H.R. 135: TWENTY-FIRST CENTURY WATER COMMISSION ACT OF 2007

(110–87)

HEARING

BEFORE THE

SUBCOMMITTEE ON
WATER RESOURCES AND ENVIRONMENT

OF THE

COMMITTEE ON
TRANSPORTATION AND
INFRASTRUCTURE
HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

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October 30, 2007

SUMMARY OF SUBJECT MATTER:

TO: Members of the Subcommittee on Water Resources and Environment

FROM: Subcommittee on Water Resources and Environment Staff

SUBJECT: Hearing on H.R. 135, the "Twenty-First Century Water Commission Act of 2007"

PURPOSE OF HEARING

The Subcommittee on Water Resources and Environment is scheduled to meet on Thursday, November 8, 2007, at 10:00 a.m. in 2167 RHOB, to receive testimony on H.R. 135, the "Twenty-First Century Water Commission Act of 2007." Testimony is expected from the sponsor of the legislation, Representative John Linder, U.S. Environmental Protection Agency ("EPA"), representatives of a state water board, non-governmental organizations, and a water rights attorney.

BACKGROUND

The United States is a nation blessed with abundant water resources across much of the landscape. In addition, investment in water infrastructure has helped provide reliable water resources for the more arid regions, as well as those with less reliable water supplies. The nation's waters support myriad human uses and needs, power generation, navigation, and industry while also providing for a globally diverse freshwater ecosystem.

The water resources of the United States are not evenly distributed across the country resulting in very different water resource management strategies. Historically, areas such as the northeast have relatively abundant water resources requiring mostly flood protection, while the west and southwest, in particular, are quite dry necessitating greater water supply infrastructure.

These widely diverse conditions around the United States are all managed differently and often independently of other projects. There are many federal and state agencies with management responsibilities in addition to the very different water laws of the various states. Most of this has resulted in very local views of project operations and needs with little consideration of the broader watersheds that surround these projects. In addition, there have been increased demands for water resources, in part due to increased population and an increased recognition of the need to reserve water for aquatic ecosystems, as well as consumptive uses. These different operations and

conditions are resulting in greater conflict over water resources and are potentially subject to changing climactic conditions.

The past year saw historic floods throughout New England and again this spring in New Hampshire, while the southeast is gripped in a record breaking drought which is impacting seven states. This is in addition to the ongoing controversies about water resource management for the Apalachicola/Chatahootchee/Flint rivers ("ACF") affecting Alabama, Georgia, and Florida; or the Missouri River disputes between upper basin states and lower basin states; or the oversubscribed Colorado River system.

The current drought in the southeast emphasizes the challenges that have overwhelmed the ACF basin for years. The diverse water resource needs within the system often cause one user's needs to run counter to those of other water users. This year Lake Lanier is near record low levels, and without significant rains only has approximately 280 days of water remaining. Atlanta is one of the dominant water users in the basin with tremendous water demands to support its growing population. Other interests include downstream municipal water users in Georgia and Alabama, industrial users in Alabama, and the ecological needs of Tupelo trees, endangered mussels, oysters, and recreational uses in Florida.

The Missouri River basin is another watershed that has seen divergent needs put tremendous pressure on an ultimately limited resource. The upper basin users depend on the Missouri River for water supply and recreation, while the lower basin states depend on the river for navigation needs, water supply and recreation; and two endangered species also depend on certain type of operations of the dams on the mainstem of the river. The management of the Missouri River has been contentious for years as a result of these often conflicting interests. In addition, conditions have gotten worse in the past few years as sustained drought conditions have enhanced the conflict as up stream interests want to hold water back for water supply needs, while the downstream interests need more water released to sustain navigation.

While these examples are representative of some existing water resource challenges, global climate change is predicted to exacerbate these conditions and place greater fiscal and management burdens on the nation. In an April 2007 report, the Intergovernmental Panel on Climate Change ("IPCC") Working Group reported that "by mid-century, annual average river runoff and water availability are projected to increase by 10-40% at high latitudes and in some wet tropical areas, and decrease by 10-30% over some dry regions at mid-latitudes and in the dry tropics, some of which are presently water stressed areas...Drought-affected areas will likely increase in extent. Heavy precipitation events, which are very likely to increase in frequency, will augment flood risk...In the course of the century, water supplies stored in glaciers and snow cover are projected to decline, reducing water availability in regions supplied by meltwater from major mountain ranges, where more than one-sixth of the world population currently lives...The resilience of many ecosystems is likely to be exceeded this century by an unprecedented combination of climate change, associated disturbances (e.g., flooding, drought, wildfire, insects, ocean acidification), and other global change."[ii]

Earlier this year, the Committee received testimony that indicates sea level rise will increase the vulnerability of coastal infrastructure to flooding and storm surge, speed the loss of coastal wetlands and lead to salt water intrusion into coastal aquifers and upstream water supply infrastructure.

Since the 1950's there have been at least seven different commissions empanelled to examine Federal water policy. The last review of water policy was the Western Water Policy Advisory

Review Commission which was authorized in 1992 and issued its report in 1998. There has not been a comprehensive review of Federal water policy since 1973. Given the current challenges that exist in a number of large watersheds, and the greater challenges to be faced with changes brought on by factors such as climate change, increasing population, endangered species, and other competing uses there needs to be a comprehensive review of national water policies, and an assessment that starts to review watershed needs and planning. Earlier this year, the Committee approved by voice vote legislation to create a comprehensive review of national water policies, also called the 21st Century Water Commission. This provision, which was included in Section 702 of the Transportation Energy Security and Climate Change Mitigation Act of 2007 (H.R. 2701), establishes a commission to provide expert scientific guidance on future water supply and demand projections, climate change impacts to our nation's flood risk and water demand, and associated climate change impacts on water quality. This commission would study current federal, state, and local water resources management programs and activities, and ensure that the nation is adequately prepared to meet the water supply, water quality, and water resources demands of the next 50 years. This provision was incorporated into H.R. 3221, New Direction for Energy Independence, National Security, and Consumer Protection Act, which was approved by the House on August 4, 2007, by a vote of 241 to 172. The Subcommittee on Water Resources and Environment is planning a hearing early in 2008 covering comprehensive watershed planning.

H.R. 135, THE "TWENTY-FIRST CENTURY WATER COMMISSION ACT OF 2007"

H.R. 135, the "Twenty-First Century Water Commission Act of 2007," would establish a commission to provide for water assessments to project future water supply and demand, review current water management programs at each level of government, and develop recommendations for a comprehensive water strategy, and would authorize $9 million to carry out these functions. Modeled after the 1968 National Water Commission Act, the "Twenty-First Century Water Commission" would consist of nine non-Federal members, appointed by the President, Speaker of the House, and Majority Leader of the Senate.

Specifically, H.R. 135 would require that the recommendations developed by the Commission must: respect the rights of States in regulating water rights and uses, identify incentives to ensure a dependable water supply for the nation over the next 50 years, suggest strategies to avoid unfunded mandates, eliminate duplication among Federal agencies of jurisdiction, consider all available technologies, make recommendations for capturing excess water and flood water for conservation and subsequent use in times of drought, develop financing options for public works projects, and suggest strategies to conserve existing water supplies and repairs to infrastructure. The Commission may consider other objectives related to the effective management of the water supply to ensure reliability, availability, and quality which the Commission considers appropriate.

The Commission would issue interim reports every six months and a final report within three years. After issuing its final report, the Commission would cease to exist.

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[i] Intergovernmental Panel on Climate Change, Working Group II. *Climate Change 2007: Impacts, Adaptation and Vulnerability*. Contribution to the Fourth Assessment Report Summary for Policymakers.. Geneva: IPCC: April 2007.

HEARING ON TWENTY-FIRST CENTURY WATER COMMISSION ACT OF 2007

Thursday, November 8, 2007

HOUSE OF REPRESENTATIVES,
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT,
Washington, DC.

The Subcommittee met, pursuant to call, at 10:00 a.m., in Room 2167, Rayburn House Office Building, the Honorable Eddie Bernice Johnson [Chairwoman of the Subcommittee] presiding.

Ms. JOHNSON. Good morning. Today's hearing comes during a historic week where the House of Representatives came together in a bipartisan fashion and soundly overturned the President's veto of the Water Resources Development Act of 2007, the WRDA Bill, and I especially want to applaud all of my colleagues from the Committee, both Democrat and Republican alike who unanimously voted for overriding the veto.

WRDA authorizes vitally important local projects for a wide array of water resources needs including water supply, flood control, navigation and environmental restoration. WRDA recognizes the vital importance of taking a watershed approach to water resource needs. This bill includes dozens of projects to provide for watershed management and water supply needs in communities across the Country.

Provisions were also included to reinvigorate broader watershed planning authority including a federally-funded assessment of water resources needs for the river basins and watersheds of the Southeastern United States and a region-wide study to review drought conditions in the Southeastern U.S.A. These region-wide assessments are especially critical to the Southeastern U.S. including the States of Georgia, Alabama and Florida which are experiencing the ever increasing challenge of balancing water needs during a record drought.

Earlier this year, the Committee received testimony from experts that highlighted the need for a comprehensive watershed approach to water resource planning, one that is not limited to just water supply needs but takes a comprehensive view of all the water resource activities in a watershed including local, State and Federal roles and activities in water supply, flood control and environmental restoration.

The experts also advised taking into account the impact of global climate change on water resource capacity and future needs.

As a result of these hearings, this past July, the Committee approved, by a voice vote, legislation to create a comprehensive re-

view of national water policies also called the Twenty-First Century Water Commission. This provision, which was included in the Transportation Energy Security and Climate Change Mitigation Act of 2007, establishes a commission to provide expert scientific guidance on future water supply and demand projections, climate change impacts to our Nation's flood risk and water demand and associated climate change impacts on water quality.

This commission would study current Federal, State and local water resources management programs and activities and ensure that the Nation is adequately prepare to meet the water supply, water quality and water resources demands of the next 50 years. This provision was incorporated into H.R. 3221, New Direction for Energy Independence, National Security and Consumer Protection Act which was approved by the House, August 4th, 2007.

My home State of Texas has had long experience in water resource planning. Following the drought of the 1950s, Texas began its initial efforts in statewide water planning.

In 1957, the State Legislature created the Texas Water Development Board. The board has prepared and adopted eight State water plans. Early efforts focused mostly on describing the State's water resources and then evolved into a focus on developing plans addressing water supply, conservation and environmental issues.

But, drought in 1997 was a watershed event for Texas. This devastating drought caused nearly $5 billion in losses for agriculture and related industries and caused widespread loss and anxiety over water supply shortages.

As a result of this statewide event, Texas totally changed its approach to water planning and moved from a very centralized approach to a decentralized process that put primary responsibility for water planning at the regional and local governments' level. The new process greatly increased public participation and implemented a bottom-up local and regional planning process. This new effort emphasized conservation and increases in environmental protection.

Texas has just released its 2007 water plan which is one of the most comprehensive State water plans produced, and I am pleased that we have William Mullican, Deputy Executive Administrator for Planning of the Texas Water Development Board here today to tell us more about this plan.

Mr. Baker.

Mr. BAKER. Thank you, Madam Chair.

I certainly appreciate your willingness to hold this hearing, and I look forward to hearing from our colleagues from Georgia and those with concerns around the Great Lakes this morning to learn their perspectives on this obviously critical circumstance. I also look forward to the second panel of experts who I hope will have what is not apparent to me, the appropriate remedies for us to adopt.

It is unfortunate that we really have to have a hearing this morning on the Water Commission Act as the past two Congresses have passed the measure. Had it made it through, we perhaps would have had an operational plan in place to more adequately prepare for these circumstances and for all involved to know what

appropriate steps to take. Not to speak ill of my colleagues on the other side of the Capitol, but a little production would be helpful.

Ensuring that we all have access to clean and sustainable quantities of water is an enormous responsibility. It is also very evident that the demand for clean water is expanding rather dramatically.

Even though States like Georgia which would ordinarily not be viewed as a likely location for drought, it can happen and public water supplies are dangerously low. It goes beyond the mere convenience of watering one's lawn or washing your car on a Saturday afternoon. It goes to the very quality of basic life.

I am hopeful that there are remedies within our reach, but I think it is tragic we find ourselves in this circumstance. We all knew this day would come. We just weren't sure when. Now we know. It is here and, perhaps, the remedies that can be attained will take considerable time, perhaps more time than citizens have available to them.

I just want to again express appreciation to the Committee and to my colleagues in the Congress for their generous and repetitive response to those in need in the State of Louisiana in our terrible time and absolutely commit the Louisiana delegation to be responsive to any region of the Country's needs, knowing that you were there when we needed you, and we certainly want to be helpful to you in bringing this to a speedy conclusion.

Madam Chair, I look forward to continuing work with you. Now having WRDA out and soon to be overridden in the Senate in about an hour, it gives us time to turn our attention to essential matters. I look forward to working with you.

I yield back.

Ms. JOHNSON. Thank you very much.

Just a question, do you think anybody who didn't vote for the bill won anything out of it?

Mr. BAKER. Oh, no, no.

Ms. JOHNSON. The Chair recognizes Mr. Salazar.

Mr. SALAZAR. Thank you, Madam Chair.

Today, I believe that Congress has to examine the alternatives for funding and updating our aging infrastructure when it comes to water, but I would like to give today a perspective from the western States of America. As you know, we have been suffering a drought for many, many years, and we deal a lot with agricultural water. We deal a lot with urban water needs as well.

Many of the Western water users are ag users and, without the financial resources to fund these necessary investments, they can't be made. While water allocation is a State water rights issues, much of the arid West's ag water infrastructure is from Federal resources. I believe that as we recently have seen in the Southwest, that drought, without Federal involvement, would leave us in dire straits.

I think consistent with reliable water-related data is a prerequisite for good water planning, and I certainly respect exactly what you are doing, Mr. Linder.

I believe that Congress has routinely reduced funding for the U.S. Geological Survey stream gauging program. Already a cost share program, the Federal share has now dropped below 50-50 partnership. I think that as we look forward to the 21st Century,

our commitment to our water infrastructure needs has to include at least a 50-50 partnership.

And so, with that, Madam Chair, I would like to turn my statement in for the record, but I would also urge you to look at the severe droughts that we are having not only in the Southeast but in the Southwest.

I certainly want to thank you for your commitment to addressing the water infrastructure needs of this Country. Thank you.

Ms. JOHNSON. Thank you very much, Mr. Salazar.

The Chair now recognizes Mrs. Miller.

Mrs. MILLER. Thank you very much, Madam Chairman. I certainly appreciate your calling this hearing.

I also voted for the override for WRDA and am pleased that we did work in a very bipartisan way on that. That is a critical piece of legislation, very, very important for the entire Nation. One of the reasons I was in support of it and voted for the override was because of the authorization for a number of projects that were critical to the Great Lakes.

I have a statement I would like to enter into the record, without objection, but briefly I would like to say this: I appreciate Mr. Linder being here. I have a high regard for him. I must tell you I have huge consternation about his bill that he will be testifying about today.

When we voted on this in the last Congress, I was one of 22 Members who voted against that, and let me tell you why. In full transparency, my principal advocacy, coming from the Great Lakes State of Michigan and that basin, is the protection of our magnificent Great Lakes which is 1/5 or 20 percent of our fresh water supply on the entire planet.

As other parts of the Nation are having droughts, which we have great empathy for and sympathy for what is happening there, I don't want to be looking at a national approach about anything that might talk about diversion of the Great Lakes to any other part of the Nation. I think that this bill could very well, in my mind, be looked at as a way of socialism almost for a national water policy, a national approach to water policy that needs to be looked at on a regional basis.

I don't think I am being too alarmist about this, and I would make just one example here. Recently, about three weeks ago, Bill Richardson, who is a Presidential candidate, the Governor of New Mexico, this is what he said. He said, I want a national water policy. We need a dialogue between States to deal with issues like water conservation, water reuse technology, water delivery and water production.

Okay, fair enough until he said, States like Wisconsin are awash in water. You can imagine the red flags that sends up to a State like Michigan and others around the Great Lakes Basin at a time when we are having historic low water levels in the Great Lakes.

As we have lost population and jobs to other parts of the Nation, people want to build subdivisions in deserts or whatever they are doing, God bless them, but do not look to the Great Lakes to solve the Nation's water problem.

I look forward to the testimony this morning. Thank you.

Ms. JOHNSON. Thank you very much.

The Chair now recognizes Mr. Mitchell.

Mr. MITCHELL. Thank you, Madam Chairman, and thanks for holding today's hearing.

As you know, we are long overdue for a comprehensive review of water policy, Federal water policy, and we haven't had one since 1973. This is particularly distressing to a State like Arizona whose population has more than tripled since then and whose habitability is so closely tied to the availability of a safe, reliable water resource.

Currently, Arizona is experiencing its 11th, and some people say 13th, year of drought. The Colorado River system as a whole is now in its 8th year of drought, and I believe it is past time for the Federal Government to study these issues.

I want to extend a special thank you and welcome to Robert Lynch who will be testifying before us today on the second panel. Bob knows these issues as well as anyone. He has worked on them for decades both in Washington and in Phoenix, and we are very lucky to have him here with us today.

I look forward to today's testimony. Thank you, and I yield back.

Ms. JOHNSON. Thank you, Mr. Mitchell.

Anyone else?

Mr. EHLERS. Thank you very much, Madam Chair, and thank you for calling this hearing.

Water is the essence of life, and I am sure all of you know it is important because you like to drink it and you need to drink it, but as a matter of fact the majority of our bodies is water. By far the greatest concentration of chemicals in our bodies is H2O, and that illustrates the extreme importance of water not just for us but also for plant life which also is largely water. That is why water becomes so extremely important and agriculture, forestry and so forth.

I would certainly like to second the comments of my colleague from Michigan, Congresswoman Miller. I would like to strengthen them, but the only way to make them any stronger than she has would be to add profanity, which I don't do, but this is a very serious matter.

The feelings in the Great Lakes States are so strong that if anyone tried to divert water, I suspect we would call up the militia and come to arms. We feel that strongly about it.

Our very existence depends on having that water. We have a major fishery, an $18 billion a year fishery in the Great Lakes. Some 40 million people get their drinking water out of the Great Lakes.

Frankly, the Great Lakes are going down as well. Lake Michigan has dropped almost two feet in the past couple of years. So the drought or whatever other conditions are causing this are affecting us as well.

So water is crucial. I think it is very important to have this hearing, and it is fine to get a national water policy. But I might point out that Congress has already passed legislation signed by the President, giving the governors of the Great Lakes States the authority of any diversion of water from the Great Lakes, and you can be assured that they would never allow diversion outside of the water basin. That is totally understood.

With that, I will yield back. Thank you.

Ms. JOHNSON. Thank you very much.

The Chair recognizes Ms. Hirono.

Ms. HIRONO. Thank you, Madam Chair.

Water is one of the naturally limiting factors that impacts the growth and development and the economy of any State. The State of Hawaii has a statewide water commission which is charged with deciding who gets what water. So, even within the State, it is a very, very difficult process.

I have no problems with the Federal Government coming in and acknowledging the importance of water resources throughout the Country, but at the same time I would like to make sure that the State of Hawaii, which is not even contiguous to all of the other States, if we are going to proceed in this way, that we acknowledge the unique circumstances of Hawaii in whatever we do.

Thank you, Madam Chair.

Ms. JOHNSON. Thank you very much.

Any other opening statements?

The Chair recognizes Mr. McNerney.

Mr. MCNERNEY. Thank you, Madam Chair, and I want to acknowledge your leadership on the Water Bill. That is very important to California and to the Nation. So I was proud to be a part of that, and I look forward to working in those issues.

I want to follow up on Mr. Baker's remark that we all knew this day was coming. Well, it is here now. What we are seeing in Georgia, I think we are going to be seeing elsewhere across the Country with increasing frequency.

In the West, we are used to droughts. We see those periodically. The demand for water is only going to continue to increase.

We are seeing severe problems with the ecology of the San Joaquin Delta. We are having to shut down pumps that transport water to 23 million people in California now to protect marine life. So we certainly appreciate the dilemma that the people in Michigan are facing with people exporting water from our region.

I think it is our responsibility in this body to plan for water supplies that could take up to 10 years or so or more to develop. So we have a lot of work to do.

I am anxious to see this hearing come forward and the testimony. Thank you, Mr. Linder, for your testimony and for your work. With that, I yield back.

Ms. JOHNSON. Thank you very much.

The Chair now recognizes Mrs. Napolitano.

Mrs. NAPOLITANO. Thank you, Madam Chair, for this very important hearing and I welcome our guest, the Honorable Mr. Linder.

We have discussed this issue on the Floor in regard to the necessity of being able to establish a commission that is going to take a wide and deep look at the status of water. We have not had to face it. I think it is very apropos at this time that we begin. We should have started 10 years ago, but then that is hindsight.

I strongly support your bill and look forward to working with you on being able to identify those areas that we know from our experience in the West, how we have either been able to deal with it or things that we need to begin to get the Federal Government involved in.

It is also, Madam Chair, very important that our agencies that deal with water work in tandem with Congress to be able to work out the solutions specifically dealing with contaminated areas, with being to address the filtering of water to be able to make it potable and not carry anything that has not been able to be filtered, and I am talking about drugs and things that get into the water, and ensure that there is sufficient water for the continued growth of the communities that we all serve.

The climate change has been diminishing our supply. We have heard how we can expect 100 years of climate change, that we have had 100 years of moist climate and now we are going to be having dryer climate. All of those are important issues so that we can take a look at not only our above-ground but our underground resources and how do we clean what we have so that we are able to face the challenges of the future.

We have no new water sources, so we must figure out a way of being able to identify where we can capture water and where we have contaminated aquifers that we can clean and be able to put to production.

The Federal Government has over 10 different water supply programs to recycle, reuse, desalinate, clean up and conserve our water resource within 4 Federal agencies, and we should bring those Federal agencies together to work out the solutions that we can all be supportive of. Your commission would create a national strategy to address the water shortages and recommend the improvements.

I am hoping that as we move along that it is done expeditiously rather than in the next 10 years. I think we need to face the fact that we need strong and fast action.

I thank you Congressman for bringing this to us and for authoring this important legislation.

Madam Chair, I yield back the balance of my time.

Ms. JOHNSON. Thank you very much.

We will now go to our first witness. We are pleased to have Congressman John Linder, sponsor of H.R. 135, the Twenty-First Century Water Commission Act of 2007, and we are pleased that you were able to make it this morning.

Your full statement will be placed in the record. We ask that you limit your testimony to a five minute oral summary from your written statement.

Congressman Linder, thank you.

TESTIMONY OF THE HONORABLE JOHN LINDER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF GEORGIA

Mr. LINDER. Thank you, Madam Chair, Mr. Baker and Members of the Committee. I am pleased to be here to talk about the Twenty-First Century Water Commission Act.

But, first, I want to hasten to assure my friends from Michigan that the only thing worse than a national water policy is a global water policy. This is not to establish a national policy for using water but to get people around the same table, to bring all the knowledge we have about water to the same place to advise the Congress and the President.

For example, California has the best conservation record in the Country. The rest of the States need to know how they do it. California has one other problem, though. Fifty percent of the water that falls on California goes to the sea, unused even once. They have to start using that water and reusing that water.

Tampa is doing a great job in desalinization. They are bringing the cost down to make it almost commercially reasonable. They have to improve that and share that technology with the other States, but the most important thing is there are ideas all across this Country and across the world that are making their way into the discussion. We have to get at the same table.

It is my fondest hope that some obscure expert from some obscure part of the world will bring some knowledge to us that we had no idea existed, so we can improve our storage, both above ground and underground, our conservation and, most important, repair our leaky pipes. Philadelphia loses 85 million gallons of water a day through leaky pipes.

We need to increase the revolving loan fund in the Clean Water Act, so that more States can fix their problems. We are fixing in Atlanta, a $3 billion problem with our sewage treatment. We ought to be able to borrow that money at low interest rates from the Federal Government under the Clean Water Act.

This is not to establish any new policy at the Federal level. This is not to establish any new Federal policy to tell people at the Great Lakes what to do with their water but to tell us all how to store more of it, how to use more of it. We are going to have to have Federal help with the borrowing of the money from the Clean Water Act at low interest rates, the revolving loan fund.

This was started after looking at what happened. How did we get our interstate highway system established? It was started in 1938 by FDR with a commission to bring all the knowledge and engineers to the same table. In three years, they came up with a proposal.

That proposal took 70 years to enact and get completed, but it got completed and the individual States controlled what went on in their States with their development. That is exactly how I see this happening.

Bob Lynch from Arizona, a water expert in the West, will testify after me. He will note that in 2003, when he testified for the first time, he was just as concerned as the folks in Michigan are about a national water policy. We hastened to assure him and others at that meeting, that that was not our intention.

Our intention is just to say what do we know about water, what do we know works across the Country, bring it to the President and the Congress, so the Congress can look at it and decide how to help improve our storage.

Thank you, Madam Chair.

Ms. JOHNSON. Thank you very much, Mr. Linder. I appreciate your cooperation and your valuable participation this morning. We will not pose any questions to you. We will talk about you when you are gone.

Mr. LINDER. Thank you very much.

Ms. JOHNSON. The second panel of witnesses consists of the Honorable Benjamin Grumbles—I don't think he misses one of our

Committee meetings—Assistant Administrator for the Office of Water, the U.S. Environmental Protection Agency.

We have Mr. William Mullican, Deputy Executive Administrator for Planning of the Texas Water Development Board; Mr. David Conrad, Senior Water Resources Specialist, National Wildlife Federation; Mr. Robert Lynch from Robert Lynch and Associates; Mr. Aris Georgakakos, Professor of the Georgia Institute of Technology.

As I noted to the first panel, your full statements can be placed in the record, and we ask that you try to limit your testimony to about five minutes as a courtesy to other witnesses. Again, we will proceed in the order in which the witnesses are listed.

Mr. Grumbles, you may proceed.

TESTIMONY OF THE HONORABLE BENJAMIN H. GRUMBLES, ASSISTANT ADMINISTRATOR FOR THE OFFICE OF WATER, UNITED STATES ENVIRONMENTAL PROTECTION AGENCY; WILLIAM F. MULLICAN, III, DEPUTY EXECUTIVE ADMINISTRATOR FOR PLANNING, TEXAS WATER DEVELOPMENT BOARD; DAVID CONRAD, SENIOR WATER RESOURCES SPECIALIST, NATIONAL WILDLIFE FEDERATION; ROBERT S. LYNCH, ROBERT S. LYNCH AND ASSOCIATES; ARIS P. GEORGAKAKOS, PH.D., CIVIL AND ENVIRONMENTAL ENGINEERING, GEORGIA INSTITUTE OF TECHNOLOGY

Mr. GRUMBLES. Thank you, Madam Chair.

I am Ben Grumbles, Assistant Administrator for Water, U.S. EPA, and it is an honor to appear before the Committee to talk about sustainable water policy and improving the coordination and integration at a national level and also a chance for EPA to discuss the three Rs of water sustainability: reducing waste, reusing water and restoring watersheds.

EPA, as you know, has over the last five years been implementing its four pillars of sustainability for infrastructure: better asset management, full cost pricing, water efficiency and the fourth pillar of a watershed approach.

But, today, as all of us are focusing in on the importance of water resource management, including quantity issues, it is important for us to articulate some enduring policy approaches, some guiding principles, and that is where the three Rs come into play.

Reducing waste and inefficiency is the first. EPA is not a regulatory entity when it comes to water quantity or water allocation. However, we, like everyone else, recognize the importance, the inextricable connection between quantity and quality, and so we are using our non-regulatory authorities to encourage and to provide technology and innovation for water efficiency, to cut the water waste.

I have spoken before to the Committee about the WaterSense program. We feel it is an extremely important part and it certainly would be a part of discussion, I am sure, with a water commission for the 21st Century to instill an ethic of efficiency and conservation.

As Congressman Linder noted, there is a tremendous amount of water waste, and the WaterSense program is based on the principle of there doesn't need to be sacrifice. Through technology and providing information to consumers and utilities across the Coun-

try and manufacturers, we can see water efficient products and appliances where families save money and water and energy as well. So the WaterSense program is a very important part of reducing waste and inefficiency.

The other R is reuse, reclamation and reuse of water, recycling water. I know this Committee is aware of that when you held hearings on water is the oil of the 21st Century. One of the solutions is technology. So to view water as a true resource and to reclaim it, the continued press for innovation on desalination and wastewater reclamation, indirect reuse, potable reuse is an important one.

It also includes stormwater. One of EPA's visions is to work with communities to view stormwater not as a waste product but as a water resource.

The Administrator has kicked off a campaign, a movement, a green infrastructure movement which is supported by grassroots and national organizations across the Country to view stormwater as a true resource and use rain gardens and wetlands and greening watersheds, retaining water to reuse it at a later point in time. So that is a very important component of water resource sustainability.

The Western Governors Association, which is focusing in on water sustainability, is also very much aware of the need to reuse and reclaim. We see communities throughout the Country, desal plants, as the Congressman mentioned, in Tampa Bay or El Paso, a desalination plant, are very important ones.

The third R is restoring, restoring watersheds. We all live downstream. So if steps are taken upstream to reduce the pollution through wetlands and buffer strips and through pollution prevention practices, that can reduce the treatment costs downstream and help provide for a healthier watershed.

Those are the three Rs.

What I would like to articulate, Congresswoman, is that a very important part of all of this, which is one of our pillars of sustainability, is full cost pricing. A key to making true progress toward sustainability is for citizens, governments, communities to pay the true value, to recognize the true value of water and water infrastructure, so that we all appropriately invest in those assets.

The last thing I would like to say is with respect to H.R. 135, I commend Congressman Linder for his leadership on this issue. While the Administration doesn't have an official position on the bill at this time, we recognize there are some very, very important and timely components that are part of this legislation and the discussion.

I, myself, do not read the bill as providing some type of mandate or a hint towards looking at interstate diversions or threatening other water bodies or about water grabs, but I do see value in having discussions that emphasize the importance of State and local rights when it comes to water quantity and focusing in on private sector and entrepreneurial solutions and better integration among the Federal agency programs.

Madam Chair, I appreciate the opportunity to be part of this important panel and the discussion, and I look forward to answering questions you or your colleagues may have.

Ms. JOHNSON. Thank you very much.

Mr. Mullican.

Mr. MULLICAN. Thank you, Madam Chair. Thank you, Members of the Committee.

For the record, my name is Bill Mullican with the Texas Water Development Board. I would be remiss this morning, Madam Chair, without recognizing on behalf of the citizens of the State of Texas, your own work in the development and passage of the Water Bill. In Texas, this has become of paramount importance to us. So we just want to thank you for all your efforts in that regard.

I also thank you for your introductory remarks about the regional water planning process in Texas, and that is really what I want to talk about primarily this morning. In 1997, the State changed the way we do water planning.

We had been doing it for 40 years, but the reality of what we learned is that if there is this top-down planning process put in place, then the reality of it is the local and regional project sponsors will not have any buy-in or support to that planning process. Therefore, the chances of implementation are almost zero.

As such, we now have a process that is based on local and regional participation in that planning process. Already, just after 10 years of being engaged in this effort, we have produced two State water plans that were solely based on the recommendations of the local and regional water providers and 11 other interest groups that are required to be part of that planning process through a consensus-building process, and we are already seeing remarkable levels of implementation of that process.

Just in brief, the results of the 2007 State water plan are that Texas will more than double its population over the next 50 years from about 23 million to over 46 million people by 2060.

As part of that planning process, you have to understand that this is not just a plan based on regional plans, but in Texas it is based on about 2,600 individual local plans. The decisions and recommendations are developed by those local and regional entities that participate in the planning process.

Of those 2,600 entities, those local plans are then integrated into the 16 regional water plans which are then integrated into a State water plan.

The results of the most current planning process are that, and they are rather sobering results, for the very first time our demands for water supply in Texas during drought conditions will be increasing from over 18 million acre feet today to over almost 22 million acre feet by 2060. This is compared to a currently available water supply of about 17.9 million acre feet today decreasing to about 14.5 million acre feet by 2060.

As such, we already have right now today, during drought conditions, about a 3.3 million acre feet per year deficit of water supply. If we do nothing in Texas, we project that number will increase to almost 9 million acre feet. In 2060, if we do nothing, we project that 85 percent of the people in the State of Texas will not have adequate water supply during drought conditions.

Due to the enormity of those conclusions, the Texas Legislature in its most recent session not only enacted several of the policy recommendations that came out of that planning process including the

designation of 19 unique reservoir sites, but they also appropriated over $760 million to begin the process over the next two years of building the water supply projects that are going to be needed to meet our future water supply needs.

With that success, I would just point out a few things about the bill that I think are appropriate to H.R. 135.

First and foremost, Texas has a long experience in water planning. When you look at the kind of success that we are having in our water supply planning today and you look at the diversity that occurs within the State of Texas, where in far west Texas our precipitation average is about six inches a year and in far east Texas our precipitation averages about 60 inches a year, there is an order of magnitude difference in the amount of precipitation that Texas receives from west to east.

When you look at that kind of diversity, it seems to me it would be appropriate to make a comparison on a national scale to what we are facing today.

As a result of that, I think it is incumbent upon you to consider ensuring in this planning process, in this evaluation process that it is truly a grassroots effort, that the local and regional water providers, the tribes and the States are the people that are driving this process and making the recommendations to Congress on what needs to happen from a national water policy perspective.

Second, I work with a lot of States in the United States on their water planning process as they try to move towards implementation of the Texas model. The reality of it is the data, the basic data needed for this kind of planning simply does not exist in a vast majority of the States.

Third and in conclusion, the reality of it is there is a $9 million authorization in this bill. Take it from someone who has been responsible for doing the budgets for the State of Texas over the last 10 years for this process, $9 million not only is totally inadequate to do this job, but the reality of it is it sends a message for a deliverable or a product that will be totally inadequate in the end for this process.

Thank you very much for the invitation to be before you today.

Ms. JOHNSON. Thank you very much.

Mr. David Conrad.

Mr. CONRAD. Good morning, Madam Chairwoman, Ranking Member Baker and Members of the Subcommittee.

My name is David Conrad. I serve as Senior Water Resources Specialist for the National Wildlife Federation, the Nation's largest conservation education and advocacy organization.

On behalf of the National Wildlife Federation, I appreciate the opportunity to testify on H.R. 135, the Twenty-First Century Water Commission Act. We applaud Representative Linder for introducing this bill and the now 27 other Members who have joined as cosponsors. This is a vitally important subject for legislation, and we believe there is a strong need for a new national water commission.

The issue of water resources is critical to national security, economic security, the health and well being of our citizens and the wildlife and ecological health of our Nation. International tensions over shared water resources are increasing as water becomes scarcer and water quality is compromised.

Many of our communities cannot afford necessary upgrades to their antiquated sewers, water treatment and delivery systems. Wetland resources continue to decline. Our Nation's flood risk is increasing. The need for broad-based planning in water resources in virtually every area of the Country is increasingly clear.

For these reasons, we would urge an expansion of the scope of the commission in the bill from its current narrow focus on water supply. We believe a broader mandate that reflects the wide variety of water resources issues that we face would better serve the Nation's interests.

Thirty-five years have passed since the last national water commission issued a report to Congress and the President on our Nation's water resources. The duties of the 1973 commission were very broad, and the commission's report provided insights on a wide range of issues ranging from the effects of water management on the economy, groundwater issues, State and Federal water law, interbasin transfers, the emerging concerns about the environment, financing, project evaluations and the roles and governance of water.

A lot has changed since the 1973 report, not just technologically but also ecologically as well as our understanding of water concerns. Today, we are becoming increasingly aware of the delicate nature of our aquatic ecosystems and how dependent we are on the natural services that in the past we have often taken for granted.

We have learned that interbasin transfers often are accompanied by transfers of invasive species, which do ecological harm, and increased political tensions due to threats to downstream communities' water supplies.

The reality of global warming can no longer be denied. The Intergovernmental Panel on Climate Change has made clear that global warming is expected to result in profound effects on water cycles, more drought in the West, more flooding and droughts in the East, higher sea levels along our coasts. Therefore, we urge the Committee to specifically require the commission to examine the impacts of global warming on our Nation's water resources including flood risks, water quality and wetland habitats.

We would draw the Committee's attention to Section 8207 of the House-passed Energy Bill that the Chairwoman mentioned in her opening statement. This would authorize a commission similar to the commission in H.R. 135.

The language, in addition to projecting future water development and optimizing future water supply, would also suggest strategies to use best available climate science and projections of future flood and drought risk, promote incentives for development of comprehensive water plans, support low impact development, encourage the use of and reduce biases against nonstructural elements and approaches when managing stormwater, address sewage overflow problems and support regional watershed planning. We urge the Committee to consider adding these important components to the duties of the commission.

We also believe that the commission should definitely include members appointed by the Congress as well as the President. This would likely give the commission a broader base of support for the difficult tasks it would face.

Finally, we would also like to draw the Committee's attention to the Water Resources Council which acted as a Federal integrated water resource planning entity from 1965 to 1983. The Water Resources Council assessed the adequacy of U.S. water supplies and produced the principles and guidelines which are guidelines for evaluating federally-funded water projects.

We strongly urge the Committee to consider requiring the 21st Century Water Commission to evaluate the possibility of reviving the Water Resources Council or an entity with a similar function.

Again, Madam Chairwoman, Members of the Subcommittee, we applaud your work in holding a hearing on this important legislation. We all share a moral responsibility to protect our water resources and to protect our children's future. Thank you.

Ms. JOHNSON. Thank you, Mr. Conrad.

Mr. Robert Lynch.

Mr. LYNCH. Good morning, Madam Chairman and Members of the Committee.

I am Bob Lynch. I am an attorney in Phoenix, Arizona. I really don't want to talk about the bill so much as how we got here.

Before I start, I want to bring greetings to you from Leroy Goodson. Leroy is at the NWRA, the National Water Resources Association annual meeting, where I was going to be until you graciously decided to have this hearing. He also wanted me to advise you that he has a candidate for the commission if this bill becomes successful.

I serve, among other things, as the Chair of NWRA Water Property Rights Taskforce which is probably the reason I ended up getting involved in this, and I actually testified against the original version of this bill in 2002. Western States had great concerns about the sovereignty of their adjudication and water rights management processes which we, I will tell you, you already know, guard very jealously.

I will assure the Members from Michigan that there will be World War III before you get raided because if you can get raided, so can we, and that will happen over my dead body.

So this commission has a very important role to play, and we hope that you will favorably consider this bill, but we started with a dialogue. Once the original bill was introduced and some problems were identified, I and others literally shopped the idea around the Western United States to water professionals, water lawyers, water buffalos, anybody who would talk to us, and we got a lot of input. We got a lot of support.

I am here to tell you that for its third go-round in the House of Representatives, this bill is supported by State water agencies in the West. It is supported by the Western States Water Council, the water arm of the Western Governors Association. Everybody who cares about water in the West has had a look at this from the get-go, two Congresses ago, and has supported it.

I testified in favor of this bill in 2003 because we had that iterative process that made things work and made the people in the West, who guard their sovereignty very, very carefully, comfortable.

I call your attention to the provision in the bill on page three that says that this task will include respecting the primary role of

States in adjudicating, administering and regulating water rights and water uses. Without that provision, I would not be here in support of this bill, and Western water interests would not support it. It is that critical.

So, for those of you from other areas of the Country who are concerned about the ability of your States to deal with their resources, I am here to tell you we share that concern and that has been a primary motivating factor for us to be very careful about the language of this bill and to protect the rights of the States concerning water.

I hope that if you decide to move in the direction or in some part of the direction of the provision that is in H.R. 3221, that you give some of us the opportunity to assist you in developing some language. I am troubled by some of the verbiage in H.R. 3221. I don't know that it was intended to have some of the consequences it has, but it appears in certain phraseology in some of the paragraphs to be more limiting than I think you probably intend it to be.

So, in closing, I just want to say that we do support this bill. It is an important bill.

I was at the Justice Department in the late 1960s and early 1970s when the National Water Commission was doing its work and litigating these issues. It has been a long time and, as Mr. Conrad said, this is an issue that needs focus from this Congress.

Thank you very much for the opportunity to testify.

Ms. JOHNSON. Thank you very much.

Dr. Georgakakos.

Mr. GEORGAKAKOS. Thank you, Madam Chair.

My name is Aris Georgakakos, and I am Professor of Civil and Environmental Engineering at Georgia Tech in Atlanta, Georgia. I am also Director of the Georgia Water Resources Institute.

GWRI has been developing and implementing information and decision support systems for water resources planning management in several world regions including the Southeastern U.S., California, Europe, China, East Africa and South America.

I would like to thank you for the opportunity to testify in support of H.R. 135 advocating the establishment of a water commission to develop recommendations for a comprehensive water strategy. I cannot overemphasize the need for a comprehensive strategy as water challenges are becoming increasingly complex, threatening our quality of life, compromising the integrity of the Nation's environment and ecosystems, and undermining economic growth and prosperity.

In 2001 and 2004, two National Research Council studies thoroughly examined the urgency and complexity of water resources issues facing the U.S. Among others, the report cited that:

There is abundant evidence that the condition of water resources in many parts of the Country and the world is deteriorating.

Our institutions appear to have limited capacity to manage the provision of ecosystem services while concurrently supplying human needs.

Demands for water resources to support population and economic growth continue to increase although water supplies to support this growth are fixed and already fully allocated in most areas.

The frequency and magnitude of damages attributable to droughts and floods are increasing and so is our society's vulnerability to extreme climate and weather events.

My own State of Georgia is presently in the second year of an unprecedented drought, rapidly depleting our water supplies, halting our economy, threatening the sustainability of aquatic ecosystems and increasing tensions among water users in our State and across the borders with Alabama and Florida.

While droughts are the result of a natural climate cycle, drought stresses and impacts reach a new height with every new drought as urban, industrial and agricultural water demands rise steadily. Georgia, as well as most U.S. regions, is not well prepared to effectively manage these unprecedented water stresses.

The main reasons are lack of comprehensive knowledge and information on the interdependencies of natural process and water uses, narrow perspective of water user groups on local rather than basin-wide interests, lack of Federal and State agencies coordination and cooperation, insufficient Federal and State research investments on the modernization of management processes, and weakening of water resources research and education programs.

I would like to briefly comment on each one of those areas.

On knowledge and information, the NRC reports developed a comprehensive list of 43 areas needing further scientific inquiry. These areas pertain to the interdependence of water quantity and quality, the balance between human and ecological water uses, and the legal, institutional and social factors that contribute to sustainable water resources management.

While there is a lot to learn, a lot is already known and can significantly benefit the water resources planning and management. However, making this knowledge and information meaningful for and accessible to those involved in decision-making is a very serious challenge.

Paradoxically, in spite of our information age, water resources policymakers, managers and stakeholder groups are becoming ever more removed from current scientific and technological advances. There is thus a compelling need to establish and invest in effective information and technology transfer mechanisms.

On local versus system-wide scope, water stresses are often compounded by the efforts of individual stakeholders acting to safeguard their own local interests without regard of the long term risks of their actions. A local and short term scope by each stakeholder group, sharing the resource, cannot be sustainable and only serves to hasten the depletion of water reserves and the onset of disastrous impacts for all.

This tragedy of the commons scenario is likely to occur when water uses and impacts are planned and managed individually without regard for their multiple temporal and spatial linkages. It is thus imperative that the proposed water commission take a holistic perspective in the development of a comprehensive national water strategy.

On Federal and State agency coordination and cooperation, water resources management falls within the mandates of many Federal agencies. In reviewing the existing Federal coordination mechanisms, the NRC reports concluded that "coordination among agen-

cies has occurred only sporadically over the last several decades, despite repeated calls for more coordination."

As a result, the national water resources agenda among the Federal agencies is fragmented, has a disciplinary rather than a broad and holistic scope, and is unable to provide the breadth and depth of information needed by the political process.

Furthermore, although Federal and State agencies must work together to ensure harmonization of and compliance with Federal and State laws in the management of trans-boundary water resources, the existing coordination and cooperation mechanisms, if any, have been ineffective, and more often than not turn water conflicts and disputes into costly litigious battles.

This ineffective Federal and State agency culture and modus operandum need to be improved so as not to undermine implementation and positive impact of the H.R. 135 commission strategy recommendations.

On the lack of investments, a striking finding of the NRC reports was that over the last 30 years total funding in the areas of water supply augmentation and conservation, water quality management and protection, water resources planning and institutional issues, and water resources data collection declined severely. As a result, long term basic research and technology transfer in modern methods of water resources planning and management have been neglected, and the majority of our water resources are managed by reactive, disciplinary and inefficient methods and procedures.

In a recent assessment of the ACF River Basin in the Southeast, GWRI demonstrated that the use of modern forecast decision methods can mitigate drought impacts and sustain adequate water services for all human users and ecosystem. Similar assessments and similar findings have been carried out and obtained for the Northern California river system as well as for other river basins.

The main impediments in the use of modern management methods are, first, the inflexible bureaucracies that have evolved around the use of old management procedures and, two, inadequate training of agency personnel. Thus, a promising and largely unexplored strategy to address water scarcity is the modernization of the current management procedures through recent but proven scientific advances which are transferred to professional practice through education and training.

The other casualty of declining funding has been the weakening of our water resources research and educational programs. At a time when universities increasingly depend on soft funding, faculty positions and student support migrate to other higher priority areas. In sharp contrast to the 1960s, 1970s and 1980s, very few academic programs can now claim significant expertise in water resources.

This is not to imply that academic programs are shrinking. On the contrary, they are expanding to cover much finer and very exciting frontiers of geophysical, environmental and life sciences. In doing so, however, universities have lost their commitment to interdisciplinary education and are becoming overspecialized.

An important role that water resources programs can play is to provide a scientific and policy framework for interdisciplinary research, education and technology transfer. Such a framework is

necessary to create broadly educated scientists, engineers and policymakers able to invent technological and institutional solutions for the Nation's water resources and environmental challenges.

In this regard, the Water Resources Research Institutes provide a unique network to address the need for interdisciplinary research, education and technology transfer. However, the Institutes cannot fully realize their potential at the current low rate of Federal and State funding. I hope the commission envisioned by H.R. 135 will also address the need for sustainable and sufficient investments needed to reverse the continued weakening of our water resources programs.

Thank you for the opportunity to testify before this Committee. I strongly support the establishment of a national water commission to study and develop recommendations for a comprehensive water strategy to address our Nation's future water needs. Thank you.

Ms. JOHNSON. Thank you very much.

Unfortunately, we will have to have a short recess so that we can vote, and we will return for the questions.

The Subcommittee is in recess.

[Recess.]

Ms. JOHNSON. The Committee comes to order, and we are now ready for our questioning.

I would like to first ask Mr. Mullican a question. It appears that Texas' long experience with water planning has evolved from a relatively narrow focus on water supply to a broader look at the comprehensive watershed planning. Have you found this approach to be more satisfactory in planning for future water?

Mr. MULLICAN. Yes, ma'am. The point of looking at our planning process from a watershed basis is that until you get to a level of sophistication where you can truly integrate all of the demands and all of the supplies and the interaction of those demands and supplies on a watershed basis, you are going to continually overlook opportunities for optimizing the system.

So, for example, in Texas, one of the things that we look at is rather than operating a series of reservoirs within a watershed on an individual basis, we will look towards operating them as a system. Simply as a function of operating those reservoirs as a system within a watershed can result in significant increases in the supplies available to meet water needs.

Ms. JOHNSON. You discussed the lack of data, that Texas is investing heavily in data and science for water resources. Do you feel it should be a Texas responsibility or do you see a greater Federal role?

Mr. MULLICAN. Well, Texas is more than willing to assume its fair share of the costs and effort that is required for water data collection and for the science that goes along with it, but the reality of it is when you look at the impact on a variety of Federal acts such as the Clean Water Act, Safe Drinking Water Act, Endangered Species Act, you cannot ignore the fact that those actions do have a consequence and do establish a Federal role at least in the aspect of making sure that we have adequate data to make the wise policy decisions that we must make.

As was mentioned earlier in the panel, it is very frustrating to have this deterioration in Congressional funding for the USGS for their basic data collection program because what that does is it just simply transfers that cost share responsibility on to the State. We have for the last several sessions and will continue this session and into the next to work with you and Congress on getting back to a point where we are truly in a 50-50 working relationship on the data collection activities.

But we are not going to stop there because the reality of it is there are many parts of the United States—and again this comes from my working with other States—where the data simply is not being collected. There are huge gaps in the data that are needed to make the financial decisions and the policy decisions with respect to our water resources.

One does not want to go out and build a billion dollar water supply project that may have an environmental component to it, that may have a power, hydroelectric component to it. You do not want to make that kind of investment when you have inadequate data to ensure that the water supplies that project is supposed to be developing will actually occur.

And so there must be a balance. That is what Texas has been working on for a time now, a balance between State and Federal roles in the basic data collection and science development, the development of new techniques and scientific models that we need to ensure our future water supplies, and I think that also goes over into climate change issues.

We must look at adaptive management tools so that we can be responsive to the needs of the States to develop their water supplies. I think that when you look at the national perspective of things like that, it is really more appropriate for the Federal Government to be involved in the science of developing those new models rather than having 50 different States making an investment basically to develop the same tool.

Ms. JOHNSON. Thank you very much.

Mr. Grumbles, climate change is likely to impact a host of water resource areas, and these include increases in water pollution, more extreme weather events impact on water, reduced availability of water supplies in some areas because of drought or saltwater intrusion, and change in aquatic biology. EPA is obviously involved in these areas, but so are many other Federal agencies, not to mention State and local governments.

In your opinion, how should the Federal, State and local governments, not just EPA, best plan and prepare for limiting the impact of climate change on these vital shared resources?

Mr. GRUMBLES. Thank you, Madam Chair.

A couple points I would make, one is making sure that we can all identify appropriate issues, so we can be proactive about the range of climate change impacts.

EPA has developed and we have an internal work group. We have been spending an enormous amount of time and effort identifying potential issues, a range of different effects and considerations so that we can be proactive and have adaptive management, and we are working on developing a draft strategy that we would then finalize after public comment and input.

The key is coordination with other agencies and levels of government and move forward in a responsible manner that recognizes that there is a need for adaptation and continued research on some emerging areas.

There is also an important component of working on mitigation of greenhouse gases. So a good example of interagency collaboration is with the Department of Energy where we are recognizing the potential of aquifers, not aquifers but underground storage areas for deep injection of carbon dioxide to help mitigate greenhouse gas emissions. That is an emerging area.

We are working with them and working with the Interior and Army Corps of Engineers, looking at a range of wetlands and water supply issues and impacts.

At the same time, it is very important to be working with those who are closest to the ground, and that means the utilities, water and wastewater utilities, and State agencies on what their particular needs, whether it is a coastal concern about sea level rise or an inland concern about potential water quality or water quantity-related impacts from ethanol or other biofuels.

There is no doubt this is an important component of climate change, looking at the water-related aspects, and we are certainly committed to doing that within EPA and coordinating with other agencies at the Federal, State and local levels including tribes.

Ms. JOHNSON. Thank you very much.

The Chair now recognizes Mrs. Miller.

Mrs. MILLER. Thank you very much, Madam Chair.

At the risk of sounding like a broken record about the Great Lakes, that is why I came here today, so I am going to say my peace about our Great Lakes here again.

Notwithstanding some of the comments earlier from Mr. Lynch and your assurances that under no circumstances do we ever have to worry that any part of this legislation would ever be a problem for us, I have red flags all over the field on this piece of legislation. I just have to keep reiterating that.

I say that, the huge consternation that we have, because in the Great Lakes Basin we have had bad experience in the past every time the Federal Government has gotten involved with anything regarding the Great Lakes. I will just give you two quick examples of things that have happened, that are manmade by the Federal Government, by the Army Corps of Engineers, that are literally diverting billions of gallons of Great Lakes water right now.

In one instance, if you think of Michigan, right here in the St. Clair River, as Lake Huron comes into the St. Clair River, the Army Corps of Engineers in the early 1960s did extensive dredging there actually to open up the upper Great Lakes to shipping which was a great thing, but subsequent dredging and erosion has, we think—there is a huge theory out there—it has actually effected something like a bathtub effect, like the drain out of a bathtub. We are literally diverting billions of gallons over the Niagara into the big pond there because of that.

Another example is at the mouth or the foot of Lake Michigan, the Chicago diversionary canal, again constructed by the Army Corps of Engineers years ago, and I appreciate the drinking water part of that, but billions of gallons of Great Lakes water is being

flushed down the Mississippi River to float the barges in the Mississippi, again at a time when we have historic low lake levels.

We are very, very concerned about this piece of legislation. I just want to tell you that I intend to make sure that every Member of Congress in the Great Lakes Basin from every State, which would be Michigan, New York, Ohio, Indiana, Illinois, Minnesota, Wisconsin and Pennsylvania, receive my own lobbying, I guess, to make sure that they understand that this piece of legislation could have negative ramifications for us in the Great Lakes Basin.

I think, as you look at a national model, for instance, in the Great Lakes, our governors have a covenant, an annex actually, the governors in the Great Lakes Basin as well as the provinces of Canada because we share the long liquid border there, to ensure that there is never any diversion of the Great Lakes.

Let me just say accolades to all of you for your fantastic water conservation and things that you are doing in your own States, in your own regions. God bless you. I think it is wonderful.

I am very parochial about this, and I know you might think I am alarmist, but this is where I am going with this. It is such a big issue for all of us.

If you just think of this, I don't know how much this water costs. Maybe it is a buck, right? If you think about how much it costs for a gallon of gasoline, let's say it is $3, maybe a little bit more. Let's say it is $3. I mean a gallon of bottled water is $6 to $8, and you can actually live without the gas, but you cannot live without fresh water.

So it is an asset that we have in the Great Lakes Basin, and we do intend to make sure it is not diverted to other parts of the Nation.

My question would be to each one of you. I have only one question. I would like you each to answer this. Would you still support this bill if there was language in the bill which clearly spelled out that under no set of circumstances could any national commission that would be comprised by this bill ever consider any diversion of Great Lakes water?

If there was boilerplate language to iterate that in the bill, would you still support this bill that you have all testified on? That is my question for the panel.

Mr. GRUMBLES. I will start, Congresswoman. I think it is important for any commission or any entity or agency to recognize existing law, Section 1109 of WRDA 1986, which makes it very clear that if there is a Federal agency involved in a project or even study of a diversion from the Great Lakes that doesn't have the support of the Great Lakes governors as spelled out in Federal law, then that is prohibited.

I think the value of having certain savings clauses or provisions in the bill that identify what is the scope of the commission's considerations is an important one. I think there can be a danger, though. It runs the slippery slope of starting to take broad discussion areas off the table.

But I certainly understand that, and I think other regions of the Country would understand that it should be a discussion about not perpetuating problems but coming up with solutions and then suggesting them to policymakers.

I think the bill, as currently written, does make a pretty strong signal about deferring to States on water quantity, water allocation, water diversions. I see value in clarifying that or strengthening it, but I do think there can be a danger to starting to take specific issues or areas off the table for a commission to consider.

Mrs. MILLER. I will take that as a definite maybe. Thank you.

Mr. Mullican.

Mr. MULLICAN. Well, in 1968, the State of Texas passed a water plan that would have in part put an interbasin transfer that would have diverted water perhaps out of the Mississippi, perhaps from as far as your part of the world, and the voters of Texas voted it down. And so, I think I can say that we would not have a problem just on the face of it with excluding the Great Lakes from consideration as far as water supply to Texas is concerned.

But I would even go further, though, to say that based on the Texas experience, that I think there has to be a certain amount of buy-in to anything that comes out of this process for there to be any chance of any consideration or implementation by those that are responsible. I mean the local and regional water providers.

As such, it seems to me that the focus of this particular first step is a true assessment of what and where are the demands and when are they going to occur and where are the needs because until we get that fundamental understanding of our water supplies, then to me you are putting the cart before the horse when you start worrying what are the recommendations for how we are going to meet our future water supply needs. You are making an assumption that we know what those needs are.

I will argue, having worked with a number of States across the United States, that that very basic understanding does not exist in most States in the United States. So, first and foremost, there has to be some sort of assessment to understand what those needs are and where they are going to occur. Then you can think about what the potential solutions might be, but I really want to emphasize that putting the solutions before the assessment is, as Mr. Grumbles said, a very slippery slope.

Mrs. MILLER. Thank you.

Actually, I am out of time and, with the Chair's indulgence, perhaps just another 30 seconds for the other three to answer if you could. Thank you.

Mr. CONRAD. Thank you, Congresswoman.

I respond somewhat to some of the caveats that Assistant Administrator Grumbles has there about the commission being essentially a study group that wouldn't be empowered to actually make decisions.

I am going to say, first off, the National Wildlife Federation is one of the staunchest supporters of the integrity of the Great Lakes, and we strongly support both the law that was passed in 1986, the compact that exists.

In 2005, I believe it was, our organization, which has a kind of national legislature of affiliates, adopted a very strong policy view that interbasin transfers should really be discouraged and not allowed except under the most narrow circumstances. It was almost a don't do it policy, and I think we believe that for all the major basins.

Mrs. MILLER. Thank you.

Mr. Lynch?

Mr. LYNCH. Mrs. Miller, I must confess that I was born in Manistee on Lake Michigan, and my extended family still farms south of Grand Rapids.

Mrs. MILLER. I knew there was something I liked about you.

Mr. LYNCH. And so, all I can say is I experienced appropriations bills here, oh, for three decades from a gentleman by the name of Scoop Jackson who said there will be no transfers from the Columbia Basin to the Colorado, and everybody got the message.

I hope that this commission would be able to consider your concerns that you have voiced today about things going on in the Great Lakes, but I would join Mr. Conrad. We are not interested in having you raided for anybody or solutions like that.

The West is as paranoid about its sovereignty as you are about the Great Lakes, and we join you in that paranoia, and we will do everything we can to preserve the prerogative of the States in addressing these issues.

Mrs. MILLER. Thank you.

Thank you, Mr. Chairman.

Mr. HALL. [Presiding.] You are welcome, Mrs. Miller.

Mr. Georgakakos, would you like to briefly answer the same question?

Mr. GEORGAKAKOS. Thank you, yes.

Water resources is a common good, and it is never meant to pit one part of the Country against another. So I would not support a bill that actually does that.

But it should be a process that is the result of the consensus, a regional consensus, and only then if it is discussed democratically and is agreed upon that perhaps it is a solution, then it should become a bill and then we should be asked to vote for it.

Mrs. MILLER. Thank you very much, Mr. Chairman.

Mr. HALL. Thank you, Mrs. Miller.

You can add me to the list of people you will be lobbying because New York State also has a long stretch of Lake Ontario and little teeny bit of Lake Erie and, of course, we are concerned about Great Lakes water as well.

Mr. Georgakakos, you discuss a reduction in funding for research and a decline in academic programs. Is this a U.S. problem or is this a short fall in research funding plaguing science globally?

Mr. GEORGAKAKOS. I mentioned it specifically about water resources programs. As I said, back in the 1960s and 1970s and 1980s, there were good programs in many universities of ours, but if you look now I think very few universities can claim the expertise that I talked about in terms of adaptive forecast decision methods and management.

So somehow it is the natural consequences of actually moving into more finer frontiers of science and funding those as opposed to making sure that we maintain the integrity of our academic programs.

I would say that if we are going to create solutions and invent solutions looking to this interdisciplinary question, we need to have people educating in that regard. I think this is the kind of funding

that we need to maintain the programs and have the people that are going to find the solutions.

Technology is not going to do it by itself. It is the people that are going to put things together. I am worried that without this funding we are just putting ourselves in the situation that we cannot do that.

Mr. HALL. Thank you.

Mr. Grumbles, you mentioned in your testimony high efficiency toilets as a concrete or a ceramic way to make an immediate impact. I noticed on a recent trip to Israel that all of the toilets there had two buttons, the little button and the big button, and I think most people in the United States can figure out which was the one to hit.

Is this something that you think the American public would accept and the Administration would look kindly on as a mandate, if I dare use that word?

Mr. GRUMBLES. I don't think we would accept a mandate. The Administration feels that the most successful approach is to encourage the market to develop innovative, sustainable solutions.

Our WaterSense is certifying. We have certified and given the WaterSense high efficiency label to over 80 different types of toilets now, and some of those are the dual flush toilets. We leave it to the consumer to choose.

We see and want to encourage products like that that work well and save water and save money on the energy bills for utilities, to continue to use those. So the dual flush toilets are one of many exciting innovative technologies that are really taking hold and there is an increasing use of dual flush toilets.

Mr. HALL. Excuse me for interrupting you because we have votes called and I only have a couple minutes, but I just wanted to ask you if the combination of public outreach and incentives are, in your opinion, working enough to make this change?

Mr. GRUMBLES. Right now, the law is 1.6 gallons per flush or less for toilets. What we are focused on is trying to increase the efficiency of that to 1.28 through incentives and encouragements, and we see that the marketplace will drive more and more consumes voluntarily to use those dual flush and other truly high efficiency toilets.

Mr. HALL. Thank you.

I wanted to ask the question, and it bears on Mrs. Miller's question about certain regional concerns but also on the regional supply of renewable energy that could be used for desalinization or for water purification.

Now an Israeli company, Solel, which is currently building a photovoltaic in the Mojave Desert to supply electricity for about 400,000 homes in partnership with PG&E. The nice thing about solar, among other renewables, is that it generates sometimes, it doesn't at other times, but when it does you can use it for storage of whatever you are trying to produce, be it power or water.

So I am curious of the commission, what do you foresee?

I would ask maybe Mr. Conrad first, do you see the commission as studying desalinization technology and do you think that, for instance, in the Southwest where there is such an abundant supply of sunshine and also proximity to water, be it from the Gulf or from

the Pacific, that that is a viable way to try to bring a new supply of water on board?

Mr. CONRAD. I believe that is the kind of forward thinking that a commission of this sort needs to do. It needs to look at technologies and mixtures of technologies that are being tried in other places or being tried within the United States and not generally known and whether they are valuable and to bring that forward to the Congress and to the public.

Mr. HALL. Thank you very much.

Thank you all for your testimony.

We have to leave for another vote. At this time, if Mr. Brown and Mr. Arcuri will agree, we will ask Members to submit the balance of questions to the witnesses and answers will be taken for the record rather than having you sit here and go and vote for who knows how long.

Thank you again for your testimony, and the hearing is now adjourned.

[Whereupon, at 11:47 a.m., the Subcommittee was adjourned.]

STATEMENT OF THE HON. RICHARD BAKER
HEARING ON
H.R. 135
THE "TWENTY-FIRST CENTURY WATER COMMISSION ACT OF 2007"
NOVEMBER 8, 2007

- THANK YOU MADAM CHAIRMAN, WHILE I APPRECIATE YOUR HOLDING A HEARING ON THIS VERY IMPORTANT LEGISLATION, I AM NOT SURE A HEARING IS REALLY NECESSARY.

- H.R. 135, THE *"TWENTY-FIRST CENTURY WATER COMMISSION ACT OF 2005,"* HAS PASSED THE HOUSE NOT ONCE BUT TWICE OVER THE SPAN OF THE LAST TWO CONGRESSES. WORSE, IF THE SENATE HAD ACTED ON THIS LEGISLATION WHEN THE HOUSE PASSED THE BILL IN 2003, WE MIGHT ACTUALLY HAVE A DOCUMENT IN HAND TO GUIDE US IN A TIME WHEN MUCH OF THE NATION IS EXPERIENCING SEVERE DROUGHT CONDITIONS.

- WITH THIS BILL, H.R. 135, THE *"TWENTY-FIRST CENTURY WATER COMMISSION ACT OF 2005,"* CONGRESS BEGINS THE HARD WORK OF TACKLING ONE OF THE MOST IMPORTANT, AND DIFFICULT, ENVIRONMENTAL AND ECONOMIC ISSUES FACING OUR NATION -- ENSURING WE HAVE AN ADEQUATE SUPPLY OF CLEAN WATER.

- WE NEED WATER FOR OUR HOMES, FARMS, AND FACTORIES. WATER ALSO SUPPORTS NAVIGATION, GENERATES POWER, AND SUSTAINS OUR ENVIRONMENT.

- COMMUNITIES CANNOT GROW, OR EVEN EXIST, WITHOUT ADEQUATE WATER.

- AS WE ENTER THE 21ST CENTURY, DEMANDS FOR WATER ARE GROWING, AND ARE OUTSTRIPPING SUPPLIES IN MANY AREAS, BOTH IN THE WEST AND EAST, LEADING TO DISPUTES OVER WATER SUPPLY AND ALLOCATION.

- THE DROUGHT OF 2007 IN THE EAST HAS MADE IT CLEAR THAT, WHILE WATER MAY BE ABUNDANT IN MANY AREAS, IT IS NOT LIMITLESS, AND EVEN OUR NATION'S MOST WATER-RICH REGIONS CAN RUN DRY.

- TO ALLEVIATE DRY CONDITIONS IN GEORGIA, THE REGION WILL NEED BETWEEN 15 TO 20 INCHES OF RAIN WITHIN THE NEXT TWO WEEKS. THAT IS THE EQUIVALENT OF TWO OR THREE TROPICAL STORMS.

- BETWEEN 1990 AND 2000, WATER USE IN GEORGIA HAS INCREASED 30%. AND OFFICIALS ARE STILL GRAPPLING WITH HOW TO PROVIDE FOR A PROJECTED DOUBLING OF DEMAND OVER THE NEXT 30 YEARS.

- THE DROUGHT HAS HAD REAL-LIFE CONSEQUENCES AS WELL. ACCORDING TO THE METRO ATLANTA LANDSCAPE AND TURF ASSOCIATION, ALMOST 14,000 WORKERS IN LANDSCAPING AND RELATED INDUSTRIES HAVE LOST THEIR JOBS IN GEORGIA ALONE.

- THE EFFECTS OF DROUGHT ARE NOT LIMITED TO THE SOUTHEAST HOWEVER. IN THE GREAT LAKES WATER LEVELS ARE WELL BELOW LONG TERM AVERAGES AND ARE LIKELY TO STAY THAT WAY UNTIL AT LEAST MARCH 2008. THIS HAS SERIOUSLY IMPACTED THOSE COMPANIES WHO RELY ON WATER TRANSPORTATION IN THE GREAT LAKES.

- ABOUT 240 MILLION TONS OF CARGO IS TRANSPORTED ON THE GREAT LAKES ANNUALLY. THE UNITED STATES FLEET OF 63 VESSELS HAS LOST 8,000 TONS OF CARGO CAPACITY FOR EVERY INCH OF WATER THE LAKES HAVE FALLEN BELOW NORMAL. THOSE 8,000 TONS CORRESPOND TO ENOUGH IRON ORE TO PRODUCE 6,000 CARS, ENOUGH COAL TO PROVIDE ELECTRICITY TO THE DETROIT METROPOLITAN AREA FOR THREE HOURS, OR ENOUGH STONE TO BUILD 24 HOUSES.

- SOME OF THE LARGER GREAT LAKES VESSELS ARE TRANSPORTING 1,800 TONS LESS PER TRIP THIS YEAR THAN COMPARED TO LAST YEAR.

- POLICYMAKERS NO LONGER CAN IGNORE THIS ISSUE. WE NEED TO START PLANNING FOR THE FUTURE.

- H.R. 135, THE *"TWENTY-FIRST CENTURY WATER COMMISSION ACT OF 2005,"* WILL HELP START THAT PLANNING PROCESS, BY LOOKING AT OUR NATION'S AVAILABLE WATER SUPPLY AND THE PROJECTED DEMAND FOR WATER, AND MAKING RECOMMENDATIONS ON HOW TO MEET THAT DEMAND.

- H.R. 135 RESPECTS THE PRIMARY ROLE THAT STATES PLAY IN ADDRESSING WATER SUPPLY ISSUES. WITH THIS LEGISLATION, WE WILL BEGIN LAYING THE GROUNDWORK TO ENSURE WE ARE FULFILLING OUR OBLIGATIONS BY REQUIRING THE FEDERAL GOVERNMENT TO OPERATE IN A COORDINATED AND EFFICIENT MANNER TO GUARANTEE AN ADEQUATE, AND SAFE WATER SUPPLY FOR THE 21ST CENTURY.

- I LOOK FORWARD TO HEARING FROM THE WITNESSES.

OPENING STATEMENT OF
THE HONORABLE RUSS CARNAHAN (M0-3)
WATER RESOURCES AND ENVIRONMENT SUBCOMMITTEE
TRANSPORTATION AND INFRASTRUCTURE COMMITTEE
U.S. HOUSE OF REPRESENTATIVES

Hearing on
Twenty-First Century Water Commission Act of 2007

Thursday, November 8, 2007, 10:00 AM
2167 Rayburn House Office Building

Chairwoman Johnson and Ranking Member Baker, thank you for holding this important hearing on H.R. 135, the Twenty-First Century Water Commission Act of 2007.

In my home state of Missouri, we have two major rivers, the Mississippi and the Missouri. We have long known about the importance of having a reliable water source for agricultural use and drinking supply. In order to maintain commerce on our important waterways and restore the fragile habitat of the endangered species that live in the watershed, we must delicately manage this nation's water resources. In addition, global climate change places new pressure on our resources. The effects of climate change upon our water supply should be among the considerations as we look at long term concerns and solutions.

I would like to commend Chairman Oberstar for including language in our committee's Transportation Energy Security and Climate Change Mitigation Act that will create a commission to review our national water policies, including the role that climate change will play. I support the creation of a broad 21st Century Water Commission.

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STATEMENT OF
THE HONORABLE JERRY F. COSTELLO
SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT
HEARING ON HR 135, THE TWENTY-FIRST CENTURY WATER COMMISSION ACT OF 2007
THURSDAY, NOVEMBER 8, 2007

Thank you, Madame Chairwoman, for holding this hearing on HR 135, the Twenty-first Century Water Commission Act of 2007.

Within my home state of Illinois, we continue to focus our attention on water management and planning to protect water supplies and provide clean water in an efficient and effective way to individuals, businesses, and our wildlife. HR 135 seeks to do this at the federal level to ensure cooperation and efficiency at all levels of government and when trying to coordinate and effectively development water resources and their management.

Madame Chairwoman, I am pleased that we are having a hearing on this to look at this legislation and policy issues affecting our nation's efforts to properly manage our water resources. I

welcome the witnesses here today, and look forward to their testimony.

STATEMENT OF
THE HONORABLE EDDIE BERNICE JOHNSON, CHAIRWOMAN
"TWENTY-FIRST WATER COMMISSION ACT OF 2007"
SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT
NOVEMBER 8, 2007

Today's hearing comes during an historic week, where the House of Representatives came together in a **bipartisan** fashion and soundly overturned the President's veto of the Water Resources Development Act of 2007—WRDA. I especially want to applaud all of my colleagues from the Committee, both Democrat and Republican alike, unanimously voted for overriding the veto.

WRDA authorizes vitally important local projects for a wide array of water resources needs including water supply, flood control, navigation, and environmental restoration.

WRDA recognizes the vital importance of taking a watershed approach to water resource needs. This bill includes dozens of projects to provide for watershed management and water supply needs in communities across the country.

Provisions are also included to reinvigorate broader watershed planning authority, **including a federally funded assessment of water resources needs for the river basins and watersheds of the Southeastern United States**, and a region wide study to review drought conditions in the Southwestern United States. These regionwide assessments are especially critical to the southeastern U.S., including the states of Georgia, Alabama, and Florida, which are experiencing the ever-increasing challenge of balancing water needs during a record drought.

Earlier this year, the committee received testimony from experts that highlighted the need for a comprehensive watershed approach to water resource planning. One that is not limited to just water supply needs but takes a comprehensive view of all the water resources activities in a watershed including local, state and federal roles and activities in water supply, flood control, and environmental restoration. The experts also advised taking into account the impacts of global climate change on water resource capacity and future needs.

As a result of those hearings, this past July, the Committee **approved by voice-vote,** legislation to create a comprehensive review of national water policies, also called the 21st Century Water Commission.

This provision, which was included in the Transportation Energy Security and Climate Change Mitigation Act of 2007, establishes a commission to provide expert, scientific guidance on future water supply and demand projections, climate change impacts to our nation's flood risk and water demand, and associated climate change impacts on water quality.

This commission would study current federal, state, and local water resources management programs and activities, and ensure that the nation is adequately prepared to meet the water supply, water quality, and water resources demands of the next 50 years.

This provision was incorporated into H.R. 3221, New Direction for Energy Independence, National Security, and Consumer Protection Act, which **was approved** by the House on August 4, 2007.

My home state of Texas has had long experience in water resource planning. Following the drought of the 1950's Texas began its initial efforts in statewide water planning. In 1957, the Texas legislature created the Texas Water Development Board.

The Board has prepared and adopted 8 state water plans. Early efforts focused mostly on describing the state's water resources and then evolved into a focus on developing plans addressing water supply, conservation, and environmental issues.

The drought of 1997 was a watershed event for Texas. This devastating drought caused nearly $5 billion in losses for agriculture and related industries, and caused widespread loss and anxiety over water supply shortages. As a result of this statewide event, Texas totally changed its approach to water planning and moved from a very centralized approach to a decentralized process that put primary responsibility for water planning at the regional and local government levels.

The new process greatly increased public participation and implemented a bottom-up local and regional planning process. This new effort emphasized conservation and increases in environmental protection.

Texas has just released its 2007 Water Plan, which is one of the most comprehensive state water plans produced. I am very pleased that we have William Mullican, Deputy Executive Administrator for Planning, of the Texas Water Development Board here today to tell us more about this latest plan.

**STATEMENT OF REPRESENTATIVE JOHN LINDER (R-GA)
BEFORE THE HOUSE TRANSPORTATION AND INFRASTRUCTURE
SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT
CONCERNING H.R. 135: A BILL TO ESTABLISH THE
TWENTY-FIRST CENTURY WATER COMMISSION**

**November 8, 2007
10:00 a.m.**

Mr. Chairman and Members of the Subcommittee, ensuring fresh water for U.S. citizens will be a critical challenge facing the United States as we enter the 21st Century. Water related issues have been of interest to me for many years. In fact, I wrote an article in 1978 that predicted that one of the 2 major challenges for our country in the next century would be providing enough fresh water for our booming population. Since that time, 29 years ago, America still does not have an integrated or comprehensive water policy, even with hundreds of thousands of Federal, State, local and private sector employees working to solve water problems. If we wait another 10 or 20 years to get serious about meeting our demand for clean water, it will be too late.

There are numerous Federal, state and local agencies that have responsibilities for managing water resources. While there is some overlap of agency responsibilities, some argue that there is little coordination among them. At the same time, competing demands for water among various agricultural, urban, recreational and environmental interests have led to many challenges over the last few decades.

H.R. 135 establishes the Twenty-First Century Water Commission. The Commission's agenda is: to project future water supply and demand, study current water management programs, and consult with representatives of Federal, state, local agencies, and private water management programs and entities, to develop recommendations for a comprehensive water strategy. The bill authorizes $9 million in federal funding for the Commission, which is supposed to complete its duties within three years following enactment.

H.R. 135: 1) respects the primary role of states in water rights law; 2) identifies incentives to ensure an adequate and dependable domestic water supply for 50 years; 3) does not place increased mandates on state and local governments; 4) eliminates duplication and conflict among governmental agencies; 5) considers all available technologies for increasing water supply efficiently, while safeguarding the environment; 6) recommends means of capturing excess water for future droughts; 7) suggests financing options for public works projects; and 8) suggests conservation strategies.

The bill stipulates that the President of the United States and the U. S. Congress shall make every effort possible to appoint these commissioners from a broad cross- section of

regional and geographical U.S. perspectives. The commission is directed to hold no less than ten public hearings around the Nation and submit a final report no later than three years after its first meeting. The legislation sunsets the commission within 30 days of the final report's submission.

H.R. 135 has already passed the House twice. In the 109th Congress, the House approved H.R. 135 by a 402-22 vote on April 12, 2005. In the 108th Congress, H.R. 135 passed the House floor unanimously by voice vote on November 21, 2003. Unfortunately, the Senate adjourned before having the opportunity to consider the bill in both Congresses. As such, I reintroduced H.R. 135 on January 4, 2007. Since reintroducing the bill, H.R. 135 passed the full House Natural Resources Committee, without amendment, by unanimous consent on October 10, 2007. H.R. 135 is identical to the bill passed by the House in the 109th and 108th Congresses. The Administration has not testified on H.R. 135 in this Congress. However, it testified that it supports the goals of a similar bill in the 108th Congress.

Additionally, in the 109th and 108th Congresses, House Transportation and Infrastructure Committee Chairman James Oberstar (D-MN) testified in support of H.R. 135. Chairman Oberstar's testimony is as follows:

"Madam Speaker, I rise today in support of H.R. 135, a bill to establish a commission to examine the issue of clean, safe, and reliable water supplies for this generation and for generations to come.

Madam Speaker, water may well be the most precious resource on Earth. The existence of water set the stage for the evolution of life and is an essential ingredient of all life today.

Recognizing the importance of this vital resource, the United Nations designated 2003 as the ``International Year of Freshwater.'' According to the U.N., throughout the world roughly one person in six lives without regular access to safe drinking water, and over twice that number--or 2.4 billion--lack access to adequate sanitation. In addition, water-related diseases kill a child every eight seconds.

In the United States, we have avoided many of these concerns through careful planning and decades of investment in our water infrastructure. Nationally, a combination of Federal, state, and local funds have built 16,024 wastewater treatment facilities that provide service to 190 million people, or 73 percent of the total population.

In addition, 268 million people in the United States--or 92 percent of the total population--are currently served by public drinking water systems, which provide a safe and reliable source of drinking water for much of the nation.

As I noted earlier, clean, safe, and reliable sources of water are critical to this nation's health and livelihood. However, in the past few decades, a series of natural events, as well as, human-induced events have demonstrated that our nation remains vulnerable to shortages of water.

In my own State, we have experienced shortages of snowfall and rain which have had an adverse impact on local water supplies, agriculture, and recreation and tourism, and have contributed to historically low water levels in the Great Lakes. One thing is certain: no area of this country is immune to the threat of diminished water supplies. We must be vigilant in preparing for such occurrences.

This bill is a part of the debate on the very important issue of water resource planning in this country. The gentleman from Georgia, Mr. Linder, has taken an important step in encouraging this debate, calling for the creation of a Federal commission to examine issues related to national water resource planning, and to report its findings on potential ways to insure against large-scale water shortages in the future.

While I believe that the legislation introduced by our colleague is a good starting point, we must be sure to examine fully all of the relevant issues for ensuring adequate supplies of clean and safe water to meet current and future needs.

For example, water resource planning should work toward increasing the efficiency of water consumption as well as increasing the supply of water. Simply increasing the supply of water can be a more costly approach to meeting future water needs, and in any case, merely postpones any potential water resource crisis.

In addition, it is important to remember that issues of water supply are closely related to water quality. Contaminated sources of freshwater are of little use to the Nation's health or livelihood; removing contaminants drives up the overall cost of providing safe and reliable water resources to our people.

In addition, human activities, whether through the pollution of waterbodies from point or non-point sources, the elimination of natural filtration abilities of wetlands, or through the destruction and elimination of aquifer recharge points, can have a significant impact on available supplies of usable water.

We cannot base our future water resource planning needs on the possibility of finding "new" sources of freshwater while, at the same time, tolerating practices that destroy or contaminate existing sources. All the water there ever was or ever will be on this planet is with us now; we must spare no effort to be vigilant and careful stewards of that water.

I urge my colleagues to support the bill."

The crisis now facing the Southeast region of our country's water supply is truly devastating. It is a direct consequence of our nation's failure to sufficiently prepare for water emergencies. We are dealing with tremendous droughts, competing states' interests and need for water, lawsuits between states, conflicting Federal laws, and outdated information. We cannot continue to wait to get serious about meeting the demand for clean water. That is why I introduced legislation in the 107th, 108th, 109th, and 110th Congresses to create the 21st Century Water Commission.

In addition, numerous news articles over the past few years have increased our attention to other water problems that we currently face. To name just a few, aquifers are being challenged by salt water intrusion, rivers and wells are drying up all over the country, crops are being threatened, and our aging water pipes leak billions of gallons of fresh water in our cities all over the country. For example, New York City loses 36 million gallons per day and Philadelphia loses 85 million per day just through leaks in infrastructure.

Let me be clear about one thing: my bill does not give the Federal Government more direct authority or control over water. This commission is designed to make recommendations about how we can coordinate water management efforts on all levels, so that localities, States, and the Federal Government can work together. Had we passed H.R. 135 back in 2003, the Commission would have completed its study by now, and we would have a timely and quality remedy to address the water problems now facing our country.

The Water Commission created by H.R. 135 will lay the groundwork to ensure that the Federal government is fulfilling its obligations in an efficient and coordinated manner so that our citizens will be guaranteed an adequate and dependable supply of water for the 21st century. This bill would ensure that states like those in the Southeast never again face such a dire water crisis.

Providing all Americans with fresh water is a matter of life and death, and I hope that the Committee will support my objective of ensuring an adequate and dependable water supply of fresh water for all Americans throughout the 21st Century.

Doris O. Matsui

Statement by Congresswoman Doris O. Matsui
At the Hearing on HR 135 the "Twenty-First Century Water Commission Act of 2007"
November 8, 2007

Thank you Chairwoman Johnson and Ranking Member Baker for calling this hearing.

And welcome Congressman Linder to our Committee today.

I want to start out by saying that I like the idea of creating a commission that has input for an overarching national water policy. I believe that we are in a new age where we can not wait and see with our water policy. Too much is at stake.

One of the reason's WRDA is so important to our country is that it is suppose to provide a road map for our national water policy. However, as we have witnessed this past week, water issues, flood protection and water policy in general are vulnerable to politics. It has been seven years and we are still waiting on that final Senate vote to over ride the President's veto.

If Katrina has taught us anything, it is that preparedness is the first step toward responsible public safety. To be prepared we need to have a firm understanding of what our challenges are.

My focus, as a representative from Sacramento---the most at risk city for catastrophic flooding----has been flood protection.

However, there are many, many issues that impact our water policy. I have come to realize that we must have a broad perspective when considering these issues.

For example, in the Sacramento region, I have begun to take a watershed approach to our regional water issues. It can be a less expensive and longer lasting solution to water resource problems. I want to push for non-structural solutions that can have multiple benefits. For example in the Sacramento River Watershed water resource issues involving water quantity

(Dam Statement pg 2)

and quality go hand in hand. Flood plain management is part and parcel of ground water recharge which helps with water supply. The fires that have raged in California also take a toll on our water quality so forest management even becomes a watershed issue.

The Sacramento Watershed is diverse and has many stakeholders. We have agricultural interests, water supply concerns, urban and rural dynamics and of course flood protection. I have found that the broader the approach you take toward water the more intricate you see that these policies really are.

These are complex and deeply intertwined issues—with plenty of history. However, as our population continues to grow and the climate continues to change these issues become more pronounced.

I strongly believe that we need to examine the way in which we plan, fund and manage our flood protection projects. As well as manage our national water policy. Downstream problems need upstream solutions. We need a commission to look at it on a watershed basis to get at the real problem instead of using band aids. After the 2003 fires in California I heard that after a long study of the problem came up with the solution of simply asking for more fire engines. I hope this isn't true. That is the wrong approach. We need to be ahead of the issue, not behind it.

We need an entity or commission that can address these long term water challenges broadly. We need an open and diverse national dialogue on these vital and important water issues.

I am looking forward to hearing from today's witnesses.

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Statement of Rep. Harry Mitchell
House Transportation and Infrastructure Committee
Subcommittee on Water Resources and Environment
11/8/07

--Thank you Madame Chairwoman, and thank you for holding today's hearing.

--As you know, we are long overdue for a comprehensive review of federal water policy. We haven't had one since 1973.

--This is particularly distressing to a state like Arizona, whose population has more than tripled since then, and who's habitability is so

2

closely tied to the availability of a safe and reliable water resources.

--According to the Arizona Department of Water Resources, Arizona is now in its thirteenth year of drought.

--The Colorado River system as a whole is now in its eighth year of drought.

--I believe it is past time for the federal government to study these issues.

3

--I want to extend a special welcome to Robert Lynch who will be testifying before us this morning. Bob knows these issues as well as anyone. He's worked on them for decades, both in Washington and Phoenix, and we are very lucky to have him here with us today.

--I look forward to today's testimony.

--I yield back.

Testimony of

DAVID R. CONRAD

SENIOR WATER RESOURCES SPECIALIST
NATIONAL WILDLIFE FEDERATION

Before the

SUBCOMMITTEE ON WATER RESOURCES & ENVIRONMENT,
HOUSE TRANSPORTATION & INFRASTRUCTURE COMMITTEE

FOR THE SUBCOMMITTEE HEARING REGARDING

H.R. 135, The Twenty-First Century Water Commission Act of 2007

November 8, 2007

Good morning, Chairman Johnson, Ranking Member Baker and Members of the Subcommittee on Water Resources and Environment.

My name is David R. Conrad. I serve as Senior Water Resources Specialist for the National Wildlife Federation. The National Wildlife Federation is the nation's largest conservation education and advocacy organization, with some four million members and supporters and affiliates in 48 U.S. states and territories. Since our founding in 1936, the Federation has been actively involved in the development of federal natural resources policy, and especially the many policies related to our nation's waters and shorelines. In this regard, we have been actively involved in the development and implementation of a wide array of federal legislation, including the Clean Water Act, the Water Resources Development Act, the National Flood Insurance Program (NFIP), and the Coastal Zone Management Act. I have been personally involved in amendments to, and implementation of, a number of these laws.

On behalf of the National Wildlife Federation, I welcome the opportunity to testify on H.R. 135, the Twenty-First Century Water Commission Act of 2007. We applaud Representative Linder for introducing this bill, and the 22 other members who have joined as cosponsors. This is an important subject for legislation, and we believe there is a strong need for a new national water commission. The issue of water resources is critical to national security, economic security, the health and well being of our citizens, and the wildlife and ecological health of our nation. International tensions over shared water resources are increasing as water becomes scarcer and water quality is comprised. Many of our communities find they cannot afford necessary upgrades to their antiquated sewers and water treatment and delivery systems. Wetland resources continue to decline. Our nation's flood risk and the cost of flood damages is increasing. The need for broad-based planning for water resources in virtually every area of the country is becoming increasingly clear. For these reasons, we would urge an expansion of the scope of the Commission from its current narrow focus on water supply. We believe a broader

mandate that reflects the wide variety of water resources issues we face would better serve the nation's interests.

Duties of the Commission

Thirty-five years have passed since the last National Water Commission issued a report to Congress and the President on our nation's water resources. This report provided insights on a wide range of water issues, including the effects of water management on the economy, groundwater issues, state and federal water law, and interbasin transfers.

The Duties of the 1973 Commission were stated in one long sentence, Section 3 (a) of the National Water Commission Act, P.L. 90-515, Sept. 26, 1968, 42 U.S.C.§ 1962a, which says:

The Commission shall:

> (1) review present and anticipated national water resource problems, making such projections of water requirements as may be necessary and identifying alternative ways of meeting these requirements – giving consideration, among other things, to conservation and more efficient use of existing supplies, increased usability by reduction of pollution, innovations to encourage the highest economic use of water, interbasin transfers, and technological advances, including but not limited to desalting, weather modification, and waste water purification and reuse;
>
> (2) consider economic and social consequences of water resource development, including, for example, the impact of water resource development on regional economic growth, on institutional arrangements, and on esthetic values affecting the quality of life of the American people; and
>
> (3) advise on such specific water resource matters as may be referred to it by the President and Water Resources Council.

A lot has changed since the '73 report– not just technologically, but also ecologically, as well as our understanding of a broad range of water concerns. Today, we are becoming increasingly aware of the delicate nature of our aquatic ecosystems and how dependent we are on the natural services that in the past we often have taken for granted. We have learned that interbasin transfers often are accompanied by transfers of invasive species which do ecological harm and increasing political tensions over threats of diverting downstream communities' water supplies. In addition, the reality of global warming can no longer be denied. As we know, the threat of global warming will have significant impacts on our precious water resources. I would urge the Committee to specifically require the Commission to examine the impacts of global warming on our nation's water resources, including flood risks, water quality, and wetland habitats. The Intergovernmental Panel on Climate Change (IPCC) reports have been clear -- global

warming is expected to result in profound effects on water cycles – more drought in the West, more flooding and droughts in the East, and higher sea levels along all our coasts. The scientific community agrees that weather events like Hurricanes Katrina, Wilma, and Rita could become increasingly common because of global warming.

On April 12, 2007, the National Wildlife Federation and Environmental Defense released the report, "America's Flood Risk is Heating Up," which chronicles the impacts of global warming on the nation's flood risk. The report emphasized the need for the U.S. Army Corps of Engineers to incorporate modern climate science as it plans and manages water resources projects, and it urged Congress to update the National Flood Insurance Program to reflect the new realities of global warming.

From flood risks to sewage overflows, a 21st Century Water Commission would have a monumental role in helping define and resolve water resources issues over the next 50 years. These next 50 years could be critical to the health of our planet.

I would like to draw the Committee's attention to the language in Section 8207, of the House-passed energy bill, H.R. 3221, which includes very good language to create a similar Commission as the one contemplated in H.R. 135, but with a much broader scope. The language in the energy bill would require the Commission, in addition to projecting future water demand and optimizing future water supply, to also:

- suggest strategies for using best available climate science in projections of future flood and drought risk, and for developing hazard mitigation strategies to protect water quality, in extreme weather conditions caused by climate change;

- suggest strategies for financing options, incentives, and strategies for development of comprehensive water management plans, holistically designed water resources projects, conservation of existing water resources infrastructure (except drinking water infrastructure) and to increase the use of nonstructural elements (including green infrastructure and low impact development techniques);

- identify policies that encourage low impact development, especially in areas near high priority aquatic systems;

- suggest strategies for encouraging the use of, and reducing biases against, nonstructural elements (including green infrastructure and low impact development techniques) when managing stormwater;

- suggest strategies for addressing increased sewage overflow problems due to changing storm dynamics and the impact of aging stormwater and wastewater infrastructure, population growth, and urban sprawl;

- promote environmental restoration projects that reestablish natural processes; and

- identify opportunities to promote existing or create regional planning, including opportunities to integrate climate change into water infrastructure and environmental conservation planning.

I urge the Committee to consider adding these important components to the duties of the Commission in Section 4 of the H.R. 135.

In its current form, H.R. 135 does not address border conflicts over water issues. We would therefore encourage the Committee to require the Commission to explore the avenues to reduce international conflicts over water resources, especially current tensions on the U.S. borders with Canada and Mexico.

Membership

I believe that the membership of the Commission should be changed to include members appointed by the Congress, not just the President. This would likely give the Commission a broader base of support for the difficult tasks it would face.

Water Resources Council

Finally, I would also like to draw the Committee's attention to the Water Resources Council, which acted as a federal integrated water resource planning entity from 1965 to 1983. The Water Resources Council was established by the Water Resources Planning Act of 1965. (42 U.S.C. 1962a -1962(a)(4)(e). The Water Resources Council maintained a continuing assessment of the adequacy of water supplies in each region of the U.S. The Secretaries of Agriculture, Interior, Army, Health, and Education, Chairman of the Federal Power Commission, and the EPA Administrator served on the Council. The Act also created seven River Basin Commissions to promote water resources planning and economic development. The Council was charged to provide biennial water resources assessments. It also produced the Principles and Guidelines, which are guidelines for evaluating federally funded water projects and allocating water. The Water Resources Council also provided valuable research assistance to the 1973 National Water Commission, and the Commission was required by law to consult with the Water Resources Council as it drafted its final Commission report.

We strongly urge the Committee to consider reconstituting such a Council or requiring that the 21st Century Water Commission evaluate the possibility of reviving a Water Resources Council or an entity with a similar function. As our water resources become more scarce, a newly constituted Water Resources Council could oversee a much-needed integrated federal water policy to safeguard our national security and our citizen's health.

Once again, Madam Chair and Members of the Subcommittee on Water Resources and the Environment, we applaud your work to hold a hearing on this important legislation. We all share a moral responsibility to protect our water resources and to protect our children's future.

Thank you.

Testimony on H.R. 135
Subcommittee on Water Resources and Environment
Committee of Transportation and Infrastructure
US House of Representatives
November 8, 2007

Dr. Aris Peter Georgakakos
School of Civil and Environmental Engineering
Georgia Institute of Technology & Georgia Water Resources Institute
790 Atlantic Drive, Atlanta, Georgia 30332-0355; (404) 894-2240

Mr. Chairman, my name is Aris Peter Georgakakos and I am Professor of Civil and Environmental Engineering at the Georgia Institute of Technology, in Atlanta, Georgia. For the past 10 years, I have also served as Director of the Georgia Water Resources Institute (GWRI) established by the Water Resources Research Act in 1964. This Act created a water resources research institute in each of the fifty states, the District of Columbia, and the territories of the US. The mission of the institutes is to help improve water resources management through innovative new research, education, technology transfer, and information dissemination. GWRI has unique expertise in the development and implementation of integrated information and decision support systems for water resources planning and management and has had involvement in several world regions including the Southeastern US, California, Europe, China, East Africa, and South America. As a disclaimer, I would like to state that the views presented herein are my own and should not be interpreted as those of the Georgia Institute of Technology or the National Institutes for Water Resources of which GWRI is a member.

First, I would like to thank you for the opportunity to testify in support of the H.R. 135, advocating the establishment of a Twenty-First Century Water Commission to study and develop recommendations for a comprehensive water strategy to address future water needs. I cannot overemphasize the need for a *comprehensive* strategy as water challenges are becoming increasingly complex, threatening our quality of life, compromising the integrity of the nation's environment and ecosystems, and undermining economic growth and prosperity.

In 2001 and 2004 two seminal National Research Council Reports ("Envisioning the Agenda for Water Resources Research in the Twenty-First Century" and "Confronting the Nation's Water Problems: The Role of Research") thoroughly examined the urgency and complexity of water resources issues facing the US. Among others, the following water resources challenges were cited as motivation for these studies:

- There is abundant evidence that the condition of water resources in many parts of the US and the world is deteriorating;

- Our institutions appear to have limited capacity to manage water-based habitats to maintain and improve species diversity and provide ecosystem services while concurrently supplying human needs;
- In some regions of the country, the availability of sufficient water to service growing domestic uses is in doubt, as is the future sufficiency of water to support agriculture in an increasingly competitive and globalizing agricultural economy;
- Demands for water resources to support population and economic growth continue to increase, although water supplies to support this growth are fixed and already fully allocated in most areas;
- Renewal and repair of the aging water supply infrastructure will require time and hundreds of billions of dollars;
- The frequency and magnitude of damages attributable to droughts and floods are increasing, providing evidence of increasing vulnerability to extreme climate and weather events;
- The threat of waterborne disease is constantly present, as exemplified by recent outbreaks of cryptosporidium.

My own state of Georgia, Mr. Chairman, is presently in the second year of an unprecedented drought, rapidly depleting our water supplies, halting our economy, threatening the sustainability of aquatic ecosystems, and increasing tensions among water users in our state and across the borders with Alabama and Florida. While droughts are the result of a natural climate cycle, drought stresses and impacts reach a new height with every new drought as urban, industrial, and agricultural water demands rise steadily. Georgia, as well as most US regions, is not well prepared to effectively manage these unprecedented water stresses. The main reasons for the lack of preparedness are symptomatic across the US and include:

- Lack of comprehensive knowledge and information on the interdependencies of natural processes and water uses;
- Narrow perspective on the part of water user groups acting to protect their short term interests with total disregard of long term risks; Lack of a shared and system-wide management vision and strategy;
- Lack of federal and state agency coordination and cooperation; Inflexible legal and institutional bureaucracies;
- Insufficient federal and state research investments for the development and implementation of innovative, adaptive, and integrated management technologies, systems, and processes; and
- Weakening of water resources research and education programs which are naturally suited to integrate knowledge across disciplines and create human resources qualified to develop sustainable solutions for our complex water resources challenges.

I would like to briefly comment on each of these areas.

Knowledge and information: There are many critical areas where knowledge and information need improvement for better water resources management. The above cited NRC reports developed a comprehensive list of 43 areas needing further scientific inquiry. Selected examples are listed below:

- Improve existing supply enhancing technologies such as wastewater treatment, desalinization, and groundwater banking;
- Understand the impact of land use changes and best management practices on pollutant loading to waters, ecosystem services, biotic indices, and higher organisms;
- Understand regional and national hydrologic measurement needs and develop a program that will provide these measurements;
- Understand and predict the frequency and cause of severe weather (floods and droughts);
- Understand global change and the associated hydrologic impacts;
- In all sectors develop more efficient water use strategies and optimize the economic return for the water used;
- Develop legal regimes that promote groundwater management and conjunctive use of surface water and groundwater;
- Develop adaptive management;
- Understand the role of the private sector in achieving efficient water and wastewater services; and
- Develop different processes for obtaining stakeholder input in forming water policies and plans.

These areas exemplify the need to improve our current understanding on the interdependence of water quantity and quality; the balance between human and ecological water uses; and the legal, institutional, and social factors that contribute to sustainable water resources management.

While there is a lot to learn, a lot is already known and can significantly benefit water resources planning and management. However, making this knowledge and information meaningful for and accessible to those involved in decision making processes has proved to be another very serious challenge. Paradoxically, in spite of our information age, water resources policy makers, managers, and stakeholder groups are becoming ever more removed from current scientific and technological advances. There is thus a compelling need to establish and invest in effective information and technology transfer mechanisms.

Local vs. system-wide perspectives: Water stresses are often compounded by the efforts of individual stakeholders acting to safeguard their own local interests without regard for the long term risks of such actions. A local and short term perspective by each water user group sharing the resource cannot be sustainable and only serves to hasten the depletion of water reserves and the onset of disastrous impacts for *all*. The same

"tragedy of the commons" scenario is likely to occur when water uses and impacts are planned and managed individually, without regard for their multiple temporal and spatial linkages. It is thus imperative that the Twenty-First Century Water Commission take a holistic perspective in the development of a comprehensive national water strategy.

Federal and state agency coordination and cooperation: Water resources management falls within the mandates of several federal agencies including EPA, NASA, and NSF and various Departments such as Agriculture, Commerce, Defense, Energy, Health and Human Services, Homeland Security, and Interior. Further complicating water management, monitoring and oversight responsibilities are found within different groups of these departments, for example, ARS, NOAA, CORPS, USGS, ATSDR, NIEHS, and USBR. In reviewing the existing federal coordination mechanisms, the 2004 NRC report concluded that "coordination among agencies has occurred only sporadically over the last several decades, despite repeated calls for more coordination." As a result, the national water resources agenda among the federal agencies is fragmented and has a disciplinary rather than a broad and holistic scope. Furthermore, although the adjudication, administration, and regulation of water rights and uses rests with the States, federal and state agencies must work together to ensure harmonization of and compliance with federal and state laws in the management of transboundary water resources. However, the existing coordination and cooperation mechanisms, if any, have been ineffective, and more often than not turn water conflicts and disputes into costly litigious battles. This ineffective federal and state agency culture and modus operandum need to be improved so as not to undermine the implementation and positive impact of the H.R. 135 Commission strategy recommendations.

Lack of investments in integrated and adaptive management: A striking finding of the 2004 NRC report was that over the last 30 years total funding in the areas of (1) water supply augmentation and conservation, (2) water quality management and protection, (3) water resources planning and institutional issues, and (4) water resources data collection severely declined. As a result, long-term basic research and technology transfer in integrated and adaptive water resources planning and management have been neglected, and the majority of our water resources are managed by reactive, disciplinary, and inefficient methods and procedures. In a recent assessment for the Apalachicola-Chattahoochee-Flint (ACF) River Basin in the southeast US, GWRI demonstrated that the use of integrated and adaptive forecast-decision methods can mitigate drought impacts and sustain adequate water services for all human users and ecosystems. Similar assessments and similar findings have been carried out and obtained for the northern California river system, as well as for other river basins. The main impediments in the use of modern management methods are the (1) inflexible bureaucracies that have evolved around the use of old management procedures and (2) inadequate training of agency personnel. Thus, a promising and largely unexplored strategy to address water scarcity is the modernization of the current management

procedures through recent but proven scientific advances, transferred to professional practice through education and training. The proposed H.R. 135 Commission provides an opportunity to realize the merits of such non-structural approaches along with other means of augmenting water supplies (through recycling, desalinization, and other technologies) and managing demands (through pricing and other incentives).

Water resources research and educational programs: The other casualty of declining funding has been the weakening of our water resources research and educational programs. At a time when universities increasingly depend on "soft" funding, faculty positions and student support migrated to other higher priority areas. In sharp contrast to the 60's, 70's, and early 80's, very few academic programs can now claim significant expertise in water resources. This is not to imply that academic programs have shrunk. On the contrary, they have expanded to cover much finer and very exciting frontiers of geophysical, environmental, and life sciences. In doing so, however, universities lost their capacity to provide interdisciplinary education and became over-specialized. An important role that water resources programs can play is to provide a scientific and policy framework for inter-disciplinary research, education, and technology transfer. Such a framework is necessary to create broadly educated scientists, engineers and policy makers able to invent technological and institutional solutions for the nation's water resources and environmental challenges.

In this regard, the Water Resources Research Institutes provide a unique network to address the challenges of interdisciplinary research, education, and technology transfer. However, the institutes cannot fully realize their potential at the current low rate of federal and state investment. I hope that the Commission envisioned by H.R. 135 will also address the need for sustainable and sufficient funding needed to reverse the continued weakening of our water resources programs.

Mr. Chairman, thank you for the opportunity to testify before this Committee. I strongly support the establishment of a National Water Commission to study and develop recommendations for a *comprehensive* water strategy to address our nation's future water needs.

TESTIMONY OF
BENJAMIN H. GRUMBLES
ASSISTANT ADMINISTRATOR FOR WATER
U.S. ENVIRONMENTAL PROTECTION AGENCY

BEFORE THE
SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
UNITED STATES HOUSE OF REPRESENTATIVES

November 8, 2007

Madam Chair and members of the Subcommittee, I am Benjamin H. Grumbles, Assistant Administrator for Water at the United States Environmental Protection Agency (EPA). Thank you for inviting me to discuss sustainable water policies. In particular, I appreciate the opportunity to describe what I call the 3 R's of water sustainability: Reducing waste and inefficiency; Re-using water; and Restoring watersheds.

Too often we take for granted a system that provides, clean, safe and inexpensive water: from the drinking water that automatically appears when we turn on our taps, to the water that allows us to flush our toilets, to our local watersheds where we live, work, and play.

But water is a finite resource – even though about 70% of the Earth's surface is covered by water, less than 1% is available for human use. Recent headlines about water crises in Atlanta, Georgia and the communities served by the Colorado River Basin are raising the collective awareness of our Nation about this precious and life-sustaining resource. States and thousands of communities across the nation are facing difficult challenges in

meeting their water resource needs. A report by the Government Accountability Office in 2003 indicated that between now and 2013, 36 states are projecting water shortages.

Studies of water use by the United States Geological Survey show that water withdrawn for the public supply increased by 7 percent from 1995 to 2000 -- an increase of 1 trillion gallons. The U.S. Bureau of Census projects that the U.S. population will increase by 3% by 2010, 12% by 2020 and 30% by 2040. Given these population increases, water systems throughout the nation will need to increase water capacity. An even more serious issue is that population is growing faster in areas where water is the scarcest. Six western states had demands on public supply increase by more than 20 percent in the same time period.

EPA's Office of Water is working closely with the Western Governors' Association and the Western States Water Council to implement the recommendations in their June 2006 Report "Water Needs and Strategies for a Sustainable Future." Contained within the Report are many recommendations that are consistent with EPA initiatives as well as recommendations contained in a report released by the White House Office of Science and Technology Policy titled, "A Strategy for Federal Science and Technology to Support Water Availability and Quality in the United States."

The responsibility for water, both in terms of quality and quantity, is divided among many different federal agencies as well as each of our states, tribes, and territories. In light of this shared and diverse responsibility, it is imperative that we all work collectively to meet the growing needs and demands of our limited water resources. We

can no longer merely look at water based on quantity or based on quality. Quality and quantity are inextricably linked, for with out one, we can not have the other.

One of EPA's top priorities is to ensure America's waters resources and water infrastructure systems are clean, safe and sustainable. As you know over the past 5 years EPA has consistently and repeatedly articulated and implemented, its Four Pillars of Sustainable infrastructure – better management, full cost pricing, water efficiency, and the watershed approach. It is an effort to help ensure that our nation's water infrastructure is sustained into the future by fundamentally changing the way America views, values, and manages its water resources and infrastructure. It is a collaborative effort involving drinking water and wastewater utility managers, professional and trade associations, local watershed protection organizations, private sector experts in technology, engineering, and finance, and federal, state, and local officials.

The Three R's for Sustaining Water Resources

As EPA advances its Four Pillars of Sustainable Infrastructure through the tools of technology, innovation, and collaboration, we see an opportunity to keep pace with our water resource needs of the future by developing a comprehensive strategy built upon several key initiatives. All of these initiatives seek to stretch our limited water resources and, therefore, we must Reduce, Reuse, and Restore. The 3 R's are soundly based in science and policy, whether it is Reducing based on a Presidential Executive Order (E.O. 13423), Re-using highly treated wastewater or stormwater, or Restoring a watershed that is polluted by an abandoned mine with efforts from a volunteer such as a Good Samaritan

that had no role in creating the pollution but wants to Restore their watershed so that the resource can be used. Not one of these initiatives by themselves, or one agency by itself, will solve all the problems. But collectively and collaboratively we can have a meaningful positive impact on our limited water resources.

Executive Order (EO) 13423 Section 2 (c) requires that beginning in 2008, Federal agencies reduce water consumption intensity, relative to the baseline of the agency's water consumption in fiscal year 2007, through life-cycle cost-effective measures by 2 percent annually through the end of fiscal year 2015 or 16 percent by the end of fiscal year 2015. The Office of Water is responsible for developing Water Efficiency Implementation Guidance for all agencies covering the three elements of compliance: baseline development, efficiency opportunity identification/implementation, and necessary reporting. Federal agencies are also encouraged to include WaterSense products and services within their implementation strategies to meet the E.O. goals.

Reducing Water Waste and Inefficiency

Reducing waste isn't just about pollution prevention (a key component of our Clean Water Act programs), It's about cutting water waste and inefficiency too. On average, the per capita residential water use in the U.S. is 100 gallons of water a day and in many areas of the country this rate is even higher. Areas with higher than average per capita water consumption are often experiencing unprecedented population growth. As a result, communities across the country are facing challenges regarding water supply and water infrastructure.

Improving water efficiency is one of the most effective ways that communities can manage their supplies. With less water moving through the system, utility operating costs will decrease. They will avoid costs for treatment chemicals, residuals disposal, and energy associated with water collection, treatment, and disposal. In addition, water efficiency can help utilities better manage capacity expansion because necessary expansions can be delayed or reduced in size.

EPA is working to foster a national ethic of water efficiency, so that water is valued as a limited resource that should be used wisely. In June 2006, we announced WaterSense, an innovative partnership program that helps American consumers, businesses, and governments make smart water choices that save money and maintain high environmental standards without compromising performance.

EPA's WaterSense program reduces water use across the country by creating an easy-to-identify label for water-efficient products that is backed by strict criteria and independent certification. WaterSense labels products that use 20 percent less water and perform as well as—or better than—conventional models. To earn the WaterSense label, products must be independently tested and certified to meet EPA's criteria for efficiency and performance.

In less than two years, WaterSense has already become a national symbol for water efficiency among utilities, plumbing manufacturers, and consumers. Awareness of the WaterSense label is growing every day. Eighty models of high-efficiency toilets from

twelve different brands have earned the label, and WaterSense labeled faucets should be available to consumers by next year. In addition to manufacturers, EPA is working with utilities, retailers, distributors, and the media to educate consumers on the benefits of switching to water-efficient products.

For example, toilets account for about 30 percent of the water used in the home, and Americans waste 900 billion gallons per year by flushing old, inefficient toilets.[1] By replacing an older toilet with a WaterSense labeled model, a family of four could reduce total indoor water use by about 16 percent and, depending on local water and sewer costs, save more than $90 annually. If every home replaced just one old toilet with a WaterSense labeled High Efficiency Toilet, the water savings would be enough to supply nearly 10 million U.S. households with water for a year. Savings at the tap also result in energy savings. If just one in every 10 homes in the United States were to install WaterSense labeled faucets or aerators in their bathrooms, in aggregate, they could save 6 billion gallons of water, and more than $50 million in the energy costs to supply, heat, and treat that water.

The potential for preserving our water supply for future generations through this voluntary program is great, and WaterSense will continue working on new product areas in the future. Projected savings for initial WaterSense product labeling areas (toilets, faucets, showerheads, irrigation controllers) and certification of irrigation professionals, based on a 10 percent replacement of existing fixtures, is estimated to be 155 billion gallons, or nearly twice the average annual rainfall of Seattle. The average home,

[1] All statistics on pages 6-7 should be considered estimates based on currently available data.

retrofitted with water-efficient fixtures, can save 30,000 gallons per year. If just one out of every 10 homes in the U.S. upgraded to water-efficient fixtures (including ENERGY STAR labeled clothes washers), it could save more than 300 billion gallons and nearly $2 billion annually. Additional savings can be expected from the program in the future as WaterSense adds new products and implements its New Homes program. This New Homes effort will combine water-efficient products, enhanced design features, and homeowner education into a single residential program.

We are also spreading the word against water waste through our Water Efficiency Leader program to recognize organizations and individuals who are working to improve water efficiency through innovative processes and technologies. We continue to support a new national organization called the Alliance for Water Efficiency (AWE), which is establishing a water-efficiency information clearinghouse and will expand to complement WaterSense's activities including monitoring national plumbing and appliance standards and codes. We are collaborating with public officials and utility managers to identify strategies and tools for reducing water loss from systems. One of EPA's newest and most impressive facilities, the Region 8 Headquarters, will save water through the use of high efficiency plumbing fixtures such as waterless urinals and dual-flush toilets. It also has a green roof.

We are also working with public officials and utility managers to identify strategies and tools for reducing water loss from systems. Making water distribution more efficient will

not only save water and reduce costs, but it will save energy and significantly improve sustainability and increase capital available for infrastructure investment.

We have come a long way in a very short time with this program. As the demands on our water resources grow, the need for the products and services we are developing through WaterSense will become even more important. We look forward to working with our stakeholders and Congress as we look to expand our water efficiency efforts in this area.

Reusing Water

We know that the continued growth in demands being placed on limited available fresh water supplies in many areas of the country, along with tightening discharge standards will likely lead to an increased dependency upon water reuse. Areas with limited water resources such as the arid US Southwest, already have well-established water reclamation and reuse programs. These will continue to grow and improve.

For example, over 525,000 ac. Ft/yr (nearly 470 million gallons per day) of water were recycled in California in 2003, with nearly 46 percent of that used for agricultural irrigation and the current goal set by State legislation is for this to increase to 1 million acre feet (nearly 893 million gallons per day) by the year 2010.

The popularity of reuse has also grown in other areas such as Florida, which now has over 1.2 billion gallons per day of total reuse capacity and over 630 million gallons per day of reclaimed water actually being reused, with 50 percent of that used for landscape

irrigation in public access areas such as residences, golf courses, parks and school grounds.

The WaterReuse Association has estimated the amount of water reused in the US in 2004 to be about 2.6 billion gallons per day and projected this amount would increase to about 12 billion gallons per day by 2015. As demands on existing water supplies increases, such as we are seeing in cities like Atlanta and Las Vegas, we expect that even more communities will become interested in making greater reuse of reclaimed water.

Restoring Watersheds

EPA is also approaching our water resource and infrastructure challenge by integrating watershed-based approaches into decision making at the local level so that communities can make the most informed and cost-effective infrastructure decisions that also help to ensure the overall health of the watershed. In many cases, we know that the adoption of watershed-based approaches, such as source water protection, water quality trading, and watershed permitting, in conjunction with traditional "hard infrastructure" approaches, can help reduce overall infrastructure costs.

EPA is advancing the President's vision of "Cooperative Conservation" through grassroots, community–driven actions to protect local watersheds and waterbodies of natural significance. Last December, we convened a group of drinking water, wastewater, and stormwater utility managers to discuss watershed approaches to utility management.

Building off the success of that effort, we asked the National Advisory Council on Environmental Policy and Technology to provide EPA with recommendations on how to advance our efforts in this area. We received initial recommendations from the group in July and they are currently engaged in the second phase of their project.

Other Activities

We see stormwater as one of the most promising re-use opportunities. Our vision is to work with communities, companies, and citizens to view stormwater as a water resource, not simply a waste product. We're putting technology and innovation to work in our stormwater permitting program and our new "Green Infrastructure" strategy. Beneficial re-use of stormwater, whether on a watershed scale or at individual sites such as rain gardens and rain barrels can help to conserve our water resources.

EPA is also working to carry out a research program on infrastructure that is focused on the "underground and out of sight" network of drinking water distribution and wastewater collection pipes. The initial plan primarily identifies research, demonstration and technology transfer activities for wastewater collection systems and drinking water distribution systems. And while our WaterSense program is focused on more efficient water use by end users, we are also working to identify effective leak detection strategies that public water systems can use to minimize leakage in the distribution systems. Water efficiency strategies that incorporate water-saving technology along with innovative management practices to use less water can be implemented and still allow a water system to deliver an unchanged or improved level of service to consumers. "Acceptable"

industry standards for water loss (non-revenue water) are on the order of 15-20%. However, in many utilities water loss through deteriorated distribution pipes can exceed 60%. EPA is working with stakeholders to identify and promote tools, resources and processes for public water systems to further water efficiency through activities such as universal metering, conducting water audits and implementing leak detection and repair programs.

EPA's State Revolving Fund programs can help states meet the challenges posed by infrastructure construction and rehabilitation. Total assets of these two successful programs exceed $75 billion and are expected to grow in the future. EPA is also proposing a new tool – Water Enterprise Bonds – to accelerate and increase investment in the nation's water infrastructure. These will be private activity bonds for public-purpose drinking water and wastewater facilities. Providing expanded access to private activity bonds for communities will allow them to finance, build, and manage water facilities using public-private partnerships that deliver the best mix of technology, construction, and operations with the appropriate transfer of risk to their private sector partners. Consistent with one of our four pillars of sustainability, this proposal would also require state or local governments that use the bonds to implement full-cost pricing for services within five years. If enacted, this initiative would lead to a more robust market offering of new solutions to our water infrastructure investment challenges.

Climate Change

While we will continue to carry out activities under our Sustainable Infrastructure

strategy, EPA and its partners are learning more about the impacts of climate change and we are doing more to confront the serious challenges it poses for our water resources. Increasingly, we understand climate change may have impacts on water infrastructure and watersheds that will affect our actions under the Clean Water Act, Safe Drinking Water Act, and various ocean and coastal laws.

While there remains some uncertainty on the scope, timing and potential regional impacts of climate change related effects, EPA and its partners are taking prudent steps now to assess emerging information, evaluate potential impacts of climate change on water programs, and identify appropriate response actions. The National Water Program recently established an intra- agency Climate Change Workgroup, made up of senior managers from EPA headquarters and regional water offices. The Water Program Climate Change Workgroup is working to improve understanding of climate change impacts on water resources and is finalizing a Climate Change Strategy for the National Water Program.

The 21st Century Water Commission Act of 2007

Clearly, it is important to carefully consider how the water resources of this Nation are used and how we can effectively manage them into the 21st Century. The status of the Nation's water resources will continue to change with growing population, increasing urbanization, changing industrial and agricultural practices, and changing climate. Science can inform us about the status of our water resources and help us anticipate the likely effects of water-policy and management practices on those resources. Authority to

manage water resources is largely delegated to States, Tribes, and local municipalities. Federal agencies are committed to productive collaboration with these water resource managers. In the future, water managers will need to update policies and practices to respond to changing water resource conditions and to reflect new knowledge. We are committed to collaboration and integration, not confrontation and duplication. Our experiences have shown us how coordination of federal, state, tribes, and local constituents can help us to accelerate environmental progress.

Thank you Madam Chair, for the opportunity to testify on HR 135 and EPA's actions to promote innovative and coordinated policies to sustain our water resources into and beyond the 21st Century. I'd be happy to answer any questions you or your colleagues may have.

STATEMENT OF

ROBERT S. LYNCH
ROBERT S. LYNCH & ASSOCIATES
340 E. PALM LANE, SUITE 140
PHOENIX, ARIZONA 85004-4603
TELEPHONE: 602-254-5908

BEFORE THE

HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT

CONCERNING H.R. 135 TO ESTABLISH THE

TWENTY-FIRST CENTURY WATER COMMISSION

NOVEMBER 8, 2007

STATEMENT OF ROBERT S. LYNCH
BEFORE THE HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT
CONCERNING H.R. 135 TO ESTABLISH THE
TWENTY-FIRST CENTURY WATER COMMISSION

November 8, 2007

Mr. Chairman and Members of the Subcommittee, my name is Bob Lynch. I am an attorney in Phoenix, Arizona. I have worked on water and water rights issues, beginning at the Justice Department here in Washington in the late 1960's and then in private practice in Phoenix for over 40 of the 43 years I have been a member of the bar.

As you know, H.R. 135 has been passed by the House of Representatives not once but twice. It has received overwhelming bipartisan support. I am here today to ask you to continue that bipartisan support by joining the House Natural Resources Committee in supporting this bill and expediting its early consideration by the full House of Representatives.

My reasons for asking you to do so are twofold. First, this bill has received unprecedented scrutiny, especially in Western water circles. That scrutiny has resulted in equally unprecedented support among Western water interests for this Commission and its focus on enhancing water supplies, not only in the West but throughout the country. We in the West have a long history of having to deal with drought. The experiences in the East are of more recent vintage but emphasize the need for a national look at water supply. There hasn't been such a look since the National Water Commission report came out in the early 1970's. Second, the problems identified in H.R. 135 and in testimony when it was considered by the House Natural Resources Committee in April 2003 have not gone away. Indeed, if anything, they have gotten worse. While we were already behind the curve in terms of fashioning solutions then, we are even more behind the curve now. There are things that can be done. There are things that can be done in relatively short order, including actions that can be taken by Congress.

I want to commend the Committee and the Subcommittee for scheduling this hearing and considering this important legislation. Action on this bill by the full Congress is overdue. The drought problems that are creating headlines in our newspapers are testimony in themselves of the need for a critical look at the nation's water supply and ways that we can protect and enhance it.

We in Arizona understand the seriousness of this situation. We are in our eleventh year of drought within the interior of

Arizona and the eighth year on the Colorado River system as a whole. So far our infrastructure and planning are proving to have been wise choices, both as to the actions taken at the state and local level in Arizona and the federal projects that Congress has previously authorized. As we speak, the final Environmental Impact Statement on the Shortage Criteria for the Colorado River is released as a predicate to the decision by the Secretary of the Interior on those criteria. Those criteria will complete the regulatory pattern for the Colorado River Basin that has been underway in one fashion or another since 1922.

In addition, the three Lower Basin States, Arizona, California, and Nevada, have entered into a partnership with the federal government called the Multi-Species Conservation Plan. This environmental mitigation and restoration plan covers the entire floodplain of the Colorado River from Hoover Dam to the Mexican border. It will spend a billion dollars over fifty (50) years. The program is designed to ensure that environmental objectives for the Lower Colorado River are met while ensuring that water and power supplies for 20,000 million people continue to be made available. Congress has before it a bill to indicate its support for this ground-breaking venture.

Arizona has established the most stringent groundwater management law in the nation. We are still exploring all the ramifications of our program since its initial passage in 1980. However, it is clear that this law was an essential step for Arizona in management of its groundwater resources. We have also embarked on an aggressive groundwater storage and recovery program. While we are perhaps several decades behind southern California, which has long had such programs, we are catching up. These are some of the tools we have chosen in order to plan for our water future. Not all of these may be appropriate in other areas. Other programs may need to have different elements to be effective in different parts of the country. Nevertheless, it is time for more actions and more solutions, fashioned by the several states, fashioned in multi-state programs, and fashioned in public/private partnerships with state and local government and with the federal government.

In my view, the Twenty-First Century Water Commission will provide an impetus and an enhanced public awareness not only of our problems but of the solutions that we need to solve them. Some of these solutions will be difficult. Without marshaling the public will, some of them will not be attainable. We need the emphasis on increasing our water supply that this Commission is fashioned to produce. We need H.R. 135 passed and signed by the President.

Thank you for the opportunity to appear before you on this very important legislation. I urge your support and quick action on H.R. 135.

Testimony before the

Subcommittee on Water Resources and Environment

"Twenty-First Century Water Commission Act of 2007"

Thursday, November 8, 2007
10:00 a.m.
Room 2167
Rayburn House Office Building
Washington, DC

Written Testimony of:

William F. Mullican III
Deputy Executive Administrator For Planning
Texas Water Development Board
1700 Congress Avenue
P.O. Box 13231
Austin, TX 78711-3231
Tele: 512-936-0813

Complete Statement

of

William F. Mullican III
Deputy Executive Administrator
For Planning
Texas Water Development Board

before

The Subcommittee on Water Resources and Environment
Committee on Transportation and Infrastructure
United States House of Representatives

on

H.R. 135, The Twenty-First Century Water Commission Act of 2007

November 8, 2007

INTRODUCTION

Madam Chair and Distinguished Members of the Subcommittee:

Thank you for the opportunity to testify before you on H.R. 135, "The Twenty-First Century Water Commission Act of 2007." I am testifying today in my capacity as Deputy Executive Administrator for Planning at the Texas Water Development Board (Board). The Board is the state agency charged with collecting and disseminating water-related data, assisting with regional water planning, and preparing the state water plan for the development, management, and conservation of Texas' water resources. The Board also administers cost-effective financial programs for constructing water supply, water infrastructure, wastewater treatment, flood control, and agricultural water conservation projects.

Of the several financial assistance programs the Board administers, two major programs are funded in part by federal grant money, the Clean Water State Revolving Fund and the Drinking Water State Revolving Fund. The Board's Clean Water State Revolving Fund is the second largest State Revolving Fund in the nation, with $4.9 billion in cumulative loan commitments. The Board's Drinking Water State Revolving Fund, established in 1996, has provided more than $743 million in cumulative loan commitments.

Please allow me to take a minute to thank Chairwoman Johnson for her strong support of Texas water issues and of the Board, in particular. This subcommittee, along with Committee Chairman Oberstar, has been and

continues to be extremely receptive and accommodating to the Board's insights on water resources policy of benefit to Texas and the entire nation. It is an honor and privilege for the Board to maintain a supporting role to the subcommittee.

The subcommittee's serious consideration of water supply issues is particularly commendable. Drought is a way of life in the western United States, and now water supply concerns are making news across other parts of the country as well. The impact of drought on water supplies is increasingly relevant in places like Baltimore, Atlanta, parts of North Carolina, and the rest of the southeastern United States. Water supply is a national concern.

In the last 50 years, Texas has experienced a series of regional droughts and two major statewide droughts, the severity of which prompted unprecedented action by the Texas Legislature to ensure that the future water needs of all Texans are met. My initial remarks will describe Texas' experiences during the droughts of the 1950s and 1990s, focusing on the 1990s, and how Texas responded by establishing a comprehensive, bottom-up regional water planning process. This summary will be followed by a brief discussion on some of the successes Texas has achieved as a result of this bold approach to water planning. I will also present some specific water supply challenges and conclude my testimony with suggestions on how the federal government can continue to be an active partner with us in our quest to meet the future water supply needs of Texas.

BACKGROUND

Texas began statewide water planning in earnest after the drought of the 1950s, still considered the drought of record for most regions in Texas. Although the drought ended in 1957, its devastating effects on the Texas economy, particularly in the agricultural sector, where ranch debt climbed above $3 billion, prompted the Texas Legislature to create the Texas Water Development Board (Board). The voters of Texas subsequently approved a constitutional amendment authorizing the Board to administer a $200 million Water Development Fund to help communities develop reliable water supplies.

Since that time, the Board has prepared and adopted eight state water plans—in 1961, 1968, 1984, 1990, 1992, 1997, 2002, and most recently in 2007. The 1961 and 1968 plans consist of early attempts to describe the state's water resources, to quantify future water needs, and to propose water supply projects to meet those needs. The 1984–1997 plans document an ever-increasing focus on a rapidly growing demand for water supply, the need for increased water conservation, and the importance of environmental issues.

Development and adoption of the 1997 State Water Plan coincided with a major drought in Texas. By the end of 1996, drought conditions in the state were on their way to causing an estimated $5 billion in losses for agricultural and agriculturally related industries. **These devastating losses and the anxiety experienced by communities across Texas threatened by water supply**

shortages provided the catalyst for a fundamental paradigm shift in Texas water planning—from a centralized to a decentralized process in which the primary responsibility for water supply planning was shifted from the state to regional and local government levels.

This change in the way Texas approached its water planning was mandated in Senate Bill 1, the landmark water legislation passed by the Texas Legislature and signed into law in 1997 by then-Governor George W. Bush. Senate Bill 1 greatly increased public participation in water planning by implementing a bottom-up local and regional planning process that emphasizes conservation, increases protection of the environment, and promotes voluntary water transfers through marketing. The first cycle of regional water planning was completed in 2002, on time and under budget at $19.1 million. Senate Bill 1 requires that both the regional and state water plans be reviewed and revised as necessary on a five-year cycle in order to adequately address changing conditions in demographics, water supplies, and new technologies. The second cycle under the Senate Bill 1 planning process was completed on January 5, 2007.

As part of the initial regional water planning effort in 1997, the Texas Legislature directed the Board to designate regional water planning areas and develop guidelines for the planning process. After substantial collaboration with local and state groups, the Board created 16 planning areas, each represented by a regional water planning group (planning group). Senate Bill 1 assigned the Board the task of selecting the first members of these groups. We selected the members from the 11 specific interests identified in Senate Bill 1, including, but not limited to, the general public and representatives of counties, municipalities, industries, agriculture, the environment, small businesses, electricity-generating utilities, river authorities, water districts, and water utilities. We also sponsored public meetings and workshops through the state to develop the planning guidelines that serve as the structure for the regional planning process.

For the 2007 State Water Plan, the 16 planning groups eventually included approximately 350 voluntary representatives with a broad array of interests, including the 11 interest group categories specifically required by statute. They worked for more than four years to develop their regional water plans and held several hundred public meetings across the state. Planning group members spent thousands of hours and traveled as many miles to create these plans.

Senate Bill 1 requires planning groups to address the needs for a 50-year planning horizon of *all* water users in their regions. If current supplies do not meet future demand, the planning groups must recommend specific water management strategies, such as water supply projects, to meet near- and long-term needs. The planning groups, with assistance from the Board, assess the social and economic impact of not meeting those needs and are required to note and explain the conditions that led to the inability to meet an identified need.

Throughout the planning process, joint meetings between the planning groups serve both to coordinate water management strategies and also to circumvent future potential conflicts arising over the use of shared resources. When appropriate, planning groups coordinate their planning efforts with those of neighboring states and the Republic of Mexico. Because certain water management strategies, such as the development of a large reservoir, could satisfy needs in more than one region, the planning groups are encouraged to form subregional water planning groups and to hold joint regional meetings.

As with its predecessor, the 2002 State Water Plan, the 2007 plan was prepared on the basis of the 16 regional water plans. Key findings of the 2007 State Water Plan are as follows:

- The population of Texas is expected to more than double in the next 50+ years, from nearly 21 million in 2000 to about 46 million in 2060.
- Water supplies from existing sources are expected to decrease 18 percent, from 17.9 million acre-feet per year in 2010 to 14.6 million acre-feet per year in 2060.
- Although statewide per capita water demand is projected to decrease over the 50-year planning period, total demand for water is projected to increase 27 percent, from nearly 17 million acre-feet in 2000 to 21.6 million acre-feet in 2060.
- **If the state does nothing to increase water supplies, about 85 percent of the state's projected population will not have enough water by 2060 during drought conditions.**
- Total capital costs of implementing all of the 4,500 water management strategies included in the 16 regional water plans are approximately $30.7 billion. Total capital costs of water supply, water infrastructure, wastewater treatment, and flood control through 2060 in Texas are now estimated at approximately $173 billion.

SUCCESSES ACHIEVED WITH NEW APPROACH

Texas' commitment to establishing the regional water planning process has resulted in truly remarkable success. This success became evident when *Water for Texas—2002*, the first comprehensive state water plan to be adopted using the regional water planning process, was published. The goal of *Water for Texas* was to provide a water plan that, if implemented, would meet the needs of all Texans, even during conditions of drought. Although some needs may remain unmet today, the degree to which this plan has achieved its goal is unprecedented. Texas is proud of this achievement and rightfully so—it took a lot of hard work by a lot of people, much of it voluntary, to make this happen.

Texans realize, however, that the true measure of success is not the publication of a water plan, but whether this new regional water planning approach can

produce real solutions to the water supply challenges facing our state over the next 50 years and beyond. Major water management strategies, such as the Lower Colorado River Authority/San Antonio Water System's Off-Channel Reservoir Project, the Kerr-McGee Pipeline Project, the Kay Bailey Hutchison Desalination Plant in El Paso, and the significant increase in developing and relying upon water conservation, both municipal and agricultural, are all excellent examples of successful implementation of locally and regionally developed water plans.

CHALLENGES FOR THE REGIONAL WATER PLANNING PROCESS

The water management strategies that have already been implemented or are in the process of implementation have demonstrated how Texas is using the regional water planning process to develop potential solutions to water supply challenges and to move these solutions toward implementation. We fully expect the regional water planning approach to continue to result in new solutions as the process and institutional framework mature. There remain, however, a number of water supply challenges that will test the mettle of this new approach. Following is a discussion of the most visible issue to present a challenge in Texas.

Reservoir Development

A progressive de-emphasis on building new reservoirs in Texas is evident in both historical reservoir development patterns and chronological editions of Texas' state water plans. Texas now has 196 major reservoirs (more than 5,000 acre-feet of conservation storage capacity), with only one of these existing before 1900. By 1950, Texas had constructed approximately 62 major reservoirs, although development was most prolific between 1950 and 1980, when the number grew to a total of 184. The pace of construction began to slow in the 1970s and has since slowed considerably as a result of environmental issues, increasing costs of reservoir development, and the reduced number of potentially high-quality reservoir sites. Over time, Texas' state water plans have reflected this slowdown in reservoir development. The 1984 State Water Plan identified 65 major reservoir sites. In contrast, the 1997 and 2002 State Water Plans each recommended only eight major reservoirs to meet needs for additional water supplies through 2050. Emphasis on conservation, reuse, and other alternative water management strategies lowers the state's reliance on new, large-scale reservoir projects.

Texas recognizes, however, that large-scale reservoir projects must remain a strong and viable tool in our water development toolbox if the state is to meet its future water demands. This recognition was most clearly demonstrated during the last session of the Texas Legislature (80th Texas Legislature from January–May 2007) when legislators designated 19 sites as unique sites for reservoir construction. This designation of unique reservoir sites, a major component of Texas Senate Bill 3, prevents political subdivisions of the state from taking any actions that would significantly prevent the construction of a

reservoir. Although Texas recognizes that this major provision of Senate Bill 3 has no direct bearing on an action by the federal government, it is hoped that these designations will be a clear and definitive message to federal agencies with regard to what Texas plans for these sites.

There are a number of major issues associated with maintaining the viability of the large-reservoir option. Proposed large-scale reservoirs are frequently associated with interbasin transfers of surface water, which present certain difficulties that must ultimately be overcome through the permitting process. Constructing proposed reservoirs will also be problematic because of opposition from residents who will be affected, timber companies and other landowners, and environmental groups.

RECOMMENDATIONS ON THE APPROPRIATE FEDERAL ROLE IN WATER PLANNING AND IMPLEMENTATION

By 1997, Texas had maintained a formal, centralized water planning process for more than 40 years. Yet the impact of a statewide drought in the 1990s served to illustrate two fundamental deficiencies. First, there was little or no public awareness of how critical the need was for additional water supplies. Second, the level of implementation of projects recommended in the state-developed water plans was not sufficient to meet future, and in certain cases, current water supply needs.

One of the most basic theories developed to explain this lack of implementation was that water supply project sponsors, typically cities and communities, were not involved in either the planning process or in the selection of projects to meet future needs for water supply. In many cases, there was not even the fundamental recognition of a need for additional water supplies. The Texas regional water planning process involves local governments not only in water planning but also in selecting recommended projects. The involvement of local interests has resulted in significant improvements in both of these areas. First, public participation and awareness have increased well beyond even the most optimistic expectations. Second, the implementation of water management strategies and projects recommended to meet future water supply needs is moving forward at a pace not experienced in Texas since the late 1970s and early 1980s.

Therefore, as Congress considers efforts such as those envisioned in H.R. 135, using the Texas experience as an example, it is crucial that certain principles be followed.

First and foremost in terms of a national water policy, I encourage Congress to discuss and determine the appropriate federal role in managing and developing water supplies. I say this with some trepidation, as the members of the subcommittee are keenly aware of the states' unflinching stance on state primacy over water resources. Yet, the piecemeal approach cobbled together by various federal agencies hinders our ability to fully use federal assistance on water

supply issues. This is especially true when one considers the significant federal legislation, such as the Endangered Species Act, the Safe Drinking Water Act, and the Clean Water Act, that local project sponsors will be required to address as they develop their projects. This is why the Texas Water Development Board has initiated discussions with our federal partners, most notably the U.S. Army Corps of Engineers, to convene a national forum on "What is the appropriate federal role and investment in water supply?" The Board has had constructive discussions with Assistant Secretary of the Army for Civil Works, John Paul Woodley, Jr., about this very topic. Similar preliminary discussions are ongoing with the Environmental Protection Agency through our participation on the National Advisory Council on Environmental Policy and Technology. We hope to generate a gathering of federal, state, and local leaders to determine an effective and efficient way forward on water supply issues. I hope the subcommittee will support the idea of a national forum on this issue.

Another principle for this subcommittee to consider in its water legislation is the value of a collaborative process. There must be significant, meaningful public participation by the entities that will be responsible for implementing any potential recommendations. If local, regional, and state governments are not afforded an opportunity to participate in the planning contained in H.R. 135 or similar initiatives, then chances for implementation will be significantly reduced. **Judging by Texas' regional water planning experience, the most appropriate and effective role for the state has been in (1) establishing planning guidelines, (2) providing technical support, (3) resolving interregional conflicts regarding use of existing or planned supplies, and (4) providing funding necessary for the planning effort. These four areas of involvement in the planning process by state agencies in Texas, such as the Board, serve as an excellent template for the appropriate role for the Commission proposed in H.R. 135.** In our regional planning process, state input to the planning groups on water management strategies has been limited to three roles: technical assistance during the assessment of water demands and supplies, technical review to ensure that planning guidelines have been followed, and oversight to ensure that no interregional conflicts exist. To extrapolate our experience to the federal level, the Commission, should it come to fruition, should fulfill a similar role, deferring to the states on matters clearly recognized as being within their primacy, yet providing the coordination, technical assistance and oversight needed so that an integrated, comprehensive analysis with any necessary policy recommendations may be presented to Congress.

A third principle the subcommittee should consider for H.R. 135 is the importance of accurate, timely data. Since 1997, Texas has invested approximately $36 million in the regional water planning process and another $20 million to collect and analyze basic surface and groundwater data. This data allows us to calculate current supplies and make projections for the availability of future supplies to meet needs over the next 50 years.

Data needs are enormous in this type of planning. This is because the local and regional planners, who will also be the project sponsors, understandably insist upon having adequate and reliable water data on which to base their funding decisions. Thus, the dearth of data across the country can be a potential obstacle for a national assessment. I have had the privilege of consulting with numerous states throughout the country on the Texas planning model (from California to Pennsylvania and several states in between), and I have concluded that few if any of these states possess the volume and quality of data necessary to build a solid plan. The cost and time required to develop data is an important consideration as you deliberate on the implementation of a national assessment as proposed in H.R. 135. Clearly, the $9 million authorized will not be adequate to conduct a water demand and supply analysis for the nation at anything but the most cursory level. Based on the Texas experience, Congress will be very skeptical of any recommendations that the Commission may develop based on such a superficial analysis, and thus the value of such an effort will be minimal at best.

I appreciate the opportunity to offer insights on water supply planning and implementation. I hope I have been able to provide a clear picture of how our planning approach in Texas has succeeded, and how it can be translated into a national effort. I am available for your questions.

Thank you.

Testimony before the

Subcommittee on Water Resources and Environment
Committee on Transportation and Infrastructure
United States House of Representatives
The Honorable Eddie Bernice Johnson (D-TX), Chairwoman

On

H.R. 135, The Twenty First Century Water Commission Act of 2007

November 8, 2007
10:00 am
Room 2167
Rayburn House Office Building
Washington, DC

Written Testimony of:

The Honorable Shirley Franklin
Mayor
City of Atlanta, Georgia
City Hall
55 Trinity Avenue, SW
Suite 2400
Atlanta, GA 30303

Thank you Madam Chair and distinguished members of the Subcommittee for holding this important hearing and allowing me to provide testimony on H.R. 135, "The Twenty-First Century Water Commission Act of 2007." This bill was introduced by fellow Georgian, Congressman John Linder, who represents parts of the growing metro Atlanta area. As Mayor of Atlanta, and as someone who has had to address some of the nation's most difficult water supply and water infrastructure challenges, I commend Congressman Linder for introducing this legislation and am appreciative of the opportunity to provide my thoughts on this legislation and the water issues facing Atlanta and the nation to the Subcommittee.

Madam Chair, I am truly grateful for your leadership on water issues. As we have discussed before, water is an issue we will continue to grapple with for generations to come and the communities that you represent in Texas face very similar challenges as the City of Atlanta. I appreciate your commitment to assisting those of us at the local level with federal support and the recognition that this is not just a local problem, but a challenge of national proportion.

Water is our lifeblood. We can live without food for several weeks. Without water, we die within three to four days. Every great civilization has depended on a reliable water source. All built their societies on access to clean, safe drinking water, constructing reservoirs, aqueducts, dams and vast pipelines.

And this is all part of the reason that a Twenty First Century Water Commission has merit. If every great civilization has depended on a reliable water source then we should certainly have some type of organization responsible for doing exactly what is stated in the legislative language of the proposed Commission's purpose:

"to project future water supply and demand, study current water management programs, and consult with representatives of federal, state, local agencies, and private water management programs and entities, to develop recommendations for a comprehensive water strategy."

Let me digress a moment and submit to you some of the reasons that Atlanta's perspective on water issues is important, unique, and buttresses the fact that when looking at solutions to our water and water infrastructure issues, we must not have a one-size-fits-all approach.

Like other cities, Atlanta, too, depends on its water. But it is the largest major city in the United States not built on a large body of water. We depend on one water source -- the Chattahoochee River -- that is relatively small, given that it supplies such a large population. Unlike many other large cities that were developed around ports, Atlanta was developed as a railroad terminus.

Geologically, Atlanta is built on solid granite bedrock. We don't have easily accessible aquifers to tap as an alternate water supply. What we have is more than four million people dependent on rivers that in other parts of the US would supply only a fraction of

that population. Everyone moving into Atlanta and the metro area becomes dependent on those very same rivers for their water and sewer systems. Therefore, we have an extra obligation to take the responsibility of clean water seriously.

In coming to office I found myself confronted with a multi-billion dollar program to complete the overhaul of water and wastewater infrastructure. It is our way of taking responsibility of for decades of neglect of that infrastructure. We are doing this with the goal of making the Chattahoochee and other rivers that supply Atlanta's drinking water; irrigate other parts of Georgia; and end up in Florida's fish beds; the cleanest urban rivers in the country.

The problem I encountered from the beginning was the City's water and sewer infrastructure, some of it dating to the late 1800s. Leaks, blockages, debris, collapses and general lack of maintenance were leading to sewage backups and overflows, contamination of local waterways and brown water complaints. Atlanta was becoming the poster child for infrastructure neglect. Two lawsuits led to federal consent decrees under which the City agreed to make extensive improvements to its wastewater system. In addition, the City's drinking water system required repairs and upgrades. The total cost of the improvements that would become the Clean Water Atlanta program was $3.9 billion. Creating the program was the first of many tough decisions Atlanta would have to make on behalf of its residents and our downstream neighbors.

The Clean Water Atlanta program represents nothing less than a total overhaul of the City's water and wastewater systems. To fund such an extensive program, Atlanta asked its ratepayers to assume an enormous burden, with unprecedented rate increases and tolerance of the inconvenience associated with massive construction projects. City residents passed a one-cent sales tax to help fund Clean Water Atlanta, and the City issued $865 million in revenue bonds. (It has since authorized another $600 million in commercial paper and has taken on $100 million in low-interest state loans.) We coupled that with efforts by the state and cooperation and support by our congressional delegation to support our efforts to pursue federal funding to additionally support the efforts we had made at the local and state level.

It is important to remember that the City's drinking water and wastewater systems are actually regional systems that serve 1.2 million customers daily over a 650-square-mile area.

Recently, the Department of Watershed Management Commissioner Rob Hunter and I held a press conference reiterating the City's intention to comply with the Governor's 10 percent water use reduction goals, urging Atlanta's commercial, industrial and residential customers to conserve water whenever possible and vowing that the City will make conservation one of its top priorities.

In 2004, Atlanta committed $1 billion toward water system improvements, even though that investment was not mandated. With that $1 billion, the City is replacing water mains and meters, and identifying and repairing leaks in the system. That year, the City also began using conservation pricing for its water/sewer bills, rewarding those who use less water.

Under an extensive leak identification and repair program, Atlanta has repaired almost 8,000 leaks this year alone. The City is currently averaging 800 leak repairs a month compared to 750 a year when the water system was operated privately.

Atlanta is in the middle of a $35 million project to replace its 148,000 water meters with Automated Meter Reading technology, which will reduce leaks, allow meters to be read remotely and ensure accurate billing. Already, we have replaced more than 55 miles of old water mains in communities throughout the City. When the water main replacement project is completed, the City will have replaced more than 130 miles of water mains.

At the same time, we are conserving. Atlanta's water production was 105.9 million gallons a day for the first four days in November 2006. This year, the production was 98.5 million gallons a day over the same time period, a reduction of 7 percent. This reduction in usage is coming as the number of accounts increases. For example, in November 2006, the City was billing 158,960 accounts for a total of 662 gallons per day per account. In October 2007, those numbers were: 183,405 accounts using 537 gallons per day per account, a reduction of 129 gallons per account or 19.4 percent.

Since 2000, the City's customer base has risen by 9 percent, but its water consumption has dropped by 5 percent.

The bottom-line is that Atlanta is determined to set an example with its conservation efforts.

Our administration has come a long way in a short time but we recognize we have a long way to go. We have come to recognize our water and wastewater infrastructure as a treasure. And at times like these, when we are experiencing historic droughts, we recognize how we must do everything we can to protect and improve these precious resources

Some say the biggest difference between industrialized nations and developing nations is not food or stable political systems, but safe, clean drinking water

I made it my mission when I came into office to form alliances and partnerships within the metro area, the state as a whole, and with our congressional delegation. I have reached out to Republicans, Democrats and Independents at all levels of government. I have reached out for the help and support of our suburban and rural neighbors, because clean water doesn't have a party and deserves to be at the top of everyone's agenda.

The City of Atlanta is heavily involved in the Metropolitan North Georgia Water Planning District. This is a planning entity dedicated to developing comprehensive watershed, wastewater and water supply and conservation plans to be implemented by local governments in the 16-county metro Atlanta region. The City also looks forward to working with the Georgia Department of Natural Resources' Environmental Protection Division, as they continue to develop a comprehensive state water plan.

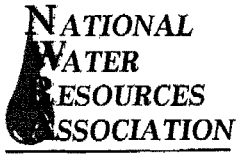
As far as the need for a Twenty First Century Water Commission, I can attest to the fact that from our region's perspective it would certainly be beneficial to ensure critical, long-term planning for our water supply and our water needs with a 50 year strategy from a national perspective.

The legislation's goal to reduce the challenges faced by the litany of federal, state and local agencies and attempt to coordinate among them and the many different water resource management plans that have stacked up indeed would be of benefit. The City of Atlanta and the state of Georgia serve as perfect examples of how competing demands for water among various agricultural, urban, recreational and environmental interests have led to many challenges over the last few decades. It is my hope that a Commission such as this can complement the efforts already taking place at the local and state levels to address our water needs of the future.

Should this legislation pass and be enacted into law, it is my hope that the City of Atlanta can host one of the ten nationwide hearings the Commission will hold as it develops its final report.

Madam Chair, thank you for allowing me to provide testimony on this important issue. I look forward to working with you in the future as you continue to discuss ways to address our water supply and water and wastewater infrastructure needs for the future.

Nov. 5. 2007 11:44AM No. 4889 P. 1/2



Meeting Tomorrow's Challenge

President W.E. "Bill" West, Jr.
Vice President Lawrence M. Libeu
Treasurer Wade Noble
Executive Vice President Thomas F. Donnelly

November 2, 2007

Congressman James Oberstar
Chairman
Transportation and Infrastructure Committee
House of Representatives
Washington, D.C. 20515

Dear Chairman Oberstar:

On behalf of the Board of Directors and membership of the National Water Resources Association (NWRA), I am writing you in strong support of the Twenty-First Century Water Commission Act of 2007, H.R. 135, as introduced by Congressman John Linder on January 4, 2007.

The National Water Resources Association (NWRA) is a nonprofit federation of associations and individuals dedicated to the conservation, enhancement, and efficient management of our Nation's most precious natural resource, WATER. The NWRA is the oldest and most active national association concerned with water resources policy and development. Its strength is a reflection of the tremendous "grassroots" participation it has generated on virtually every national issue affecting western water conservation, management, and development.

In the West, water infrastructure is every bit as important as transportation infrastructure. It is essential to the continued economic growth and development of the region. Water infrastructure needs continue to exist, particularly rural water supply. However, on the whole, the approach to meeting these needs will be quite different from those of the past. No one envisions a future infrastructure development program and financing arrangements like the original Reclamation program, which facilitated the development and unprecedented economic growth of the West during much of this century. Future projects are more likely to include non-structural features, environmental enhancement, proven best management practices, innovative approaches to water quality/quantity concerns and greater levels of non-federal financing.

An essential element, which is currently missing from the federal planning equation, is a basin-by-basin infrastructure and programmatic needs assessment. Such an assessment cannot be developed without the active involvement and, perhaps, leadership of the nation's governors, water resources professionals, and state and local officials. We would strongly recommend that this be a primary mission of the Commission.

Several water development projects have been authorized by the Congress but remain unfunded. These projects should be reviewed to determine if they still meet the needs they were authorized to address. These projects should be prioritized on a state and regional (watershed) basis and Congress should determine what project benefits are in the federal interest for funding purposes.

3800 North Fairfax Drive, Suite #4, Arlington, Virginia 22203, (703) 524-1544
FAX (703) 524-1548 E-mail: nwra@nwra.org HomePage: http://www.nwra.org

November 2, 2007
Congressman James Oberstar
Chairman
Transportation and Infrastructure Committee
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Again, the NWRA strongly supports H.R. 135 and applauds Congressman Linder's efforts to develop consensus in solving, not only Georgia's water supply challenges, but the nation's. We look forward to working with you to ensure the passage of this needed legislation.

Thank you for your time and consideration.

Sincerely,

Thomas Donnelly

Thomas F. Donnelly
Executive Vice President

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