in the Civil Works Program J, ecosystem restoration projects are not subject to traditional benefit-cost analyses. Economic justification of ecosystem restoration is not required in the traditional sense of ensuring that the monetary benefits of the alternative plans exceed their monetary costs. An ecosystem restoration proposal must still be justified by comparing the monetary and non-monetary costs and benefits of restoring degraded ecosystems. However, Corps ecosystem restoration evaluation procedures focus on the non-monetary benefits of restoration, comparing these benefits to monetary costs through the use of cost effectiveness and incremental cost analysis procedures.

Question 5. Has a cost-benefit analysis been performed on the proposed land acquisitions?

Response. No. A cost benefit analysis has not been performed for the proposed land acquisitions. The land requirements needed for the project components have been estimated and are included in the overall project costs.

Question 6. What are the expected benefits and problems associated with the use of aquifer storage recharge (ASR) units?

Response. Aquifer Storage and Recovery (ASR) was included in the Comprehensive Plan for several reasons: ASR wells have small land requirements and can be distributed to provide regional benefits in populated areas; ASR operations can provide an extended dry season water resource that is not possible with surface reservoirs; and ASR wells can store large amounts of water during prolonged wet periods. ASR involves pumping high quality freshwater through a well, for storage underground in a suitable aquifer, and recovery of that water from storage when needed. ASR will store excess water during the wet season for later recovery during the dry season. The recovered water will augment regional water supplies. There is not a demand in the following dry season, the water can be held to meet future demands. ASR will be used to buildup a "bank account" of stored water for future demand or for emergencies by leaving more water in storage than is recovered each year.

Aquifer Storage and Recovery technology has been used successfully in the United States for three decades. Most of these ASR facilities utilize treated water as their source but several "raw" (untreated) ground water and surface water ASR facilities are currently under design, permitting, construction or testing in South Florida. ASR technology has great potential to store large volumes of raw ground and surface water below ground and requires significantly less land than above ground reservoir storage.

Pilot projects will be used to identify any site specific problems and to clarify design needs before full implementation of ASR.

Question 7. Has the full range of science for design, monitoring, and evaluation of the pilot proposal for ASRs been examined?

Response. In December 1998, an Aquifer Storage and Recovery Issue Team was formed by the South Florida Ecosystem Restoration Working Group to develop an action plan and identify projects to address the surface water, hydrogeological and geochemical uncertainties associated with regional aquifer storage and recovery facilities. This report will serve as the basis for developing the aquifer storage and recovery pilot projects which will determine the specific water quality characteristics of waters to be injected and the water quality characteristics of the receiving aquifer. In addition, the pilot projects will provide information on the hydrogeological and geotechnical characteristics of the upper Floridan Aquifer System within the regions, and the ability of the upper Floridan Aquifer System to store injected water for future recovery.

Question 8. What will be the impact of the ASR units on each of the Water Conservation Areas?

Response. ASR provides storage to improve the availability of water to the Water Conservation Areas as well as other regions of the system. ASR wells, as included in the Comprehensive Plan, have different purposes for different areas. For this reason, the three major applications have to be considered differently for the LEC, Caloosahatchee River Basin, and the Lake Okeechobee components.

The primary purpose of ASR in the LEC is to provide dry season regional benefits to the Biscayne Aquifer thus enhancing water supply. Some secondary benefits are associated with flood management when co-located with a surface storage area The primary purpose of ASR in the Caloosahatchee River Basin is to provide dry season regional deliveries to the Caloosahatchee River for both water supply and minimum flows to the Caloosahatchee Estuary. Currently, the minimum flow the estuary is zero—which leads to hypersalinity in the estuary. Water supply needs are met from Lake Okeechobee after groundwater sources are depleted.

There are secondary flood management benefits to the Caloosahatchee ASR since they are combined with a surface storage reservoir. The addition of ASR to Lake Okeechobee was done primarily improve the health of the Lake especially during in the low stage periods and prolonged high stage periods. There are secondary benefits to the Caloosahatchee and St. Lucie Estuaries due to an incremental reduction of regulatory releases.

Question 9. What will be the impact of the restoration plan on the hydrological needs of the Big Cypress National Preserve?

Response. The area of the Big Cypress region primarily affected by the Comprehensive Plan lies within the Big Cypress National Preserve (BCNP) boundary, the BCNP addition lands, the Big Cypress Seminole Indian Reservation and Miccosukee Indian Reservation. Components of the Comprehensive Plan affecting the hydrology, and thus the ecology of this area include: 1) modifications to the L–28 Interceptor canal that would reroute water from the West and North feeder canals to wetlands in northeast Big Cypress, including degradation of the southwest L–28 Interceptor levee and filling in the adjacent canal to enhance sheetflow into the BCNP addition lands; 2) pump stations and spreader canals built or relocated along the L–28 Interceptor in order to facilitate sheetflow off of the Seminole and Miccosukee reservations; 3) assumption that this alternative will comply with the Seminole Indian Tribes' Conceptual Water Conservation System master plan; 4) construction of two stormwater treatment area to ensure acceptable water quality prior to discharge from the North and West Feeder canals; and 5) degradation of the L–28 levee (south of the gap with the L–28 Interceptor), L–28 Tieback and L–29 Levee between Forty-mile bend and the L–67, and removal of all associated structures, including the S–344, S–343(A), S–343(B) and the four S–12 (A-D) structures.

Limited and somewhat scattered effects would be expected along the eastern boundary of the BCNP, along the L–28 Interceptor and in the sloughs draining the BCNP toward the Gulf of Mexico south of Loop Road. Hydrologic effects should be most dramatic and widespread in the area southwest of the L–28 Interceptor, where the Comprehensive Plan returns hydroperiod to more natural conditions. Finally, as the water quality entering the northeastern Big Cypress from the Feeder canals is, at present, of poor quality, it is important that the recommended plan ensure adequate water quality treatment prior to restoring more natural flows from this area. It is assumed, for planning purposes, that compliance with the Big Cypress Seminole Water Conservation Master Plan, in combination with the two proposed stormwater treatment area along the Western and Northern Feeder canals, will achieve these water quality standards. Without successful achievement of water quality targets, flows entering the northeastern Big Cypress may, in fact, cause more harm than good to the receiving waters.

Question 10. What role have expected population changes in the region been incorporated into identifying the scope of the restoration plan and in the identification of local sponsors for each project?

Response. The CERP was formulated and evaluated with full recognition of the anticipated increase in population in south Florida over the next 50 years. Therefore, the Plan will able to deliver the appropriate amount of water to the ecosystem with an increased population.

Question 11. What role did water flow functions and natural flow characteristics in the region play in the analysis and development of the restoration plan?

Response. The overarching objective of the Comprehensive Plan is the restoration, preservations and protection of the south Florida Ecosystem while providing for other water related needs of the region. The focus of the recommended Comprehensive Plan has been on recovering the defining ecological features of the original Everglades and other south Florida ecosystems. What made these ecosystems unique was their topographic flatness and expansiveness, and that they formed hydrologically integrated systems from boundary to boundary. What this means in a healthy ecosystem is that water patterns in one part of the system could be used to predict the patterns throughout the system. Animals living in the Everglades would "read" the water patterns, and "know" where to go to find the food and water that they needed for successful reproduction and survival under a range of natural conditions. It was the combination of connectivity and space that created the range of habitats needed for the diversity of plants and animals. The construction of the many levees and dikes designed to compartmentalize the Everglades and separate Lake Okeechobee from its natural overflow, and the canals that drained water to the coast, disrupted these natural patterns, and destroyed the ability of many animals to find the dependable habitat needed for their survival at the right time.

The recommended Comprehensive Plan, by removing over 240 miles of internal levees in the Everglades, and approaching recovery of the natural volume of water in the remaining wetlands, will restore these essential defining features of the pre-drainage wetlands over large portions of the remaining system. The plan also includes water storage and water quality treatment areas that will improve water quality conditions in the south Florida ecosystem. In response to this substantial improvement, the characteristic animals of these ecosystems will show dramatic and positive responses. At all levels in the aquatic food chains, the numbers of such animals as crayfish, minnows, sunfish, frogs, alligators, herons, ibis, and otters, will markedly increase.

Question 12. What has been the impact on tree islands of current management plans? What is the expected impact of the restoration plan on Bee islands?

Response. The Comprehensive Plan makes substantial progress toward remedying the two most significant causes of habitat degradation for wildlife within WCA–3A. The first of these is flood damage to tree islands, with attendant loss of upland tree species, willow strands that serve as wading bird nesting sites in northeastern WCA–3A, tropical hardwood hammocks in southwestern WCA–3A, and habitat throughout the WCA for island-dependent organisms such as nesting reptiles, white-tailed deer, and migratory and nesting songbirds. The second major cause of habitat degradation has been the destruction of peat soils, marsh vegetation, and tree islands as a result of wildfires brought on by drought conditions in the north. Together, the reduction in the frequency and intensity of these two sources of environmental damage should be expected to lead to substantial restoration within this large portion of the remnant Everglades ecosystem.

Question 13. Can a restoration plan that does not infringe upon the agricultural community's future water allocation rights be successful? If yes, how can this be managed? If no, why not?

Response. The recommended Comprehensive Plan will significantly increase the capability to supply water from the regional system to agricultural users. This will provide better protection from economically harmful water supply cutbacks and allow agriculture to remain productive. Storage facilities associated with Lake Okeechobee such as those north of the lake, and Lake Okeechobee aquifer storage and recovery will enable the lake to remain an important source of water supply while keeping lake stages at more ecologically desirable levels. Additional storage facilities built throughout the system will diversify sources of water for many users and enable recycling of water within a basin to meet dry season demands, significantly improving the reliability of agricultural water supply in the future.

RESPONSES BY JOSEPH WESTPHAL TO ADDITIONAL QUESTIONS FROM SENATOR GRAHAM

Question 1. In your brief I know you did not have art opportunity to discuss the restoration work that the Army Corps has already conducted on the Everglades project. Can you describe these projects arid their status?

Response. There are a number of significant and important restoration projects currently underway in south Florida I will briefly summarize these projects below:

a. The Kissimmee River Restoration Protect involves the ecosystem restoration of the historic floodplain to reestablish wetland conditions resulting in the restoration of 27,000 acres of wetlands and riverine habitat in the Kissimmee watershed. The project will be accomplished through the backfilling of 22 miles of canal C–38, modifications to the operation of the lakes, modification or removal of several structures and canals, and excavation of about 9 miles of new river channel. Construction was initiated in the fall of 1997 and is scheduled to be completed in September 2009.

b. The West Palm Beach Canal protect (C–51) provides water quality treatment, reduction of damaging freshwater discharges to Lake Worth, and increased water supply for the Loxahatchee National Wildlife Refuge, the Everglades and other users. Construction was initiated fast year. The eastern basin works are complete and work continues in the western basin, which is scheduled for completion in March 2003.

c. Another protect underway is the South Dade county Protect (Canal C–111). C–111 normally discharges into Florida Bay via overland flow across the eastern panhandle of Everglades National Park and discharges into Taylor Slough which ultimately also flows to Florida Bay. The project will not only maintain existing flood protection to the southeast coast urban areas, but will also minimize the need for damaging freshwater discharges to Barnes Sound, restore more natural hydrologic conditions to the Taylor Slough Basin in Everglades National Park and restore his-

toric freshwater flows into Florida Bay. Project construction was initiated in August 1996 and is scheduled for completion in May 2003.

d. The Corps/DOI/South Florida Water Management District partnership for Modified Water Deliveries to Everglades National Park will make structural modifications and additions to the Central and Southern Florida (C&SF) Project enabling water deliveries for the restoration of more natural hydrologic conditions in Everglades National Park's Northeast Shark River Slough Basin. Project construction is scheduled for completion in November 2003.

e. Section 528 of WRDA 1996 provided authority for Critical Restoration Protects would provide immediate, independent and substantial restoration benefits. Last year we executed the first Project Cooperation Agreement (PCA) with the State of Florida for a carrying capacity study of the Florida Keys and on January 7, 2000, the Corps executed 7 more PCAs with the South Florida Water Management District and the Seminole Tribe of Florida to implement the following projects:

Project	Total Costs
East Coast Canals (C–4)	$1,300,000
Tamiami Trail Culverts	$8,336,000
Western C–11 Water Treatment	$9,630,000
Seminole Big Cypress Water Conservation	$49,332,000
Southern CREW/Imperial River Flowway	$12,021,000
Lake Okeechobee Water Retention / Phosphorus Removal	$16,360,000
Ten Mile Creek Water Preserve Area	$29,066,000
Lake Trafford	$17,540,000
Florida Keys Carrying Capacity Study /1/	$6,000,000

[1]PCA executed in fiscal year 1999

Question 2. How are these initial projects similar or different than what is being proposed in the Restudy?

Response. For the purposes of developing the CERP, the Restudy team assumed that authorized/ongoing projects were in place and operating This assumption provided a basis for developing the future " Without Project Condition " which all alternative plans were compared against. Since these projects had already been authorized, no attempt was made to reevaluate the merits of these ongoing projects. Instead, the team utilized data and reports developed for these projects to determine if modifications were necessary.

Generally, the team determined that these projects provide an important first step toward ecosystem restoration of the Everglades. However, there are some projects, such as the Modified Water Deliveries Project, that will need to be modified based on the CERP. To implement these modifications, the Restudy Team is working closely with the Modified Water Deliveries team and other project teams to ensure integration of these modifications. Further, to facilitate and expedite these modifications, the Corps is recommending immediate authorization of features that will have an impact to ongoing projects. This initial authorization will ensure the development of comprehensive solutions that otherwise could not be pursued under existing conditions.

Question 3. Can you describe the impact to the Everglades and surrounding ecosystems if we move forward with this project?

Response. The entire south Florida ecosystem, including the Everglades, will become healthy, with many of its natural characteristics restored. Urban and agricultural water users will also benefit from enhanced water supplies. Flood protection, so important to hurricane-prone south Florida, will be maintained and, in some cases, improved.

Economic benefits from the implementation of the CERP are wide-ranging and are linked with the availability of clean, abundant water in the ecosystem. Not only is water the key to ecosystem restoration, it is necessary for a sustainable agricultural and urban environment. It plays a significant and obvious role in commercial and recreational fishing.

The CERP will provide for ecosystem restoration. First and foremost, the goal of the Plan is to restore, protect and preserve a natural treasure—the south Florida ecosystem. The focus of the Plan has been to restore the defining ecological features of the original Everglades and other parts of south Florida. In response to this substantial improvement, the characteristic animals will show dramatic and positive responses. The number of animals—crayfish, minnows, sunfish, frogs, alligators, her-

ons, ibis, and otters—at virtually all levels in aquatic food chains will markedly increase. Equally important, the natural distribution of plants and animals will return to more natural patterns as more pre-drainage water flows are restored.

The Plan will support the return of the large nesting "rookeries" of wading birds to Everglades National Park and the recovery of several endangered species to more certain and optimistic futures. Wading birds, such as herons, egrets, ibis, and storks, are symbolic of the overall health of the Everglades. As recently as the 1950's and 1960's, large " super colonies" of nesting waders remained in the Park. Today there are none. Wading birds, perhaps more than any other animal, "assess" the quality of the entire basin of south Florida wetlands, before making "decisions" about where and when, or even whether, to nest. The recovery of the super colonies will be a sure sign that the entire ecosystem has made substantial progress toward recovery. Of the endangered species, the wood stork snail kite, Cape Sable Seaside Sparrow, and American crocodile, among others, will benefit and increase. We are confident that implementation of the CERP will once again allow us to witness what is now only a fading memory of the former abundance of wildlife in the Everglades.

Lake Okeechobee will once again become a healthy lake. Both the shallow and open water areas within the lake, essential to its commercial and recreational fishery and other aquatic species, will be greatly enhanced by the improved water levels as a result of the CERP. This will mean more abundant and healthier fish populations. Water quality in the lake will also be improved significantly by reducing the pollutant loading of water flowing into the lake. Lake Okeechobee provides huge regional benefits to wildlife, including waterfowl, other birds, and mammals.

Major benefits will be provided to the Caloosahatchee and St. Lucie estuaries, and Lake Worth Lagoon. The CERP eliminates almost all the damaging fresh water releases to the Caloosahatchee and most detrimental releases to the St. Lucie and makes substantial improvements to Lake Worth Lagoon. As a result, abundant favorable benefits will be provided for the many aquatic species that depend on these areas for food, shelter, and breeding grounds, thereby enhancing the productivity and economic viability of estuarine fisheries.

The Plan will also improve fresh water deliveries to Florida and Biscayne Bays. Appropriate fresh water regimes will result in substantial improvements in aquatic and semi-aquatic habitats, including, mangroves, coastal marshes, and seagrass beds interacting together to produce food, shelter, and breeding and nursery grounds. These coastal habitat areas will support more balanced, productive fish, shelfish, and wildlife communities.

Question 4. Can you describe the impact to the Everglades and surrounding ecosystems if we do not move forward with this project?

Response. Although some level of ecological improvement will occur in the south Florida ecosystem as a result of implementation of projects currently planned outside of the CERP, the cumulative, regional benefits from these projects would not result in a sustainable south Florida ecosystem. Specifically, based on an evaluation of conditions in the year 2050 without the CERP, the overall health of the ecosystem will have substantially deteriorated. Analyses conducted during the feasibility study show that making modifications to only some portions of the Central and Southern Florida Project in order to achieve sustainable natural systems will not succeed. Conditions without the CERP in 2050 fail to meet the basic needs of the south Florida ecosystem.

Demands placed on Lake Okeechobee result in damaging water levels and extreme harm to the littoral zone. Damaging fresh water discharges into the Caloosahatchee and St. Lucie estuaries result in major harm to fisheries. Damaging high flows alter salinity balances in Lake Worth Lagoon. Hydropatterns predicted for the Water Conservation Areas are harmful to tree islands. Everglades National Park does not receive enough freshwater flow to maintain important aquatic habitat in Shark River Slough. Low flows to Florida and Biscayne Bays also result in harm to the resources in these areas. These ecological problems would not be corrected solely by implementation of currently planned or ongoing projects.

Question 5. Based on your view of how the Restudy authorization process will move forward, will Congress' action in WRDA 2000 be the first phase in a multistage authorization process or will this year be the only time this project comes before Congress?

Response. Yes, WRDA 2000 will be the first of many subsequent WRDA bills on authorization of CERP projects. The process and schedule for authorizing the CERP and its components was developed using a phased approach based on an analysis of the scheduling of plan features and ongoing Federal and State programs, such as the C–111 Project and the Everglades Construction Project. The process for implementing the CERP through congressional action assumes:

a. Congressional approval of the CERP in WRDA 2000 and the appropriate framework for restoration;

b. Initial authorization of a specific set of key components and pilot projects in the WRDA 2000;

c. A programmatic authority in WRDA 2000 similar to the existing Critical Projects authority contained in WRDA 1996;

d. Future congressional authorization of components in subsequent WRDAs through 2014; and

e. Implementation of some components without further congressional action.

Question 6. Can you briefly explain your vision of how the assurances process would work as you have proposed it?

Response. The assurance language is designed to ensure that the benefits that flow from the CERP are achieved and are maintained for as long as the project is authorized. This includes both benefits to the natural system and to the human environment (e.g., water supply). The Administration's language also ensures that existing legal users are allowed to continue to use that water (both water supply and natural environment).

We believe that the programmatic regulations are needed to provide a framework for developing operations plans for project components. This will provide a system-wide context as we proceed with each Project Implementation Report. The programmatic regulations will provide another level of detail on the amount of water to be dedicated and managed for the natural system and the human environment. These regulations could be adjusted over time based on the results of the monitoring and adaptive management program.

Question 7. As you described in your testimony, some of the projects submitted to Congress for authorization in WRDA 2000 will not have the traditional, detailed feasibility study completed. The language you have submitted includes a definition for a Project Implementation Report. Can you compare this definition to that of a traditional feasibility study and identify any differences and why they are there?

Response. A project implementation report (PIR) is a new type of reporting document unique to the Everglades and south Florida ecosystem restoration initiative. These documents will bridge the gap between the CERP and the detailed design necessary to proceed to construction. A PIR will not differ from a traditional Corps feasibility report in that it will contain detailed information on the planning and design of a component or series of components proposed for implementation. Specifically, PIRs will develop the remaining detailed technical information to implement the project, including additional plan formulation, engineering and design, detailed cost estimates, environmental analyses, flood protection analyses, water quality analyses, economic analyses, siting and real estate analyses, and preparation of supplemental National Environmental Policy Act documents. PIRs will also document a Plan component, or group of components, contribution to the CERP performance and describe any needed refinements and modifications to the CERP resulting from the detailed planning and design efforts.

The purpose of the PIR is to affirm, reformulate or modify a component, or group of components, in the CERP. All planning analyses, including economic, environmental, water quality, flood protection, real estate, and plan formulation, conducted during preconstruction design activities will be documented and included in PIRs. The PIR will be the vehicle to identify, quantify and attempt to resolve any uncertainties surrounding the cost and performance of each major component. These uncertainties are not limited to hydrologic performance of the specific structure component, but also include the uncertainties surrounding the expected ecosystem response to the component. A clear description of the expected environmental outcome of each component will be included in the PIR. PIRs will typically be completed in 18 to 36 months.

The PIRs for those projects recommended for initial authorization, and projects implemented under the programmatic authority, would be reviewed and approved by the Secretary of the Army prior to construction. All other PIRs for future projects would be submitted to the Congress for authorization similar to traditional Corps feasibility reports.

Question 8. Regarding the property purchased by the Federal Government in the Talisman transaction in 1998, can you identify on your chart where that property is and explain what benefit the use of these lands as a reservoir will bring to the restoration project? Why is it important to move forward with this project authorization this year?

Response. The Everglades Agricultural Area (ERA) storage reservoir component includes above ground reservoir(s) with a total storage capacity of approximately 360, 000 acre-feet located on land associated with the Talisman Land purchase in

the EAA. The design for the reservoir(s) assumed 60, 000 acres, divided into three, equally sized compartments with the water level fluctuating up to 6 feet above grade in each compartment.

This project is located on lands in the Everglades Agricultural Area in western Palm Beach County on lands purchased with Department of Interior Farm Bill funds, with South Florida Water Management District funds, and through a series of exchanges for lands being purchased with these funds. The area presently consists of land that is mostly under sugar cane cultivation. This project will be implemented consistent with the Farm Bill land acquisition agreements. This project will improve timing of environmental deliveries to the Water Conservation Areas including reducing damaging flood releases from the Everglades Agricultural Area to the Water Conservation Areas, reduce Lake Okeechobee regulatory releases to estuaries, meet supplemental agricultural irrigation demands, and increase flood protection within the Everglades Agricultural Area.

This project is included in the initial authorization for three reasons: 1) lands needed for the project have been acquired by the U.S. Department of Interior and the South Florida Water Management District; 2) it provides the opportunity to construct the facility in a manner that is mutually beneficial for the Comprehensive Plan and the sponsor's Everglades Construction Project; and 3) expedites construction of this facility which provides multiple environmental, water supply, and flood protection benefits.

A delay in authorization of this project component will prolong damaging flood releases from the EAR into the Water Conservation Areas and damaging releases from Lake Okeechobee into the coastal estuaries. Further, any delay will also jeopardize the ability of SFWMD to provide required notifications and rise further delays and increased costs to both SFWMD and the Federal Government in implementing the project.

RESPONSES BY JOSEPH WESTPHAL TO ADDITIONAL QUESTIONS FROM SENATOR MACK

Question 1. Do you support applying section 902 of the 1986 Water Resources Development Act to all features of the Comprehensive Plan before us today? (This provision requires a congressional review if a project exceeds 120 percent of authorized cost.)

Response. Yes. The Army supports applying the conditions of Section 902 to all features of the CERP.

Question 2. Do you support congressional committee review and approval of the feasibility level of engineering and design work before any construction can begin on the initial suite of ten projects in the Comprehensive Plan?

Response. Yes. The Army supports congressional committee review of the project implementation reports prior to initiation of construction on the initial ten projects recommended for authorization in the Administration's bill.

Question 3. Do you support requiring full feasibility studies before any other projects are authorized under the Comprehensive Plan?

Response. Yes. The Administration's WRDA proposal includes language requiring completion of feasibility level project implementation reports and submission to Congress for authorization.

Question 4. Do you support modifying the definition of the South Florida Ecosystem to make clear the system includes the lands and waters within the boundaries of the South Florida Water Management District as they existed on July 1, 1999?

Response. Yes. The Army supports this modification.

Question 5. Do you support a provision making clear the Corps of Engineers is only authorized to study the question about providing an additional 245,000 acre-feet of water to the natural system?

Response. Yes. The Army would support such a provision clarifying the Corps commitment to study the proposal of providing an additional 245, 000 acre-feet of water to the natural system.

Question 6. Do you support language making clear that the Corps must work with the State of Florida to ensure all groundwater discharges resulting from the Comprehensive Plan meet all applicable water quality standards and water quality permitting requirements?

Response. The Comprehensive Plan includes features related to the protection and improvement of quality. The Army intends to design and construct the individual project features to take into account the protection of water quality by considering applicable State water quality standards for those features specifically described in

the CERP. The Army is also authorized to cost share in additional projects for the improvement of water quality where it is deemed essential to the Everglades restoration. However, from the standpoint of the non-Federal interest that we enter into an agreement with on a specific project, these individual project features may be subject to various State regulations relating to water quality, including permitting requirements. As a matter of comity, the Army will cooperatively work with the non-Federal interests, including the State of Florida, to ensure that the requisite standards are complied with. However, unless there has been a specific waiver of Federal immunity, we cannot agree to comply with or subject the Army to individual permit requirement, which may change over time. Additionally, oftentimes permit requirement relate to circumstances that may be beyond the reach of the Government where the non-Federal interests will operate and maintain the facility. The Army has agreed to include a monitoring period after the completion of physical construction to verify that the features, including features for the improvement and protection of water quality already included in the CERP, perform as designed. This initial operational testing and monitoring period would allow for any adjustments, if necessary, prior to transfer of the feature to the non-Federal interest to operate and maintain.

Question 7. Do you support replacing the project purposes language stated in (c)(1) of the Administration's draft with language restating the purpose of the Comprehensive Plan developed and passed in WRDA 1996?

Response. Yes. The Army supports restating the language from the Water Resources Development Act of 1996.

Question 8. Do you support additional programmatic authority for the Corps to construct projects of limited cost but are in keeping with the Plan's purposes and have independent and substantial benefit to Everglades restoration?

Response. Yes. The Army supports this provision.

Question 9. Do you support a 50/50 cost share between Federal Government and the State of Florida on operation and maintenance of the Project? If not, please state the cost share you believe to be appropriate and why.

Response. No. The Army supports the Administration's proposed cost sharing. The Corps analysis shows that 80 percent of the new water obtained under the Comprehensive Everglades Restoration Plan (CERP) will be used to benefit the natural system environment and the remaining 20 percent will benefit regional water supply for urban and agricultural users. The 40–60 cost sharing was derived as follows:

Cost share 80 percent of the new water for the natural system as environmental restoration at 50 percent—Federal; 50 percent—non-Federal. Cost share 20 percent of regional water supply at 100 percent non-Federal, or

Cost Sharing Formula:

Non-Federal 0&M= 0.80 (.50) + 0.20 (1.00) = 60 percent
Federal 0&M= 0.80(.50) + 0.20 (.00) = 409/0

Question 10. Please provide your thoughts on the definition of Project Implementation Reports found in the Administration's language. Do you support this definition? If not, please provide suggestions as to how you would define these reports.

Response. The Army supports the Administration's language defining a project implementation report.

Question 11. Do you believe the Department of Interior and the State of Florida should be on equal footing in developing any regulations related to assurances? If not, why?

Response. Yes. The Army believes that the DOI does have a special interest and stake in the success of the restoration given the extensive DOI lands that will be impacted by implementation of the CERP. In this regard, DOI must be involved in the development of programmatic regulations. We also believe in a full partnership with the State of Florida and that the State will have an equivalent concurrency role for each project feature. That is each feature will require a written agreement between the Army and the State. During the development of our legislation, we considered fully the possibility of granting the Governor a concurrency role on the programmatic regulations. Because of potential legal and constitutional issues we were not able to add it to our legislation. We are working with the Department of Justice to examine this issue and address what may be done to alleviate these constitutional concerns so that the State may be provided a role reflecting an equal partnership in implementing the CERP.

Question 12. Do you support the reporting requirement in the Administration's bill? If not, how would you amend the reporting requirement?

Response. Yes. The Army supports the reporting requirements.

STATEMENT OF MARY DOYLE, ACTING ASSISTANT SECRETARY FOR WATER AND SCIENCE, U.S. DEPARTMENT OF THE INTERIOR

Mr. Chairman, I am Mary Doyle, Acting Assistant Secretary for Water and Science at the Department of the Interior. I serve as the Chair of the South Florida Ecosystem Restoration Task Force, an interagency and intergovernmental entity created by the Congress in the 1996 Water Resources Development Act (WRDA) to facilitate intergovernmental coordination directed toward the restoration of the South Florida ecosystem. I am pleased to have the opportunity to address you today to discuss a matter of great importance to the Department of the Interior—the restoration of America's Everglades.

In its natural state, the South Florida ecosystem was connected by the flow of water south from Lake Okeechobee through vast freshwater marshes—known as the Everglades—to Florida Bay and on to the coral reefs of the Florida Keys. The Everglades covered approximately 18,000 square miles and were the heart of a unique and biologically productive region, supporting vast colonies of wading birds, a mixture of temperate and tropical plant and animal species, and teeming coastal fisheries. These superlative natural resources were nationally recognized with the establishment of Everglades National Park in 1947. Designated internationally as both a Biosphere Reserve and World Heritage Site, the park was expanded in 1989. At 1.5 million acres, the park preserves the largest remaining subtropical wilderness in the United States. Its wonders are widely known, and include unique habitats of saw grass prairies, tree islands, estuarine environments and the vast waters of Florida Bay. The park is also known for its diverse bird and wildlife populations. Each year over one million visitors from around the world visit Everglades National Park. Other significant Federal conservation areas in the region include the Big Cypress National Preserve, Biscayne National Park, the Florida Keys National Marine Sanctuary and 16 units of the National Wildlife Refuge System, including Loxahatchee, Florida Panther, and Florida Keys National Wildlife Refuges, to name a few. These federally protected areas conserve Everglades habitat, protect some the most outstanding coral reef and marine resources in the United States, provide important conservation areas for wildlife and migratory birds and provide unique recreational opportunities to numerous visitors.

Early in the last century, vast efforts were undertaken to drain the Everglades in order to develop the region. These efforts culminated in 1948 with congressional authorization and construction of the Central and Southern Florida Project, a flood control project jointly built and managed by the Army Corps of Engineers and the South Florida Water Management District. Comprising over 1,800 miles of canals and levees and 200 water control structures, the Central and Southern Florida Project succeeded in draining half of the original Everglades and allowed the development of cities on the lower east coast of Florida and the expansion of the farming area south of Lake Okeechobee known as the Everglades Agricultural Area (EAA). Although historically and naturally most rainwater had soaked into the region's wetlands, the Central and Southern Florida Project canal system has for years drained water off the land such that an average of 1.7 billion gallons of water per day are discharged into the ocean.

As a result, not enough clean fresh water is available for the environment, resulting in long-term problems for the Everglades ecosystem including the federally designated areas above, and the communities in the region. Examples include: 90 percent reduction in wading bird populations; 68 species listed as endangered or threatened; reduced fisheries in Biscayne and Florida Bays; loss of over five feet of organic soil in the EAA; degraded water quality in inland and coastal areas; infestation and spread of invasive exotic plant species on over 1.5 million acres; damaging fresh water and pollutants into the St. Lucie, Caloosahatchee, and many other estuaries; loss of wetlands that provide important species habitat and ground water recharge; and loss of tree islands and damaging ecological effects in the State and tribally managed water conservation areas north of the park. Without significant overhaul to the existing Central and Southern Florida Project works and features, these problems already at crisis level, will only get worse, and water shortages are a certainty in future years as water demands continue to grow in South Florida.

Everglades restoration, and a fuller understanding of how it is defined and implemented, are the challenges of a new era in natural resource management and environmental policy. Eight years ago the Department embarked on an historic journey with the Army Corps to assess the profound environmental damage done to the Everglades ecosystem by the Central and Southern Florida Project, and, on an eco-

system-wide basis, design measures for the restoration and protection of what remains of the natural system. With the submission of the Comprehensive Plan to Congress last summer, that journey is now at an important juncture.

In my statement today, I will discuss the Administration's legislative proposal for the Comprehensive Everglades Restoration Plan which is part of the Water Resources Development Act of 2000.

The Comprehensive Everglades Restoration Plan

In July of last year, the Army Corps, with the South Florida Water Management District as the local sponsor, submitted to Congress its Central and Southern Florida Project Comprehensive Everglades Restoration Plan to restore America's Everglades. The Comprehensive Plan is a conceptual framework for structural and operational changes to the Central and South Florida Project that will result in restoration of the ecosystem over the next 30 years. The Department fully supports the Comprehensive Plan.

Overall, the Department believes the Comprehensive Plan provides a practical and effective approach to ensure the long-term restoration of the South Florida ecosystem while providing for future water supply and flood control needs. Further, the Department believes that the Comprehensive Plan must be implemented in its totality. While the authorizations to implement the Comprehensive Plan are planned to be phased, the Department believes that the Comprehensive Plan must be implemented fully to guarantee that the benefits promised to the natural system are ultimately received. The Department is eager to work with the committee and other Members of Congress to obtain the necessary authorizations and funding to allow the Army Corps to proceed with and complete implementation of the Comprehensive Plan.

When the Comprehensive Plan is fully implemented, what currently remains of the natural system in South Florida will gradually recover and function in a manner characteristic of the pre-drainage Everglades. It will become once again an interconnected healthy ecosystem, capable of supporting viable, abundant populations of native plants, fish, and wildlife. The Comprehensive Plan will better distribute the water flowing eastward and westward to the coastal areas and southward across Everglades National Park and into Florida Bay. This redistribution of water flows is expected to substantially reduce the huge ecologically damaging releases of fresh water to the coastal estuaries and instead direct water southward in a pattern that more closely replicates historic natural water flows. Associated features of the Comprehensive Plan will allow better control of the timing and quantity of these flows, and improve water quality. These actions will improve the salinity balance and reduce nutrient runoff in the coastal estuaries and in Florida Bay, resulting in substantial improvements to habitat and associated fish and wildlife productivity.

Through the restoration of the natural water flows, the Comprehensive Plan is designed to restore substantially the biological patterns and abundance of wildlife which defined the original Everglades and which prompted the Congress to establish Everglades National Park in 1947. This would likely improve the status of several federally listed endangered species, including the wood stork, American crocodile, the Cape Sable seaside sparrow, and the Everglades snail kite. Full plan implementation is also expected to reverse the degradation of important biologic communities, including seagrasses, coral reefs, marl prairies, and tree islands. Animals will respond to the recovery of more natural water patterns by returning to their traditional distribution patterns, resulting in substantial increases in many species, including crayfish, minnows, sunfish, frogs, alligators, herons, ibis, and otters.

The costs of inaction are incalculable. Absent the full implementation of the Comprehensive Plan, the Everglades ecosystem as we know it today will continue to deteriorate and eventually disappear. Without the Comprehensive Plan, the natural system is likely to experience future water shortages, along with more frequent fire events. These water shortages will make it difficult to maintain aquatic habitat in Shark River Slough and Taylor Slough. Estuaries like Florida Bay will experience increased algae blooms, seagrass die-offs and hypersalinity, reducing sport fisheries and critical nursery functions for the shrimp and lobster fisheries. The ability to recover endangered species will be seriously impaired and as the natural environment suffers, so too will the human environment. The urban population of South Florida will experience water shortage problems and severe flood events as the water supply system, under pressure of continued population growth, becomes impossible to administer adequately.

The 68 project features that make up the Comprehensive Plan are interconnected and interdependent, designed to be built and function as a complete set. Even though individual features will yield substantial benefits, the benefits provided by the entire plan are greater than the sum of the individual parts. Therefore, it is

important that the Comprehensive Plan is implemented in its entirety to achieve the quantity, quality, timing, and distribution of water flows required to restore, protect, and preserve the natural system, including its rich diversity of life, for future generations.

The promise of the Comprehensive Plan depends on effective legislative assurances that the project benefits for the natural system are achieved in a timely manner and maintained for the long-term life of the Central and Southern Florida Project. Once the Everglades is restored, these assurances must guarantee that the operation of the Central and Southern Florida Project will never again negatively affect the natural system areas of the South Florida ecosystem. Without assurances, the project will not have achieved its main objective.

The Administration's Legislative Proposal

The Administration's legislative proposal is the product of extensive interagency discussion and consultation. It includes legislative assurances language that accomplishes two primary objectives. The first is a guarantee, as a matter of Federal law, that there will be sufficient quantities of clean fresh water for the environment at the right places and the right times. Second, the individual project works and features will be designed and managed to further the restoration, preservation and protection of the Everglades.

Enacting a Federal mandate to set aside a quantity of water for the natural system will complement laudable efforts by the State of Florida under State law to establish minimum flows and levels for the environment and to reserve additional quantities of water for the natural system.

Once an appropriate amount of water is dedicated to the natural system as a matter of Federal law, the next important step is to ensure that the Central and Southern Florida Project works and features are operated, or managed, appropriately to deliver the dedicated quantity of water. This can be accomplished by ensuring that the design construction, modification, and operation of Central and Southern Florida Project works and features envisioned under the Comprehensive Plan are carried out by the Corps of Engineers in consultation with the Department of the Interior, Environmental Protection Agency and other Federal and State agencies as appropriate and consistent with the set-aside regulations. This does not mean that the Department will be involved in daily water management decisions, but rather the Department will assist the Army Corps in determining the amount of water, with the proper distribution and flows, to be dedicated and managed for the natural system environment and requiring that all individual components of the Comprehensive Plan further this goal.

In addition, the Administration's legislative proposal provides for the sharing of adversity—flood or drought—appropriately between the natural system and the built environment; and the protection of existing permitted uses, two goals endorsed by the all of the stakeholders in the South Florida ecosystem.

Conclusion

In the Everglades we have an historic opportunity to correct past mistakes and save a national treasure for future generations while at the same time ensuring South Florida's continued viability. The Federal and State governments are doing things that have never before been attempted, certainly not at this scale. This effort has always enjoyed bipartisan support and reflects a level of partnership, of which we are very proud, among the State of Florida, the Federal Government and concerned citizens.

We appreciate the leadership and commitment of Chairman Smith and the committee and other members in the United States Senate in bringing us this far today. If we are to truly succeed, that commitment must continue for many years to come, and we look forward to working with the Subcommittee as the restoration proceeds.

Mr. Chairman, that concludes my statement. Thank you for the opportunity to address the committee on this important effort and I will be pleased to answer any questions you may have.

RESPONSES BY MARY DOYLE TO ADDITIONAL QUESTIONS FROM SENATOR SMITH

Question 1. Did you participate in the development of the Operation and Maintenance formula and do you think that it adequately represents the amount of Federal lands and waters that benefit from the Comprehensive Plan?

Response. Although the Water Resources Development Act of 1996 requires that operation and maintenance costs for the Central and Southern Florida Project be the responsibility of the local sponsor, and that the Comprehensive Everglades Res-

toration Plan provided to the Congress last July called for an equal split of the operation and maintenance costs, the Administration proposes that the costs be split 60 percent non-Federal and 40 percent Federal. The Department did not directly participate in the development of this formula. The Department supports the Administration's position.

Question 2. Can you provide the committee with examples, if any exist, of other instances in which advanced treated wastewater was successfully returned to the natural system?

Response. The Department is not aware of any other instances in which advanced treated wastewater was used to supply hydrologic needs of a natural system. As part of the strategy to capture and store 1.1 million acre-feet of water now presently sent to tide, the Comprehensive Plan proposes two specific wastewater reuse structural features to provide up to 231 million gallons per day of additional water by recycling and treating municipal waste water. These features include the West Miami-Dade County Reuse project and the South Miami-Dade County Reuse project proposed for authorization in 2014. In order to attain superior level of water quality, construction of treatment systems will be necessary. Further, the plans to develop these . features occur late in the Comprehensive Plan implementation process. Other potential sources of water will be investigated before pursuing the reuse facility as a resource, it is possible that the adaptive assessment process and technological improvements may make these features unnecessary.

Question 3. Can you comment on the desirability of waste water as a source of water for the natural system?

Response. As long as the waste water is of sufficient quality, the additional quantity of water that will be captured from this effort will be very beneficial for the natural system.

Question 4. Why is it important to move forward with authorization of this initial set of ten projects this year? Can you describe what the impacts of delay would mean for the ecosystem?

Response. The first ten projects were selected for the initial authorization because they provide system-wide water storage, quality and flow distribution benefits to the ecosystem and they integrate these features with ongoing State and Federal restoration programs. This will result in immediate benefits for Everglades restoration and will enhance the water supply for all uses. For example, as part of the initial authorization, modifications to raise portions of Tamiami Trail are proposed in order to improve the flow of water deliveries into Northeast Shark River Slough that is to be reestablished under the ongoing Modified Water Deliveries Project funded by the Department of the Interior and constructed by the Corps.

Additionally, about 381,000 acre-feet of additional water storage capacity will be created by the construction of six water storage areas, and, where necessary to ensure adequate water quality, accompanying stormwater treatment areas. The most significant of these is the 260,000 acre-feet to be realized from phase one of the Everglades Agricultural Area (EAA) Storage Reservoir that is proposed to be located on lands acquired from the Talisman Sugar Corporation and other sugar producers in the EAA. Delaying the authorization for the EAA Storage Reservoir until a site specific Project Implementation Report is complete jeopardizes the ability of the South Florida Water Management District to provide notice by October 1, 2002, required under the land purchase and exchange agreement, and for the Army Corps to utilize these lands for this purpose by the agreed-upon date for the end of the lease term, which is March 31, 2005

If authorization is delayed, the Everglades ecosystem as we know it today will continue to deteriorate and eventually disappear. Without the Comprehensive Plan, the natural system is likely to experience future water shortages, along with more frequent fire events. These water shortages will make it difficult to maintain aquatic habitat in Shark River Slough and Taylor Slough. Estuaries like Florida Bay will experience increased algae blooms, seagrass die-offs and hypersalinity, reducing sport fisheries and critical nursery functions for the shrimp and lobster fisheries. The ability to recover endangered species will be seriously impaired and as the natural environment suffers, so too will the human environment. The urban population of South Florida will experience the water shortage problems and severe flood events as the water supply system, under pressure, of continued population growth becomes impossible to administer adequately.

Question 5. Would you be supportive of a safeguard mechanism, perhaps comparable to the process Congress approved last year for the Challenge 21 program, which would allow these projects to be authorized, but give the Congress appropriate oversight?

Response. Because of the immediate benefits that will be realized, the Department believes that it is important to authorize the proposed initial construction projects now. The Administration's proposal provides that construction would not begin until a Project Implementation Report is completed.

RESPONSES BY MARY DOYLE TO ADDITIONAL QUESTIONS FROM SENATOR VOINOVICH

Question 1. On April 6 the Corps of Engineers released a draft General Reevaluation Report and Supplemental Environmental Impact Statement on alternatives for providing flood mitigation to the 8.5 Square Mile Area in conjunction with implementing the Modified Water Deliveries Project. The Modified Water Deliveries Project is essential to Everglades restoration and has been mired in controversy. In a draft Fish and Wildlife Coordination Act report on the Corps report the Fish and Wildlife Service and National Park Service rated a total buyout as the best plan. It is going to be very difficult to achieve any workable consensus on a total buyout plan. Is there any plan that would provide flood mitigation for the most developed portions of the 8.5 mile area that might be acceptable to the Department of the Interior and environmental interests?

Response. The Department is working with the Army Corps of Engineers to complete the Supplemental Environmental Impact Statement for the Modified Water Deliveries to Everglades National Park, 8.5 Square Mile Area. The Corps of Engineers, the Department and the South Florida Water Management District are evaluating ten alternatives including flood mitigation. Consistent with the Modified Water Deliveries underlying statutory authorization, the Department has identified some of these alternatives as providing for restoration of more natural hydrologic flows for Northeast Shark River Slough, as well as the required flood protection.

Question 2. The Administration proposal for the Comprehensive Everglades Restoration Plan includes the proposal that the Federal Government share in 40 percent of the operation and maintenance cost of the Comprehensive Plan based on the fact that the plan provides water to Federal properties including Everglades and Biscayne Bay National Parks. As the Federal agency responsible for management of Everglades and Biscayne Bay parks, should the 40 percent Federal share of operation and maintenance come out of the National Park Service budget?

Response. Although the Water Resources Development Act of 1996 requires that operation and maintenance costs for the Central and Southern Florida Project be the responsibility of the local sponsor, the Administration proposes that the costs be split 60 percent non-Federal and 40 percent Federal. The Administration believes that the traditional arrangement of having the Army Corps fund Federal share of the project operation and maintenance costs is more appropriate than having such costs funded by the National Park Service.

Question 3. Is the proposal to redevelop Homestead Air Force Base as a commercial airport compatible with Everglades restoration?

Response. The Air Force is working on a draft Supplemental Environmental Impact Statement (SEIS) and is evaluating the public comments received during the public comment process. Although the Administration has not made a final decision on the reuse of the former Homestead Air Force Base surplus property, the Department has stated its belief that the Mixed Use alternative analyzed in the draft SEIS meets the goals of the SEIS in that it provides for significant economic opportunities for South Miami-Dade County and protects the nearby national parks. Attached is a copy of the Department's comments on the draft SEIS.

U.S. DEPARTMENT OF THE INTERIOR.

MS. SHIRLEY CURRY,
AFBCA External Affairs,
1700 N. Moore Street, Suite 2300,
Arlington, VA 22209–2802.

DEAR MS. CURRY: The Department of the Interior (Department) appreciates the opportunity provided to the National Park Service and the Fish and Wildlife Service to work as cooperating agencies on the preparation of the Draft Supplemental Environmental Impact Statement (Draft SEIS) entitled "Disposal of Portions of the Former Homestead Air Force Base" and dated December 1999. The Department understands that the goal of the Air Force is to dispose of the former Homestead Air Force Base surplus property in a manner that supports economic revitalization of South Florida, while protecting Biscayne and Everglades National Parks.

Homestead Air Force base is less than two miles from Biscayne National Park, and less than 10 miles from Everglades National Park, so what is done at Homestead is enormously important to the parks. Both parks have been set aside by Congress for the fundamental purpose stated in the National Park Service's Organic Act, "which purpose is to conserve the scenery and the natural and the historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." Everglades National Park has also been recognized as both a World Heritage Site and a Biosphere Reserve; it also constitutes the largest remaining subtropical wilderness in the United States, with 1,296,500 acres that have been formally designated by Congress as part of the National Wilderness Preservation System. Biscayne National Park receives nearly 500,00 visitors per year, and Everglades National Park nearly one million visitors per year.

Because South Florida supports some of the greatest biodiversity in the United States, decisions about the disposal and reuse of Homestead Air Force Base are also potentially significant to wildlife resources for which the U.S. Fish and Wildlife Service has responsibility. Crocodile Lake National Wildlife Refuge is about 30 miles from Homestead. Within South Florida 68 species are listed as endangered or threatened under the Endangered Species Act.

The Department believes that the Mixed Use alternative is the preferred approach to achieve the stated goal for the disposal of this property and urges the Air Force adopt the Mixed Use alternative in its Record of Decision. The Department believes that the Mixed Use is preferable to the development of a commercial airport because the Mixed Use alternative:

Environmental Group Plan, or some similar as yet unidentified proposal—provides significant economic renewal and revitalization of south Florida in a manner that avoids degrading the natural environment and resources of Biscayne and Everglades National Parks.

Although the Draft SEIS analyzes the environmental consequences of the proposed action and is based upon the best scientific information available at this time, the Department believes that we have only a modest understanding of the potential environmental impacts and associated cumulative impacts from a commercial airport, located less than two miles from Biscayne National Park and less than 10 miles from Everglades National Park. Although the Draft SEIS notes correctly that we are unable at this time to analyze fully the impacts of a proposed airport expansion because it is so far into the future, the Department believes that similar impacts could occur, only to compound the potential degradation to park resources that may result from a commercial airport.

For all of these reasons, the Department supports the Mixed Use alternative as the best way to provide significant economic opportunities to South Miami-Dade County, consistent with the Air Force's goal to dispose of surplus property at the former Homestead Air Force Base in a manner that supports economic revitalization of South Florida, while protecting Biscayne and Everglades National Parks.

More specific comments addressed in the order in which they are discussed and analyzed in the Draft SEIS follow:

Socioeconomic Benefits

The Department notes that the Mixed Use alternative has the capacity to generate significant economic benefits quickly that are nearly as great as the proposed action. The Draft SEIS states that employment resulting from the Mixed Use alternative in South Miami-Dade County is expected to ultimately increase by 7,848–15,843 jobs, generating a potential increase in earnings of 5228 59 million by 2015 The Draft SEIS calculates that this represents an increase in South Miami-Dade County of about 11–23 percent over the present baseline. Although less than that associated with the development of the commercial airport, this is significant economic growth. Further, the Draft SEIS notes that economic benefits accrue more quickly to the surrounding area from the Mixed Use alternative than from the commercial airport, thereby providing more immediate benefits to the local communities and residents.

In contrast to the commercial airport, the Mixed Use alternative also provides for significant recreational and educational opportunities. The Air Force should carefully consider the immediate and lasting benefits that are offered under both the Collier Resources Company Proposal and the Hoover Environmental Group Plan as they have the potential to provide unique educational and recreational opportunities, as well as expanded tourism in the region.

Airspace Safety

Although the Draft SEIS indicates that serious accidents involving commercial aircraft are infrequent. the Department remains quite concerned about the environmental consequences for any aircraft accidents that may, depending upon the location of such accident. degrade natural resources under the jurisdiction of the Department of the Interior. For example, an accident occurring in the wetlands of Biscayne or Everglades National Parks could destroy valuable habitat and vegetation, degrade soils and cause mortalities of plant and animal species. Accidents often involve the release of tonic fuels that may further degrade the environment. Finally, related aircraft recovery operations have the potential to damage natural resources. These risks, though small, are not present in the Mixed Use alternative.

Noise

The natural ambient soundscape, those sound conditions that exist in the absence of human-caused sounds, is among the important natural conditions and resources of national parks. As already indicated, the Draft SEIS states that a single-runway commercial airport at Homestead would lead to about 231,000 annual aircraft operations at full buildout, as compared to about 20,000 military and other operations at Homestead Air Reserve Station today If expanded in the future, a commercial airport could lead to about 370,000 aircraft operations a year. At the initial proposed level, let alone at an expanded level, these operations could significantly increase man-made noise levels in Biscayne and Everglades national parks, and represent a significant impairment and use of park resources, including natural sounds and a sense of tranquility. The proposed flight tracks and operational levels would also impact Crocodile Lake National Wildlife Refuge.

As with many resources the National Park Service is charged to preserve, the natural soundscapes of Everglades and Biscayne National Parks are not currently pristine and all of the factors affecting those soundscapes are not controlled by the Park Service; However, the National Park Service will restore degraded soundscapes to the natural ambient condition wherever possible and will protect natural soundscapes from degradation due to human-caused noise. To that end, the National Park Service is currently preparing a draft Soundscape Management Plan for Biscayne National Park. Soundscape preservation will also be addressed in the upcoming General Management Plan for Everglades National Park. The Department is concerned that the development of a commercial airport in such close proximity to Biscayne and Everglades National Park will frustrate these management efforts, as well as contribute to the further degradation of the resource.

In terms of the analysis of noise consequences from the proposed action, the Department notes that the draft report by Wyle Laboratories entitled "The Soundscape in South Florida National Parks" and prepared for the National Park Service was included in the appendix to the Draft SEIS. The report was prepared to assist the National Park Service in its efforts to resolve methodological issues associated with defining the "natural soundscape" i.e., the conditions that do or would exist in the absence of human caused noise, in parks across our system. Because the natural soundscape is a natural resource of all parks and is the "affected environment" for assessing the impacts of noise intrusions. the accurate characterization of the soundscape resource is of great interest to the National Park Service.

The Wyle report reviewed the data from earlier studies that were used as the basis for the noise analysis in the Draft SEIS. In various places, the Wyle report points out where the methodology and assumptions in the earlier studies appear to be inconsistent with an accurate assessment of the natural soundscape. For example, the ambient noise level ascribed to the parks by the FM's short term measurements is far higher than the levels measured over a longer period of time by Wyle Laboratories. In addition, the Wyle findings do not validate the vegetation-based extrapolation of data that was done by the FAA. The Department accepts the Draft SEIS's finding that the airport alternative would lead to increases in the amount of time that there would be elevated noise levels in the parks. However, the re-analysis by Wyle Labs indicates that the analysis reflected in the text of the Draft SEIS may underestimate the amount of time each day that noise levels would be elevated.

Notwithstanding these differences in methodologies and assumptions that indicate that different noise impact results could be achieved, increased noise levels in the national parks have the potential to disrupt park employees and visitors, park interpretive programs, and park natural resources. Because of concerns over the differing methodologies and assumptions employed by the Federal Aviation Administration and Wyle Laboratories regarding noise issues, the Department believes that our knowledge of the effect of increased noise levels on the resources in Biscayne and Everglades National Park is evolving. Further, although it is beyond the scope of this Draft SEIS, it is possible that if a commercial airport were to be expanded at

a later date to increase the frequency of air traffic, increased noise levels could result despite any future changes in technology that could mitigate such impact, if such technology were to be developed. It is unclear at this time if that will be the case.

The Department notes, however, that the Mixed Use alternative does not result in any change in noise levels, whatsoever, and would allow the National Park Service to continue its efforts to: (1) preserve and protect for present and future generations the natural resources of nearby parks; (2) restore natural soundscapes to the extent possible; and (3) provide for continued visitor enjoyment of the nearby parks without the impact caused by increased noise levels.

Land Use and Aesthetics

The Department believes that the increased level of aircraft operations associated with the proposed action could seriously affect the land use and aesthetics in the nearby national parks and the enjoyment of present and future visitors.

In terms of the park resources that could be affected by this dramatic increase in aircraft operations flat open landscapes and vast skies are essential resources of Everglades and Biscayne National Parks that are presently enjoyed by visitors and are an integral part the visitor experience. The Draft SEIS describes the impact of increasing the frequency and expanding the distribution of aircraft and contrails on these resources and on the visitors who enjoy these resources. A full understanding of the impact of such intrusion is modest.

The Department notes that Everglades locational Park. receiving close to I million visitors per year and internationally recognized as both a World Heritage Site and Biosphere Reserve, is the largest remaining subtropical wilderness in the United States with 1,296,500 acres officially designated as wilderness. Visitors seeking the solitude of a wilderness setting at Everglades National Park through back country camping or canoeing down Shark River Slough could have their experiences disrupted through increased commercial air traffic over these areas. Similarly, the nearly 500,000 annual visitors to Biscayne National Park may find their experience seriously degraded by the frequent appearance of low altitude approaching and departing aircraft over Biscayne Bay, and associated aircraft lights and noise. The Department notes that Biscayne National Park serves as an important retreat and recreational resource for the surrounding greater Miami urban area.

Similar to vast open day skies, clear, dark, night skies are another important landscape of both Biscayne and Everglades National Parks Based upon the information set forth in the Draft SEIS, it is reasonable to infer that increased aircraft activity, related airport infrastructure, and potential secondary development on the adjacent lands, as well as the -potential for future airport expansion has the potential to permanently impair this resource for current and future park visitors. The Draft SEIS recognizes this impact.

In addition to the effects of a commercial airport on the landscapes and the visitors who enjoy such landscapes, there are also important park interpretive programs that could be affected by such a significant increase in air traffic over existing levels. For example, one of the hallmarks of the environmental education program at Everglades National Park is the opportunity for children with little or no exposure to the natural world to experience a setting where the influence of human activity is minimized. Park rangers teach these children about nature by letting them experience the prevailing "silence" of nature—having them stand quietly for 60 seconds and then having them describe what they saw, heard, and felt during that time. This theme is incorporated into many of the ranger-led activities throughout the parks. Fundamental parts of these educational experiences could be compromised' if not completely altered, and we would be very disappointed if this experience were degraded by the projected air traffic and noise associated with the proposed airport.

The Department notes that the Draft SEIS finds that the potential for incomparability between the Mixed Use alternative and the surrounding landscapes and aesthetics to be less than for the other alternatives. The Department agrees and believes that the Mixed Use alternative does not alter the landscapes or aesthetics of either Biscayne or Everglades National Park or the enjoyment of such resources by visitors in the same way that such resources would be altered by a commercial airport.

Air Quality

The Draft SEIS concludes that the development of a commercial airport at the former Homestead AFB would increase nitrogen deposition in Biscayne National Park by 2, percent over current deposition rates. Nitrogen deposition in Everglades National Park would increase by about 6 percent. If nitrogen levels increased in the waters of Biscayne Bay at the levels described for the commercial airport, that could

speed up the process of eutrophication, which could have a negative effect on ecological productivity.

Polycyclic aromatic hydrocarbons (PAHs) are toxic organic compounds emitted in the exhaust of aircraft, motor vehicles, and industrial boilers. Higher concentrations of PAHs in soils and water body sediments are expected near sources such as airports or roadways. PAHs are considered hazardous air pollutants by the Environmental Protection Agency, but emissions from aircraft engines are not regulated. Although there is limited data on the transport of PAHs, they are apparently very insoluble in water, and readily attach to particles such as soil and dust. In water bodies, PAHs tend to settle to bottom sediments where they affect the benthic communities and ultimately the whole food chain.

The Draft SEIS finds that increased activity of aircraft and other mobile sources associated with the Proposed Action would increase the generation of PAHs in the vicinity of former Homestead AFB. The Draft SEIS suggests that PAHs released from aircraft during night would be widely distributed at extremely low concentrations before reaching the earth The Department is concerned that our knowledge of PAHs in this resource context may be limited and that the distribution of PAHs may not be so widely dispersed, particularly beneath the flight paths in the sensitive nearshore areas of Biscayne Bay. Extremely low levels of total PAHs may be enough to cause a biological impact.

Earth Resources

The Draft SEIS estimates that the commercial airport could result in the reduction of about 800 acres of nearby farmland in South Miami-Dade County. In contrast, the Mixed Use alternative is estimated to result in the reduction of 200–500 acres of nearby farmland. The Department believes that any action that increases the development of land surrounding the former Homestead Air Force Base has the potential to: (1) disrupt the ability to implement recommendations to establish a buffer between the former Homestead Air Force Base and the nearby national parks whatever re-use alternative is chosen as recommended by various groups (discussed further below); and (23 diminish future local and State efforts to acquire environmentally sensitive lands in the area for the purpose of constructing projects that could result in improved water quality and quantity for the Biscayne Coastal Wetlands feature described in the Army Corps Comprehensive Plan for Everglades Restoration. The purpose of the Biscayne Coastal Wetlands feature included in the Army Corps' Comprehensive Everglades Restoration Plan is to rehydrate wetlands and reduce point source discharge into Biscayne Bay by replicating historic overland flow and redistributing available surface water entering the area from regional canals through a coastal wetland spreader system. The Army Corps estimates that about 13,600 acres are needed for this project.

Restoration the South Florida ecosystem is a major priority for State. Federal and local governments. The Department believes that any decision about re-use of the former Homestead Air Force Base should complement the future ability of Federal, State and local efforts to implement these goals. Protecting the immediate environs of Biscayne National Park. including land between and proximate to the base property and the Bay, is vital to achieving ecosystem restoration by securing more natural quality, quantity, timing and distribution of water flows to Biscayne Bay. Potential environmental impacts of redevelopment of the former Homestead Air Force Base property could effect this important ecosystem restoration project.

Various agencies at the local, State and Federal levels have advanced recommendations to create a protected area between former Homestead Air Force Base and Biscayne National Park to protect Biscayne National Park and Biscayne Bay from some of the potential impacts of developing a commercial airport and to restore overland sheet flow to Biscayne Bay. Any re-use scenario, regardless of what re-use alternative is chosen should include protections from urbanization and degradation of the lands between and proximate to former Homestead Air Force Base and Biscayne Bay.

Miami-Dade County's Comprehensive Development Master Plan amendments and its proposed Wildlife/Habitat Management and Mitigation Plan, the South Florida Ecosystem Restoration Working Group's Issue Advisory Team and Drafting Subcommittee reports, the Florida Department of Community Affairs' report to the Administration Commission, and the Administration Commission's final Order on Chapter 288 amendments all include proposals for a buffer area.

Miami-Dade County's Wildlife Habitat Management and Mitigation Plan for Homestead AFB, completed in June 1998, describes "Preservation Considerations for Areas Outside of the Former Base." According to the plan, the areas to the east and southeast of the former Base "are the most significant areas in terms of habitat

protection and should be considered critical target areas for preservation and management.,'

The preservation of a buffer area would serve several purposes in protecting and restoring conditions in Biscayne UP. As described in the Draft SEIS, a buffer would:

Protect park resources, including water quality and the viewshed; Protect critical wildlife habitat and wetlands; Preserve the rural character of the area by limiting conversion of agricultural land; Preserve in its present condition an area that could be crucial for restoring sheetflow to Biscayne Bay.

The Department believes that a buffer to maintain existing agricultural and open spaces uses between Biscayne National Park and the urban areas of southeast Miami-Dade County is essential to protect the nationally and regionally significant resources and values of the park. Implementing the buffer may be more easily accomplished under the Mixed Use alternative in that projected to result in the use of fewer acres adjacent to the former Homestead Or Force Base property and the secondary development impacts may be less.

Water Resources

The analysis of impacts to water resources in the Draft SEIS assumes changes in the stormwater management system on the former base, based on the Homestead Regional Airport Surface Water Management Master Plan. This plan and a permit application for stormwater discharges would need to be submitted to, and approved by, the South Florida Water Management District prior to implementation. Substantial changes may be made to the plan during the approval process, but the Draft SEIS assumes that the actual stormwater management system would function as described in the HST Surface Water Management Master Plan. The Department is concerned that specific storm drainage plans for the new airport have not been finalized and that possible replumbing to route stormwater through wetlands east of the base property has not been addressed.

The Department is also concerned about potential increased flows of other groundwater contaminants, especially ammonia. The Draft SEIS suggests that the increase in flows of ammonia, which is tonic to organisms, could be 13–14 percent. The Department is concerned that French Drains (which are an important element in the stormwater management plan for the airport used to develop the Draft SEIS) may more likely increase contaminants flowing from groundwater into the Bay, rather than reduce it as suggested in the Draft SEIS. This is especially likely when one considers the amount of ammonia flowing from nearby landfills. Ammonia in groundwater is a powerful solvent that will move metals and other contaminants out into the Bay.

Biologic Resources

Proposed air traffic routes under the commercial airport alternative bisect and transverse many sensitive habitats (Cape Sable Seaside Sparrow breeding habitat, foraging habitat for woodstorks and spoonbills, and crocodile nesting habitat). Notwithstanding the pending determination of the Fish and Wildlife Service under Endangered Species Act consultation requirements, the Department is concerned that the increased frequency, volume, and duration of noise could impact these endangered species and species of special concern, as well as other biologic resources in the area. Furthermore, the Department is concerned that these increases could severely hinder efforts to reliably determine the status and trends of the critically endangered Cape Sable Seaside Sparrow, other breeding birds and may impact monitoring of the reintroduction of the bluebird and nuthatch.

The Draft SEIS finds that "wading birds may flush or be startled during, feeding loafing or roosting, but it is not anticipated that nesting birds would be sufficiently affected to abandon their nests. Some species of wading birds appear to habituate to high noise levels, while others may choose to relocate to quieter areas with suitable habitat." The Department believes that a full understanding of the effects of aircraft overflights on indigenous and migratory birds, some of which are threatened or endangered species, is modest, as we lack specific studies of commercial aircraft traffic and its effects for all of the represented species in the affected environment. Further. the Draft SEIS suggests the use of unspecified techniques to scare birds away from the flight paths to minimize the danger of bird strikes. If these techniques involve the use of noise to prevent birds from roosting in the area, there would be farther impacts to wildlife in and around the National Parks.

Additionally, development of a commercial airport is expected to result in the destruction of ecologically sensitive remnant pine rocklands, with the potential for losses offsite as the result of secondary development. Similarly, there is also a reduction in wading bird habitat. The Department notes that, in contrast to the commercial airport, the Mixed Use alternative offers the opportunity to preserve re-

maining pine rocklands and increase wading bird habitat. Under the Hoover Environmental Group Plan, these areas would be preserved and enhanced. The Department notes that this may be possible under any scenario involving Mixed Use, particularly if deed restrictions are used to preserve rare and ecologically sensitive habitat.

Summary of Concerns and Conclusion

As described above, the Department is very concerned that the development of a commercial airport in close proximity to Biscayne National Park and Everglades National Park could have a series of negative consequences on these nationally and internationally recognized resources and the surrounding areas. Once allowed to occur, these negative environmental impacts may be difficult to reverse and could frustrate collective efforts among the Federal, State and local governments to create a sustainable South Florida economy by restoring the Everglades. A summary of the potential negative environmental impacts follows:

Significant derogation of the natural soundscapes in both Biscayne and Everglades National Parks with adverse effects on visitor enjoyment, National Park-Service interpretive activities, and biologic resources—including the potential disruption of nesting and/or migration patterns of birds—in both Biscayne and Everglades National Parks; Increases in contaminants, including ammonia and PAHs, in Biscayne Bay; Increases in nitrogen deposition in Biscayne and Everglades National Parks; Reduction of the ability to track the status and trends of repatriated species, endangered species, and other breeding birds; Disruption of the scenic vistas and impairment of night skies at Biscayne and Everglades National Parks; Loss of important farmland through secondary development impacts thereby leading to land use changes that may frustrate the ability to complete various components of the Army Corps' Comprehensive Everglades Restoration Plan.

For all of these reasons, the Department prefers the Mixed Use alternative as the environmentally preferable alternative of all the alternatives evaluated in the Draft SEIS.

The Air Force's goal is "to dispose of this surplus property in a manner that supports local community plans for economic revitalization of south Florida and protects Biscayne Bay and the nearby national parks." The Department believes that this goal can be best advanced by selecting the Mixed lose Alternative. None of the other alternatives evaluated in the Draft SEIS accomplishes this goal.

Sincerely,

DONALD J. BARRY, *Assistant Secretary,*
Fish and Wildlife and Parks.

RESPONSES BY MARY DOYLE TO ADDITIONAL QUESTIONS FROM SENATOR CRAPO

Question 1. Has the Corps of Engineers or Department of the Interior made recommendations for or undertaken actions that are consistent with a modified reconnaissance or feasibility study for the projects contained in the comprehensive Everglades restoration plan?

Response. Yes, the Department has taken a number of independent actions that are consistent with the recommendations contained in the Comprehensive Everglades Restoration Plan and that anticipate future authorization and implementation of the Plan. As part of its land acquisition grant program for the State of Florida, the Department of the Interior has issued a number of grants to the State of Florida's Department of Environmental Protection and South Florida Water Management District to assist both agencies in acquiring lands that may be utilized in implementing specific project features associated with the Comprehensive Plan. Lands that have been or are being acquired by these agencies using the grant funding provided by the Department are located in the East Coast Buffer, Everglades Agricultural Area, Southern Golden Gates Estates, Corkscrew Regional Ecosystem Watershed, and the Caloosahatchee Basin. If the lands are not ultimately utilized for a project feature associated with the Comprehensive Plan, the underlying grant agreements provide that the lands will be managed for Everglades restoration purposes.

Question 2. What will be the impact of the restoration plan on the hydrological needs of the Big Cypress National Preserve?

Response. Two components of the Comprehensive Everglades Restoration Plan target the hydrologic needs of the Big Cypress region. These include the Big Cypress/L–28 Interceptor Modifications and the Seminole Tribe Big Cypress Water Conservation Plan. The purpose of the Big Cypress/L–28 Interceptor Modifications is to reestablish sheetflow across the Big Cypress Reservation and into the Big Cy-

press National Preserve, maintain flood protection on Seminole Tribal lands, and ensure that inflows meet applicable water quality standards. The Seminole Tribe Big Cypress Water Conservation Plan is designed to achieve environmental restoration on the Reservation, the Big Cypress Preserve, and the Everglades Protection Area, as well as promote water conservation.

RESPONSES BY MARY DOYLE TO ADDITIONAL QUESTIONS FROM SENATOR GRAHAM

Question 1. The language proposed by the Administration includes assurances language that calls for concurrence by the Department of the Interior in Federal regulations and consultation by the Governor. What is your explanation for why this arrangement is appropriate given the 50–50 cost-sharing with the State on this project?

Response. We believe that the State of Florida should be a full partner in the implementing the CERP. At the time the proposed legislation was being drafted, the Federal agencies involved in this effort had constitutional concerns over providing the State of Florida with a concurrence role over the Federal programmatic regulations that are proposed to be developed to determine the appropriate quantity, quality, timing and distribution of water for the natural system so that it will be restored consistent with the Comprehensive Plan. Upon further review, the Administration now believes it is appropriate to provide a similar role to the Governor of Florida in the programmatic regulations that are proposed to be developed to determine the appropriate quantity, timing and distribution of water for the natural system.

Question 2. Can you summarize in a list the Federal holdings that will benefit from the water generated by this project?

Response. The following federally designated conservation areas will benefit from the implementation of the Comprehensive Everglades Restoration Plan:

1. Lake Wales Ridge National Wildlife Refuge
2. Archie Carr National Wildlife Refuge
3. Pelican Island National Wildlife Refuge
4. Hobe Sound National Wildlife Refuge
5. Loxahatchee National Wildlife Refuge
6. Island Bay National Wildlife Refuge
7. Pine Island National Wildlife Refuge
8. Ding Darling National Wildlife Refuge
9. Matlacha Pass National Wildlife Refuge
10. Callosahatchee National Wildlife Refuge
11. Florida Panther National Wildlife Refuge
12. Ten Thousand Islands National Wildlife Refuge
13. Crocodile Lake National Wildlife Refuge
14. Key Deer National Wildlife Refuge
15. Great White Heron National Wildlife Refuge
16. Key West National Wildlife Refuge
17. Everglades National Park
18. Big Cypress National Preserve
19. Biscayne National Park
20. Dry Tortugas National Park
21. Florida Keys National Marine Sanctuary
22. Rookery Bay National Estuarine Reserve

Question 3. The language proposed by the Administration includes a 60–40 cost-share for operations and maintenance funding. What is your justification for this number?

Response. Although the Water Resources Development Act of 1996 requires that operation and maintenance costs for the Central and Southern Florida Project be the responsibility of the local sponsor, and that the Comprehensive Everglades Restoration Plan provided to the Congress last July called for an equal split of the operation and maintenance costs, the Administration proposes that the costs be split 60 percent non-Federal and 40 percent Federal. The Department understands that this allocation was determined by the amount of Federal lands that will benefit from the Comprehensive Plan.

Question 4. There have been concerns raised regarding the content of the Chief's Report of June 22, 1999. Why is this water important to the natural system? Are you aware that both General Ballard and Secretary Westphal have sent me a letter indicating that they committed to study the feasibility of providing an additional 245,000 acre feet of water, not that they committed to providing the additional

water? Are you comfortable with an action to study the feasibility of providing this water?

Response. As described in the Comprehensive Everglades Restoration Plan submitted to the Congress last July, the 245,000 acre-feet referenced in the Chief of Engineer's Report is vitally important to the natural system. When the 245,000 acre-feet is combined with excess water from the Water Conservation Areas, it allows for significant increased flows of new water to Everglades National Park and Biscayne Bay. These increased flows are expected to produce substantial improvements toward meeting the hydrological performance targets for these two areas, as it would allow these parks to approximate 90 percent of predrainage volumes. This Restudy's Alternative Evaluation Team arrived at this same conclusion, as described in the Comprehensive Plan, subsequent to the hydrologic modeling conducted during the winter of 1998, and in response to the public comments received on the issuance of the draft plan in October 1998.

Despite the substantial benefits from this additional water, the 245,000 acre-feet of water was not, however, included in the Comprehensive Plan's recommended plan submitted to the Congress last July because there were significant unresolved concerns with the delivery of this new water. Rather, the Alternative Evaluation Team recommended that the 245,000 acre-feet be included contingent upon additional planning and study be completed to find a way to resolve some of these concerns so that the new water could be delivered. For these reasons, the Army Corps of Engineers agreed to study this proposal in greater detail and submit a project implementation report on this issue to the Congress. The Department is aware that Chief of Engineers Ballard and Assistant Secretary of the Army Westphal both have made clear in previous correspondence to Congress that "the Corps has only committed to completing an evaluation on the additional 245,000 acre feet."

The Department understands that the commitment to study the feasibility of delivering this additional water to be consistent with the recommendations contained in the Comprehensive Plan and agreed to in correspondence between the Department and the Army Corps of Engineers, as well as in the Chief of Engineer's Report. The Department is comfortable with this action.

Question 5. Can you describe the impact to the Everglades and surrounding ecosystems if we move forward with this project?

Response. The Department expects what currently remains of the natural system in South Florida to gradually recover and function in a manner characteristic of the pre-drainage Everglades. It will become once again an interconnected healthy ecosystem, capable of supporting viable, abundant populations of native plants, fish, and wildlife. The Comprehensive Plan will better distribute the water flowing eastward and westward to the coastal areas and southward across Everglades National Park and into Florida Bay. This redistribution of water flows will substantially reduce the huge ecologically damaging releases of fresh water to the coastal estuaries and instead direct water southward in a pattern that more closely replicates historic natural water flows. Associated features of the Comprehensive Plan will allow better control of the timing and quantity of these flows, and improve water quality. These actions will improve the salinity balance and reduce nutrient runoff in the coastal estuaries and in Florida Bay, resulting in substantial improvements to habitat and associated fish and wildlife productivity.

Question 6. Can you describe the impact to the Everglades and surrounding ecosystems if we do not move forward with this project?

Response. Absent the implementation of the Comprehensive Plan, the Everglades ecosystem as we know it today will continue to deteriorate and eventually disappear. Without the Comprehensive Plan, the natural system is likely to experience future water shortages, along with more frequent fire events. These water shortages will make it difficult to maintain aquatic habitat in Shark River Slough and Taylor Slough. Estuaries like Florida Bay will experience increased algae blooms, seagrass die-offs and hypersalinity, reducing sport fisheries and critical nursery functions for the shrimp and lobster fisheries. The ability to recover endangered species will be seriously impaired and as the natural environment suffers, so too will the human environment. The urban population of South Florida will experience water shortage problems and severe flood events as the water supply system, under pressure of continued population growth, becomes impossible to administer adequately. As a result, the significant Federal investment in the region's national parks, wildlife refuges, and marine sanctuaries will be at risk and future generations of Americans will miss an opportunity to experience the Florida Everglades.

Question 7. Regarding the Talisman property that I spoke about earlier with Secretary Westphal, can you describe the terms of the final land transaction?

Response. On March 26, 1999, the final purchase and related simultaneous exchange of the Talisman Sugar Corporation properties in the Everglades Agricultural Area (EAA) for other EAA properties was completed. Following nearly 2 years of negotiations with various parties, this action resulted in the acquisition of 50,855 acres of land in fee and 490 acres of leased lands in the EAA. These lands had previously been held by Talisman, as well as other sugar producers, including U.S. Sugar, Florida Crystals, the Sugar Growers Cooperative and Knight.

Although the Department of the Interior funded $99.9 million toward the final $152.5 million acquisition cost, the Department does not hold title to any of the properties acquired; title is held by the South Florida Water Management District (SFWMD). The funds provided by the Department for this acquisition were appropriated to the Department under the Federal Agriculture Improvement and Reform Act of 1996 (the 1996 Farm Bill).

Of the 50,855 acres of fee lands now held by the South Florida Water Management District, approximately 43,098 acres of land has been evaluated by the Army Corps of Engineers, as part of the initial implementation phase of the Central and Southern Florida Project Comprehensive Review Study (now known as the Comprehensive Everglades Restoration Plan or Comprehensive Plan), for use as a water storage reservoir to supply an additional 360,000 acre feet of water for the region. The Army Corps intends to make maximum use of these lands, as well as other EAA lands acquired by the SFWMD, to meet this need.

The remaining 7,757 acres of lands acquired by the SFWMD will be incorporated into various stormwater treatment areas (STAB) that are presently being constructed by the SFWMD as part of its responsibilities under the Consent Decree, as proposed to be modified, that ended the water quality litigation between the State of Florida and the United States, and under the State of Florida's Everglades Forever Act.

As with similar large land acquisitions and exchanges, the terms of the final purchase and exchange agreement are complex. A summary of the major terms and conditions follows:

1. Lease back of acquired lands by various sugar companies: Because the lands that were acquired through this purchase and exchange are not expected to be needed by the Army Corps until additional site specific analysis is complete, it was determined that maintaining the property in its existing use would be desirable to prevent the spread of invasive exotic species, continue present levels of employment, decrease land management costs to the SFWMD, and produce lease income for the SFWMD to use for other Everglades restoration land acquisition purchases. Of the 43,098 acres acquired by the SFWMD for the purpose of constructing a water storage facility, 34,214 acres have an initial lease term ending on March 31, 2005; the remaining 8,884 acres being farmed by U.S. Sugar will have a term ending on March 31, 2007. After the initial lease term expires, the lease is renewable annually until terminated by the SFWMD. The leases will terminate and the lands will be made available to the Army Corps of Engineers at the time the Corps and the SFWMD determine that the lands are needed for restoration purposes.

2. Lease termination provisions: Notice of termination must be given 30 months in advance of the effective termination date of March 31 of the appropriate year, with the notice based upon the understanding that construction is expected to begin within 12 months of the effective termination. For those lands with an initial term ending March 31, 2005, notice must be given by October 1, 2002.

3. Lease rental income available for other Everglades restoration land purchases: Lease rental is to be paid quarterly at market rates starting on April 1, 2004 (until that time the lease is at no cost). Under the terms of a separate Cooperative Agreement between the Department and the SFWMD, the SFWMD will allow the Department to approve proposed land acquisition purchases from this fund.

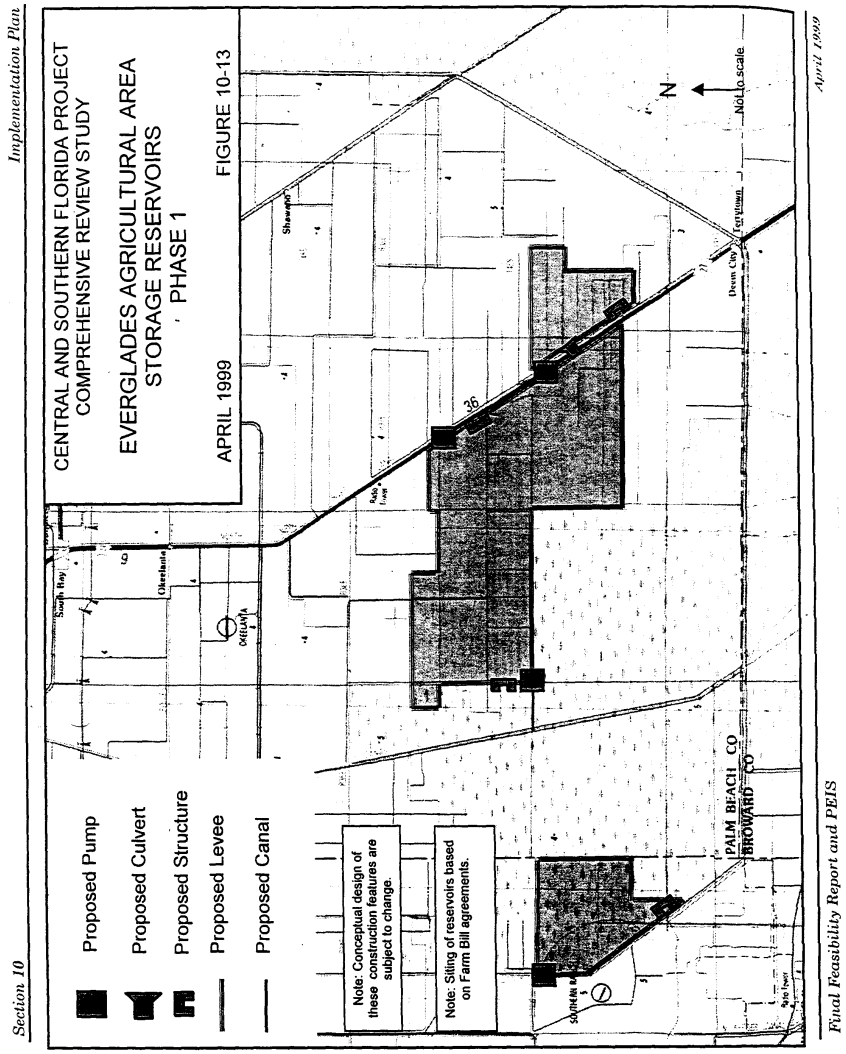
4. Environmental cleanup; use of best management practices: The sugar companies are required to completely remediate the properties consistent with Federal and State environmental laws prior to the SFWMD taking possession of the property. In addition, during the lease period, the sugar companies must employ best management practices.

5. Other miscellaneous provisions—options to purchase: As part of the overall transaction, the SFWMD: (i) settled condemnation litigation with various owners of approximately 2,070 acres of land located in the EAA within STA–1W and STA–2; (ii) purchased 878 acres of land in STA–1E, thereby settling pending condemnation litigation; (iii) entered into an option to purchase approximately 800 acres of EAA lands owned by Okeelanta Corporation (a subsidiary of U.S. Sugar); and (iv) received the assignment of a right of first refusal from Okeelanta Corporation to purchase approximately 889 acres of EAA lands.

6. Purchase price: The overall purchase price of $152,454,800 reflected an average value of about $2,900 per acre, which was consistent with the price per acre of other EAA land sales. The price was in an acceptable range of the underlying real estate appraisal for the Talisman Sugar Corporation properties that had valued the Talisman holdings, after applying discounts for its large size, at $110.1 million, as well as subsequent desk review of that appraisal that indicated a value of $148.1 million if no discounts were made for the parcel's large size. Because the property was ultimately acquired as part of an overall exchange, it was determined that the discounts did not accurately reflect the property's true value. As noted earlier, the Department provided $99.9 million toward this acquisition; the SFWMD provided $38.6 million, with the remaining $13.9 million supplied by the various sugar companies (other than Talisman).

Question 8. Regarding the property purchased by the Federal Government in the Talisman transaction in 1998, can you identify on your chart where that property is and explain what benefit the use of these lands as a reservoir will bring to the restoration project? Why is it important to move forward with this project authorization this year?

Response. Delaying the authorization for the EAA Storage Reservoir until a site specific Project Implementation Report is complete jeopardizes the ability of the South Florida Water Management District to provide notice by October 1, 2002, required under the land exchange agreement, and for the Army Corps to utilize these lands for this purpose by the agreed-upon date for the end of the lease term, which is March 31, 2005. The expected environmental benefits to be realized from this completion of this feature include: (i) improve the timing and release of water to the Water Conservation Areas, including reducing the damaging flood releases from the EAA to the Water Conservation Areas; (ii) reduce damaging releases from Lake Okeechobee to the estuaries; and (iii) meet EAA irrigation and water demands. The approximate location of the lands that have been acquired through the Talisman purchase and land exchange are shown in the map as follows:



Question 9. The Everglades Restoration Task Force created a scientific review panel for the Everglades Restoration process in 1998. Can you describe the mission of this group, its members, and how it operates in conjunction with the Task Force?

Response. In order to ensure that all of the science is appropriately peer-reviewed and at the Task Force's request, Secretary Babbitt asked the National Academy of Sciences to provide additional scientific input on Plan implementation. The science advisory panel, called the Committee on Restoration of the Greater Everglades Ecosystem or CROGEE, began its work in December 1999. It is composed of 16 scientists, selected by the National Academy, and represents a broad range of expertise including biology, ecology and hydrology.

The purpose of CROGEE is to provide scientific advice to the Task Force on the implementation of the Comprehensive Plan. The Comprehensive Plan is predicated upon the concept of "adaptive assessment," which calls for careful scientific monitoring over the entire 30-year period of implementation to assure that restoration goals are being met as planned projects come on line, and where the goals are not being achieved to devise science-based approaches that are effective. The Task Force re-

cently approved a portion of the CROGEE initial workplan, which calls for review of aspects of aquifer storage and recovery and ecological indicators.

RESPONSES BY MARY DOYLE TO ADDITIONAL QUESTIONS FROM SENATOR MACK

Question 1. Do you support applying section 902 of the 1986 Water Resources Development Act to all features of the Comprehensive Plan before us today? [This provision requires a congressional review if a project exceeds 120 percent of authorized cost]

Response. The Department does not oppose the application of section 902 if the cost of a particular project exceeds 120 percent of the authorized cost.

Question 2. Do you support congressional committee review and approval of the feasibility level of engineering and design work before any construction can begin on the initial suite of ten projects in the Comprehensive Plan?

Response. The Department supports the Administration's proposal on these projects. The Administration's proposal provides that construction on the specific project features may not begin until a Project Implementation Report is complete.

Question 3. Do you support requiring full feasibility studies before any other projects are authorized under the Comprehensive Plan?

Response. Yes, the Department supports the Administration's legislative proposal requiring the completion of project implementation reports (feasibility studies) prior to congressional authorization for the projects following the initial suite of ten proposed in the WRDA 2000. The Department supports completion of the project implementation reports for authorization of the remaining projects not included in the initial suite of projects.

Question 4. Do you support modifying the definition of the South Florida Ecosystem to make clear the system includes the lands and waters within the boundaries of the South Florida Water Management District as they existed on July 1, 1999?

Response. As provided in the Administration's legislative proposal, the definition of the South Florida ecosystem does include land and waters within the boundaries of the South Florida Water Management District as they existed on July 1, 1999.

Question 5. Do you support a provision making clear the Corps of Engineers is only authorized to study the question about providing an additional 245,000 acre-feet of water to the natural system?

Response. Consistent with the Comprehensive Plan, both Chief of Engineers Ballard and Assistant Secretary of the Army Westphal have made clear in previous correspondence to the Congress that "the Corps has only committed to completing an evaluation on the additional 245,000 acre feet." The Department is comfortable with this action.

Question 6. Do you support language making clear that the Corps must work with the State of Florida to ensure all groundwater discharges resulting from the Comprehensive Plan meet all applicable water quality standards and water quality permitting requirements?

Response. Yes, the Department supports this modification.

Question 7. Do you support replacing the project purposes language stated in (c)(1) of the Administration's draft with language restating the purpose of the Comprehensive Plan developed and passed in WRDA 1996?

Response. The Department supports the project purpose as stated in the Administration's proposal. The Department believes that language proposed in the Administration's draft accurately reflects one of the guiding principles for the development of the recommended Comprehensive Plan. As stated in the Comprehensive Plan issued in April 1999, that principle is: "[t]he overarching objective of the Comprehensive Plan is the restoration, preservation and protection of the south Florida ecosystem while providing for other water related needs of the region." This principle is consistent with the congressional direction provided in the Water Resource Development Act of 1992 requiring the Army Corps of Engineers to reexamine the Central and Southern Florida Project to determine the feasibility of modifying the project to restore the South Florida ecosystem and to provide for other water related needs of the region, as well as congressional direction in the Water Resources Development Act of 1996 that required the Army Corps to complete the Comprehensive Everglades Restoration Plan.

Question 8. Do you support additional programmatic authority for the Corps to construct projects of limited cost but are in keeping with the Plan's purposes and have independent and substantial benefit to Everglades restoration?

Response. Yes, the Department supports this provision as proposed in the Administration's plan.

Question 9. Do you support a 50/50 cost share between the Federal Government and the State of Florida on operation and maintenance of the project? If not, please state the cost share you believe to be appropriate and why.

Response. Although the Water Resources Development Act of 1996 requires that operation and maintenance costs for the Central and Southern Florida Project be the responsibility of the local sponsor, the Administration proposes that the costs be split 60 percent non-Federal and 40 percent Federal.

Question 10. Please provide your thoughts on the definition of Project Implementation Reports found in the Administration's language. Do you support this definition? If not, please provide suggestions as to how you would define these reports.

Response. The Department supports the Administration's language defining the Project Implementation Reports.

Question 11. Do you believe the Department of the Interior and the State of Florida should be on equal footing in developing any regulations related to assurances? If not, why?

Response. We believe that the State of Florida should be a full partner in the implementing the CERP. At the time the proposed legislation was being drafted, the Federal agencies involved in this effort had constitutional concerns over providing the State of Florida with a concurrence role over the Federal programmatic regulations that are proposed to be developed to determine the appropriate quantity, quality, timing and distribution of water for the natural system so that it will be restored consistent with the Comprehensive Plan. Upon further review, the Administration a law believes it is appropriate to provide a similar role to the Governor of Florida in the programmatic regulations that are proposed to be developed to determine the appropriate quantity, quality, timing and distribution of water for the natural system.

Question 12. Do you support the reporting requirement in the administration's bill? If not, how would you amend the reporting requirement?

Response. The Department supports the congressional reporting requirement as proposed in the Administration's bill.

STATEMENT OF GARY S. GUZY, GENERAL COUNSEL, U.S. ENVIRONMENTAL PROTECTION AGENCY

Good afternoon, Mr. Chairman and members of the committee. I am Gary Guzy, General Counsel for the U.S. Environmental Protection Agency (EPA). Thank you for your invitation to appear here today to talk to you about something of great importance to me personally and to the people of this nation: the Administration's unprecedented efforts to ensure that the Florida Everglades has clean, abundant water to ensure environmental and human needs, and the Administration's emphasis on the importance of EPA's role under the Clean Water Act in ensuring that protecting water quality is fully integrated into each step of the restoration efforts.

The efforts to protect the Everglades are a part of Florida's rich history. Marjory Stoneman Douglas, in her autobiography, Voice of the River, describes the efforts of Congresswoman Ruth Bryan Owen, who actively argued at committee hearings against the commonly-held notion of the time that the Everglades was just a swamp filled with snakes and mosquitoes. She argued that Congress should create the Everglades National Park.

And Congress did create the Everglades National Park. But that's not the end of the story, and here we sit today to urge the committee to once again exert its leadership and take the steps necessary to preserve and protect this national treasure. Yes, the Everglades is a major source of fresh water for South Florida. Yes, the Everglades is the largest wetland east of the Mississippi River. And yes, the Everglades is an economic boon to a State that depends on tourism. But the Everglades is more than these things; it is a historical treasure that is only venerated through its preservation.

PAST EFFORTS AND RECENT PROGRESS

During the second half of the last century, the existing Central and Southern Florida Project was built to help meet needs for flood control and water supply at that time. But the explosive growth since then has far exceeded the capacity of the current system to meet even these needs, and has contributed to the ongoing decline in the Everglades ecosystem. The design and operation of the current system, while very efficient at draining excess water, severely limits our capability to store excess

water when it becomes available (in the wet season) so we will have it when it is needed (in the dry season). Moreover, it is important to remember that the system was designed for flood control and for water supply purposes. Water quality was not a consideration at the time.

The Comprehensive Everglades Restoration Plan was submitted to the Congress by the Vice President of the United States for the U.S. Army Corps of Engineers nearly a year ago (July 1999). The Plan, which was carefully developed with the full involvement of EPA and other Federal/State agencies, lays out an ambitious Federal/State joint venture to restore water flows to the Everglades ecosystem while providing flood protection and adequate freshwater supplies to the agricultural industry and to the growing population of South Florida. The Comprehensive Everglades Restoration Plan represents a fundamental change in philosophy a commitment to a sustainable future in which we learn to balance the water supply needs of the natural systems both freshwater and marine, with the needs of the urban and agricultural components of the Everglades systems.

More recently, EPA worked with its Federal partners to shape the Administration's proposed legislation for the Water Resources Development Act of 2000 (WRDA), which would authorize the Central and Southern Florida Project in accordance with the recommendations set forth in the Comprehensive Everglades Restoration Plan (CERP). The authorization would allow the Corps and its Federal/State partners, including EPA, to implement the Comprehensive Everglades Restoration Plan, which, in concert with other proposed and ongoing restoration efforts, would "get the water right" by delivering fresh water in the right quantity, of the right quality, and with our best estimate of the right timing and the right distribution to achieve the desired results in the Everglades ecosystem, including downstream coastal communities all the way to the living coral reefs of the Florida Keys.

EPA recommends the passage of the proposed Everglades legislation the Administration provided to Congress for authorization in the Water Resources Development Act 2000. Among EPA's priorities for the proposal is to ensure that the legislation clearly amends the current and future project features and purposes for the Central and Southern Florida project to restore, preserve, and protect the South Florida ecosystem.

We also worked closely with our Federal partners to shape the Everglades proposal so that it identifies, and fully addresses, the goal of water quality improvement for the ecosystem. EPA supports the Army Corps of Engineers' request that project features needed to provide water of adequate quality be included to help in restoring, protecting, and preserving the South Florida ecosystem. EPA recommends that in doing this, applicable Federal water quality standards, applicable federally-approved water quality standards developed by the State or Indian tribes, and plans to implement the standards should be taken into account. The Administration's proposed legislation includes specific language in the assurances section and in relation to future regulations to ensure that water quality needs of the ecosystem are met.

We believe that the Administration's proposed bill builds on the successes that have already been achieved and serves as an appropriate mandate for future efforts. For example, under the Everglades Forever Act (EFA), which built on the commitments in the 1991 settlement agreement with the South Florida Water Management District and the State, the implementation of best management practices in the Everglades Agricultural Area have achieved a four year cumulative phosphorus load reduction of 54 percent in waters discharged into the Everglades Water Conservation Areas, as reported in Chapter 5 of the 2000 Everglades Consolidated Report. Under the EFA and the settlement agreement, the State also is constructing Stormwater Treatment Areas to filter the farm runoff further. The construction of the six STAs totaling 44,000 acres has begun and the two operating STAs have greatly exceeded their design goals. It is important to note that these commitments by the State were a baseline assumption in the development of the CERP, and that the State's future cost of meeting the water quality goals of these measures will not add to the total costs of the CERP. Another example is the completion of the Administration's important acquisition of the Talisman Sugar Plantation from willing sellers in the Everglades Agricultural Area, which involves more than 51,000 acres, critical new restoration lands in the heart of the system.

The Administration's proposed bill also requires involvement of EPA in the development of programmatic and project-specific regulations. Due to our unique ecosystem-wide perspective, we believe EPA can contribute to the success of the Comprehensive Everglades Restoration Plan and evaluation of its progress. We strongly encourage Congress to endorse this integrated approach.

I would now like to talk to you about some of the specific challenges that remain in restoring the magnificent Everglades ecosystem, as well as EPA's recommenda-

tions for how WRDA 2000 can best provide the sound legislative underpinnings we need for this unprecedented effort.

REMAINING CHALLENGES AND FUTURE DIRECTIONS

As noted earlier, the Administration's Comprehensive Everglades Restoration Plan offers a broad, farsighted approach, which is designed to increase water supplies for the region so urban and other users continue to get their fair share, while the natural system finally gets its fair share to restore and improve the condition of water quality throughout the Everglades ecosystem. Throughout the design, construction, and operation phases of the project, EPA intends to focus its efforts and energies on ensuring that features of the plan will fully comply with all Federal, State, and Tribal water quality standards, as well as all other applicable provisions of the Clean Water Act and Safe Drinking Water Act. Now I'd like to highlight how EPA's involvement in certain features of the plan will help promote water quality and contribute to restoration of the overall integrity of the Everglades ecosystem.

Stormwater Treatment Areas (STAs) and Water Storage Areas (WSAs)

The Comprehensive Everglades Restoration Plan includes proposals to construct 36,000 acres of wetlands to treat polluted runoff from urban and agricultural lands. These Stormwater Treatment Areas (STAs) will be located throughout South Florida, and will enable us to use the natural filtering capability offered by wetlands in an enhanced manner to treat and improve both water quality and, at the same time, contribute to the restoration of the health of the Everglades ecosystem.

The Comprehensive Everglades Restoration Plan also calls for construction of 181,000 acres of Water Storage Areas (WSAs), 171,000 of which will allow us to capture excess fresh water flows that now are drained rapidly to the Atlantic Ocean and the Gulf of Mexico. This valuable water, which currently is being "lost to tide," will be captured and used to provide much-needed water for restoration of the Everglades ecosystem and to enhance potable water supplies for the people of South Florida. As with the STAs, the WSAs will render major water quality benefits to both inland and coastal waters and benefits to the wetland habitat of the Everglades ecosystem. In addition to the STAs and WSAs, it also will be critical to ensure the acquisition of the East Coast Buffer Area because of the continued threat of development that can affect the Everglades.

Aquifer Storage and Recovery (ASR) Facilities

Construction of regional Aquifer Storage and Recovery (ASR) facilities is another important component of the Comprehensive Everglades Restoration Plan. When completed, the ASR facilities are also intended to store water during the wet season—freshwater flows that are currently lost to tide. ASR facilities will store these waters in the upper Floridan Aquifer for recovery in dry seasons—for use both to restore the ecological integrity of the Everglades ecosystem and to enhance future water supplies for urban and agricultural purposes in South Florida.

WRDA 1999 authorized two large-scale pilot projects at Lake Okeechobee and Palm Beach County, and EPA is now involved with these pilot efforts in the start-up phase. EPA recognizes that the ASR approach is bold and entails some technical and regulatory uncertainties; however, we support this approach in concept and are fully committed to ensuring that these facilities will function in ways that are fully protective of South Florida's drinking water supplies and surface water quality. EPA is working with other Federal and State partners to demonstrate and assess the efficacy of ASRs. Regardless of the ultimate feasibility of ASR facilities, the Administration remains committed to finding the same amount of water storage through other means, if necessary. Again, I believe that the demonstrated commitment to adaptive assessment that this program has displayed will incorporate future adjustments, as needed.

Comprehensive Integrated Water Quality Plan

Under the Comprehensive Everglades Restoration Plan, EPA and Florida Department of Environmental Protection (FDEP) will share the lead in developing a Comprehensive Integrated Water Quality Plan. This plan will evaluate water quality standards and criteria from an ecosystem restoration perspective. It will also make recommendations for integrating existing and future water quality restoration targets for South Florida waterbodies into future planning, design, construction, and operation activities in ways that optimize water quality in inland areas, estuaries, and nearshore coastal waters. The plan also will lead to recommendations regarding water quality programs, including setting priorities for developing both water quality standards and pollution load reduction goals.

Other Activities Related to Water Quality

In addition to the activities associated with the Comprehensive Everglades Restoration Plan, which would be authorized in WRDA 2000, EPA is involved in a number of related activities and projects aimed at protecting and restoring water quality and ecosystem integrity in the Everglades. While time does not permit me to fully describe these efforts, I do want to call the committee's attention to some of the most important activities and the purpose of each:

- Florida Keys Water Quality Protection Program: EPA has been working with the State of Florida in conjunction with the National Oceanic and Atmospheric Administration (NOAA) to plan and implement priority corrective actions and compliance schedules to address both point and non-point sources of pollution in order to restore and maintain the chemical, physical, and biological integrity of the Florida Keys National Marine Sanctuary.
- Improving the Wetlands Regulatory Process in Southwest Florida: EPA has been actively involved in assisting the Army Corps of Engineers in finalizing a Programmatic Environmental Impact Statement (PEIS), intended to improve the section 404 regulatory decision-making process in Southwest Florida.
- Mercury: EPA, along with United States Geological Survey (USGS), the Florida Department of Environmental Protection and the South Florida Water Management District, and NOAA is actively engaged in a comprehensive mercury research program to address mercury contamination in the Everglades. EPA also is working with the State of Florida to develop a pilot mercury TMDL for a parcel of the Everglades ecosystem known as Water Conservation Area 3A. This effort is designed to determine the maximum amount of mercury that can enter the Area each day and still enable the waters to meet water quality standards.
- Phosphorus: phosphorus is still one of the chief pollutants that threatens aquatic life and restoration of the Everglades ecosystem. In May 1999, EPA approved stringent new water quality standards for the Miccosukee Reservation in a portion of the Everglades ecosystem, which, for the first time ever under the Clean Water Act, set a specific protective numerical standard for the Everglades for phosphorus. This protective standard sets a benchmark for how much phosphorus the ecosystem can handle before adverse impacts to native aquatic life begin to occur. Under the Everglades Forever Act, Florida is now actively engaged in developing a water quality standard for phosphorus for other portions of the Everglades ecosystem and has planned its first Everglades technical workshop on May 17. The State recently committed to accelerate this process and to adopt a scientifically-defensible standard by no later than December 31, 2002. EPA is providing technical assistance to the State to help meet this ambitious schedule.

THE IMPORTANCE OF WRDA TO THE FUTURE HEALTH OF THE EVERGLADES ECOSYSTEM

EPA fully supports the Administration's proposed Everglades legislation that includes specific provisions to assure that the benefits of the project are achieved and maintained for the life of the authorization. We have worked with our Federal partners to ensure that the WRDA legislation specifies that implementation of the Central and Southern Florida Project, as amended by the Comprehensive Everglades Restoration Plan, must occur in a manner that ensures that the anticipated benefits to the natural system and the human environment, including the proper quantity, quality, timing and distribution of water, are achieved and maintained.

EPA also believes that WRDA 2000 must provide for implementation of the Comprehensive Everglades Restoration Plan in its totality in order to ensure that the desired benefits are ultimately achieved. While the many individual projects needed to implement the Plan in its entirety will be phased in over time, EPA believes that WRDA 2000 needs to include a framework that guarantees continuity for completing these highly interconnected and interdependent project features over time. Our joint efforts in the Everglades represent an unprecedented, holistic approach to ecosystem restoration, and we, as a nation, must commit at the outset to see this effort through to its desired end.

The Administration's proposal contains important legislative assurances language that guarantees the delivery of sufficient quantities of clean, fresh water and ensures that the many individual project works and features will be designed and managed to appropriately deliver the water. The proposal also formalizes EPA's consultative role in ongoing decisions regarding projects and programs to ensure that the natural system and the human environment receive the water quality benefits intended as the Comprehensive Everglades Restoration Plan is implemented and incorporated into the Central and Southern Florida Project. EPA regards these safeguards as essential components of WRDA 2000, and strongly supports their inclusion in the authorization of this legislation.

CLOSING

Congress has played its part in the past creating the Everglades National Park and providing funding for the previous restoration work. There now is broad recognition that the Everglades are a national treasure and that they are severely threatened and we all must take action to preserve them for future generations. By authorizing the Comprehensive Everglades Restoration Plan as part of WRDA 2000, Congress can again be part of this important history.

Mr. Chairman, that concludes my statement. Thank you for the opportunity to address the committee today. I will be pleased to answer any questions you may have.

RESPONSES OF GARY GUZY TO ADDITIONAL QUESTIONS FROM SENATOR SMITH

Question 1. Can you comment on the desirability of wastewater as a source of water for the natural system?

Response. There are numerous very successful, environmentally compatible wastewater-to-wetlands and direct reuse projects in Florida (e.g., Orlando) and throughout the United States. Under the right circumstances, and with the proper treatment, this approach can be very desirable it is certainly more desirable than losing the water to tide, rendering it inaccessible for future use or reuse.

In South Florida, approximately 400 million gallons per day of wastewater from urban areas that comes from freshwater sources is either discharged into the ocean and lost to tide, or mixed with saline groundwater through injection wells. Since one of the principal goals of the CERP is to provide additional water for the Everglades ecosystem, the use of the readily available wastewater should certainly be considered. With the proper level of treatment to applicable water quality standards for discharge to surface waters, this can be a beneficial additional source of water for the natural system.

Question 2. Why is it important to move forward with authorization of this initial set of 10 projects this year? Can you describe what the impacts of delay would mean for the ecosystem?

Response. The initial ten projects were chosen because they will provide immediate system-wide water quality and flow distribution benefits to the ecosystem. Several of these projects will provide additional water storage, which is critically important to the natural system as well as to human users. To expedite results, some of the projects utilize lands already purchased (e.g., the Talisman Lands) or are designed so they can be coupled easily with existing features to increase the potential benefit (Tamiami Trail project). Several were selected because they use proven technologies. In sum, these projects were chosen specifically to jump start the restoration process by providing the maximum benefit to the Everglades and enhance the water supply for all users. Similar to the benefits that compounding interest provides in a financial investment, authorizing these particular projects at this stage will allow benefits to accrue more rapidly, pushing the restoration process forward.

If these projects are delayed, the degradation of the Everglades will continue, and our restoration tasks will be much more difficult. Furthermore, without the increased water storage and water quality features provided by these projects, the urban population will likely experience water shortages and severe flood events—the existing system was never designed to provide water supply and flood control to even the level of the current population.

Question 3. Would you be supportive of a safeguard mechanism, perhaps comparable to the process Congress approved last year for the Challenge 21 program, which would allow these projects to be authorized, but give the Congress appropriate oversight?

Response. EPA would support consideration of a process comparable to Challenge 21 that provides appropriate congressional oversight or other means of review prior to construction.

RESPONSE BY GARY GUZY TO AN ADDITIONAL QUESTION FROM SENATOR BAUCUS

Question. In your written testimony you refer to commitments made in the 1991 settlement agreement with the South Florida Water Management District and the State of Florida. Your testimony, related to the Stormwater Treatment Area (STA) components of the Comprehensive Everglades Restoration Plan (CERP), goes on to note that "these commitments by the state were a baseline assumption in the development of the CERP, and that the state's future costs of meeting water quality goals of these measures will not add to the total costs of the CERP." Please expand on what is meant by this statement, particularly as it related to concerns that the STA components of the CERP will not be able to meet a phosphorus standard for the

natural system of 10 ppb, that this will likely increase the cost of the CERP, and that the Federal Government will, at least partially assume responsibility for these additional costs.

Response. In the 1991 Settlement Agreement, and the 1994 Everglades Forever Act, the state of Florida committed to the development and implementation of on-farm Best Management Practices (BMPs) and the Everglades Construction Project (STAs, now totaling 44,000 acres) with the absolute requirement that water delivered to the Everglades Protection Area will achieve all applicable water quality standards (WQSs) in the Everglades Protection Area by December 31, 2006 (the Federal settlement agreement required compliance by an earlier date, but in a joint motion to the court, the Federal Government and the state have asked that the deadlines be changed to match the requirements in the EFA).

Although, at the time the EFA was written, it was unclear exactly how effective the STAs would be in removing phosphorus, both the BMPs and the STAs have greatly exceeded our performance expectations. You are correct that the STAs are not reaching 10 ppb. However under the EFA, additional research is required (and is being conducted) to identify technology that will reduce the phosphorous concentrations to acceptable levels. To improve their performance, the Water Management District must conduct research into optimizing the design and operation of the STAs. It also must identify other treatment and management methods that could achieve optimum water quality and quantity. To reach the 2006 deadline, in 2003, if water quality standards are not being met, the Everglades Construction Project permits must be modified to reach that goal. Since these requirements were present in a settlement agreement and state law, and the state law provided a source of funding for these features, the Corps assumed in drafting the CERP that these commitments would be fully implemented and met. Accordingly, there would be no additional cost to the Federal Government to meet these particular commitments.

The CERP does contain a separate set of STA features (36,000 acres) that would be subject to the same types of permitting requirements as the EFA-STAs, including meeting WQSs. However, with the exception of two STAs that would discharge into the Everglades Protection Area (associated with the S–9 and S–140 pumps), the STAs required under the CERP are located in areas such as north of Lake Okeechobee where the ambient phosphorus levels are much higher then the nutrient poor Everglades. Therefore, based on the performance of the current STAs in the EAA, we do not anticipate that additional treatment beyond that provided by the STAs will be needed to meet the required nutrient loading reductions for these other areas.

Regarding the two CERP STAs that will be discharging directly into the Everglades Protection Area, the EFA research is currently evaluating how to increase the efficiency of the STAs, and what additional/supplemental treatment technologies are required to reduce the phosphorus concentrations down to acceptable levels. Since the state must meet these WQS requirements by 2006, the results of that research and testing will be available for application to these STAs. Costs associated with any additional features needed to meet applicable WQSs on these features should be shared by all appropriate parties.

RESPONSE BY GARY GUZY TO AN ADDITIONAL QUESTION FROM SENATOR VOINOVICH

Question. The Stormwater Treatment Areas that are being constructed as part of the Everglades Construction Project and the additional Stormwater Treatment Areas proposed in the Comprehensive Plan will result in significant reductions in the phosphorus levels by that there is not good scientific evidence that they will be able to achieve the long term water quality standard for phosphorus estimated at 10 ppb. There is currently insufficient information to estimate the additional costs required to meet the long term standard. In addition there are other unresolved water quality problems in Lake Okeechobee. If there are substantial additional costs associated with meeting water quality standards for the natural system, who should pay these additional costs? Should these be State of Florida costs? Shared State and Federal costs? If shared costs, which Federal agency should be responsible?

Response. Both the BMPs and the STAs that were required under the 1991 Settlement Agreement and the Everglades Forever Act (EFA) have greatly exceeded the performance expectations, reducing the phosphorus loads being discharged into the Everglades. Under the EFA additional research is required (and being conducted) to identify technologies that will reduce the phosphorous concentrations down to acceptable levels. Since these requirements were present in a settlement agreement and state law, and the state law provided a source of funding for these features, in drafting the CERP, the Corps assumed that these commitments should be fully

implemented and met. Accordingly, there would be no additional cost to the Federal Government to meet these particular CERP commitments.

The CERP does contain a separate set of STA features (36,000 acres) that would be subject to the same regulatory requirements, including meeting WQSs, as the EFA-STAs. However, with the exception of two STAs that discharge into the Everglades Protection Area (S–9 and S–140), most of the STAs required under the CERP are located in areas where the ambient phosphorus levels are much higher than the nutrient poor Everglades. Although there are no numeric phosphorus criteria for these areas, information gathered from these areas indicate that, based on the performance of the STAs in the EAA, additional treatment beyond the STAs will not be needed to meet the nutrient load reduction requirements.

Regarding the two STAs that will be discharging directly into the Everglades Protection Area, current research is evaluating how to increase the efficiency of the STAs, and what additional ("phase 2") technologies may be needed to get down to the numeric WQS. Since the state must meet these WQS requirements by 2006, the results of that research and testing will be available for application to these STAs. Costs associated with any additional features needed to meet applicable WQSs on these features should be shared by all appropriate parties.

Water quality in Lake Okeechobee has been the focus of research and restoration plans for many years. In addition to the Lake Okeechobee Surface Water Improvement Management Plan (SWIM Plan), and the Lake Okeechobee Issue Team Report (the Lake Okeechobee Action Plan), EPA has proposed a total Maximum Daily Load (TMDL) for phosphorus in the lake and the state is working on its own phosphorus TMDL. This year, the state also passed a Lake Okeechobee restoration bill that includes a source of funding for projects chosen to help restore the lake. Some of the proposed CERP projects for this year are in the Lake Okeechobee watershed and should start the process of moving restoration forward. All of these efforts will help restore the water quality of the lake.

RESPONSES BY GARY GUZY TO ADDITIONAL QUESTIONS FROM SENATOR CRAPO

Question 1. What is the expected water quality impact on the ecosystem of the changing nature of water flows in the restoration plan?

Response. One of the primary goals of the CERP is to restore the historical natural hydropattern (the timing and distribution of flows) and quantity of water delivered to the Everglades ecosystem. Where there used to be a natural annual cycle of water flowing through the system, it has been intercepted and diverted during most rain events, so the water never reaches the ecosystem. Restoring the timing and the quantity of the historic flows will also have a definite positive effect on the water quality of the region by allowing the natural system to function again as an ecosystem, tempering the flows through it, filtering the water, and maintaining the appropriate water quality in the system.

A pervasive ecological/water quality problem in South Florida is the pulse flows of huge quantities of fresh water to estuaries during wet periods which result in extreme salinity fluctuations and place tremendous stress on the biological community residing in those estuaries. The above ground storage facilities proposed in the CERP would first function to capture large volumes of wet season freshwater flows that would otherwise be directly discharged to the estuaries. The waters could then be released at a later time in a more gradual manner such that the salinity fluctuation experienced by the estuaries would be significantly reduced. For example, with the above ground and ASR storage facilities proposed in the Lake Okeechobee area, the problematic pulse flows currently experienced by the Caloosahatchee and St. Lucie estuaries are projected to be virtually eliminated.

Another benefit of the increased ability to store water is the ability to allow water levels in Lake Okeechobee to be lowered, which will help restore the littoral zones in the lake and improve water quality within the lake. For years the lake has been used to store excess water, increasing its average depths. The water storage aspects of the CERP will provide an alternative to using the lake for this purpose.

Question 2. What is the expected water quality impact on the ecosystem of the use of ASR units?

Response. The ASR wells proposed in the CERP will have a positive impact on water quality of the ecosystem by helping to restore the ability of the system to store excess water during the wet season for use during the dry season. Because a large amount of the Everglades Ecosystem has been lost to urban and agricultural development, and South Florida has been so extensively ditched and drained, it has lost a significant amount of its capacity to store water such that, in general we either have too much fresh water during the wet season or too little water during the dry season. During the wet season, the C&SF system is operated to rapidly drain

off excess water. Because this water is rapidly drained to tide, the estuaries are damaged by the fresh water, and during the dry season there sometimes isn't enough water to satisfy all of the urban, agricultural, and natural system needs of the region. As the area grows these extremes will be exacerbated without the above ground and ASR wet season water storage components proposed in the CERP. By storing water during the wet season and releasing it to the ecosystem when it is needed to restore the natural hydropattern, the water quality of the Everglades system will be improved and the damaging releases of fresh water through the estuaries will cease.

As noted above, another benefit of the increased ability to store water that the ASR wells will provide is the ability to allow water levels in Lake Okeechobee to be managed at a lower level. This will help reestablish a healthy littoral zone and improve water quality within the lake.

Question 3. What is the expected water quality impact on the ecosystem of the changes in activities in the current Everglades Agricultural Area and surrounding Water Conservation Areas?

Response. The water quality impact from changes in the activities in the EAA and surrounding WCAs will be positive, helping to restore the Everglades ecosystem. The water quality of the discharges from the Everglades Agricultural Area (EAA) into the Water Conservation Areas (WCAs) was first addressed in the 1991 Settlement Agreement and the Everglades Forever Act. Under these programs, the implementation of BMPs on the EAA farms, the construction of 44,000 acres of Stormwater Treatment Areas (STAs) in and around the EAA, and the possible use of additional technologies, will result in the discharges into the WCA's area from the EAA achieving water quality standards by 2006. Relying on full implementation of these requirements by the state, the CERP, through the construction of Surface Water Storage Reservoirs on EAA lands providing additional water storage, will allow for more flexible water management, the restoration of the natural hydroperiod of the ecosystem, and additional improvement in water quality, while also providing water for other existing users.

RESPONSES BY GARY GUZY TO ADDITIONAL QUESTIONS FROM SENATOR GRAHAM

Question 1. This morning we discussed with the state their progress on setting water quality standards. Can you describe from EPA's perspective the water quality issues in the Florida Everglades and explain how the Restudy will maintain appropriate levels of contamination throughout the system?

Response. Major water quality concerns in the Everglades, as noted in the testimony already provided, include phosphorus enrichment and mercury contamination. A tremendous amount of effort is underway to address the issue of phosphorus enrichment of the Everglades. Other parameters of concern include specific conductance in water discharged to Loxahatchee National Wildlife Refuge, and detection of pesticides at various locations. The Restudy does not directly address the mercury contamination issue.

Several components of the CERP will result in improved water quality conditions. Over 36,000 acres of treatment wetlands, in addition to those currently being constructed as required by the Everglades Forever Act, will be constructed to treat urban and agricultural water before discharge into public waters. Additionally, 172,000 acres of stormwater storage areas are proposed. Although these areas will be managed primarily to store water, they will simultaneously provide some water quality improvement. This will help water quality in several water bodies, including the Everglades, Lake Okeechobee, and the estuarine areas.

Water quality protection and restoration is an essential component of the CERP. It is not possible to get the water right without simultaneously assuring that water quality is adequate for meeting environmental, urban, and agricultural needs. The CERP assumes that Florida's effort under the 1991 Settlement Agreement and the EFA to control phosphorus loading to the Everglades is successful by 2006, and other appropriate remediation projects are put in place by state or local governments (e.g. SWIM Plans, permitting programs, TMDL's).

Question 2. Can you describe the impact to the Everglades and surrounding ecosystems if we move forward with this project?

Response. The implementation of the CERP will provide system-wide water quality and flow distribution benefits to the ecosystem and enhance the water supply for all users. It will allow the remaining Everglades to be restored, providing habitat for the numerous species of animals that depend upon it, while providing for urban and agricultural flood control and water supply for years into the future.

Question 3. Can you describe the impact to the Everglades and surrounding ecosystems if we do not move forward with this project?

Response. If these projects are delayed, the degradation of Everglades and the estuaries will continue, the Everglades as we know them today will cease to exist, and our restoration tasks will be much more difficult. Also, without the increased water storage and water quality features provided in the CERP, the urban population will likely experience water shortages and severe flood events the existing system was never designed to provide water supply and flood control to current population levels. If there is an extended drought, the ecosystem will suffer even more. Over time, as competition for scarce water supplies increases, even tougher decisions will need to be made over whether water is used for the natural system, agriculture, or urban uses.

Question 4. One of the pilot projects submitted for authorization is a wastewater reuse pilot. Can you describe how this relates to wastewater treatment projects that are funded through the SRF?

Response. The CERP includes two advanced wastewater treatment facilities to increase the water available to restore the ecosystem. The pilot project is intended to test the technology and assess the costs associated with these proposed facilities. The pilot project is designed to address water quality issues associated with discharging reclaimed water into natural areas such as West Palm Beach's Catchment Area, Biscayne National Park, and the Bird Drive-Everglades Basin wetlands, as well as determine the appropriate level of treatment and methodologies for that treatment. It includes a small advanced wastewater treatment facility to treat wastewater currently injected into a deep well. The capital costs of upgrading the current wastewater treatment plants to produce the quality of reclaimed water suitable for discharge would be eligible for SRF funding provided the plant modifications are completed in a cost-effective manner and the level of treatment provided is necessary to comply with water quality standards. The State of Florida prioritizes projects for Clean Water SRF loans. O&M costs for wastewater treatment plants are a local responsibility and are not eligible for SRF funding.

The treatment plants ultimately proposed for upgrading/construction include the current domestic wastewater treatment plant serving the southern portion of Miami-Dade County, and a new domestic wastewater treatment plant proposed to serve western Miami-Dade County. The existing facility currently provides secondary treatment and discharges to a series of deep injection wells. In order to produce the quality of reclaimed water suitable for discharge to Biscayne Bay, which is classified as an Outstanding Florida Water, significant plant upgrades would be necessary at the existing facility. Reclaimed water produced at the proposed new facility would also have to be of very high quality since the water would be discharged to sensitive Everglades quality wetlands; therefore, the new facility must be designed to provide a highly advanced degree of treatment.

The purpose of the proposed wastewater treatment discharges is to provide clean freshwater to the environment during the dry season when the other restudy components will not have enough extra water available for the Biscayne Bay/Everglades restoration effort.

Question 5. One of the issues that arose at the field hearing in Florida was related to Combined Sewer Overflows. Does Florida have any Combined Sewer Overflow systems?

Response. We are not aware of any Combined Sewer Overflows (CSO's) in the State of Florida. Unlike most northern cities, the sanitary sewer systems in Florida are relatively new and were constructed as separate systems. Some time ago the City of Sanford had a combined sewer system which was, in fact, problematic with respect to downstream water quality. Through the use of Construction Grants and local funds, those systems were separated a number of years ago.

Approximately 10 years ago a problem with Sanitary Sewer Overflows (SSOs), compounded by a minor contribution from a small area with a Combined Sewer System, was identified in the Metropolitan Miami area. These problems are currently being corrected as a result of a Federal Consent Decree and a State of Florida Settlement Agreement with the Miami-Dade County Water and Sewer Authority.

Due to the density of development expected with the projected population increases over the next 50 years, we anticipate that most of this development will be served by new or expanded separate sanitary sewers. However, in some of the more isolated or less densely developed areas, wastewater treatment and disposal using septic tanks serving single family homes will also undoubtedly occur. Construction of combined sewers is not allowed under state law. Construction and operation of the wastewater collection, treatment and disposal systems to serve this expanded population will, as usual, continue to be expensive and challenging especially with regard to how the treated wastewater will be reused or disposed of.

RESPONSES BY GARY GUZY TO ADDITIONAL QUESTIONS FROM SENATOR MACK

Question 1. Do you support applying section 902 of the 1996 Water Resources Development Act to all features of the Comprehensive Plan before us today? [This provision requires a Congressional Review if a project exceeds 120 percent of authorized cost].

Response. Yes, we support the Corps' position that would apply the section 902 requirement for congressional review if the cost of a project exceeds 120 percent of the authorized cost.

Question 2. Do you support congressional committee review and approval of the feasibility level of engineering and design work before any construction can begin on the initial suite of ten projects in the Comprehensive Plan?

Response. EPA would support further discussion on congressional review or other means of reviewing the Project Implementation Reports prior to commencement of construction on these projects. We believe the initial suite of ten projects is critical to moving the restoration process forward while enhancing the existing water supply and flood protection needs of the region. These projects were chosen because they provide immediate system-wide water quality and flow distribution benefits to the ecosystem. To expedite the realization of results, some of these projects utilize lands already purchased (the Talisman Lands) or can be coupled easily with existing features to increase the potential benefit (Tamiami Trail project). These projects were specifically chosen to jump start the restoration process by providing the maximum benefit to the Everglades and enhance water supply for all users. If these projects are delayed, the degradation of Everglades will continue, and our restoration tasks will be much more difficult. Without the increased water storage and water quality features provided in these ten projects, the natural system will continue to be degraded, and the urban population will likely experience water shortages and severe flood events.

Question 3. Do you support requiring full feasibility studies before any other projects are authorized under the Comprehensive Plan?

Response. EPA supports the Administration's legislative proposal that requires the completion of Project Implementation Reports prior to congressional authorization for remaining projects not included in the initial suite of projects.

Question 4. Do you support modifying the definition of the South Florida Ecosystem to make clear the system includes the lands and waters within the boundaries of the South Florida Water Management District as they existed on July 1, 1999?

Response. EPA supports the modification the definition of the South Florida Ecosystem to include the reference to the boundaries that existed on July 1, 1999.

Question 5. Do you support a provision making clear the Corps of Engineers is only authorized to study the question about providing an additional 245,000 acre feet of water to the natural system?

Response. We believe that the Chief Engineer's Report should be part of the authorization, but consistent with the positions of Chief of Engineers Ballard and Assistant Secretary of the Army Westphal, the Corps has only committed to study the question of the additional 245,000 acre feet of water. Upon completion of this evaluation, the Corps should then provide a report for authorization. We would support a legislative clarification that comports with this process.

Question 6. Do you support language making clear that the Corps must work with the state of Florida to ensure that all groundwater discharges resulting from the Comprehensive Plan meet all applicable water quality standards and water quality permitting requirements?

Response. EPA supports language that indicates that the Corps must work with the state of Florida to ensure that all groundwater discharges resulting from authorized features in the Comprehensive Plan meet all applicable water quality standards and applicable water quality permitting requirements.

Question 7. Do you support replacing the project purposes language stated in (c)(1) of the administration's draft with language restating the purpose of the Comprehensive Plan developed and passed in WRDA 1996?

Response. Yes, EPA supports restating the language from WRDA 1996 concerning the purpose of the Comprehensive Plan.

Question 8. Do you support additional programmatic authority for the Corps to construct projects of limited cost but are in keeping with the Plan's purposes and have independent and substantial benefit to the Everglades restoration?

Response. Yes. The success of the CERP will depend on the ability to use adaptive management to build projects in response to information gathered during the CERP implementation. Allowing projects of limited costs to be authorized under the pro-

grammatic authority fits within the requirements of NEPA and will allow the Corps to expeditiously develop remedies as the need arises.

Question 9. Do you support a 50/50 cost share between the Federal Government and the State of Florida on operation and maintenance of the project? If not, please state the cost share you believe to be appropriate and why?

Response. Although the Water Resources Development Act of 1996 requires that operation and maintenance costs for the Central and Southern Florida Project be the responsibility of the local sponsor, the Administration proposes that the costs be split 60 percent non-Federal and 40 percent Federal. The Agency believes that this allocation represents the amount of Federal lands that will benefit from the Comprehensive Plan.

Question 10. Please provide your thoughts on the definition of Project Implementation Reports found in the Administration's language. Do you support this definition? If not, please provide suggestions as to how you would define these reports?

Response. EPA supports the Administration's language defining Project Implementation Reports.

Question 11. Do you believe the Department of Interior and the State of Florida should be on equal footing in developing any regulations related to assurances? If not, why?

Response. We believe that the State of Florida should be a full partner in the implementing of the CERP. At the time the proposed legislation was transmitted, the Federal agencies involved in this effort had constitutional concerns over providing the State of Florida with a concurrence role over the Federal programmatic regulations that are proposed to be developed to determine the appropriate quantity, quality, timing and distribution of water for the natural system so that it will be restored consistent with the Comprehensive Plan. Upon further review, the Administration now believes it is appropriate to provide the Governor of Florida with the opportunity to concur on the Secretary of the Army's programmatic regulations to ensure that the goals and purposes of the Plan are achieved.

Question 12. Do you support the reporting requirement in the administration's bill? If not, how would you amend the reporting requirement?

Response. EPA supports the reporting requirement as stated in the Administration's bill requiring reports be submitted to Congress no less than every 5 years through 2036.

STATEMENT OF KEN KECK, DIRECTOR OF LEGISLATIVE AND REGULATORY AFFAIRS FLORIDA CITRUS MUTUAL

INTRODUCTION

Mr. Chairman, members of the committee, my name is Ken Keck, and I am employed by Florida Citrus Mutual as Director of Legislative and Regulatory Affairs. Florida Citrus Mutual is a voluntary grower association comprised of 11,500 members growing citrus on over 800,000 acres throughout central and south Florida. While not historically the case, today more than one-half (400,000) of all the citrus acreage in Florida is within the boundary of the Restudy. Obviously not all of this acreage is directly impacted, but much of it is, so the Florida citrus industry has a significant stake in the deliberations surrounding how the "re-plumbing" of the natural system is accomplished.

Let me start by assuring the committee that we, like you, are committed to restoring the Everglades. We have supported the Comprehensive Everglades Restoration Plan because it offers the promise of accomplishing our restoration goals without sacrificing the property and capital investments citrus growers have made throughout central and south Florida.

In developing the views presented today, I have attempted to represent the consensus of the agriculture community in the region, like citrus growers, who will be impacted by the Restudy. Indeed, the substance of my testimony results from a collaborative effort of the South Florida agricultural sector. These same groups would like to express their appreciation to Senators Graham and Mack for the leadership shown in Everglades legislation.

Further, allow me to thank the committee for holding this hearing on the Administration's proposed Comprehensive Everglades Restoration Plan provision contained in S.2437, the Water Resources Development Act of 2000.

I will summarize my remarks and ask that my prepared statement be included in the hearing record.

The Central and Southern Florida Project is one of the world's great engineering accomplishments and has been critical to the development of a large and vibrant

agricultural economy that benefits every consumer in America. In addition, it has allowed millions of people to live along the coasts of Florida with the security of reliable water supply and flood protection. Unfortunately some elements of the project, as well as project-induced economic activity, have adversely affected the natural environment. We fully recognize the need to protect and restore the ecosystem's natural functions and values while continuing to provide for the other purposes of the project.

Florida agriculture has participated extensively in the Federal/State Restudy process that has produced the Comprehensive Plan and we expect to continue to participate as the process moves forward. We are prepared to support major improvements to the water management system. However, we believe that the importance of Everglades Restoration and the other vital project purposes demand that project modifications be based on sound science, be the product of objective analysis, and be implemented in an orderly way that ensures that the needs of existing landowners and businesses are met.

OVERVIEW OF SENATE BILL 2437

Because of their precedent-setting nature, the policy issues raised by S. 2437 should be the concern of every member of this committee and the Congress. The Comprehensive Everglades Restoration Plan is the first large Federal water project with ecosystem restoration as its primary objective. Similar efforts are being planned across the nation. Because ecosystems are the result of complex interactions between human activity and natural processes, restoration projects require actions on many fronts and at many levels of government. Decisions on distribution of cost burdens and determinations of responsibility for restoration activities will be major policy issues across the nation. The Comprehensive Plan raises, either explicitly or implicitly, all of these issues.

Florida agriculture is profoundly disappointed with the Administration's bill. We would like to see the committee make a fresh beginning rather than attempt to modify this fundamentally flawed document. Not only does the Administration persist in seeking Congress's approval of projects that have had no feasibility studies and to undo the balanced purposes of the existing Central and Southern Florida (C&SF) Project, it also seeks unprecedented Federal authority to manage Florida's water resources.

This statement summarizes our broad concerns with S. 2437. In addition, we have specific problems with definitions used in the bill and the wording of many other provisions. We are prepared to work with the committee and its staff to make suggestions regarding specific language changes as the committee moves toward drafting its legislation. Indeed, the ag groups I speak for today are committed to developing a WRDA bill, which we believe would move the process of Everglades restoration forward this year.

EIGHT PROBLEMS WITH THE EVERGLADES PROVISIONS OF S. 2437.

Problem 1. The bill eliminates the balanced purposes for the existing and modified Central & Southern Florida Project that were re-affirmed in WRDA 96. When modified as proposed by the Comprehensive plan, the C&S Florida Project will supply sufficient water for all future natural and human water uses until 2050. There is no reason to afford one purpose priority over another. Even though the primary purpose of this Comprehensive Plan is ecosystem restoration, it is essential to reaffirm that the C&SF Project, after modification by this plan, must, and will still provide all the other purposes for which it was originally authorized and constructed. A commitment to improving the present level of flood protection wherever possible as individual project elements are designed and built would greatly enhance taxpayer support for this plan.

Problem 2. The assurance provisions preempt Florida law governing water allocations and reservations and preclude comprehensive water management by the local sponsor. They fundamentally alter current Federal policy. These provisions establish unprecedented Federal authority and control of water quality and quantity.

The issue of assurances is rightly a concern of all interests affected by this project. These include the Federal taxpayer concerned that the intended purposes of Federal expenditure will be achieved. Environmental agencies and the public want assurances that the water for the ecosystem will not be diverted to economic purposes. Finally, existing water users fear that their present water supplies will be reallocated under the Comprehensive Plan to restoration purposes before suitable replacement supplies are in place.

These vital assurances should be provided based on the Project Implementation Reports for each project component under the Plan. Using the information contained

in these reports, the Secretary of the Army and the local sponsor, can enter into agreements, consistent with State law, that would fully respond to the concerns of all parties. First, these agreements can allocate and reserve the new water supply made available by a project component. Second, they can specify any other benefits such as flood control. Third, they can establish the operating guidelines necessary to provide the water supply allocations and other benefits. Under this approach, there is no usurpation of State power, and assurances can be made based on scientific information and knowledge of the outputs and performance of each project component.

Problem 3. The bill's provisions regarding Project Implementation Reports seriously undermine the usefulness of the Reports and are inconsistent with the description of those Reports in the Comprehensive Plan. These provisions are also inconsistent with representations by the Corps that the Reports will contain all the information needed for a full feasibility report and more. These Reports provide an opportunity to address assurance issues with a more complete decision making document.

Congress should affirm the language in the Final April 1999 Restudy Document regarding the content of these Reports and should affirm that the Reports should meet the requirements of the U.S Water Resources Council's Principles and Guidelines. If this is done, the Reports will provide all information needed to (1) support congressional authorization, (2) obtain approval under State law, and (3) answer all questions regarding the allocation of benefits and achievement of Project and Comprehensive Plan purposes for both Federal and State taxpayers and their elected representatives.

Problem 4. The bill authorizes specific project components and undefined other components that are "consistent with the plan". These are all project components whose value, cost-effectiveness and benefits have not been demonstrated by feasibility level engineering, economic and environmental studies. There are no reliable cost estimates on which to base authorization for appropriations.

Restoration projects should have to meet the standards expected of other Civil Works projects. We strongly believe Congress should authorize construction of project modifications only after it has been able to review a completed and fully coordinated Project Implementation Report. This principle has been affirmed twice within the last year by the Administration, and we find no reason to abandon it in the case of this particularly complex plan that relies on incomplete science and untested technology.

The signing statement issued when President Clinton approved the Water Resources Development Act of 1999 on August 17, 1999, less than 9 months ago, complained that "many of its project modifications are still in the planning stage or undergoing review and, therefore, simply are not ready for authorization at this time. Until the completion of the review required for proposed Federal water resources projects under Executive Order 12322, neither the Executive branch nor the Congress is likely to know which of these projects will raise significant concerns regarding their scope, economic and technical feasibility, environmental acceptability, or the ability of local sponsors to provide the required cost-share."

The Assistant Secretary of the Army for Civil Works, in his statement on the Water Resources Development Act of 2000 submitted on March 22, 2000, less than 2 months ago, to the Water and Environment Subcommittee of the Transportation and Infrastructure committee of the United States House of Representatives stated: "In light of constrained Federal dollars, we must assure the public that projects authorized for construction have completed the planning process, have passed a full Agency and Administration review, and are in accord with the Federal laws and policies established to protect the environment."

South Florida agriculture strongly endorses the principle of "finishing the analysis before authorizing construction." We urge that it be applied to the projects that will be authorized under the comprehensive plan. Because no feasibility studies have been completed or in some cases, even initiated, Congress should not authorize any individual projects for construction and should not authorize the proposed program authority allowing the Secretary of the Army to implement projects requiring up to $35 million in Federal appropriations, especially in light of the fact that the Administration, as reflected in S.2437, desires to proceed ahead of the science and the analysis.

Problem 5. The bill references the Chief's Report of June 22,1999 that includes additional commitments that were not part of the Plan reviewed in consultation with the State and included without notice or opportunity for public comment. If implemented, these conditions would have substantial adverse impacts on State interests and substantially increase project costs.

We take particular exception to the further commitments contained in paragraph 31 of the Final Chief's Report. Among the most egregious of these commitments was one to: "deliver additional water (approximately 245,000 acre-feet to Everglades National Park and Biscayne Bay) either by capturing additional runoff from urban areas or by some other means." This amount of water, some 79,000,000,000 gallons annually, represents a 20 percent increase in the total amount of water supplied by the plan, or alternatively, virtually all of the water that is supplied by the plan to non-environmental purposes. There are no facilities in the plan to do this and the costs of the necessary features are not included in the estimated total cost of the plan.

These changes in a final Chief's report were made without consulting the State of Florida or the local sponsor and without any documented analysis or public review and are unprecedented. Florida agriculture would like all references to the Chief's Report deleted from the Bill. This will confirm that the Plan we recommend Congress approve as a guideline and framework for future project components is based on the Recommended Plan in the April 1999 Jacksonville District Engineers Report.

Problem 6. The bill approves the Comprehensive Everglades Restoration Plan in a manner that changes the meaning of the Plan as presented to the people of Florida for the past 2 years.

S. 2437 goes well beyond what was anticipated by the Restudy. The Final Integrated Report, April 1999, produced by the Jacksonville District of the Corps states that the Comprehensive Plan "will serve as a framework and guide for modifications to the C&SF Project." S. 2437 states: "Congress hereby approves the Comprehensive Everglades Restoration Plan to modify the Central and Southern Florida Project to restore, preserve and protect the South Florida Ecosystem." In our view, this language would fundamentally change the authorized purposes of the C&SF Project and eliminate the balanced multiple purposes affirmed as recently as the Water Resources Development Act of 1996, which authorized development of the Comprehensive Plan. As stated above, Florida agriculture recommends that Congress affirm the balanced purposes of the project and modify the project only in conjunction with authorization of new project components based on completed feasibility studies. Congress should approve the Comprehensive Plan as a guide and framework for a continuing planning process leading to formulation of the new C&SF Project components. Moreover, Congress should require periodic updates of the Comprehensive Plan at the time further congressional authorizations are requested.

Problem 7. The bill acknowledges the need for but does not provide a full and equal partnership between the State and Federal Governments.

In the sections dealing with assurances, the Federal agencies would assume unprecedented responsibilities for water allocation. South Florida agriculture recommends that Congress object to a dangerous national precedent and delete provisions by which Federal allocation of water would preempt State law. Further, Congress should authorize (1) equal cost sharing of the C&S Florida project including construction of project components and operations and maintenance, and (2) equal decision-making authority between the Secretary of the Army and the South Florida Water Management District, the project's sponsor, in the establishment of operating protocols in Project Implementation Report agreements.

Problem 8. Compliance with water quality requirements is not ensured. A major shortcoming of the Comprehensive Plan is its failure to fully integrate water quality considerations. The Restudy itself calls for a Comprehensive Integrated Water Quality Plan feasibility study.

The Comprehensive Plan is just one element of a much larger effort. The South Florida Ecosystem Restoration Task Force has promised a strategic plan this summer that will attempt to identify more of the cost elements and to integrate the many on-going activities at the Federal, State and local level. It is widely acknowledged that achieving water quality objectives will cost several billion additional dollars. Restoration requires both water quality and quantity objectives be met, and water quality considerations will play a major role in the feasibility of many of the Comprehensive Plan's components. Accordingly, Congress should require that, prior to authorization, project components include the features necessary to ensure that all discharges meet applicable water quality standards and water quality permitting requirements.

CONCLUSION

We hope the committee finds our recommendations for congressional action on the Comprehensive Plan to be constructive and responsible. We reiterate our willingness to work with the committee staff in the development of appropriate legislation.

The Corps of Engineers study was abbreviated in both scope and depth to ensure that the July 1, 1999, deadline for transmission of the comprehensive plan to Congress could be met. While referred to as a feasibility report, the Central and Southern Florida Project Comprehensive Review Study does not contain the engineering, real estate, economic and environmental analyses that normally support recommendations for authorization of Civil Works projects. Moreover, there simply was not sufficient time to integrate water quality and quantity considerations or to make the usual calculations of the economic benefits and costs associated with the Comprehensive Plan.

In addition to abbreviated engineering and other data collection and analytical shortcuts, there is an extraordinary level of uncertainty with this plan because of its reliance on undemonstrated technologies and the evolving understanding of the science of ecosystem restoration. These uncertainties are frankly acknowledged in the report in the following ways: 1) the clear statement that the ecological changes that will occur in the Everglades as a result of the Restudy cannot be forecast at this time, 2) the recommendation for construction of $100 million in pilot projects to demonstrate the technology, and: 3) the commitment to the principle of "adaptive management."

The Administration has taken the important step of contracting with the National Research Council of National Academy of Sciences to form an advisory committee. The Committee on Restoration of the Greater Everglades Ecosystem will provide a scientific overview and technical assessment of the many complicated, inter-related activities and plans that are occurring at the Federal, State, and local governmental levels. In addition, the National Research Council will provide advice on technical topics of importance to the restoration efforts.

Congress needs to recognize the extraordinary scientific, analytical and technological uncertainties associated with the comprehensive plan. Extra prudence and discipline are essential in the authorization and implementation of this unparalleled series of massive investments in the future of South Florida.

These organizations have endorsed the attached statement of concerns with the Administration's legislative proposal relating to Everglades Restoration (Section 3 of S. 2437) as of May 9, 2000.

Florida Farm Bureau
Florida Citrus Mutual
Gulf Citrus Growers Association
Sunshine State Milk Producers
Florida Fruit and Vegetable Association
Florida Fertilizer and Agri-Chemical Association
Florida Sugar Cane League, Inc.
Sugar Cane Growers Cooperative of Florida
Miami-Dade County Farm Bureau
Palm Beach County Farm Bureau
Western Palm Beach County Farm Bureau
Lake Worth Drainage District

THE POSITION OF THE AGRICULTURAL ADVISORY COMMITTEE TO THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT CONCERNING THE C&SF RESTUDY ADOPTED UNANIMOUSLY, NOVEMBER 24, 1998

Modifications to the Central and Southern Florida Flood Control Project are needed to meet the water related needs of the region (water supply and flood control) and Ecosystem objectives.

The Committee supports the overall goals of the Draft Conceptual Plan, but believes this plan should be used as a guide and should not be presented for congressional approval in its present form.

The Committee supports moving forward with the Pilot Projects and Early Action items identified in Section 10 of the Draft Plan.

The Committee supports an accelerated program to answer other key technical questions such as the effectiveness of seepage barriers, aquifer storage and recovery systems, above ground reservoirs and various other components.

Major project elements must have complete engineering, environmental and economic evaluation with an opportunity for public review and comment before congressional authorization is sought.

Land acquisition should come after congressional authorization, from willing sellers whenever possible, using the state imminent domain process when condemnation is required.

The proposed feasibility study on system-wide water quality should be integrated into the Comprehensive Plan. Water quality and hydrology should be looked at in tandem.

Water supplies for existing users must be protected while new technologies are being developed and implemented. (See water assurance language.)

A financing plan, including all expected costs, that is well understood by the state and Federal partners as well as stakeholders must be developed prior to authorization.

No less than the current level of flood protection must be maintained for all areas.

Water Assurance Language

During the subsequent planning, design, construction and operation of projects included in the Comprehensive Plan, and any related studies to determine modifications to the C&S Florida Project, the South Florida Water Management District and Corps of Engineers will not, in any proceeding, transfer, limit or modify an existing source or supply of water necessary for an existing use until another source or supply of equal reliability is in place to meet that need.

FLORIDA DEPARTMENT OF CONSUMER SERVICES,
Tallahassee, FL, December 7, 1998.

Colonel Joe R. Miller,
District Engineer
U.S. Army Corps of Engineers,
Jacksonville District,
400 West Bay Street,
Post Office Box 4970,
Jacksonville, Florida 32232–0019.

DEAR COLONEL MILLER: I want to write and share with you some of my initial impressions about the draft Comprehensive Review Study (Restudy or Comprehensive Plan) of the Central & Southern Florida (C&SF) Project which is currently available for public comment. Although I intend to submit more detailed comments prior to the close of the comment period, I believe my concerns are widely shared by many affected interests throughout the south Florida community and I thought it might be helpful to the Corps to have the benefit of their earliest consideration.

As you are well aware, I am a strong supporter of the C&SF Restudy process. Modifications to the C&SF Project are clearly needed if we are to meet all of south Florida's future water needs, including water supply, flood control and ecosystem restoration.

In support of the Restudy, the Florida Department of Agriculture and Consumer Services has committed staff and resources to the Corps Restudy teams, the Federal Working Group, and the Governor's Commission for a Sustainable South Florida. We have worked closely with the South Florida Water Management District Agricultural Advisory Committee and other agricultural interests throughout south Florida as the Restudy has evaluated alternatives and developed the draft recommended Plan. Through these efforts, frequent correspondence, and public testimony we have attempted to bring the perspective of Florida agriculture to the balanced Everglades restoration effort required by the Water Resources Development Acts of 1992 and 1996.

The recommended alternative in the draft Restudy Comprehensive Plan, containing more than 60 project elements estimated to cost $7.8 billion and take upwards of 20 years to complete, is a useful planning document and has my support as a guide for future action. However, given the many uncertainties associated with the draft Comprehensive Plan, I cannot support either its use as a final decisionmaking document or any blanket authorization in its present form by Congress.

These uncertainties, which are directly attributable to the compressed time-frame for the Restudy to be completed and delivered to Congress, include:

- a dependence on regional-scale modeling, which provides few details on the precise location, design, and operation of project elements;
- a lack of the engineering and economic feasibility studies needed to justify, design, and implement individual projects;
- heavy reliance on unproven technologies such as Aquifer Storage and Recovery, seepage control, and large above ground reservoirs;
- a requirement of 250,000 acres of private land, most of which will probably come from agriculture, for which the location and the need has yet to be determined;
- inadequate provisions for meeting water quality standards;
- an undetermined implementation process or schedule; and

- lack of a funding proposal to implement project elements.

Concern about these uncertainties in the draft Plan has been repeatedly expressed to me by citizens throughout the south Florida community. If we are to have any chance to implement such a technically, politically, and financially complex series of modifications to the water management system in south Florida, these concerns must be addressed. If these concerns are successfully addressed, then I believe we can proceed to implement the elements in the Restudy's recommended alternative in a manner than can receive the broad-based support which will be needed for an undertaking of this magnitude. Conversely, if these uncertainties can not be successfully resolved, political and financial support will be lacking and the Restudy will remain only a plan.

There are several key positive steps, which would provide an excellent foundation for moving forward, that should be taken to address these uncertainties.

Formal Involvement of the Governor and the Legislature

Implementation of the projects contained in the draft Comprehensive Plan will require an enormous commitment of resources and impact the environment and economy of Florida well into the next century. In my view, it is imperative that the Governor and the Legislature be formally and directly involved as the Comprehensive Plan is developed and implemented.

Assurances

Assurances need to be provided to our citizens whose water supply, land, or economic future may be directly affected as the Comprehensive Plan is implemented. With respect to water supply, I recommend that the Corps endorse the following assurance to water users:

During the subsequent planning, design, construction and operation of projects included in the Comprehensive Plan and any related studies to determine modifications to the C&S Florida Project, the South Florida Water Management District and Corps of Engineers will not, in any proceeding, transfer, limit or modify an existing source or supply of water necessary for an existing use until another source or supply of equal reliability is in place to meet that need.

In addition, because the Plan contains elements that divert existing water supplies for environmental purposes, while providing potentially more costly replacement sources, an additional assurance to water users needs to be developed to provide that the costs of new or replacement water supplies will be equitably distributed.

With respect to the approximately 250,000 acres of land which may be needed, assurance should be provided that any land acquisition will be based on need, as justified by sound science, including engineering and economics, for each project. Appropriate use of available public lands should be evaluated and acquisition of private property should only come after congressional authorization, using willing sellers wherever possible, and using the state's eminent domain process where condemnation is required.

A Defined Process for Implementing the Comprehensive Plan

In addition to these assurances, citizens need to be comfortable that the process of den eloping, authorizing, and implementing specific projects, or groups of projects, provides an opportunity to develop the technical and economic feasibility information needed resolve the very significant uncertainties in the Comprehensive Plan. Certainly, such a process will not eliminate all differences among competing interests, but it will allow honest and informed dialog on the technical, economic, or environmental merits and shortcomings of Plan components.

In order to do this, the Implementation Plan portion of the Comprehensive Plan should be completed and an opportunity for public comment provided before the Comprehensive Plan is submitted to the Chief of Engineers. The Implementation Plan should clearly specify a process which provides for the necessary engineering, environmental and economic feasibility studies of major project components, including funding and water quality considerations, with an opportunity for public review and comment, prior to congressional authorization. After the Comprehensive Plan is submitted to Congress in July 1999, I would support action by Congress that would clearly specify the process by which Comprehensive Plan components are to be authorized and implemented.

Finally, I would observe that if we can reduce the uncertainties now present in the draft Comprehensive Plan by formally involving the Governor and the Florida Legislature, providing appropriate assurances, and developing a defined implementation process, there are many areas of agreement that will allow us to continue needed progress on modifications to the C&SF Project. In addition to broad support for the general direction of the draft Comprehensive Plan, there is agreement on the

need for pilot projects and support for authorization of a group of early action or critical projects that are technically and economically feasible and provide immediate benefits. Given the fact that it may be possible to quickly gain consensus on pursuing authorization of several hundred million dollars in projects, we should be able to maintain momentum in implementing the Comprehensive Plan while completing the engineering, economic, and environmental evaluations needed to support funding and authorization of future project elements.

I hope these suggestions are useful as you move forward with development of your final recommendations for Congress. Many dedicated individuals from widely varying interests have devoted countless hours to the success of the Restudy and the quality of the final product is a reflection of the excellent leadership provided by the Army Corps of Engineers. I commend you for a job well done, and look forward to continuing to work with you as the final Comprehensive Plan is developed and implemented.

Sincerely,

BOB CRAWFORD, *Commissioner of Agriculture.*

DADE COUNTY FARM BUREAU,
Homestead, FL, December 29, 1998.

Colonel Joe Miller,
District Engineer, Jacksonville District,
U.S. Army Corps of Engineers,
P.O. Box 4970,
Jacksonville, FL 32232.

DEAR COLONEL MILLER: This letter is in response to the Draft Integrated Feasibility Report of the Comprehensive Review Study. The Dade County Farm Bureau has approximately 6,000 members representing over 80,000 acres of high value agriculture in the same county with the highest population in the state. We want to thank you for holding a public hearing in our community and would like to recognize the technical staff who have worked so hard to put this report together.

Trying to keep up with all the Corps of Engineers' reports that have affected our area for the part 5 years has been difficult and frustrating for our organization. We have had the C–111 GRR, which led to the government acquisition of 10,000 acres of our best farmland and cost our community thousands of jobs; Tests 6 and 7 of the Experimental Program which have raised our water table and contributed to further crop damage on private property, and the Sparrow Emergency last year which resulted in the south Dade canal system being used as an outlet for flood releases from Water Conservation Area 3-A.

During all of these projects, agriculture has been viewed as an obstacle to restoration rather than an opportunity to maintain a meaningful buffer between the Everglades and urban development. Flood protection for private property has been sacrificed in a never-ending struggle to satisfy the evolving demands of the Department of the Interior. The Restudy seems to continue this theme.

Our organization does not have the time or the resources to review the 3500 page report in the few weeks that have been made available. These are our preliminary comments. Please see that we are included in future reviews as more detailed information becomes available.

1. This plan is obviously conceptual and does not contain enough information to make an informed decision on whether many of the components of the plan should be approved. Congress should not be asked to approve any significant element of this plan until enough credible detail is provided to judge the costs and the benefits of the action.

2. The 2050 Base Case, considered the Future Without Project Scenario for this study, assumes the C–111 Project is operational. The hydrologic modeling of this scenario shows a significant increase flooding east of L–31N and C–111. This is totally unacceptable. That project was designed so protection of private property east of the C–111 and L–31N canals would be compatible with the hydrologic needs of the Park. The 2050 Base scenario should be changed to reflect the proper operating levels for the C–111 project. Operating structures as they are in the model of the 2050 Base would violate every assurance we were given during the C–111 GRR process that the land east of the canals would not be harmed by the C–111 Project. We brought this to the attention of the Restudy Team during the plan development phase and are disappointed that it was not corrected. Please correct this problem in your final report.

3. Two Components, the C–111 North Spreader and the Biscayne Bay Wetlands require the government purchase of more than 26,000 acres. We cannot provide

meaningful feedback on these components unless we know exactly what property you are talking about acquiring. Government projects have taken so much farmland already, this community cannot accept the loss of any more productive land. These components should not be presented to Congress for approval until they, and we, know what land will be taken and what environmental benefits will be obtained by doing so.

4. The environmental goals of this study appear to be based on a hypothetical hydrologic model of the area before people arrived. The study does not make a compelling case that Everglades wildlife will return if water levels are manipulated to match this computer model. In view of the huge uncertainties that underlie this study Congress should only be asked to approve a common sense process to move toward restoration, not $7.8 billion worth of expensive structures that may do more harm than good. That process must include defining both the design and operations of a component before it is approved and monitoring both the ecosystem and hydrologic response every step of the way to make sure we know we are making the right choices.

5. We appreciate the fact that the report acknowledges the potential for the Recommended Plan to cause flooding in south Dade (p. E–163.) However the discussion stops short of expressing a commitment to prevent that from occurring. We find the description of the existing flooding problems on page E–117 inaccurate and somewhat offensive. To ascribe our problems to "agricultural encroachment" in the floodplain is just plain wrong. Please rewrite this section to correct this misrepresentation and to include a firm commitment to reduce flood damage to private property.

We have reviewed the letter to you from Bob Crawford, Commissioner of Agriculture and Consumer Services for the State of Florida, and endorse his position on this study. Although this plan is not ready for consideration by Congress, the momentum it has generated could be harnessed in a productive way if you can convince local interests you are serious about their input. Recent experiences will make this difficult in our area, but we hope you are willing to make the effort. Thank you for your consideration.

Sincerely,

STEVE SAPP, *President.*

FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES,
Tallahassee, FL, February 5, 1999.

Colonel Joe R. Miller,
District Engineer,
U. S. Army Corps of Engineers,
400 West Bay Street P.O. Box 4970,
Jacksonville, Florida 32232–0019.

DEAR COLONEL MILLER: I want to thank you for providing this opportunity for comment on the Implementation Plan draft document. Your continuing efforts to involve the public in the development of the Comprehensive Plan are commendable and will contribute, in a positive manner, to the successful outcome of this effort.

In my December 7, 1998 letter to you containing my comments on the draft Comprehensive Plan, I delineated specific issues that I felt must be addressed in a revised Implementation Plan section. Mr. Chuck Aller, Director of the Of rice of Agricultural Water Policy, followed my initial letter with more detailed comments on December 29.

To summarize those concerns, I believe the uncertainties in the draft Comprehensive Plan preclude its blanket authorization by Congress or use as a final decision-making document. However, a carefully designed Implementation Plan, which contains a phased authorization process, using the Restudy as a guide for the continuing process of project development, will allow the Comprehensive Plan to serve as a useful planning document and guide for future action.

In order to accomplish this, the Implementation Plan should provide for the involvement of the Governor and Legislature in successive Water Resources Development Act authorization of project elements. There also needs to be provisions for complete feasibility studies as projects are developed, and specific assurances for water users, flood control, equitable cost distribution, land acquisition and private property rights. The uncertainties surrounding the issues of water quality and the general environmental permitability of project elements need to be decisively addressed and resolved. The Implementation Plan clearly should provide a process that ensures that water quality and/or other requirements that could prevent implementation of a project, be identified, fully addressed and equitably funded by both

the Federal and local sponsor before projects are authorized and public resources are irrevocably committed.

I am very pleased that the draft Implementation Plan has addressed many of my concerns. The commitment to continue working with the South Florida Water Management District and stakeholders on adequate assurances for water users is extremely important. In addition, the Project Implementation Report (PIR) process should offer the opportunity to resolve technical and economic feasibility issues prior to authorization. To protect the integrity of this process, Congress should not be asked to authorize any of the Plan's major components until after a final PIR has been completed. The time table delineated in the Plan's initial proposed authorization provides ample time to complete the PIR and still obtain congressional authorization before construction is scheduled to begin. Maintaining this discipline will improve the credibility of the restudy in Washington and Florida and will strengthen the chances for long term implementation.

However, given the monumental commitment of resources required by the Comprehensive Plan and its extensive impact on Florida's environment and economy, I would ask that the final Implementation Plan find a way to acknowledge, as the Governor's Commission for a Sustainable South Florida has done, the need to involve the Governor and the Florida Legislature in this process on a continuing basis. I also believe that water quality considerations, including a process for the integration of results from the Water Quality Feasibility Study into projects should be more directly addressed. Other comments, including suggested changes or specific recommended language for the Plan that address remaining uncertainties and issues are enclosed.

I hope these comments are useful and would request their incorporation in the final Implementation Plan. I have been very pleased with the effort made by the Corps to ensure the involvement of diverse interests in this complex process. You certainly have my assurance that the Florida Department of Agriculture and Consumer Services will continue to support your efforts to restore the Everglades while meeting the balanced purposes set forth in the Water Resources Development Act for the Central and Southern Florida Project.

If you or staff has any questions regarding these comments, please feel free to contact Mr. Chuck Aller at (850)922–7925.

1Sincerely,

BOB CRAWFORD,
Commissioner of Agriculture.

FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES ADDITIONAL COMMENTS ON THE DRAFT IMPLEMENTATION PLAN FEBRUARY 5, 1999

FLOOD PROTECTION

Originally, the primary functions of the C&SF Project were flood control and water supply, with environmental protection and enhancement given a lower priority. The main focus of the Restudy is to improve the environmental performance of the system, while providing for the other project purposes; flood control, urban and agricultural water supply. When reviewing the Implementation Plan, it is important to be able to determine how the Corps will address each specified purpose when designing and operating the components. It is not clear in the current version of the plan how flood control will be considered or addressed in the future planning/design efforts. Flood control as a topic does not fit very well under assurances to water users (pg. 9), which clearly addresses the water supply issue. It is imperative that flood control be addressed in a separate section. The following language should be incorporated as the means to address this issue within the Plan.

10.2.XX. REDUCING FLOOD DAMAGE

The lack of site-specific information, absence of detailed engineering evaluations and the limitations of the models used to develop the Comprehensive Plan precluded the review of impacts to flood protection caused by the plan. These same limitations also prevented a review of opportunities to correct existing flooding problems as specific plan components are constructed. Flood protection benefits can be obtained without compromising, and in some cases even enhancing, the restoration performance of the plan. The detailed review of flood protection and enhancement will be included, as an area for additional effort in the PIR.

(The following section should be included in the PIR description.)

The Project Implementation Reports for specific Comprehensive Plan components will include a detailed review of flood protection issues in areas affected by each

component. The Corps will include the enhancement of flood protection in areas with known flooding problems as a design objective in each PIR. This includes the reduction of agricultural losses associated with high water tables as well as traditional damages caused by surface flooding.

FEASIBILITY STUDIES

The scope of the Southwest Florida Feasibility Study (pg. 38) should clearly delineate flood control as a continuing project function.

The issue of water quality is inherent in the components/projects of the Comprehensive Plan. Therefore, the Water Quality Feasibility Study is critical to the development of the water quality constituents needed to be included as part of these projects. It is imperative that the Implementation Plan provides a specific schedule, budget, timetable and initial scope for the Water Quality Feasibility Study. The Plan should clearly describe the process for integrating the study's findings into components and project as they are developed. This is critical in order to avoid problems similar to those experienced in STA–1W.

LANDOWNER/PROPERTY RIGHTS ASSURANCES

The Comprehensive Plan anticipates the need to acquire 250,000+ acres of private lands. Assurances should be provided that land acquisition, for each project, will be based on need and justified by sound science, engineering and economics. The following language should be incorporated as the means to address this issue within the Plan.

2.10 ASSURANCES TO LANDOWNERS

In view of the extensive real estate requirements anticipated by the Comprehensive Plan and the long timeframe that will be needed for engineering, environmental and economic studies, the potential consequences for private property owners must be recognized. Once property has been identified for acquisition in a government report the owner's ability to utilize the property, and consequently the market value of the parcel, is affected. To minimize this problem, the implementation process will only identify in the PIR necessary real estate after detailed studies have been completed. In order for real estate costs to qualify as part of the local share, acquisition must come after completion of the PIR and authorization by Congress, unless Congress specifically grants a deviation.

The State of Florida and the Local Sponsor have already established an ambitious land acquisition program to acquire certain high priority parcels for construction of several critical components of the Comprehensive Plan. The Water Preserve Areas for the East Coast suffer and the Regional Attenuation Facilities for the Indian river Lagoon and St. Lucie Estuary have been identified and approved by the state for early acquisition. Congress has also recognized the benefit of crediting the Sponsors costs for these acquisitions even though they have occurred prior to authorization.

PREVIOUSLY AUTHORIZED PROJECTS

Previously authorized projects (Kissimmee River Restoration, STA–1E, Modified Water Deliveries, and C–111) were assumed to be in place in the initial Restudy alternative model runs. Due to problems that have surfaced recently with some of the previously authorized projects, the designs are being modified, and they are inconsistent with what was modeled in the Restudy. The recommended plan components contain some additional modifications to the authorized projects, not all of which are included in the initial authorization list. Some of the proposed modifications require pilot projects and could not be constructed for many years or at all, depending on the success of the pilot. The Implementation Plan should clarify that previously authorized projects are high priority and should not be delayed while the Restudy is determining how to deal with the conceptual modifications proposed in the recommended plan.

IMPLEMENTATION OF INITIALLY AUTHORIZED PROJECTS CONFLICT WITH THE PLAN PIR PROCESS

Process consistency is critical to generating support for the Comprehensive Plan. Preparing individual Project implementation Reports (PIRs) after acquiring congressional authorization for the initial package of plan components (as described on pg. 30) is a deviation from the PIR process illustrated on page 13. Looking at the projected construction start dates for several projects recommended for WRDA 2000 raises questions as to why PIRs cannot be completed for these projects when the

schedule indicates that sufficient time exists to do the PIRs before asking for congressional authorization. If PIRs cannot be completed on these projects then WRDA 2000 authorization should be limited to the pilot projects and early action items delineated in the draft plan.

RECOMMENDED ADDITIONS TO PLAN PROGRAMMATIC AUTHORITY

The 10 Mile Creek project should be added to Table 5.3–1 Programmatic Authority. It is a Critical Project that has tremendous local support, one that would expedite implementation of the Comprehensive Plan, and has not yet been completely funded.

APPROVAL OF THE COMPREHENSIVE PLAN

The phrase "Restudy authorized by Congress" (pg. 23, line three of Schedule) is inconsistent with the stated objective for Plan approval used on page 28, Section 5.1. Please modify "authorized" to "approved" on page 23.

SUGAR CANE GROWERS COOPERATIVE OF FLORIDA,
Belle Glade, FL, February 5, 1999.

Col. Joe R. Miller,
District Engineer,
U.S. Army Corps of Engineers,
400 West Bay Street,
P.O. Box 4970,
Jacksonville, Florida 32232–0019.

DEAR COLONEL MILLER: Sugar Cane Growers Cooperative of Florida has been following the Restudy process very closely since 1993. We have had briefings with your staff during the development of the various alternatives and attended public hearings on the recommended comprehensive plan in South Florida and Washington, D.C. We have expressed our skepticism concerning the lack of scientific and engineering support for many of the concepts being proposed.

We continue to have some generalized, process and specific concerns with the Implementation Plan. First, we are in concurrence with the position taken by Florida Department of Agriculture Commissioner Bob Crawford and echo the Department's comments as outlined in its December 7, 1998, December 29, 1998 and February 3, 1999 written correspondence.

Due to the great number of uncertainties in the draft Comprehensive Plan, we cannot support its blanket authorization or approval by Congress or use as a final decisionmaking document.

Of particular concern are the proposed reservoirs for storing water in the Everglades Agricultural Area (EAA). Our members have been managing water and crops on this land for most of their lives. We have extensive on-the-ground experience with the hydrology and geology and believe that the engineering requirements and economic realities will make these large scale storage areas impractical. In addition, the high evaporation rates in this area would make these facilities a significant waste of water, when the objective of the Restudy is to make more water available.

Our only solace was a commitment by your staff to perform all necessary engineering and economic studies prior to final approval of these projects. Regrettably, the draft Implementation Plan, dated January 25, 1999, recommends seeking congressional authorization for a 40,000 acre project in the EAA before any technical evaluation has been done. Since the construction schedule included in the same document shows that there is plenty of time to produce the necessary engineering, economic and environmental evaluations before authorization, we do not understand the decision to include this project in your initial authorization list.

In summary, we do not support the pre-authorization of any components in which the technical, engineering and economic feasibility hasn't been addressed.

The assurances to water users as outlined in the Implementation Plan is a good start. Assurances need to be made for flood protection and protecting private property rights as well.

Please consider revising the Implementation Plan to address these concerns, specifically showing the completion of the necessary technical evaluations before congressional action on any storage area in the Everglades Agricultural Area. We will actively oppose, in Florida and in Washington, any proposal that short circuits this process.

Thank you for allowing us to review this plan and for your consideration of our comments.

Sincerely,

GEORGE H. WEDGWORTH, *President.*

LANDERS & PARSONS, P.A.
Tallahassee, FL 32301, May 28, 1999.

Lt. Gen. Joe N. Ballard,
Chief of Engineers,
7701 Telegraph Road,
Alexandria, Virginia 22315–3861.

RE: COMMENTS OF FLORIDA SUGAR CANE LEAGUE INC ON FINAL INTEGRATED FEASIBILITY REPORT AND PEIS—COMPREHENSIVE REVIEW STUDY—C&SF PROJECT

DEAR GENERAL BALLARD: I am writing on behalf of the Florida Sugar Cane League Inc. and its grower and processor members to provide comments for your consideration on the April 1999 Final Integrated Feasibility Report and Programmatic Environmental Impact Statement developed for the Comprehensive Review Study of the Central and Southern Florida Project.

Representatives of the Florida Sugar Cane League, Inc. have been active in attending public participation opportunities during the course of the Comprehensive Review Study, or Restudy, of the C&S Florida Project. We have long recognized the need to modify the Project to better develop and utilize available water resources for both the environmental and other water related needs of the project consistent with the authorized purposes for the Restudy as provided in the Water Resources Development Acts of 1992 and 1996 and related resolutions. We are committed to the success of the Restudy and its implementation based upon future authorizations and approvals.

As you may know, after the publication of your final Report and PEIS, the Florida Legislature enacted legislation in support of the Restudy providing a process that will be valuable in building.a broad public support and consensus for Restudy implementation and for the necessary funding. We urge you to consider this legislation in the formulation of your final Report and recommendations to Congress and in requests for congressional authorization of Project components in future Water Resources Development Acts. Although we acknowledge that this State legislation does not limit you or any Federal Agency in the exercise of your duties and responsibilities, it will be important to the effectiveness of the State and Federal Partnership that your recommendations and future requests for authorization be consistent with those of Florida.

More specifically we ask that you reconsider your current recommendations in the Restudy Implementation Plan for some Project Components now included in the initial authorization to be requested from Congress. We believe there are Project Components in the current Implementation Plan that will need further analysis and justification in order for the local sponsor to receive State approval to join you in seeking congressional authorization. Providing additional analysis and justification will not, we believe, delay the proposed dates in the-Restudy Implementation Plan.

We ask you to revise your Report and recommendations with regard to the following:

1. The Restudy legislation in Florida requires that all water resource issues be analyzed and evaluated before the local sponsor can seek congressional authorization for a Project Component. The issues include water quality, flood protection and natural system and habitat needs. Throughout the development of the Comprehensive Plan many comments from several interest groups have expressed concern that the analysis of water quality needs and the treatment facilities to meet those needs has been incomplete. The resolution of this issue is critical to the success of Everglades Restoration and should be integrated into the analysis of Restudy components to be authorized by Congress and not deferred to a later feasibility study as now proposed.

2. In particular, the Restudy Report fails to adequately analyze the water quality needs of Lake Okeechobee and the impact on the Everglades from reliance on the Lake for meeting water supply needs of the Everglades. however, there has not been an adequate alternatives analysis of reservoir storage in the area of Lake Okeechobee to determine which alternative will provide the most cost-effective and feasible water supply design. This analysis is likely to demonstrate that provision of reservoir storage north of the Lake will provide greater management flexibility so that additional water supply can be available to the Caloosahatchee and St. Lucie basins and not just the Everglades.

3. Because the recommended Comprehensive Plan relies heavily on uncertain and unproven technology the results from pilot projects and further feasibility analysis are essential to determine if the Plan as a whole will provide the benefits presented in the Report. The proposed Implementation Plan should be revised to give greater priority to those project components that utilize existing technology of known reliability and that will provide a balance of benefits in addressing all needs;

4. Likewise, many have been concerned that project components in the list for initial authorization have not been determined feasible based on standard engineering practices and that evaluations of whether they are cost-effective are incomplete. One way to provide consistency with the State process would be to complete the proposed Project Implementation Report prior to seeking congressional authorization of any Project component.

5. With specific regard to the proposed Everglades Agricultural Area Reservoirs, the most expensive projects included in the proposed authorizations for WRDA 2000, we believe (1) serious engineering and design issues may make these projects infeasible and (2) water quality management has not been appropriately addressed in the planning of these projects. These projects can not be credibly recommended for authorization on the basis of the woefully inadequate feasibility and cost benefit analysis that has been undertaken to date.

6. The local sponsor is required by the Florida legislation to provide reasonable assurances to existing users and landowners that existing quantities of water and levels of service for flood control not be diminished by the implementation of Restudy project components. While the Jacksonville District's Restudy Report and recommendations are explicit and unequivocal in providing a commitment to habitat restoration and providing assurances that environmental water supply needs will be met, there is no corresponding commitment to meet economic water supply needs even though meeting all water related needs of the region is an authorized Restudy purpose provided by WRDA of 1996. The local sponsor is required by Florida law to meet all water related needs in a balanced way. We are persuaded that the water resource development potential in South Florida is sufficient to achieve this and we urge you to provide a commitment to this goal in your Report.

7. Agricultural interests in South Florida are particularly concerned that the recommended Comprehensive Plan proposes to take approximately 220,000 acres of land for Restudy purposes, such as water supply reservoirs and high flow attenuation facilities, which in most instances will require the conversion and loss of prime agricultural land. We urge the Corps of Engineers to conduct site-specific analyses to determine the extent to which the targeted parcels will successfully function as assumed in the Restudy models. There is considerable doubt among experienced property owners as to the capacity of soils and sub-soils in many areas to hold water and function as water supply reservoirs. Further, the distribution logistics associated with centralized water supply reservoirs need to be calculated as part of a cost-effective feasibility analysis. This additional analysis of feasibility-and cost-effectiveness should be completed prior to seeking congressional authorization. Finally, to reduce the substantial economic impacts of this—conversion we ask for a commitment to avoid use of productive farm land wherever practicable and when use of productive farm land can not be avoided retain existing agricultural activity on productive land until it actually is needed for construction or operation of Restudy project components.

8. With regard to how Project operations may change in the future, how new Project Components will be operated and how water resources will be allocated, the Report and Comprehensive Plan is at best vague but mostly silent. These questions should be addressed directly and early in the process so that the public can adequately assess all costs and benefits of the Plan and the resulting water supply available for all needs. If these and other questions relating to flood protection and other water related needs remain unanswered, it will be very difficult to develop a consensus to provide implementation funding at the levels now projected.

As we have stated in earlier comments, our goal is for the Restudy to succeed and for the State and Federal partnership to be effective in meeting all needs.

We acknowledge and appreciate the leadership of Col. Joe Miller and complement his professional staff who have able to produce a Report of this magnitude and complexity within the limited timeframe they were given.

We are also grateful for this and other opportunities to comment on the Restudy.

Sincerely,

PHILIP S. PARSONS, *for the Florida Sugar Cane League, Inc.*

DRAFT MEETING SUMMARY—GOVERNOR'S COMMISSION FOR A SUSTAINABLE SOUTH FLORIDA

MARCH 2–3, 1999 THE CONSERVANCY OF SOUTHWEST FLORIDA NAPLES

DAY ONE—MARCH 2

I. Opening Remarks

The meeting was convened at approximately 9:30 am.

Chairman Pettigrew began by asking the Commission to approve the December and January meeting summaries. The summaries were approved without objection. He then explained the voting procedures for the next 2 days, stating that only Commission members may vote, but alternates can participate in discussions. Chairman Pettigrew admitted that, while consensus cannot always be reached on all issues, the Commission's best work has come when it has had the opportunity to fully understand the issues at hand. He added that trying to impose an unrealistic deadline that does not allow a deliberative process would make it difficult to reach consensus. Therefore, for the next 2 days, the Commission should concentrate on those issues that it fully understands, and it should defer those that have not been given enough time to adequately address. Chairman Pettigrew reflected on the Commission's accomplishments, citing the Comprehensive Plan for the Restudy, Eastward Ho!, Sustainable Communities, Brownfields legislation, and other important contributions. He said the new administration has made a clear commitment to urban revitalization, and he is hopeful that the Commission will continue to assist in this effort. He expects the administration to make a decision on the Commission after the current legislative session.

II. Attendance

Fred Rapach for Burt Aaronson (3/2); Chuck Aller; John Anderson; Gary Evink for Thomas Barry; Agnes McLean for Mitchell Berger (3/2), Sam Poole for Mitchell Berger (3/3); Ernie Caldwell (3/2); Mike Collins; John DeGrove; .Bill Dobson for Miguel Diaz de la Portilla; Robert Duane; Loly Espino; George Haughney for Suellen Fardelmann (3/2); John Flanigan; Richard Harvey for John Hankinson; Shannon Estenoz for Debra Harrison (3/2), Debra Harrison (3/3); Maggy Hurchalla; Joette Lorion for Dexter Lehtinen (3/3); Maggie Megee; Maj. Ted Pruett for Col. Joe Miller (3/2), Col. Joe Miller (3/3); Jack Moller; Bill Payne; Richard Pettigrew; Terry Rice; Dick Ring; Carol Rist; Herbert Robinson; Roy Rogers; Rock Salt; Stuart Strahl; Herb Zebuth for David Struhs (3/2), John Outland for David Struhs (313); Michele Thomas (3/2), Craig Tepper for Michele Thomas (3/3); Phil Parsons for Bubba Wade; Bernie Yokel; Charles Zwick.

III. Overview of the Draft Conceptual Plan to Achieve Sustainable Communities

Karla Ebenbach, Senior Planner for the Task Force, and staff to the Commission's Quality Communities Committee, gave a brief overview of Planning for 2050, A Conceptual Plan to Achieve Sustainable Communities in South Florida, the end product of the draft document formerly known as A Conceptual Plan for the Human System. Ms. Ebenbach said this document makes recommendations relative to the economic and social aspects of sustainability. The ideas are the end product of an ongoing process that began with the Initial Report recommendations, and reflect the input received from the Commission. She said this document is more like an executive summary than the lengthy report style of the previous draft. She added that this style will be more effective and have greater applications complementing the Commission's work in restoration. She asked the Commission to review the document in preparation for its approval on the following day.

Ms. Ebenbach then explained the contents of the document. It begins with an introduction that describes the concept of sustainability, and the need to balance the resource needs of the environment, the economy, and society. Following the introduction is a set of sustainability goals and objectives focusing on employment, transportation, and education. Each of the three sectors is addressed by a vision statement, a discussion of current trends and problems, and a clearly articulated strategy.

IV. Overview of Working Group Effort to Determine Land Acquisition Priorities for Ecosystem Restoration

Richard Harvey, Chair of the South Florida Ecosystem Restoration Working Group (Working Group), began with a brief discussion of the Aquifer Storage and Recovery (ASR) letter signed by Environmental Protection Agency (EPA) Regional Administrator John Hankinson on February 9,]999 (see attachment 1). Mr. Harvey said the letter allows the ASR concept to move ahead for a comprehensive evalua-

tion of both water quality and hydrogeologic issues. He said the Working Group formed an ASR issue team in September and it has just published a report identifying these issues and strategies for addressing them. Mr. Harvey added that, for the process to continue, the Florida Department of Environmental Protection (DEP) must make a decision based on the quality of the source water compared to that of the receiving aquifer. He said that current DEP rules require the source to meet all drinking water standards, and that DEP must decide whether or not to proceed with rulemaking.

Mr. Harvey then discussed the land acquisition priority list. He said that the Secretary of the Interior is directed to submit a comprehensive acquisition plan for non-Federal lands to Congress by March 31, 1999, which will include a priority list of lands to be acquired should additional funds become available. This plan must clearly identify why the parcels selected for acquisition are critical to ecosystem restoration. The Working Group established a committee at its January meeting to develop the acquisition list. The committee met twice in February. At its first meeting, the committee focused on establishing qualifying and ranking criteria that could be used to evaluate land acquisition projects for inclusion in the list. At the second meeting, the committee refined the criteria, and also reviewed projects nominated by different participating organizations.

Mr. Harvey said the criteria fall into two categories. First, qualifying criteria for projects to be included on the list. These include: the project has a willing non-Federal 50 percent cost match from a local sponsor; the project is included on a current list and has received public review, such as the CARL, Save Our Rivers, or Miami-Dade County's Environmentally Endangered Lands lists; the project must be compatible with the Restudy; the land is vitally important to the South Florida ecosystem restoration effort; and the project is not already authorized in the Department of Interior's fiscal year budget. The second category of criteria identify the beneficial attributes associated with the project. These include: the land is critical for multi-species recovery; lands that are important to regional hydrology; lands that provide linkage to wildlife corridors; lands that improve regional water quality; lands that are vulnerable to development; and, lands that are specifically identified by the Restudy as being a key feature of the proposed plan (see attachment 2 for the list of criteria).

Mr. Harvey said the end result was a list of about 35 to 40 projects. The committee then developed a matrix listing each of the projects and the various ranking criteria. Each project criteria was assigned a ranking number between zero and two, with two stating that the project has significant contributions to that particular criteria, and zero signifying the project has no contribution. Mr. Harvey asked the Commission to review the list and decide the best way for it to participate. He added that the Working Group hopes the Commission will rank these projects into some form of priority list. Maggy Hurchalla, who participated in the land acquisition committee, said the ranking is different than the process used for the Critical Projects, which placed the projects into some order for implementation. Instead, this.list would be an evaluation of the importance of each project. Terry Rice expressed concerns over trying to formulate this list on such a short timeframe. He agreed with Chairman Pettigrew's opening statement that the Commission's best work has been done through thorough review, and.that trying to rush this list without adequate public review would not be appropriate. Ms. Hurchalla responded that this process will go forward on its own, and that the Commission should comment on it to the best of its capacity. Chairman Pettigrew suggested that the Commission concentrate on reviewing the criteria instead of reviewing the projects individually. Several Commission members agreed that this would be the best step. Dick Ring added that the Secretary of the Interior would feel much more comfortable about submitting the list to Congress after knowing that the Commission has reviewed the criteria used to formulate that list.

V. Public Comment

Edith McClintock, of the Nature Conservancy, discussed a series of public forums that the Conservancy has been holding throughout South Florida to make residents aware of the water supply and resource management problems the area is facing. She said that if residents do not understand the problems, they will not support restoration efforts. Ms. McClintock stated that the Conservancy, along with the South Florida Water Management District, initiated a community outreach program in 1998, and this program has been extremely successful in raising public awareness. Last year they held 29 forums throughout the South Florida area, and will be holding an additional 30 to 50 "Water for Our Future" forums in the next several months. Ms. McClintock asked the Commission to partner in hosting some of these forums, and invited the participation of its members.

Diane Buchanan, of the Full Club of Miami-Dade County, said her organization has five concerns over the Restudy. These are: too much water in the Water Conservation Areas (WCAs); too much water in the western part of Everglades National Park; too much water in the eastern portion of Big Cypress National Preserve; not enough water in the north end of WCA 3; and maintaining a sufficient supply of water for Broward County. Ms. Buchanan said her organization has been taking water level measurements in the WCAs, and that these levels differ from the South Florida Water Management District's measurements. She added that high water levels are damaging the tree islands. Ms. Buchanan said that levees, including the L–29, should be removed in order to restore sheet flow, and expressed concerns that the first phase of the Restudy does not include this as a component. She concluded by saying that, despite these concerns, she supports the Restudy.

Ellen Lindblad, Director of the Corkscrew Regional Ecosystem Watershed (CREW) Land and Water Trust, spoke on the Southern Crew and Imperial River Flow Way, saying that these lands should be acquired and protected. Ms. Lindblad stated that when the initial project boundaries were delineated in the 1980's, only the wettest areas were included. The boundaries did not. include any active agricultural or residential areas as part of the watershed. Later, it was realized that the watershed did indeed include these adjacent lands. Ms. Lindblad said that the original intent of the CREW project was to protect an important aquifer recharge area, but it could also serve as a flood protection area if the boundaries are expanded. She concluded by stressing the opportunity of acquiring these lands while they are still relatively undeveloped, and urged the Commission to recommend their acquisition.

Nancy Payton, Southwest Florida Field Representative for the Florida Wildlife Federation, spoke about the Southern Golden Gate Estates, an area of approximately 55,000 acres at the core of acquisition projects in Collier County. The area is bordered by several preserves, including the Florida Panther National Wildlife Refuge, Fakahatchee Strand State Preserve, Everglades National Park, Ten Thousand Islands National Wildlife Refuge, and Rookery Bay. Ms. Payton emphasized the importance of Southern Golden Gate Estates as a wildlife habitat for panthers, black bears, wading birds, and several species of plants. She said the area is also important for water recharge and flood protection. Ms. Payton stated that acquiring the remaining lands is vital in light of a proposal by Collier County to build a road into the area.

Cynthia Laramore, of the Glades Area Environmental Justice Institute, expressed her concerns over the proposed 35 Aquifer Storage and Recovery (ASR) wells along the Palm Beach Canal as part of the Restudy. Ms. Laramore recalled that in the mid 1980's, the water bills in Belle Glade had warnings about trihalomethanes caused by the water treatment in use at the time. She added that during October and November 1998 the water in Bell Glade was yellow. Ms. Laramore said the proposed ASRs, and the possible relaxed regulations expressed in the EPA letter, could pose a threat to her area's drinking water if trihalomethanes are produced. Chairman Pettigrew explained that the EPA letter does not call for any treatment that could cause trihalomethanes, and that the ASR water will be introduced into a different aquifer from the drinking water source.

David Guggenheim, President of the Conservancy of Southwest Florida and Florida Co-chair of the Everglades Coalition, discussed two points contained in a recent Coalition letter. First, the Commission's Initial Report stated that a healthy Everglades is crucial. Mr. Guggenheim said the Commission has not articulated enough assurances for Everglades restoration in its recent reports. Second, Mr. Guggenheim expressed concerns over the language in recommendation No. 17 of the Commission's Draft Assurance/Implementation Report. He feels that the Talisman lands, and resulting trades, should be authorized in the year 2000 Water Resources Development Act (WHOA), and the components should be on-line by 2005 and 2007. Mr. Guggenheim concluded by stressing the importance of the CREW Project, and urged that the southern addition be included in the land acquisition process discussed earlier.

Charles Lee, Senior Vice President, Florida Audubon Society, spoke in support of an amendment that Stuart Strahl proposed to the Draft Assurance/Implementation Report. The amendment stated that the Talisman lands were in public ownership, and the first 50,000 acres of storage in the Everglades Agricultural Area (EAA) should be authorized in WRDA 2000, and come on-line no later than 2007. Mr. Lee explained that the Talisman sale agreement was signed in January in good faith by all the parties, including the sugar industry. He said that some sugar representatives are currently trying to prevent the storage in the Talisman lands from being implemented on time in order to continue farming the land under lease. Mr. Lee said that leasing the land purchased with taxpayer money to sugar interests is not an appropriate use of the $133.5 million. Mr. Lee noted that the sugar interests are

asking that a Project Implementation Report (PIR) be completed prior to the request for authorization, and asked what uncertainties this PIR would answer that are not already known. He concluded by urging the Commission to recommend that the EAA storage component of the Restudy be completed by the year 2007.

Jonathan Ullman, of the National Sierra Club, said the Club's 30,000 Florida members are very concerned over the Restudy, and would like to see Everglades restoration done with the best science possible. He said the fact that a peer review panel will monitor the restoration efforts is very satisfying. Mr. Ullman added that his organization will not support a Restudy implementation plan that serves the urban areas before meeting the needs of the natural system. He said that some very tough decisions need to be made, but that the Everglades must come first.

Mary Barley, Everglades Trust, reiterated support for Stuart Strahl's amendment, adding that the Everglades Trust opposes any delays to the EAA storage. She said that some decisions will not be easy, but the Commission has a chance to protect the Everglades and Florida Bay with its upcoming votes. Ms. Barley closed by thanking the Commission and Chairman Pettigrew for showing the people of South Florida the importance of the Everglades to their environment and economy.

Ann Hauck, of the Council of Civic Associations, stated that Southwest Florida is being ignored in the Everglades restoration plan. She added that Lee County has one of the highest concentrations of endangered and threatened species in the United States, and that Southwest Florida is the nation's fastest growing area. Ms. Hauck asked that the Estero Bay area be considered for acquisition. She said that Estero Bay and its tributaries are designated Outstanding Florida Waters, and that state and Federal agencies have failed to protect these areas for the last 10 years.

VI. Consideration of Draft Report on the Implementation Plan for the C&SF Project Restudy

The Commission dedicated the remainder of the day to voting on the proposed amendments to the Commission's Implementation Plan Report.

Roy Rogers and Maggie Megee, Co-chairs of the Commission's Public Outreach Committee, announced the completion of the Commission's sustainability brochure, the end result of many months of work. Mr. Rogers expressed his thanks to Rebecca Rust and Katrina Ferguson of the Florida Department of Labor and Employment Security for their help on producing the brochure. Mr. Rogers also introduced the near-completion of the Commission's video, and a short introduction of the video was played on the screen.

Recess at approximately 5 pm.

DAY TWO—WEDNESDAY, MARCH 2

I. Opening Remarks

The meeting was reconvened at approximately 8:30 am.

Chairman Pettigrew asked Maggie Megee to continue the discussion of Planning for 2050, A Conceptual Plan to Achieve Sustainable Communities in South Florida; the document that the Commission received the previous day.

II. Consideration of the Draft Conceptual Plan to Achieve Sustainable Communities

Ms. Megee began by reminding the Commission of the link between the environment, the economy, and society. This document addresses the economic and societal components of the Commission's icon. Ms. Megee explained that the document is a broad vision, or conceptual plan, of what South Florida's communities should look like in the future. It does not go into detail on how to achieve specific goals. Ms. Megee explained how the concept of sustainability, that present demands must not supersede future needs, is usually associated with the natural system, but it also applies to the entire living environment. Achieving sustainability requires balancing the resource demands of the environment, economy, and society. Ms. Megee concluded by stating that the principles contained in the document were first addressed in one of the Commission's first meetings, and that now the Commission has come full-circle by developing this document. The Commission unanimously adopted the document.

III. South Miami-Dade County Land Elevation Data Report

Jose Otero, Senior Engineer for the South Florida Water Management District (SFWMD), presented a status update on the effort to collect accurate elevation data in South Miami-Dade County. Chairman Pettigrew explained that the Commission requested the land elevation data in response to farmers' concerns that restoration efforts might create adverse flooding to their lands. Mr. Otero said that the South Miami-Dade Topographic Interest Group was formed in August, 1998 as a direct response to a Commission resolution requesting that high-accuracy topographic data

address the concerns of the agricultural interests. The team is responsible for collection of high-accuracy elevation data, determining the data requirements of various hydrologic models, and evaluating the potential for root-zone flooding. Mr. Otero said the data will be used to improve the various hydrologic models used by different agencies for ecosystem restoration. The data is collected by shooting a laser beam from a level-flying aircraft and measuring the distance to the ground. Navigational equipment on board the aircraft determines the exact position in relation to the ground and the exact course. This technology has an accuracy of 20 centimeters (8 inches), and millions of data points are collected in one flight. Mr. Otero explained that while the technology is accurate, it is limited to use over dry ground. The laser cannot penetrate water since the beam will bounce off the surface. He added that there will be a pilot project for this technology on March 16, and that maps should be available in May. Mr. Otero said the questions remains as how to best incorporate this data into the hydrologic models. He said the Topographic Group is working with the modelers in trying to address this issue.

IV. Consideration of Draft Report on the Implementation Plan for the C&SF Project Restudy (continued)

The Commission continued voting on the proposed amendments to, and unanimously adopted, the Commission's Report on the January 25, 1999 Draft Implementation Plan of the C&SF Project Restudy.

V. Public Comment

Joe Iannone, of Saint Thomas University, expressed his gratitude for the work of the Commission, and encouraged its members to continue the Commission's spirit through their individual outreach efforts. He mentioned that Rock Salt will give a presentation at Saint Thomas University's "Healing the Earth" conference on March 18, adding that Carol Rist made a presentation last year. Mr. Iannone volunteered the university network throughout Miami-Dade, Broward, and Monroe Counties for distribution of Commission information. He concluded by stating the University's commitment as a partner in environmental education, and added that 15 of its teachers will train 300 K–12 private school teachers. Maggie Megee thanked Mr. Iannone on behalf of the Public Outreach Committee for his time and effort.

Ibel Aguilera, representing the United Property Owners in the 8.5 Square Mile Area and a resident of the area for 20 years, said that she was not properly notified that this meeting was taking place. She said holding a meeting which would address land acquisition issues at a location 3 hours away from the affected area, and on a weekday, demonstrated to her that the opinion of the residents was of no concern to those involved in restoration. Ms. Aguilera said the residents were led to believe that the research in the area was intended to benefit both Everglades National Park and the residents. She added that the SFWMD stated at the October 5, 1998, public meeting that the research was intended to find ways to minimize relocation of the residents. Ms. Aguilera said she believes the decision for total buyout at the November 12 meeting was made without adequate public input and in violation of the Sunshine Law. She concluded by saying that many residents are not willing sellers and that the 8.5 Square Mile Area is not needed for restoration.

Maria Gonzalez, a property owner in the 8.5 Square Mile Area, said the fate of their properties is being decided without adequate public involvement and input from the residents. She said that prior to the November 12 meeting, the residents had been led to believe that alternative 2 would be the preferred alternative. Ms. Gonzalez said that, according to three prominent hydrologists, the area is not necessary for restoration. She cited a memo from Alan Hall of the SFWMD which states that the area does not have to be acquired for Everglades restoration (see attachment 3). Ms. Gonzalez said she supports the Corps mitigation plan, and added that she understands that this plan will not provide flood protection. She would like the area to remain as it is, and does not request that the County provide additional services. She said that the Miami-Dade County Board of Commissioners has postponed addressing this issue because they do not know all the facts. She explained that the area is not part of Shark River Slough and is therefore relatively high. She concluded by stating that the property owners will fight to keep their land.

Charles Lee, Senior Vice President, Florida Audubon Society, thanked the Commission for adopting language in the Implementation Report that requests accelerating the implementation of water storage areas in the Restudy. Mr. Lee said that in pursuing the acquisition of properties from willing sellers, in light of other owners, oppositions, a government action that could be viewed as a restraint on the alienation of title is a violation of property rights and should be avoided. He said that the SFWMD has received calls from hundreds of property owners in the 8.5 Square Mile Area that are interested in selling their land, and that these sellers

should not be denied their right to sell by those He added that the interests of the non-willing property owners can only go who are opposed. so far before they violate the property rights of those who want to sell. Mr. Lee emphasized land acquisition is always an emotional issue, especially among those immediately affected. He explained that Miami-Dade County will be constructing a new cross-town expressway east of the airport, a project that will cost $5 billion. In the process thousands of private property owners will have their land condemned, many of which will be low to moderate income homes. He added that while the planning for this project is moving forward rapidly, the public has not been given nearly as much involvement as the discussion on the 8.5 Square Mile Area. Mr. Lee concluded that there will always be people coming forward with their opposition to land acquisition, and that the minority should not interfere with the opportunity of the majority that wants to sell.

Jonathan Ullman, of the Sierra Club, said that the permits to build in the 8.5 Square Mile Area should never have been issued, and that there is a chance now to do the right thing. He said that this is a very emotional issue, and empathizes with the residents, but there are more important factors than their interests. He urged Miami-Dade County, the SFWMD, and the Federal Government to resolve this issue quickly.

John DeGrove announced that Rock Salt was nominated by Chairman Pettigrew and Ernie Barnett for the Thousand Friends of Florida, 1999 Bill Sadowski Award. This award is given each year to an individual who exemplifies a high level of commitment to growth management and the philosophy of negotiation for which former Department of Community Affairs Secretary, Bill Sadowski, was known. Dr. DeGrove said the award ceremony will take place on March 17, from 6 to 8 p.m. in the Old Capitol in Tallahassee.

VI. Consideration of Commission Input to Working Group Effort to Determine Land Acquisition Priorities for the Ecosystem Restoration

Richard Harvey, with assistance from Bob Jones of the Florida Conflict Resolution Consortium, led the Commission in a discussion to evaluate the Working Group's land acquisition criteria. The Commission agreed it would only evaluate the criteria, not the specific projects on the list. Joette Lorion, representing the Miccosukee Tribe, expressed concerns that these criteria were generated in meetings without public participation, and that the rankings would go directly from the Working Group to the Secretary of the Interior. She added that this process did not follow the same procedure as the Critical Projects where consensus was reached through a series of public meetings. The Commission's comments on the land acquisition criteria are summarized in attachment 4.

VII. Consideration on the Draft Report on Funding the C&SF Project Restudy

The Commission adopted its Fig the Restudy of the Central crud Southern Florida Project report. The Commission was not able to complete its discussion of the proposed amendments to the report, and the Construction, Operation, and Maintenance Funding and Water Quality Funding sections were withdrawn for consideration by a new commission.

The meeting adjourned at approximately 4:15 pm.

ATTACHMENTS

1) Letter from John Hankinson, EPA Region 4 Administrator, to Colonel Joe Miller, February 9, 1999.

2) Working Group Land Acquisition Criteria, March 1, 1999.

3) Alan Hall memorandum to SFWMD Governing Board on 8.5 Square Mile Area, January 4, 1999.

4) Comments from the Governor's Commission for a Sustainable South Florida on the Working Group Land Acquisition Criteria, March 3, 1999.

ATTACHMENT I

U.S. ENVIRONMENTAL PROTECTION AGENCY,
REGION 4, ATLANTA FEDERAL CENTER
Atlanta, GA 30303-8960, February 9, 1999.

Colonel Joe R. Miller,
U.S. Army Corps of Engineers,
Jacksonville District Office,
P.O. Box 4970,
Jacksonville, FL 39239.

DEAR COLONEL MILLER: Thank you for your October 1, 1998, letter to Environmental Protection Agency (EPA) Administrator Carol M. Browner. I am providing you with a response to your request of written confirmation of the Agency's policy regarding the use of "raw" surface and ground water in aquifer storage and retrieval (ASR) wells proposed for the Central and Southern Florida Project Comprehensive Review Study (Restudy). Under the Safe Drinking Water Act (SDWA) and Federal regulations, these wells would be classified as Class V underground injection wells regulated by the Underground Injection Control (UIC) program. The State has primary enforcement authority for these wells, but in any case, injection into any Class V wells must not endanger underground sources of drinking water (USDWs).

The issue of implementing ASR well technology using untreated surface or shallow ground waters as source water has been challenging. We have focused a great deal of attention on this issue at the Regional level, and at EPA Headquarters offices. We have also worked closely with the Florida Department of Environmental Protection (FDEP) as our partner in the Underground Injection Control program and will continue to solicit their support.

ASR technology has the potential for great environmental benefit in solving water use problems in south Florida, but we believe that the potential may also exist for this technology to cause undesirable contamination of aquifers, which might be used as drinking water supplies for the region. EPA is aware that recapturing lost water storage capacity is a key element in the overall south Florida ecosystem restoration effort. Even so, it is imperative that implementation of this technology not cause contamination of USDWs that could adversely affect the health of persons now or in the future.

The Restudy currently proposes to use ASR technology to provide up to 1.7 billion gallons per day of water storage capacity. The source of most of the water to be stored is untreated surface waters or shallow ground waters. This raises a potential concern because the SAGA and the Federal UIC regulations prohibit injection activity which allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CER Part 142 or may otherwise adversely affect the health of persons [42 U.S.C. §300h(d)(2); 40 CFR §144.12(a)]. Most surface waters, and some shallow ground waters, cannot comply with this requirement due to the presence of various contaminants. A review, however, of the somewhat limited water quality data available for the proposed source waters (Lake Okeechobee and the Caloosahatchee River) indicates that there may be only one contaminant present which exceeds the primary drinking water maximum contaminant levels (MCLs): total coliform bacteria.

Because of the importance of identifying effective ways to store water in the region, EPA has indicated in meetings with involved stakeholders that we are willing to consider a flexible approach to constructing and permitting the ASR wells proposed by the Restudy. For those wells, EPA believes that the proposed "raw" water ASR projects can be implemented consistent with the SDWA and EPA's regulations if "risk-based" analyses of the projects demonstrate that the USDW will not be endangered in a way that could adversely affect the health of humans. his approach would depend on a number of factors: (1) that a more comprehensive evaluation of the quality of the proposed source waters confirms that total coliform bacteria is the only problematic parameter; (2) that a demonstration can be made that the biological contaminants will experience "die-off' such that the presence of these contaminants in the USDW will not cause a violation of the MCL or pose an adverse health risk; (3) that both modeling and test monitoring confirm die-off after injection of the biological contaminants within a reasonable time-space continuum after injection into a saline/brackish aquifer; (4) that the use of ASR technology on the scale and with the number of wells proposed, results in recovery of a reasonable amount of injected waters and of reasonable quality; (5) that there are documented environmental benefits to be derived by the storing of seater in this manner; and (6) that

use, and treatment if necessary, of the recovered water is consistent with its intended primary purpose, i.e., for ecosystem restoration.

We have all come to recognize the complexity of the concerns involving raw water ASR implementation and the probability that additional concerns will also arise. Indeed, some concerns may not become known until actual project initiation. If these current and future concerns are to be addressed adequately so as to not threaten public health then the appropriate pilot projects and "risk-based" strategies will need to be developed, carried out and carefully evaluated. For example, if monitoring clearly demonstrates that total coliform bacteria is the only contaminant of concern, then a "risk-based" analysis must demonstrate that coliform bacteria in the injectate will not impact any portion of the public currently using that aquifer or any surrounding aquifer as a source of water supply, as well as that no bacteria will survive long enough to pose risks down-gradient or in the future.

Other than for coliform bacteria, the proposed raw water injectate should be evaluated to determine if other contaminants are present that exceed MCLs for drinking water, or may otherwise adversely affect the health of persons. Appropriate water quality monitoring of both the source seater and the injection zone should be instituted both to characterize the quality of those waters and to ensure that no USDWs are endangered.

In addition to monitoring the quality of water that is injected, appropriate water quality monitoring for contaminants that may form within the injection zone as a result of the injection activity should also be conducted. For example, it is conceivable the injection of oxygenated waters could cause the dissolution of uranium isotopes, if present, from the injection zone which would cause a threat to the USDW. Likewise, oxygenated waters could potentially sustain bacterial survival in the receiving USDW. Other potentially harmful effects from injection activity include the conversion of organic nitrogen to ammonium nitrogen, the methylization of mercury, and the formation of trihalomethanes should chlorination be utilized. Any proposed raw water ASR project should address these and other concerns that may arise.

As a general matter, the injection zone for any proposed raw water ASR project should already contain water that is of lesser quality than the proposed raw water injectate. For example, it may be acceptable to inject fresh water from Lake Okeechobee containing coliform colonies that will die off in the brackish water of the Floridan Aquifer in the region. But the same quality of raw water could not be injected into the fresh water of the Floridan Aquifer in northern or central Florida. In other words, the proposed injection activity for the ASR project should not cause a current or future public water system to need more treatment to meet drinking water standards than would be necessary using the native waters of the injection zone aquifer.

EPA believes that such large scale, untreated water ASR projects should be developed incrementally. Initial implementation should begin with pilot testing. If this testing indicates initial success with very low risk, then the project could be expanded in stages with each subsequent stage demonstrating the potential environmental benefit of ASR technology. It is critical that a favorable percentage of injected water be recoverable so that implementation of ASR technology provides a direct environmental benefit that is more advantageous than alternative water storage mechanisms. Also, the incremental implementation of ASR should closely monitor the rates and volumes of injected fluids, the wellhead injection pressure, and the pressure buildup within the injection zone. Injection pressure and/or pressure buildup within the injection zone must not cause fracturing of the overlying geologic unit so as to allow the injectate or formation fluids from the injection zone to migrate upward into zones with higher quality water, such as the Biscayne Aquifer.

If all of these factors/conditions are satisfied, we believe that EPA, and the FDEP, can determine for this specific project that ASR injection is allowable under the SDWA without the requirement for sophisticated treatment of the raw water prior to injection. However, even if this decision is made, it may be necessary for FDEP to promulgate amended State rules to allow for injection of this type which does not meet drinking water standards at the point of injection. If any factor is not satisfied, the result may be that the proposed ASR cannot proceed without prior treatment of the injectate.

It is my understanding that an ASR Issue Team, co-chaired by Richard Harvey, Director of EPA Region 4, South Florida Of lice, has been created by the South Florida Ecosystem Restoration Task Force/Working Group to address the issues and concerns discussed above. I would like to encourage you to continue working with Richard and the other members of the Issue Team to resolve these concerns as expeditiously as possible and to develop an appropriate "risk-based" strategy. As always, EPA looks forward to working with you on these and other critical ecosystem res-

toration issues facing south Florida. If I may be of further assistance, please feel free to contact me.

Sincerely,

JOHN H. HANKINSON, JR., *Regional Administrator.*

ATTACHMENT II

LAND ACQUISITION CRITERIA

UPDATED MARCH 1, 1999

1. Criteria For Qualification of Projects:

a. Must have non-Federal co-sponsor(s) willing to contribute 50 percent cost-share.

b. Projects that are part of a current land acquisition list prepared through an evaluation and selection process that incorporated broad public input can be included without additional detailed analysis and public review. New projects may be considered, but would require special attention to include dedicated opportunities for broad public review and comment.

c. Intended use of land (and subsequent modifications) must be compatible with the C&SF Restudy Recommended Plan (can't preclude subsequent implementation of some Plan features).

d. Land is vitally important to the South Florida ecosystem restoration effort, including but not limited to hydrologic or ecologic restoration.

e. Land acquisition project is not already authorized and included in DOI's Fiscal Year Budget request, such as Everglades National Park Expansion, Big Cypress Park Expansion, etc.

2. Criteria for Ranking of Projects (not all criteria must be met, but "points" accrued if these factors are true):

a. Land includes habitat considered critical for implementation of Multi-species Recovery Plan (e.g., an imperiled habitat type such as dry prairie, panther habitat, etc.), or acquisition and modification of hydrology on the land will help to mitigate impacts on threatened and endangered species.

b. Project adds habitat diversity to lands currently held in public ownership (e.g., short hydroperiod wetlands, wet pine flatwoods, wet prairies, sand pine scrub, etc.) .

c. The land parcels are an important component of an overall plan to modify regional hydrology to more closely mimic historical hydro-patterns.

d. Land would provide critical linkage in wildlife corridor.

e. Acquisition and modification of lands will improve regional water quality (e.g., creation of buffer, construction of water quality treatment features, restoration of natural drainage patterns, etc.)

f. Acquisition (and subsequent modifications) would improve regional water quantity (e.g., implementation of storage facilities).

g. Acquisition (and subsequent modifications) would improve timing & distribution of water.

h. There is some level of local cost-share—thereby extending benefits that can be gained with Federal, state, and SFWMD funds.

i. Lands are vulnerable to development.

j. Lands will later be used for implementation of the Restudy Comprehensive Plan, including features anticipated for inclusion in proposed Feasibility Plans (e.g., SW Florida, Indian River Lagoon, Florida Bay, etc.)

Issues for Cover Letter:

1) All of the projects on the list support one or more of the three goals for South Florida ecosystem restoration and protection. Because the South Florida ecosystem is of national importance, we believe that cost-sharing on these projects is responsible use of Federal funds.

2) Several very critical land acquisition projects are not included in this list because they are already included in either the DOI's or the USAGE's fiscal year budgets. Examples include lands needed for the following: Kissimmee River Restoration Project; C–111 Project; Everglades National Park Expansion; Big Cypress National Preserve; and National Wildlife Refuges. Continued funding for purchase of these lands is critical to the restoration and protection of the South Florida ecosystem.

3) Because of the importance of land acquisition in the overall restoration and protection effort, the subgroup recommends that the Working Group establish a Task Team to continue the development of a land acquisition strategy that identifies

and prioritizes both small and larger parcels needed to meet the three restoration goals. The Restudy Team has done a great job in identifying lands needed to get the water right—we need a similar exercise to identify and prioritize lands needed to restore and protect critical habitats needed to support Florida's biological diversity—both projects that protect large tracts of habitat and those that protect and restore small localized tracts in or near the urban core areas.

ATTACHMENT III

MEMORANDUM

TO: Governing Board Members
FROM: Alan Hall, P.E., Director, Ecosystem Restoration Department
DATE: January 4, 1999
SUBJECT: Ecosystem Restoration Myth-management

I am writing to give you information that might be helpful in addressing Terry Rice's recent comments in a Herald editorial. You have all received a copy of Terry Rice's op-ed on this subject, copy attached. For your benefit I feel that I need to provide to you some additional details related to what Col. Rice calls "myths." He represents the Miccosukee Tribe in this and other matters; and, as such, presents a very specific point of view on this project. Representatives of the tribe have openly stated that they have no interest in the provision of flood protection to the 8.5 Square Mile Area (8.5 SMA). I will respond to each of his ten "myths" as presented in his article:

1. It is true that the 8.5 square mile area does not have to be acquired for Everglades Restoration. However, it is also true that the acquisition is the least cost, in public funds, of all the alternatives which met the project criteria. It is important to note two things here related to the second part of this "myth statement": a) the Corps was directed to develop a plan to protect the area from increased flows; and b) this was presented to Congress in 1992. First, the Corps plan was designed to ensure that the 8.5 SMA did not get wetter because of increased flows; it was not intended to provide any measure of flood protection above the current conditions—which is none at all. And second, was developed in 1992, a full 3 years before completion and acceptance of the Natural Systems Model (NSM) which showed that restoration of the Everglades would require significantly higher stages in this area than was assumed in 1992.

2. The Corps Plan would work "as designed:" which means that it would not provide flood protection to the area above current conditions. If flows in the Everglades are restored to NSM levels, the pumping facilities designed in 1992 are substantially undersized to even "hold the line" on flooding in the area, as highlighted by our consultants in their studies. Also, the higher water levels predicted by the NSM would necessitate greatly increased pumping as well as higher operations and maintenance costs, above those estimated by the 1992 Corps design report. The two SFWMD consultants did confirm that the Corps Plan would allow for "increased" flows in the slough; but they also confirmed shot, from a public interest standpoint, the Corps Plan did not provide an adequate flood protection system for the residents or represent a wise expenditure of tax dollars. Building the 1992 Corps Plan would not reduce the outcry from area residents for flood protection nor allow for improved operations of the L–31N system for restoration purposes.

3. The SFWMD taxpayers, like all Floridians, are stakeholders in the restoration of the Everglades. Significant funding for this project will come from both the Federal Government and local agencies, as required by the Governing Board's action. Here, at least, Col. Rice begins to hint that, ". . . If the Corps plan doesn't work . . ." Terry Rice knows that the Corps Plan doesn't provide flood protection to the 8.5 SMA, and in fact he highlights this point in his ninth item.

4. The 8.5 SMA is part of the flow path for restored flows in Shark Slough.—It is true that some of the area on the eastern edges, adjacent to L–31N, are Higher" ground, to the extent that 7 to 8 feet above mean sea level can be called high ground. Just a few miles to the north of the 8.5 SMA the Corps is already experimenting with raising water levels from 7.5 to 8.0 feet above sea levels Eastern parts of the 8.5 SMA which were not inundated by a restored slough would be expected to have a water table so high as to make the ground unsuitable much of the time for year-round agricultural purposes, let alone residential habitation.

5. It will be up to Governor Bush to establish the state's position on this project in 1999. The Transition Team has received a briefing on this issue.

6. Here, Col. Rice precisely states that the Corps Plan provides flood mitigation, not flood protection. The intimation is that, since the plan does not protect the resi-

dents from floods, no urban services will be required or demanded from Miami-Dade County. Based upon the history of the area, I think this is not a valid assumption. As stated previously, tribal representatives have openly admitted that they have no interest in the 8.5 SMA receiving flood protection.

7. Total acquisition is certainly the least engineered option and the one with the least long-term operations and maintenance costs. It requires that we all pay the hard costs now instead of continuing to defer the high cost of inaction to future generations. This point was well made by Board member Berger during the workshop in November.

8. The analysis was as open to input as possible. Col. Rice was specifically invited to be a member of the the District Review Team. He accepted and then, due to his many other commitments, was not able to fully participate with the rest of the team members in the evaluation process. There was no preordained outcome. I specifically instructed my staff and the consultants to proceed through the process with open minds and let the result be whatever is the best alternative for all concerned. Some team members from other agencies were quite skeptical of the process in the beginning but when it was completed they felt they could support its integrity and fairness.

9. Finally, here Col. Rice admits that most residents want ". . . a version of the Corps Plan." Even the residents could see that the Corps Plan would do nothing for them, nor meet any of their basic water control needs. If the 1992 Corps Plan had moved forward, over $40 million of Federal funds and up to $150 million of local funds would have been spent, resulting in a living environment for the residents which would be no better than the very unsatisfactory conditions which they endure at the present. The net result would be a demand by even more residents in 4 to 5 years for a flood protection system!

10. Col. Rice incorrectly states that the Governing Board's vote for total acquisition was a willing-seller only condition. This is clearly not the case. The only condition, which you placed on this option, was that we secure funding commitments from the Department of the Interior and Miami-Dade County before we close on the first properties in the area. The willing seller aspect of land acquisition was discussed as the appropriate first step to initiate this program; but, it was clear that further acquisition tools might be required later, after we had processed the anticipated heavy workload of willing seller deals over the next 2 years.

We all want to expeditiously restore the only Everglades in the world. Implementing a project, such as the 1992 Corps Plan, which will cost many millions of dollars, and only lead to an increased demand for more flood protection in the future, is clearly not in the best interests of the Everglades, the residents, or the public taxpayers at large.

I hope the above information is useful in clearing up any misconceptions that may have arisen as a result of Terry Rice's article. As always, if I can help explain this in any way please call me at 561–682–6103.

ATTACHMENT IV

LAND ACQUISITION CRITERIA 3/3/99 (COMMENTS FROM THE GOVERNOR'S COMMISSION MEETING—3/3/99)

1. Criteria for qualification of projects:

{ } = discussed deletion < >= discussed add

a. Must have non-Federal {co-}sponsor(s) willing to <acquire the land> {contribute 50 percent cost-share}

b. Projects that are part of a current land acquisition list prepared through an evaluation and selection process that incorporated broad public upon can be included Thou additional detailed analysis and public review. New projects may be considered, but would require special attention to include dedicated opportunities for broad public review and comment.

c. intended use of land (and subsequent modifications) must be compatible with the C&;SF Restudy Recommended Plan (cants preclude subsequent implementation of some Plan features).

Concerns

- needs to be more than compatible—not different than, Restudy—don't supplant Restudy;
- which money pot being used;

d. Land is {vitally} important to the South Florida ecosystem restoration effort, including but not limited to hydrologic or ecologic restoration. concern—"vitally" not needed

c. ELIMINATE—Land acquisition project is {not} already authorized and <not fully funded> {included} in DOI's Fiscal Year Budget request, such as Everglades National Park Expansion, Big Cypress Park Expansion, etc.

Concerns

- implies that there is something routine about fed budget, no certainty year to year, change "included" to "fully funded";
- use authorized and not fully funded;
- do we need? perhaps not—WITHDRAW.

??Need, cost "bang-for-the-buck" and urgency has been established (split into 2 categories: Conservation vs. Project)

??Must be 1000 acres or greater in size (HOWEVER, ranking process may take care of)

??Title held by non-Federal entity

2. Criteria for ranking of projects (not all criteria must be met, but "points" accrued if these factors are true):

a. Land includes habitat considered critical for implementation of Multi-species. Recovery (e.g., an imperiled habitat type such as dry prairie, panther habitat etc.), or acquisition and modification of hydrology on the land will help to mitigate impacts on threatened end endangered species.

b. Project adds habitat diversity to lands currently held in public ownership (e.g. short hydroperiod wetlands, wet pine flatwoods, wet prairies, sand pine scrub, etc.). The land parcels are an important component of an overall plan to modify regional hydrology to more closely mimic historical hydro-patterns.

d. Land would provide critical linkage in wildlife corridor.

e. Acquisition and modification of lands will improve regional water quality (e.g., creation of buffer, construction of water quality treatment features, restoration of natural drainage patterns, etc.).

f. Acquisition (and subsequent modifications) would improve regional water quantity (e.g. implementation of storage facilities).

g. Acquisition (and subsequent modifications) would Prove timing & distribution of water.

h. There is <meaningful> {some} level of local <government> cost-share—thereby extending benefits that can be gained with Federal, state, and SFWMD funds.

Concern

- drop "some";
- local—local government (city/county).

i. stands are vulnerable to development.

j. Lands will later be used for implementation of the Restudy Comprehensive Plan, including features anticipated for inclusion In proposed Feasibility Plans (e.g., SW Florida, Indian River Lagoon, Florida Bay, etc.) concern targeted to implement a specific project.

k. Have non-Federal co-sponsor(s) willing to <acquire the land:> contribute 50 percent cost-share.

l. Has a Public recreational use <that does no damage to the resource>

Concern

- recreational use that does no damage to the resource.

m. address cost, need and urgency.

RESPONSES BY KEN KECK TO ADDITIONAL QUESTIONS FROM SENATOR MACK

Question 1. Do you support applying section 902 of the 1986 Water Resources Development Act to all features of the Comprehensive Plan before us today. [This provision requires a congressional review if a project exceeds 120 percent at authorized cost]?

Response. We would not be opposed to waiving the section 902 requirement for the pilot projects included in the proposed WRDA. The section 902 policy should definitely apply to all project components of the Plan. The fact that the Plan features, and thus cost estimates, are conceptual, should not be used as a rationale for avoiding the budget discipline imposed by section 902 but rather as the basis for requiring the completed feasibility studies to come back to Congress for authorization so the costs can be reliably assessed. [See Agriculture's concerns No. 4]

Question 2. Do you support congressional committee review and approval of the feasibility level of engineering and design work before any construction begin on the initial suite oilmen projects in the Comprehensive Plan?

Response. No. We oppose congressional authorization at this time of project components in the Plan because these components have had almost no engineering or site-specific optimization studies that demonstrate their value or cost-effectiveness. Conditional authorization subject to committee review and approval of Project Implementation Reports prior to Appropriations has been suggested as an alternative. This alternative could be considered by South Florida Agriculture when the specifics of procedural safeguards are presented and understood [See Agriculture's concerns No. 4]

Question 3. Do you support requiring full feasibility studies before any other projects are authorized under the Comprehensive Plan?

Response. Yes. We believe that every project component in the Plan should be authorized based on a feasibility study consistent with section 905 of the Water Resources Development Act of 1986. The Administrations proposed program authority, which would allow the Secretary of the Army to approve projects costing as much as $70 million, is not necessary for timely implementation of the Plan. Granting of this authority by Congress inevitably will result in less emphasis on project justification and identification of the most cost-corrective alternatives for investments of significant magnitude. [See Agricultures concerns No. 4]

Question 4. Do you support modifying the definition of the South Florida Ecosystem to make clear the system includes the lands and water within the boundaries of the South Florida Water Management District as they existed on July 1, 1999?

Response. We do not understand the rationale for modifying the definition in section 528(a)(4) of WRDA 1996 but will consider this further, once explained. We do not oppose the use of this term, as defined, combined with the term "natural system" in the second Graham/Mack Staff draft of Section 3, WRDA 2000.

Question 5. Do you support a provision making clear the Corps of Engineers is only authorized to study the question about providing an additional 245,000 acre-feet off water to the natural system?

Response. We do not support any reference to the Chiefs Report of June 22, 1999. The issue of the additional 245,000 acre-feet is discussed adequately in the April 1999 Report and any reference in WRDA 2000 is unnecessary and would perpetuate the mistrust generated by the Chief's Report. The Corps of Engineers needs no additional authority to study any aspect of the C&S Florida Project because general authority was provided in WRDA 1996. [See Agriculture's concerns No. 5]

Question 6. Do you support language making clear that the Corps must work with the State of Florida to ensure all groundwater discharges resulting from the Comprehensive Plan meet all applicable water quality standards and water quality permitting requirements?

Response. We support language making it clear that both surface and groundwater discharges from C&S Florida Project facilities meet all water quality standards. Groundwater discharges should not be singled out. [See Agriculture's concerns No. 8 and subsection (c) of proposed WRDA 2000.]

Question 7. Do you support replacing the project purposes language stated in (c)(1) of the Administration's draft with language restating the purpose of the Comprehensive Plan developed and passed in WRDA 1996?

Response. Yes. [See Agriculture's concerns No. 1 and subsection (b) of proposed WRDA 2000.]

Question 8. Do you support additional programmatic authority for the Corps to construct projects of limited cost but are in keeping with the Plan's purposes and have independent and substantial benefits to Everglades restoration?

Response. No. We believe such authority is unnecessary and will result in insufficient attention to project justification and cost-effectiveness. Each project component should be properly considered to be a modification of the existing C&S Florida Project and that the incremental contribution of each project component to system performance for all project purposes should be demonstrated in Project Implementation Reports. Moreover, Congress should approve only project components whose incremental contributions to system performance, as measured in environmental and economic terms, are commensurate with their cost. [See Agriculture's concerns 44]

Question 9. Do you support a 50/50 cost share between the Federal Government and the State of Florida on operations and maintenance of the project? If not please state the cost share you believe to be appropriate and why.

Response. It is appropriate for the Federal Government to participate in the operations and maintenance cost of the project because current estimates are that 80 percent of the water will be used for restoration purposes. We support the 50/50 division also because that was the understanding of all the parties during the planning process. [See Agriculture's concerns No. 7 and subsection (h) of proposed WRDA 2000.]

Question 10. Please provide your thoughts on the definition of Project Implementation Reports found in the Administration's language. Do you support this definition? If not, please provide suggestions as to how you would define these reports.

Response. We are strongly opposed to the apparent weakening of future analyses that would result from the PIR definition in the Administration's draft. The Administration's language does not reflect the scope and content of these reports as described in the Implementation Plan in Chapter 10 of the Restudy Report of April 1999. WRDA 2000 should cite Chapter 10 of the April 1999 Report as provided in the second Graham/Mack Staff draft of section 3 of WRDA 2000. [See Agriculture's concerns No. 3 and subsection (g) of proposed WRDA 2000.]

Question 11. Do you believe the Department of the Interior and the State of Florida should be on equal footing in developing any regulations related to assurance? If not, why?

Response. No. Parity should exist between the State of Florida and the Federal Government not between the State and the Department of Interior. PIRs should be utilized to provide assurances by clearly defining how each project component will be operated, documenting the purpose of the component and quantizing the expected water supplies to be derived. The subsequent Project Cooperation Agreement for each component should codify operational intent and expectations by agreement between the State and Federal Governments. [See Agricultural concerns No. 2 and No. 7 and subsections (f) and (g) of proposed WRDA 2000]

Question 12. Do you support the reporting requirement in the Administration's bill? If not, how would you amend the reporting requirement?

Response. No. The reports should be provided jointly by the State and Federal Governments and include periodic updates of the Comprehensive Plan and findings of the CROCEE and any other peer review panels. [See Agriculture's concerns No. 6 and subsection (c) paragraph (1) of proposed WRDA 2000]

Mr. Ken Keck, Director Legislative and Regulatory Affairs Florida Citrus Mutual P.O. Box 89 Lakeland, FL 33802

RESPONSES BY KEN KECK TO ADDITIONAL QUESTIONS FROM SENATOR SMITH

Question 1. You testified that the Governor's Commission was not given the opportunity to vote on the Implementation Plan. This is contrary to what both the minutes of the March 2 and 3 meetings indicate, as well as Section to of the April 1999 Restudy. Can you clarify?

If Agriculture is opposed to authorization of the initial ten projects, as I have heard stated today, then why did Mr. Parsons and Mr. Aller, representatives for the agricultural community, vote for the Restudy, including the implementation plan, at the Governor's Commission Sleety on March 2 and 3, 1999?

Response. You were correct in your testimony that the Governor's Commission did not vote on the Implementation Plan that was contained in Section 10 of the April 1999 Restudy.

[The following are excerpts from letter signed by Philip S. Parsons:]

The minutes of this meeting reflect, accurately, that:

The Commission continued voting con the proposed amendments to, and unanimously adopted, the Commission's Report on the January 25, 19959 Draft Implementation Plan of the C&SF Project Restudy.

The Commission's Reports consisted of recommendations that related to the Comprehensive Plan and Implementation Plan but the Commission never voted at any time directly on either the Restudy Comprehensive Plan or the Implementation Plan. The Commission did adopt two reports relating to the Restudy, the one noted above on the January 25, 1999 Draft Implementation Plan and an earlier Report under the title "Restudy Plan Report" of January 20, 1999, transmitted to Governor Bush on January 27, 1999. These reports did not approve or adopt either the Restudy Comprehensive Plan or the Implementation Plan. The Commission could only make recommendations for consideration in the final plans because the Commission did not meet frequently enough to review each draft Plan. The Commission's reports made recommendations on a variety of issues raised by Commission members or the public.

In addition, the two reports of the Governor's Commission did not recommend that the 10 Project Components in the Implementation Plan be authorized by Congress without full feasibility review. These reports provided a set of recommendations that in the words of the Governors Commission Chairman Pettigrew, "were aimed at ensuring a full range of State, stakeholder and citizen input into the development of the Comprehensive Plan far the C&SF Project Restudy due to Congress on July 1, 1999." The Commission did not meet again after March 2 and 3, 1999 and took no action on the Army Corps of Engineers' Restudy Plans and Report of April 1999.

The Commission's Report of January 20, 1999 contained recommended consensus assurance language dealing with urban, agricultural and natural system concerns. Some of this language, but not all, was included in the later Implementation Plan contained in Section 10 of the April 1999 Restudy Report. The further recommendation of the Commission contained in its later report adopted on March 3 was that "the entirety of the consensus assurance language" be contained in the final Restudy Report of April 1999. This was not done.

The Report adopted at the March 3 meeting of the Commission did not deal with the Implementation Plan contained in Section 10 of the April 1999 Restudy Report but rather an earlier draft of the Implementation Plan dated January 25, 1999. Further, Mr. Aller, as a member, did vote on matters before the Governor's Commission but was in attendance in March 1999 as an alternate for Mr. Wade and could not vote on anything before the Commission.

It important to also point out that several comments from agriculture were submitted to the Corps of Engineers on the draft Implementation Plan of January 25, 1999. Among those commenting was Bob Crawford, Commissioner of the Florida Department of Agriculture and Consumer Services. Mr. Chuck Aller was Commissioner Crawford's and the Department of Agriculture's representative on the Governor's Commission. In Mr. Crawford's letter of February 5, 1999 he commented on the issue of providing an adequate feasibility analysis prior to congressional authorization:

In addition, the Project Implementation Report (PIR) process should offer the opportunity to resolve technical and economic feasibility issues prior to authorization. To protect the integrity of this process, Congress should not be asked to authorize many of the Plan's major components until after a final PIR has been completed. The time table delineated in the Plan's initial proposed authorization provides ample time to complete the PIR and still obtain congressional authorization before construction is scheduled to begin. Maintaining this discipline will prove the credibility of the Restudy in Washington and Florida and will strengthen the chances for long term implementation.

The position of agricultural interests in advocating a feasibility analysis prior to congressional authorization has been a consistent recommendation both before and after the Governor's Commission meeting of March 2 and 3, 1999 in November 1998 the Agricultural Advisory Committee to the South Florida Water Management District adopted a position statement on the Restudy that included:

Major project elements must have complete engineering, environmental and economic evaluation with an opportunity for public review and comment before congressional authorization is sought.

There are many other written and oral statements from Agricultural interests regarding the Restudy that are all consistent with the comments of Commissioner Crawford and the position statement of the Agricultural. Advisory Committee. I cannot recall any statement to the contrary.

I have spoken to Dr. Bonnie Kranzer, director of the Governor's Commission and to Mr. Chuck Aller. Both confirm my understanding, reflected here. that the Governor's Commission did not vote on or approve the Restudy generally or the Implementation Plan dunging the March 2 and 3, 1999 meeting or at any other time. More specifically, the Governor's Commission never voted to endorse or approve congressional authorization of the 10 initial projects or programmatic authorization prior to completing a full feasibility review through Project Implementation Reports or otherwise.

I have also spoken to Mr. Mike Collins, Chairman of the Governing Board of the South Florida Water Management District. He also confirms that agricultural interests have always been consistent in opposing the authorization of project components prior to the feasibility review.

I have attached copies of the minutes from the Governor's Commission meeting of March 2 and 3, 1999, the Commission's Reports and letters from Commissioner Crawford and several agricultural interests reflecting Agriculture's consistent position in advocating completion of feasibility and economic analysis prior to authorization of further Central and Southern Florida Project features.

BOARD OF COMMISSIONERS, MIAMI-DADE COUNTY, FLORIDA

RESOLUTION NO. 300–00

RESOLUTION SUPPORTING THE RESTORATION OF THE EVERGLADES, THE FAIR DISTRIBUTION OF WATER TO URBAN AND AGRICULTURAL USERS AND THE EQUITABLE ALLOCATION OF NON-FEDERAL COSTS AMONG STATE AND REGIONAL INTERESTS

WHEREAS, the Governor's Commission for the Everglades is overseeing the Comprehensive Everglades Restoration Project (CERP), concerning the restoration of the Everglades and ensuring future water supplies for urban and agricultural users, and

WHEREAS, Miami-Dade County wholeheartedly recognizes the importance of a restored Everglades as a national, state and regional priority, along with the fair distribution of water to urban users and agriculture; and

WHEREAS, current funding proposals for the CERP do not allocate costs equitably among all state, regional and local interests, and require adjustment, and

WHEREAS, the impact of implementation of the CERP on flooding is not known at this time and significant areas of South Florida are subject to frequent and severe flooding, and

WHEREAS, flood protection is part of the mission of the South Florida Water Management District, and limited evaluation of flooding impacts in urban and agricultural areas was conducted in the development of the CERP, and

WHEREAS, the CERP has numerous projects proposed within the Lower East Coast which will benefit the overall system, but are expensive to construct, operate and maintain, e.g., two wastewater re-use plants planned to be located in Miami-Dade County, and

Section 6. The Army Corps of Engineers and the South Florida Water Management District must act to ensure that the proposed components of the plan will maintain or enhance existing levels of flood protection in all urban, agricultural and environmental preservation areas, and that

Section 7. The Army Corps of Engineers and the South Florida Water Management District must commit to the people of South Florida that the various related projects under consideration will not result in adverse water quality or flooding impacts anywhere in Miami-Dade County.

Section 8. The Federal Government should fund 50 percent of the County's aquifer storage and recovery facilities.

Section 9. The Army Corps of Engineers and the South Florida Water Management District should expedite the investigation, as required in the CERP, of alternative sources of water other than reuse due to its high construction, operation and maintenance costs. Additionally, the ACOE and the South Florida Water Management District should evaluate a more equitable distribution and location, throughout the entire watershed, of the expensive and technologically unproven components of the CERP, in particular the reuse facilities, for a more equitable distribution of available freshwater supplies.

I, HARVEY RUVIN,Clerk of the Circuit Court in and for Dade County, Florida, and Ex-Officio Clerk of the Board of County Commissioners of said County, DO HEREBY CERTIFY that the above and foregoing is a true and correct copy of Resolution No. R–300–00, adopted by the said board of County Commissioners at its meeting held on March 21, 2000.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal on this 6th day of April, A.D. 2000.

HARVEY RUVIN, *Clerk Board of County Commissioners Dade County, Florida.*

STATEMENT OF DAVID E. GUGGENHEIM, FLORIDA CO-CHAIR, THE EVERGLADES COALITION AND PRESIDENT & CEO, THE CONSERVANCY OF SOUTHWEST FLORIDA

Thank you for the opportunity to provide testimony today, and thank you again for choosing the Everglades Coalition's fifteenth annual conference in Naples as the venue for the committee's field hearing earlier this year.

I am David Guggenheim, Florida Co-Chair of the Everglades Coalition and President & CEO of The Conservancy of Southwest Florida, based in Naples, Florida. I hold a Ph.D. in Environmental Science & Public Policy.

The Everglades Coalition represents 40 national, State and local organizations working together to protect and restore the Greater Everglades Ecosystem. The Coalition represents a broad diversity of organizations, including environmental and recreational groups, civic organizations and foundations, and represents organizations covering the broad geographical extent of the Greater Everglades Ecosystem,

which stretches from the headwaters of the Kissimmee to the Florida Keys, across the entire South Florida peninsula.

The Urgency of Restoration

Today America's Everglades are our nation's most endangered ecosystem. Our lack of foresight over the past century has left the Everglades in a devastated condition that threatens not only the splendid creatures that live within and winter there from all over the nation, but a way of life for millions of people who call—and will call—South Florida their home.

The Coalition strongly believes that Congress should move forward this year to enact legislation that truly results in the restoration of America's Everglades, and we believe that the Restoration Plan submitted by the Corps clearly contains numerous strong points. However, there are several areas where the Coalition believes the legislation can be and must be improved to ensure that restoration succeeds. Our testimony provides these specific recommendations.

Last week, the Florida legislature made good on its commitment to Everglades restoration by approving legislation that establishes a long term funding plan, meeting another critical restoration milestone. Advancing the Federal authorizing legislation this year will ensure that the Federal and State components of this effort move forward as one, and will ensure that restoration can begin without delay.

Today, the status quo represents the greatest risk to the ecosystem and to taxpayers. We are pushing the system and the endangered species that live there to the brink, with unknown consequences. Restoring the system has already waited more than 30 years, over which time the system has seen dramatic degradation. With every passing day, restoration will be more expensive and its success more uncertain. Our biggest enemy is inaction.

Opportunities for restoration and for preventing the need for further restoration—especially opportunities for acquiring critical lands—are disappearing due to South Florida's rapid growth.

Severe habitat loss and fragmentation continues throughout South Florida at a rapid pace, and populations of threatened and endangered species continue to decline. To make matters worse, infestation by exotic species continues to spread, forcing native species from their habitat.

Without restoration, water levels and water quality will continue to be far from natural, further threatening native species. Recent fires in South Florida highlight the need to restore water tables to their natural levels.

Nearly one trillion gallons of water that the ecosystem needs is sent to tide each year. Disruption of the timing of fresh water flows has led to too little or too much fresh water in the system. Ironically, in an ecosystem that is now often desperately thirsty, our wasteful practices have managed to make fresh water a pollutant. In excess quantities, fresh water is severely damaging South Florida's estuaries, with impacts to commercially—and recreationally—important fish species. Such discharges have also affected tourism.

Last week, Lee County took steps to file an injunction against the South Florida Water Management District to stop harmful fresh water discharges from Lake Okeechobee from impacting the Caloosahatchee estuary. It is illustrative of how it has become routine to trade an impact in one part of the system for an impact in another part.

Without the ability to store fresh water, the system is suffering from a lack of this precious and ironically abundant resource. Salt-water intrusion into estuaries and groundwater is impacting freshwater populations and drinking water supplies. There has been a dramatic decline in sea trout populations over the past several decades, whose buoyant eggs depend on a specific balance of salt and fresh water.

There are numerous examples around the Greater Everglades Ecosystem that illustrate how humankind has pushed the system to its limits and underscore the urgent need for restoration.

The single greatest common characteristic among the 68 threatened and endangered species within the Everglades ecosystem is the degradation of habitat. While each has individual challenges, restoration of as much of the historic Everglades watershed will begin their road to recovery.

Only 50 Florida Panthers remain in the wild today. Population growth and agricultural expansion in South Florida are compromising the ability of natural habitats to support a self-sustaining panther population. Much of the panther's habitat lies in Southwest Florida, among the fastest growing regions in the nation today.

At Corkscrew Swamp Sanctuary, wood stork nesting productivity is down 97 percent since 1958 due to habitat loss, especially isolated wetlands and ephemeral pools.

The fate of the Cape Sable Seaside Sparrow is precarious, forcing the system to be managed under emergency operating conditions in order to hold back water and prevent the flooding of this endangered bird's nesting habitat.

The Greater Everglades Ecosystem is a large, complex ecosystem whose components are closely interrelated. This restoration is critical to restoring the health of the overall system. The declining health of Everglades National Park is a stunning lesson of how in South Florida, land and water are inseparably linked and that protecting our public lands requires more than drawing a line on a map. Clearly, we must also protect and restore the lands and flowways around these treasures. There are numerous other examples throughout the ecosystem, including exquisite aquatic resources. For example, Florida Bay and North America's only living coral reef tract along the Florida Keys are part of this ecosystem, and their health depends upon how the system functions many miles upstream.

WRDA 2000 Legislation

The Coalition believes that Congress must pass an authorization package that puts in place a program to achieve significant restoration of the Greater Everglades Ecosystem. This can only happen if the legislation includes the specific procedural and legal tools to accomplish this unprecedented and important mission.

Recommendations to Improve Legislation

The legislation that has been drafted by the Administration and introduced in Congress clearly contains numerous strong points. For example, it appropriately establishes the priority of restoring the ecosystem first, with water supply and flood protection goals concurrent but subsidiary. The legislation also includes initial authorization of 11 projects that will provide critical benefits for the natural system.

However, the Coalition believes that the legislation should be improved in a number of areas to ensure that it achieves its intent of restoring the Everglades. We offer the following eight points:

1. Assurances for the Natural System: Stopping the Decline of the Everglades Ecosystem: First and foremost, this effort is about restoring an ecosystem. The principal goal of the CERP is to restore the natural functioning of the Greater Everglades Ecosystem. The project also has secondary benefits of flood control and water supply, which must be compatible with this principal goal. The Coalition strongly believes that the authorizing legislation must ensure that, as the CERP is put in place over time, the Everglades ecosystem does not continue to decline as a result of human or other consumptive uses. Specifically, any assurance to current consumptive users that their current flood protection and water supply "benefits" from the existing water management system will be preserved must be matched by an equivalent assurance for the natural system.

The legislation only protects sufficiently current consumptive uses. The entire natural system is not ensured its current level of water management benefits—which are already woefully inadequate as we have all now recognized—thereby allowing current consumptive users the opportunity to increase their share of the benefits. Indeed, the legislation even opens the door for future consumptive users to receive—and vest themselves in -water or flood protection, at the expense of the natural system. We believe it is unacceptable to purposefully allow the deterioration in the Everglades to increase simultaneous with implementation of the restoration plan. If allowed, the difficulty of the restoration task will be compounded and the resource placed in extreme jeopardy, particularly in the event the CERP is only partially implemented.

The true measure of success in Everglades restoration is not just that we successfully repair the damage already done to the ecosystem, but that we prevent the need for a large-scale restoration in the other portions of the system, including rapidly-developing Southwest Florida. The CERP's "Southwest Florida Study" seeks to achieve this, but will only be able to succeed if the appropriate assurance language exists in the legislation.

2. Ensuring a Full and Equal Interagency Partnership: The Department of Interior and the Corps must be co-equal partners in developing the design, plan and regulations for at least those new project features that are intended to provide benefits for federally-managed lands. The legislation appropriately requires

development of rules that will ensure that each specific CERP project achieves its intended benefits and the requirements of the so-called programmatic regulations. However, the legislation provides the Department of Interior with only a consultative role in the development of the project-specific regulations, which are the primary means by which the restoration process is implemented. This consultative role is essentially little more than Interior's current role in a process that has regularly failed the Everglades.

We believe that Interior, as the agency with legal responsibility and scientific expertise to protect the federally-managed lands, must be accorded partnership status on the projects intended to restore these lands. It has been the plight of these Federal lands, most prominently Everglades National Park, which has attracted national attention and served as a catalyst for restoration of the entire ecosystem.

3. Peer Review: The authorization should institutionalize the independent peer review process led by the National Academy of Sciences to review and provide recommendations to the agencies on the restoration process for the entire 30 years. Such a body, which would be a continuation of the existing Committee on Restoration of the Greater Everglades Ecosystem (CROGEE), would also provide Congress with an independent source of expertise to enable it to better evaluate the progress of restoration projects and activities. CROGEE will scrutinize the plan to see if there are ways to achieve greater ecological restoration at a lower cost and investigate some of the plan's experimental technologies to see if they are viable. CROGEE will also play an important role in ensuring that the translation of broadly-stated goals into specific, measurable targets results in ecologically-meaningful measures.

4. Coordination of Other Federal Actions: The authorization should include a process that will ensure coordination of other Federal actions in and around the Everglades with the restoration effort. It is counter-productive and poor public policy to have other Federal agencies pursuing ends that are in conflict with the restoration effort, as with the inadvisable plan for a major commercial airport at the former Homestead Air Force Base at the edge of the Everglades. We believe that such a provision could have helped avoid the breakdown between Federal, State, and local agencies on this matter. Similarly, CERP project features that overlap with previously-authorized restoration projects, such as the Modified Water Deliveries Project and the C-111 Project, need to be formally incorporated, at least for design purposes, into these efforts to ensure expedited and efficient restoration.

5. Pilot Projects Must Go First: There should be no irreversible or irretrievable commitment of resources to CERP project features that rely upon pilot projects for their justification. (Such a commitment of resources might include financial expenditures or natural resource destruction.) For example, the Lake Belt pilot project should also examine alternative storage approaches, expediting the benefits to the natural system, and collateral environmental impacts. In addition, adjacent wetlands potentially necessary as mitigation for the reservoir storage areas should not be impacted until completion of the pilot project.

Similarly, development of land in the L-3 IN project area should not proceed until the completion of the pilot project for this critical CERP project feature. We believe that there are many questions regarding the effectiveness of the seepage management technology on which the current concept of the larger L-3 IN project relies. The results of the pilot project will determine specifically whether or not additional land will be required in order to achieve project benefits. Indeed, we continue to recommend that the L-3 IN pilot project be significantly expedited. This project should be closely coordinated with implementation of the Modified Water Deliveries Project to avoid further delays to this current restoration program and the creation of a new problem—increased groundwater levels under private land east of the L-3 IN.

6. Clearly Stated Benefits: The authorization should be crystal-clear about what benefits it intends to provide for America's Everglades. These benefits are spelled out in some detail in the CERP documents and transmittal letter; accordingly, provisions in the legislation, such as those concerning the programmatic and project-specific regulations, should make specific reference to these documents.

7. Land Acquisition: The authorization should provide a process to expeditiously purchase lands necessary for wildlife habitat and CERP projects that are under extreme development pressure.

8. Agency Reports to Congress: The authorization should require agency reports to Congress concerning CERP's progress every 2 years, not every 5 years as currently proposed. The two-year report requirement would be consistent with the WRDA cycle and enable more engaged and effective review by Congress and the NAS.

Importance of Authorizing the Initial Package of 11 Projects

The legislation contains 11 projects for authorization this year. The Everglades Coalition believes that approval of all 11 of these projects is absolutely essential. These projects were chosen specifically for their ability, in concert, to provide significant restoration benefits within the first decade of restoration. These projects are either interconnected or provide relief to portions of the system enduring critical stress, and serve to "front-load" restoration with maximal benefits early on. In addition, approval of the initial 11 projects is important to the State/Federal partnership

in allowing the State to move forward rapidly with purchasing land necessary for the CERP. Given the pace of development in South

Florida, anything that delays land acquisition guarantees a higher cost to taxpayers and could serve to limit options available today.

The Coalition understands the sensitive issue of contingent authorization, but we hope that this issue does not prevent the restoration from moving forward this year. The bottom line is that the ecosystem needs a process that enables restoration to proceed expeditiously with appropriate oversight by Congress, and the Coalition would support such a process.

Approval of the Talisman Water Storage Reservoir (EAA Storage)

Included in the list of 11 projects is the first major reservoir to be constructed by the Corps—commonly referred to as the Talisman Water Storage Reservoir. This project will be built on most of the 50,000 acres of publicly owned land in the Everglades Agricultural Area (EAA) that was purchased last year at a cost of $135 million to taxpayers. This project represents one of the highest priorities of the Everglades Coalition because it begins the process of recapturing water and seasonally storing water that the Central and Southern Florida Project is currently wasting. Therefore, we believe that any Everglades Restoration legislation that fails to include an authorization for this project will be inadequate.

Storage of water in this location is also important because it is adjacent to, and will complement, the Stormwater Treatment Areas (STAB) that the State is spending $800 million to construct as part of a legal settlement. The prime location of the Talisman Reservoirs will allow for water to be stored next to these filtration marshes, and appropriately timed releases of the stored water can ensure that the wetlands function as intended and that the filtered water released into the Central Everglades is clean. Because the capacity of these filtration marshes is 240,000 acre-feet of water per year, nearby storage will negate any future temptation to "stack" inappropriate quantities of water that would diminish their effectiveness.

While evaporation of water from the Talisman Reservoir will occur, the net gain of water will still greatly increase the amount presently available for the natural system. Further, such water essentially is already being lost or mismanaged because it can only be sent to the Caloosahatchee and/or St. Lucie Estuaries, backpumped into Lake Okeechobee, or sent into the Everglades at the wrong time, with the wrong water quality, and/or in the wrong quantity.

As a result of a series of land swaps that occurred when the government purchased the Talisman lands, the government owns a contiguous block of land in the southern EAA. An agreement was signed that construction of this critical reservoir can commence in 2005. The land was purchased for the sole purpose of storing water for the restoration of the Everglades, but is being leased to sugar growers and will remain in cultivation until it is needed for restoration in 2005. To be perfectly clear, the Coalition urges all sides to abide by this contract. When this agreement expires, however, we believe that the taxpayers are entitled to utilize their investment for its intended purpose.

If Congress fails to authorize the Talisman Water Storage Reservoir this year, it is very likely that the government would miss several key dates by which the sugar growers must be notified of the termination of their leases—the first of which is October 1, 2002. This Congress cannot assume that the next Congress will act to meet that critical deadline. If these dates are missed, the leases are automatically extended in their present form (which are below fair market value), restoration is delayed, and a new de facto subsidy to the sugar industry is created.

That Talisman Water Storage Reservoir will not immediately solve all of the problems facing the Everglades, but it will provide immediate relief from the current crisis conditions by giving water managers some additional and badly needed flexibility.

The Corps' Everglades Restoration Plan (Alternative D-13R) anticipates water being stored on 60,000 acres in the EAA at a maximum depth of 6 feet. This would ultimately result in the storage of 117.3 billion gallons (360,000 acre-feet) of water on publicly owned lands in the EAA.

- The first two phases of the Talisman lands to be utilized for water storage in the EAA are a little more than 40,000 acres. The Corps has proposed storing water at a maximum depth of six feet, therefore, the Talisman Water Storage Reservoir will store approximately 78.2 billion gallons of water (240,000 acre-feet).

From January 25, 1999 to January 24, 2000, 15.9 billion gallons (45,444 acre-feet) of polluted, phosphorus-laden water were back-pumped from the Everglades Agricultural Area into Lake Okeechobee.

• From January 25, 1998 to January 24, 1999, 24.5 gallons (75,444 acre-feet) of polluted, phosphorus-laden water were back-pumped from the Everglades Agricultural Area into Lake Okeechobee.

Even though the South Florida Water Management District (SFWMD) estimates that the EAA is responsible for approximately 5 percent of the total phosphorus that is deposited in the Lake. We believe that this indicates the magnitude of the phosphorus problems, especially given that phosphorus is not naturally produced in Lake Okeechobee. The SFWMD's estimate of phosphorus levels in the Lake is illustrative of the severity of the present ecological crisis. We also believe that it clearly demonstrates the need for the Talisman Reservoir and the necessity of congressional action this year for the entire CERP.

Once one of America's premier bass fishing spots, Lake Okeechobee, is also being hurt by a management regime that has treated it as a reservoir for unwanted polluted water. As previously indicated, water managers are presently attempting to restore more natural water levels in the Lake but are finding that their options boil down to making the Lake's problem another area's problem. This "Hobson's Choice" is repeated throughout South Florida because water managers can only pit one part of the system against another part when they try to alleviate any of the numerous problem of the current C&SF project. This scenario will continue to exist until we build water storage back into the system and demonstrates why we believe we must authorize the Talisman Reservoir this year.

Hurricane Irene dumped up to 17 inches of rain on South Florida last October. To protect their investment, sugar growers began pumping their fields before Irene's arrival and had them dry as quickly as possible after the storm. Water managers could only put the EAA's water in a finite number of places—the coastal estuaries, Lake Okeechobee, and the Central Everglades. Compared to the residential areas, Irene spared the EAA of the higher rainfall amounts. However, when the pumping practices in the EAA are coupled with the necessity of providing flood protection, water managers have only one option: Send the water to where no one lives.

We believe the water management crisis created by Hurricane Irene dramatically illustrates how the present system fails the Everglades. Since Irene, several of my colleagues have unsuccessfully attempted to obtain information from the SFWMD as to where water was pumped from and discharged. We believe that these figures would demonstrate that the Talisman Reservoir would not have solved all the problems. At the same time, however, we also believe that these figures would show how this much-needed flexibility could meet the multiple needs of South Florida and the Everglades.

The Everglades for All Generations

One of the highlights of my work at The Conservancy is our education program. Each year, we teach thousands of school children about their home in the Western Everglades. We take many of these children into the field to experience a swamp walk, a beach hike or a snorkeling adventure. Invariably, they are touched by a profound sense of awe and wonder, and are bursting with hundreds of questions about what they see. But they are troubled to learn that the Everglades were suffering back when I was their age, and it is hard for them to understand why the Everglades are still imperiled today. Today we stand at the brink of a tremendous opportunity to right a terrible wrong, to rescue a beloved ecosystem before it is too late. It is a responsibility we must accept on behalf of our children and their children. Our success now depends upon swift and decisive action, and with our presented modifications, the restoration bill is stronger.

The Everglades Coalition is grateful for the opportunity to provide input to the committee, and we sincerely thank you for your leadership and vision on restoring America's Everglades.

RESPONSES BY DAVID GUGGENHEIM TO ADDITIONAL QUESTIONS FROM SENATOR SMITH

Question 1. As a member of the environmental community, how to you respond to the concept of Assurances, particularly the Programmatic Regulations? Do you fled it troubling that a plan will be tied, in 2 years, to project results that may not be apparent for 20–30 years?

Response. The volume, timing and distribution of water essential for the restoration and preservation of the Everglades must be calculated and reserved at the beginning of the restoration process. These programmatic rules, including reservations, should occur under Federal programmatic regulations established pursuant to WRDA 2000. There is significant precedent for such Federal programmatic regula-

tions, including water reservations for the Everglades, dating back to 1970 (Pub. L. No. 91–282). If we wait specifically to reserve water for the natural system as it becomes available with the completion of CERP projects, we run a significant risk that new water will be subsumed by urban and agricultural uses, including under Florida's consumptive use permitting process. The only way to be certain that new water will be allocated to the natural system when it becomes available is to identify and reserve it at the beginning of the process.

For example, if we wait to reserve water for the natural system until it becomes available as a result of specific CERP projects, there is virtually certain to be intense conflict due to efforts to permit this "new" water to urban and agricultural uses under Florida's consumptive use permitting process. Chapter 373.236 Florida Statutes states that consumptive use "permits shall be granted for a period of 20 years, if requested for that period of time, and if there is sufficient data to provide reasonable assurance that the conditions for permit issuance will be met for the duration of the permit." There will be considerable pressure over the next several years, to permit for 20 years "new" water far ahead of its availability. The only way to be certain that new water will be allocated to the natural system when it becomes available is to identify and reserve it at the beginning of the process.

Regarding the implementation period of the plan, we understand that ecosystem restoration is a long process. The Comprehensive Plan in our view is a good road map for achieving long-term restoration benefits, in part because it recognizes the uncertainty involved in restoring a natural system. Restoring an ecosystem requires moving forward in small increments, monitoring the affects of our actions and then changing and adapting the plan if necessary along the way. For these reasons, we strongly recommend: (1) a comprehensive framework of assurances to ensure that adaptations of the plan are driven by restoration needs and that hydrologic resources are available to meet such needs, and (2) strong independent scientific oversight.

Question 2. Why is it important to move forward with authorization of this initial set of ten projects this year? Can you describe what the impacts of delay would mean for the ecosystem?

Response. The beneficial effects of restoration will not be immediate. The natural system will require many years to recover. It is therefore important to initiate restoration as soon as possible.

Recognizing the precipitous decline of the natural system, the Restudy Team identified 10 projects that it felt produced important restoration benefits in the first 10 years of CERP implementation. The initial set of ten projects will focus on water storage, decompartmentalization and habitat conservation. Any delay in initiating these projects would result in pushing back restoration benefits that the system desperately needs to be realized as soon as possible; in further increases the cost of restoration; and would make the success of restoration less certain.

The most fundamental thing that must happen in the Everglades as soon as absolutely possible is an increase in available water storage capacity. Water storage is not only an important restoration component, it is needed immediately to slow the precipitous decline of the system, so that the Everglades will survive long enough for us to restore it.

Without the ability to store ample fresh water, the Greater Everglades Ecosystem suffers from both a lack and overabundance of this resource. Without the means to store fresh water, more than a trillion gallons are dumped to tide each year. This is water that is later needed during dry periods. Consequently, the system is routinely managed under emergency operating conditions, threatening natural systems by severely disrupting the natural hydrological cycle, and threatening cities and agriculture by water shortages and flooding threats.

Salt-water intrusion into estuaries and groundwater is impacting freshwater wildlife populations and drinking water supplies. There has been a dramatic decline in sea trout populations over the past several decades, whose buoyant eggs depend on a specific balance of salt and fresh water. The wasteful "pulse" releases of fresh water into the Caloosahatchee River to the west and the St. Lucie River to the east have had a devastating impact on the respective estuaries.

Recently, Lee County took steps to file an injunction against the South Florida Water Management District to stop harmful fresh water discharges from Lake Okeechobee from impacting the Caloosahatchee estuary. It is illustrative of how it has become routine to trade an impact in one part of the system for an impact in another part. Without restoration, water levels and water quality are far from natural levels, threatening native species.

The single greatest common characteristic among the 68 threatened and endangered species within the Everglades ecosystem is the degradation of habitat. Severe habitat loss and fragmentation continues throughout South Florida at a rapid pace.

At the same time, rapid infestation by exotic species continues to climb, forcing native species from their habitat. While each species has individual challenges, restoration of the historic Everglades watershed will begin their road to recovery.

Only 50 Florida Panthers remain in the wild today. Population growth and agricultural expansion in South Florida are compromising the ability of natural habitats to support a self-sustaining panther population. Much of the panther's habitat lies in Southwest Florida, among the fastest growing regions in the Nation today.

Opportunities for restoration and for preventing the need for further restoration—especially opportunities for acquiring critical lands—are disappearing due to South Florida's rapid growth.

Question 3. In your written testimony you highlight the importance of the Everglades Agricultural Area Storage Reservoir. If the Corps is unable to begin construction in 2005, don't you believe that the land should no longer remain in cultivation? Why is this project of such significance to the restoration effort?

Response. In order for restoration to begin, there must be a place to store water that is now being wasted to tide. The current practice of water dumping not only wastes a valuable resource, but it also causes significant environmental damage to the St. Lucie and Caloosahatchee Estuaries. Currently water managers have limited choices as to how to handle excess water. They can dump contaminated water downstream into the conservation areas causing damaging high water levels and the loss of tree island habitat that results. They can force the water into the Caloosahatchee or St. Lucie estuaries, causing too much freshwater into these tidal systems with the concomitant loss of fisheries productivity and the death of many species. Or water can be held in Lake Okeechobee, drowning marshes, and causing the loss of the lake's important fisheries. Water storage in the EAA allows for flexibility in how the water is moved, and provides, in conjunction with the STAB, water quality improvements that currently do not exist. The real benefits of EAA water storage cannot be delayed. Therefore, farmers who hold leases in the EAA storage areas must be notified before 1 October 2002 that their leases will expire so that restoration efforts can move forward. If construction of the EAA reservoirs is delayed due to unforeseen technical difficulties, seasonal agriculture (e.g. rice, vegetables, sod) may be feasible, and could help control the invasion of exotic plants into the site prior to the construction of the reservoir.

Question 4. What is the environment community's position regarding Homestead AFB?

Response. The proposal for a large commercial airport at Homestead is incompatible with Everglades restoration. As the Coalition has stated on numerous occasions, such a commercial airport, if built, would degrade significantly the Everglades' air, sound, wildlife and water resources and thus conflict with the planned comprehensive and costly Federal/State project to restore such resources. With the proposed airport just a few miles from both Everglades and Biscayne National Parks and with one flight almost every minute, the parks would be filled with airplane noise most of the day. According to predictions, the commercial airport would result in seven tons of air pollutant emissions daily, loss of thousands of acres of open space and wildlife habitat, and up to 50 percent of all new water pollution into such pristine water bodies as south Biscayne Bay.

The Coalition believes that a mixed-use alternative to the airport is a better choice environmentally and economically. Not only would such a mixed use alternative, with proper planning, result in significantly less environmental harm, but the Air Force estimates that it would produce over 50 percent more jobs and earnings growth than the airport over the next 5 to 10 years.

RESPONSES BY DAVID GUGGENHEIM TO ADDITIONAL QUESTIONS FROM SENATOR VOINOVICH

Question 1. The Everglades Coalition includes members such as the National Wildlife Federation who are on record as opposing contingent authorization. In other words they oppose Congress authorizing projects before the feasibility reports are complete and Congress has an opportunity to review the details of the economic and environmental evaluation of the project. How do you reconcile this position with the fact that you support the Administration's proposal to authorize 10 projects with an estimated cost of $1.1 billion based on conceptual plans and before Congress has an opportunity to review feasibility reports on these projects? Also, how is this position consistent with a programmatic authority for the Everglades Restoration effort that allows the Secretary of the Army to approve projects of up to $70 million in cost without any specific congressional authorization?

Response. The Everglades Coalition including the National Wildlife Federation is indeed concerned about the increasing numbers of "contingent authorizations" that have appeared in recent Water Resources Development Acts. For many traditional projects, practically the only detailed congressional oversight received is through the authorization process. Too often proponents of projects use the contingent authorization approach to avoid close scrutiny by Congress and the relevant authorizing committees on questions of whether the projects will meet basic environmental, engineering, and economic and financial standards, meet national water resources policy objectives, and, overall, constitute wise investments. We therefore continue to oppose contingent authorizations in general.

However, we believe (1) that the Everglades bill does not provide a true contingent authorization as that term is typically used; (2) that there are a number of special circumstances regarding the Everglades project that both require speed and provide some additional accountability tools not typically applicable to other projects; and (3) that even so, it is critical that additional accountability tools should be provided to warrant proceeding to construction on specific projects without further congressional action.

First, the bill differs from typical contingent authorizations in that proceeding with individual Everglades projects is not subject to a separate benefit/cost analysis. Unlike other projects that stand on their own, most of the features of the Everglades project are designed to work interdependently. Furthermore, if it passes the Everglades bill, Congress is indicating that a total program budget is warranted for the environmental results. For this reason, the basic go/no go decision has already been made. Furthermore, the language that we recommend requires the Army Corps to submit its report to Congress and we anticipate that Congress will enact legislation that addresses the design of the project. The authorization is contingent only in the sense that the Army Corps is authorized to proceed with the project if there are delays in congressional action.

Second, we believe that the fragile state of the Everglades warrants authorizing the Army Corps to proceed in the absence of congressional action with the first basic projects. It is a fact that matters are sometimes not addressed by Congress because of legislative scheduling issues unrelated to the merits or even degree of controversy regarding that particular matter. The rapid decline of the Everglades and the rapid development of land necessary for Everglades restoration make expeditious implementation of the plan critical and warrants special treatment of the initial projects. As the committee is very much aware, the Everglades ecosystem is in a rapid and serious state of decline. For instance, the Everglades contains some 68 endangered and threatened species. In particular, birds such as the Snail Kite and the Cape Sable Seaside Sparrow are dependent on this habitat and are directly imperiled by current conditions.

Even with the unique circumstances of the Comprehensive Everglades Restoration Plan, we believe that Congress should require additional accountability measures as a surrogate for outright congressional approval. These should include agreement among the key agencies about the plan, agreed operating rules for the project, and the review of each project's specific design and operations and endorsement by an independent scientific review panel.

The additional program authority that allows implementation of projects that do not exceed $35,000,000 for the Federal share generally fall within the concept of continuing Corps authorities for smaller projects. Because the dollar thresholds for these projects are somewhat larger than typically called for in this category, we support these projects also being subjected to the same special accountability provisions discussed above.

Question 2. Is the Air Force proposal to approve redevelopment of Homestead Air Force Base as a commercial airport compatible with Everglades Restoration?

Response. The proposal for a large commercial airport at Homestead is incompatible with Everglades restoration. As the Coalition has stated on numerous occasions, such a commercial airport, if built, would degrade significantly the Everglades' air, sound, wildlife and water resources and thus conflict with the planned comprehensive and costly Federal/State project to restore such resources. With the proposed airport just a few miles from both Everglades and Biscayne National Parks and with one flight almost every minute, the parks would be filled with airplane noise most of the day. According to predictions, the commercial airport would result in seven tons of air pollutant emissions daily, loss of thousands of acres of open space and wildlife habitat, and up to 50 percent of all new water pollution into such pristine water bodies as south Biscayne Bay.

The Coalition believes that a mixed-use alternative to the airport is a better choice environmentally and economically. Not only would such a mixed use alternative, with proper planning, result in significantly less environmental harm, but

the Air Force estimates that it would produce over 50 percent more jobs and earnings growth than the airport over the next 5 to 10 years.

RESPONSES BY DAVID GUGGENHEIM TO ADDITIONAL QUESTIONS FROM SENATOR GRAHAM

Question 1. Can you provide a general list of the organizations that have endorsed the views you are providing today on behalf of the Everglades Coalition?

1000 Friends of Florida
Arthur R. Marshall Foundation and Florida Environmental Institute, Inc.
Audubon Society of the Everglades
Biscayne Bay Foundation
Broward County Audubon Society
Broward County Sierra Club
Center for Marine Conservation
Clean Water Action Clean Water Network-Florida Campaign
Collier County Audubon Society
The Conservancy of Southwest Florida
Defenders of Wildlife
Earthjustice Legal Defense Fund
Environmental and Land Use Law Center
The Environmental Coalition
Environmental Defense Fund
Everglades Coordinating Council
Florida Audubon Society
Florida Defenders of the Environment
Florida Keys Chapter of the Izaak Walton League of America
Florida Keys Environmental Fund
Florida PIRG
Florida Sierra Club
Florida Wildlife Federation
Izaak Walton League of America
League of Women Voters of Florida
Loxahatchee Sierra Club
Martin County Conservation Alliance
National Audubon Society
National Parks and Conservation Association
National Wildlife Federation
Natural Resources Defense Council
Outward Bound
The Pegasus Foundation
Redland Conservancy
Sierra Club
Sierra Club Miami Group
Tropical Audubon Society
Wilderness Society
World Wildlife Fund

Question 2. Can you describe the impact to the Everglades and surrounding ecosystems if we move forward with this project?

Response. Moving forward with the restoration project will ensure sufficient water quantity and quality to preserve and restore the Everglades ecosystem as well as help maintain and increase water supply for agricultural and urban users.

Question 3. Can you describe the impact to the Everglades and surrounding ecosystems if we do not move forward with this project?

Response. Many portions of the Everglades ecosystem are in decline, or have collapsed ecologically. Water shortages are becoming more prevalent all the time. In an area that receives an average of 60 inches of rain a year, this is a ridiculous scenario. It will continue to get worse, degrading Everglades habitat further, and destroying South Florida's quality of life. The restoration efforts cannot be delayed, we must move forward with restoration now.

Question 4. Are you comfortable with the project purpose as set into law in WRDA 1996?

Response. WRDA 1996 directed the Secretary of the Army to "develop as expeditiously as practicable a proposed Comprehensive Plan for the purpose of restoring, preserving, and protecting the South Florida ecosystem. The Comprehensive Plan shall provide for the protection of water quality in, and the reduction of the loss of fresh water from, the Everglades. The Comprehensive Plan shall include such features as are necessary to provide for the water related needs of the region, including flood control, the enhancement of water supplies, and other objectives served by the Central & Southern Florida Project." In 1996 we were comfortable with this language because we felt that it clearly directs the Secretary of the Army to develop an ecosystem restoration plan while giving the Secretary the discretion to determine whether other project features were necessary to continue to meet the other C&SF Project purposes. We thought that this language made it abundantly clear that the primary and overarching purpose of the Comprehensive Plan is to restore the Everglades.

Unfortunately, we have been frustrated that this language was interpreted by the State of Florida and by the Jacksonville District of the Corps, during the development of the CERP, to mean that the Comprehensive Plan has three co-equal purposes. That has never been our interpretation of WRDA 1996, a view that we have made clear in every restoration forum, including the Governor's Commission for a

Sustainable South Florida. In light of the popular interpretation of the WRDA 1996 language, we strongly believe that the WRDA 2000 project purpose language must add clarity to the WRDA 1996 language to ensure that the purpose of the Comprehensive Everglades Restoration Plan remains the restoration of the American Everglades. While we restore the American Everglades the comprehensive plan will continue to meet other C&SF project purposes.

Question 5. Your first concern is related to the assurances language in the bill. Can you elaborate on your point here? Is your concern with the way the Administration's language is crafted or with the approach taken to developing the programmatic regulations?

Response. The authorizing legislation must include four essential safeguards in its "assurances" language:

The legislation must implement a principle of "do no more harm" to the Everglades. As we move forward to restore the Everglades, we should not risk losing any more ground. This will only make the restoration task more difficult, more expensive and put the ecosystem in even greater jeopardy if the CERP is never wholly implemented. Therefore, the authorizing legislation must guarantee the natural system at least its current benefits from the existing water management system.

The Department of the Interior and the Corps of Engineers must be equal members of the Federal partnership in the CERP's implementation. It has been the plight of Federal lands, most prominently Everglades National Park, which has drawn the country's attention to the need to restore the entire ecosystem. The Department of the Interior is the agency with legal responsibility and particular scientific expertise to protect these federally managed lands, which constitute almost 50 percent of the remaining Everglades. It should also be noted that Interior currently has concurrence authority concerning management of water structures affecting the Park.

• The legislation must require development of programmatic regulations. Such a process will, among other things, provide the guiding purpose that will help ensure that the Everglades restoration project "gets the water right." Simply moving forward with 68 separate project-specific regulations over 30 years will likely result in only localized, uneven, and inadequate restoration throughout the Everglades ecosystem. Moreover, a programmatic approach would provide the flexibility necessary to allow adaptive assessment and management to succeed.

• The legislation must define specifically what benefits it intends to provide for America's Everglades. Otherwise, in the competition over water resources, the Everglades will continue to lose. The CERP plan includes a specific description of the hydrologic benefits it intends to provide. Such benefits should be specifically referenced in the legislation to serve as standards for the development of the programmatic regulations and CERP's initial implementation.

The Administration's assurances language and, in particular, the language entitled "Assurances Language No. 2" in the Senate discussion draft do not adequately address any of the above four essential restoration assurances components.

First, neither version of the assurances language provides the necessary "floor" to halt the Everglades' deterioration. Rather, both versions go in the opposite direction by including provisions entitled "Existing Water Uses" that are focused on protecting consumptive uses. These provisions should either (a) be removed entirely and separate provisions added to protect the natural system, or (b) be significantly revised to prioritize, or at least balance, protection of the natural system.

The problem with both versions of draft assurances language is that they prioritize protection of consumptive uses and then use broad terms to describe such protection (e.g., "interfere," "existing legal users," and "existing levels of service for flood protection or existing water use"). Protections for natural system benefits, on the other hand, are treated secondarily and described in more narrow terms.

Accordingly, the "existing water uses" language opens the door, for example, for consumptive users such as utilities to demand, under Federal law, more water—even for future customers—at the expense of the Everglades and to monopolize whatever benefits the CERP plan produces. Similarly, the Administration's language would guarantee "existing authorized levels of flood protection" to geographic areas, regardless of how many people moved into the area and how much more the Everglades needed to be flooded in order to protect them. The Senate draft language also removes the requirement that the flood protection be "authorized."

Such language appears to weaken current law. The Corps generally now asserts that it is required to operate the system for multiple purposes; however, both versions of the assurances language, especially the Senate discussion draft, elevate benefits for the human environment at the expense of the natural system. Current inhabitants could potentially have a new statutorily created right to demand water and flood protection even if doing so would harm our national parks or cause viola-

tions of environmental laws. This potential conflict must be addressed in any legislation passed by Congress so that we do not spend $8 billion to again place the Everglades last in line.

Second, neither version of the assurances language provides an adequate role for the Department of the Interior in CERP's implementation and management. Indeed, "Assurances Language No. 2" provides the Interior Department with no role in CERP implementation and management. For the reasons already stated, this is not acceptable.

The Administration's assurances language does provide Interior with a concurrence role in the programmatic regulations. But it provides Interior only a consultative role in development of project specific regulations, which is the primary means by which the restoration project will be implemented. This consultative role is little more than Interior's current role in a process that has regularly failed the Everglades. Interior needs to be a co-equal partner in development of specific regulations for least those new project features that are intended to provide benefits for lands it manages.

Third, the Senate discussion draft "Assurances Language No. 2" version fails to include provisions for development of critical programmatic regulations that will help ensure that the intended level of restoration is accomplished and that such restoration is, and remains, CERP's No. 1 priority.

Question 6. Can you describe your view of the purpose of an independent scientific peer review process led by National Academy of Sciences'

Response. The legislation should institutionalize the current Committee on Restoration of the Greater Everglades Ecosystem ("CROGEE") or a successor body to provide Congress and the agencies with independent, scientific peer review of the restoration process throughout the duration of the project. We have three objections to the Senate draft bill's language. First, by failing to name CROGEE specifically, the draft seems to suggest establishing a new panel. A good panel is in place and, rather than start all over again, the bill should incorporate CROGEE. Second, CROGEE's independence will suffer if it is made subordinate to the Everglades Restoration Task Force, as in the Senate draft bill. To be effective, CROGEE must be independent of south Florida political interests. Third, the draft limits CROGEE's reporting responsibilities to the Task Force. Given the scientific uncertainties and large costs of the restoration project, the legislation should require CROGEE to issue specific reports directly to Congress.

Question 7. You indicate that the authorization should have a process to expeditiously purchase lands under extreme development pressure that are necessary for CERP projects. Can you outline what you would suggest that is different from existing policy?

Response. We have known for some time that one of the best things we can do for the Everglades is buy land now that will be needed for restoration later. The Talisman acquisition is an important example because had we waited until closer to the construction date, in all likelihood the land needed for water storage in the EAA would not have been available.

We believe that the process by which the State and Federal Government purchase lands can be streamlined to increase efficiency and the pace of acquisitions. Each acquisition has had its own series of lengthy negotiations involving State and Federal agencies—primarily the South Florida Water Management District and the Department of the Interior.

We feel that each party should now understand the general needs of the other party and should seek to agree on a set of principles that can govern future acquisitions. Such principles should seek to accommodate the jurisdictional requirements of the agencies and serve as a formula for how future agreements would be constructed. Such a process would enable us to avoid negotiating the same issues over and over, but should have the necessary level of flexibility to address specific needs of an individual acquisition.

Question 8. Can you elaborate on your final concern related to commitment of CERP resources to projects that rely on pilots for completion?

Response. In several cases, the CERP schedule calls for implementation of costly projects before completion of their pilot projects, even though the very point of the pilot projects is to test the larger project's viability and to investigate significant potential collateral impacts. For example, construction of reservoirs in the Lake Belt area and related rock-mining is planned to proceed concurrent with the pilot project for this water storage component, even though significant questions exist about the component's viability, its environmental impacts, and how to ensure adequate mitigation for wetlands loss (the component will result in loss of thousands of wetlands acres).

One of the proposals that has been discussed among various constituencies is the use of State water law and regulatory processes to issue assurances to the natural system and the human environment. Do you participate in the development of these standards? If so, how?

Our role is limited to participating as citizens in the State political process, including the legislative process, agency rulemaking and on appointed citizen advisory board where applicable. The extent to which the public and advocacy groups can participate and influence the outcome of these processes is typically limited by their financial, legal and political resources. These resources cannot, on an issue-by-issue basis, compete with a specific affected economic interest such as the sugar industry, mining and development interests etc.

The State has Chapter 373 authority to issue consumptive use permits, minimum flows and levels, and reservations of the natural system for almost 30 years. To date, the State has only issued consumptive use permits. If Congress chose to use the State water law and regulatory processes to issue assurances, how would you provide comfort to Congress that the State process would ever move forward?

In our view, the only way to provide comfort that the State may move forward with water reservations for the natural system in a manner consistent with the restoration of federally protected lands, is to require that a programmatic regulatory process be undertaken under Federal law.

Question 9. You do not focus specifically on water quality in your testimony. Can you elaborate on your view as to whether the Comprehensive Everglades Restoration Plan includes a process to address water quality needs of the natural and human environment?

Response. The conceptual plan as it now stands does not adequately address water quality concerns. Water quality will be addressed in all of the components of the CERP program, consistent with applicable water quality law, but care must be taken throughout the entire restoration project to coordinate the water quality components of the projects so that the overall effect is a comprehensive water quality program. Great care must be taken to ensure that when the construction of all of the components is completed, they and related compliance efforts will address water quality in a comprehensive way.

RESPONSES BY DAVID GUGGENHEIM TO ADDITIONAL QUESTIONS FROM SENATOR MACK

Question 1. Do you support applying section 902 of the 1986 Water Resources Development Act to all features of the Comprehensive Plan before us today? [This provision requires a congressional review if a project exceeds 120 percent of the authorized cost.]

Response. We have no objection, but as noted in our written testimony we believe that tracking the cost and progress of projects can be greatly enhanced by requiring more frequent reports to Congress. The Administration's bill proposed such reports no less than every 5 years, which we believe will result in reports being produced every 5 years. We recommend that these reports be required every 2 years to better track the traditional WRDA legislative calendar.

Question 2. Do you support congressional committee review and approval of the feasibility level of engineering and design work before any construction can begin on the initial suite of ten projects in the Comprehensive Plan?

Response. We understand and respect the desire of the committee and of Congress to preserve its oversight role, but we caution against using it as a reason to not move forward this year. Many of the studies on the specifications of each project remain to be performed, but they will be completed before work begins. We could therefore support a process that preserves construction schedules and protects congressional oversight responsibilities.

Question 3. Do you support requiring full feasibility studies before any other projects are authorized under the Comprehensive Plan?

Response. Yes, we support requiring full feasibility studies before any other projects are authorized.

Question 4. Do you support modifying the definition of the South Florida Ecosystem to make clear the system includes the lands and waters within the boundaries of the South Florida Water Management District as they existed on July 1, 1999?

Response. To adequately and comprehensively restore the Everglades, all lands within the boundary of the South Florida Water Management District boundary must be included in the project. However, the northern reaches of the Indian River Lagoon system and Charlotte Harbor are not within the boundaries of the South

Florida Water Management District, but could be impacted (positively or negatively) by the restoration efforts. Therefore political boundaries will not always adequately define the ecological boundaries of the project.

Question 5. Do you support a provision making clear the Corps of Engineers is only authorized to study the question about providing an additional 245,000 acre-feet of water to the natural system?

Response. We would support language that makes it clear that the delivery of an additional 240,000 acre-feet of water to Everglades National Park and Biscayne National Park, while necessary for restoration purposes, is not authorized until a FIR for said delivery is completed and until Congress reviews and authorizes its implementation. We believe that there is no justification for restricting the actions of the Corps on this issue in WRDA 2000 to "study only". The team of scientists who developed the Comprehensive Plan agreed that this water is being wasted to tide and should be captured to make up wet season shortfalls in Everglades National Park if the negative impacts associated with its delivery, including water quality, conveyance, and impacts on other parts of the ecosystem could be resolved. If resolution of these issues can be reached, then a PIR process should be allowed to move forward with the subsequent goal being a congressional authorization of such a project.

Question 6. Do you support language making it clear that the Corps must work with the State of Florida to ensure all groundwater discharges resulting from the Comprehensive Plan meet all applicable water quality standards and water quality permitting requirements?

Response. We would support such language, on the conditions that the Environmental Protection Agency is also included in groundwater quality control efforts to the extent that the agency's authority allows, and that responsible parties must still comply will all applicable current laws and regulations concerning such discharges.

Question 7. Do you support replacing the project purposes language stated in (c)(l) of the administration's draft with language restating the purpose of the Comprehensive Plan developed and passed in WRDA 1996?

Response. WRDA 1996 directed the Secretary of the Army to "develop as expeditiously as practicable a proposed Comprehensive Plan for the purpose of restoring, preserving, and protecting the South Florida ecosystem. The Comprehensive Plan shall provide for the protection of water quality in, and the reduction of the loss of fresh water from, the Everglades. The Comprehensive Plan shall include such features as are necessary to provide for the water related needs of the region, including flood control, the enhancement of water supplies, and other objectives served by the Central & Southern Florida Project." In 1996 we were comfortable with this language because we felt that it clearly directs the Secretary of the Army to develop an ecosystem restoration plan while giving the Secretary the discretion to determine whether other project features were necessary to continue to meet the other C&SF Project purposes. We thought that this language made it abundantly clear that the primary and overarching purpose of the Comprehensive Plan is to restore the Everglades.

Unfortunately, we have been frustrated that this language was interpreted by the State of Florida and by the Jacksonville District of the Corps, during the development of the CERP, to mean that the Comprehensive Plan has three co-equal purposes. That has never been our interpretation of WRDA 1996, a view that we have made clear at every restoration forum, including the Governor's Commission for a Sustainable South Florida. In light of the popular interpretation of the WRDA 1996 language, we strongly believe that the WRDA 2000 project purpose language must add clarity to the WRDA 1996 language to ensure that the purpose of the Comprehensive Everglades Restoration Plan remains the restoration of the American Everglades. While we restore the American Everglades the comprehensive plan will continue to meet other C&SF project purposes.

Question 8. Do you support additional programmatic authority for the Corps to construct projects of limited cost but are in keeping with the Plan's purposes and have independent and substantial benefit to Everglades restoration?

Response. In several cases, the CERP schedule calls for implementation of costly projects before completion of their pilot projects, even though the very point of the pilot projects is to test the larger project's viability and to investigate significant potential collateral impacts. For example, construction of reservoirs in the Lake Belt area and related rock-mining is planned to proceed concurrent with the pilot project for this water storage component, even though significant questions exist about the component's viability, its environmental impacts, and how to ensure adequate mitigation for wetlands loss (the component will result in loss of thousands of wetlands acres).

Question 9. Do you support a 50/50 cost share between the Federal Government and the State of Florida on operation and maintenance of the project? If not, please state the cost share you believe to be appropriate and why.

Response. Yes, we support a 50/50 cost share between the Federal Government and the State of Florida on operation and maintenance of the project.

Question 10. Please provide your thoughts on the definition of Project Implementation Reports found in the Administration's language. Do you support this definition? If not, please provide suggestions as to how you would define these reports.

Response. We generally support the definition upon the condition that the project-specific regulations to be developed for each component be part of the PIR.

Question 11. Do you believe the Department of Interior and the State of Florida should be on equal footing in developing any regulations related to assurances? If not, why?

Response. We believe that the Department of the Interior should have a primary role in the development of specific assurances that will ensure the restoration of federally managed lands, including Everglades National Park and Biscayne National Park. This role is appropriate and necessary because:

1. The Interior Department has legal responsibility and particular scientific expertise concerning these lands—approximately 40 percent of the Everglades watershed.
2. The plight of these lands has drawn the country's attention to the need to restore the American Everglades.
3. The Federal investment to save these lands warrants the participation of relevant agencies, especially Interior's role as a primary steward of public lands.
4. The American Everglades have been historically disadvantaged by water management in south Florida (relative to consumptive users) and require specific Federal protections.

Question 12. Do you support the reporting requirement in the administration's bill? If not, how would you amend the reporting requirement?

Response. As previously indicated, we recommend that these reports be required every 2 years to better track the traditional WRDA legislative calendar. These reports constitute the only regular government evaluation of this project currently contemplated. They will serve as a "State of Everglades Restoration" report and, as such, should be required more frequently than every 5 years.

Specifically, the reports should be timed so that Congress has the benefit of a review by the CROGEE/National Academy of Sciences panel prior to considering additional project authorizations in a WRDA bill.

May 11, 2000.

The HONORABLE BOB SMITH, *Chairman,*
Senate Committee on Environment and Public Works,
Senate Dirksen Office Building,
Washington, D.C. 20510.

RE: Lake Worth Drainage District's Testimony on the Comprehensive Everglades Restoration Plan

DEAR MR. CHAIRMAN: Thank you very much for allowing the opportunity to testify before the Senate Committee on Environment and Public Works on the Comprehensive Everglades Restoration Plan ("CERP"). I am the Manager for the Lake Worth Drainage District (LWDD) and my comments today are made on behalf of the Lake Worth Drainage District Board of Supervisors and landowners. I previously submitted testimony on CERP at the committee's Naples Field Hearing in January, 2000. I appreciate being given the opportunity to supplement that testimony now that the Administration has released its CERP Authorization language as a part of the Water Resources Development Act for 2000 ("WRDA 2000").

As in my prior testimony I want to begin by commending the Army Corps of Engineers Jacksonville District (Corps) and the South Florida Water Management District (SFWMD) staff who spent considerable time and resources working to put CERP together. The LWDD also spent a significant amount of time and resources participating in the development of CERP by attendance at Corps briefings of the SFWMD Governing Board and at the various public meetings and workshops. Until the release of Alternative D13R1-4, LWDD was under the impression that there were no substantial conflicts between the recommended plan and the operational mission of the LWDD.

However, after review of Alternative D13R1-4, LWDD became very concerned that CERP will significantly impact LWDD's ability to provide protection from flooding for the residential, agricultural, municipal and industrial users in its service area.

Despite LWDD's recommendations that the Corps not include Alternative D13R1-4 in any plan that moved forward for consideration by the Congress this Alternative was included in the Appendices to the Comprehensive Plan and was also discussed in detail in the Chief of Engineer's Report which presented the Comprehensive Plan to Congress. LWDD provided testimony to your committee in January, 2000 to explain why we believe the committee should not authorize a Comprehensive Plan which includes Alternative D13R1-4 or potentially commits an additional 245,000 acre feet of water to the Everglades National Park without detailed study. LWDD is supplementing that testimony today in light of the authorization language for CERP included in the Administration's WRDA 2000 Bill.

I. CHARACTERISTICS OF LWDD

LWDD is an independent taxing district of the State of Florida created pursuant to Chapter 298, Florida Statutes, and special act for the purpose of providing water control, including flood protection and water supply within its boundaries for urban and agricultural development. LWDD is located in southeast Florida and makes up a large portion of Palm Beach County. The boundaries of LWDD stretch approximately from Okeechobee Boulevard in the north, to Water Conservation Area Number One (WCA-1) to the west, south to the Hillsboro Canal and east to the E-4 Canal.

The LWDD system contains six main equalizing canals running in a north-south direction and over 50 smaller lateral canals oriented in an east-west direction. These canals provide flood protection to residential, agricultural and industrial interests as well as satisfying public water supply, domestic, agricultural, commercial, golf course and landscaping water use demands. LWDD contains a service area of 218 square miles with 511 miles of canals. It provides flood protection to over 700,000 residents and over 20,000 acres of agricultural row crops. LWDD further provides recharge to the Surficial and Biscayne aquifers preventing saline intrusion from the coast.

II. ALTERNATIVE D13R1-4

This alternative proposes utilizing the LWDD facilities which currently discharge north and east to divert water in the opposite direction (to the south and west) for the benefit of the Everglades National Park. The precise benefit to the Everglades National Park needs to be determined before such a massive overhaul of the LWDD canal system is made. The flood protection, water quality and water supply implications from such an overhaul must also be studied before Congress authorizes this additional commitment.

While LWDD recognizes the needs of the Everglades National Park and the corresponding benefit to the Lake Worth Lagoon from the provision of additional water, LWDD has specific concerns with Alternative D13R1-4 relating to flood protection, water quality, water supply and funding which have not been addressed. I discussed these concerns in detail in my January, 2000 testimony before the committee. Therefore, for the purpose of today's Hearing I will focus on the Administration's proposed WRDA 2000 Bill, specifically the authorization language for CERP.

III. CERP AUTHORIZATION LANGUAGE

The Administration's proposed WRDA Bill is unlike any I have ever seen regarding the C&SF Project. It appears to be more of a policy bill providing for the Federal takeover of water allocation in South Florida rather than a public works authorization bill based on sound engineering principles. The sections which require additional attention and in some cases substantial redrafting are as follows:

- The "Assuring Project Benefits" language at Section 3(i) attempts to redefine the original authorization of the C&SF Project, as originally defined in the 1948 WRDA and all subsequent WRDA laws, to make flood control and water supply secondary to restoring and protecting the "natural system". This is unacceptable.
- Section 3(a)(3) defines the "Comprehensive Everglades Restoration Plan" to include the Chief's Report. The Chief's Report is not a consensus document. Inclusion of the Chief's Report in the definition of CERP is unacceptable. CERP should be defined to refer solely to the Plan contained within the Final Integrated Feasibility Report and Programmatic Environmental Impact Statement, April 1999.
- Section 3(c)(2)(A) directs the Corps to carry out CERP subject to the conditions contained in the Chief's Report. Again, the Chief's Report is not a consensus document and is opposed by most interests in South Florida. Carrying out CERP subject to the Chief's Report's conditions is particularly problematic to LWDD because of the Chief's potential commitment to send 245,000 acre-feet of additional flow to the Everglades National Park by way of major modifications to LWDD's system. Ref-

erence to the Chief's Report should be removed and the authorization should refer only to the April 1999 Plan.

- If the references to the Chief's Report are not removed from the CERP authorization, language must be included to provide limitations on the Chief's Report's commitment to provide the additional 245,000 acre feet of water. Specifically, language will have to be added to the CERP authorization language requiring: "a detailed two-part scientific study that documents, through a full, open and public process, the system-wide environmental impacts of providing the additional flow, and a comprehensive analysis of the structural facilities proposed to provide the flow which includes the engineering, economic and physical requirements to divert and treat urban runoff while maintaining flood protection to adjacent private property."
- Section 3(i) relates to "Assuring Project Benefits", such assurances continue to be of utmost importance to all water users in South Florida. This section puts the Secretary of the Interior in charge of dedicating and managing the water made available from CERP and all C&SF project features from prior WRDAs. This is unacceptable.
- Section 3(i) also creates a process that puts the Department of the Army and the Department of Interior in charge of writing a new set of rules for identifying the amount of water to be dedicated and managed for the natural system from the C&SF project as authorized by CERP and in all prior WRDAs. The Governor of Florida is not given the same footing as the Department of the Army and the Department of Interior in developing these rules, even though Florida is to pay more than Congress for CERP. This process is unacceptable. The State of Florida should be on an equal footing with the Department of the Army and the Department of the Interior in the development of any criteria to provide the water necessary to restore, preserve and protect the South Florida Ecosystem while providing for the other water related needs of the region.
- Section 3(g)(1) appears to reduce the scope of the Project Implementation Reports, which were set forth in CERP to evaluate the economic, engineering, environmental and social impacts that were not done as a part of the Final Integrated Feasibility Report. CERP should continue to require that the PIRs provide the detailed evaluation requirements as described in Chapter 10 of CERP. Specifically, the Chief of Engineers has made a commitment to submit a PIR on the issue of additional flow to the Everglades National Park, this PIR should also continue to require the detailed evaluation requirements of the PIR as described in Chapter 10 of CERP.

The theme of this bill does not appear to be restoration of the South Florida Ecosystem through a consensus public works project. It appears to be the initiation of a Federal takeover of water allocation and the operation of flood control facilities in the 16 counties of the SFWMD. Major changes will need to be made for the CERP authorization language to have a chance of gaining broad support in Florida.

IV. CONCLUSION

- The Comprehensive Everglades Restoration Plan remains timely and necessary to assure the protection of the Everglades and future water supply for the people of South Florida.
- The commitment by the Chief of Engineers to provide 245,000 acre-feet of additional flow to Everglades National Park, above the unprecedented increases already provided by the Recommended Plan, is a breach of understanding with stakeholders who participated in the development of the Plan. This commitment should be flatly rejected by Congress.
- Diverting urban runoff from West Palm Beach through the LWDD canal system for the benefit of the Everglades National Park is not practical, and may not even be possible, given the number of existing public and private facilities that would have to be abandoned or significantly modified.

Florida water law mandates a balanced approach to the allocation of water. Human needs are to be considered along with the environmental needs in making a decision as to where the water will go. To authorize CERP in accordance with the Administration's proposed language is contrary to the directives of the State and Federal environmental agencies. The LWDD is firmly opposed to congressional authorization of CERP as set forth in the Administration's proposal for WRDA 2000.

The Federal Government and the State of Florida have embarked on the most far-reaching changes to the Everglades since 1949. When implemented, CERP and the Everglades Forever Act will change the hydrology and water quality characteristics of the entire system. At this point, Congress should concentrate on authorizing a design that works for the whole system while maintaining the integrity of each one of the C&SF project's primary purposes: flood control, water supply for municipal, industrial, and agricultural uses, water supply for the Everglades National Park,

prevention of saltwater intrusion, and the protection of fish and wildlife resources. LWDD looks forward to working with each member of your committee to identify authorization language that works for the entire system without jeopardizing the current flood protection provided by the C&SF project in combination with LWDD's canal system.

Again, thank you for providing me with the opportunity to testify before the committee today.

Sincerely yours,

WILLIAM G. WINTERS, *Manager,*
Lake Worth Drainage District.

IMPACTS TO LWDD

Based on the preliminary design in Alternative D13R1-4 by the Corps the LWDD has evaluated that it will take the following to create the additional flow to the Everglades National Park by way of LWDD's canal system:

- The complete redirection of water flows in two major LWDD canals.
- New Control Structures on numerous lateral canals.
- Up to 48 miles of new right of way acquisition for canal excavation requiring the taking of 875 acres by eminent domain through property that is now fully developed.
- Twenty-four new highway and secondary bridge crossings for the redirected canals, including two interchanges on the Ronald Reagan Turnpike.
- A total cost of over $420,000,000 is not reflected in the current estimate for the Restudy.
- The Chief's report does not provide additional flood protection.

A POTENTIAL TAX INCREASE OF 477 percent TO LWDD RESIDENTS.

ITEMIZED COSTS WITHIN LWDD

The table below estimates the costs that can be expected within the boundaries of the LWDD. Operation and maintenance costs have not been included.

Item	Quantity	Total
Canal Enlargement	48 Miles	$177,408,000
New Pump Stations	4	$36,500,000
Control Structures	?45	$24,350,000
New Bridges	24	$35,840,000
Real Estate	?875 acres	$56,875,000
Houses/Apartments	?200	$90,000.000
TOTAL		$420,973,000

Wherever possible, costs were adapted from estimates in the Army Corps C&SF Restudy.
Other costs were adapted from LWDD structural data, bridge cost source—FDOT.

CITIZENS FOR A SOUND ECONOMY,
May 11, 2000.

The HONORABLE BOB SMITH, *Chairman,*
Senate Environment and Public Works Committee,
Dirksen Senate Office Building,
Washington, D.C. 20510.

SENATOR SMITH: Citizens for a Sound Economy is grateful for the opportunity to provide the Senate Environment and Public Works Committee with comments on the Comprehensive Everglades Restoration Plan included in S. 2437, the Water Resources Development Act of 2000.

While CSE often has been outspoken in our criticism of the Comprehensive Plan, formerly called the Re-Study, we do have some areas of agreement with this legislation:

(1) We certainly agree with the statement in subsection (1) of the Findings that the Everglades is a national treasure, and that the South Florida ecosystem has been endangered by adverse changes in quantity, quality, distribution, and timing of water flows.

(2) We also agree with the proposition in subsection (2) of the Findings that the Central and Southern Florida (C&SF) project plays an important role in the economy of South Florida, and that modifications to this project will be necessary as the population of South Florida grows.

We also have a number of disagreements with the legislation, with the Final Implementation Plan upon which it is based, and with the overall manner in which the Comprehensive Plan is being advanced:

(1) We disagree strongly with subsection (4) of the Findings, which refers to the Plan as being "scientifically and economically sound." There are critical information gaps remaining with regard to the science, especially with regard to Aquifer Storage and Recovery (ASR) wells and wastewater reuse technology. In addition, cost projections have risen dramatically over the past several years, from an initial estimate of perhaps $1 billion to a current estimate of at least $7.8 billion if not $11 billion.

(2) We also disagree with the statement in subsection (6) of the Findings that the Plan will "significantly" improve the quantity, quality, distribution, and timing of water. The Corps of Engineers itself admits that they cannot predict how the Plan will affect ecosystems, much like no one realized how the original C&SF project would affect the environment. To quote from Section O, page 13 of the Final Implementation Plan: "There is a very real, and to a great extent, unresolvable uncertainty about what the new ecosystem will look like. Because no one knows for sure what the ecosystem will look like, no one knows for sure what the hydropattern required to produce it will look like. Moreover, we do not know with certainty what the linkages between hydropatterns and the ecosystem are."

(3) We do not believe Congress should approve the Comprehensive Plan as it is laid out in this bill. Should the committee decide to move ahead with the Plan, we believe it is imperative that the initial authorization not include any components beyond the pilot projects. To be exact, the 11 projects in sub section (C) of the Specific Authorizations should not be authorized until we have empirical results from the pilot projects. This is particularly important since, as both the Corps of Engineers and members of this committee have said, once you start implementing the Plan you can't stop until it's finished, 20 to 30 years from now. In other words, once the initial batch of implementation projects have begun, Congress has irrevocably committed itself to the entire Comprehensive Plan. By the time pilot projects are complete, not until 2011 in one case, it will be far too late to turn back. Congress would have no choice but to continue throwing good money after bad. Essentially, Congress will have given the Corps of Engineers a blank check.

Two pilot projects in particular stand out: ASR and wastewater reuse. These two technologies are so central to the Comprehensive Plan that if pilot projects prove unsuccessful, the entire Plan as written cannot work. Moving ahead without this data puts the entire Everglades restoration program, and the people of South Florida, at risk.

(4) We disagree with the Programmatic Authority granted in subsection (d) of the Specific Authorization. Once again, these components should not be allowed to move forward without solid empirical data from pilot projects proving their viability.

(5) We also disagree with the proposition that the primary and overarching purpose of the Plan is restoration of natural systems. The overarching purpose of the plan, at least publicly, has seemed to vary depending on the audience. We hope that in this legislation, the water needs of the people actually living in South Florida will be considered just as important as any other aspect.

(6) Finally, we must criticize the legislation, and the entire Comprehensive Plan, for a sin of omission. There is no mention of providing the residents of the 8.5 square mile area with the flood protection that they were guaranteed a decade ago. The residents of this area are primarily Hispanic, and came to this country looking to escape oppression and find the American dream. Instead, they have found a system that, to some, seems little different from what they left behind. They have turned to Congress for help, often literally in tears, only to find dead end after dead end. The Comprehensive Plan, once again, leaves these Americans out in the cold, or in this case, under water.

We know that a great many people have put a great deal of time, effort, and resources into developing the Comprehensive Plan. However, history will not pass judgment on how large of a plan was implemented, but on how successful that plan was. If we believe that this plan is the last chance to save the Everglades, we must make sure that as many of the remaining uncertainties as possible are resolved. Should we discover 10 years down the road that critical components of the Comprehensive Everglades Restoration Plan are not working as predicted, it will be too late. The Plan will have failed and the Everglades will be gone.

STATEMENT OF THE HONORABLE ALEX PENELAS, MAYOR OF MIAMI-DADE COUNTY AND M.R. STIERHEIM, COUNTY MANAGER OF MIAMI-DADE COUNTY

Chairman Smith, Senator Caucus, Senator Graham and members of the Committee, thank you for the opportunity to comment on the Administration's bill to authorize the Comprehensive Everglades Restoration Plan (CERP), as contained in the Water Resources Development Act of 2000. We applaud Governor Bush and the Florida Legislature for its unanimous approval of the Everglades Restoration Investment Act and its appropriation of funding to begin the implementation of the CERP. We also recognize the diligent work of Congress and the Federal agencies in bringing together the parties involved in the restoration effort.

Miami-Dade County is in a unique position in this country. We are the only large urban area in the Nation located between two national parks, each with different environmental and ecological needs. We are home to more than 2 million residents. In 1998, more than 9 million overnight travelers visited our area. These residents and visitors, along with local businesses, rely on the underground Biscayne Aquifer as their sole source of drinking water. That Aquifer depends Ott the South Florida and Everglades ecosystems for its sustenance, replenishment and viability.

By Resolution No. 300–00, passes, and adopted on March 21, 2000, the Miami-Dade County Board of County Commissioners voted unanimously to recognize the importance of a restored Everglades as a national, state and regional priority. A copy of that Resolution is attached. As further detailed below, the Resolution identifies our concerns with the CERP as it addresses the equitable distribution of water, funding proposals, flood protection assurances, the investigation of alternative sources of water and technologically uncertain components of the CERP. Therefore, we request you consider the following concerns.

Water Supply Equity

Project benefit assurances should provide equal importance to the needs of the South Florida region for improvement of the ecosystem environment, flood protection and crater supply. The long-term success of the restoration of the Everglades ecosystem drill rely on the ability of the Federal, state and local agencies to work in partnership. This includes recognition of the water supply and flood protection needs of the existing and future residents and businesses in Soup Florida. The proposed components of the CEDE must maintain or enhance existing levels of flood protection in all urban, agricultural and environmental preservation areas.

Financial Equity

As of 1995, almost one-fourth of the County's residents revere at or below the poverty level. Our resident, include a majority population of economically disadvantaged immigrants, senior citizens and minorities, who can ill afford to pay increased rates for beater service. As further explained in the next paragraph, the CERP assumes that very expensive facilities "will be constructed by Miami-Dade County with no Federal participation whatsoever, while similar facilities constructed elsewhere in the South Florida area will receive Federal assistance. This is inequitable to the residents of Miami-Dade County.

One critical factor in restoring the South Florida ecosystem is to store excess mater instead of discharging it to the ocean via the canal network. This storage increases the amount of water available and significantly enhances our ability to meet future needs of both the natural system and urban land uses. The CERP depends heavily upon Aquifer Storage and Recovery (ASR), a technology that stores excess water in the Upper Floridan aquifer for later use, and includes the assumption that Miami-Dade County will depend upon ASR to provide 150 million gallons of water per day. Unfortunately, the ASR within Miami-Dade County was assumed to be in the future condition for the CERP and, therefore, is not currently eligible for Federal funding. The benefits provided by that ASR are the same as those provided by the other ASR components included in the CERP and, therefore, we request that the ASR within Miami-Dade County be eligible for a 50 percent match from the Federal Government on its construction, operation and maintenance.

The CERP contains a large number of components that together accomplish restoration of the South Florida ecosystem and directly benefit Federal lands including Everglades National Park, Biscayne National Park, Big Cypress National Preserve, and the Loxahatchee National Wildlife Refuge. State lands such as the Water Conservation Areas, the Water Preserve Areas, and the South Dade Wetlands also benefit. These natural systems and their restoration are of international as well as national importance. Therefore, we recommend that, in addition to construction costs, the costs for operation, maintenance repair, replacement and rehabilitation for all CERP components be shared equally between the Federal Government and the non-Federal sponsor.

Technologically Uncertain and Expensive Components

Many of the technically uncertain and expensive components in the CERP, such a inground reservoirs, seepage management, and wastewater reuse, are proposed to be located with Miami-Dade County. These components have the potential to impact general hydrology and water quality in the County. To address the technical uncertainties, the CERP proposes that pilot projects be conducted to better understand the feasibility of constructing the component and the potential impacts that a full-scale project may cause. It is imperative that Miami-Dade County participates in the design and implementation of the pilot projects to verify that its concerns are adequately addressed. Therefore, we request that the Act specify a process for developing and implementing pilot projects and clarify the formal points of entry into the process.

The wastewater reuse component also is subject to uncertainties. Current Federal regulatory restrictions prohibit Miami-Dade County from utilizing recently constructed underground injection wells for the disposal of treated effluent. By state lam wastewater reuse plants are required to have an alternative source of disposal for those periods in which reuse water is not needed for the natural or human environment, such as during the rainy seasons. In Miami-Dade County, the two proposed reuse plants would rely on similar injections wells to dispose of unneeded reuse water. Under current conditions, these reuse plants, if constructed, could not be operated. Miami-Dade County is seeking the resolution of this issue with the U.S. Environmental Protection Agency.

We also request that guidance language be included to emphasize the importance and encourage expeditious implementation of further evaluations in certain areas. Due to strict timeframes in the development of the CERP, there was not adequate time to complete all the evaluations thoroughly or to wait for the development of final restoration targets for all natural areas. We wish to emphasize the importance and encourage the implementation of (1) the investigation of, in conjunction with the implementation of the Wastewater Reuse Technology pilot project, potential sources of water other than reuse, for providing freshwater flows to Biscayne Bay focusing on loon cost alternatives; (2) refinement of Me quality, quantity, timing, and distribution of freshwater flows needed to provide and maintain the fishery resources, recreational opportunities, and overall health of Biscayne Bay; and (3) farther evaluation of whether restoration targets can be better achieved in the Lower C–111/Model Lands Basins. We recognize that the CERP requires these activities but ask that Congress restate their importance which will assist in prioritizing those activities.

We thank you for the opportunity to comment on the Act.

EVERGLADES RESTORATION

WEDNESDAY, SEPTEMBER 20, 2000

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

GAO STUDY OF WATER QUALITY ISSUES

The committee met, pursuant to notice, at 9:34 a.m. in room 406, Senate Dirksen Building, Honorable George V. Voinovich (chairman of the subcommittee) presiding.

Present: Senators Voinovich, Inhofe, Smith, and Graham.

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

Senator VOINOVICH. Good morning. I am pleased that you are all able to testify this morning on the GAO investigation of the Everglades and water quality issues. I welcome in panel one Mr. Barry Hill, Associate Director of Energy Resources and Science Issues, United States General Accounting Office; and in panel two I would like to welcome Mr. Michael Davis, Deputy Assistant Secretary of the Army for Civil Works; and Mr. David Struhs, Commissioner, Florida Department of Environmental Protection.

This year, I have invested many hours of time on the Everglades, and, in particular, the Comprehensive Restoration Plan. I am unequivocally committed to the fact that the Everglades are a national treasure that must be protected and restored. Having said that, my detailed review of this largely conceptual plan has also convinced me that it was rushed to this Congress for consideration.

A cursory review of this document shows that it lacks the specificity of a traditional feasibility report. For instance, it lacks a complete analysis of the water quality aspects of the Plan. Restoration of the South Florida ecosystem will involve restoring the appropriate quantity, quality, timing, and distribution of water to the natural system. This restoration effort raises a number of serious questions to me.

First, is the Plan adequate to address water quality concerns in the Everglades natural system? Second, what is the magnitude of the likely additional investment required to achieve adequate water quality for restoration of the Everglades natural system? Third, what is the expectation of the State of Florida about Federal participation in the additional investment that will be needed to achieve appropriate water quality for the natural system?

I asked the GAO to review the big picture of Everglades restoration and water quality issues on March 29 at a time when my colleagues and I began to take a close look at the Comprehensive Restoration Plan. At that time there were a lot of unanswered questions about how much this would cost and how the package would be put together.

Additionally, I am pleased that GAO was able to act on my request in a swift manner and produce this informative report. In its report, GAO lists several uncertainties in the Plan that will likely lead to additional water quality projects that could increase the total cost of the Plan over the Corps' current estimate of $7.8 billion. For example, the report suggests that the Corps could have a role in future efforts to improve water quality, such as the clean-up of Lake Okeechobee, which is estimated to cost approximately $1 billion. I think it is clear from this report that there are too many unknowns and uncertainties in the Plan to estimate what the final price tag will be.

As authorizers, we need to stay on top of this. This is why I am conducting this hearing today. I cannot emphasize enough the fact that the Corps currently has a construction backlog which consists of over 500 active projects with Federal cost to complete of about $38 billion. When the Everglades restoration is considered, this backlog includes the $5.4 billion Federal share of work within the State of Florida, representing about 14 percent of the backlog across the country.

With the construction appropriations for the Corps averaging about $1.6 billion a year in the 1990's, there is not enough money to accomplish all of the proposed work in the State of Florida and address the water resources needs of the rest of the nation. Unless the Corps' construction appropriations is substantially increased to meet these needs, the State of Florida in particular and the Nation in general are going to have to make some very difficult and painful decisions on priorities.

The GAO recommends that the Secretary of the Army provide the Congress with updates that reflect the cumulative project and cost changes to the overall Plan and indicate the progress being made toward implementing the Plan. GAO recommends that these updates should be made at the same time as Congress considers the Corps' biennial WRDA proposals. I look forward to hearing from GAO this morning about how this recommendation differs from the reporting requirement that has been included in the WRDA 2000 bill on the Everglades.

In addition, I would also like to hear from our witnesses today about opportunities to save costs on the Everglades restoration project and how costs will be shared between the State and Federal Government if more water quality projects are identified.

On a side note, I am pleased that after months of hard work, the Senate will soon begin floor consideration of the Water Resources Development Act of 2000, legislation that I have sponsored and which includes a $1.4 billion authorization for the Everglades. Perhaps we will even consider it today—at least we're scheduled to consider the bill today.

So I am saying to some of the advocates here: We have to get down to reality. These projects are important, but they are just

going to be talked about unless we can come up with some more money on the Federal side to move forward on it.

Again, I would like to thank all today's witness for coming to testify on the GAO investigation on the Everglades and water quality issues. I look forward to your testimony and responses to any questions that may follow.

[The prepared statement of Senator Voinovich follows:]

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With the construction appropriations for the Corps averaging about $1.6 billion a year in the 1990's, there is not enough money to accomplish all of the proposed work in the State of Florida and address the water resources needs of the rest of the nation. Unless the Corps' construction appropriations is substantially increased to meet these needs, the State of Florida in particular and the Nation in general are going to have to make some very difficult and painful decisions on priorities.

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On a side note, I am pleased that after months of hard work, the Senate will soon begin floor consideration of the Water Resources Development Act of 2000, legislation that I have sponsored and which includes a $1.4 billion authorization for the Everglades. Perhaps we will even consider it today—at least we're scheduled to consider the bill today.

Again, I would like to thank all our today's witness for coming to testify on the GAO investigation on the Everglades and water quality issues. I look forward to your testimony and responses to any questions that may follow.

Senator VOINOVICH. Senator Inhofe, you came in early and the early bird——

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

Senator INHOFE. Thank you. I enjoyed your last remarks and I agree with everything you said. The only thing I don't agree with is your conclusion, after having said that, that you are supporting it. It seems like all these problems you pointed out are the very problems that I am going to point out.

I think we are setting some precedents here that I worry about for the future. I will just outline five so that I can be sure to get them in the record.

One is the new precedent—at least new in the last 16 years—which requires the Federal Government to pay for a portion of operations and maintenance costs. That is a precedent because we haven't been doing that, to my knowledge, since the change was made 16 years ago.

Second is the violation of the Committee on the Environment and Public Works' policy concerning the need for a Chief of the Army Corps of Engineer's report before project authorization. This is something we always do. We are not doing it here, to my knowledge.

The third is the basis of the restoration project on unproven technology. That is kind of like the second point. One of the reasons for a Corps report is to show that we are going to use proven technology, so the things we say we are going to do we have a reasonable expectation of being able to do it.

The fourth is the possibility—and I guess it is a done deal now that this is going to put in as part of the Water bill instead of a stand-alone bill. I think something of this magnitude—in fact, I had a hold on it for a while for that reason. I believe, Mr. Chairman, that something of this magnitude should be in a stand-alone bill.

Last, the open-ended nature of the costs of the project, $7.8 billion over 38 years. We all know what happens to these estimates over a long period of time because I am old enough to remember when Medicare came in back in 1967. It was going to be $3.4 billion and this year are looking at $232 billion.

As the Everglades report states, "A project of this size is not without uncertainties." These projects and their costs will be a moving target for many, many years to come. I know we have some changes you have put in here that will require them to come back, but here is the problem we have, Mr. Chairman. It is kind of like

Ronald Reagan said—"a rendezvous with destiny"—back in 1965. He said that there is nothing closer to immortality on the face of this earth than a Government program once started. So once you get started, and then you find out later on it was a mistake, you can't get out. I think that may be what we are getting into here.

I would like very much to try to change the approach and would like to ask some of my colleagues as to possibly handling this as a stand-alone bill. I don't know that it is too late or if the train has already gone by. But I do believe the Everglades is a national treasure. I was there when a very small child with my parents. I have been there since then. We have a lot of other national treasures, too. I think if we start out in some unprecedented approaches to a national treasure, that I am going to be coming back in here with some of ours and I think Senator Smith will be doing the same thing from New Hampshire.

So I have those concerns over it, Mr. Chairman. I wanted to make sure that I got those into the record.

I would ask that my entire statement be made a part of the record.

Senator VOINOVICH. Without objection, your prepared statement will appear in the record.

[The prepared statement of Senator Inhofe follows:]

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

Mr. Chairman, in my dissenting view on S. 2797, the "Restoring the Everglades, An American Legacy Act," I outlined my concerns with this legislation. While I recognize the Everglades as a national treasure, S. 2797 sets precedents, which I can not, in good conscious, condone.

My concerns ranged from:

- the new precedent which requires the Federal Government to pay for a portion of operations and maintenance costs; to
- the violation of Committee on the Environment and Public Works' policy concerning the need for a Chief of the Army Corps of Engineer's report before project authorization; to
- the basis of the restoration project on unproven technology; to
- the strong possibility that the Restoring the Everglades, An American Legacy Act will not be considered as a stand alone bill; to
- the open-ended nature of the costs of this project.

Today's GAO testimony goes to the heart of this concern. The total cost of the Comprehensive Everglades Restoration Plan is estimated at $7.8 billion over 38 years. This is the current estimate. I have serious concerns about the potential for cost over runs associated with this project. As with almost all Federal programs, this project will probably cost much more at the end of the day. For example, in 1967, when the Medicare program was passed by Congress, the program was estimated to cost $3.4 billion. In 2000, the costs of the program are estimated to $232 billion. No one could have foreseen this exponential growth! The future cost of projects of this magnitude must be taken into consideration by Congress before we pass legislation.

As the Everglades report states, "A project of this size is not without uncertainties." These projects and their costs will be a moving target for many, many years to come. I understand that the Corps has developed a process for incorporating project modifications and additions in its future reports to Congress. However, in addition to the current reporting requirements, I believe that the Corps should be required to incorporate GAO's recommendations into their reporting system, specifically providing Congress with information on: (1) cumulative changes in projects and costs for the Everglades plan as a whole and (2) the progress being made in implementing the Everglades plan. I also agree with GAO—it would also be helpful to have this information every 2 years—rather than the 5-year reporting cycle called for in the Everglades legislation—so that as Congress considers authorization for future Everglades projects, Congress can make informed decisions concerning the expenditure of American tax dollars.

I would also like to reiterate my objection to the Committee's action to attach the Restoring the Everglades, An American Legacy Act to the Water Resources Development Act of 2000. I know many advocates of this plan argue that the Everglades should be a part of WRDA 2000. The Everglades plan is hardly a typical WRDA project. Because of the scale and departure from existing law and policy of the Everglades legislation, it should be considered as a stand alone bill—not a provision in the Water Resources Development Act of 2000. This is a precedent setting bill. With Bayou Restoration and other plans in the works, the Everglades will be a model for how we handle these enormous ecological restoration projects in the future.

Again, I recognize the Everglades as a national treasure—as I do many treasures in Oklahoma. As Congress considers the Everglades restoration legislation, all I ask is that Congress play by the rules.

Senator VOINOVICH. Senator Smith?

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

Senator SMITH. Thank you, Mr. Chairman. Thank you for holding this hearing on the GAO report and asking for that report. I think we should not be afraid to deal with the facts as they come.

Before going to my specific opening statement, let me respond to a couple of points.

We have said all along throughout this process that there was uncertainty. There is uncertainty in life and risk in life. The issue here is not about the concern about precedents as much as it is—and these precedents we have made a point of saying that these are not going to be precedents, that this is a special case and a very sensitive environmental ecosystem. The question really boils down to whether we at the Federal Government level are willing to spend about $110 million a year on average over the next 36 years to save the Everglades. That is what the issue is.

If you want me or anyone else to say that we are guaranteeing you that we are going to spend $110 million a year for the next 36 years and we are going to save the Everglades, the answer is no. I can't guarantee that. But what I can guarantee you is if we don't try, we will not save the Everglades and the Everglades will be gone. I have made that point over and over and over again. If we want to go back and go down through every one of these issues that have been outlined here, then we won't save the Everglades. That is the issue.

So for $110 million a year, with roughly 260 million Americans, that doesn't cost much per American. Frankly, it is worth it. We take risks every single time we build a weapons system in this country. Sometimes they work, many times they don't, most times they don't. We take risks every time we invest money in any program, any Government military program or any other item. Sometimes we invest this money and it doesn't work and sometimes it does.

That is the issue: whether or not we are willing to take the risk here, knowing the fact that the Army Corps of Engineers, at our direction in the 1940's changed this system in a way that basically ensured its destruction. That is the issue.

I just want to say, again—and I will be on the record here—I am not going to say that this is a guaranteed work. But I will say that through the process of adaptive management, which is very carefully incorporated into the language of this legislation which I helped to put in there, we will have the opportunity every 2

years—indeed, every year for that matter—to look at these wells, some of the new technology—we will look at those wells. If those wells don't work, if salt water and fresh water in these holding wells—if it doesn't work, if the freshwater doesn't lay on top as we hope it will, we will stop and correct that. We will do something else.

If we need more acre feet of water, we will have more acre feet of water. If we don't need it, we won't. We will look at it every single year. We will have the opportunity to do that. This is a very innovative method of looking at a project which is environmentally sensitive.

Let me just say this: the key theme is that there are uncertainties. Anyone who is familiar with what the committee has done here knows that. The Senate, hopefully, will consider the bill this week, maybe today. And it is going to take 30 to 36 years, as I said. But my favorite aspect of this Plan is that it is an adaptive management concept. It is new and gives us that flexibility. If we learn anything new about the ecosystem, we would know that the concept of adaptive management where we can modify the Plan based on any new information at hand might work. It just might work.

I believe it will work. And I think we have a lot of experts who will tell you that it will work. If it doesn't, we can adapt.

Although the GAO report has focused on the uncertainties surrounding aquifer storage—ASR, aquifer storage and recovery—our bill authorizes a pilot project. New technology? Yes. It is a pilot project in addition to the two ASR pilot projects included in WRDA 99 to test the technology. In fact, I would like to highlight that there is chance for substantial savings if ASR technology works, so it is worth the effort and the risk.

There are other opportunities for savings in this Plan that GAO has not mentioned. One is wastewater reuse facilities. The Comprehensive Plan calls for two wastewater reuse facilities to treat water to a high level of cleanliness for return to the natural system. The committee is skeptical about the need for these facilities, as well as their nearly billion dollar cost. The bill reflects that concern and it reflects that skepticism. We are prepared to deal with it. Pending the results of a pilot project included in our bill, one or both of the facilities may not even be needed.

Finally, GAO makes a recommendation that the Army Corps and the State report to Congress on the status of this Plan, whether any new projects have been added, whether any projects are no longer necessary, and what the costs of implementing that Plan have been. Our bill has a requirement for a detailed report to be submitted to Congress every 5 years. GAO suggests a biennial report, so that we hear from the Corps every time the Administration submits its water resource bill to the Congress. I understand that the Corps and the State both support this recommendation. I don't think this is the same type of exhaustive report that we seek every 5 years, but there may be value in more frequent interim reports and I don't have a problem with that.

It is important, though, to squarely face the uncertainties in the Plan, and the risk that someday we may need to spend more money than we anticipate today. Hopefully, we may spend less. That is an estimate. It might go up and it might go down. We do

this all the time. If anybody can tell me today that we are going to build an airplane and you can tell me exactly what it is going to cost and hit it right on the head, then you are a better man than I am—or woman.

I think we should take the risk that there are uncertainties that could end up costing more than we now estimate in order to save the Everglades. And to go back to my original point, Is it worth $100 million average per year for you to take that risk? I think it is and that is really the issue in whether or not you support the Plan or not.

Thank you, Mr. Chairman.

[The prepared statement of Senator Smith follows:]

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

This morning we will hear from three witnesses on a report recently completed by the General Accounting Office on water quality as it pertains to the Comprehensive Everglades Restoration Plan. I welcome our witnesses and thank them for their participation.

This report highlights an important aspect of Everglades restoration water quality in the ecosystem. The key theme of the report, that there are uncertainties involved in restoring the Everglades, is familiar to anyone who has closely followed the debate in the Committee. Our Everglades legislation, which the Senate likely will consider this week, anticipated uncertainties in the implementation of the Plan, as is to be expected with a project that is going to take an estimated 30 years to construct. I have said it before and I will say it again: my favorite aspect of the Comprehensive Plan is the inherent flexibility provided by Adaptive Assessment. If we learn something new about the ecosystem, perfect our modeling techniques, or just plain see that something isn't working right, through the concept of Adaptive Management, we can modify the Plan based on the new information on hand.

In addition, I understand that the GAO Report highlights whether an additional 245,000 acre-feet of water is needed for Everglades National Park. The Everglades bill which this Committee passed on June 28, 2000, includes a provision dealing with this very issue. In our bill, we require the Army Corps of Engineers to conduct a feasibility study on the need for the water, and this feasibility study must be submitted to Congress for our review. The Committee will carefully consider the completed feasibility study, including concerns of National Park neighbors that they not be flooded if the additional water is needed. Again, this is not an unanticipated issue.

The GAO Report also focused on the uncertainty surrounding Aquifer Storage and Recovery or "ASR" as it is called. Our bill authorizes a pilot project, in addition to the two ASR pilot projects included in WRDA 99, to test this technology. In fact, I would like to highlight for those who don't know that there is chance for substantial SAVINGS if ASR works how the Corps and South Florida Water Management District anticipate it will work.

There are other opportunities for savings in the Plan that GAO has not mentioned. One example is the Wastewater Reuse facilities. The Comprehensive Plan calls for two wastewater reuse facilities to treat water to a high level of cleanliness for return to the natural system. The Committee is skeptical about the need for these facilities, as well as their nearly billion dollar cost. The bill reflects that concern and skepticism. Pending the results of a pilot project included in our bill, one or both of the facilities may not even be needed.

Finally, GAO makes a recommendation that the Army Corps and the State report to Congress on the status of the Plan, that is, whether any new projects have been added, whether any projects are no longer necessary, and what the costs of implementing the Plan have been. Our bill has a requirement for a detailed report to be submitted to Congress every 5 years. GAO suggests a biennial report, so that we hear from the Corps every time the Administration submits its water resource bill to the Congress. I understand that the Corps and the State both support this recommendation. I don't think this is the same type of exhaustive report that we seek every 5 years, but there may be value in more frequent interim reports from the implementing agencies on progress and changes to the Plan.

It is important to squarely face the uncertainties in the Plan, and the risk that someday we may need to spend more money than we anticipate today. We know

that the Plan will not cost $7.8 billion. That is an estimate, it may go up, hopefully it will go down. What we do know today is that if we do not act, then the remaining Everglades will die. I think we should take the risk that there are uncertainties that could end up costing more than we now estimate in order to save the Everglades. I have no further remarks and look forward to hearing from the witnesses.

Senator VOINOVICH. Thank you, Senator Smith.

Senator Graham, you have been involved in this a long time. I know getting on with this is very important to you.

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

Senator GRAHAM. Thank you, Mr. Chairman. I appreciate those remarks and I appreciate the chance to discuss the next phase of a very long book with many chapters already having been written and many more to be written as it relates to our efforts to restore the Everglades.

This hearing today underscores the importance of what we are about. This is not a regular—certainly not a trivial—issue with which we are dealing. We are talking about the second largest National Park in the Continental United States at risk of being lost. We are talking about a United Nations World Heritage Site in the Everglades System. We are discussing the largest environmental restoration project in the history of the world—I will repeat those words—the largest environmental restoration project in the history of the world. This project will serve as a laboratory for the 21st century and beyond, both for the United States and global efforts to restore damaged environmental systems.

This is in the category of the great projects Congress—in many cases, this committee—has authorized over its more than 200 years of existence. There is a new book out by Stephen Ambrose that describes the process by which the United States was linked by a road of steel, the first railroad to link the Atlantic to the Pacific. That was a project that was authorized by funding through the U.S. Congress. It was a project which was beset with many of the same unknowns and risks we are talking about with the Everglades, but would anyone today, 135 years after its completion, say that that was not a risk worth taking?

Almost 100 years ago, we authorized an even more unknown and risky project, one which had already killed thousands of people, cost millions of francs, and the disgrace and imprisonment of some of the most prominent citizens of the country of France. But this Congress decided, with the strong support of President Theodore Roosevelt, that we would attempt to build a canal across Panama. I would suggest a book called "Path Between the Seas" by David McCullough, which describes all the unknowns in that great project. But would anyone today, 100 years later, say that we should not have taken the risk of the unknown in pursuing that project? I think not.

There have been some comments made, which I hope our panelists will help us clarify. One is on the front page of a report we just received—and I underscore, just received—which says "additional water quality projects may be needed and could increase costs". Those speculative statements may and could become reality with a project as complex as this, as I am certain there were changes in the plan to build the railroad in the 1860's and build the Panama

Canal in the first two decades of this century. But I would point out that every change would require the authorization of a future Congress.

These projects—we do not live in a dictatorship in which the executive branch can, without restraint, proceed to do with it thinks is right. This is a system of Government of divided powers and the power to authorize public works projects and to appropriate the funds for those projects is by the Constitution resident in the legislative branch. So if there are going to be additional water quality projects, which could increase costs, we are the ones who will have to make that judgment as to the appropriateness of the project and the acceptability of the cost of that project and authorize and appropriate.

Much has been made about the issue of cost. And this is going to be an expensive project. But I would point out what needs to be understood. This is a 50/50 project. When we talk about $7.8 billion, 50 cents of every one of those $7.8 billion is going to come from the State of Florida and 50 cents will come from the Federal Government. I think in a business transaction, if you have two partners, one of the advantages of that is that you have two different sets of eyes looking at the facts and trying to render good judgment, recognizing that their money is going to be at risk by those decisions.

So while it may not be a total comfort, I think the fact that the State of Florida is going to be putting up half the money for this project, and will be assuming both the economic and political consequences of those decisions, should give us some degree of confidence as to the project.

We are going to be talking later today about the issue of the operation and maintenance. I will agree that it is a relatively new or maybe a renewed concept that the Federal Government should have a responsibility for operation and maintenance after the project is complete. I would again point out that if this were to be financed as a standard Corps of Engineers project would be financed, 65 percent of the cost would be paid by the Federal Government, not 50 percent. So the State of Florida is accepting a substantially higher proportion of the cost of this project than would normally be the case.

It seems to me—both in recognition of the fact that the principal beneficiary of this project will be these enormous Federal investments throughout South Florida and the fact that the initial cost of construction is going to be substantially less to the Federal Government than would normally be the case—this is persuasive justification for an ongoing 50/50 relationship in operation and maintenance as there will be in construction.

But Mr. Chairman, we are going to have ample opportunity to discuss these issues.

There is another concern I must state, and that is that I am concerned about the process that has led us to this hearing today. Just as one of the goals of the Everglades restoration is to restore a natural flow of water throughout the Everglades System, it seems to me one of the goals of a legislative process is to maintain a flow of information. We may disagree as to what that information means and have different recommendations and judgments based

on the same set of facts, but we all ought to be dealing with the same set of facts.

When now chairman of the Federal Reserve System was the head of the Commission to study Social Security, he began the debate of his commission by saying that everyone could have their opinion, nobody could have their own facts. Everybody had to start from the same set of basic facts.

I am concerned that the process which has brought us to this morning has impinged upon that goal. The GAO released its report on September 13. It was not until 6:30 last night that our office was able to get a copy of this report. They may wish to comment on it, but I understand that as of this hour that the representatives of the State of Florida and the Corps of Engineers received copies of this report. I don't think that is an appropriate way in which to proceed with a discussion as serious as the one we are going to be having.

I am writing a letter to the head of the GAO asking that their policy of allowing the person who requested the report to essentially embargo the report for up to 30 days be modified in the event that there is going to be a public hearing or other public use of the document in that 30-day period. If you want to embargo it for 30 days so that you are the only one that can read the book, that is one thing. But if you want to use the book for a public hearing, then there ought to be access by the public to that material sufficiently in advance so that everyone is operating off the same set of facts.

I would also ask that when we start the 107th Congress that the rules of this committee might be looked at in terms of when members of the committee will receive materials that relate to what is going to be the subject of a committee hearing. Senator Mack and I both feel as if we have not had an adequate opportunity to fully digest this material, although what we do know about the material indicates to us that the concerns raised in this report are concerns that have been raised previously and that several of the recommendations have in fact been substantially incorporated in the legislation, which the Senate will be considering later today.

Mr. Chairman, with those comments about how I hope that maybe similar issues might be handled by the GAO and by the committee in the future, I look forward to the comments of the participants today and regret that the representatives of the State and the Corps of Engineers did not have more adequate opportunity to familiarize themselves with the report prior to this hearing.

Senator VOINOVICH. Thank you, Senator Graham.

I think you raise some very legitimate questions in terms of when the request is made to the GAO and in terms of when the response is given to the person who requested the information. As a newcomer on the block, I felt that we were following protocol that was established with the GAO and I would be more than happy to discuss that with you or Senator Smith in terms of when these reports are given to members of the committee and Members of Congress.

I would like to clarify for the record that according to my staff the draft report was delivered to the Corps of Engineers and the

State of Florida on August 1. It seems to me that that draft report——

Senator GRAHAM. But the report on which we are holding this hearing—we can ask them that question when they testify—I do not believe that neither the State nor the Corps of Engineers received a copy of this final report.

Senator VOINOVICH. Well, that may be the case. But I think if you look at the draft report that they received and compare it to the report GAO finally came out with that the differences and discrepancies are very, very little. In fact, the meat of the report is in the draft report. I don't think it is fair to say that the people who are testifying today were unable to respond properly to the request to come here because of the fact that they did not have something before them to which they could respond. As a matter of fact, Senator, if you will note in the report, comments were made in the first part of the report where the State of Florida said they didn't agree with the issue of the cost estimate for the dredging of Lake Okeechobee.

I think your point is well taken in terms of when members of this body receive reports and when they are distributed as something that is worthy of discussion and I think we should get to it. But I don't think that this hearing this morning is defective because the witnesses didn't have adequate information upon which to testify.

I will now move on with the hearing.

Senator VOINOVICH. We would like to call upon Mr. Barry Hill, Associate Director, Energy, Resources, and Science Issues for the United States General Accounting Office.

Mr. Hill, we thank the GAO for the quick response they gave to the request I made to them about the overall cost in terms of water quality. We look forward to your testimony.

STATEMENT OF BARRY HILL, ASSOCIATE DIRECTOR, ENERGY, RESOURCES, AND SCIENCE ISSUES, GENERAL ACCOUNTING OFFICE, ACCOMPANIED BY SUSAN IOTT AND SHERRY L. MC DONALD, GENERAL ACCOUNTING OFFICE

Mr. HILL. Thank you, Mr. Chairman and members of the subcommittee. It is a pleasure to appear before the subcommittee to discuss the water quality issues related to the Comprehensive Everglades Restoration Plan.

Before I begin, I would like to introduce my colleagues. With me today are Susan Iott and Sherry McDonald, who are responsible for developing the information we will be presenting.

If I may, I would like to briefly summarize my prepared statement and submit the full text of the statement for the record.

We are here today to discuss our report, which is being released today, on the role of the Corps of Engineers' Comprehensive Everglades Restoration Plan in addressing the major water quality concerns in the South Florida ecosystem and modifications that may be needed as the Corps implements the Plan after it has been authorized by the Congress.

In summary, the Corps' Plan provides a conceptual framework for improving the quality, quantity, timing, and distribution of water in the South Florida ecosystem. As authorized by the Water

Resources Development Act of 1996, the Corps included 24 water quality projects in the Plan that it deemed essential to the restoration of the ecosystem. Both the Federal and State governments will equally share the costs of these projects.

The projects shown on the chart to my left include the construction of 17 stormwater treatment projects in areas where new storage sites will be built to reclaim water or modify its use; two advanced wastewater treatment facilities to take runoff from the Miami area, treat it, and return it to natural areas to increase the amount of water being provided there; and five smaller projects, such as the restoration of wetlands or dredging of sediments from lakes or other water bodies, that will have immediate environmental benefits.

Among other things, the water quality projects are intended to improve the quality of water in the ecosystem and to supplement the efforts of Florida, which has the primary responsibility for achieving water quality in the State.

Before proceeding with a discussion of the modifications that may be needed as the plan is implemented, I would like to point out that much of the information we will present today is based on our discussions with officials from Federal and State agencies that are responsible for managing water supplies and ensuring water quality.

This was made necessary for two reasons. First, since the Plan is a conceptual document, detailed plans of the projects to be constructed are not yet available. Second, our review is forward-looking, that is, it is not an assessment of events that have already occurred.

On the basis of our review of the 24 water quality projects included in this Plan, it is likely that modifications and additions to the Plan will be necessary as uncertainties related to implementing the Plan's projects are resolved and more information is gathered about the extent of the ecosystem's water quality concerns. Changes to the Plan's water quality projects could increase the total cost of the Plan over the Corps' current estimate of $7.8 billion.

Potential water quality projects that may be needed include additional stormwater treatment areas, dredging projects to remove sediments contaminated with pollutants such as phosphorous, areas to treat the water being retrieved from underground storage wells, and chemical treatment facilities.

Mr. Chairman, achieving water quality in the South Florida ecosystem will depend on several programs and efforts, including the Corps' Plan and several State programs. Although the Plan currently includes 24 projects to address the quality of water in natural areas of the ecosystem, there are too many uncertainties to estimate the number and costs of the projects that will ultimately be needed to improve water quality. The Corps has acknowledged this uncertainty in the Plan and has included a process for incorporating project modifications and additions in its future reports to the Congress.

It has not, however, included a means for reporting cumulative changes in projects and costs for the Plan as a whole and the progress being made in implementing the Plan. We believe that

such information will be important for the Congress in authorizing future projects. As a result, our report recommends that the Corps provide the Congress with this information at the same time as subsequent authorization proposals. In responding to our draft report, both the Corps and the state of Florida concurred with our recommendation.

Mr. Chairman, this concludes our statement and we will be happy to respond to any questions from you or other members of the subcommittee.

Senator VOINOVICH. Thank you very much.

The Corps recognizes that the Plan has uncertainties and has included a process that Senator Smith made reference to in his opening remarks of adaptive assessment.

What will this program accomplish and is it a reasonable way to deal with the uncertainty of the Plan?

Mr. HILL. We think it is a very good way to deal with the uncertainties. Since this is basically a conceptual framework and a lot of the details have not been worked out and a lot of the technologies have not been tested or tried, this is probably the best approach to basically getting a project running and through monitoring and collecting data and assessing the results and effects you are getting from that project you can make whatever adjustments you need to make sure that the projects are working effectively and you are achieving your goals.

Senator VOINOVICH. You identified the potential for adding additional water quality projects in the Plan and say the cost could increase. The Corps believes that it will have opportunities to save costs. Could you identify where costs could be saved?

Mr. HILL. Yes, and we do mention that in our report. There are a number of places but the one we discuss specifically in the report deals with the aquifer storage areas. There is about 250 of these aquifer storage and recovery wells that will require treatment of water. The current Plan calls for chlorination and filtration facilities to treat the water basically going into the well and some filtration needed when it comes out of the well.

There are some concerns, in talking to the experts, about the chemical reaction that will occur when this treated water meets the groundwater. There is also a question as to whether any treatment will be needed at all. If they find out, once they get into this, that the chlorination and filtration is not needed, then there could be the potential of saving $500 million off the total project cost. On the other hand, if they find out that not only is the treatment needed but perhaps additional treatments are needed, these costs could be increased in the future.

So it is uncertain right now as to which way it is going to go. But there is the potential there, if that treatment is not needed, to save $500 million off these estimated costs.

Senator VOINOVICH. Your testimony listed several uncertainties in the Plan that will likely lead to additional water quality projects. I am not asking you to list every one of them, but I think it is important for this hearing for you to elaborate on the specific projects you have identified in all probability could add to the cost of the Project because we need to deal with the water quality issue.

A statement has been made—I will be interested in what Mr. Struhs has to say—that this Plan will provide for 25 parts per billion of phosphorous when EPA may require in the Plan to reducing it to 10 parts per billion. This is a real question that is still on the table. I am interested in hearing your comment on it.

Mr. HILL. That is one of the areas that deals with the stormwater treatment areas in terms of trying to deal with reducing the level of phosphorous in the water.

The standard has not been set yet by the State in terms of how low a standard they need to achieve. The projects are currently being built with a standard in excess of what could be the ultimate standard there. If the standard is lowered to 10 parts per billion, then there may be some additional projects or modification of projects that are needed. That is one area.

There are also questions about additional water for the Everglades National Park. The Department of Interior is concerned that some additional water may be needed over what has been estimated now, up to 245,000 acre feet of water. If it is found out that additional water is needed, then there would have to be modifications made to provide that water.

Senator VOINOVICH. Thank you.

Senator Smith?

Senator SMITH. Mr. Hill, were your investigators able to calculate any evidence that the cost would increase beyond the $7.8 billion?

Mr. HILL. Let me answer that by saying that first of all we did not estimate costs as much as we talked to the experts, we talked to the people doing the design work in getting together this project in terms of trying to identify some of these uncertainties and some of the options or alternatives that might need to be considered. Some of this is uncertain to the point where there are no costs but there does seem to be some concern that additional projects may be needed. In other cases, we were able to identify projects that basically are on the horizon and could have quite a price tag on it, like the work that would be needed in Lake Okeechobee.

Ms. IOTT AND MS. McDonald can answer some specific things in terms of the people they have talked to and the experts they have talked to in terms of what they know.

Senator SMITH. Can you suggest any areas outlined in the Plan now where significant cost reductions might occur?

Mr. HILL. Well, we just talked about the aquifer storage areas which could reduce up to $500 million, depending on whether that chlorination and filtration is needed or not needed.

Ms. MCDONALD. The Corps is also considering whether or not they will need the wastewater treatment areas that are also included in the Plan. The Corps also plans to—as it designs the projects—do value engineering to see where they can save additional costs.

So there are some areas where they may save costs, which is why we believe there is potential for that. But when looking at the modifications and additions that may be needed, we believe there is a possibility that the cost could increase.

Senator SMITH. Did you want to comment, Ms. Iott?

Ms. IOTT. I think we should point out that the advanced wastewater treatment plants—they are considering substitutes for

that, but that is the option now on the table for water for Biscayne Bay where there is still some uncertainty about the water that will be provided for the Bay.

Senator SMITH. One of the assertions that you made in your report, as I understand it, is that Lake Okeechobee might have to be dredged. That opinion is not shared by either the State of Florida or the Corps of Engineers, as I understand it.

Is that a fair assessment to have in the GAO report, if most of the experts feel that that $1 billion cost of dredging may not indeed happen at all? Is it fair to include that in the report?

Mr. HILL. We have included that in the report because we view the lake as being such a critical part. It is the heart of the water system we are dealing with. There are lots of concerns about the phosphorous in the lake. The water will be needed for this restoration effort. The Corps is already involved in doing some treatment of the water in the tributaries leading into that lake. There are various options that are still being considered in terms of how to deal with the phosphorous in the lake.

Dredging is certainly one of the options that is under consideration right now. It is a possibility. I think they are still going to pursue other less costly ways of dealing with the problem, but right now, it is really uncertain.

Senator SMITH. But I think you would have to conclude, wouldn't you, that to dredge Lake Okeechobee at a cost of approximately $1 billion would be an extreme position to take at this point in the game. Is that fair or unfair to say?

Mr. HILL. I don't know if we can comment on that. I don't know if it is extreme or not extreme. All we are really trying to do is identify some potential unknowns and uncertainties out there. Certainly, Lake Okeechobee is a big uncertainty right now in terms of what you do with it. It is something that is going to have to be dealt with. How it is dealt with and how much it is going to cost remain to be seen. We wanted to bring it to your attention that this is something that is going to have to be dealt with. From the cost estimates and alternatives with which we were presented, the most costly alternative would be complete dredging of the lake. The estimate that has been given to us on that is $1 billion.

Senator SMITH. But you can always create more uncertainty if you want to. But the point is that the Army Corps and the State of Florida do not agree that Lake Okeechobee would have to be dredged. You are taking a position that is in opposition with the experts who have advised us on this entire Plan. Is that correct?

Mr. HILL. I think in our report we appropriately point out that there is still disagreement over this and that the State and the Corps are still contemplating what to do about this and studying what needs to be done about this. I don't think we at any time characterized or attempted to characterize in our report that this was definitely going to be something that the Federal Government was going to be involved in and pick up the cost.

We are just saying that this is an area of disagreement, an area of concern. We did take the additional step of stepping back and saying that based on where that lake is and how it fits into the restoration effort and the extent to which the Corps has already been involved in projects that affect that lake, there is a likelihood

that the Federal Government will get involved in it and it will have a price tag on it.

Senator SMITH. My time has expired, but I just want to say that the point is, even if that were the case, under the adaptive assessment process that we have laid out, Congress would have to authorize that. It is not going to happen unless Congress authorizes it.

Mr. HILL. That is correct.

Senator SMITH. So again, going to that point—and Senator Voinovich asked you this question and did a quick followup—are you comfortable that under this adaptive management process we have laid out here that we can adapt and we can make changes which could escalate it or depress—are you comfortable with that?

Are you comfortable with the language that is written in the legislation? Whatever Congress does, Congress does, and the executive branch. But as far as the language is concerned, there is no commitment here beyond what we authorize in the first round. We are not committed to $8 billion, per se.

Mr. HILL. You are correct. That would require authorization. There are two things that would make us comfortable. One is the adaptive assessment process that is already included in the bill. We fully support that. The second is the recommendation we made. We think in addition to just monitoring and assessing how this thing is working, Congress also needs to know, on a more periodic basis than once every 5 years, at the time that the Corps is coming in for more authorizations, they need to explain more fully what is happening here. Since this is a conceptual project, there is a lot of uncertainties out there, the feasibility studies haven't been done, the more information Congress has in terms of how this overall effort is going, how much it is costing, what more will be needed, and how effectively we are achieving the goals I think the better off everybody is.

Senator SMITH. I don't disagree with you there. I agree with you.

Thank you, Mr. Chairman.

Senator VOINOVICH. Thank you, Senator.

Senator Graham?

Senator GRAHAM. Just two issues. One, we are in agreement that any additional projects that would be developed as a result of the adaptive management process and indicated to be appropriate to achieve the results will require congressional authorization?

Mr. HILL. Yes, sir.

Senator GRAHAM. So our successors in this room would have to make a judgment as to whether those modifications, deletions, or additions and their projected costs were in the public interest in terms of achieving this goal of restoration. Is that correct?

Mr. HILL. That is correct.

Senator GRAHAM. No. 2, I have quickly looked through the report and I have only been able to find one recommendation—and that is on page 26. Are there any other recommendations you have made?

Mr. HILL. No. The only recommendation dealt with the need to periodically report to the Congress the status of the project and the need for more money or more projects.

Senator GRAHAM. I would like to bring your attention to page 34 of the legislation—not of the book, of the legislation which is going to be before the Senate hopefully this afternoon.

It states on line four, "Report to Congress—Beginning on October 1, 2005, and periodically thereafter until October 1, 2036, the Secretary"—that's the Secretary of the Army—"and the Secretary of the Interior, in consultation with the Environmental Protection Agency, the Department of Commerce, and the State of Florida, shall jointly submit to Congress a report on the implementation of the Plan. Such reports shall be completed not less often"—not less often—"than every 5 years. Such reports shall include a description of planning, design, and construction work completed, the amount of funds expended during the period covered by the report (including a detailed analysis of the funds expended for adaptive assessment under subsection (b)(2)(C)(xi)), and the work anticipated over the next 5-year period. In addition, each report shall include"—and then it gives more detail as to what is required.

How would you modify that language, based on your recommendation?

Mr. HILL. We think that is a good reporting requirement. The only modification we would see is that since this is such a conceptual project and the designs and feasibility studies haven't been done, there would be benefit to having that type of report done more often than once every 5 years.

I know the language says at least every 5 years, but I guess what we are saying is that when the Corps comes in for its authorization request that would be a good time for them to report in, basically, the types of information you are talking about there.

Senator GRAHAM. It seems to me that the language is quite clear. It says they have to report every 5 years, but can be required to report more frequently. Every time they report they have to not only do an assessment of all actions to date, but then look forward 5 years as to what they anticipate.

It seems to me that gives to the Congress very great sense of confidence as to the information they are going to get, and the ability of Congress to direct that this report be given either on a more frequent calendar basis of the 5-year requirement or on the basis of individual events, for instance, at the completion of the first 10 projects that are going to be authorized in this report, or at some other date in the process that has a particular significance.

If you have some language change that you would recommend to that report to Congress language, I would be receptive to hearing it. But I will say that this was thoughtfully crafted and seems to me as if it accomplishes what your recommendation is in the proposal.

Ms. MCDONALD. I have not seen the requirements you have in the most recent version, but——

Senator GRAHAM. Our language has been in the public domain since this bill was reported out of this committee. So it is available.

Ms. MCDONALD. But what I wanted to point out was that one of the things that we think would be very important is to know what cumulative changes are being made to the Plan. At this point, there are 66 projects in the Plan, at an estimated cost of $7.8 billion. Part of our recommendation is for the Corps to report to the

Congress on what cumulative changes to the Plan have been made and then how much that will affect the schedule and cost.

Senator GRAHAM. I would ask when the Corps testifies if they think this language covers that. I think it does. And as you know, the structure of this legislation is that while we are sanctioning the full report, we are only authorizing a stipulated set of the some three score projects that are going to be necessary to accomplish this. So the Corps has to periodically come back to Congress to get authorization for the next wave of projects that are necessary to carry out this restoration.

Mr. HILL. And I guess where we were coming from, in that process, they are likely to come to you and ask for individual projects or increases to individual projects—the 10 projects, perhaps, that were authorized in the prior session. They will come and ask for additional money to complete that work.

We are saying that in addition to that information you need to also step back and look at the process as a whole, cumulatively. What is going on with the project? How many more additional projects have you identified that we are going to need to do? If you are not considering that and you don't get funding for those projects, then it is possible that the entire effort and their ability to achieve the goals would be jeopardized. And nobody would want that.

Senator GRAHAM. Thank you.

Thank you, Mr. Chairman.

Senator VOINOVICH. Thank you very much. I appreciate you being here today.

Senator VOINOVICH. Our next panel is Mr. Michael Davis, Deputy Assistant Secretary of the Army for Civil Works and Mr. David Struhs, Commissioner of the Florida Department of Environmental Protection.

Mr. Davis, thank you for coming today to testify.

STATEMENT OF MICHAEL L. DAVIS, DEPUTY ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

Mr. DAVIS. Thank you.

Mr. Chairman and members of the subcommittee, I am Michael Davis, Deputy Assistant Secretary of the Army for Civil Works. I am pleased to be here today to present the Administration's views on the draft GAO report concerning water quality issues associated with the restoration of America's Everglades. I am also pleased to be here today with my colleague from the State of Florida, Secretary David Struhs.

With me today are representatives of the Army Corps of Engineers, the Department of the Interior, and the Environmental Protection Agency.

Mr. Chairman, as you know, the restoration of America's Everglades is a high priority for this Administration. Restoration of the Everglades requires that we "get the water right" by addressing each of the four interrelated factors: quantity, quality, timing, and distribution. As such, ensuring a supply of clean fresh water is an integral part of the Comprehensive Everglades Restoration Plan, or CERP.

Over the past 100 years, excessive drainage of wetlands and changes in the natural variability of water flows have altered the Everglades wetland ecosystem. Today, discharges to the Everglades are often too much, often too little, and frequently at the wrong times of the year. An overabundance or scarcity of water affects plants and wildlife accustomed to the Everglades' historic range of water flows, levels, and seasons. In addition, canals and highways that criss-cross the Everglades have interrupted its natural overland sheet flow.

Water quality throughout south Florida has deteriorated over the past 50 years. More than one-half of the wetlands that acted as natural filters and retention areas are gone due to agricultural and urban expansion. Under current conditions, these natural systems cannot recover their defining characteristics and they will not survive.

The CERP offers a broad, comprehensive approach, which is designed to restore and improve the condition of water quality throughout the Everglades ecosystem. While it will not solve all water quality problems, the CERP improves the quality of water in the study area, integrates modifications to the Central and Southern Florida project with ongoing State of Florida water quality efforts, and ensures that our actions to capture and store water meet water quality requirements.

Water quality was a consideration in every aspect of the CERP, and many components of the CERP include treatment features to ensure that water quality conditions are improved.

We believe the CERP, in concert with other proposed and ongoing restoration efforts, represents the best way to both restore the ecological integrity of the Everglades ecosystem and to enhance water quality. While the CERP reflects the best available science, we are prepared to refine our thinking as we learn more. Thus the CERP is designed to be flexible, to incorporate and respond to new information as it becomes available. Continuous monitoring and independent scientific review are key components of the CERP. Still, we cannot wait for all the answers to begin. There is too much at stake and little time to act.

We appreciate the work conducted by GAO and as always we welcome constructive advice on how to improve Army water resources projects. In its draft report GAO concluded that "there are too many uncertainties to estimate the number and cost of projects that will ultimately be needed to improve water quality." To address this concern, we understand that GAO will recommend that the Secretary of the Army provide Congress with updates that reflect any cumulative project and cost changes to the CERP; and indicate the progress being made toward implementing the CERP.

We do not take issue with the specific recommendations made in the draft report. We agree that Congress should be kept informed of our progress and of any substantial changes as we implement the CERP. We have proposed legislation to require such reporting.

In regard to water quality generally, we are satisfied that the CERP reflects the proper balance between the need to have information and the need to begin the restoration of an important natural resource that is in serious trouble. Much is known about the Everglades and how it can be restored. We will learn a lot more

through on-going independent scientific peer review as well as the adaptive assessment process outlined in the CERP. We strongly believe that the level of uncertainty and potential cost increases are manageable through the monitoring and reporting.

We agree that there are some uncertainties associated with the implementation of the overall CERP. Some uncertainties are expected considering the size of the project and its staged implementation over 30 years. However, the Corps, the South Florida Water Management District, and many other Federal and State partners have disclosed fully the uncertainties and proposed a methodology and process to address these uncertainties.

We disagree that uncertainties on the proposed water quality components will absolutely lead to cost increases. The $7.8 billion cost estimate reflects our best estimate of the cost of implementing the CERP based on information we have today after considering these uncertainties. In many ways, the Corps estimate is very conservative, often assuming the worst case scenario, as suggested by the comments on the ASR by the GAO expert. In fact, there is good reason to believe that the actual cost of some project features could be less than estimated in the CERP.

We concur with the GAO recommendation that the Army should provide Congress with updates regarding implementation progress and changes to the CERP. The Everglades restoration legislation included in the Administration's April 10, 2000 proposal for Water Resources Development Act included a provision requiring reports to Congress. This provision requires that the Secretary of the Army and the Secretary of the Interior, in consultation with the Environmental Protection Agency, the Department of Commerce, and the State of Florida, submit reports on the implementation of the CERP to Congress beginning in October 2005 and at least every 5 years thereafter.

In conclusion, Mr. Chairman, protecting and restoring water quality is an integral part of restoring the Everglades ecosystem. As such, addressing water quality issues has been and continues to be a fundamental objective of the CERP. Providing a reliable supply of clean fresh water to the ecosystem is at the heart of the CERP. While some uncertainties exist, we remain confident of the analysis, conclusions, and recommendations outlined in the CERP, including those germane to water quality. Further, we do not believe that based on the GAO report or any other information available at this time that Congress should assume that the cost to implement the CERP will unreasonably increase or even increase at all.

Mr. Chairman, an American treasure is in serious trouble and we have developed a technically sound plan to do something about it. America's Everglades cannot wait until we have all the answers because we never will have all the answers. As with any important endeavor of this nature there are risks. The risks associated with inaction, however, are clearly greater.

The next vital step for Everglades restoration is passage this year of the legislation authorizing the CERP. As you know, the Administration has been working closely with the Senate Environment and Public Works Committee on such legislation. Recently, the Administration, the committee, the State of Florida, and a di-

verse group of stakeholders reached agreement on amendments to S. 2797. The Administration strongly supports S. 2797 with these amendments and recommends its immediate passage.

Mr. Chairman, that concludes my statement. Again, I appreciate the opportunity to testify today before your subcommittee.

I would be pleased to answer any questions you or the other subcommittee members may have.

Senator VOINOVICH. Thank you very much.

Mr. Struhs?

STATEMENT OF DAVID STRUHS, COMMISSIONER, FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, TALLAHASSEE, FLORIDA

Mr. STRUHS. Thank you, Senator Voinovich, and thank you for inviting me to join you this morning.

On a personal note, I remember the day that you and I spent touring the Everglades. It was a marvelous day and I remember you asked a lot of hard questions then. You continue to ask hard questions today. I think that is good for all of us because it makes sure that as we go forward and undertake such a large project, we can provide the public the confidence they need that we are going to have a project that demonstrates and delivers on its promises and maintains that public support.

One of the ways in particular which I think this report will be particularly helpful is laying to rest a common misperception that water quality issues are somehow separate or apart from the other project goals of this restoration project. Indeed, quite the opposite is true. As you know, the Comprehensive Everglades Restoration Plan has anticipated—and indeed integrated—water quality issues throughout its various components. Water quality is clearly and inextricably intertwined with all the other project purposes that are essential to Everglades restoration.

Regarding the projected costs of the Project, particularly those that relate to water quality, to the extent they can be separated out, I think the costs are actually fairly firm for a project of this size and duration. Moreover, I suspect that if the cost of the water quality components move at all, it is just as likely that they will move in a downward direction. Indeed, you have already heard the possibility that if we are successful in using risk-based treatment standards on the aquifer storage and recovery technology, we could save as much as $500 million on the Project.

A couple of other things I wanted to make clear for the record. While some issues may remain in dispute, overall it is a project and project conclusions that we can endorse quite happily. The main project recommendations from the report are some additional reporting by the Corps of Engineers, particularly as it relates to costs and progress in terms of delivering results. We fully agree with that. Indeed, in the State of Florida, we are already bound by a similar requirement through some State statutes.

I also wanted to thank the General Accounting Office for being attentive and responsive to some of the comments they received from the State of Florida as we reviewed drafts. In particular, they were accommodating in changing the title of the report, the final title being "Additional Water Quality Projects and Costs May Be

Needed". We think that is a superior title, giving a truer reflection of what we are actually talking about. As you know, a lot of people won't ever get beyond the title of reports such as this.

Regarding the Lake Okeechobee dredging, clearly whenever you see a $1 billion figure it becomes fairly daunting to all of us, and that is something that deserves a lot of public attention and debate. As far as the State of Florida goes—we are not even convinced that we would want to go forward with a project like that. I don't believe there is any scientific consensus that indeed a dredging project would be in the long-term best interest of the lake or the larger ecosystem.

A final comment, interwoven throughout the report is a discussion of how you are going to achieve a phosphorous standard that will probably be substantially lower than that which will actually be achieved by the stormwater treatment areas that are being designed and built as part of the Comprehensive Everglades Restoration Plan. I want to make it very clear that to the extent there will be extra costs in achieving those reductions, those costs, regrettably, are going to rest with the State of Florida and our various stakeholders.

Finally, the work that is already underway with the Everglades construction project and the proposed projects in the Comprehensive Everglades Restoration Plan, as it relates to water quality are compatible.

With that, I would look forward to answering any questions you may have.

Senator VOINOVICH. Thank you very much.

I would like to ask both of you if you would support additional language by agreement that would require more often reporting, as suggested in the report by the General Accounting Office.

Mr. STRUHS. Currently, under the State requirements in Florida, we are obligated to provide reports of a similar nature on an annual basis. I suspect that that would probably be appropriate at the Federal level as well.

Senator VOINOVICH. Mr. Davis?

Mr. DAVIS. Mr. Chairman, we would like to work with you to perhaps refine that language. I think clarifying the frequency of the reporting could be something that we could agree to.

I would ask the question, though—in at least the first 5 years you may not want or need a report every 2 years because there is probably not going to be much to report on for the first 3, 4, or 5 years. So you may want to have a starting point and then every 2 years or 3 years after that.

Senator VOINOVICH. Well, I would be interested in having you sit down with the staff. We are going to be dealing with this legislation today or tomorrow. Certainly before we get out of here, we are going to pass this legislation. If we can work on that and get it into a manager's amendment, that would be fine.

Mr. DAVIS. We will work with you.

Senator VOINOVICH. Thank you very much.

I think one of the reasons why I was interested in asking the GAO about whether or not we had all the costs nailed down or if there were some other costs that would be faced down the road gets back to my opening statement. That is that the adequacy of the

funding to move forward with all these WRDA projects—as I mentioned, $39 billion and about $4.5 billion of that would include the first phase of the restoration of the Everglades. We talk about these issues—and Mr. Struhs, I want to compliment you and your Governor and your Legislature for stepping to the table in terms of funding of this. You are anxious to get going.

But the real issue is whether the Federal Government will be able to belly up to the table in terms of their costs. And we do have a genuine need for additional dollars in this area. It is one that needs to be confronted.

Mr. Davis, I would like you to comment. Do you think the budget is adequate to take care of the capital costs of the projects the Corps has been asked to undertake?

Also, we have another problem here, and that is the whole issue of O&M money. My understanding is that you have a backlog of $450 million in O&M projects. Of course, one of the issues that we have that may be debated on the Floor of the Senate is whether or not we should go along with the legislation talking about the sharing of those costs.

I would like you to respond.

Mr. DAVIS. Mr. Chairman, I think you have raised a very large and very important issue that transcends Everglades restoration that certainly the Administration and the Congress need to sit down and have a very constructive dialog to try to resolve, and that is what the appropriate level of funding for water resources in this country is, and in particular for the Corps of Engineers. There is not enough money to do everything we are being asked to do right now. There is a backlog in both the O&M and construction programs. We need to work together to try to tackle that backlog and set some priorities.

I think the important thing with the Everglades is that I believe by most everyone's account this will rise to the top in terms of priority. I think we must get moving on this one, but at the same time we do need to work on the larger problem about funding and the Nation's priorities for water resources overall and how we fund that. There are a lot of unmet needs out there to which we need to pay attention.

Senator VOINOVICH. I know that when I was Governor of Ohio, we set about trying to really identify what the unmet needs were. When I was Mayor of Cleveland, they came in and said $3 billion worth of sewer, water, and all the rest of it. We got the private sector and created something called "Build Up Greater Cleveland" and identified what we needed to do. We said here is the problem and then started to systematically deal with it. I think that is the logical way to tackle things.

I think we are being a little bit unrealistic. This legislation passes and people will go out and tout that they are really going to do this. Then when you scratch the surface, you want to see the money. Show me the money.

That is a major issue that I think we all need to be concerned about in terms of our public policy.

Mr. Davis, you talked about the fact that there were specific areas where you feel, rather than low-ball cost, you put them in at

what might be the highest cost. Could you give us a few examples of those?

Mr. DAVIS. First, let me say that one of the general philosophies behind the Jacksonville District's formulation of the Plan was full and fair disclosure. They really did take conservative approaches when they put their estimates together because they knew that in many cases these were conceptual ideas and projects. So they did kind of assume the high cost here.

An example is the ASR. Again, we assumed that before we can pump this water in the ground from these 300 or so ASR wells that we will have to treat this water to drinking water standards. We have had discussions with the State and with the Environmental Protection Agency that lead us to believe that there is a good possibility that we will not have to do that. There is a possibility, as a result of that, that we could save as much as $500 million just on the cost of ASR alone.

The wastewater reuse—we have assumed that we will have to have two wastewater reuse facilities in Dade County to provide water in that part of the ecosystem. There are some folks who believe we will not need both of those and those are some of the most expensive features, both in terms of the capital costs and the O&M costs. We have reason to believe that we can get by with only one of those. But we don't know that yet, so we assumed the worst case, that we have to have them both.

We felt pretty strong in the Army—as we gave direction to the Corps—like you, we wanted to be fair. We wanted to disclose as fully as possible to the Congress what the potential cost would be here. I don't want to be sitting here 2 years from now, telling you that we made a mistake and it is actually $10.5 billion. We didn't want that situation. So we tried to get as close as we can, but being conservative so that maybe we can reduce it.

Senator VOINOVICH. And the example is that you anticipate that you would have to treat the stormwater before you put it into these underground wells for storage purposes?

Mr. DAVIS. That's right. Right now, before we pump it down, we would have to treat it to drinking water standards. The State and EPA have suggested that perhaps we might not have to do that. If coliform bacteria is the only problem that perhaps we might not have to do that and we can avoid chlorination and other problems that that might create by just pumping it down in there, maybe with some limited filtration.

Senator VOINOVICH. This whole business of water quality is one that has been kicking around. I mentioned earlier the issue of the 25 parts per billion in terms of phosphorous. I know that that is a big problem in the Everglades because of the growth of some invasives that have flourished because of the phosphate content of the water.

Has there been any final discussion about what it is? Does it have to be 10? Is the natural environment 10? Have you done any research on this?

Mr. STRUHS. Yes, sir.

Senator VOINOVICH. What is your take on it?

Mr. STRUHS. Well, it is remarkably complicated. If you looked at phosphorous levels in any other ecosystem, and you could get those

nutrients down to 100 parts per billion people would celebrate because it would be pristine water. Yet what makes the Everglades truly unique—and we use that word unique too liberally nowadays, but in this case it really is true—what makes the Everglades the Everglades is the ultra low levels of phosphorus. Getting it down to the natural background level in the Everglades is going to be a daunting challenge.

But the good news is that we are making better progress and ahead of schedule. The Everglades Construction Project, which is, as you know, already underway, was intent on delivering water that would reduce phosphorous levels down to 50 parts per billion. Indeed, now that some of them are up and operating, they are actually exceeding that performance standard.

That is a marvelous thing for the State of Florida because to the extent that we need to set standards that go below what this project is going to deliver, that is a cost that is going to fall on Florida and Floridians. So we are very encouraged by the progress made thus far.

In terms of the schedule for defining what that standard——

Senator VOINOVICH. The natural—what was it?

Mr. STRUHS. Currently in the State of Florida——

Senator VOINOVICH. What is the goal that you think will get the job done of the restoration that deals with the invasives—that is a whole other subject that you and I talked about in Florida that seems to me needs to be addressed, which is the invasive exotics that are in there. The quality of water has to do with whether they flourish or they don't flourish—I guess—in terms of the phosphorous content. But beyond that, what do we do about that particular problem?

But let's get back to the phosphorous in the water.

Mr. STRUHS. Currently, in Florida State law there is in fact a standard for phosphorous in the Everglades System. The standard is what we call a narrative standard. It is not a numeric standard. Basically what it says, in simple terms, is that phosphorous has to be kept at a level where there is no imbalance to the natural flora and fauna.

As we discussed earlier, the challenge with the Everglades is that that balance is a very delicate one because it is accustomed to very, very low levels of phosphorous.

Under State law, we are obligated by December of 2003 to translate that narrative standard into a numeric one. As you probably remember, Governor Bush has pledged that he will accelerate that process and see if we can set that number sooner. We are nowhere near accomplishing that just yet, but I think what has given everybody confidence that Florida is serious is that within State statute we actually built in a default standard of 10 parts per billion. In the event that the science is unclear and we can't pinpoint whether it is supposed to be 13 or 7, that default standard kicks in and we know that 10 parts per billion is a pretty good marker in terms of the natural phosphorous you see in the Everglades System today.

Senator VOINOVICH. Mr. Davis?

Mr. DAVIS. Mr. Chairman, if I may, I could maybe add something to Mr. Struhs' comments.

I think there is some confusion about this 10 parts per billion and whether or not we are going to build these 19 stormwater treatment areas that are on this map here and perhaps we will build them and we will not be able to make that 10 parts per billion.

The confusion lies in the fact that the 10 parts per billion requirement will only apply in what is called the Everglades Protection Area, the water conservation areas and the Everglades National Park. Only two of those 19 stormwater treatment areas will discharge into that Everglades Protection Area that will be subject to that 10 parts per billion.

For example, right now, the target is 40 parts per billion for Lake Okeechobee. So it will vary around the ecosystem. It is not going to be 10 parts per billion everywhere. So only two of those will be actually discharging where it might end up being 10 parts per billion; the other 17 will not.

Senator VOINOVICH. It does get into the whole issue of—I know the Interior Appropriations Committee requested a report on the total cost to restore the ecosystem in South Florida. They asked that it be updated biennially. John Berry, who is the Assistant Secretary, indicated in a letter to the Appropriations Committee that the total cost is $14.8 billion.

I don't want to pit one group against another, but I think you testified that you thought that this projected cost was a little bit out of line. We had the Assistant Secretary in the Department of Interior saying that he thinks that is what the cost is going to be.

It would be interesting to know what your comments are. Are you familiar that that is what he said?

Mr. DAVIS. I would never disagree with a Department of Interior official, let the record reflect.

[Laughter.]

Mr. DAVIS. Actually, we didn't disagree—I don't know what comments have been attributed to me personally, but the $14.8 billion is a different number. The $7.8 billion is to get the water right. That is what we believe it is going to take to get the water right, and that is what you need to realize the benefits to restore essentially the hydrology in that ecosystem.

There are other components. There is a land acquisition component that is going on. Some of that land may be lands on which the State and the Federal Government—mostly Interior—are sharing the cost of that land acquisition program. Then there are other programs—mostly within the State—regarding the built environment—maybe brownfields or reuse of these areas. That is part of this as well.

But what we said was that the $7.8 billion was for water. If you never do anything else, you will get the water right. All you need to do to get the water right is spend that $7.8 billion and implement that Plan.

Senator VOINOVICH. I am going to spend some more time looking at those numbers. But you are basically saying that it is the hydrolase you are talking about—they are talking about maybe more land acquisition and things of that sort?

Mr. DAVIS. Yes, sir.

Senator VOINOVICH. Do either of you want to volunteer any more comments? If you don't, I have exhausted my questions.

Mr. STRUHS. I would just reiterate what I said at the beginning. Whenever you undertake a public project of this size and duration, we all benefit and are stronger for putting it in the public spotlight and asking the hard questions and making sure that everyone is working with the same information. We appreciate your interest and the GAO's report.

Senator VOINOVICH. I appreciate your kind remarks.

I hope you understand that I am a supporter of this project. I think, though, as in any case, we need to have as much information as we can have on it. The more information we have the better job I think we can do. Again, as so often around here, if you have a big price tag on something people would rather not get started with it. We are going to get started with the Everglades restoration and hopefully by the time I leave this place we will increase that budget and have some more money available so that before I leave this earth I can say that we really have gone a long way to restore the Everglades and get on with some of the other major projects that we have in our country that are so important to our quality of life and to our environment.

Thank you so very much.

Senator Graham asked that—he wants to come back in about 3 minutes. We will just recess until the Senator gets back.

[Recess.]

[Whereupon, at 11:03 a.m., the subcommittee was adjourned, to reconvene at the call of the Chair.]

[Additional statements submitted for the record follow:]

STATEMENT OF BARRY T. HILL, ASSOCIATE DIRECTOR, ENERGY, RESOURCES, AND SCIENCE ISSUES, RESOURCES, COMMUNITY, AND ECONOMIC DEVELOPMENT DIVISION, UNITED STATES GENERAL ACCOUNTING OFFICE

COMPREHENSIVE EVERGLADES RESTORATION PLAN

ADDITIONAL WATER QUALITY PROJECTS MAY BE NEEDED AND COULD INCREASE COSTS

Mr. Chairman and Members of the Subcommittee: The South Florida Ecosystem Restoration Initiative is a complex, long-term effort to restore the South Florida ecosystem, which includes the Everglades. Because water is key to restoring the ecosystem, one of the initiative's major goals is "getting the water right" or improving the quality, quantity, timing, and distribution of water in the ecosystem. The primary means of achieving this goal is through the U.S. Army Corps of Engineers' Comprehensive Everglades Restoration Plan (the Plan). Although achieving the right quantity, timing, and distribution of water is important, improving its quality is critical to sustaining and restoring the South Florida ecosystem. The Plan represents one of the most ambitious restoration efforts the Corps has ever undertaken; it contains 66 individual projects that are scheduled to take more than 20 years to complete., Implementing the Plan is currently estimated to cost $7.8 billion a cost that will be shared equally by the Federal Government and the state of Florida. We are here today to discuss our report, which is being released today, on (1) the role of the Corps' Comprehensive Everglades Restoration Plan in addressing the major water quality concerns in the ecosystem and (2) modifications that may be needed as the Corps implements the Plan after it has been authorized by the Congress.

In summary, Mr. Chairman, the Corps' Comprehensive Everglades Restoration Plan provides a conceptual framework for improving the quality, quantity, timing, and distribution of water in the South Florida ecosystem. Twenty-four of the Plan's 66 projects are intended, among other things, to improve the quality of water in the natural areas of the ecosystem; the remaining projects deal more with the water's quantity, timing, and distribution. The water quality projects in the Plan are intended to supplement the efforts of the state, which has the primary responsibility for achieving water quality standards in Florida. Under the Water Resources Devel-

opment Act of 1996, the Corps is allowed to include water quality projects in the Plan and equally share the costs with Florida if the projects are essential to restoring the Everglades.

Modifications and additions to the Plan will likely be necessary as uncertainties related to implementing the Plan's projects are resolved and more information is gathered about the extent of the ecosystem's water quality problems. These changes could increase the total cost of the Plan over the Corps' current estimate of $7.8 billion. Currently, there are too many uncertainties to estimate the number and costs of the Corps projects that will ultimately be needed to address water quality in the ecosystem. The Corps has acknowledged the uncertainty in the Plan and has included a process for incorporating project modifications and additions in its future reports to the Congress. It has not, however, included a means for reporting (1) cumulative changes in projects and costs for the Plan as a whole and (2) the progress being made in implementing the Plan. Such information will be important for the Congress in authorizing future projects. Our report recommends that the Corps provide the Congress with updates that provide this information when the Corps submits future project authorization proposals. Both the Corps and the state of Florida concurred with our recommendation.

Background

Following major droughts from the 1930's through the mid-1940's and hurricanes in 1947, the Congress authorized the Corps to construct the Central and Southern Florida Project. The project an extensive system of 1,700 miles of canals and levees and 16 major pump stations prevents flooding and saltwater intrusion into the state's aquifer while providing drainage and water to the residents of South Florida. The project's canals now divert much of the water that historically flowed south from Lake Okeechobee through the Everglades to Florida Bay east and west to the ocean or to agricultural and urban uses. Although the Corps' Central and Southern Florida Project accomplished its objectives, it had unintended detrimental environmental effects. Coupled with urban and agricultural development, the project has led to significant deterioration in the South Florida ecosystem's water quality.

Recognizing that the Central and Southern Florida Project needed to be modified to address its negative impact on the environment of South Florida, the Congress included provisions relating to the project in the Water Resources Development acts of 1992 and 1996. The 1992 act provided the Secretary of the Army, who delegated this responsibility to the Corps, with the authority to study the original design of the project in order to determine whether modifications were needed because of changes in the ecosystem's physical, biological, demographic, or economic conditions. The 1996 act directed the Corps, on the basis of its initial review, to prepare a feasibility report and a programmatic environmental impact statement to determine what changes were needed to restore the South Florida ecosystem. The act required that the Corps report back to the Congress by July 1999.

Because the Plan consists of a large number of projects that will be designed and constructed over a long period of time, according to Corps officials, it is not as detailed as typical Corps feasibility studies. For example, it does not identify specific sites for the proposed projects. The Corps also plans to conduct additional feasibility studies because the time allotted under the 1996 act to complete the Plan did not allow for a thorough investigation of all of the regional water resource problems in South Florida. The Corps will design the projects in more detail and expects to request the Congress to authorize a new set of projects every 2 years until all the projects are authorized, which the Corps anticipates will take until 2014.

The Plan will be carried out primarily by one Federal agency the Corps and one state agency the South Florida Water Management District (the District), which manages water resources for South Florida and is the Corps' local sponsor, or partner. These two agencies are responsible for operating the Central and Southern Florida Project as it is currently configured and will be responsible for planning, designing, and constructing the Plan's projects to reconfigure it. The agencies are responsible for meeting both the water supply and water quality goals in the Plan. Furthermore, under the Clean Water Act, which seeks to restore and maintain the physical, chemical, and biological integrity of the nation's waters, the projects must be designed to meet applicable state water quality standards.

The Projects in the Corps' Plan Supplement Florida's Efforts to Address Water Quality in the Ecosystem

The water quality projects included in the Corps' Plan supplement the efforts of Florida, which is primarily responsible for ensuring compliance with water quality standards in the ecosystem and for ensuring that the projects meet state water quality standards. To identify water quality projects, the Corps established two cri-

teria. First, the Corps included projects to treat water that is being "reclaimed" as part of the Plan. This water is now being discharged by the Central and Southern Florida Project into the ocean, but under the Plan, it will be diverted, stored, and discharged into natural areas to supplement water supply and improve habitat. Second, the Corps included treatment projects for water that will be "reused." This water will also be reclaimed, but its final use will be changed. For example, the Corps now releases water from Lake Okeechobee to the water conservation areas for flood control purposes and water supply, but under the Plan it will instead release some of this water for environmental purposes. As authorized by the Water Resources Development Act of 1996, the Corps included 24 projects in the Plan to improve water quality in the South Florida ecosystem that the Corps deemed essential to achieve the restoration of the Everglades. These include:

- 17 projects to construct stormwater treatment areas in areas where new storage sites will be built to reclaim water or modify its use;
- 2 advanced wastewater treatment facilities to take runoff from the Miami area, treat it, and return it to natural areas to increase the amount of water being provided there; and
- 5 smaller projects, such as the restoration of wetlands or dredging of sediments from lakes or other water bodies, that will have immediate environmental benefits.

The Federal and state governments will share the costs of these projects equally. Figure 1 shows the location of the 24 water quality projects included in the Plan.

Figure 1: Location of the Plan's Water Quality Projects

Source: GAO's adaptation of an illustration prepared by the U.S. Army Corps of Engineers.

Resolution of Project Uncertainties and Outcomes of Studies May Lead to Additional Water Quality Projects and Costs

As the Corps implements the Plan, Corps officials believe that modifications to existing projects and additional projects may be necessary, as their details are further developed and as uncertainties about their implementation are resolved. In addition, the Corps plans to conduct several studies that may further identify water quality problems in the ecosystem. If it is determined that additional water quality projects are needed during the Plan's implementation or as a result of these studies, the costs to implement the Plan could increase above the Corps' current $7.8 billion estimate. Recognizing that additional projects could be needed as the Plan is implemented, the Corps included a process in the Plan to incorporate and report to the Congress on modifications and additions to it. However, the Corps has not included a process for updating the Congress on the cumulative effects of the individual changes on the overall Plan.

This information is primarily based on our discussions with officials from Federal and state agencies that have responsibilities for managing water supplies and ensuring water quality in South Florida. Reliance on discussions with Federal and state officials was necessary because the Plan is a conceptual document and detailed plans of the projects to be constructed are not yet available.

Resolution of Implementation Uncertainties

The Corps acknowledged that a number of uncertainties associated with implementing the Plan's projects have not yet been resolved and could lead to additional water quality projects. These uncertainties include:

- whether planned stormwater treatment areas will be successful in achieving the lowest phosphorus concentration needed,
- whether 245,000 acre-feet of additional water will be needed for Everglades National Park, and
- what type and level of treatment will be necessary for water stored in and retrieved from aquifer storage and recovery wells large underground wells that are one of the primary means in the Plan for storing water.

Impact of Ongoing and Planned Studies

Recognizing that all the water quality concerns in the South Florida ecosystem have not been fully identified, the Corps plans to conduct several feasibility studies to identify such concerns in areas of the ecosystem that were not included when the Plan was developed. These feasibility studies, which focus on the Southwest Florida and Florida Bay/Florida Keys areas, were included in the Plan because there was not enough time when the Plan was being developed for a thorough investigation of all the water resource problems in these areas of the ecosystem. In addition to the feasibility studies proposed in the Plan, the Corps is currently conducting two feasibility studies under the authority of the Water Resources Development Act of

1996 the Indian River Lagoon Feasibility Study and the Water Preserve Areas Feasibility Study and is conducting a third for Biscayne Bay under a separate authority. These studies will likely identify new water quality projects to add to the Plan and would be in addition to those needed to address the uncertainties involved in implementing the Plan. For example, as a result of the Indian River Lagoon Feasibility Study, the Corps will likely add a water quality project to the Plan to dredge the lagoon to remove sediments from the St. Lucie estuary, a major tributary of the lagoon, to improve the water's quality and clarity.

Moreover, the Plan recommends the development of a comprehensive integrated water quality plan to evaluate and determine whether any additional water quality projects recommended by the state should be added to the Plan. Recognizing that not all of the ecosystem's water quality concerns have been identified, the Corps has included a recommendation in the Plan for the development of a comprehensive integrated water quality plan. According to Corps officials, the water quality plan will be closely coordinated with the South Florida Water Quality Protection Program, which was recently initiated by the state. As the state program identifies additional projects to improve water quality, the Corps will evaluate whether the projects are essential and whether the Federal Government should participate in them, share their costs, and include them in its comprehensive plan.

An example of an ongoing restoration effort where the Corps might have a future role is the cleanup of Lake Okeechobee. The lake, which has been described as the "liquid heart of the ecosystem," may require a number of projects to restore the quality of its water. According to Corps officials, these projects could eventually require the Corps' involvement. Currently, Lake Okeechobee which was once a sandy-bottomed, clear, shallow lake has high levels of phosphorus that make it prone to algal blooms and cattail growth, adversely affecting the quantity and types of plants and fish in the lake. Despite the implementation of certain permitting programs by the state, the annual phosphorus amounts exceed the state targets. Our discussions with state officials responsible for water quality in Florida indicate that a combination of actions, such as agricultural best management practices and the use of storm water treatment areas, will be needed to lower the levels of phosphorus entering the lake. According to Corps officials, the Corps may participate in the construction of other stormwater treatment areas if the state determines that additional areas are needed. In addition, some Federal and state officials believe that if large deposits of phosphorus-laden sediment remain in the lake, the lake's water quality will remain a significant problem. Although no final decision has been made on what actions to take, a preliminary estimate prepared by an issue team of Federal and state scientists showed that fully dredging the lake could cost at least $1 billion. Pending Florida's completion of a feasibility study on options to remove the sediment, the Corps could become involved if it decides that the proposed action is essential to the restoration of the ecosystem.

The Plan Includes a Process for Incorporating and Reporting Change

To allow for changes that will result as uncertainties involved in implementing the Plan's projects are resolved, including the possible addition of water quality projects, the Corps' Plan includes three ways to incorporate changes: (1) additional efforts, such as surveys, mapping, and water quality analyses, that are needed to develop the final design of the projects; (2) pilot projects conducted to resolve technical uncertainties; and (3) an adaptive assessment process, which involves monitoring the systemwide effects of the projects on the ecosystem as they are implemented. The Corps has also included a process in the Plan for authorizing future projects, including any changes, either modifications or additions, that result from its additional planning efforts. As it prepares to move forward with a project, the Corps will submit to the Congress a project implementation report that includes the detailed technical information necessary to design a project or a group of similar projects. These reports will be used to add, remove, or modify projects in the Plan and, except for the projects presented for initial authorization, will be presented to the Congress for authorization every 2 years until 2014 when the Corps anticipates that all of the projects needed for the restoration effort will have been authorized. Although the reports will contain recommendations for any modifications to the Plan whose need was determined by systemwide evaluations, the Corps does not currently plan to report to the Congress on the cumulative changes that have been made to the Plan. Such a report would provide the Congress and the state with an understanding of how the Plan is evolving, as well as an update every 2 years on the costs of the projects and the Plan.

Mr. Chairman, achieving water quality improvements in the South Florida ecosystem will depend on several programs and efforts, including the Corps' Plan. Although the Plan currently includes 24 projects to address the quality of water in

natural areas of the ecosystem, there are too many uncertainties to estimate the number and costs of the projects that will ultimately be needed to improve water quality. Given the Plan's conceptual nature and the likelihood of changes and additions to its projects, we recommend in our report that the Secretary of the Army, when submitting subsequent authorization proposals, provide the Congress with updates that:

- reflect the cumulative project and cost changes to the overall Plan and
- indicate the progress being made toward implementing the Plan.

Both the Corps and the state of Florida agreed with our recommendation. The Corps also agreed that there are many uncertainties associated with implementing the overall Plan and the projects to improve water quality in the South Florida ecosystem. The Corps believes that the uncertainties have been fully disclosed and has proposed a methodology that will address them. This methodology includes the development of project implementation reports. We recognize that the Corps was aware of the uncertainties associated with implementing the Plan and our report describes, in detail, the process that the Corps included in the Plan to incorporate changes as the uncertainties are resolved. We believe that the resolution of these uncertainties may lead to additional water quality projects and will likely result in cost increases. The state took exception to the inclusion of the $1 billion cost estimate for dredging Lake Okeechobee in our report and maintained that we characterized the Corps' involvement as inevitable. We do not believe that our report characterized the Corps' involvement in dredging Lake Okeechobee as inevitable. We included Lake Okeechobee as an example of an area where, through the state's efforts to identify actions needed to improve water quality in the South Florida ecosystem, the Corps could have a future role. We point out in our report that the state has not yet determined all of the actions that will be needed to clean up Lake Okeechobee and that the Corps' role has not yet been defined. However, to emphasize that point, we revised this section of our report to reiterate that once the state determines which projects are necessary, the Corps will determine if the additional projects are essential to the ecosystem's restoration and decide if the Federal Government will participate in and share the costs of the additional projects.

This concludes our statement. We will be happy to respond to any questions from you or other Members of the Subcommittee.

Contact and Acknowledgement

For further information on this testimony, please contact Barry Hill at (202) 512–3841. Individuals making key contributions to this testimony included Susan Iott, Chet Janik, and Sherry McDonald.

COMPREHENSIVE EVERGLADES RESTORATION PLAN: ADDITIONAL WATER QUALITY PROJECTS MAY BE NEEDED AND COULD INCREASE COSTS

(Letter Report, September 14, 2000, GAO/RCED–00–235).

September 14, 2000.

The HONORABLE GEORGE V. VOINOVICH, *Chairman,*
Subcommittee on Transportation and Infrastructure,
Committee on Environment and Public Works,
U.S. Senate.

B–285227

DEAR MR. CHAIRMAN: The South Florida Ecosystem Restoration Initiative is a complex, long-term effort to restore the South Florida ecosystem, which includes the Everglades. Because water is key to restoring the ecosystem, one of the initiative's major goals is "getting the water right"—or improving the quality, quantity, timing, and distribution of water in the ecosystem. The primary means of achieving this goal is through the U. S. Army Corps of Engineers' Comprehensive Everglades Restoration Plan (the Plan). Although achieving the right quantity, timing, and distribution of water is important, improving water quality is critical to sustaining and restoring the South Florida ecosystem. Currently, pollutants such as excessive nutrients, metals, and other contaminants have diminished the quality of water in the ecosystem and harmed plants, fish, and other wildlife. To achieve and sustain the restoration of the ecosystem, its water needs to be clean and unimpaired by pollutants.

In April 2000, the administration presented proposed legislation to the Congress requesting the approval of the Plan as a framework for restoring the ecosystem and

authorizing an initial group of projects. The Plan, whose development was authorized by the Congress in the Water Resources Development acts of 1992 and 1996, provides a road map for increasing the region's freshwater supply and improving the delivery and quality of water to natural areas. This Plan represents one of the most ambitious restoration efforts the Corps has ever undertaken; it contains 66 individual projects that will take more than 20 years to complete.[1 2] Implementing the Plan is currently estimated to cost $7.8 billion—a cost that will be shared equally by the Federal Government and the state of Florida. The effort is unique in that the Plan is conceptual. Because the Plan consists of a large number of projects that will be designed and constructed over a long period of time, it does not provide the level of detail normally found in a Corps feasibility study. The Congress is currently considering this proposal. In May 2000, Florida passed legislation approving the Plan and initially committed $2 billion in resources for the effort. The legislation also included a requirement for an annual report that provides information on the funds received and expended for the implementation of the Plan as well as the progress being made in implementing the Plan.

Because the Plan is conceptual and water quality is critical to sustaining the restoration of the South Florida ecosystem, you asked us to (1) describe the role of the Corps' Comprehensive Everglades Restoration Plan in addressing the major water quality concerns in the ecosystem and (2) identify modifications that may be needed as the Corps implements the Plan after it has been authorized by the Congress. The information presented in this report is primarily based on our discussions with officials from Federal and state agencies that have responsibilities for managing water supplies and ensuring water quality in South Florida. Reliance on discussions with Federal and state officials was necessary because the Plan is a conceptual document and detailed plans of the projects to be constructed are not yet available. We also reviewed the portions of the Plan that describe water quality projects and obtained and reviewed other pertinent water quality reports and studies.

This is our third report on efforts to restore the South Florida ecosystem. In April 1999, we reported on the Federal funding provided for the South Florida Ecosystem Restoration Initiative and how well the initiative was being coordinated and managed. In April 2000, we reported on the status of land acquisition plans for the initiative.[3] In our first report, we recommended that the Task Force, a multi-agency group responsible for coordinating and facilitating the overall effort, develop a strategic plan. The strategic plan would lay out how the initiative's three goals—getting the water right, restoring and enhancing the natural system, and fostering the compatibility of human and natural systems—would be accomplished. Our second report recommended that the Task Force develop a land acquisition plan to supplement the strategic plan. At the request of the Congress, the Department of the Interior, which chairs the Task Force, estimated that achieving all three of the initiative's goals would cost $14.8 billion. This figure includes the estimated cost of the Plan—$7.8 billion—as well as the estimated costs for land acquisition programs and several other Federal and state efforts.

3. South Florida Ecosystem Restoration: An Overall Strategic Plan and a Decision-Making Process Are Needed to Keep the Effort on Track (GAO/RCED–99–121, Apr. 22, 1999) and South Florida Ecosystem Restoration: A Land Acquisition Plan Would Help Identify Lands That Need to Be Acquired (GAO/RCED–00–84, Apr. 5, 2000).

The Comprehensive Everglades Restoration Plan provides a conceptual framework for improving the quality, quantity, timing, and distribution of water in the South Florida ecosystem. Twenty-four of the Plan's 66 projects are intended, among other things, to improve the quality of water in the natural areas of the ecosystem; the remaining projects deal more with the water's quantity, timing, and distribution. The water quality projects in the Plan are intended to supplement the efforts of the state, which has the primary responsibility for achieving water quality standards in Florida. Under the Water Resources Development Act of 1996, the Corps is allowed to include water quality projects in the Plan and equally share the costs with Florida if the projects are essential to restoring the Everglades.

Currently, there are too many uncertainties to estimate the number and costs of the Corps projects that will ultimately be needed to address water quality in the

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[1] The Plan includes 68 projects, but 2 of these projects were funded under another program's authority. As a result, there are 66 projects remaining in the Plan. Many of the projects have multiple purposes and contain multiple features. Throughout this report, we use the term "projects" to refer to the 66 projects and their features.

[2] The Corps estimates that most projects will be completed within 20 years; however, the projected timeframes for two large reservoir projects extend over 35 years. According to Corps officials, appropriation levels will affect these timeframes.

ecosystem. As uncertainties related to implementing the Plan's projects are resolved and more information is gathered about the extent of the ecosystem's water quality problems, it is likely that modifications and additions to the Plan will be necessary and that these changes could increase the total cost of the Plan over the Corps' current estimate of $7.8 billion. For example, the state is currently determining the level of pollutants that Lake Okeechobee can receive and what actions are needed to clean up the lake. Some of the actions being considered, such as dredging the lake to remove contaminated sediment, could cost over $1 billion. Because the lake is the source of much of the water in the ecosystem, the Corps could become involved in the effort if it determines that the lake's cleanup is essential to the ecosystem's restoration. Other efforts, such as the completion of feasibility studies for areas in the ecosystem not covered by the Plan, could also lead to additional water quality projects. The Corps has acknowledged the level of uncertainty in the Plan and has included a process for incorporating project modifications and additions in its future reports to the Congress. It has not, however, included a means for reporting (1) cumulative changes in projects and costs for the Plan as a whole and (2) the progress being made in implementing the Plan. Such information will be important for the Congress in authorizing future projects. We recommend in this report that the Corps provide for such reporting.

We provided a draft of this report to the Corps, the U.S. Environmental Protection Agency, the Florida Department of Environmental Protection, and the South Florida Water Management District for review and comment. The Corps, the Department, and the District agreed with our recommendation and noted that they will be producing varied reports that will help them meet our recommended reporting requirement. While they agreed with the recommendation, the Corps, the Department, and the District noted areas in which they believed the report was misleading. For example, the Corps believes that it fully disclosed the uncertainties associated with the Plan and developed a methodology to deal with the uncertainties, and it does not believe that the Plan's total costs will necessarily increase. In our report, we recognize that the Corps was aware of the uncertainties and describe the process that it has in place for incorporating change. Furthermore, we acknowledge that the Corps may achieve some cost savings in some areas, but overall, we believe that the costs of implementing the Plan may increase. In addition, the Corps and the Department objected to the inclusion in our report of the $1 billion estimated cost of dredging Lake Okeechobee and did not agree with our conclusion that the lake's cleanup could become part of the Plan. We revised the report to indicate that the cost estimate is preliminary, and we indicated the source of the estimate. However, we continue to believe that projects to improve the lake's water quality—if deemed essential to restore the ecosystem—should be included in the Plan. The Department also objected to our inclusion of the estimated costs for the entire restoration effort in the report, saying that this total was not an agreed-upon cost. However, we believe that the cost of the overall restoration is an important piece of information that places the Plan in context, and therefore we did not remove this information. We did identify the source of the estimate and clarify what it includes. Finally, each of the agencies, including the Environmental Protection Agency, provided technical comments that we incorporated as appropriate.

Background

The South Florida ecosystem extends from the Chain of Lakes south of Orlando to the reefs southwest of the Florida Keys. The ecosystem includes such major water bodies as Lake Okeechobee; the Kissimmee, Caloosahatchee, and St. Lucie rivers; portions of the Indian River Lagoon; and Biscayne and Florida bays. Following major droughts from the 1930's through the mid-1940's and drenching hurricanes in 1947, the Congress authorized the Corps to construct the Central and Southern Florida Project. The project—an extensive system of 1,700 miles of canals and levees and 16 major pump stations—prevents flooding and saltwater intrusion into the state's aquifer while providing drainage and water to the residents of South Florida. The project's canals now divert much of the water that historically flowed south from Lake Okeechobee through the Everglades to Florida Bay east and west to the ocean or to agricultural and urban uses. The Everglades, which used to extend from Lake Okeechobee to Florida Bay, has been reduced to about half its former size.

Although the Corps' Central and Southern Florida Project accomplished its objectives, it had unintended detrimental environmental effects. Coupled with urban and agricultural development, the project has led to significant deterioration in the South Florida ecosystem's water quality. By draining off water to the ocean that historically flowed through the ecosystem to Florida Bay and opening large land tracts for urban development and agricultural practices, the project disrupts natural drainage patterns in the region and releases stormwater runoff into the ecosystem in

many areas. Pollutants in the runoff, including excess nutrients such as phosphorus and nitrogen, metals such as mercury (which is primarily deposited from atmospheric incinerator emissions), and pesticides, have degraded the natural areas of the ecosystem. Excess nutrients have caused a decline in natural vegetation, such as sawgrass, and have caused the increase of undesirable species, such as cattails. Mercury, which increases in concentration as it moves up the food chain, and some pesticides can be toxic to fish and wildlife.

Recognizing that the Central and Southern Florida Project needed to be modified to address its negative impact on the environment of South Florida, the Congress included provisions relating to the project in the Water Resources Development acts of 1992 and 1996. The 1992 act provided the Secretary of the Army, who delegated this responsibility to the Corps, with the authority to study the original design of the project in order to determine whether modifications were needed because of changes in the ecosystem's physical, biological, demographic, or economic conditions. The 1996 act directed the Corps, on the basis of its initial review, to prepare a feasibility report and a programmatic environmental impact statement to determine what changes were needed to restore the South Florida ecosystem. The act required that the Corps report back to the Congress by July 1999.

Using the authority provided by the acts, the Corps, with the cooperation and assistance of multiple Federal, state, local, and tribal agencies, completed the feasibility study and developed the Comprehensive Everglades Restoration Plan. The Plan, which was presented to the Congress in July 1999, proposes a set of 66 projects to modify the Central and Southern Florida Project to protect and restore the South Florida ecosystem at an estimated cost of $7.8 billion. The projects in the Plan, if authorized and built, will restore water to the natural areas of the ecosystem and also supply water to agricultural and urban areas. The natural areas of the ecosystem are made up of Federal and state lands, including the water conservation areas owned by the state,[4] wildlife refuges managed by the U.S. Fish and Wildlife Service and the state, Everglades National Park, Big Cypress National Preserve, and the coastal waters, estuaries, bays, and islands. The goal of the Plan is to increase the water available for the ecosystem by capturing much of the water that is now being drained, storing the water in many different reservoirs and underground storage wells, and releasing it when it is needed. (See app. I for additional details on the projects included in the Plan.)

The administration presented proposed legislation in April 2000 asking the Congress to approve the Plan with its projects as a conceptual framework for restoring the ecosystem.[5] Because the Plan consists of a large number of projects that will be designed and constructed over a long period of time, it is not as detailed as typical Corps feasibility studies. For example, it does not identify specific sites for the proposed projects. The Corps also plans to conduct additional feasibility studies because the time allotted to complete the Plan did not allow for a thorough investigation of all of the regional water resource problems in South Florida. The Corps will design the projects in more detail and expects to request the Congress to authorize a new set of projects every 2 years until all the projects are authorized, which the Corps anticipates will take until 2014.[6]

The Plan will be carried out primarily by one Federal agency—the Corps—and one state agency—the South Florida Water Management District (the District), which manages water resources for South Florida and is the Corps' local sponsor, or partner.[7] These agencies are responsible for operating the Central and Southern Florida Project as it is currently configured and will be responsible for planning, designing, and constructing the Plan's projects to reconfigure it. The agencies are responsible for meeting both the water supply and water quality goals in the Plan. Furthermore, under the Clean Water Act, which seeks to restore and maintain the

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[4] The state has three water conservation areas that comprise about 1,350 square miles of land south of Lake Okeechobee. These areas—one of which is managed by the U.S. Fish and Wildlife Service as a national wildlife refuge—are natural areas of remnant Everglades that are used for multiple purposes, such as storing water that has been discharged from Lake Okeechobee and other sources. The areas also serve as a source of water for Everglades National Park, the lower east coast agricultural lands, and urban areas.

[5] The administration's proposal also asks the Congress to authorize 4 pilot projects, 10 initial projects, and 25 smaller projects that will have immediate benefits if implemented.

[6] Design work is already progressing under the authority of an existing design agreement between the Corps and the District.

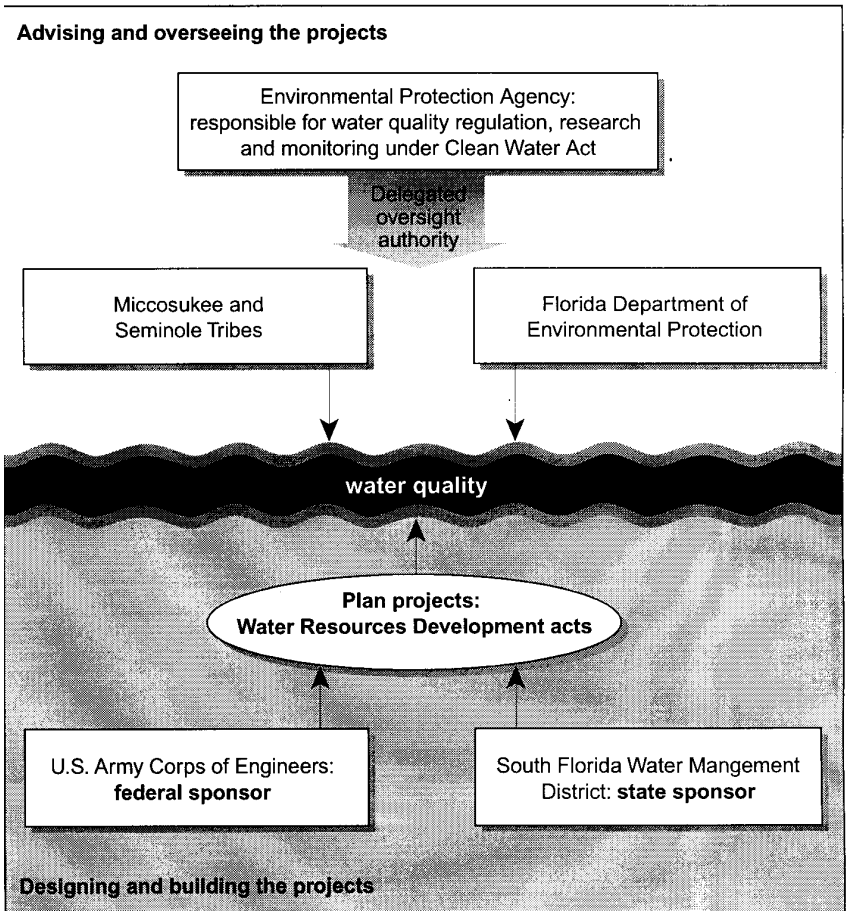
[7] Although the South Florida Water Management District is the primary non-Federal sponsor, as many as five counties and city governments and Native American tribes could also serve as non-Federal sponsors for portions of the Plan. The Seminole Tribe of Florida signed a project coordination agreement with the Corps in Jan. 2000 to implement a water resources project on its Big Cypress Reservation.

physical, chemical, and biological integrity of the nation's waters, the projects must be designed to meet applicable state water quality standards.[8]

The entities responsible for ensuring that the Plan's projects meets the requirements of the Clean Water Act are the U.S. Environmental Protection Agency (EPA), the Florida Department of Environmental Protection, and the Miccosukee and Seminole tribes. EPA is responsible for developing regulations and guidance for implementing the act, while the state and the tribes have primary responsibility for programs to manage water quality. Florida's Department of Environmental Protection is responsible for (1) classifying the types of water in the state by designated use, (2) establishing water quality standards for each type of water designed to protect the designated use, (3) regulating discharges into waters, (4) determining and reporting waters that do not meet standards to EPA and (5) making plans to improve the quality of water that does not meet standards. In addition, the Department is responsible for monitoring the quality of each water body. In the South Florida ecosystem, the Department has delegated water quality monitoring and assessment to the District. Other agencies, such as the U.S. Geological Survey, contribute to water quality monitoring and analysis. The tribes are responsible for these activities on their reservation lands, which encompass about 165,000 acres in the South Florida ecosystem. Figure 1 shows the relationship of the Federal and state agencies and tribes involved in improving water quality in the South Florida ecosystem.

[8] Enacted in 1972, the Federal Water Pollution Control Act is commonly called the Clean Water Act (33 U.S.C. 1251–1387).

Figure 1: Relationship of Federal and State Agencies and Tribes Involved in Implementing the Plan to Improve Water Quality in the South Florida Ecosystem



NOTE: The Florida Department of Environmental Protection has delegated responsibility for water quality monitoring and assessment in the ecosystem to the South Florida Water Management District.

The Projects in the Corps' Plan Supplement Florida's Efforts to Address Water Quality in the Ecosystem

The water quality projects included in the Corps' Plan supplement the efforts of Florida, which is primarily responsible for ensuring compliance with water quality standards in the ecosystem and for ensuring that the projects meet state water quality standards. As authorized by the Water Resources Development Act of 1996, the Corps included projects in the Plan to improve water quality in the South Florida ecosystem that the Corps deemed essential to achieve the restoration of the Everglades. The Federal and state governments will equally share the costs of these projects. The Corps developed guidance establishing which water quality projects would be considered essential for restoration purposes. Generally, the guidance calls for the construction of water quality projects in locations where the Corps will reintroduce water to natural areas of the ecosystem. Therefore, some of the Plan's projects involve not only collecting, storing, and diverting water that is now being drained by the existing Central and Southern Florida Project, but also constructing

water quality projects, such as treatment facilities, to ensure that the water being put back into the natural areas is clean.

Florida Has Primary Responsibility for Addressing Water Quality in the Ecosystem

Florida has the primary responsibility for achieving water quality standards in the state and is taking steps outside the Plan to achieve water quality standards in the ecosystem. Most significantly, the state is beginning to develop pollutant reduction plans to improve the waters in the state. Under the Clean Water Act, the state has to report water bodies to EPA that do not meet the agency's standards or are considered "impaired."[9] In 1998, the state identified and reported 150 such water bodies or water segments in the South Florida ecosystem. To improve these impaired waters, the state must establish the amount of each pollutant that can be discharged into a particular water body and still meet standards and limit discharges to those levels. Florida currently has a 13-year schedule to establish the allowable amounts of each pollutant, known as a "total maximum daily load," that can be discharged into each body of water in the state, including those in the South Florida ecosystem.[10] If the state fails to establish the total maximum daily loads, EPA is required to establish the amounts.

In addition to its statewide water quality programs, Florida has initiated several efforts specifically designed to address the quality of water in the Everglades and other natural areas in the South Florida ecosystem. For example, Florida's Everglades Forever Act,[11] passed in 1994, established a plan to restore significant portions of the ecosystem through construction, research, and regulation. Most importantly, the act requires the state to reduce phosphorus levels entering the natural areas of the ecosystem. To do this, six wetlands, called stormwater treatment areas, are being constructed to filter pollutants in runoff from the agricultural areas south of Lake Okeechobee.[12] In addition, the state must develop a numeric criterion for phosphorus in the Everglades. Another important state effort to address water quality in the ecosystem, the Lake Okeechobee Protection Program, was passed in May 2000. These and other state efforts intended to improve the quality of water of the South Florida ecosystem are described in appendix II.

With funding through a grant from EPA, Florida recently initiated an effort, called the South Florida Water Quality Protection Program, to coordinate the various ongoing efforts to improve water quality in the ecosystem. The purpose of the program, which will be developed primarily by those entities that have water quality responsibilities in South Florida, will be to identify water quality problems in the ecosystem; recommend actions to deal with these problems; and identify and coordinate the efforts of the Federal, state, tribal, or local agencies that will be responsible for taking action. The key programs that will be coordinated are the state's total maximum daily load program and its activities under the Everglades Forever Act, as well as the Corps' projects in the Plan.

Corps' Plan Includes Projects to Address Some Water Quality Concerns

Twenty-four of the 66 projects that the Corps included in its Plan are intended to improve water quality in the ecosystem. Many of the Plan's other projects will also improve the quality of water by increasing the quantity or changing the flow of water to degraded areas, but these 24 projects were included specifically to improve water quality. To identify these projects, the Corps established two criteria. First, the Corps included projects to treat water that is being "reclaimed" as part of the Plan. This water is now being discharged by the Central and Southern Florida Project into the ocean, but under the Plan, it will be diverted, stored, and discharged into natural areas to supplement water supply and improve habitat. Second, the Corps included treatment projects for water that will be "reused." This water will also be reclaimed, but its final use will be changed. For example, the Corps now releases water from Lake Okeechobee to the water conservation areas for flood control purposes and water supply, but under the Plan it will also release

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[9] The state indicated that there are questions about the process and data used to achieve this listing. GAO has reported on the inaccuracy of the data used by the states to report impaired waters in Water Quality: Key EPA and State Decisions Limited by Inconsistent and Incomplete Data (GAO/RCED–00–54, Mar. 15, 2000).

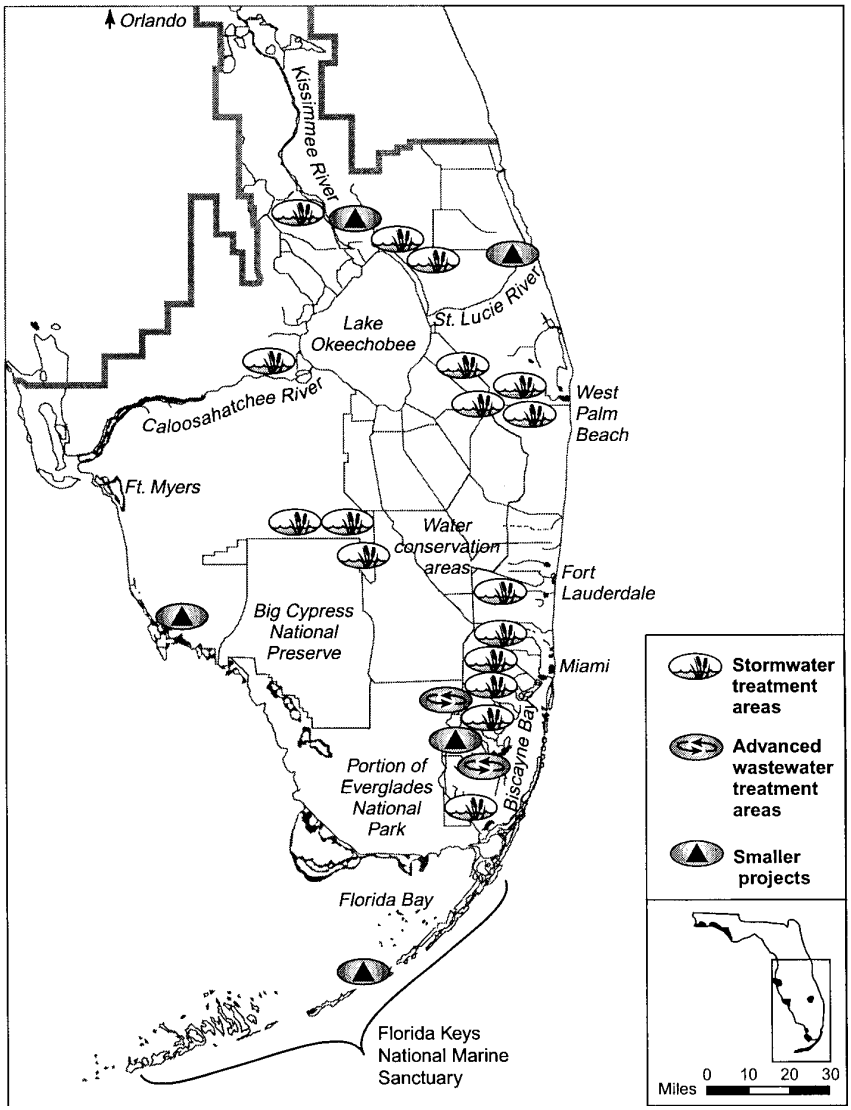
[10] Florida's schedule has been adjusted to reflect the results of a lawsuit against EPA for not reviewing the establishment of total maximum daily loads in the state. The state has rescheduled the establishment of some total maximum daily loads to meet the schedule set in the consent decree settling the lawsuit.

[11] The Everglades Forever Act codifies much of a consent decree establishing a settlement agreement between the United States and the state. The consent decree settled a lawsuit against the state for not enforcing its water quality standards in Federal areas.

[12] Under the consent decree cited in footnote 11, the state will build five of these areas and the Federal Government will build one.

water for environmental purposes. Figure 2 shows the location of the 24 water quality projects included in the Plan.

Figure 2: Location of the Plan's Water Quality Projects



Source: GAO's adaptation of an illustration prepared by the U.S. Army Corps of Engineers.

The Plan includes 19 stormwater treatment areas (17 projects—2 projects each contain 2 treatment areas) in locations where new storage sites will be built to reclaim water or modify its use. One of the major purposes of the Plan is to create new storage for the 1.7 billion gallons of water per day that historically flowed south into the Everglades but is now, because of the Central and Southern Florida Project, being discharged into the ocean or released for flood control purposes, thus depriv-

ing the Everglades of much needed water. While this water generally meets standards for discharge into the ocean, it will require additional treatment before it can be released into the natural areas of the ecosystem because these areas are less able to assimilate specific pollutants, such as phosphorus. A team of Federal and state water quality experts used available water quality models to evaluate the potential effects of the Plan's projects on water quality and to identify areas in which known water quality problems could be addressed by the Plan's projects. As a result, the Corps added over 35,500 acres of stormwater treatment areas. Ten treatment areas will be constructed along the east coast between the natural areas and the developed coastal areas, five are located around Lake Okeechobee to treat water entering the lake, and four treat water entering the natural areas northwest of Everglades National Park. In addition, the Plan relies on the six stormwater treatment areas being constructed under the Everglades Forever Act to treat water released from the Everglades Agricultural Area, Lake Okeechobee, and a reservoir planned for the area. The design of the treatment areas was based on that of the areas being built by the state under the act.

In addition to the stormwater treatment areas, the Corps identified a need for two advanced wastewater treatment facilities to treat wastewater for reuse to benefit natural areas. The two plants will take wastewater from the Miami area, treat it, and return it to natural areas to increase the amount of water being provided there. Water that is currently being released from wastewater treatment facilities will be treated and used to recharge groundwater to prevent water from seeping underground from Everglades National Park and to meet the freshwater needs of Biscayne Bay. The Corps included these projects as part of the Plan because it needed additional water in these areas but faced limited supplies. Because of concerns about potential overflows and accidents, such as pipe ruptures, the Corps is considering alternatives for at least the facility near Biscayne Bay.

Finally, the Plan included five smaller projects that were selected because they will have an immediate environmental benefit.[13] These projects include such activities as restoring wetlands or dredging sediments from lakes or other water bodies. For example, one project involves dredging the tributaries that flow into Lake Okeechobee to remove sediments, which will help remove nutrients that contribute to algal blooms.

Resolution of Project Uncertainties and Outcomes of Studies May Lead to Additional Water Quality Projects and Costs

As the Corps implements the Plan over the next 20 or more years, Corps officials believe that modifications to existing projects and additional projects may be necessary, as their details are further developed and as uncertainties about their implementation are resolved. In addition, the Corps plans to conduct several studies that may further identify water quality problems in the ecosystem. If additional water quality projects are identified during the Plan's implementation or as a result of these studies, the costs to implement the Plan could increase above the Corps' current $7.8 billion estimate. Recognizing that additional projects could be needed as the Plan is implemented, the Corps included a process in the Plan to incorporate and report to the Congress on modifications and additions to it. However, the Corps has not included a process for updating the Congress on the cumulative effects of the individual changes on the overall Plan.

Resolution of Implementation Uncertainties

The Corps acknowledged that a number of uncertainties associated with implementing the Plan's projects have not yet been resolved and could lead to additional water quality projects. These uncertainties include (1) whether planned stormwater treatment areas will be successful in achieving the lowest phosphorus concentration needed, (2) whether 245,000 acre-feet of additional water will be needed for Everglades National Park;[14] and (3) what type and level of treatment will be necessary for water stored in and retrieved from aquifer storage and recovery wells—large underground wells that are one of the primary means in the Plan for storing water.

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[13] Most of the small-scale projects were selected from the list of critical projects compiled under the 1996 Water Resources Development Act that allowed the Corps to construct small projects that would have an immediate environmental effect. This list of critical projects was developed by the South Florida Ecosystem Restoration Task Force, and about half of them have been funded. In addition, some small-scale projects were selected from a list of projects submitted by the Florida Governor's Commission's Conceptual Plan for ecosystem restoration and from suggestions by the scientists and agency officials compiling the Plan.

[14] An acre-foot of water is equal to about 326,000 gallons of water—enough to cover 1 acre to a depth of 1 foot.

Uncertainties About Stormwater Treatment Areas May Lead to Additional Projects

Uncertainties about the degree to which pollutants can be removed by the planned stormwater treatment areas may lead to additional water quality projects. In particular, some natural areas in the ecosystem, such as Everglades National Park and the water conservation areas, have a low tolerance for phosphorus—only about 10 parts per billion of phosphorus can be in the water without adversely affecting its designated use. Two or three of the stormwater treatment areas in the Corps' Plan will be used to reduce the levels of phosphorus in water that is being released into these areas, and the treatment areas will have to be built so the released water meets Florida's water quality standards for all pollutants. The state, however, does not currently have a numerical standard for phosphorus in these water bodies, although it is in the process of establishing one. The Corps based the design of its stormwater treatment areas on similar areas being built by the state that are designed to reduce phosphorus levels to meet an interim standard of 50 parts per billion. Evidence gathered by EPA and the state support a numeric criterion for phosphorus of 10 parts per billion; the final standard will involve methods of monitoring and determining compliance that could affect treatment options.[15] If the state establishes a lower phosphorus standard—for example 10 parts per billion—for Everglades National Park and the water conservation areas, then the Corps will likely be required to modify the stormwater treatment areas being built for these areas to achieve that standard.

If the Corps determines that an additional 245,000 acre-feet of water will be essential to the restoration of natural areas, particularly Everglades National Park, it may need to add another water quality project. In response to concerns by the Department of the Interior about needing additional water for the Park during certain times of the year, the Corps determined that an extra 245,000 acre-feet of water could be made available from eastern urban areas. Because of uncertainties in the models for water quantity in the Park, some Federal and state officials disagree that the extra water is needed for the Park. In the meantime, the Corps has considered ways to bring the water to the Park, but it will not study the matter fully until a decision is made on the amount of water needed. In addition, the amount of water for the Park may be affected by the amount of water needed in Florida Bay, which will be determined as part of follow-on feasibility studies for the Bay. If the Corps and others determine that more water is needed for the Park, then additional water treatment facilities could be needed to ensure the quality of the water entering the natural areas. Under its criteria to include reclamation projects to protect the quality of water in natural areas, the Corps could be involved in constructing and funding the project. According to Corps officials and others, because undeveloped land is scarce on the east side of the natural areas, water treatment facilities using traditional chemical treatment are the most likely option. According to District officials, another option could be to relocate or resize some of the treatment projects already included in the Plan.

Uncertainties About the Treatment Needed for Water Stored in Wells May Result in Additional Water Quality Projects

Uncertainties about the type and extent of treatment needed for water being pumped into and retrieved from over 300 aquifer storage and recovery wells may result in additional water quality projects. The Corps has included plans and costs for chlorination and filtration facilities to treat the water being injected into more than 250 of these wells. Although the need for chlorination has not yet been determined, concerns have been raised about a possible chemical reaction between chlorinated surface water and the aquifer's groundwater. According to Corps and state officials that we spoke with, such a reaction could create trihalomethane compounds, which are carcinogenic. In addition, the level of filtration required may vary according to the quality of the water being injected into wells; in some cases simple filtration will likely be needed to remove debris, but in other cases, ultrafiltration may be needed to remove pathogens such as coliforms. Corps officials think it is unlikely that chlorination and ultrafiltration will be needed, and if not, the Corps estimates that about $500 million could be saved. The Corps will design and implement pilot projects to determine if these treatments will be needed and what problems arise from using untreated or chlorinated surface water. If additional information from the pilots indicates that chlorination and ultrafiltration are necessary, addi-

[15] The Miccosukee Tribe adopted a phosphorus standard of 10 parts per billion for its lands in the water conservation area. In May 1999, EPA approved that standard determining that the Tribe's 10-parts-per-billion criterion is protective of the water's designated use, is reasonable and is scientifically defensible.

tional projects to address water quality problems arising from chemical reactions may be necessary.

Regardless of whether chlorination and filtration are used, other chemical reactions could occur in the water stored underground, resulting in a need for additional projects to improve the quality of water retrieved from the wells. Some Federal and state officials and scientists believe that chemical reactions could occur when water is injected underground. For example, un-ionized ammonia—which in excess amounts can kill freshwater species, including fish—could be formed. Florida's monitoring of a small well has demonstrated that underground chemical reactions have contaminated the water with arsenic and radioactive materials, such as uranium, although not at levels exceeding Federal drinking water standards. According to officials from EPA and the Florida Department of Environmental Protection, if such chemical reactions occur, the water will require treatment when it is retrieved from the wells. Corps and District officials said that any pretreatment facilities, if constructed, could be used to treat the water recovered from wells to handle such problems if they occur. Corps officials noted that pilot projects the Corps has designed will gather information to resolve these uncertainties and will identify any additional projects that may be needed to address water quality issues created by the technology. If the pilots indicate that the use of this technology is not feasible, Corps officials said that other storage options would be substituted.

Impact of Ongoing and Planned Studies

Recognizing that all the water quality problems of the South Florida ecosystem have not been identified, the Corps plans to conduct several feasibility studies to identify water resource problems in areas of the ecosystem that were not included when it developed the Plan. These studies will likely identify new water quality projects to add to the Plan. Moreover, the Plan recommends the development of a comprehensive integrated water quality plan to evaluate and determine whether any additional water quality projects recommended by the state should be added to the Plan. Any projects identified by these studies will be in addition to those needed to address the uncertainties involved in implementing the Plan.

Feasibility Studies Will Likely Identify Additional Water Quality Projects

In addition to the 66 projects in the Plan, the Corps included several feasibility studies for other areas of the South Florida ecosystem, which could result in the addition of other water quality projects to the Plan. These feasibility studies, which deal with the Southwest Florida and Florida Bay/Florida Keys areas, were included because there was not enough time when the Plan was being developed to allow for a thorough investigation of all the water resource problems in these areas of the ecosystem. In particular, water models and water quality models that exist for Biscayne Bay and Florida Bay have not been calibrated or validated, and, as a result, the Corps and other agency scientists could not rely on these models to conduct detailed studies of the projects needed to improve the quality, quantity, timing, or distribution of water for these areas. The feasibility studies will identify new projects to be included in the Comprehensive Everglades Restoration Plan to help solve any problems with water quality, quantity, timing, and distribution. The Corps, in conjunction with other Federal and state agencies, is currently refining water flow and quality models for both bays.

More detailed project designs and analysis from each feasibility study could reveal additional water quality concerns and could result in additional water quality projects. For example, the Corps' Plan already includes a project to improve the circulation and quality of water in Florida Bay by removing portions of the roadbed that fills some of the waterways between islands in the Keys. The Corps will include this as a project in the Florida Bay feasibility study, as well as other projects that have not yet been identified. Additional projects may include solutions for the decline in sea grasses and increases in algae that have occurred in the Bay. Federal and state scientists and other experts are aware of the excess nutrients and salinity in some parts of the Bay, and they believe that either one or both are contributing to these problems. However, they have not reached consensus on the source or effects of these problems or on the potential actions needed to resolve them. As more information becomes known, additional projects to improve water quality in the Bay may be identified. For these, as for other water quality projects, the Corps will determine its involvement according to whether they involve reclaiming water for the natural system or reusing water.

In addition to the feasibility studies proposed in the Plan, the Corps is currently conducting two feasibility studies under the authority of the Water Resources Development Act of 1996—the Indian River Lagoon Feasibility Study and the Water Preserve Areas Feasibility Study—and is conducting a third for Biscayne Bay under a

separate authority. According to a Corps official, the Plan already includes most of the projects that will be recommended in these reports, but the Indian River Lagoon study has identified at least one water quality project that is not in the Plan. As a result of the study, the Corps will likely add a water quality project to its Plan to dredge the lagoon to remove sediments from the St. Lucie estuary, a major tributary of the lagoon, to improve the water's quality and clarity.

Comprehensive Integrated Water Quality Plan May Identify Additional Projects

Although Florida has the primary responsibility to clean up impaired waters and ensure water quality in the South Florida ecosystem, the Corps of Engineers could have a role in future water quality efforts if it determines that the projects are essential for ecosystem restoration under the provisions of the Water Resources Development Act of 1996. Recognizing that not all of the ecosystem's water quality problems have been identified, the Corps has included a recommendation in the Plan for the development of a comprehensive integrated water quality plan. According to Corps officials, the water quality plan will be closely coordinated with the South Florida Water Quality Protection Program, which was recently initiated by the state. Through their participation in the Indian River Lagoon Feasibility Study, program officials have already helped to identify one modification to the Plan—the need to add a stormwater treatment area to a reservoir project on the St. Lucie River to help reduce the flow of sediment and pollutants into the St. Lucie estuary.

As the state program identifies additional projects to improve water quality, the Corps will evaluate whether the projects are essential and whether the Federal Government should participate in them, share their costs, and include them in its water quality plan. One of Florida's major efforts to improve water quality will be identifying and enforcing total maximum daily loads. To complete its 13-year schedule to establish total maximum daily loads, the state will establish hundreds of load amounts for the almost 150 impaired water bodies or segments of water bodies in the South Florida ecosystem. The state will also be developing plans that will identify projects for reducing the amounts of pollutants entering these water bodies. This does not include efforts that will need to be undertaken to address future impaired waters. According to Corps officials, the Corps will apply the same criteria it originally used to include water quality projects in the Plan to determine which additional water quality projects it will participate in under its comprehensive water quality plan.

For example, the cleanup of Lake Okeechobee, which has been described as the "liquid heart of the ecosystem," may require a number of projects to restore the quality of the lake's water and, according to Corps officials, could eventually require the Corps' involvement. Currently, Lake Okeechobee—which was once a sandy-bottomed, clear, shallow lake—has high levels of phosphorus that make it prone to algal blooms and cattail growth, adversely affecting the quantity and types of plants and fish in the lake. Despite the implementation of certain permitting programs by the state, the annual phosphorus amounts exceed the state targets. Our discussions with state officials responsible for water quality in Florida indicate that a combination of actions, such as agricultural best management practices and the use of storm water treatment areas, will be needed to lower the levels of phosphorus entering the lake. The state passed legislation on recovering Lake Okeechobee this year and will put in place additional best management practices for agricultural lands, will build pilot projects to test sediment removal and stormwater treatment areas, and will begin other programs to reduce phosphorus in the lake, but it does not yet know how many stormwater treatment areas may be needed. The Corps has already included five treatment facilities in its Plan to remove phosphorus from some of the lake's tributaries. The number of stormwater treatment areas that will be needed in addition to those already planned by the Corps will depend on the final target concentration that is set for reducing phosphorus in the lake and the effectiveness of nonregulatory and regulatory actions in helping to reach that target. According to Corps officials, the Corps may participate in the construction of other stormwater treatment areas if the state determines the areas are needed.

Large deposits of phosphorus-laden sediment in the lake further exacerbate the phosphorus problem. Some Federal and state officials believe that if the sediment remains in the lake, the lake's water quality will remain a significant problem. However, dredging will involve removing as much as 30,000 metric tons of phosphorus from the lake's sediment and disposing of it either in landfill or as potential fertilizer. No final decision has been made on what actions to take pending Florida's completion of a feasibility study on options to remove the sediment, which range from dredging the entire lake to sealing or capping phosphorus-laden sediments. If a decision is made to take some action to remove the sediments, then the Corps would decide if the proposed action is essential to the restoration of the ecosystem

and if the Federal Government should become involved and share the costs of the project(s). According to Corps officials, improving the water quality of Lake Okeechobee, which is the source of much of the water in the South Florida ecosystem, is critical to the lake's restoration. The Corps has already included two similar, but much smaller, projects in the Plan—the Lake Trafford[16] and Lake Worth Lagoon dredging projects. In our discussions with both Federal and state officials, the main difference between these two projects and a project to dredge Lake Okeechobee is that Lake Okeechobee is many times larger and would cost more to clean up. A preliminary estimate prepared by an issue team of Federal and state scientists showed that fully dredging the lake could cost at least $1 billion.

Another area that may involve the Corps in future water quality projects is the abatement of mercury in the ecosystem. Mercury accumulates in fish and in wildlife that eat fish affected with mercury and concentrates as it moves up the food chain. Scientists believe that mercury in the atmosphere from waste incineration and power generation is deposited in South Florida and, under specific conditions, is converted to a toxic form that accumulates and concentrates in fish and animals. At present, scientists continue to research the problem. However, because of high concentrations of mercury in fish and wildlife on Federal lands, such as Everglades National Park, the Corps or other Federal agencies could become involved in trying to remove mercury from these areas. Other Federal agencies, such as EPA and the Department of the Interior's U.S. Geological Survey, are already involved in addressing the mercury problem to some extent through research and monitoring programs.

The Plan Includes a Process for Incorporating and Reporting Change

To allow for changes that will result as uncertainties involved in implementing the Plan's projects are resolved, including the possible addition of water quality projects, the Corps' Plan includes three ways to incorporate changes: (1) additional efforts, such as surveys, mapping, and water quality analyses, that are needed to develop the final design of the projects; (2) pilot projects conducted to resolve technical uncertainties; and (3) an adaptive assessment process. The adaptive assessment process involves monitoring the systemwide effects of projects on the ecosystem as they are implemented, evaluating the achievement of each project's objectives, and including the monitoring and evaluation results and new information learned from continuing research to refine or alter the design or sequencing of projects. According to the Corps, adaptive assessment will allow it to recognize the need for change and adapt the Plan if the intended results are not achieved or if new ways to increase the benefits to the ecosystem are identified.

The Corps has also included a process in the Plan for authorizing future projects, including any changes, either modifications or additions, that result from its additional planning efforts. As it prepares to move forward with a project, the Corps will submit to the Congress a project implementation report that includes the detailed technical information necessary to design a project or groups of similar projects. The reports will contain the results of additional efforts, such as surveys and mapping, economic analyses, and water quality analyses that are needed to develop the final design of the projects. These reports will be used to add, remove, or modify projects in the Plan and, except for the projects presented for initial authorization, will be presented to the Congress for authorization every 2 years until 2014—when the Corps anticipates that all of the projects needed for the restoration effort will have been authorized. The reports will contain recommendations for any modifications to the Plan whose need was determined by systemwide evaluations. However, according to Corps officials, the Corps does not currently plan to report to the Congress on the cumulative changes that have been made to the Plan. Such a report would provide the Congress and the state with an understanding of how the Plan is evolving, as well as an update every 2 years on the costs of the projects and the Plan.

Conclusions

Achieving water quality improvements in the South Florida ecosystem will depend on several programs and efforts, including the Corps' Plan. Although the Plan currently includes 24 projects to address the quality of water in natural areas of the ecosystem, there are too many uncertainties to estimate the number and costs of the projects that will ultimately be needed to improve water quality. Even though the Corps believes that the costs of some projects could be reduced, we believe that, with the potential addition of a number of water quality projects to the Plan, it is likely that the overall costs to improve water quality could result in an increase in the current estimate of $7.8 billion for implementing the Plan. The Plan's water quality monitoring and adaptive assessment process will be key to ensuring success

[16] The Lake Trafford project was funded as a critical project.

in addressing the water quality problems of the natural areas. Congressional oversight of future project authorizations will be important to ensure that the Corps consistently applies its criteria for including additional water quality projects and monitors their additional costs. The Corps has correctly acknowledged the Plan's need for flexibility and adaptability and has included a means for reporting changes to the Congress. Where the Plan falls short is in the type of report that the Corps will provide to assist the Congress in its oversight. Although our review identifies the potential for modifying and adding water quality projects, the other projects in the Plan, such as the construction of surface storage reservoirs and barriers to prevent underground water seepage, are subject to similar changes because they have not yet been designed. If the Congress approves the Corps' blueprint for restoration this year, given its conceptual nature and the likelihood of changes and additions to its projects, the Congress—as well as Florida, which is equally sharing the costs of implementing the Plan—will need to understand how the Plan has evolved from the original blueprint and how these changes will affect the Plan's total implementation costs.

Recommendation

To promote well-informed decisions about the Plan's projects that are presented for approval in future authorization acts, we recommend that the Secretary of the Army provide the Congress with updates that (1) reflect the cumulative project and cost changes to the overall Plan and (2) indicate the progress being made toward implementing the Plan. The updates should be made at the same time as subsequent authorization proposals. The Corps should also provide these updates to the state of Florida.

Agency Comments and Our Evaluation

We provided a draft of this report to the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the South Florida Water Management District, and the Florida Department of Environmental Protection for their review and comment.

The Corps advised us that it concurs with our recommendation and plans to implement it. The Corps noted that the recently finalized Master Program Management Plan calls for the Restoration Coordination and Verification team, which will evaluate and assess the performance of the Comprehensive Everglades Restoration Plan, to produce five categories of written reports covering such topics as the performance of the Plan and recommendations for design and operational criteria. The Corps also expects to issue an annual report card on the status, trends, and success of the Comprehensive Everglades Restoration Plan. The Corps indicated that it would use the information presented in these reports to implement our recommendation to prepare an overall update to the Congress on the cumulative project and cost changes to the Plan as well as on the progress being made in implementing the Plan. The Corps also pointed out that the administration's proposal contains a provision requiring periodic reports to the Congress on the implementation of the Plan. The Corps expects to submit these reports every 5 years. We share the Corps' views on the importance of providing the Congress with information showing the progress being made in implementing the Plan. However, we believe that the Corps' progress report should include an update of the cumulative changes that have been made to the Plan and the effect of those changes on the Plan's implementation cost and schedule and should be provided every 2 years when the Corps is submitting its request for congressional authorization of a new set of projects.

The Corps also agreed that there are many uncertainties associated with the implementation of the overall Plan and the projects to improve water quality in the South Florida ecosystem. The Corps believes that the uncertainties have been fully disclosed and has proposed a methodology that will address them. This methodology includes the development of project implementation reports. The Corps disagreed that the uncertainties will absolutely lead to cost increases. We recognize in our report that the Corps was aware of the uncertainties associated with the implementation of the Plan and describe, in detail, the process that the Corps included in the Plan to incorporate changes as the uncertainties are resolved. We believe that the resolution of these uncertainties may lead to additional water quality projects and will likely result in cost increases. However, because we recognize that the Corps may also have opportunities to reduce the costs of some projects, our report does not state that the resolution of these uncertainties will absolutely result in an increase in the current estimate of $7.8 billion for implementing the Plan.

The Corps believed that it was premature to suggest that dredging Lake Okeechobee could increase the cost of the Plan and questioned the inclusion of an estimate of the costs in our report. We specifically point out in our report that the state is

currently conducting a feasibility study on the options to remove phosphorus-laden sediment from the lake and that no decision on dredging Lake Okeechobee has yet been made. We also recognize that any involvement by the Corps would be contingent on the Corps' determination that the project(s) would be essential for the ecosystem's restoration. However, we believe that the cleanup of Lake Okeechobee is the type of water quality effort that could involve the Corps in the future because (1) Lake Okeechobee is an important component of the South Florida ecosystem, (2) the Corps has already included projects in the Plan to address the lake's water quality, and (3) the Corps' Plan already includes two similar, but much smaller, dredging projects. We revised the report to identify the source of the $1 billion cost estimate for the possible dredging of Lake Okeechobee.

The Florida Department of Environmental Protection concurred with our recommendation. The Department stated that the recommendation is consistent with state law and requested that we recognize that Florida already requires that cumulative project and cost information be reported. We commend the state for having the foresight to establish this requirement and have revised the report to include this information. However, we believe that it would be useful for the Congress to receive information that shows how the Plan has evolved and how those changes affect the Plan's original cost and implementation schedule. For that reason, we have recommended that the Corps provide such information to the Congress at the same time that it submits new project authorization requests. The Department also stated its belief that our report is misleading in the following instances:

First, the Department believes that the title of our draft report implied that the Corps and the state were either unaware of the uncertainties associated with the implementation of the Comprehensive Everglades Restoration Plan or downplayed the uncertainties. We did not intend to imply that the Corps and the state were either unaware of or downplayed these uncertainties. However, we agree that the title could have been misconstrued and, to prevent further misinterpretation, we revised the title of our report to indicate that additional water quality projects may be needed and could increase the Plan's cost.

Second, the Department took exception to the inclusion in the report of (1) the $14.8 billion cost estimate to achieve all three goals of the South Florida Ecosystem Restoration Initiative and (2) the $1 billion figure for the possible dredging of Lake Okeechobee. The Department stated that any reference to the $14.8 billion cost estimate should be deleted. In the Department's view, the $14.8 billion figure is not comparable to the cost estimate developed for the Plan and there is no consensus among state and local governments on this amount. We believe it is important to recognize that restoring the South Florida ecosystem will require more than implementing the Corps' Comprehensive Everglades Restoration Plan, which primarily addresses one of the initiative's goals. We agree that we should acknowledge the source of this estimate, and we revised the report to indicate that the $14.8 billion cost estimate was calculated by the Department of the Interior, which chairs the interagency task force that facilitates the overall restoration effort, at the request of the House and Senate Appropriations Committees. In addition, the interagency task force's recently published strategic plan, requested by the Congress, also uses the $14.8 billion figure in discussing the estimated cost of restoring the ecosystem.[17]

In taking exception to the inclusion of the $1 billion cost estimate for dredging Lake Okeechobee, the Department maintained that we represented this estimate as an official rather than as a rough estimate and that we characterized the Corps' involvement as inevitable. We recognize that the cost estimate is preliminary and agree that we should indicate its source and precision. Accordingly, we revised the report to include this information. We do not believe that we have characterized the Corps' involvement in dredging Lake Okeechobee as inevitable. We included Lake Okeechobee as an example of an area where, through the state's efforts to identify actions needed to improve water quality in the South Florida ecosystem, the Corps could have a future role. We already point out that the state has not yet determined all of the actions that will be needed to clean up Lake Okeechobee and that the Corps' role has not yet been defined. However, to emphasize that point, we revised this section of the report to reiterate that once the state determines which projects are necessary, the Corps will determine if the additional projects are essential to the ecosystem's restoration and decide if the Federal Government will participate in and share the costs of the additional projects.

Third, the Department believes that our discussion of the uncertainties associated with stormwater treatment areas is misleading and that we misunderstood the applicability of the numeric criterion to be established for phosphorus. We disagree.

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[17] Coordinating Success: Strategy for Restoration of the South Florida Ecosystem, July 31, 2000.

We recognize that the stormwater treatment areas being built by the state are not part of the Corps' Plan and the Corps assumed that these areas would achieve the numeric criterion that will eventually be established. Furthermore, we specifically state that several stormwater treatment areas in the Corps' Plan will release water into areas of the natural system, such as Everglades National Park and the water conservation areas, that will be affected by the numeric criterion that the state is in the process of establishing. We acknowledge the state's experience in constructing stormwater treatment areas to reduce phosphorus levels and point out that the Corps used the stormwater treatment areas being built by the state as part of the Everglades Construction Project as the "model" for those included in its Plan. The state's stormwater treatment areas, which are part of the Everglades Construction Project, were designed to reduce phosphorus levels to the interim target of 50 parts per billion. However, if the state establishes a 10-parts-per-billion numeric criterion for Everglades National Park and the water conservation areas, we believe that the Corps will be required to modify the stormwater treatment areas included in its Plan that release water into this protected area.

Fourth, the state believes that our report characterizes two state programs—the Lake Okeechobee Protection Program and the South Florida Water Quality Protection Program—as dependent on the Corps' Plan. We disagree. We concluded that the state's efforts to improve water quality in the ecosystem could identify additional projects for the Corps to consider as part of its integrated water quality plan, which was included in the Plan because the Corps recognized that not all the water quality problems of the ecosystem had been identified. The Plan is intended to be a "comprehensive plan for restoring, preserving, and protecting the South Florida ecosystem," and as a result, any future water projects that the Corps determines the Federal Government should participate in as essential for the restoration of the ecosystem would be part of the Plan.

Finally, the Department provided comments on several other issues. The Department pointed out that the Corps had not yet decided to include the water quality project to dredge the Indian River Lagoon in the Plan. We agree and revised the report to indicate that the Corps will likely add this project to the Plan. The Department also commented that our report implies that the other projects in the Plan do nothing for water quality. Our report states that many of the Plan's other projects will also improve water quality by changing the flow of water to degraded areas. The report notes, however, that the 24 projects discussed in it were specifically included in the Plan to improve water quality. The Department believed that the appendix on the state's initiatives to improve water quality in the ecosystem did not mention essential activities, such as the state's water regulatory and water quality monitoring programs. We agree that these are important parts of Florida's overall effort to protect water quality in the state, including the South Florida ecosystem. We discussed Florida's regulatory responsibilities for managing water quality programs in the main body of the report and did not include the information in appendix II because the purpose of the appendix was to discuss the additional efforts the state has undertaken specifically to improve water quality in the South Florida ecosystem. For this reason, we did not add a discussion of Florida's regulatory programs for water quality to appendix II. The Department's comments are in appendix III.

The District also concurred with our recommendation and stated that it will work with the Corps to carry it out. The District did not believe, however, that we should characterize the Plan as unusual or atypical because of the uncertainties associated with its implementation. We do not characterize the Plan as atypical because of its uncertainties. It is atypical because it does not provide the level of detail normally found in a Corps feasibility study—a fact that the Corps recognizes—as a result of the large number of projects that would be designed and constructed over a long period of time. For this reason, we did not modify the report to reflect this concern. The District's comments are in appendix III.

Finally, each of the agencies, including EPA, provided technical comments that we incorporated as appropriate.

Scope and Methodology

To describe the role of the Corps' Comprehensive Everglades Restoration Plan in addressing the major water quality concerns of the South Florida ecosystem, we reviewed portions of the Plan that described the water quality projects. We also obtained and reviewed reports and studies, such as the Everglades Consolidated Report, the South Florida Ecosystem Assessment Interim Report, and the South Florida Water Quality Protection Program: Phase I Document that identify water quality concerns of the ecosystem.

To identify the modifications that might be needed as the Corps implements the Plan, we contacted officials from the Corps and discussed the ecosystem's water quality concerns, how the Plan's water quality projects address them, and the potential need for additional projects and modifications as the Plan is implemented. We also contacted officials from EPA, the Department of the Interior's National Park Service and Fish and Wildlife Service, and Florida's Department of Environmental Protection and South Florida Water Management District. These Federal and state agencies were among those involved in the Plan's development and have responsibility for (1) designing and constructing the Plan's projects, (2) ensuring water quality, or (3) managing lands within the ecosystem. We discussed the water quality problems of the ecosystem, the projects included in the Plan to address them, and potential future problems and projects. Because the majority of the projects in the Plan have multiple purposes, the cost estimate for each project is an aggregate cost for construction components that make up the project, such as levees, canals, pumps and structures. For this reason, the cost estimates attributable to water quality were not readily available.

We also contacted the staff of the Committee on the Restoration of the Greater Everglades Ecosystem, the peer review committee for the restoration effort, to discuss the committee's draft work plan as it related to water quality. Although the committee does not yet have a final work plan, it has drafted a work plan that includes studies that address aspects of water quality. Finally, we contacted the head of the Florida Keys National Marine Sanctuary and representatives of the Miccosukee and Seminole tribes, the National Audubon Society, and other environmental and special interest groups and organizations participating in the effort to restore the South Florida ecosystem to discuss their concerns about how the Plan addresses water quality.

We conducted our review from May 2000 to August 2000 in accordance with generally accepted auditing standards.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 15 days after the date of this letter. At that time, we will send copies to the Honorable Louis Caldera, Secretary of the Army; the Honorable Carol Browner, Administrator, Environmental Protection Agency; the Honorable Jeb Bush, Governor of Florida; and other interested parties. We will also make copies available to others on request.

If you or your staff have any questions, please call me at (202) 512–3841. Key contributors to this report are listed in appendix IV.

Sincerely yours,

JIM WELLS
Director, Energy, Resources, and Science Issues.

APPENDIX I

DESCRIPTION OF THE MAJOR TYPES OF PROJECTS INCLUDED IN THE CORPS' COMPREHENSIVE EVERGLADES RESTORATION PLAN

The Comprehensive Everglades Restoration Plan (the Plan) was presented to the Congress in July 1999. As it was presented, the Plan contained 68 projects to modify the Central and Southern Florida Project, which consists of a system of 1,700 miles of canals and levees and 16 major pump stations that drain water from the ecosystem and provide water and flood protection to the developed areas of South Florida. If implemented, the Plan will increase the region's freshwater supply and improve the delivery and quality of water to natural areas in the ecosystem.

The Plan, as it was presented to the Congress, consisted of 41 large-scale projects to modify the Central and Southern Florida Project and 27 smaller projects that were selected by the Corps, with the assistance of other Federal and state agencies participating in the restoration effort, to provide immediate environmental improvements. Since the Plan was introduced, two of the projects have been funded under an authority, called the critical projects authority, in the 1996 Water Resources Development Act. This authority allowed the Corps to construct small projects that would have an immediate environmental effect. As a result, the Plan has 66 projects—25 small-scale projects and 41 large projects. The 41 projects can be generally categorized by the type of function they will serve in the ecosystem:

- Surface storage reservoirs: More than 180,000 acres of reservoirs will provide 1.5 million acre-feet[18] of water storage in areas around Lake Okeechobee, the

[18] An acre-foot of water is equal to about 326,000 gallons of water—enough to cover 1 acre to a depth of 1-foot.

Caloosahatchee and St. Lucie rivers, and the Everglades Agricultural Area and along the lower east coast of Florida.

- Aquifer storage and recovery: More than 300 underground wells will be built to store water at a rate of as much as 1.6 billion gallons a day with little evaporation loss, for use during dry periods.
- Stormwater treatment areas: Approximately 35,600 acres of man-made wetlands will be built to treat urban and agricultural runoff before it is discharged to natural areas, including Lake Okeechobee, the Caloosahatchee River, the Everglades, and Florida's lower east coast. This is in addition to 47,000 acres of stormwater treatment areas (41,500 acres of effective treatment area) being constructed by the state in the Everglades Agricultural Area.[19]

Additional Water for Park, If Needed, Could Require Water Quality Treatment

- Seepage management: Millions of gallons of water per day seep underground or through levees and canals from the Everglades toward the east coast. Along the eastern side of Everglades National Park and the water conservation areas, impervious barriers will be built in levees, pumps will be installed to redirect water back into natural areas, and water levels will be held higher to prevent such seepage.
- Reuse water: Two advanced wastewater treatment plants, which will have increased capability to remove pollutants from the wastewater, will treat 220 million gallons of water per day in Miami-Dade County for release into underground aquifers and wetlands along Biscayne Bay.
- Removing barriers to sheetflow: More than 240 miles of canals and internal levees that are part of the original Central and Southern Florida Project and that lie within the Everglades and the water conservation areas will be removed to establish the natural broad, shallow flow of water in the ecosystem.
- Operational changes: The delivery of water to different parts of the ecosystem will be changed to improve the health of Lake Okeechobee and to enhance the timing of water flows.

APPENDIX II

FLORIDA'S INITIATIVES TO SPECIFICALLY ADDRESS WATER QUALITY IN THE SOUTH FLORIDA ECOSYSTEM

Outside of the Comprehensive Everglades Restoration Plan (the Plan), Florida has initiated several efforts specifically designed to address the quality of water in the Everglades and other natural areas of the South Florida ecosystem. In addition to developing numeric phosphorus standards, the state has several ongoing efforts, including the Dairy Rule, the Works of the District, the 1994 Everglades Forever Act, and the Lake Okeechobee Protection Program. The following sections describe the details of these initiatives.

The Dairy Rule

In 1987, the state adopted the Dairy Rule in response to serious water quality problems contributing to the degradation of Lake Okeechobee. The water quality problems were determined to be associated, at least in part, with the nutrient-rich runoff from dairy farms in the Lake Okeechobee basin. The Dairy Rule requires farm owners in the Lake Okeechobee area, who were previously exempt from permitting requirements, to obtain permits from the Florida Department of Environmental Protection. The rule also requires the dairy farmers to construct waste management systems and to use best management practices to control runoff from their dairy farms. Runoff from the area around the barns, which is heavy with animal manure, is collected and treated as wastewater. Many facilities reuse the wastewater by applying it to their farmland and using the nutrient-rich water as fertilizer. The farmers must obtain industrial waste permits that require monitoring of effluent and groundwater near the application sites.

Works of the District

In the Lake Okeechobee and Everglades basins, Works of the District permits are required for landowners who discharge water to the canals, rights of way, lakes, streams and other water resources for which the South Florida Water Management District (the District) has responsibility. The Lake Okeechobee permit program uses performance-based phosphorus controls designed to achieve the annual phosphorus

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[19] The Everglades Agricultural Area consists of 1,122 square miles of highly productive agricultural land directly south of Lake Okeechobee and north of the state's water conservation areas.

loading targets set for Lake Okeechobee. The Everglades permit program requires all landowners in the Everglades Agricultural Area with land that discharges to District works to obtain a permit, implement best management practices, and monitor the quality and quantity of water they discharge and provide this information to the District. If a permit holder fails to comply with the terms of a permit, the District retains the right to revoke it or take appropriate legal action.

Everglades Forever Act

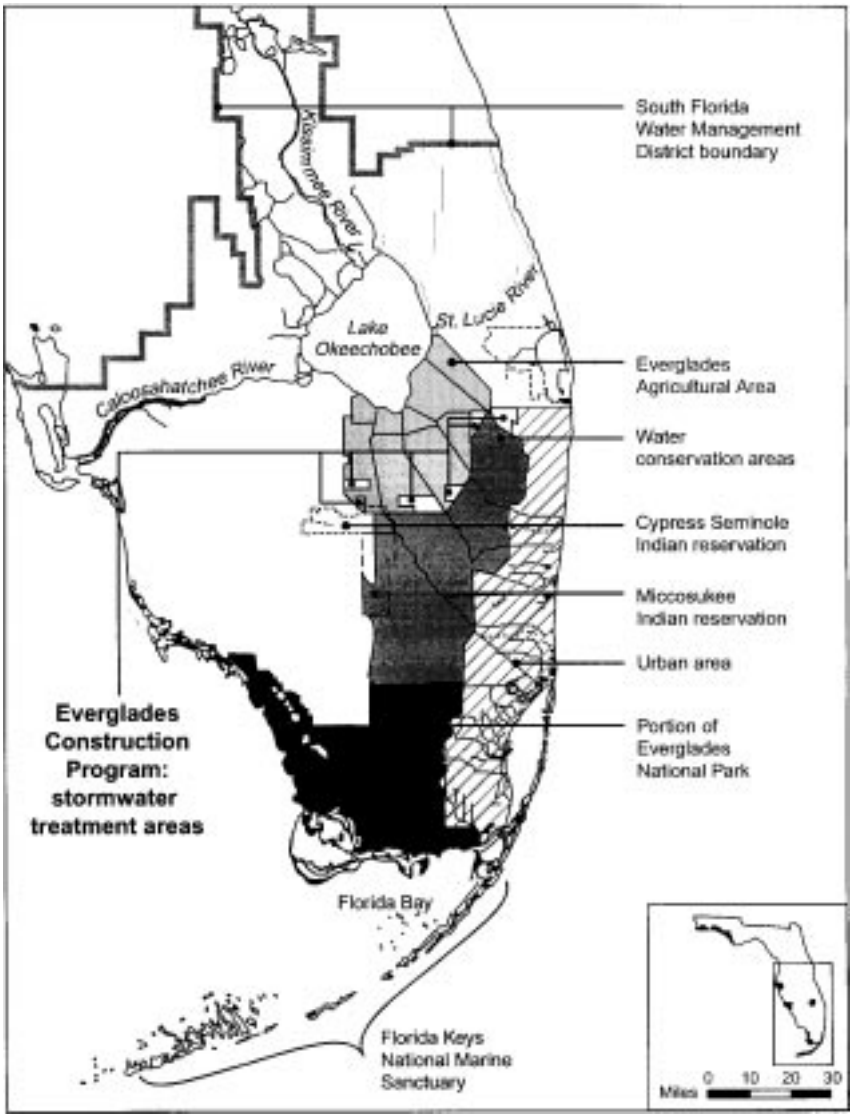
In 1994, the state enacted the Everglades Forever Act. The legislation was a result of a lawsuit filed against the state of Florida by the Federal Government for allegedly not enforcing its water quality standards in Federal areas such as Everglades National Park. The Florida Legislature found that the Everglades was endangered by adverse changes in the quality, quantity, timing, and distribution of water flows. The Legislature also found that the programs established by the District and the Florida Department of Environmental Protection to improve the tributary waters of the Everglades were not being implemented in a timely manner. The waters flowing into the Everglades contained excessive levels of phosphorus that endangered the flora and fauna of the Everglades. The act established an Everglades Protection Area that includes Everglades National Park and the state water conservation areas. The act is intended to expedite the state's plans and programs for improving water quality and quantity in this area; provide water supply for Everglades National Park, urban and agricultural areas, and Florida Bay; and replace water previously available from the coastal ridge in areas of southern Dade County.

The long-term goal of the Everglades Forever Act is to ensure that waters discharged into the Everglades Protection Area achieve water quality standards by December 31, 2006. The act directs the state to review existing water quality standards and to establish a numeric criterion for phosphorus in the Everglades Protection Area. The long-term goal is to reduce phosphorus discharges to levels that do not cause an imbalance in natural populations of aquatic plants and animals. Although the standard for phosphorus has not yet been set, the Everglades Forever Act provides a default standard of 10 parts per billion if a standard is not adopted by December 31, 2003. In addition, the act requires farmers in the Everglades Agricultural Area to implement best management practices to reduce pollutants in runoff from their farms and to pay an Agricultural Privilege Tax to fund the construction of stormwater treatment areas to provide additional water quality treatment. The Everglades Forever Act establishes a monitoring program to determine the effectiveness of best management practices, which are determined by the District in cooperation with the Florida Department of Environmental Protection. Finally, the act also requires the state to implement advanced water quality treatment measures and increase the amount of water flowing to the Everglades by 28 percent.

Everglades Construction Project

The Everglades Forever Act establishes a state plan to restore significant portions of the remaining Everglades ecosystem, including a program of construction projects, research, and regulation. A critical element of this program is the Everglades Construction Project, whose primary component consists of six large stormwater treatment areas. The treatment areas will encompass 47,000 acres, of which about 40,000 acres were once used as farmland, and will reduce the phosphorus content of stormwater runoff from the Everglades Agricultural Area and some releases from Lake Okeechobee into the Everglades Protection Area. (Fig. 3 shows the location of the stormwater treatment areas.)

Figure 3: Location of Everglades Construction Project Stormwater Treatment Areas



Source: GAO's adaptation of an illustration prepared by the South Florida Water Management District.

Under a consent decree settling the lawsuit between the Federal and state governments, the District is responsible for the design and construction of five of the stormwater treatment areas, and the Corps is responsible for the design and construction of one area. In conjunction with best management practices, the treatment areas are designed to reduce phosphorus concentrations to an interim target of 50 parts per billion. The long-term target is to reduce phosphorus concentrations to achieve and maintain compliance with the long-term water qualty standard that the state will establish. As of August 2000, the District had completed the construction of over 18,000 acres of wetlands in four treatment areas, and it will begin construct-

ing the fifth area within several months. The Corps began constructing the sixth treatment area this year. Achieving the long-term standards may require future modification of treatment areas.

Everglades Stormwater Program

The Everglades Stormwater Program was established by the District after the Florida Legislature passed the Everglades Forever Act of 1994 to improve water quality in basins not addressed by the Everglades Construction Project. The program includes two main components, the Everglades Agricultural Area phosphorus reduction program and the Urban and Tributary Basins Program. The District's staff is working with local governments, state and Federal agencies, drainage districts, Indian tribes, affected landowners, and members of the general public in these efforts.

The goal of the Everglades Agricultural Area phosphorus reduction program is to reduce by 25 percent the annual phosphorus load—that is, the mass of phosphorus mixed in with runoff—discharging into the Everglades from the area. The program includes regulatory programs developed to reduce phosphorus loads from the area by reducing phosphorus on the surrounding farms and other adjacent land. The 25-percent reduction goal is to be accomplished by implementing best management practices that eliminate or reduce pollutants at their source rather than treating stormwater runoff downstream. The best management practices in use include new methods of fertilizing farms, detaining stormwater runoff, controlling sediments, and other management methods that prevent or reduce the introduction of pollutants into surface waters. The District has issued each farm parcel within the Everglades Agricultural Area a permit that details the best management practices and water quality monitoring program being implemented on each farm. Records are kept to ensure accurate implementation of the practices, and each farm must also measure the flow and phosphorus level of water discharging from the farm. If the discharges from the Everglades Agricultural Area into the Everglades meet the 25-percent reduction goal, then the area is determined to be in compliance with the District's permits, and the farmers receive state tax credits. If the discharges do not meet the goal, the individual farms with the highest measured phosphorus discharges are identified and required to implement additional best management practices. According to recent water monitoring data, the farmers have reduced phosphorus loading for 1997 through 1999 by an average of 44 percent (19 percent above the required 25-percent level).

The Urban and Tributary Basins Program was developed to ensure that eight basins discharging into the Everglades other than those included in the Everglades Agricultural Area meet state water quality standards. The program identifies schedules and strategies for achieving compliance by December 31, 2006. It tests over 250 pollutants (such as phosphorus, metals and pesticides) at more than 40 structures that discharge water into, within, or from the Everglades Protection Area. The District is required to collect, review, and evaluate the water quality data in order to measure progress toward achieving compliance with state water quality standards. In particular, a key goal of the program is to lower phosphorus concentrations in the water discharged from these basins to comply with the state's long-term water quality standard. If the Florida Department of Environmental Protection does not establish a standard by December 31, 2003, the default will be 10 parts per billion. For the period from May 1, 1998, through April 30, 1999, phosphorus concentrations were well below 50 parts per billion at most structures.

Everglades Restoration Investment Act

On May 16, 2000, the state enacted the Everglades Restoration Investment Act, which represents the state's commitment to paying 50 percent of the costs of the Corps' Comprehensive Everglades Restoration Plan. The provisions of the law indicate that, over the next decade, more than $2 billion in state and local resources will be directed toward restoration. Through the newly created "Save Our Everglades Trust Fund," resources will be carried forward across fiscal years to help ensure that resources will be available when needed. The law also requires accountability based on performance for all involved in restoration activities.

Lake Okeechobee Protection Program and Lake Okeechobee Protection Trust Fund

Also enacted on May 16, 2000, were two pieces of legislation dealing with the restoration of Lake Okeechobee. One act created the Lake Okeechobee Protection Program, which is intended to achieve and maintain compliance with state water quality standards for the lake through a phased, comprehensive program to reduce phosphorus levels both in the lake and outside of it. The act requires that the state's actions to clean up Lake Okeechobee be coordinated with, and if possible, developed through the Corps' Plan. The program will proceed in a phased approach and will

commit the state to a long-term effort to construct new water containment and treatment structures to better control phosphorus at its source. An initial focus will be to cooperate with landowners around the lake basin to promote existing efforts to reduce and control the release of excess phosphorus from their farms. The act provides for

- a watershed phosphorus control program, calling for the phased implementation of phosphorus load reductions, a total maximum daily load proposal, and the formal establishment of restoration goals;
- a phased protection plan that will include the accelerated construction of stormwater treatment areas and the restoration of isolated wetlands;
- an internal phosphorus management and control program, which uses best management practices for agricultural and nonagricultural sources of pollution that do not come from wastewater treatment or other specific points of discharge;
- a comprehensive research and water quality monitoring program;
- the identification and eradication of invasive exotic species; and
- the completion of a feasibility study on the removal of phosphorus-laden sediment in the lake.

A second piece of legislation created the Lake Okeechobee Protection Trust Fund to pay primarily for the requirements of the Protection Program. Trust funds will be appropriated annually by the Legislature. Of the $38.5 million that will be spent on Lake Okeechobee this year, $15 million will be spent to research, develop, demonstrate, and implement best management practices and other measures to improve Lake Okeechobee's water quality. The remaining $23.5 million will be used to implement the Source Control Grant Program, restore isolated wetlands, retrofit water control structures, and buy land to construct a reservoir-assisted stormwater treatment area in the watershed.

Department of Environmental Protection

Jeb Bush
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

David B. Struhs
Secretary

August 17, 2000

Mr. Jim Wells, Director
Energy, Resources and Science Issues
United States General Accounting Office
Washington, DC 20548

Dear Mr. Wells:

This letter transmits our comments and those of the South Florida Water Management District (SFWMD) on the Draft GAO Report on the Comprehensive Everglades Restoration Plan: *Implementation Uncertainties May Lead to Additional Water Quality Projects and Costs.*

We appreciate the opportunity to comment on the draft report and request that this letter and the attached comments be incorporated into the final report. We anticipate your favorable consideration of our comments and incorporation of the recommended changes into the final report. We agree with the South Florida Water Management comments in the attached letter dated August 10, 2000 and offer the following additional comments:

The main recommendation of the Draft GAO Report is to have the U.S. Army Corps of Engineers provide better updates that 1) reflect the cumulative project and cost changes to the overall Comprehensive Everglades Restoration Plan (Plan), and 2) indicate the progress being made toward implementing the Plan. This recommendation is consistent with the reporting requirements of S. 2797, Restoring the Everglades, an American Legacy Act that is pending before Congress and the State of Florida supports the reporting requirements contained in the bill. Furthermore, the GAO recommendation concerning updating and reporting on cumulative project and cost changes is already a requirement in state law (s. 373.470(7), F.S.) and the report should indicate this.

The title "*Implementation Uncertainties May Lead to Additional Water Quality Projects and Costs*" is misleading. This title implies that USACE/SFWMD/FDEP were either unaware of these uncertainties and had to have them pointed out by GAO or that we suppressed or downplayed the uncertainties. Neither is true, and the April 1999 Restudy report to Congress contains several statements acknowledging these uncertainties. To avoid misrepresenting the conclusions that were reached over a year ago, the GAO should re-title the report: *"Additional Water Quality Projects and Costs May be Needed".*

The GAO report includes, for illustrative and comparative purposes, two other cost figures that were not estimated with the same technical rigor as the $ 7.8 billion cost estimate for the CERP. Specifically, p. 2 states that "achieving all three of the initiative's goals is estimated to cost $14.8 billion." This figure was calculated independently by the U. S Department of the Interior as the cost to implement all natural resource management programs in South Florida and there is no consensus amongst state or local governments on this amount. The federal interest of the $14.8 billion has not

been officially recommended to Congress or determined by Congress. We recommend that references to this figure be deleted altogether. If the GAO feels compelled to use this figure, the source and meaningfulness of the $ 14.8 billion cost estimate should be described by the GAO in the report.

The estimated $ 1 billion dredging cost for Lake Okeechobee dredging (p.19) is cited as if it was also an official cost estimate. At best, the $ 1 billion figure for Lake Okeechobee dredging is a rough estimate prepared by SFWMD scientists to bracket the cost for dredging. The SFWMD is embarking on a more detailed feasibility evaluation to evaluate true costs and technical feasibility. This may lead to a determination that a large-scale dredging project is not recommended, yet the GAO report makes it sound as if a $ 1 billion dredging project is a reliable cost estimate that will inevitably be added to the cost to implement the CERP. The source, technical rigor, and meaningfulness of this $ 1 billion figure should be explained by the GAO in the report. Furthermore, GAO should note in the report that Lake Okeechobee dredging is not contemplated as part of the CERP and if the feasibility evaluation were to determine the necessity of dredging, the Army Corps of Engineers would have to complete a feasibility study and submit it to Congress for authorization of an entirely new project.

The section of the report entitled "Uncertainties About Stormwater Treatment Areas May Lead to Additional Projects" is also misleading and reflects a lack of understanding by the GAO about the assumptions in the Plan, the difference between planning and modeling, changes in flows to the Everglades Protection Area brought about by the CERP, and the applicability of the 10 parts per billion (ppb) and 50 ppb numeric criteria for phosphorus. The report (p. 14) states:

> "For planning purposes, the Corps modeled its stormwater treatment areas (STA) on similar areas being built by the state that are designed to reduce phosphorus levels to about 50 parts per billion."

In fact, the "Without Plan" condition for the CERP is that the Everglades Construction Project (ECP) STAs, as designed per the Everglades Forever Act and Settlement Agreement, are achieving the DEP-established or default 10 ppb criterion for the Everglades. The ECP was modeled at 50 ppb during the CERP planning to evaluate differences in flows into, phosphorus loading of, and performance of the ECP compared to the underlying design assumptions for the ECP. This modeling effort did not change the planning assumptions for the CERP (that the EFA is fully implemented by 12/31/06). Furthermore, as explained to the GAO, the planning work done for the CERP indicates that the CERP is not likely to adversely affect the design and operation of the ECP; yet, the GAO report states: "the Corps may be required to modify the stormwater treatment areas being built for these areas to achieve that standard". Our present conclusion, is that this, is not, in fact, the case at all for the ECP.

It is unclear if GAO fully understood or disclosed the applicability of the to-be-established or default criterion for phosphorus. This criterion will only apply to the Everglades. Yet the CERP includes STAs to treat water for many other watersheds throughout the planning area (Upper East Coast, Lower East Coast, Lake Okeechobee). For planning purposes during the development of the CERP, it was generally accepted by the interagency team that a 50 ppb design target (the basis for the sizing of the STAs in the CERP) was adequate to achieve water quality restoration in these other watersheds. The GAO report confuses the Everglades Protection Area and its water quality criterion with other watersheds and their water quality criterion.

On p. 17, in its discussion on the Indian River Lagoon (IRL) study, the GAO report states "the Corps will add a water quality project to its Plan to dredge the lagoon to remove sediments from the St. Lucie estuary...." This is a premature and incorrect statement on the part of GAO. The IRL interagency planning team has not yet decided that dredging will be included in the draft recommended plan. The draft recommended plan is not due for several months to come.

The GAO report states (p. 3, p. 21) that 24 of the CERP projects are intended to improve water quality, implying that the other 46 projects do nothing for water quality. This is not true, and the July 1 Report to Congress confirms otherwise. The Project Implementation Report (PIR) development process built into the implementation of the CERP will ensure that wherever possible, CERP features will be designed, constructed, and operated to achieve as much as possible, given other restoration objectives for the project components, water quality restoration objectives for the watersheds in which the projects are located.

The Draft GAO Report provides an appraisal of those uncertainties associated with water quality features associated with the Comprehensive Everglades Restoration Plan (CERP) components or feasibility studies. However, the report includes a discussion of potential water quality projects associated with the Lake Okeechobee Protection Program and South Florida Water Quality Protection Program (WQPP). These programs are not dependent on the CERP and are moving forward whether the CERP is authorized by Congress or not. Accordingly, the reference to these projects should be clarified to reduce the impression that all water quality project costs associated with these ongoing programs are dependent upon the CERP. We recognize the WQPP is certainly related to the CERP, as it will serve as the reconnaissance phase of the WQ feasibility study in the CERP. However, the extent of the future federal participation in the activities identified in the WQPP and Lake Okeechobee Protection Program is unchanged by the CERP. A determination of federal interest in these other future water quality projects would stand alone regardless of whether or not we even had a CERP.

Appendix II, "Florida's Initiatives to Specifically Address Water Quality In the South Florida Ecosystem", does not mention Florida's water quality regulatory programs, nonpoint source control programs, water quality monitoring programs and land acquisition programs. These are all essential parts of the overall effort to protect water quality in south Florida.

In addition to these comments, attached are several specific technical and grammatical comments for your consideration. Once again, thank you for the opportunity to comment and if you have any questions, please do not hesitate to contact me at (850) 488-4892.

Sincerely,

John B. Cuttard

for Ernie Barnett
Director of Ecosystem Projects

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

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GOV 02-04-02

August 10, 2000

Secretary David B. Struhs
Florida Department of Environmental Protection
3900 Commonwealth Boulevard, MS 10
Tallahassee, FL 32399-3000

Dear Secretary Struhs:

The South Florida Water Management District has reviewed the *Draft GAO Report* concerning implementation uncertainties that may lead to additional water quality projects and costs for the Comprehensive Everglades Restoration Plan.

The main recommendation of the *Draft GAO Report* is to have the U.S. Army Corps of Engineers provide better updates that 1) reflect the cumulative project and cost changes to the overall Plan, and 2) indicate the progress being made toward implementing the Plan. We agree with this recommendation and will work with the U.S. Army Corps of Engineers to carry this out.

The *Comprehensive Everglades Restoration Plan's Master Program Management Plan* contains sections that address the recommendation in the *Draft GAO Report*. The District's Governing Board approved the master plan today. The U.S. Army Corps of Engineers should also be approving it soon.

The uncertainties in any long-term, conceptual plan like the Comprehensive Everglades Restoration Plan are natural and unavoidable and were recognized in the plan. The *Draft GAO Report* correctly concludes, "The Plan's water quality monitoring and adaptive assessment process will be key to ensuring that success in addressing the water quality problems of the natural areas".

We have attached several more specific comments for your use and appreciate the opportunity of having reviewed the *Draft GAO Report*.

Sincerely,

Frank R. Finch, P.E.
Executive Director

FRF/pv
Attachment
VIA AIRBORNE EXPRESS

c: Ernest Barnett, FDEP

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SFWMD Comments on GAO Draft Report
Implementation Uncertainties May Lead to Additional Water Quality Projects and Costs

General Comments

Although it is basically well written, the context of the narrative in several areas could be improved. We offer our comments to try to improve the reader's understanding of this issue. In addition, there are some technical inaccuracies that our comments address.

This report makes a good case that the costs of the Comprehensive Everglades Restoration Plan are not certain. The report outlines a process for incorporating and reporting changes to the Plan. The major recommendation of the report is that the Corps provides Congress with updates that reflect the cumulative project and cost changes to the Plan and indicate the progress being made towards the Plan.

The *Master Program Management Plan* for the Comprehensive Everglades Restoration Plan describes the format and content for the Project Implementation Reports that will go to Congress for authorization of projects. A section of each Project Implementation Report will specifically address any changes to the Comprehensive Plan that result from that project. The *Master Plan* also includes an outline for future versions of *Volume II, the Annual Report and Work Plan.* These *Volume II* updates will include a summary of progress and accomplishments on implementation of the plan (Section 2) and a specific section that will summarize refinements to the Comprehensive Plan (Section 8). These summaries will be used to prepare reports to the Florida Legislature required by the 2000 Everglades Restoration Investment Act and any Progress Reports for Congress that result from WRDA-2000.

Pilot Projects and the Adaptive Assessment process, including RECOVER, were built into the Comprehensive Everglades Restoration Plan because there are many unknowns in this massive effort and it will have to be "fine tuned" over the years. The GAO report should not frame the Comprehensive Everglades Restoration Plan as being unusual or not typical for having implementation uncertainties, but should convey that uncertainties and unknowns can be encountered in any type of project -large and small - no matter how detailed the planning and cost estimation effort is. The larger and more complex the project and the longer the implementation period, however, the more uncertainties there are going to be. Flexibility and contingencies need to be built into any project planning effort, along with a means to assess the progress so rational, informed decisions can be made.

RESPONSES BY BARRY HILL TO ADDITIONAL QUESTIONS FROM SENATOR VOINOVICH

Question 1. In your report, you state that the Corps' Comprehensive Everglades restoration Plan primarily addresses the first goal of the South Florida Ecosystem Restoration Initiative. What are the initiative's other goals? How much will achieving all the initiative's goals cost?

Response. In addition to the goal of "getting the water right," or getting the quality, quantity, timing, and distribution of water in the Everglades right; the initiative has two other goals restoring and enhancing the natural system, such as habitat for endangered species; and fostering the compatibility of built and natural systems. The Department of the Interior, which chairs the multi-agency restoration task force responsible for coordinating the initiative, estimated that achieving all three of the

initiative's goals will cost $14.8 billion. This figure includes the $7.8 billion needed to implement the Corps' Plan.

Question 2. Your testimony listed several uncertainties in the Plan that will likely lead to additional water quality projects. Can you elaborate on each of these?

Response. • The Plan includes stormwater treatment areas (which are man-made wetlands) that are designed to reduce phosphorus. A few of the areas will need to achieve even greater levels of phosphorus reduction. Specific project modifications needed to achieve those lower levels have not yet been determined. When they are, the Corps will likely be required to modify the stormwater treatment areas being built for these areas.

• An additional 245,000 acre-feet (326,000 gallons) of water may be needed for Everglades National Park. The water is available from areas north of the Park, but the Corps will likely need to build additional water quality projects, or may need to modify planned projects to treat this additional water. It should be noted that because of disagreements among Federal and state agencies, it is not inevitable that the Park will need or get this water this is also being studied.

• Underground wells (Aquifer storage and recovery wells) will store large amounts of water during rainy season for use in dry periods. The Corps is uncertain whether it will need to treat the water going into and coming out of the wells. Pilot projects will determine the extent of the treatment that will be needed.

Question 3. The Corps recognizes that the Plan has uncertainties and has included a process for adaptive assessment. What will this program accomplish and is it a reasonable way to deal with the uncertainty in the Plan?

Response. This is a good way to deal with many uncertainties in the Plan, but it will only be successful if the Corps and others establish a good monitoring system to determine how the ecosystem is responding to the Plan's projects. A monitoring system will identify and measure the water quality and other ecological indicators of ecosystem health and restoration.

Question 4. In your report, you state that the Corps could have a role in future efforts to improve water quality and you cite the example of the cleanup Lake Okeechobee of an ongoing effort where the Corps could become involved. What is your basis for including this example?

Response. We believe that the Corps could become involved in the clean up of Lake Okeechobee for three reasons:

(A) Lake Okeechobee is major component of the ecosystem and the cleanup may be determined by the Corps to be essential for ecosystem restoration.

(B) The Corps already included projects in the Plan to contribute to cleaning up the lake, including two stormwater treatment areas, and believes that more areas may be needed.

(C) The Corps has two dredging projects in the Plan for much smaller lakes Trafford and Lake Worth Lagoon. We were told the only difference between these projects and the Lake Okeechobee dredging project is the size of the projects.

Question 5. Only the Lake Okeechobee example includes a potential cost estimate for additional water projects—$1 billion. Are there estimates for other projects? Why did you not include them?

Response. The Lake Okeechobee dredging project is the only one, to our knowledge, where a cost estimate has been developed. The $1 billion is a preliminary estimate developed by the Task Force's working group last year and could change.

Question 6. You identify the potential for additional water quality projects in the Plan and say that the costs could increase. The Corps believes that it will have opportunities to save costs. Do you identify where costs could be saved?

Response. We identify in the report that the Corps anticipates about $500 million in cost savings if it does not use the treatment facilities for underground (aquifer storage and recovery) wells. While the Corps may identify and take advantage of opportunities to save costs as it designs and constructs projects, we believe that because additional water quality projects will likely be needed, the overall costs to improve water quality will also likely increase.

Question 7. Please tell us more about GAO's recommendation. How is the reporting requirement you recommend different from what has been included in the WRDA bill?

Response. The WRDA bill currently under consideration requires a 5-year report on the progress in implementing the Plan. We believe that the Corps should report not only on the progress being made in implementing the Plan, but also on the cumulative changes being made to the Plan and how those changes are affecting the Plan's implementation schedule and costs. We believe that this information would be more useful if the Corps provided it at the same time the Corps submits its bien-

nial requests for project authorizations. The Corps and the state agreed with our recommendation. The state requires that cumulative project and cost information be reported annually.

Question 8. In your testimony, you mention that the state of Florida disagreed with the inclusion of the $ 1 billion estimate to dredge Lake Okeechobee. What were the state's other comments?

Response. In addition to objecting to the inclusion of the $1 billion estimate to dredge Lake Okeechobee, the Florida Department of Environmental Protection and the South Florida Water Management District provided comments on several issues:

- The Department objected to the inclusion of the $14.8 billion estimate to achieve all three goals of the South Florida Ecosystem. In the Department's view, the $14.8 billion figure is not comparable to the cost estimate developed for the Comprehensive Everglades Restoration Plan and there is no consensus among state and local governments on this amount.
- The Department thought that our discussion of stormwater treatment areas was misleading and that our report characterized two state programs the Lake Okeechobee Protection Program and the South Florida Water Quality Protection Program as dependent on the Corps' Plan. We disagreed.
- The Department also commented that:
- the Corps had not yet decided to include the water quality project to dredge the Indian River Lagoon in the Plan. We agree and revised the report to indicate that the Corps will likely add this project to the Plan.
- our report implies that the other 46 projects in the Plan do nothing for water quality. Our report states that many of the Plan's other projects will also improve water quality by changing the flow of water to degraded areas. The report notes, however, that the 24 projects discussed in it were specifically included in the Plan to improve water quality.
- the appendix on the state's initiatives to improve water quality in the ecosystem did not mention essential activities, such as the state's water regulatory and water quality monitoring programs. We discuss Florida's regulatory responsibilities for managing water quality programs in the main body of the report and did not include the information in appendix II. The purpose of the appendix was to discuss the additional efforts the state has undertaken specifically to improve water quality in the South Florida ecosystem.
- The District did not believe, however, that we should characterize the Plan as unusual or atypical because of the uncertainties associated with its implementation. We do not characterize the Plan as atypical because of its uncertainties. It is atypical because it does not provide the level of detail normally found in a Corps feasibility study a fact that the Corps recognizes as a result of the large number of projects that would be designed and constructed over a long period of time.

The state agencies also provided a number of technical comments that we incorporated as appropriate.

Question 9. The Water Resources Development Act of 1996 authorized the Corps to include water quality projects in the Plan. What criteria did the Corps use to include projects?

Response. The Corps established two criteria for including water quality projects. First, the Corps included water quality projects when it was reclaiming water that used to be released to the ocean through the Caloosahatchee and St. Lucie rivers. This water should be cleaner to go to the natural system. Second, if the Corps changed the use or purpose of water it released into the natural system, the water quality could be improved. For example, if it releases water for environmental purposes rather than flood control, then the water is cleaned up.

Question 10. This report is about water quality, which is regulated at the Federal level by the Environmental Protection Agency (EPA) under the Clean Water Act. What is the EPA's role in implementing the Plan?

Response. EPA is responsible for assuring water quality in the nation. EPA usually delegates the responsibility for managing water quality programs to the states. Florida's Department of Environmental Protection will permit Corps structures built under the Plan. In addition, both EPA and the Department have been involved in commenting on and working with the Corps to identify water quality projects and needs. We should point out that if the state fails to establish pollution limits for water bodies, EPA will be required to do so. For example, if the state fails to establish the amount of phosphorus that can be discharged into Lake Okeechobee within a specified timeframe which will not likely happen then EPA is required to establish that amount.

Question 11. If more water quality projects are identified, will the costs be shared jointly between the state and Federal Governments?

Response. According to Corps officials, if the Corps determines that additional water quality projects are essential for restoration of the Everglades and meet its two criteria for inclusion in the Plan, these projects will become part of the Plan. Under the WRDA 1996 provisions, these projects will be cost-shared equally between the Federal and state governments. Because we believe that changes and additions to the Plan are likely, our report included the recommendation that the Corps provide updates to the Congress on the cumulative changes to the Plan and how those changes affect the Plan.

RESPONSES BY BARRY HILL TO ADDITIONAL QUESTIONS FROM SENATOR GRAHAM

Question 1. In the initial request for this report, you were asked to complete several tasks. One of them was the report you are discussing today. The other dealt with the Upper Mississippi River. Can you explain your progress on the Upper Mississippi section of this request? Why has no progress been made?

Response. The initial request from the Subcommittee asked GAO to review the process for the planning, formulation, and review of water resources development projects and included two specific Corps feasibility studies that warranted review the Upper Mississippi River and Illinois River Navigation Improvements feasibility study and the Central and Southern Florida Project Comprehensive Review Study. In our discussions with the staff on the timeframes for a final report, the staff indicated that they would like our work completed during the summer and in time for the Subcommittee's review of the Water Resources Development Act of 2000. For this reason, we agreed with the staff to limit the scope of our work to one project, the Comprehensive Everglades Restoration Plan and to one subject, the water quality components of the Plan.

Because of concerns about the objectivity of the Corps' analyses of water projects, both the Senate and the House recently included provisions relating to the independent review of Corps projects in their respective water resources bills. We will work with the subcommittee's staff to determine how, in light of the recent congressional action on this issue, GAO should proceed on the portion of the request to review the Upper Mississippi River and Illinois River Navigation Improvements feasibility study.

Question 2. Throughout your report, in fact, in the title, you indicate that "Additional Water Quality Projects May Be Needed and Could Increase Costs." Throughout your report you identify areas where the Corps may identify a need for a water quality project and indicate that once the Corps adds these projects to the Plan, costs could increase. From your perspective, does the Corps have the ability to independently take on work without congressional authorization?

Response. Our report on the Corps' Comprehensive Everglades Restoration Plan (Plan) discusses the criteria for including water quality projects in the Plan, the uncertainties that exist in addressing water quality as the Plan is implemented over the next 35 years, and the conceptual nature of the Plan and the process of incorporating and authorizing future changes to the Plan. In particular, we recognize that the Plan has a process of adaptive assessment that will allow the incorporation of changes as lessons are learned on early projects or as the need for additional projects is identified. As discussed in our report, such changes will be included in future authorization requests to the Congress, as only the first 10 projects of the Plan will likely be authorized in this year's Water Resources Development Act. Because the Congress will be asked to authorize projects to implement the Plan over the next 14 or more years, we recommended that the Corps' should report to the Congress every 2 years on the status and changes to the overall Plan when it submits subsequent authorization proposals.

Question 3. You offer an unexplained cost for Everglades restoration of $14.8 billion. What is the source of that number? How much of the $14.8 billion has already been expended? Is the $7.8 billion being considered for partial authorization by this Committee included in this total figure?

Response. As noted in our report, Comprehensive Everglades Restoration Plan: Additional Water Quality Projects May Be Needed and Could Increase Costs (GAO/RCED–00–235. Sept. 2000), the Department of the Interior, which chairs the multiagency task force responsible for coordinating and facilitating the South Florida Ecosystem Restoration Initiative, developed the $14.8 billion cost estimate at the request of the Congress. The cost estimate includes the $7.8 billion estimated cost of implementing the Comprehensive Everglades Restoration Plan that the Committee is currently considering as well as other ongoing and planned actions by the Fed-

eral, state, and local governments to achieve the 3 goals of the initiative getting the water right, restoring and enhancing the natural system, and fostering the compatibility of human and natural systems. No consolidated financial information on the initiative is available because the agencies involved in the initiative independently account for the funds that they allocate to the initiative. Based on financial data we have gathered as part of our work, we estimate that through fiscal year 2000, the Federal and state agencies have expended about $2.5 billion of the approximately $3 billion in appropriated funds that has been allocated to the initiative.

STATEMENT OF MICHAEL L. DAVIS, DEPUTY ASSISTANT SECRETARY OF THE ARMY FOR CIVIL WORKS, DEPARTMENT OF THE ARMY

Mr. Chairman, members of the Subcommittee, I am Michael Davis, Deputy Assistant Secretary for Policy and Legislation, Office of the Assistant Secretary of the Army for Civil Works. I am pleased to be here today to present the Administration's and the Army's views on the draft General Accounting Office (GAO) report concerning water quality issues associated with the restoration of America's Everglades. While we have not been allowed to review the final report being released today, we will provide comments on the draft report Comprehensive Everglades Restoration Plan Implementation Uncertainties May Lead to Additional Water Quality Projects and Costs.

Background

As you know, the restoration of America's Everglades is a high priority for the Administration, including the Army Corps of Engineers. On July 1, 1999, the Vice President, on behalf of the Administration, and in partnership with the State of Florida, submitted to Congress a comprehensive plan to restore the South Florida ecosystem, which includes the Everglades, Lake Okeechobee, Florida Bay, and Biscayne Bay. The Comprehensive Everglades Restoration Plan (CERP) is a technically sound plan developed by scores of the Nation's best Everglades scientists and engineers. The CERP, which will be implemented over the next 30 years, will:

- Improve the health of over 2.4 million acres of the South Florida ecosystem, including Everglades National Park;
- Improve the health of Lake Okeechobee:
- Virtually eliminate damaging freshwater releases to the estuaries;
- Improve water deliveries to Florida and Biscayne Bays;
- Enhance water supply and maintain flood protection; and
- Improve water quality.

The CERP is the most ambitious ecosystem restoration project ever undertaken in the United States if not the world. Its fundamental goal is to capture most of the fresh water that now flows unused to the sea and deliver it when and where it is needed most. Eighty percent of this "new" water will be devoted to environmental restoration, reviving the ecosystem from the Kissimmee River, through Lake Okeechobee, through Everglades National Park, to the coral reefs of Florida Bay. The remaining 20 percent will benefit cities and farmers, enhancing water supplies and supporting a strong, sustainable economy for south Florida. In short, the CERP provides the necessary road map for improving the quantity, quality, timing, and distribution of the water so vital to the health of America's Everglades and the people of south Florida.

The next vital step for Everglades restoration is the passage this year of legislation authorizing the CERP. As you know, the Administration has been working closely with the Senate Environment and Public Works Committee on such legislation. Recently, the Administration, the Committee, the State of Florida, and a diverse group of stakeholders reached agreement on the September 14, 2000, managers amendments to S. 2797, Restoring the Everglades, an American Legacy Act. The Administration strongly supports S. 2797 with these amendments and recommends its immediate passage.

Everglades Water Quality Problems

Restoration of the Everglades requires that we "get the water right" by addressing comprehensively each of the four interrelated factors—quantity, quality, timing, and distribution. As such, ensuring a supply of clean fresh water is integral to the CERP.

Over the past 100 years, excessive drainage of wetlands and changes in the natural variability of water flows have altered the Everglades wetland ecosystem on a regional scale. Today, discharges to the Everglades are often too much, or too little, and frequently at the wrong times of the year. An over-abundance or scarcity of

water affects plants and wildlife accustomed to the Everglades' historic range of water flows, levels and seasons. In addition, canals and highways that criss-cross the Everglades have interrupted its historic overland sheet flow.

As a result, water quality throughout south Florida has deteriorated over the past 50 years. More than one-half of the wetlands that acted as natural filters and retention areas are gone due to agricultural and urban expansion. The remaining Everglades ecosystem is in a continuing state of decline largely as a result of altered water regimes and degraded water quality, as evidenced by vegetation change, declining wildlife populations and organic soils loss. Some untreated urban and agricultural storm water is sent directly to natural areas and estuaries. Too much, or too little, water is often sent to the estuaries. Excess phosphorus, mercury, and other contaminants harm the region's surface water and groundwater. The water quality of the Everglades Water Conservation Areas, the coastal estuaries, Florida Bay and the Florida Keys show similar signs of significant degradation.

Under current conditions, these natural systems cannot recover their defining characteristics and they will not survive. The health of the ecosystem will continue to decline unless we act.

Water Quality Features Included in the CERP

The CERP offers a broad, comprehensive approach, which is designed to increase water supplies for the region and to restore and improve water quality throughout the Everglades ecosystem. The CERP improves the quality of water in the study area; however water quality improvement in south Florida must be viewed as an integrated effort with several interdependent parts. The CERP is designed to integrate modifications to the Central and Southern Florida project with ongoing State of Florida water quality efforts and ensure that our actions to capture and store water meets water quality requirements. These include: several components of the CERP; the State of Florida's Everglades Forever Act; Surface Water Improvement and Management Act planning efforts, including the development of pollutant load reduction goals; development of total maximum daily loads under Section 303(d) of the Federal Clean Water Act; and the Florida Keys Water Quality Protection Program.

Water quality was a consideration in every aspect of the CERP. Major features include creation of approximately 181,300 acres of surface water storage areas, totaling 1.6 million acre-feet of additional storage volume, which will allow us to capture excess fresh water flows and reduce pollution loading into downstream receiving water bodies. This valuable water, which currently is being "lost to tide," will be captured and used to provide much-needed water for restoration of the Everglades ecosystem and to enhance water supplies for the people of south Florida. Additionally, many components of the CERP include treatment features to ensure that water quality is improved. Specifically, the CERP includes 19 Stormwater Treatment Areas (STAs) totaling approximately 36,000 acres of wetlands to treat polluted runoff from urban and agricultural lands. These STAs will be located throughout south Florida, and will enable us to use the natural filtering capability offered by wetlands to treat and improve both water quality and, at the same time, contribute to the restoration of the health of the ecosystem.

Construction of extensive regional aquifer storage and recovery (ASR) facilities is an essential component of the CERP. When completed, the ASR facilities are intended to also store water during the wet season freshwater flows that are currently lost to tide. ASR facilities will store these waters in the upper Floridian Aquifer for recovery in dry seasons for use both to restore the ecological integrity of the ecosystem and to enhance future water supplies for urban and agricultural purposes in south Florida. These components include treatment facilities to meet applicable State of Florida water quality standards.

The CERP includes a recommendation for a feasibility study to develop a Comprehensive Integrated Water Quality Plan, to serve as a framework for integrating water quality restoration targets for south Florida water bodies into future planning, design, and construction activities included in the CERP.

We believe the CERP in concert with other proposed and ongoing restoration efforts represents the best way to both restore the ecological integrity of the Everglades ecosystem and to enhance water quality. While the CERP reflects the best available science, we are prepared to refine our thinking as we learn more. Thus the CERP is designed to be flexible, to incorporate and respond to new information as it becomes available. Continuous monitoring and independent scientific review are key components of the CERP. Still, we cannot wait for all the answers to begin. There is too much at stake and little time to act.

Our Views on the Draft GAO Report

We appreciate the work conducted by GAO and as always we welcome constructive advice on how to improve Army water resources projects. We also appreciate GAO's willingness to meet with the Corps Jacksonville District, the Environmental Protection Agency, the Department of the Interior, and the State of Florida to discuss these important issues.

In your request to GAO you specifically asked them to (1) describe the role of the CERP in addressing the major water quality concerns in the ecosystem and (2) identify modifications that may be needed as the Corps implements the CERP. The GAO completed its report based on interviews with agency staff between May and August of this year. In addition GAO indicates that they reviewed various reports, including portions of the CERP that describe water quality projects.

In its draft report GAO concluded that "there are too many uncertainties to estimate the number and cost of Corps projects that will ultimately be needed to improve water quality." In addition GAO concluded that it is likely that the estimated $7.8 billion cost of implementing the CERP will increase—also increasing the need for congressional oversight throughout the implementation of the CERP. In this regard, we understand that GAO will recommend that the Secretary of the Army provide Congress with updates that:

1)reflect any cumulative project and cost changes to the CERP; and 2)indicate the progress being made toward implementing the CERP.

As discussed in more detail below, we do not take issue with the specific recommendations made in the draft report. We agree that Congress should be kept informed of our progress and of any substantial changes as we implement the CERP over the next 30 years. We have proposed legislation to require such reporting.

In regard to water quality generally, we are satisfied that the CERP reflects the proper balance between the need to have information and the need to begin the restoration of an unprecedented natural resource that is in serious trouble. Much is known about the Everglades and how it can be restored. We will learn a lot more as we go through on-going independent scientific peer review as well as through the adaptive assessment process outlined in the CERP. We strongly believe that the level of uncertainty and potential cost increases noted by GAO are manageable through the monitoring, adaptive assessment, and reporting programs that will be implemented.

While as noted above we have not reviewed the final GAO report, we will provide a few specific comments on the draft report.

Uncertainty—We agree that there are some uncertainties associated with the implementation of the overall CERP and project components to improve water quality in the ecosystem. Such uncertainties are expected considering the size of the project and its staged implementation over 30 years. However, the Corps, the South Florida Water Management District, and many other Federal and state partners have disclosed fully the uncertainties and proposed a methodology and process to address these uncertainties during implementation of the CERP. This methodology and process includes the preparation of feasibility level of detail Project Implementation Reports (PIRs) which will be submitted to Congress, pilot projects, and an extensive adaptive assessment and monitoring program. The PIR would be the vehicle to identify, quantify and attempt to resolve any uncertainties surrounding the cost and performance of each major component in the CERP.

We disagree that uncertainties on the proposed water quality components will absolutely lead to cost increases. The $7.8 billion cost estimate reflects our best estimate of the cost of implementing the CERP based on information we have today considering all the uncertainties presented in the CERP. In many ways the Corps estimate is very conservative assuming the worst case scenario. In fact, there is good reason to believe that the actual cost of some project features could be less than estimated in the CERP.

For example, the Environmental Protection Agency has indicated their willingness to consider a flexible approach to constructing and permitting the aquifer storage and recovery wells proposed in the CERP as it relates to coliform bacteria. This approach involves "risk based" analyses to confirm that this flexible approach is appropriate if certain conditions are met. If the results of water quality testing and analyses conducted as part of the aquifer storage and recovery pilot projects confirm the appropriateness of this approach, then it is possible that the total cost of the recommended comprehensive plan could be reduced by as much as $500,000,000 and annual operation and maintenance costs could be reduced significantly as well. In addition to the above, we should not automatically assume that overall cost of the CERP will increase because of the need to add additional water quality features. For example, it is premature to suggest that dredging sediments from Lake Okeechobee could also increase the cost of the CERP. While the State of Florida has initi-

ated preliminary studies to look at this concept, no Federal feasibility studies for dredging sediments from Lake Okeechobee have been initiated and to our knowledge, no cost estimate has been developed. Further, GAO includes a cost estimate in the report for this project and compares this cost with the Corps' cost estimate for CERP. Such a comparison implies that the Lake Okeechobee cost estimate has some certainty and further, that the project would be part of the CERP. We do not agree with this point.

Congressional Reporting—We concur with the GAO recommendation that the Army should provide Congress with updates regarding implementation progress and changes to the CERP. The Everglades restoration legislation included in the Administration's April 10, 2000, proposal for Water Resources Development Act included a provision requiring reports to Congress. This provision requires that the Secretary of the Army and the Secretary of the Interior, in consultation with the Environmental Protection Agency, the Department of Commerce, and the State of Florida, submit reports on the implementation of the CERP to Congress beginning in October 2005, and periodically thereafter until October 2036. This provision is included in S. 2797.

Since GAO completed its review, the Corps Jacksonville District and the South Florida Water Management District, the primary non-Federal sponsor on implementing the CERP, have finalized a Master Program Management Plan (MPMP) which describes the framework and process to be used for managing and monitoring implementation of the CERP. Specifically, during implementation of the CERP, the Restoration Coordination and Verification team known as "RECOVER" will periodically produce five categories of written reports. These reports will be for the purposes of (1) evaluating or assessing the performance of the CERP or its components; (2) making recommendations regarding design and operational criteria, and a system-wide monitoring/data management program for the CERP; (3) documenting the technical and scientific aspects of the evaluation and assessment tools used by the teams; (4) identifying and resolving technical issues pertaining to the performance measures; and (5) describing processes and guidelines used by the teams to achieve their objectives. In addition, an annual report card report will also be prepared to inform the public of the status, trends and success of the CERP in meeting its objectives. Collectively these reports will provide a full documentation of the activities of the RECOVER team including the cumulative changes in projects and costs and the progress of the CERP which will serve as the basis for preparing report to Congress as required in S. 2797.

Conclusion

Protecting and restoring water quality is unequivocally an integral part of restoring the Everglades ecosystem. As such, addressing water quality issues have been and continue to be a fundamental objective of the CERP. Providing a reliable supply of clean fresh water to the ecosystem is at the heart of the CERP. While some uncertainties exist, we remain confident of the analysis, conclusions, and recommendations outlined in the CERP, including those germane to water quality. Further, we do not believe that based on the GAO report or any other information available at this time that Congress should assume that the cost to implement the CERP will unreasonably increase or increase at all.

An American treasure is in serious trouble and we can do something about it. We have developed a technically sound plan of action and the Senate Environment and Public Works Committee has worked with us to develop enabling legislation. America's Everglades cannot wait until we have all the answers—because we never will. As with any important endeavor of this nature there are risks. The risks associated with inaction, however, are clearly greater. We know more than enough to act now and act decisively by enacting S.2797 as amended on September 14, 2000.

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

RESPONSES BY MICHAEL L. DAVIS TO ADDITIONAL QUESTIONS FROM SENATOR VOINOVICH

Question 1. The Water Resources Development Act of 1996 authorized the Corps to include water quality projects in the plan. What criteria did the Corps use to include project?

Response. In accordance with legislative requirements contained in Section 528 of the WRDA 1996, the Comprehensive Everglades Restoration Plan (CERP) includes water quality features necessary to provide water to restore, preserve, and protect

the south Florida ecosystem. The CERP offers a broad, comprehensive approach, which is designed to increase water supplies for the region and to restore and improve water quality throughout the Everglades ecosystem. The CERP improves the quality of water in the study area; however water quality improvement in south Florida must be viewed as an integrated effort with several interdependent parts. The CERP is designed to integrate modifications to the Central and Southern (C&SF) project with ongoing State of Florida water quality efforts and ensure that our actions to capture and store water meets water quality requirements. These include: the State of Florida's Everglades Forever Act; Surface Water Improvement and Management (SWIM) Act planning efforts, including the development of pollutant load reduction goals; development of total maximum daily loads under Section 303(d) of the Federal Clean Water Act; and the Florida Keys Water Quality Protection Program.

Water quality was a consideration in every aspect of CERP development. Major features include the creation of 181, 300 acres of surface water storage areas, totaling 1.6 million acre-feet of additional storage volume, which would allow the Corps to capture excess fresh water flows and reduce pollution loading into downstream receiving water bodies. This valuable water, which currently is being "lost to tide, " will be captured and used to provide much-needed water for restoration of the Everglades ecosystem and to enhance water supplies for the people of south Florida. Additionally, many components of the CERP include treatment features to ensure that water quality is improved. Specifically, the CERP includes 19 Stormwater Treatment Areas (STAB) totaling approximately 36, 000 acres of wetlands to treat polluted runoff from urban and agricultural lands. These STAs will be located throughout south Florida, and will enable the Corps to use the natural filtering capability offered by wetlands to improve water quality and, contribute to the restoration of the ecosystem.

For the purpose of determining Federal participation in water quality features and improvements as part of the CERP, the Corps assumed that the Federal Clean Water Act and state/tribal water quality standards are currently being met. This assumes that all reasonable measures within watersheds are in place to assure that the waters, being received by the Central and Southern Florida project canal system, are of sufficient quality to meet required standards. If these measures did not provide water of adequate quality for South Florida ecosystem needs, then additional features for water quality improvement were deemed essential for Everglades restoration and included in the Plan CERP. These features would cost shared 50 percent Federal and 50 percent non-Federal.

Question 2. GAO reported that the Corps included 24 projects to improve the water quality in the ecosystem. If there are so many uncertainties about water quality in the ecosystem, how were the particular projects identified?

Response. We agree that there are some uncertainties associated with the implementation of the overall CERP and project components to improve water quality in the ecosystem. Such uncertainties are expected considering the size of the project and its staged implementation over 30 years. While the CERP reflects the best available science, the Corps is prepared to refine the plan as we learn more. To formulate and evaluate alternative plans, scientists, engineers and planners used computer models to simulate water quality conditions. These models included the Lake Okeechobee Water Quality Model; the Everglades Water Quality Model; and the South Florida Water Management Model (SFWMM). The SFWMM was used to assess conditions in the St. Lucie Estuary, Caloosahatchee Estuary, Lower East Coast, and Biscayne Bay. In addition to these computer model simulations, consultants to the Everglades National Park conducted an independent assessment of the effects of the CERP on the performance of the Everglades Construction Project. Thus the CERP is designed to be flexible, to incorporate and respond to new information as it becomes available. Continuous monitoring and independent scientific review are key components of the CERP.

Achieving adequate water quality to ensure ecosystem restoration was one of the fundamental planning objectives of the CERP. Therefore, water quality was included in the comprehensive planning effort to the same extent as the other ecological, water supply, and flood protection objectives mandated by WRDA 1996.

Question 3. In your testimony you state that you believe that the Corps will have opportunities to save costs to the Everglades Restoration project. Could you please explain where you believe that these opportunities may be?

Response. The current estimated cost of implementing the CERP is based on the best available information. Appropriate contingency factors were used in developing the cost estimates to reflect the uncertainties inherent at this stage of project development. It is anticipated that the cost of the Plan will be modified in the future

as pilot projects and individual Project Implementation Reports are completed. As more site-specific analysis is completed the contingency factors will be revised to reflect the greater levels of certainty. Value engineering will be used to optimize the design of facilities in the detailed planning and design phases of implementation for individual projects. During the detailed design phases, opportunities will be sought that reduce the number of control structures as well as using more passive control structures wherever feasible, which could result in reduced construction and operation and maintenance costs.

In addition there are other factors which may reduce the cost of the recommended plan. For instance, the aquifer storage and recovery pilot projects will evaluate the water quality of the source water to be used for aquifer storage and recovery and help identify the level of treatment necessary as defined by the U.S. Environmental Protection Agency (EPA) and Florida Department of Environmental Protection. However, preliminary water quality information and correspondence from the EPA indicates that the high level of treatment for aquifer storage and recovery facilities included in the CERP may not be required and therefore, a reduction in treatment costs up to $500, 000, 000 may be possible. Information derived from the pilot projects will be used to conduct a risk-based analysis of treatment requirements. Reducing the requirements of treating water for aquifer storage and recovery may also result in a reduction in the operation and maintenance costs for these facilities.

Wastewater reuse facilities, which provide additional water flows to Biscayne Bay, are another area where the project cost estimates may be modified. Refinement of ecological goals and objectives for Biscayne Bay along with evaluation of alternative sources of water for Biscayne Bay may result in a reduction in the need for superior, advanced wastewater facilities and a subsequent reduction in project costs. The two wastewater reuse facilities account for an estimated $84,000,000 (rounded) of the total operations and maintenance costs. As noted previously, the evaluation of alternative water supply sources for Biscayne Bay may reduce the need for advanced treatment or the need for all or a part of the volume of wastewater that is currently identified in the CERP.

Question 4. This report is about water quality, which is regulated at the Federal level by the Environmental Protection agency (EPA) under the Clean Water Act. What in your view is the EPA's role in implementing the Plan?

Response. The EPA played a crucial role in developing the CERP as a cooperating agency under the National Environmental Policy Act and a member of the interagency study team. The Corps intends to continue this partnership during the subsequent phases of project implementation. EPA will assist the Corps in developing pilot projects intended to address water quality uncertainties. They will also assist the Florida Department of Environmental Protection in setting pollutant reduction targets for key watersheds and/or water bodies affected by the CERP features. The EPA will assist in design and permitting of CERP water quality features and implementing monitoring programs.

Question 5. If more water quality projects are identified, will the costs be shared jointly between the state and Federal Government?

Response. The extent of additional Federal participation, if any, to achieve appropriate water quality for the natural system restoration outside the Everglades is not yet known. Further investigation of this issue was included as an element of the CERP. A feasibility level study to develop a comprehensive integrated water quality plan is currently programmed by the Corps of Engineers to be completed by 2006. This study will determine if there is a Federal interest in additional water quality improvement projects in the CERP study area (particularly in Southwest Florida and the Lower East Coast). If it is determined that there is a Federal interest in additional water quality improvement projects beyond those already included in the CERP, we could request Congress for additional project authorization through the traditional Federal resources development process.

RESPONSES BY MICHAEL L. DAVIS TO ADDITIONAL QUESTIONS FROM SENATOR GRAHAM

Question 1. Do you have the authority to independently take on work, for example, a water quality project where you identify the need for a Federal role, without congressional authorization:

Response. No. Project authorization would be required for the Corps to study or construct any water quality projects in the south Florida ecosystem.

Question 2. It appears from the GAO report that the GAO believes that the Corps merely identifying a project need would lead to increased costs in the Comprehen-

sive Everglades Restoration Plan execution. Can you clarify the process the Army Corps would use if a project need was identified?

Response. The CERP recognizes that there are implementation uncertainties and that there may be a need for additional water quality improvement projects in south Florida, particularly in those regions of the study area which there are few or no features of the Federal C&SF Project. For these reasons, the CERP includes appropriate cost contingencies and a follow on water quality feasibility level study to further investigate the Federal interest in water quality treatment projects beyond that which was considered in the CERP planning efforts. Any recommendations for additional projects as a result of that study would be submitted to Congress for authorization. Concurrently, as required by state law and the Federal Clean Water Act, the State of Florida (FDEP and the Florida of Agriculture and Consumer Services) is working with local governments and stakeholders to identify pollution sources and implement pollution source reduction measures throughout the CERP study area, independent of CERP implementation activities.

STATEMENT OF DAVID B. STRUHS, SECRETARY, FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Thank you for allowing me to appear before you to discuss the effort to restore America's Everglades. I am pleased to be here today to present the State of Florida's comments on the draft General Accounting Office (GAO) report concerning water quality issues in the south Florida ecosystem. I have not been allowed to see the report being released today. I am providing comments on the draft report entitled "Comprehensive Everglades Restoration Plan Implementation Uncertainties May Lead to Additional Water Quality Projects and Costs".

The Comprehensive Everglades Restoration Plan (Comprehensive Plan) is about water. It is about delivering water in the right place at the right time in the right quantity and quality.

It has already been determined that in an overwhelming majority of the time, the right place will be the natural system of the Everglades. There is wide-ranging agreement on this from environmentalists, utilities, agricultural interests, Federal agencies and Governor Jeb Bush and the State of Florida.

We are not too concerned about water quantity. By recapturing nearly 1.7 billion gallons of water per day, plus the water that remains in the currently deteriorating Everglades, sufficient water will be available to implement the Comprehensive Everglades Restoration Plan.

The question before us today concerns the water quality portion of the plan's overall mission. Restoration of the Everglades is not possible without adequate water quality. Water quality is an authorized purpose of the Comprehensive Everglades Restoration Plan, and explicitly cost shared on a 50/50 basis after Federal, state, Tribal and local water quality preventive and non-point regulatory requirements have been enforced. We are confident that the water quality features already contemplated in the Comprehensive Everglades Restoration Plan along with existing State and local programs will achieve the water quality restoration targets for south Florida without adding additional costs.

We recognize that degradation of water quality throughout the study area is extensive, particularly in agricultural and urban coastal areas. The Florida Department of Environmental Protection listed over 150 use-impaired segments of water bodies in south Florida. It is also recognized that achieving water quality goals for ecosystem restoration in all use-impaired water bodies within the study area will depend on actions outside the scope of the Comprehensive Everglades Restoration Plan. A number of agencies including the South Florida Water Management District, Florida Department of Environmental Protection, U.S. Environmental Protection Agency as well as local have developed or are developing water quality improvement programs for several of the impaired water bodies within the study area. The most notable example is the Everglades Forever Act, which focuses on achieving adequate water quality in the Everglades. Other examples include the Lake Okeechobee Protection Act of 2000 and Surface Water Improvement and Management Act planning efforts for the Indian River Lagoon, and Biscayne Bay, and the Florida Keys National Marine Sanctuary Water Quality Protection Program. We are confident that the State of Florida and local governments will be able to implement water quality improvement actions needed to achieve the water quality goals of south Florida without any appreciable increased costs associated with the Comprehensive Everglades Restoration Plan.

Even where existing water quality may be adequate to meet water quality standards in present receiving waters, the Comprehensive Plan contains modifications to

the present water management system that will result in delivering water to different areas having different water quality needs. Therefore, the Comprehensive Plan was formulated to treat these waters before sending it on to other areas for ecosystem restoration purposes.

The Comprehensive Everglades Restoration Plan includes approximately 35,600 acres of manmade wetlands, known as stormwater treatment areas, to treat urban and agricultural runoff water before it is discharged to the natural areas throughout the system. Stormwater treatment areas are included in the recommended Comprehensive Plan for basins draining to Lake Okeechobee, the Caloosahatchee River Basin, the St. Lucie Estuary Basin, the Everglades, and the Lower East Coast. These are in addition to the over 44,000 acres of stormwater treatment areas already being constructed as part of the Everglades Construction Project to treat runoff discharged from the Everglades Agricultural Area. We do not anticipate major additional costs associated with water quality to be added to the Comprehensive Everglades Restoration Plan.

Closing

Today, we stand at the threshold of authorizing the most significant restoration effort ever undertaken in this country. It is remarkable that so many diverse interests have come to get behind one cause. The cause is "undoing" the well intentioned efforts of Federal entities half a century ago.

While it is more than a re-plumbing project, successful Everglades restoration does demand high quality water where and when it is needed.

The blueprint—The Comprehensive Everglades Restoration Plan—contains an authorized purpose to meet that demand. The blueprint calls for a 50–50 cost share after Federal, state, Tribal and local water quality preventive and non-point regulatory requirements have been enforced.

We stipulate to the fact that there are numerous water bodies in south Florida that have water quality problems. Both state and Federal agencies are collaborating on water quality improvement programs for several of the impaired water bodies within the study area. Such cooperation, we believe, will result in water quality improvements without any appreciable increase in costs.

Governor Jeb Bush and the State of Florida is confident that through our responsibilities under the Clean Water Act, state water law, and the restoration plan we will be able to meet the water quality needs of the region. We stand ready, more than willing, and fully able to be your partner in this critical component of Everglades restoration.

Thank you for the opportunity to comment.

RESPONSES BY DAVID STRUHS TO ADDITIONAL QUESTIONS FROM SENATOR VOINOVICH

Question 1. This report is about water quality, which is regulated at the Federal level by the Environmental Protection Agency (EPA) under the Clean Water Act. What in your view is the EPA's role in implementing the Plan?

Response. The State of Florida has water quality standards and regulatory programs in place that will apply to the Comprehensive Everglades Restoration Plan. EPA has an important role in implementing the Plan through their oversight of the State's water quality programs. EPA will be instrumental in allowing the regulatory flexibility needed to recognize significant cost savings during project construction and operation.

Question 2. If more water quality projects are identified, will the costs be shared jointly between the state and Federal Government?

Response. The Water Resource Development Act of 1996 authorizes 50–50 cost sharing for water projects that are essential for Everglades restoration. This determination is vested with the Secretary of the Army. Only those projects approved by the Secretary of the Army as essential for Everglades restoration would be jointly cost shared.

Question 3. In your comments to the GAO, the Department of Environmental Protection for the State of Florida indicates that "at best, $1 billion figure for Lake Okeechobee dredging is rough estimate prepared by the South Florida Water Management District scientists to bracket the costs for dredging." What do you mean by this comment? Is the State of Florida prepared to budget for the potential dredging of Lake Okeechobee if it is viewed as essential in achieving restoration of the Everglades?

Response. The State of Florida is fairly certain that while dredging Lake Okeechobee warrants further investigation, it is not essential to Everglades restoration. The emerging consensus is that dredging is not essential but may shorten the time pe-

riod for restoration of Lake Okeechobee. However, a detailed analysis has not been completed to determine feasibility. The South Florida Water Management District is embarking on a more detailed feasibility evaluation to evaluate true costs and technical feasibility and it is likely that the evaluation will determine that a large-scale dredging project is not recommended. If the feasibility evaluation indicates that there is some potential for significantly reducing the restoration time period, the Army Corps of Engineers would need to perform a feasibility study to determine if there is a Federal interest in participating in the Lake Okeechobee restoration effort. Ultimately the final level of Federal participation, if any, will be determined by Congress.

Question 4. What is the status of the Lake Okeechobee Sediment Removal Feasibility Study?

Response. The Lake Okeechobee Sediment Removal Feasibility Study is a 3-year project that began in September, 2000 and will be completed in March, 2003. The South Florida Water Management District (District) has contracted with Blasland, Bouck, and Lee, Inc.(BBL), an engineering and scientific consulting firm based in Boca Raton, Florida, to implement the study. The total cost of the study is $955,069.

The goal of the study is to analyze all feasible sediment treatment alternatives (i.e. chemical, physical) in order to determine the best method of reducing internal phosphorus loading in Lake Okeechobee. The goal of the feasibility study will be achieved using an objective methodology that allows for review and input by experts and stakeholders throughout the process. The final deliverables from this study will be used in conjunction with a multiple criteria decision process and public/interagency input in order to make final recommendations to the Governing Board of the District.

The study consists of the following five (5) tasks:

1. Development of Goals and Performance Measures
2. Development of Alternatives
3. Work Plan for Alternative Evaluation
4. Evaluation of Alternatives
5. Consulting Assistance

Currently, BBL has begun work on Task 1. Development of Goals and Performance Measures, which are due in March, 2001. The District will be conducting interagency and public meetings throughout the study process. The first public meeting will be held in January 2001 to solicit input on the project goals and performance measures.

The District is also initiating a pilot dredging project that will demonstrate the use of innovative dredging, dewatering and water treatment technologies and provide critical information to the feasibility study. The District is currently under contract negotiations with a selected consultant and anticipates completion of the project in the Fall 2002

Question 5. The State of Florida is responsible for developing the numeric criterion for phosphorus in the Everglades. Could you please tell us what level of phosphorus reduction you have been able to achieve to date vs. what levels will be necessary to restore the natural system? Do you anticipate that this will cause significant increases to the cost of restoration?

Response. The numeric criterion for phosphorus will apply only to the Everglades Protection Area. The CERP has only one project component that will create a new discharge to the Everglades Protection Area—the Central Lakebelt project. This project stores surface water in the Central Lakebelt storage component and subsequently delivers the stored water to Northeast Shark River Slough in Everglades National Park. The source of this stored water is excess wet season flows out of the Water Conservation Areas, so it is expected to be of adequate quality to meet the Everglades phosphorus criterion upon reintroduction to the Everglades. Therefore, the CERP will not result in the need for additional water quality costs to meet the numeric criterion.

The CERP includes STAs to treat water for many other watersheds throughout the planning area (Upper East Coast, Lower East Coast, Lake Okeechobee). For planning purposes during the development of the CERP, it was generally accepted by the interagency team that a 50 part per billion (ppb) phosphorus design target (the basis for the sizing of the STAs in the CERP) was adequate to achieve water quality restoration in these other watersheds.

The existing STAs contracted under the State's Everglades Construction Project (ECP) have far exceeded the design criterion of 50 ppb and have consistently achieved approximately 25 ppb. Because the State has not yet established the numeric phosphorus criterion for the Everglades, we cannot say at this time what level of phosphorus will need to be reached in the ECP STAs to restore the natural

system. Supplemental treatment technologies will be incorporated into the design and operation of the ECP STAs to ensure that flows to the Everglades meet the final numeric standard by December 21, 2006. The costs for designing and implementing supplemental treatment technologies necessary to meet the final numeric phosphorus standard will be the responsibility of the State of Florida (except for the C–51/STA 1 East Project, which is cost-shared between the U.S. Army Corps of Engineers and the South Florida Water Management District).

Question 6. What level of research funding is the state currently conducting into advanced treatment technologies to enhance the performance of the stormwater treatment areas (STAs)?

Response. To date, the State of Florida has expended $14.28 million on advanced treatment technologies. Another $4.45 million has been budgeted for fiscal year 2001. These figures include the dollar values for research contracts, demonstration projects and staff costs associated with advanced treatment technologies. The figures do not include mercury monitoring, agricultural best management practices research, or phosphorus threshold research, all of which impact the final solution for meeting long term water quality standards.

Question 7. The Interior Appropriations Committee requested in its fiscal year 2000 Interior Appropriations bill a report on the total cost estimate to restore the South Florida ecosystem. Further, the Interior Appropriators requested that the Department submit information to be updated biennially, on the total cost of the effort to restore the South Florida ecosystem. Assistant Secretary John Berry indicated in a letter to the Appropriations Committee that the total cost is $14.8 billion. Do you dispute this figure that was provided by the Department of Interior, and if so why?

Response. The $14.8 million figure was calculated independently by the U.S. Department of the interior as the cost to implement all natural resource management programs in South Florida and there is no consensus amongst state or local governments on this amount. The majority of this amount includes projects that are already fully funded by the State or local governments and it is misleading to portray this amount as additional costs necessary for Everglades restoration. Furthermore, the Federal interest of the $14.8 billion has not been officially recommended to Congress or determined by Congress to be accurate.

RESPONSES BY DAVID STRUHS TO ADDITIONAL QUESTIONS FROM SENATOR GRAHAM

Question 1. Do you have the authority to independently take on work, for example, a water quality project where you identify the need for a Federal role, without congressional authorization?

Response. No, only Congress can authorize Federal participation in a project.

Question 2. It appears from the GAO report that the GAO believes that the Corps merely identifying a project need would lead to increased costs in the Comprehensive Everglades Restoration Plan execution. Can you clarify the process that the Army Corps would use if a project need was identified?

Response. All new projects will be subject to traditional Federal authorization in future Water Resource Development Acts. The initial 10 projects are required to have a Committee Resolution from the House and Senate prior to receiving Federal appropriations. Therefore, there is no way that increased costs will be realized without congressional approval.

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