CALIFORNIA WATER SECURITY

OVERSIGHT FIELD HEARINGS

BEFORE THE

SUBCOMMITTEE ON WATER AND POWER

OF THE

COMMITTEE ON RESOURCES
U.S. HOUSE OF REPRESENTATIVES

ONE HUNDRED SEVENTH CONGRESS

FIRST SESSION

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OVERSIGHT FIELD HEARING ON SOUTHERN CALIFORNIA WATER SECURITY -- OPPORTUNITIES AND CHALLENGES

Monday, June 18, 2001
U.S. House of Representatives
Subcommittee on Water and Power
Committee on Resources
Cerritos, California

The Subcommittee met, pursuant to call, at 10 a.m., in the Sierra Conference Center at the Cerritos Center for Performing Arts at 12700 Center Court Drive, Cerritos, California, Hon. Ken Calvert [Chairman of the Subcommittee] presiding.

Present: Representatives Calvert, Napolitano and Solis

Staff Present: Joshua Johnson, Majority Staff Director; Steve Lanick, Legislative Staff; Jolyn Murphy, Calvert's Staff; and Jeannine Campos, Clerk.

Mr. CALVERT. The hearing by the Subcommittee on Water and Power will come to order. The Subcommittee is meeting today to hear testimony on Southern California Water Security -- Opportunities and Challenges.

Under Committee Rule 4G the Chairman and the Ranking Minority Member, can make opening statements. If any members have statements, they can be included in the hearing record under unanimous consent.

STATEMENT OF THE HONORABLE KEN CALVERT, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

I frequently hear how industries such as the computer industry, agriculture, and defense are the driving economic force in California. They are right in pointing out the importance of their specific group to this broad-based economy. These industries have enabled California to become the world's fifth largest economy. We just passed France last week.

Water, or rather a secure supply of quality water, is fundamental in fueling each of these industries. We all recognize the need for clean, safe, and reliable water supplies but too little has been done to ensure the security of that supply.

It's been over 30 years since California has made any major investment in improving the supply and reliability of our water system. It is imperative that California, a state that serves as an inno-

vative leader for the rest of the United States, address its aging and inadequate infrastructure.

By doing so, we will increase our water supply and reliability and enhance the quality of the water we consume. In addition, research and development must be encouraged to support and maintain efforts to improve our healthy environment and create a sustainable future.

The water and power Subcommittee will conduct a series of hearings throughout the state. We have started this process here in Southern California where the need to focus on water security is critical. Eighty percent of the state's population is concentrated in the southern half of the state which receives only 30 percent of the annual rainfall. We depend on water from a variety of sources such as the Colorado River, Owens Valley, and Northern California.

As most of you know, California will have to reduce it's dependency on the Colorado River from the current level of 5.2 million acre-feet to 4.4 million acre-feet within the next 15 years. Complying with this requirement will not be easy, especially in light of demands placed on the water supply by an ever growing population.

Over the past 6 years California has experienced wet years. However, rainfall this year is below normal. If we begin to experience a drought similar to the late '80's and early '90's, the state will not be prepared to handle the demands on water supply given the competing needs which include urban users, agriculture, and the environment.

As dire as this sounds, there are solutions. Partnerships on local, regional, state, and Federal levels have been formed and active participation by all must be encouraged.

I have introduced a bill, H.R. 1985 with 28 of my California colleagues including Mrs. Napolitano who is sitting here with us today. This bill, the Western Security Enhancement Act, addresses California water security by improving water supply, reliability, and quality and by maintaining and improving our environment.

I believe the importance of this legislation should be evident to every municipality, irrigation district, business, conversation group, city, and county in this state. Certainly the entire West. All who are interested and invested in the success of California's future should support this bill. This debate cannot have any spectators. Too much is at risk.

[The prepared statement of Mr. Calvert follows:]

Statement of The Honorable Ken Calvert, Chairman, Subcommittee on Water and Power

During conversations with constituents, I frequently hear how industries such as the computer industry, agriculture, defense, ecotourism or Hollywood, are the driving economic force in California. They are all right in pointing to the importance of their specific group to this broad based economy. These industries have enabled California to become the world's sixth largest economy. But water, a secure supply of quality water, is fundamental in fueling each of these industries.

We all recognize the need for clean, safe and reliable water supplies, but too little has been done to assure the security of that supply. It has been over 30 years since California has made any major investment in improving the supply, and reliability of our water system. It is imperative that California, a State that serves as an innovative leader for the rest of the United States, address its aging and inadequate infrastructure. By doing so, we will increase our water supply and reliability, and enhance the quality of water we consume. Research and development must also be en-

couraged to support and maintain efforts to improve our healthy environment and create a sustainable future.

The Water and Power Subcommittee will conduct a series of hearings throughout the state; we have started this process, here, in southern California where the need for a focus on water security is the most acute. Eighty percent of the State's population is concentrated in the southern half of the State which receives only thirty percent of the annual rain fall. We depend on water receipts from a variety of sources such as the Colorado River, Owens Valley and northern California. In one case, California will have to reduce it's dependency on the Colorado River from the current level of 5.2 million acre feet to 4.4 million acre feet within the next 15 years. Complying with this requirement will not be easy, especially in light of demands placed on the water supply by an ever growing population and the 1992 Federal law known as the Central Valley Improvement Act that reallocated several hundred thousand acre feet of contracted water supplies for other purposes. Over the past 6 years, California has experienced wet years; this year rainfall is below normal. If we begin to experience a drought similar to the late eighties and early nineties, the state will not be prepared to handle the demands on its water supply given the competing needs among it's users.

As dire as this sounds, there are solutions. Partnerships on local, regional, state and federal levels have been formed and active participation by all must be encouraged. In Congress we have introduced a bill known as H.R. 1985, "Western Water Security Enhancement Act", that addresses California water security by improving water supply, reliability, and quality, and by maintaining and improving our environment. We currently have 27 California co-sponsors to this bill. I believe the importance of this legislation should be evident to every municipality, irrigation district, business, conservation group, and others who are interested and invested in the success of California's future.

I would like to recognize first my good friend and colleague on this Committee, Grace Napolitano, for her opening statement.

STATEMENT OF THE HONORABLE GRACE NAPOLITANO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Ms. NAPOLITANO. Thank you, Mr. Chair. Certainly my gratitude for his active leadership on the water issues at the Federal level and for holding the first of three hearings in the California water security in Southern California.

I believe we also need to acknowledge we are being hosted by the city of Cerritos and the city manager is sitting in the audience. We are pleased to thank council for allowing us to use this marvelous facility for such an important hearing.

I'm very appreciative of my Chairman's leadership because he's taken a bipartisan approach in addressing this crucial issue which is the major problem in California's water system is that it's aging and has not kept pace with the exploding population and we must act now to address the future needs of it. I mean long-range, not just short-range issues.

California's last major expansion of its water system occurred over 40 years ago when the State Water Project was approved. It provides and transports a fourth of our water with remaining water coming in from the Colorado River and the local ground water, a lot of which has been contaminated and those issues to deal with so it isn't just the water that we import.

It's all the other issues that our communities, our cities, and municipalities face in dealing with providing adequate potable and doing it in an expedient manner as well as in an affordable manner.

When the State Water Project was built back in the '60's California had 16 million residents and the projections now show that the state's current population is about 35 million with a strong likelihood that it's going to hit 50 million within 20 years.

Now, that is quite a jump for us. When I was serving in the state legislature I was told by my colleagues, my assembly colleagues, that we have stopped building. We have stopped accepting new people in the state of California, which may sound ludicrous to you but they were very serious about it because we experience most of the growth in Southern California. Northern California says, "We need, we want, and we will keep the water and you need to find a way to either go to desalination or recycling to fill your needs."

Well, we need a balance. I believe in this approach that the Chairman has taken is taking testimony here from the folks that actually have to deal with the issues at the local level. It's going to be paramount for us to be able to have a bill that is going to help Northern California and also Southern California.

What is the best solution for this approach? I believe that's why we're here and I thank my Chairman for that. We are given the opportunity to gain additional knowledge and have input into this complex water issue that we will be facing, not just within the next few years if we get another cycle of drought, but if we examine the factors that have left these challenges and listen to everybody, hopefully we will have a piece of legislation that will assist us and deal with our future needs of water short-term and long-term.

Thank you very much, Mr. Chairman, and that's it for me.

Mr. CALVERT. Thank you. And thank you for helping us put together this wonderful facility with the city of Cerritos. The city manager, Art, is here.

Art, stand up so we can all thank you. It's a marvelous facility.

Panel I, we have Mr. Ron Gastelum, CEO, Metropolitan Water District; Mr. Joseph Grindstaff, General Manager, Santa Ana Watershed Project Authority; Mr. Steve Koffroth, Office Manager, AFSCME Local 1902. If you will all please come to the head table.

We have a 5-minute rule. Many of you have already testified, I know, in front of my Committee and others in the past but I'll just explain it one more time. The green light indicates the time is on and the yellow light indicates 1 minute is left. The red light indicates that time has expired. There's 5 minutes in testimony. Please try to stay within that 5 minutes and we'll have plenty of time for questions. We appreciate that.

Ron, you may begin.

STATEMENT OF RONALD GASTELUM, CEO, METROPOLITAN WATER DISTRICT

Mr. GASTELUM. Thank you, Mr. Chairman, Honorable Grace Napolitano. My name is Ron Gastelum. I'm the Chief Executive Officer of the Metropolitan Water District of Southern California.

I do have written testimony that I want to submit for the record. I will make a few brief comments within the 5 minutes.

Mr. CALVERT. Without objection, all written testimony will be accepted in the record.

Mr. GASTELUM. Thank you, Mr. Chairman. Mr. Chairman, there is a clear Federal interest in the legislation that has been intro-

duced by you and co-sponsors. The California economy, the Southern California economy, is entirely dependent upon the interconnected water system in California.

That economy noted recently in Southern California has recently surpassed in gross national product that of France. It is a staggering contribution by Southern California to the economy of this country and the well being of this country. When you look at the Central Valley and the production from the Central Valley and the Sacramento Valley in agricultural products, it is a staggering contribution.

All of that is dependent on our water system. There is indeed a clear Federal interest in a reliable, clean, safe well-distributed water system here in California.

There's also a clear Federal interest given the tie between the Colorado River, the other basin states, Mexico, and the Northern California water systems that all tie to Southern California.

Balancing the management of those water systems not only produces benefits for Southern California but clear benefits for the other basin states and Mexico. There's a clear Federal interest in this legislation.

There's also a clear need. When we plan and develop water projects, it can take 10 to 15 years. I'm not just talking about building dams. I'm talking about conjunctive use programs. I'm talking about the infrastructure necessary to move water from point A to point B. I'm talking about the recycling programs, the conservation programs. Long lead times are required and substantial financing is required.

There's a clear need because of the environmental stress that we are experiencing throughout our system. Most particularly Sacramento San Joaquin Delta which your bill addresses most directly. We are in a stress condition with our water supplies. This year, as you noted in your preliminary comments, this has been a dry year. The Central Valley is hurting in many places. We are more fortunate here in Southern California because we do have water and storage but that's not indefinite and it will take, indeed, more to provide us long-term security.

Global warming is something we need to take very seriously. If global warming does result in different rainfall patterns and our ability to capture water and store water, we need to be prepared and this bill, in my opinion, does begin to prepare us for that very real potential.

Then, of course, water quality. EPA regulations, state regulations, expectations of the public on our water quality have to be met. It is best met with source water protection but a combination is going to be needed.

This bill does address both water protection and the kinds of programs that you'll be hearing about from Mr. Grindstaff and others about local projects. The solution is planning, balanced development, eco-system restoration, storage and conveyance improvements all addressed by this bill.

We will have a more efficient water system. I think what we need to keep in mind is we got to this point in the development of our water systems here in California with the record of decision

and with the decisions before us through three elements; leadership, consensus, and compromise.

If we do not keep our eye on the need for those three elements, we won't get there and California will suffer. I commend you on the introduction of this bill. We are strongly supportive of this legislation. You can count on us to be a part of all three of those elements; leadership, consensus, and compromise.

Thank you very much for this opportunity.

Mr. CALVERT. Thank you for your testimony, Mr. Gastelum.

[The prepared statement of Mr. Gastelum follows:]

Statement of Ronald R. Gastelum, Chief Executive Officer, Metropolitan Water District of Southern California

Introduction

Mr. Chairman and members of the subcommittee, thank you for the opportunity to submit this statement regarding Southern California Water Security—Opportunities and Challenges.

My name is Ronald R. Gastelum, I am the Chief Executive Officer for the Metropolitan Water District of Southern California (Metropolitan). Metropolitan is a regional wholesale water agency that provides water to 26 member public agencies who serve 17 million people living in Ventura, Los Angeles, Orange, Riverside, San Bernardino, and San Diego counties.

Mr. Chairman, I would like to thank you and the many cosponsors for your leadership in introducing CALFED authorization legislation on May 24 that provides a ground-breaking approach to resolving regional resource management conflicts that affect a variety of stakeholder interests.

The CALFED legislation not only serves California, but also serves the nation's interests. It implements a program that assures comprehensive achievement of regional health, economic and environmental program objectives. It is one of the most important pieces of water and environmental resource management legislation in California's history. In particular it:

- Authorizes funding over the next 30 years for the CALFED program, thereby preserving a national ecological treasure, ensuring necessary infrastructure for high-quality and reliable water supplies for our residents, industries and farms, and providing benefits to the aquatic and avian ecosystems of California and other western states;
- Creates an institutional framework through a Governance Board that provides the stability needed to assure coordination among the multiple local, regional, state and federal resource agencies must take coordinated actions to implement the CALFED program;
- Creates a competitive process to fund local and regional projects providing broad access to finances and assuring lower costs;
- Enhances the federal program for funding small reclamation programs throughout the west; and
- Preserves the linkages among the various CALFED objectives by requiring that projects recommended for funding be sent to Congress in a bundled package through the annual report process. This beneficially forces the stakeholder interests to work together to solve one of California's most pressing issues.

We believe the CALFED legislation has the ability to end decades of stalemate in the Bay–Delta and provide dramatic improvements for multiple beneficiaries.

By providing federal leadership to seek a balanced solution, you greatly increase the likelihood that CALFED agencies will achieve the objectives and actions that will move us forward together.

Responses to Questions. Mr. Chairman, in your letter of invitation you asked us to provide testimony to this panel that focused on three questions.

Question 1: What factors have led to the challenges that Southern California is facing today in regards to water supply, quality and reliability?

The fundamental challenge of water management in Southern California and throughout the nation is to meet the increasing needs of our customers while ensuring high water quality and protecting and restoring fisheries.

In the late 1980s and early 1990s, California experienced a six-year dry spell, one of the most severe over the last 70 years. During that time, water users also in-

curred additional limits on their supplies when two fish species (winter-run salmon and Delta smelt) were listed by federal agencies. With reduced supplies from both the dry spell and the Endangered Species Act (ESA) requirements, the State Water Project (SWP) found itself limited on pumping during both wet and dry conditions.

During this six-year period, the SWP supplies fell more than six million acre-feet under contract entitlements (see Chart 1). Water losses for ESA and other fishery regulations totaled 1.4 million acre-feet during dry years, almost one-third of dry-year supplies under the state and federal water supply contracts.

In addition, increased public health concerns and drinking water quality regulations have also challenged our approaches to providing high quality, low-cost supplies.

Over the last decade, while drinking water quality regulations have increasingly become more stringent, little progress has been made to bring source water quality for Delta exporters in line with national averages. Delta water currently contains levels of bromide that are six times higher than the national average. Bromide and trihalomethanes both raise public health concerns because of possible links to cancer.

High concentrations of salinity also degrade groundwater basins and impede efforts to recycle and reuse water.

Although Metropolitan is a nationally recognized leader in funding research and implementing new cost-effective treatment technologies, the technical challenges and costs of removing contaminants from drinking water supplies can be staggering. Currently, the best method to control water quality is at the source.

If urban water agencies are forced to abandon quality at the source and instead rely on alternative treatment technologies, the capital and operating/maintenance of these alternative technologies could exceed the cost of conventional treatment by over 1,000 percent.

In summary, the factors that have lead to an almost certain crisis that would dwarf by comparison the current energy situation are:

- The lack of sufficient storage above and below the Delta to manage efficiently the competing demands of our environment and economy;
- The inefficient conveyance systems in and through the Delta that are causing rapidly deteriorating water quality for consumers and fish; and
- Lack of adequate financing for local resource development.

Question 2: What actions and measures have you taken to improve upon your water supply, quality and reliability?

Metropolitan over the last few years has gone through a dramatic change in policy direction and has begun to aggressively develop a new water management paradigm to meet water quality, supply reliability and environmental needs.

Metropolitan has remained steadfast in our support for the environment, sound science and efficient water management practices. We have been a leader in funding and coordinating the implementation of early-start environmental restoration and scientific monitoring programs. We have also been a driving force at initiating new, more efficient water management tools to allow us to adjust to changing regulatory requirements. We fundamentally believe California needs a stable environment to ensure a stable economy.

Metropolitan's strategy for water storage has changed. The old vision called for storing water upstream of the Delta and pushing it through the Delta during drought periods. The new vision calls for banking surplus water south of the Delta in wet periods to meet contractual commitments during drought years. This allows for reduced export pumping and increased Delta outflows for fisheries in during dry periods.

Local resource development has also played a vital role at Metropolitan in managing the impacts of increasing environmental regulation and urban demand for imported water supplies.

Current efforts to conserve and recycle water have produced more than 710,000 acre-feet per year. This is comparable to the current combined annual water supply for the City of Los Angeles and the City of San Francisco.

Metropolitan's resource plan also calls for doubling recycling and adding 400,000 acre-feet of groundwater production. This is simply not possible without low salinity Delta water.

Based on a study commissioned by the Los Angeles Area Chamber of Commerce in 1996, Southern California water agencies and taxpayers have spent more than $8 billion in water conservation, water recycling and storage since the early 1980s.

Metropolitan and its member agencies are committed to invest another $8 billion by the year 2020 in the development of Southern California's local supply and storage programs.

These resource management strategies will have reduced Southern California's dependence on Bay–Delta supplies during critically dry years, like 1977 and 1991, from 35% to 12% by year 2020.

While these new strategies are proving effective at filling the 1990s supply gap with real water (see Chart 2), we still need to implement the water supply actions in the CALFED Record of Decision to meet the needs of the environment and the economy.

In summary, Metropolitan has taken key steps to deal with changing circumstances. This includes:

- Changing the storage paradigm by developing surface and groundwater storage south of the Delta; and
- Investing heavily in local resources, including extensive recycling and conservation and programs to maintain a full Colorado River Aqueduct.

But we need a successful statewide plan if these local resources are to be effective.

Question 3: What additional measures or assistance may be needed in the short, mid, and long term to improve your water security?

Metropolitan is committed to working with the Congress and stakeholder interests to move the CALFED authorization legislation forward. We will also work to ensure the final CALFED authorization legislation embodies the following legislative principles. These principles include:

A Stable and Effective Governance Mechanism. The legislation should promote creation of an effective governance mechanism, which adequately represents Southern California urban interests and assures stable and balanced implementation of the entire CALFED program.

- In 1994, the Bay–Delta Accord created a partnership between the state and federal governments, along with a broad array of water agencies and stakeholders.
- We need to continue this partnership to provide a more secure and favorable political environment for dealings with stakeholder concerns.

Funding for Water Quality Projects, including Complementary Actions. Water quality is our top priority! The CALFED legislation must assure that water quality projects, including those identified as "complementary actions" in the CALFED Record of Decision, are eligible and can effectively compete for funding within the CALFED authorization legislation. These water quality program elements include:

- Source protection measures to safeguard Bay–Delta drinking water supplies for 22 million Americans.
- Water storage and conveyance solutions to protect the integrity of drinking water supplies as they journey from the source to two-thirds of all Californian households;
- Support for innovative urban-agricultural partnerships, such as the partnership between Metropolitan and the Friant Water Users Authority, to improve source water quality, assure agricultural water supply, and provide water for fisheries restoration; and
- Water treatment technology research initiatives to improve micro filtration and ultraviolet disinfection technologies.

Funding for Local and Statewide Supply Reliability Projects. Authorization must be clearly provided for the full range of actions contained in the CALFED Bay–Delta Program to increase water supply reliability, including investments in local resources, improvements in through-delta conveyance, and additional surface and groundwater storage consistent with the CALFED Framework Agreement and Record of Decision.

A Stable Regulatory Environment. The legislation should contain provisions that require environmental restoration to be accomplished in a manner that assures reliability of water supplies for the State Water Project, Central Valley Project, and other water users.

Funding for Environmental Restoration. The legislation must authorize adequate funding for the Environmental Water Account and Environmental Restoration Program defined in the CALFED Record of Decision to assure balanced progress of environmental restoration and improvements in water quality and supply reliability.

The CALFED ecosystem restoration program is one of the largest environmental programs ever undertaken in the nation. Habitat restoration in the Bay–Delta watershed translates into environmental and "economic" benefits for both the Colorado and Columbia River Basin. The CALFED Program is also key to supporting Pacific salmon fisheries and waterfowl along the Pacific Flyway.

Metropolitan supports legislative provisions that promote environmental habitat improvements while protecting private landowners.

Elements of CALFED environmental program include:

- Installing screens on water diversions to protect fishery resources, thus eliminating a major source of fish mortality;
- Removing dams on tributary streams to open up previously inaccessible fishery spawning grounds; and
- Acquiring conservation easements and habitat acquisitions from willing sellers.

Implementation of Environmental Water Account to Meet Endangered Species Act Requirements. The legislation should authorize Environmental Water Account (EWA) implementation to provide additional environmental water above the regulatory baseline, while protecting the reliability of urban and agricultural water supplies. The first priority for use of EWA water should be to meet the requirements of the Endangered Species Act with other ecosystem purposes having second priority.

- Federal authorization of the EWA will also provide support for the resource agencies to shift from regulatory-based operating procedures to more flexible operating procedures. Combined with improved monitoring, we believe this flexible operating strategy provides more water to the fisheries when needed and conserves limited supplies.

Timely Permitting and Implementation of Projects. The legislation should provide for regulatory coordination and streamlining to assure timely implementation of CALFED projects and should protect the resource mix of demand management actions and infrastructure development agreed to in the CALFED Framework Agreement and Record of Decision.

Sound Science. The legislation should authorize adequate funds for a strong, independent and objective science board to assure that CALFED-related decisions are based on the best-possible scientific information. The science Board should develop clear criteria to measure the success of ecosystem actions and adjust the restoration program in a timely manner in response to whether or not the success criteria are achieved.

- We cannot continue to solely focus on Delta outflows for the environment. We need to continue implement and monitor habitat restoration, pollution prevention, and exotic species control.
- We also need to implement the drinking water quality goals and actions outlined in the CALFED Record of Decision.

Ending Statement

Mr. Chairman, your CALFED authorization legislation has aligned the federal government with a new direction in water management in California.

If we follow this new direction, California will not have to choose between the environment and the economy.

It is in everyone's interest to "seize the opportunity" you have provided to improve California's resources and enhance water and environmental programs throughout the West.

We at Metropolitan are dedicated to working with you, Mr. Chairman, members of the subcommittee, Senator Feinstein, and all others in developing a workable approach to implement a balanced CALFED Bay–Delta program.

]An attachment to Mr. Gastelum's statement follows:]

ATTACHMENT 1

Chart 1 – SWP Water Supply Availability – 1990s

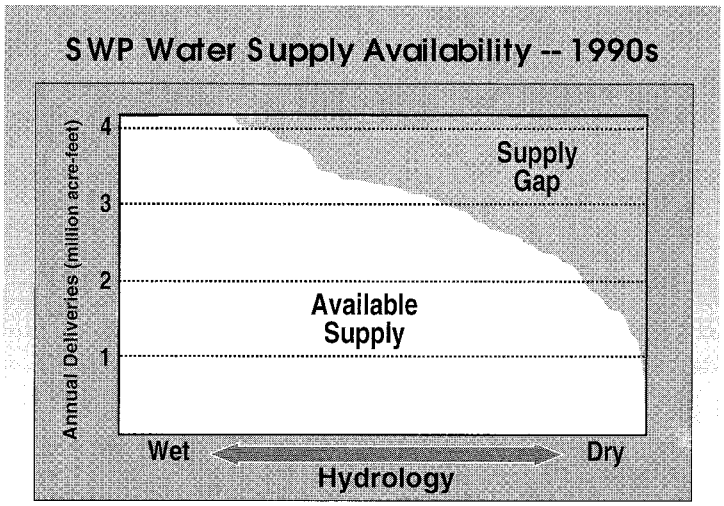
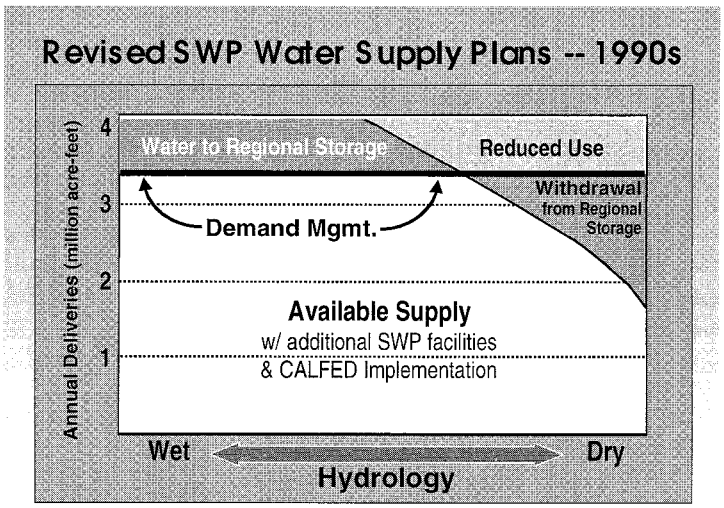


Chart 2 – Revised SWP Water Supply Plans – 1990s



STATEMENT OF JOSEPH GRINDSTAFF, GENERAL MANAGER, SANTA ANA WATERSHED PROJECT AUTHORITY

Mr. GRINDSTAFF. Mr. Chairman, Ms. Napolitano, thank you very much for this opportunity to testify today. My name is Joe Grindstaff and I'm the General Manager of the Santa Ana Watershed Project Authority, a map of which you see before you. The Santa Ana Watershed is the largest coastal watershed in Southern California. It covers the western end of Riverside and San Bernardino County, most of Orange County, and even a portion of Los Angeles County, and is home to more than 5 million people.

Before I begin, I first want to state that our agency also is wholeheartedly in support of your bill, the California Water Security Enhancement Act. We believe it is a major step forward and will help all of us in this state maintain the water supplies that we need for the future.

Mr. Chairman, unless we put guards on the county lines and salt peter in the water, our population is going to grow from 5 million to 7 million people within the next 20 years.

This next chart you'll see what the natural progression of water demand would be. Even assuming that we fully implement all of the best management practices, the top line shows that we would begin to need to import more water rather than less even in the face of decreasing supplies from Northern California and from the Colorado River.

We have developed a plan that will allow us in normal years to actually decrease our imported water even while our population increases and in drought years to actually be able to totally roll off the system in order to do what we call drought proofing. That is the goal of our region is to drought-proof the Santa Ana river watershed.

The main elements of our plan are water quality improvements, water recycling, ground water storage, and we incorporate even things such as flood control and habitat restoration, even some recreational elements, and they all integrate. They all fit together. Later today you will hear from Mr. Rich Atwater and Mr. Larry Libeu, both representing two of our member agencies.

The projects and programs that they implement will have a positive impact on the whole watershed, not just on their area. Our agencies are committed to drought-proofing the region and we will make the financial resources available to help make that happen but we need your help.

Our goal briefly is to clean up the ground water basins and make them more usable for potable use and for storage. Second goal is to store about 1.5 million acre-feet of water in the ground for use during drought. That's twice as much as is in Diamond Valley Lake which is a significant contribution.

Additionally our goal is to recycle more than 300,000 acre-feet of water per year. That's how we would reduce our normal year demands so significantly.

Another element is to remove Arundo. Arundo Donax, which some of you are aware of, I know the Chairman is aware of Arundo, it is a giant cane which uses water much more than native habitat does but also causes problems for flood control and for fire departments. In addition to having all of those benefits, that will

help offset, for example, demands for water in the watershed as we grow.

As the upper watershed recycles more water, Orange County might be concerned about the flow of water in the river, but removing Arundo helps to mitigate those decreases in flow as we begin to do more and more to use our resources wisely.

In conclusion, we are committed to supporting you to help move this legislation through. We believe that it is critical for the future of California that we find a way to solve our problems. We can do it and we support your efforts. Thank you very much.

Mr. CALVERT. Thank you for your testimony.

[The prepared statement of Mr. Grindstaff follows:]

Statement of P. Joseph Grindstaff, General Manager, Santa Ana Watershed Project Authority

Introduction

Mr. Chairman, members of the committee, I thank you very much for the opportunity to address you today. The Santa Ana Watershed Project Authority (SAWPA) represents the Santa Ana River Watershed. This river is the largest coastal river system in Southern California and flows from the San Bernardino Mountains over 100 miles southwesterly to the Pacific Ocean at Huntington Beach. The watershed covers over 2650 square miles of widely-varying terrain. This area, which includes parts of San Bernardino, Riverside, Los Angeles and Orange Counties, was home to 5.1 million people during the 2000 census. The population is expected to increase to 7 million by 2020. SAWPA was founded in 1972 after eighty years of controversy and court battles, that at one time included more than three thousand parties. These parties agreed ultimately to appoint the large wholesale water agencies as watermaster, to represent their rights and they formed SAWPA as a way to really solve problems, rather than just fight. Today SAWPA has five member agencies, Eastern Municipal Water District, Western Municipal Water District, San Bernardino Valley Municipal Water District, Inland Empire Utilities Agency and Orange County Water District. These agencies each have different individual interests, but share the global responsibility to insure there is reliable, high quality water available for all the people of the region.

The Challenges

Southern California is facing many challenges. The factors that have led to the challenges are myriad; law, regulation, population growth, water quality concerns, historical disputes between water users and many more. Southern California has done a good job managing in spite of these challenges. Water demand has remained level for many years, while the population was increasing. The water supply available from the Colorado River is decreasing because of the 4.4 plan. The water available from Northern California has been caught up in massive disputes about protecting endangered species and habitat. The ability of water suppliers to respond is limited by regulation and law. At the same time, water quality is more important than ever. Drinking water standards are, rightly, more stringent than ever. Even with implementation of all best-management practices in every single house and business, the demand for clean water in our region will increase.

Inland Southern California is one of the fastest-growing regions in North America, and its continuing development has brought water supply challenges of previously unknown proportions. The engineers and water leaders of today have many advantages that civilizations of the past lacked—better science and construction techniques to name just two. But the modern era has brought obstacles as well. Never before have water policymakers faced today's high level of ecological sensitivity. A public mandate for environmental stewardship has taken center stage, and the heyday of on-stream dams appears to have drawn to a close. Local and statewide leaders are now scrambling to quench the Inland Empire's growing thirst, but development in other parts of the West and changing attitudes elsewhere in California are taming our aspirations for new imported supplies.

Passage of the March 2000 statewide water bond has enabled a much broader pursuit of SAWPA's program goals. By restoring the area's worn-out groundwater basins, enhancing natural percolation of rainwater underground and, in effect, creating more than 1,300,000 acre-feet of currently unusable storage capacity, SAWPA expects to drought proof the entire watershed within twenty years. Not only will

this protect us from having to buy expensive imported water during dry years, but it will also leave more water for agriculture, wildlife and cities throughout California.

In order for the SAWPA program to be fully implemented and for it to meet all the stated goals SAWPA will need additional funding to the existing state bond funds. It will be our request that this come in the form of Federal matching funds, additional funds from future state water bonds and local funding from water agencies and consumers.

What SAWPA is Doing

Integrating the management of surface water, groundwater, habitat, groundwater cleanup and groundwater banking is the task of SAWPA. This integrated program implemented quickly and carefully offers the real capability to drought proof the region. The plan will recycle water and clean up contaminated water in order to reduce imported water demand and will store or bank water in groundwater basins during wet years and withdraw it during droughts. To do this effectively, the projects must be tightly coordinated and all activities integrated.

SAWPA's efforts to provide such a program were greatly improved by the passage of the Water Bond on March 7, 2000. Chapter 6, Article 5, the Southern California Integrated Watershed Program, was intended by the legislature to fulfill this opportunity. Many members of the legislature worked to insure this section was included in the Water Bond. Matching Federal funds for the Water Bond will make these projects the broadest integrated program for reclaimed water, cooperative groundwater management and drought preparedness in California. Having access to good quality water under all conditions is a requirement for the regions' residents, industry, farms and environment.

The CALFED framework agreement proposes the development of 50,000 acre feet per year (AFY) of new reclaimed water capacity each year. In the Santa Ana Watershed, about 100,000 AFY is currently reclaimed. Some of the projects funding has been through Title XVI, some through other federal, state, regional and local programs. I want to take this opportunity to brag about some of these projects and programs. The Irvine Ranch has been the national example of the benefits of recycling for years with approximately 16,000 AFY of reclamation to support wetlands and landscape irrigation demands. The Green Acres project has provided about 9,000 AFY of reclamation for Orange County. The Water Factory 21 was the first project of its kind in the nation, taking reclaimed water and putting it though reverse osmosis and injecting the project water into the ground to form a seawater barrier. The Inland Empire Utility Agency program has reclaimed over 23,000 AFY for municipal and industrial irrigation use. The EMWD program has created an effective reclaimed water system that reclaims over 43,000 AFY of treated effluent for largely agricultural irrigation use. These projects are functioning and demonstrate the benefit of recycling wastewater in an arid region. The region has plans to increase that 100,000 AFY capacity to over 300,000 AFY over the next twenty years.

SAWPA and local water leaders have stepped up to face of these rising challenges, bringing solutions to these problems that will drought proof the region. While we hold little hope for additional water imports, we are making great progress in exciting new water storage and supply technologies. By working to maximize the Santa Ana Basin's potential for water storage underground—a practice known as "water banking"—we are not only preparing ourselves for normal water years, but for drought cycles as well.

SAWPA is the hub for Santa Ana Watershed planning. SAWPA's largest success to date has been securing more than $250 million dollars in state money from the passage of Proposition 13'the most recent statewide water bond. The Proposition 13 funds will be used directly by SAWPA to enable a number of vitally important local water projects in this watershed to move forward.

The Santa Ana Integrated Watershed Program (IWP) consists of six major project categories:

- Groundwater Cleanup and Purification will mitigate negative groundwater impacts from nearly a century of agricultural and other industrial land use practices;
- Water Storage will enable much of the Watershed to withstand a major statewide drought by storing upwards of 1,300,000 acre-feet of new water underground throughout the basin;
- Flood Protection will keep lives and property safe along the Santa Ana River main stem;
- Wetlands, Habitat and the Environment welcomes a new era of man-made and natural wetlands that has potential to restore the West's now-hindered Pacific Flyway;

- Water Recycling is the product of a major attitude shift in water use, and the IWP encourages recycling as a means to reduce our area's overall consumption; and
- Recreation and Conservation will bring much-needed recreational opportunities to the region, providing access to open spaces and increasing public awareness of the Santa Ana's environmental needs and purpose.

These six project categories will be pursued simultaneously, meeting the Santa Ana Watershed's water supply and flood control needs in a manner that will enhance wildlife habitat in our area and throughout the West Coast. The IWP process has collected and aggregated project needs from SAWPA member agencies, water districts, cities, counties as well as suggestions from a number of environmental groups and parks agencies. The various interests were consolidated into the project categories stated above.

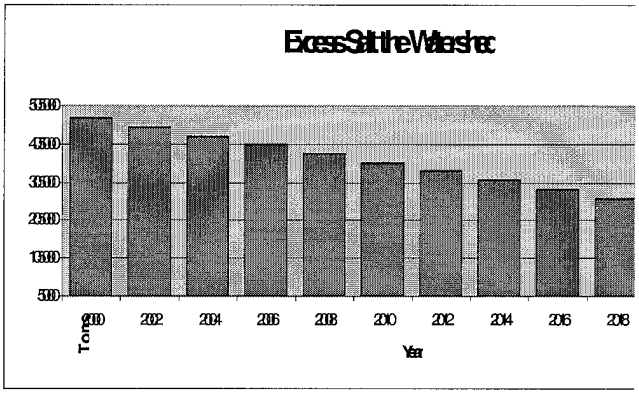
Federal Benefits

The federal benefits of this program are great. In both CALFED and the 4.4 Plan the reuse of water is critical to maintaining water supply for the region. The CALFED framework agreement calls for 50,000 AF per year in new water recycling. The only way this kind of objective can be reached is if both the federal and state government help with funding. It will take a major commitment. This will allow all water users in the west to be sure of their water allotment and in the future will provide a path for water supply development that can be replicated.

Salt Removal and Groundwater Cleanup

Any recycling program that does not address salt is remiss. The Bureau of Reclamation has included desalting as a part of the Southern California Comprehensive Water Reclamation and Reuse Study. As the Santa Ana River and its tributaries flow toward the sea, the water percolates into the stream system, recharging the 35 groundwater basins that comprise the watershed. Water is pumped by farmers and cities from the groundwater source and utilized for agricultural, municipal and industrial supply. However, each use of the supply results in added salinity to the water for the next user. The California Water Resources Control Board and the Santa Ana Regional Water Quality Control Board closely monitor the impact of this additional salt to the River to assure that the water supply is protected for downstream beneficial uses. As excess salt builds up in the groundwater, groundwater banking and recycling projects are impeded. To facilitate the removal of salts the integrated program will construct new desalters to remove excess salt that would buildup in the basins and send it to the ocean through the Santa Ana Regional Interceptor, a regional brine line operated by SAWPA. The region has invested some $130 million in the brine pipelines, $150 million in desalters and $40 million in additional brine and industrial waste treatment facilities.

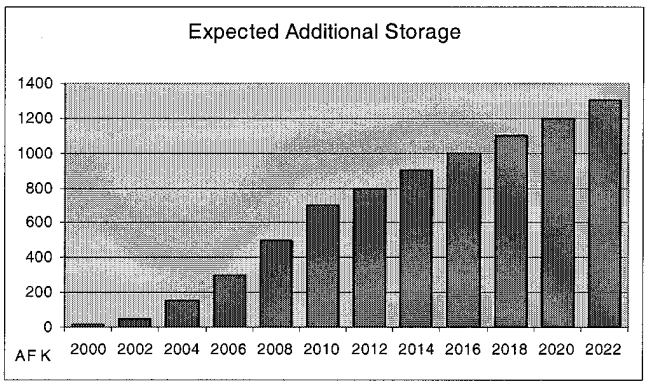
By reducing the salt that remains in the watershed, the program can better balance salt generation and import with salt exports. The graph shows the reduction in excess salt generated or imported in the watershed over the life of the program. Desalting facilities such as the Arlington and Chino Basin desalters that are already built remove over 15,000 tons of salt per year, and another 200,000 tons must be removed to achieve a balance and cleanup the basin. This goal is both daunting and doable with this program. Desalters also remove other harmful contaminants and pollution from the groundwater and work to make the groundwater basins capable of storing the water needed for droughts.



Groundwater Banking

Groundwater banking is key to the future water supply of Southern California. It is essential to prevent the need for more imported water in the watershed and provide reliable water during drought periods. Over the last thirty years, the Santa Ana Watershed Project Authority (SAWPA) and its member agencies Eastern Municipal Water District, Inland Empire Utilities Agency, Orange County Water District, San Bernardino Valley Municipal Water District, and Western Municipal Water District have been leaders in planning and dealing with the complex problems in watershed management. Their efforts have led to significant projects involving water conservation and clean up of contamination. SAWPA and its member agencies have also been working along with others to prepare for groundwater banking. Major efforts are underway to store large quantities of water in many of the basins in the watershed. Projects to remove salt and recycle water are already underway.

The chart at right shows a projection of groundwater storage capacity that can be utilized over the next 20 years. The amount of storage will vary based on the amount of wet year water available for banking and any drought needs served during these years. Storage of the additional water must be matched with the capability to extract, treat, and deliver the water for use. SAWPA and its member agencies along with others will make this a reality.



Near Term Facilities and Projects

To accomplish these ambitious goals, desalting projects are planned in the Chino, San Jacinto and Orange County groundwater basins. Surface water capture and percolation projects are planned to capture and transfer surface and recycled water into the subsurface for storage. Flood control projects will be completed to allow water to be put into storage and prevent waste and contaminated water from entering the system.

Habitat Enhancement

Steel and concrete are not the only important projects in the watershed. In the Santa Ana River a non-native species Arundo donax (giant cane) has come to dominate some 10,000 acres of riparian habitat. Many native species do not prosper in the environment created by this Arundo. The giant cane is also a significant fire hazard, and has cost millions of dollars and ravaged the environment each time it burns. After each fire the native flora typically requires much longer growing times and when it grows back is much less dense so the Arundo expands its grip on the environment. From the perspective of water supply, most observers estimate that if the Arundo were removed and replaced with native species, some 10,000 Acre Feet (AF) of water per year could be saved. One respected University of California scientist estimates that 37,000 AF of water per year could be saved. Protecting habitat enhances water supply in other ways. Examples include the use of open space to percolate water into the ground, or creating wetlands that clean water while preserving habitat. Projects restoring native habitat and creating wetlands or open space, which can be used for many purposes, have been developed by many agencies in this region. SAWPA envisions expanding these activities with a long-term program designed to specifically manage, expand and improve the habitat in the region, while at the same time obtaining a benefit for wildlife, water quality and self-sufficiency.

Wetlands Creation and Enhancement

Natural and created or enhanced (managed) wetlands have multiple benefits both to the environment and to man. The majority of water in the Santa Ana River would have been processed by a marsh or wetland of some type if humans had not modified the landscape. The recreation of wetlands in areas where they have historically prospered and the enhancement of existing wetlands benefit native species, reduce contaminants in the water, lower sediment transport and support endangered and threatened species in the area of the river. SAWPA will work with its members, environmental, conservation, and parks agencies to create and enhance wetlands to achieve the benefits wetlands bring to the watershed. SAWPA also coordinates with other agencies supporting the Santa Ana River Trail, (SART) a multi-use trail system to link trails throughout Orange, Riverside and San Bernardino Counties. As SAWPA proceeds with efforts to remove the invasive Arundo, a corridor for the SART along the river will be created. In addition, SAWPA and Orange County Water District hold land and rights-of-way in areas along the river. Arundo removal may be the one opportunity to provide access to the river in many areas because of environmental sensitivity everywhere else along the river.

Water Recycling

California is learning a hard lesson these days. In addition to making new water available through innovative groundwater storage projects, we need to learn to squeeze as much as possible from our existing supplies. Good old-fashioned water conservation at the user level is obviously a good starting point for this goal, but technology has opened up some other options as well. Some of the most important and promising opportunities are in the area of water recycling.

In addition, some industries have found that they don't need the most pristine water quality available for their particular enterprise. Why, for instance, would golf course sprinklers need the same quality of water that a restaurant would? With this in mind SAWPA is looking to expand recycling activities throughout the region, and we expect to be reusing 145,000 acre-feet of water by the year 2020. Recycled water is not an option for every area, so SAWPA's member agencies are working with local governments and even specific companies to find the most beneficial, targeted recycling projects

Recreation and Conservation

SAWPA's goals go beyond enhancing local water supply and expanding regional wetlands for wildlife improvement. It also seeks to create opportunities for the public to enjoy the area's waterways to the fullest extent possible. Ensuring access to the region's wetlands, lakes and streams will enable locals to see first-hand how their very own water source also makes a substantial contribution to waterfowl migration and wildlife in general. We anticipate that this most visible of SAWPA contributions will find a warm reception with residents in the Santa Ana River Basin and look forward to showcasing the environment locally.

The recreation and conservation component of the IWP will be fulfilled throughout the overall duration of our project. We will be looking to build bicycle paths and other trails as new wetlands are created and more riparian habitat is made available by way of Arundo removal.

The Opportunity

The principal opportunity and challenge facing everyone is not technical, but to bring competing interests into alignment so that we can all envision a future where the water resources and river environment we leave to our children and grandchildren are well managed, of high quality and adequate to meet their needs. All stakeholders whether they be cities, businesses, regulators, farms, wildlife or environment interests must have their needs addressed for the watershed, the state and the nation to be successful. Providing policy leadership for the nation and the state is essential to prevent the mistakes and dilemma's of the past and to insure proactive and responsible progress is made in water. SAWPA believes and is committed to regional and watershed based planning, with local implementation of projects of long-range goals

Federal Measures and Assistance

The US Congress can help significantly by funding local water reclamation and ground water storage projects to a much larger extent than they have been funded in the past. If the western United States is to become truly have a sustainable water supply, water recycling (or reclamation) is key. Under Congressional direction the US Bureau of Reclamation has just completed a six-year study showing what the potential for water recycling is. They have identified 500,000 acre-feet per year of recycling that could be on line by 2010. Groundwater storage in southern California combined with reclamation could potentially store enough water to totally protect the economy from a drought for the next twenty or thirty years. Federal funding of a part of the cost of the development of this water is key. Federal law and regulation have been part of the problem and federal projects (the Colorado River and Central Valley Project) are impacted significantly. The truth is that if the State and Federal government do not contribute significant resources, water recycling will not expand rapidly. The federal government should provide incentives for multipurpose, multibeneficiary projects that consider both the environmental and habitat aspects, as well as water supply and quality implications.

Governance of this resource is a critical issue. All major stakeholders must feel they are at the table, but ultimately decisions need to be made in a timely way. If we do not all work together water supplies that have long sustained significant uses, will dry up, probably in a drought, resulting in greater economic dislocation than necessary and deterioration in the quality of life for our children and grandchildren throughout the western part of the country. For your information, a summary of the federal funding needs for our watershed is attached below. Thank you for your time and attention. If you or your staff have any questions or would like more detailed information, please let me know.

Federal Funding Needs

Local water agencies have demonstrated great responsibility in working together to bring about this broad-based stakeholder partnership. Collectively, the many diverse groups representing water interests in the basin are seeing real progress in drought-proofing the region, improving water quality and groundwater management, and fully integrating the environment and habitat into water resource planning. The vigilance of regional water agencies in helping to build a sustainable future while at the same time seeking to improve our overall quality of life should not be overlooked.

We anticipate opportunities nationally to receive additional funding for projects that are already underway, as well as ones that have not yet been initiated. Local water policy makers understand that there will be a high degree of regional responsibility for project funding as well. SAWPA also anticipates future opportunities to take advantage of statewide bond measures similar to Proposition 13.

Funding support for the watershed is needed to match the local and state funds that were overwhelmingly approved by the electorate of California on March 7, 2000 for the SAWPA Integrated Watershed Program.

SAWPA has six programs in the Integrated Watershed Program (IWP). Each program is listed below along with the total federal appropriations requirements and a listing of significant example projects. Appropriations in fiscal year 2002 and 2003 are critical to allow the program to leverage California Proposition 13 funds. New and existing authorizations of these projects occur under a variety of methods, including the water bills under consideration, USBR and USACOE, among others.

Water Quality Improvement -- $15.4M FY 2002 -- $34.7M FY 2003

Desalting and groundwater treatment in the Chino Basin, Menifee, Orange County, and other areas will mitigate the impacts of nearly a century of agricultural, industrial, and other pollution now in the groundwater.

Water Recycling -- $15.2M FY 2002 -- $33.2M FY 2003

Significant water recycling projects, like OCWD's Groundwater Replenishment System and the Chino Basin Recycling Program, help to make the most of the limited water available to the watershed.

Water Storage -- $8.9M FY 2002 -- $10.5M FY 2003

Groundwater storage in the Chino, Bunker Hill, Orange County, and San Jacinto basins will ultimately store as much as 1.3 million acre-feet of water needed to drought-proof Southern California and provide for growth over the next 20 years.

Flood Protection -- $3.2M FY 2002 -- $3.9M FY 2003

Reducing flooding in the rural and urban areas of the watershed will provide significant water quality improvements and safeguards lives and property.

Wetlands Env. and Habitat -- $14.2M FY 2002 -- $13.2M FY 2003

Environmental and habitat programs save and clean water, improve habitat, and reduce the impact of urbanization on the watershed. Some examples are the removal of the invasive exotic weed, Arundo Donnax; creating water treatment wetlands; and improving native wetlands and the river system.

Recreation and Conservation -- $9.8M FY 2002 -- $32.8M FY 2003

Completing the Santa Ana River Trail and Parkway and related planned projects, such as the River Wash Loop, will provide recreational opportunities, economic enhancement, and an added understanding of the watershed and its connection to the potable water supply.

Total Watershed Program -- $66.9M FY 2002 -- $128.2M FY 2003

STATEMENT OF STEVE KOFFROTH, OFFICE MANAGER, AFSCME, LOCAL 1902

Mr. KOFFROTH. Chairman Calvert, Ms. Napolitano, we thank you for this opportunity to testify before you on the security and importance of water in Southern California.

My name is Steve Koffroth and I'm here today on behalf of the American Federation of State, County, and Municipal Employees, Local 1902. Our Executive President was unable to attend today.

Just as a matter of introduction, AFSCME is a public sector union who represents about 1.3 million public sector employees across the nation. Specifically, Local 1902 represents managers and employees at the Metropolitan Water Districts and other smaller water districts within MWD's service area. In total, we represent about 1,800 employees and the interests of all water workers in the region.

AFSCME Local 1902 is also a founder and participant in the California AFSCME Water Caucus, whose membership includes some of the largest water providers within the state, including MWD, East Bay MUD, Santa Clara Valley Water District, San Diego City County employees, and some other water districts within the state. In all, AFSCME represents about 3,000 water workers within the state and substantially more nationwide.

I want to say we are in support of this bill. It's encouraging to see such a great effort to address the security of the world's second-most import resource as water is subordinate only to air, in our opinion, and specifically how we can achieve a balanced solution that moves the various CALFED stakeholders forward and together.

Specifically we've been asked to respond to one of the questions about what long-term, mid-term, short-term assistance we may see needed. Certainly we recognize the need and importance of the CALFED program and we are committed to working with Congress and the various stakeholders to move the CALFED authorization legislation forward.

To that end we have several legislative principles that we want to make sure are addressed and I believe are very well addressed within this bill.

The first is having An Effective Governance Mechanism. The legislation should promote the creation of an effective governance mechanism which adequately represents all Southern California interests and assures stable and balanced implementation of the entire CALFED program.

The CALFED financing programs discuss the need and importance of having all the stakeholders involved and they brought together many of the interests in creating a statewide partnership.

Indeed, we have been able to reach consensus on a number of issues that will serve to strengthen the security of water. We are concerned, however, that CALFED has not adequately reached out to all the stakeholders which disregards or otherwise discounts important issues that can and should be brought to the table.

Second, Funding for Water Projects. As I said before, water is nearly the most important resource we have. If we cannot assure that this resource is available and reliable, we threaten the lives of millions of residents, and we can do nothing to support future growth.

The CALFED legislation must assure that water projects, including those directed at water quality, reliability, and environmental protection, be adequately supported in direct correlation to the importance that this resource is to the population we serve.

Third, Careful Monitoring and Development of Water Marketing Principles. This is our highest concern regarding the CALFED plan and this affects important principles that must not be disregarded or unnecessarily placed in a subordinate position. Although this concern may be addressed through effective governance structure, it is important for the legislature, in and of itself, to take proactive steps to ensure and stress the importance of and improve the security of water.

Clearly, CALFED's direction has been to investigate methods that will encourage or otherwise facilitate transfers. In fact, the Record of Decision specifically notes that the plan's success hinges on this issue. We have been concerned that this priority will lead to unnecessarily hasty decisions or plans and place blinders on the long-term outlook of the impact to all stakeholders.

We've also included in my testimony a copy of a letter that we wrote to CALFED regarding this issue which outlines some of these concerns. So far we have seen few, if any, methods or means to address these issues.

As we have seen recently with electricity, lack of long-term planning or disregard of the long-term impacts of resource supply lead to tremendous instability and insecurity thereby negatively impacting the public we serve.

Aside from water price and availability, the potential impacts created by water transfers include increased agricultural prices, farm worker job losses, public sector job losses, loss of suppliers, sprawl and environmental hazards, political accountability and stranded infrastructure and personnel costs.

Although the EWA and other transfer processes may help to address supply issues, they must not be implemented or developed without adequate input from all affected parties and due regard to all the possible impacts.

Fourth, Continued Study and Research. The legislation should provide assurances that continued research and study are performed so that any water related decisions are based on the most current and best possible information to allow us to develop clear criteria to measure the success of our actions and adjust any portion of these programs in a timely manner.

Mr. Chairman, your CALFED authorization legislation is a great opportunity. We are behind you. We hope to work forward with you and make that process happen for everyone in Southern California. Thank you.

Mr. CALVERT. Thank you for your testimony.

[The prepared statement of Mr. Koffroth follows:]

Statement of Steve Koffroth, Office Manager, American Federation of State, County and Municipal Employees, Local 1902

Introduction:

Mr. Chairman and members of the subcommittee, we thank you for the opportunity to testify before you regarding the security and importance of water in Southern California.

My name is Steve Koffroth and I am here today on behalf of the American Federation of State, County and Municipal Employees (AFSCME) Local 1902, as our Executive President Robert Reeves was unable to attend.

AFSCME is a public sector Union who represents over 1.3 million public sector employees across the nation.

Specifically, Local 1902 represents the employees and managers of Metropolitan Water District of Southern California and other smaller water districts within MWD's service area. In total, we represent approximately 1800 employees and the interests of all water workers in the region.

AFSCME Local 1902 is also a founder and member of the California AFSCME Water Caucus, whose membership includes some of the largest water providers in California, including MWD, East Bay Municipal Utility District, Santa Clara Valley Water District, and San Diego City water employees. In all, AFSCME represents approximately 3000 water workers in California alone and substantially more nationwide.

It is encouraging to see such a great effort to address the security of the world's second most important resource (as water is subordinate only to air), and specifically how to achieve a balanced solution that moves the various CALFED stakeholders forward and together.

Response:

We have been specifically asked to respond to the question, "What measures or assistance may be needed in the short, mid and long term to improve water security in Southern California?"

We certainly recognize the need and importance of the CALFED program, and we are committed to working with the Congress and the various stakeholders to move the CALFED authorization legislation forward. To that end, we support the following legislative principles to assure a balanced CALFED program:

1. An Effective Governance Mechanism. The legislation should promote creation of an effective governance mechanism, which adequately represents ALL Southern California interests and assures stable and balanced implementation of the entire CALFED program.

CALFED plans and programs discuss the need and importance of involving all stakeholders, and they have brought together many interests in creating

a statewide partnership. Indeed, we have been able to reach consensus on a number of issues that will serve to strengthen the security of water. We are concerned however that CALFED has not adequately reached out to all stakeholders, which disregards or otherwise discounts important issues that can and should be brought to the table.

2. Funding for Water Projects. As I said before, water is nearly the most important resource we have. If we cannot assure that this resource is available and reliable, we threaten the lives of millions of residents, and we can do nothing to support future growth. The CALFED legislation must assure that water projects, including those directed at water quality, reliability, and environmental protection, be adequately supported in direct correlation with the importance of this resource to the residents we serve.

3. Careful Monitoring and Development of Water Marketing Principles. This is our highest concern regarding the CALFED plans, and affects important principles that must not be disregarded or unnecessarily placed in a subordinate position. Although this concern may be addressed through effective governance structure, it is important for the legislature, in and of itself, to take proactive steps to stress the importance of and improve the security of water.

Clearly, CALFED's direction has been to investigate methods that will encourage or otherwise facilitate water transfers. In fact, the ROD specifically notes that the plan's success hinges on this issue. We have been concerned that this priority will lead to unnecessarily hasty decisions and place blinders on the long-term outlook of the impacts to all stakeholders.

I have included a copy of the letter we wrote to CALFED, which outlines some of these concerns. So far, we have seen few, if any, method or means to address these issues.

As we have seen recently with electricity, lack of long-term planning or disregard of the long-term impacts of resource supply, lead to tremendous instability and insecurity—thereby negatively impacting the public we serve. Aside from water price and availability, the potential impacts created by water transfers include: increased agriculture prices, farm worker job losses, public sector job losses, loss of suppliers, sprawl and environmental hazards, political accountability and stranded infrastructure and personnel costs.

Although the EWA and other transfer processes may help to address supply issues, they must not be implemented or developed without adequate input from all affected parties and due regard to all the possible impacts.

4. Continued Study and Research. The legislation should provide assurances that continued research and study are performed so that any water-related decisions are based on the most current and best-possible information. This will allow us to develop clear criteria to measure the success of our actions and adjust any portion of these programs in a timely manner.

Conclusion:

Mr. Chairman, your CALFED authorization legislation has created a great opportunity to address resource management not only in California, but Nationwide.

We now have the potential of moving along a path where California doesn't have to choose between the environment and the economy.

We at AFSCME are dedicated to working with you, Mr. Chairman, members of the subcommittee, and all others in developing and implementing a workable and balanced CALFED Bay–Delta program.

Mr. CALVERT. I would like to welcome Hilda Solis on our panel today, a valued member of our Subcommittee.

Mr. Gastelum, if we go into another dry period, and I guess most statisticians would say we are due for another drought—hopefully that's not the case—but without this legislation, how difficult would it be to meet our water demand in the future?

Mr. GASTELUM. It will be impossible if I could say it bluntly. If we don't do the kinds of things that the record of decision has pointed to, we will not be able to meet the future needs whether we grow or not. Just with the existing demand we will not be able to do that in extended dry periods.

Mr. CALVERT. So without this infrastructure we will not be able to meet the demand in 20 years. So what role should the Federal Government play?

Mr. GASTELUM. Well, the Federal Government is a major player as the administrator, so to speak, of the Colorado River supply. As well as the administrator of the Central Valley project, the Federal Government is a major player in water. The Federal Government has taken a proactive role locally as well with the development of infrastructures throughout the state of California, as well as recycling and conservation.

The Federal Government is deeply involved in water management in the state of California. This is an opportunity for the Federal Government, local water agencies, all the stakeholders to have a consistent plan looking out 20 years ahead, an integrated, efficient management program where investments are being made not just by the Federal Government but by the state and local entities as well. It's a tremendous opportunity for us as well to advert the kind of crisis that you see in the electrical utility industry.

Mr. CALVERT. Thank you.

Mr. Grindstaff, obviously we've talked about the regional solution that you have outlined in the Santa Ana watershed and why that is important to California. Why do you believe Federal assistance is necessary in order to put this project together?

Mr. GRINDSTAFF. As Mr. Gastelum indicated, we get a significant amount of our water both from the Colorado River and from Northern California where the Federal Government has a significant interest. The Colorado River has long been the backbone of imported water supply for the region and for the inland empire virtually all of the imported water there comes from Northern California because of the salt load that comes from the Colorado River.

It's critical that we address the water supply issues in that area and the Federal Government has a major impact, as Mr. Gastelum said, through the Colorado River and through the Central Valley project, and also through it's responsibility with the Endangered Species Act in helping us to address the issues as we move ahead in the future.

Mr. CALVERT. I think we all probably from your testimony in the beginning understand why we're here but one ought to give you an opportunity to do that again. Why don't you all three briefly describe why we find ourselves here in Southern California with a potential serious water crisis.

Mr. Koffroth, you may begin.

Mr. KOFFROTH. Well, I think if Southern California specifically were able to rely on itself for its own water supply, we definitely wouldn't be here today. It's important that as we move forward that we have a plan that allows us to sustain the growth and the population that is currently within this area.

Although it originally started out as a desert, as we have discussed today, it turned out to be a major metropolitan area supporting a large population, huge industry. I think that is something that we cannot go without denying. As we said before water being one of our most major resources, is vital in providing for the sustenance and growth of that community.

Mr. CALVERT. Mr. Grindstaff.

Mr. GRINDSTAFF. California, as usual, is in the leading position on water. We have developed our economy and I think it is the marvel of the world really and truly. California is going to set the standard for the future, and Texas, New Mexico, Oklahoma. This is the beginning.

What we decide here is going to be replicated in the future in all of the western states throughout the nation because none of them have a sustainable long-term water supply. That is why we're here. We developed this nation, the west, without having that in place, and we are building on the foundation that our forefathers laid but it is something that we can and will do.

Mr. CALVERT. Mr. Gastelum.

Mr. GASTELUM. Yes, Mr. Chairman. Southern California is dependent upon imported water. Something like 60 percent of the water consumed in Southern California is imported by the Metropolitan Water District.

I think you'll see that our needs for more imported water are relatively modest and that is because we have an integrated program here in Southern California that stresses recycling, conservation, conjunctive use. I think if you look to the Proposition 13 past by the voters recently, you see a broad-based approach.

Southern California does need imported water. We need a more efficient reliable source of imported water. Not new sources really but more efficiency and reliability in the existing sources. We need better water quality.

The result if we get those things is actually greater benefit for the other parts of the country. You have feast and famine in other parts of—rather the state. The Central Valley is most stressed first but with the kind of integrated system we're talking about, we will have more predictability for the environment, more predictability for water users, and we will have the predictability for economy generally of knowing 20 years out that we have taken care of this issue. It sounds simple. I know it's not but it is within our grasp and I think if we don't do that, we are going to be very sorry.

Mr. CALVERT. Thank you.

Ms. Napolitano.

Ms. NAPOLITANO. Thank you, Mr. Chair. One of the things that I haven't heard you state, and I know all three of you are in support of the Chairman's bill, what is it that you should do to add—what would you add to that language to assist municipalities in the Southern California area do their job better whether it's the standpoint of labor of who actually has to do the work.

I'm speaking about water wells that have been contaminated. They might help communities to deal with their own water to increase recycling. And one of the major things we haven't talked about is the effect of salinity in the cost of water delivery and how that is going to affect any future dealing with the Colorado River which is one of our main sources of the salinity.

Mr. GRINDSTAFF. Let me take a shot at that one. Mr. Gastelum talked some about water quality. We did a calculation the other day, just a rough estimate, on water from Northern California. As I mentioned, because of salt loadings when we import water into Riverside County and San Bernardino County most of that has to be state project water.

If the water quality there is improved and maintained at a consistent level that is maybe 150 milligrams per liter, that will save us in capital costs alone $160 TO $200 million on top of that untold millions in operating and maintenance costs and untold millions of kilowatt hours of power so water quality is an incredibly important part of what needs to happen.

Another part that you mentioned was cleaning up the locally contaminated ground water supply. We have, in fact, in the Southern California region some sources of water where we could use it if we could clean it up, but that water is very expensive.

I'll use an example. In an area behind our office we have the Arlington desalter. The Arlington basin was contaminated by citrus that was grown from the 1880's up to the 1940's. That is not something that anybody knew at the time when they were growing oranges. That certainly wasn't their intent but, in fact, that's the problem.

We now desalt the water and pump it out of that basin and that water is used for drinking water but it is expensive. It would be important for us to have assistance to help us do that kind of thing. If we deal with water quality from Northern California, we deal with cleaning up contaminated water locally to make use of that.

When you do that, that also makes available ground water storage where you can put clean water in and store it when it's available. Then you begin to have a real hope for maintaining our system even while we grow without using incredibly large amounts of new imported water.

Ms. NAPOLITANO. So that would be a great boon is the ability to clean some of the water and you wouldn't have to import it.

Mr. GRINDSTAFF. Absolutely. As I read the bill, I think that there is provision in there to allow for agencies to apply for grants to help pay a portion of that cost so that instead of paying $800 an acre-foot when the going rate for water is $400, maybe the city can say, "We are willing to pay $600 if we can get the Federal Government and state government to help make that difference." That's the choice that I think many agencies in our region have made in the past and will make in the future.

Mr. GASTELUM. If I can expand on that. I think the bill approaches the large issues in a way that is very helpful to cities by providing clarity and certainty in the Delta on the management of environmental issues so we know that we are going to be able to get water of high quality on a predictable basis. That sends the right signal to cities at the retail end.

Now, if Metropolitan Water District is not going to have enough water or, if indeed, it would help Metropolitan to be able to provide the needed water supply, we are going to have the clarity with this legislation of what our supplies are. And by providing competitive grants, the most efficient projects are going to have an opportunity to receive the funding that Joe just talked about.

All together this weaves, I think, a comprehensive program. Clarity, the ability to get money for the most efficient projects, and people understanding that there is a common cause here and a common program. If you leave it to individual cities to try and figure it out on their own, they don't have the resources.

They need to know from their regional governments like Metropolitan, the state, and the Federal Government they were going to take care of their needs and if they have additional needs that we can provide funding mechanisms for them to do the local projects. I'm not just talking about hardware. Conservation. We've had tremendous success here with conservation programs working through cities.

Mr. KOFFROTH. Also, I just wanted to address that I don't think that the need for this bill or the thought of this bill comes necessarily from any errors or lack of effort within the area. I think from all standpoints we have the best workers delivering great water in a reliable fashion.

I think the need for this bill is more about dealing with what we've been dealt from nature in the water that is available through Northern California, through the Colorado River, and being able to develop new methods and means to be able to provide a reliable source of water to the residents here. I think that is what we are here for today.

Mr. CALVERT. Thank you.

Ms. Solis.

STATEMENT OF THE HONORABLE HILDA SOLIS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Ms. SOLIS. Thank you, Mr. Chairman, for having this important meeting here and an opportunity to hear the panelists talk about their ideas regarding this very important issue.

My concerns really deal more with water quality and what we can do to try to continue the cleanup effort in our basin. I represent, obviously, an area that has had a history of polluted water now. There are some serious concerns there with respect to how cleanup is done and how smaller purveyors are able to compete for these grants technically and be able to get into the pool or in line to be able to receive funding.

While the need may not always require the commitment of giving funds, I wonder how we can provide that everyone gets that equal treatment so that small communities, and one that comes to mind that I used to represent in the Senate was the area of the city of La Puente where they had to close some wells and they had to transport water in.

They were then allowing for that cost to be spread over the consumers. That was of great concern. I know there's been some remedies there. I would hope there is a better way of addressing these issues as they come up that we can do some better planning and help out some of these smaller communities such as La Puente and areas in El Monte and others that are trying to deal with this issue.

As the science becomes more prominent with respect to the particular kinds of chemicals or additives that we are finding in the water, I would hope that we could have more opportunity for research done as well so that we can prevent the transport of those contaminants down the plume which has always been an area of concern for me.

Again, keeping in mind that respecting the natural watershed and the way that we go about conserving waters are equally very important to communities of interest that are now finding that, yes, water is a very valued resource.

But how do we also keep the integrity of the process of transporting that water in areas where it is needed but also without disrupting the local habitat that is equally very important. So if anyone could comment on that, I would appreciate it.

[The prepared statement of Ms. Solis follows:]

Statement of The Honorable Hilda L. Solis, a Representative in Congress from the State of California

Thank you Chairman Calvert for scheduling this important series of hearings. I would like to welcome our witnesses and thank them for their time and expertise on this issue.

The future of California water is uncertain. We need to answer several questions about the federal government's role in water resources development and management.

To do this, we must look at the entire picture. Decisions about the future of U.S. water resources policy are inextricably linked to the past. Nearly a century of project development has created a complex web of federal and state laws and regulations, contractual obligations, and economies based on existing water resources infrastructure. The time to understand this situation and start answering questions is now.

Again, I appreciate your time and look forward to hearing your understanding of the past and future of water security in southern California.

Mr. GASTELUM. I would first like to comment. In your area there is a water district, Upper San Gabriel Municipal Water District. They are one of our member agencies. I was in a meeting several days ago where the general manager was describing their thought process in dealing with the issues you identified.

EPA is not well equipped to come in in a speedy fashion to address these issues. They are an enforcement agency. They don't necessarily have a lot of money available to them. A great deal of study is required before they can justify going ahead.

The local water district decided to dip into their reserves, and I commend them for this, to go ahead and start the cleanup effort. Not everybody out there has a reserve so to the extent that you can provide funding for these local water districts to get the work going.

Now, obviously they have to work in conjunction with EPA but the missing element has been money. You can go back afterwards and sort out who is responsible and make them pay but you don't make the situation worse by just sitting there and doing nothing so to the extent that you can address local funds to do these kinds of cleanup projects.

Joe is really talking about it on a basin-wide basis but it's the same principle. You do solve the problem. You provide more water for the long term. It's clearly something that needs to be addressed in this context.

Mr. GRINDSTAFF. I would add to that that, as Ron said, we are attempting to deal with it on a basin-wide basis but, in fact, if you look at the Santa Ana watershed and our 5 million people, the truth is there are many communities of interest and each area has had to band together. One of the most positive things for us has been the fact that with money available from Proposition 13, that

has made people believe that banding together might actually do some good.

One of the hardest things for agencies to do, particularly where they had fought for years about something as crucial and water, is come together and say, "We will cooperate."

Before I came to SAWPA I was the manager of a retail water agency. We guarded our water rights jealously. We were absolutely committed to maintaining the lowest price possible, and we were committed to maintaining very high quality water.

But sometimes that didn't lead us to have incentives to look long range and that is what this legislation does. It helps people say, "Oh, there is money available for this if I'm willing to extend my view and look long range. I think maybe I'll do that. Maybe I can cooperate with my neighbor if cooperation with my neighbor means that there is more money available." I think that is an important role that you can play.

Mr. CALVERT. I want to point out in the legislation itself, and I know that if, in fact, this legislation passes and hopefully signed into law—

Ms. NAPOLITANO. When it passes.

Mr. CALVERT. When it passes. Thank you for correcting me there. This legislation addresses that. Grants for small rural economically disadvantaged communities, Indian tribes, to improve the health and safety of all communities. The intent, of course, is to work this governance process where, as you mentioned, Mr. Koffroth, all stakeholders would be represented.

We have a year working with the state legislature and the governor to put together a fair process in which communities and all stakeholders feel is a fair process in which people believe that they have an opportunity to go after funds that would help their communities.

One thing that I know is a concern to all of us is that in the past we tend to go after projects for each individual area with different success levels. This will give a process in which, I think, everyone will feel comfortable with and the money and the assets will be there to fund these projects in a more orderly fashion with the safeguards necessary for the environment and to assure that planning agencies are able to move forward to plan for adequate water and for the future of California.

If there are no other questions for this panel, I want to thank you, all three of you, for coming out today and testifying and listening to our questions and answering them very well. Thank you very much.

We are going to take a 10-minute break between the next panel and we'll start up again about 11:10. Thank you very much.

(Whereupon, at 10:57 a.m. off the record.)

Mr. CALVERT. Thank this panel. I want to explain again the 5-minute rule in case you weren't here when I explained it to the first panel.

We have a 5-minute rule for each of you on your testimony. The green light indicates your time is going. The yellow light indicates you have 1 minute left. The red light indicates that the time has expired. Please try to stay within that time requirement so we have enough time for questions and answers.

With that, Mr. Pisano, you may begin.

STATEMENT OF MARK PISANO, EXECUTIVE DIRECTOR, SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

Mr. PISANO. Thank you, Chairman Calvert, and other Members of Congress for holding this hearing on an issue as important as the area of water supply and also our water quality in the south land.

Let me note that my organization is the Council of Government and the Metropolitan Planning Organization for Southern California. We cover six counties, all the cites. We currently have 17 million people and 6 million jobs in this region.

I will paraphrase from my testimony to enable me to stay within the time frame and cover the pertinent issues that the Committee is now looking at.

Let me begin by noting that my organization working with its members develops the long-range growth forecast in the growth management plan for Southern California. I'm going to refer you to the table at the end of my testimony where we note what the population and employment forecast is.

Looking out to the year 2025 we see that we will grow to 22,600,000 people and to 10 million jobs, representing a 40 percent increase in population and a 43 percent increase in employment.

The fundamental question of concern to our council is planning and managing this growth. We are concerned about the distribution of growth and how we get all the cities and counties to coordinate their plans for this growth so that Southern California's future is shaped by the best vision for our quality of life into our new century.

These concerns require us to link growth with infrastructure needs accomplish this growth. As we grow, we need the water supply, energy, transportation and environmental mitigation systems to work cost-effectively to support new residential and business demand.

I'll limit my comments today to water. Let me note in our comprehensive plan and guide we present a water supply vision for Southern California. This vision includes a projected need for 5.79 million acre-feet of water in 2015. We've also projected water supplies for this same time frame. Assuming we reach our supply goals, we expect to have a water shortage in dry weather periods. Shortfalls of this kind demand that cities and water agencies work closely together to maximize our resources and minimize waste.

It also means adopting practices not only for conservation but for use of water from other sectors. Such practices take us directly to the issue of water quality. The resolution of the water supply issue in Southern California (and the state of California as well) is going to rest on our capacity to combine water quality and water quantity, flood control, and other multi-purpose uses in an integrated strategy.

Probably the most difficult water issue that we face in Southern California is having a fragmented institutional fabric that limits the development of flexible, comprehensive and creative multi-purpose solutions. An example of this difficulty is the administration of the total maximum daily load program by the EPA. Their

regulatory and administrative approach interferes with and ultimately prevents the use of strategies that actually improve water quality and produce better flood control and more water supply.

The Committee needs to know that the Federal Government has established a framework for integrated problem solving. Unfortunately this framework has not been used to help us coordinate the quantity/quality relationships. One of those is entitled the Section 208 Area-wide Waste Water Management Program. It was set up in the 1972 clean water act.

Section 208 contemplates a basin by basin process within our region by which water quality and quantity can be managed. I urge the Committee to review the provisions of this part of the Clean Water Act that enables us to manage our surface and ground waters and manage our storm water. Section 208 can move us beyond regulatory actions and into much needed comprehensive resource management actions. Currently we are the 208 agency in our region but have been unable to implement any of its potential because of lack of resources.

Let me just conclude with the observation and the experiences that we are seeing with many of our partners. SAWPA is pointing out and demonstrating how recycling in the management of waste water and storm water can be used for water supply in addition to flood control and quality. We need to do that in all of our basins. Furthermore, we need to find the funding needed for these kind of initiatives.

Let me just conclude by noting when we take multiple benefits from quantity, quality, and flood control and we integrate them, we will be better able to address the cost benefit results from combining multiple objectives. Our challenge is to integrate these as we develop policies and programs. We look forward to working with the Congressional Committee to get passage of legislation that helps us meet the growth challenge successfully .

The resources provided in the bill gives us a start for a framework where we can bring these various issues together and truly address our long-range needs. Thank you.

Mr. CALVERT. Thank you.

[The prepared statement of Mr. Pisano follows:]

Statement of Mark A. Pisano, Executive Director, Southern California Association of Governments

Introduction

Good morning, my name is Mark Pisano, Executive Director of the Southern California Association of Governments.

The SCAG region is the largest metropolitan area in the country, encompassing six counties, 184 cities, and 38,000 square miles. This region, which is the size of Ohio, had approximately 16 million people in 2000.

The region now serves about 40% of its water demand from local supplies and imports about 60%, mainly from the State Water Project, the Los Angeles Aqueduct, and the Colorado River Aqueduct. Potable water supplies are over 70% imported. Actions taken all over the state—indeed, throughout the western states—affect the water supplies potentially available for the SCAG region. As of 1995, the region's total annual water demand was about 10 million acre feet, compared with a statewide usage of about 80 million acre feet.

Factors that create challenges for Southern California's water supply:

- Southern California's unique economic strength. In GDP terms, the state of California has the 6th largest economy in the world; Southern California alone has the 12th largest economy.

- Southern California's tremendous growth. The region has already seen dramatic growth; twenty-six of the region's cities more than doubled in population between 1980 and 1999. This trend is projected to continue. The region will grow by about 40% in both population and employment by 2025, adding two cities the size of Chicago for a total population nearing 23 million. During the same period, trade volumes through the region's ports are expected to nearly triple, up to a total goods value of more than $660 billion. [See Table 1 attached to testimony.]
- The SCAG region's unique demographic diversity, which means that water resources and related services must be assured in an equitable manner for a variety of different ethnic, socio-economic, and age groups.
- The concentration of growth, especially residential development, in the outlying areas of the SCAG region, which creates new demands for local water supply infrastructure. At the same time, the SCAG region is nearing build-out in terms of privately owned, developable land.
- The state's uncertain future with regard to energy cost and supply. Water resources are both a source of energy supply, through hydroelectric generation, and a source of energy demand for pumping, transport, and delivery, as well as for wastewater management.
- The state's uncertain future with respect to climate. Southern California is by nature an arid region with unpredictable rainfall. Drought years, whether local or statewide, likewise cannot be predicted. Despite the dry climate, single storm events can be so severe that the region has responded to flood concerns by channelizing many natural waterways to speed runoff. However, in many areas these steps have served to minimize infiltration of storm water back into groundwater supplies.
- The possibility of global warming adds to the climate uncertainty, and could further diminish rainfall even in wetter states like Washington and Oregon, whose water in turn provides energy to California.
- Southern California's history of intense agricultural and industrial development, combined with its extensive coastal exposure, means that groundwater resources are frequently degraded, requiring treatment before they can be used.
- The region's unique concentration of biodiversity, with 70% of the state's listed threatened or endangered species in Southern California. Southern California is one of the most imperiled bio-regions in the world, making our decisions about water resources even more critical to the region's environmental sustainability.
- The fragmented nature of governmental responsibility for water resources and water quality in the region and in the state. This makes planning difficult and underlines the critical importance of communication, of multi-stakeholder efforts, and of multi-purpose solutions to the region's water supply and water quality problems.

Actions taken in the region to improve water supply, quality, and reliability:

- Regular water demand forecasting. The service area of the Metropolitan Water District of Los Angeles covers most of the SCAG region. Several smaller agencies provide water to other portions of the region's six counties. These water suppliers model population growth, together with conservation measures, anticipated climate conditions, and price, among other factors, to project water demand and identify possible supply shortfalls. SCAG has a Memorandum of Understanding with the Metropolitan Water District to provide projections of population, employment, and housing growth that are a cornerstone of water supply forecasts.
- Dry-weather shortfalls have been projected. Working closely with the Metropolitan Water District, SCAG has produced a long-range water resources plan as part of a regional comprehensive plan. This plan projected water supply shortfalls in dry years, as summarized in the attached charts. Several strategies were identified in that plan to address these shortfalls, and these strategies are being implemented through SCAG's cooperative relationships with the region's water agencies.
- SCAG's role in regional project review and planning. SCAG uses its formal intergovernmental review authority to review water infrastructure projects for consistency with anticipated regional growth patterns. Through programs such as the regional Growth Visioning initiative and related efforts, SCAG strives to integrate water planning with growth planning.
- Adoption of best management practices. Metropolitan Water District has adopted sixteen practices aimed at water conservation, including such measures as water audits, new and retrofit plumbing standards, landscape water conservation requirements, conservation incentives, and others.

- Conservation of stormwater runoff. Several parts of the SCAG region have been able to take advantage of spreading basins and gravel pits to allow artificial recharge of underground aquifers. For example, Orange County Water District's Water Factory 21 produces 15 million gallons a day of blended reclaimed water which is recharged into aquifers to serve as a barrier against seawater infiltration.
- Integrated Resources Planning by MWD. This effort by MWD was undertaken with the goals of providing long-term water supply reliability while balancing investments between local and imported sources and protecting the financial security of MWD and its member agencies.
- Water reclamation. Reclaimed water supplies are primarily useful for groundwater recharge, irrigation of greenbelts and golf courses, and industrial purposes.
- Conjunctive use of groundwater resources. These efforts allow storage of water in underground aquifers through stormwater infiltration and spreading of imported surface water during wet years or rainy seasons. Water can be pumped out of these reserves during dry periods to meet peak water demands.
- New storage facilities. Metropolitan Water District's new Diamond Valley Reservoir provides 800,000 million acre feet of new storage for Southern California, and is also producing much-needed electricity.
- Groundwater recovery. Degraded groundwater supplies are being recovered and treated, where cost-effective.
- Numerous private initiatives in watershed planning, conservancies, and water conservation. Non-governmental organizations throughout the region are showing initiative in conserving land, developing runoff models, demonstrating innovative water conservation techniques, and convening stakeholder groups to overcome some of the institutional barriers to integrated management of our region's water resources. These efforts should be coordinated and encouraged.

What additional assistance is needed to improve Southern California's water security?

- Approve continued funding for Cal Fed. This effort has been critically important in bringing together the parties with an interest in an equitable apportionment of the state's water supplies. Too much valuable work has gone into this effort, and the economic and environmental stakes are too high, to even consider withdrawing federal support now.
- Facilitate interdisciplinary planning. The issues of supply and quality and reliability are so tightly interrelated it is impossible to act in one area without significantly affecting another area. We know, for example, that environmental regulation in one area of water quality can undermine quality initiatives in another area. It is not unusual to find different efforts for a better quality of life working at cross-purposes.
- Support the use of cost-benefit considerations. Adding insult to injury, often narrowly defined efforts waste money we can ill-afford to waste. If we're going to be good public stewards we need to encourage approaches that leverage our resources much more wisely...not waste them without concern for comprehensive cost-benefit considerations.
- Support stakeholder processes. We believe that the use of more integrated, comprehensive approaches to our water challenge here require an inclusive stakeholder framework. This framework will ensure that the complexities of environmental improvement are more fully understood and prioritized, that the leaders and institutions needed to solve these problems are involved enough to "own" these problems, and that efforts to raise resources will be validated by credible cost-benefit assessments and supported by greater public consensus.
- Make use of existing authorities. The Clean Water Act was written with these approaches in mind. I refer you to Section 208 and its call for "areawide" approaches to improving water quality. We now refer to these stakeholder-driven efforts as watershed management planning. Call them what we may, these inclusive approaches to negotiated rule-making and problem-solving continue to be essential, especially when some parts of our community rely only on the hand of heavy regulation and confrontation. SCAG has been given Section 208 authority for our region and stands ready to implement that authority in the service of inclusive regional planning. SCAG has not kept the Section 208 planning process current largely because of a lack of funding sources.
- Concluding points. And as we all know in southern California, higher water quality creates more water. Higher quality in our imported water or our local water allows more reuse and more cost-effective reclamation. And as these efforts combine with ever-greater conservation, we will have sufficient water

supplies to support the growth that's coming. That will be a great achievement in this desert we know as southern California.

- But achieving this water independence, drought-proofing our communities, will require a new framework for problem solving. We ask you to be ready to help support this kind of stakeholder framework, to get the resources of EPA aligned with these local watershed initiatives and to emphasize the need for integrated, consensus-driven water improvements. SCAG and the region's water agencies have the cooperative relationships necessary to respond effectively to anticipated shortfalls and to keep water supply from becoming the next "energy crisis."
- We will bring cooperative regional initiatives to your attention as they mature, both in the form of reports and future testimony. Thank you for your interest in our challenges and your willingness to be partners with us as better stewards of nature's bounty.

[Attachments to Mr. Pisano's statement follow:]

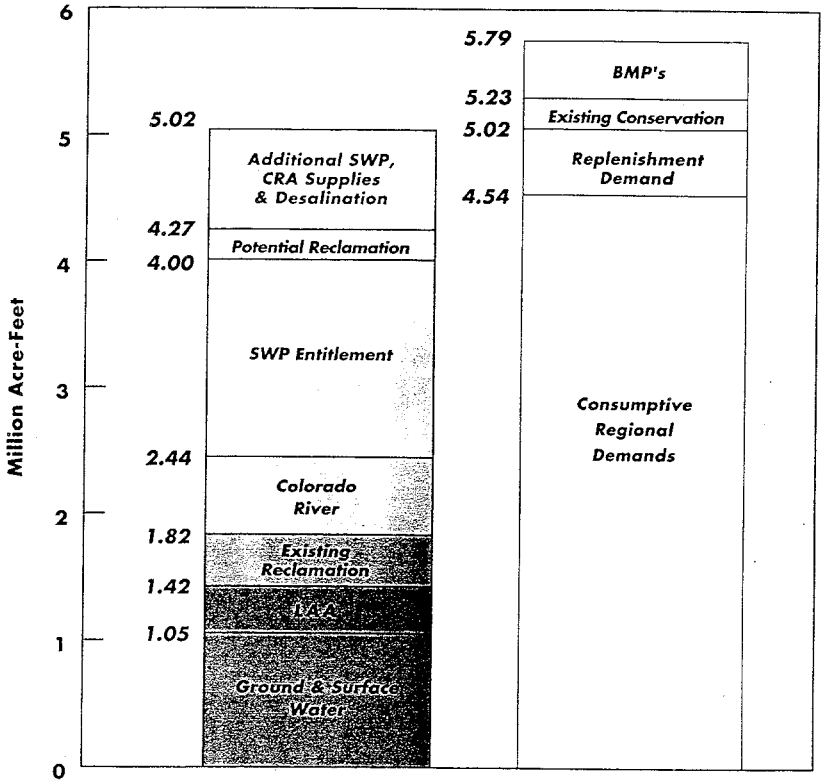
Table 1. SCAG Region's Projected Population, Employment, Household, and Trade Growth, 2000-2025

	2000	2025	Percent Increase
Population (in millions)	16.8	22.6	40%
Employment (in millions)	7.4	10.0	43%
Households (in millions)	5.4	7.4	43%
Two-Way Trade (in $billions)	$230	$661*	187.5%

*Figure for 2020.

Figure 10-4

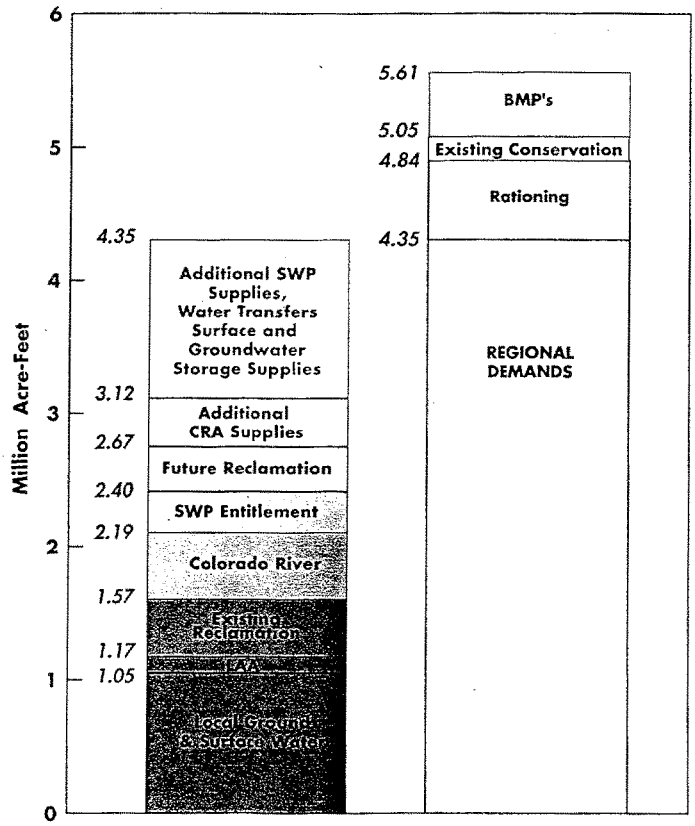
DEMAND AND SUPPLIES IN 2010
AVERAGE YEAR CONDITION



Based on SCAG Draft RCP 1993; SANDAG Draft Series 8 Forecast
Source: MWD, 1993

Figure 10-5

DEMAND AND SUPPLIES IN 2010
MINIMUM SUPPLIES CONDITION



Based on SCAG Draft RCP 1993; SANDAG Draft Series 8 Forecast
Source: MWD, 1993

STATEMENT OF RICHARD ATWATER, CEO AND GENERAL MANAGER, INLAND EMPIRE UTILITIES AGENCY

Mr. ATWATER. Thank you, Chairman Ken Calvert, Hilda Solis, Grace Napolitano. Thank you very much for the opportunity to testify. My name, for the record, is Richard Atwater. I'm the General Manager at the Inland Empire Utilities Agency, a member agency of SAWPA, and also a member agency of the Metropolitan Water District.

Mr. CALVERT. Move your mike a little closer.

Mr. ATWATER. Let me just be brief. I have a written testimony but let me highlight a few items.

First, like the previous panel, I want to thank the Chairman for introducing this legislation, H.R. 1985. We definitely support and want to work with you as you go forward with the legislation. I think it's a real opportunity for not only Southern California but statewide to address some of our long-term water problems.

First and foremost, in our area of San Bernardino County we overly the Chino Groundwater Basin, one of the larger groundwater basins in Southern California. As highlighted in Mr. Grindstaff's testimony, the opportunity to recycle water and implement the conservation best management practices, groundwater cleanup, and store surplus water from the Colorado River and Northern California so that we can utilize that supply in a drought. It will be a very cost effective way to address those issues.

The previous panel talked about some of the local groundwater contamination problems in our area because of historic agriculture, dairies, orange groves, vineyards, the result is we do have elevated nitrates and higher salinity.

In fact, in Congressman Calvert's area, I know he's well aware of it, the Jurupa Community Services District is facing an imminent problem where their local wells will be exceeding the drinking water standards for nitrates and they don't have an alternative supply readily available to them since they are not connected to the imported water system (MWD).

That sort of problem highlights the need from the Federal Government's perspective the new EPA proposed arsenic standard. The city of Chino Hills has well water that is roughly five times proposed EPA standard which will be a very expensive issue for them to treat and deal with that.

In that context, I wholeheartedly support the approach that Metropolitan has taken in their integrated water resources plan when they adopted it in 1996, as Mr. Gastelum pointed out today in his testimony, and that there is the need to have an integrated balanced approach to solving our water problems.

You look at the projections of growth in our area that Mr. Pisano just presented for SCAG. You go forward 25, 40 years and you can see that with this population growth and even if we had a full supply from the State Water Project and the Colorado River, we would be short by upwards of million acre-feet.

Clearly, local water supply and local management of resources and the infrastructure to do that is a critical issue facing Southern California. Clearly we need to do both. We need to deal with the issue statewide within Southern California it is, in my opinion, very important that we look at the local resources.

Let me just highlight what has happened in the last year. Importing water to Southern California is very energy intensive. In fact, water use in California uses about 15 percent of the total electric needs throughout the state.

One of the things we've done, like most water agencies in Southern California, we've changed our public message to be a water and energy conservation message. The homeowner, if he saves water, will also help us greatly conserve a large amount of energy. I think that is something important message to the public.

When you ask about the Federal role, well, the Washington State, as Members of Congress are well aware, we are totally interconnected with kilowatts. Certainly in the Colorado River Basin we have seven states that are joined at the hip on water management issues.

And so the Federal role both locally with EPA drinking water standards, the Army Corps of Engineers on flood control improvements, we are working with NRCS on manure management clean up and renewable energy projects with the dairies in the Chino Valley.

Certainly with the Bureau of Reclamation we are all involved intensely with our activities in Southern California. One of the things we would hope is that, for example, that this Committee would hold hearings on the energy and water issues and how they we can work together to help solve not only the energy crisis but better manage our water supplies to reduce our need for high-priced electricity.

Secondly, let me also highlight for the Committee that the Southern California salinity management study that was jointly sponsored by the Bureau of Reclamation and the Metropolitan Water District, that issue of salt management is something that the Committee ought to look at more in depth.

Then, thirdly, the Bureau of Reclamation started in 1992 has this regional study that they worked with all the local agencies on. We participated, Metropolitan, SAWPA, and other agencies in Southern California. That is the regional water recycling program. I think that is another issue. How do we work together to more efficiently use our local supplies is one that I would encourage the Committee to continue to look at. Thank you.

Mr. CALVERT. Thanks, gentlemen.

[The prepared statement of Mr. Atwater follows:]

Statement of Richard W. Atwater, General Manager, Inland Empire Utilities Agency

I. Introduction

Thank you Mr. Chairman Ken Calvert and members of the Subcommittee for Water and Power for the opportunity to testify today regarding the water problems facing southern California. I am the General Manager of the Inland Empire Utilities Agency.

A. INLAND EMPIRE UTILITIES AGENCY

The Inland Empire Utilities Agency, a municipal water district under California law, was formed in 1950 by a popular vote of its residents. The service area of the Agency is entirely in San Bernardino County and has a current population of approximately 700,000. The Chino Basin also has 350,000 dairy cows, the most densely concentrated population of dairy cows in North America. Overall water use is

about 350,000 acre-feet annually, 70 percent of the supplies are from local sources within the Santa Ana Watershed.

B. BACKGROUND AND INTERAGENCY RELATIONSHIPS

The Agency is a member agency of the Metropolitan Water District and distributes about 65,000 acrefeet of imported water to the cities of Chino, Chino Hills, Fontana (through the Fontana Water Company), Ontario, Upland, Montclair, Rancho Cucamonga (through the Cucamonga County Water District), and the Monte Vista Water District. The Agency also provides wastewater treatment service (four water recycling plants that produce about 60 million gallons per day or 63,000 acre-feet per year). Excess recycled water flows downstream into the Santa Ana River and the Orange County Water District recharges that water into the Orange County groundwater basin for drinking water.

The Agency is also a member of the Santa Ana Watershed Project Authority (SAWPA) and is an active member of the Santa Ana River Watershed Group and the Chino Basin Watermaster. As a member agency of SAWPA, the Agency's water projects are closely coordinated with the SAWPA watershedwide planning and the funding of priority projects through the Water Bond Prop. 13 grants.

II. Current Actions and Programs to Improve the Water Supply Reliability

The IEUA Urban Water Management Plan, adopted in December 2000 documents the overall strategy for improving the water supply reliability in the Chino Basin area.

- Water Conservation
- Water Recycling
- Local Groundwater Storage and Conjunctive Use
- Groundwater Cleanup
- Stormwater
- Renewable Energy and Organics Recycling

A. WATER CONSERVATION

IEUA and its retail utilities are committed to implementing the Memorandum of Understanding (MOU) Regarding Urban Water Conservation in California. IEUA is an active member of the California Urban Water Conservation Council (CUWCC). Currently, the Agency is expanding its conservation efforts to promote both water and energy conservation programs to our customers. To fund these new conservation initiatives, IEUA's Board of Directors is increasing its water rate for imported water by $ 1 per acre foot this week plus is earmarking general fund taxes to finance the water and energy conservation programs for our customers.

B. WATER RECYCLING

IEUA owns and operates four water recycling plants that produce high quality water that meets all state and federal requirements for non-potable landscape irrigation, industrial uses, and groundwater replenishment. The Agency recycles about 4,000 acre-feet annually and has a plan to increase that to approximately 70,000 acre-feet annually over the next decade. This is a ten year $125 million capital improvement program and would be accomplished in the following manner.

Build "purple" recycled water pipeline system to hookup existing large customers (Inland Paper, golf courses, city parks, Reliant powerplant).

Blend recycled water with stormwater and imported water in a coordinated fashion with flood control district to ensure that all water is conserved and replenishes the Chino Basin in an optimal manner (targeted goal is an additional recharge of 80,000 acre-feet per year).

Build in the future new smaller water recycling plants in the northern part of our service area to provide recycled water to communities (Upland, Fontana, and Rancho Cucamonga) without the need to pump the water to them.

Coordinate with cities and developers on new urban development projects so that dual "purple" piping is installed upfront to maximize non-potable uses with recycled water.

C. LOCAL GROUNDWATER STORAGE AND CONJUNCTIVE USE

The upper watershed of the Santa Ana River is fortunate to have extensive groundwater basins. This resource as described in Joe Grindstaff's testimony is the foundation for all of our water supply planning for the Santa Ana River Watershed and for that matter, the whole coastal plain of southern California.

Within the Chino Basin area, the Watermaster is implementing an Optimum Basin Management Plan to enhance the conjunctive use storage of the Chino Basin. The Optimum Basin Management Program developed over the past two years by the Chino Basin Watermaster would implement a comprehensive water resources management strategy to drought proof the area and enhance the yield of the groundwater basin. The Chino Basin Watermaster has developed a conjunctive use program to store 500,000 acre-feet of imported water in wet years for drought year withdrawal for both local, regional and statewide availability.

D. Groundwater Cleanup

Historically, Colorado River water (relatively high salinity) and agricultural practices have caused areas of the Chino Basin to have high salts that make the water unfit for domestic uses. To correct this problem and to recover this poor quality water, the Chino Basin Optimum Basin Management Plan recommends implementation of groundwater cleanup projects to pump and treat poor quality groundwater to meet drinking water standards. Additionally, the desalination projects of the lower Chino Basin area will protect and enhance the water quality of the Santa Ana River and the downstream use by Orange County.

Groundwater cleanup projects:

- Lower Chino area—- groundwater desalination 40 mgd (or approximately 45,000 AF per year), $250 million capital improvement program over 20 years.
- Jurupa Community Services District—- emergency need to build an ion exchange desalination project (about 4 million gallons per day facility) because Riverside County residents have well water approaching drinking water standards for nitrates.
- City of Chino Hills—- local Chino Basin well water has elevated arsenic (average concentrations over five times the proposed EPA drinking water standard of 10 ppb).
- Additional treatment of nitrates in groundwater in the communities of Chino, Ontario, Fontana, Upland, Montclair, Pomona, and Rancho Cucamonga is needed. Approximately six treatment plants are proposed that will pump and treat about 25,000 acre-feet annually of nitrate contaminated groundwater for municipal drinking water supplies.

E. Stormwater

A critical issue facing the coastal plain of southern California as the region continues to urbanize and hardscape our landscapes will be how to implement both small scale and larger scale projects for stormwater capture to allow percolation into our groundwater basins. IEUA in coordination with the Chino Basin Watermaster, the San Bernardino County Flood Control District and the Chino Basin Water Conservation District is developing an integrated recharge master plan to optimize the capture of stormwater with replenishment of imported water from MWD and our local recycled water to enhance the storage and recovery of water from the Chino Basin.

IEUA is also sponsoring work, in part funded by the CALFED Bay–Delta Program, with the Rocky Mountain Institute on small scale, on-site (neighborhood development) stormwater management strategies to enhance percolation of rainfall to minimize runoff, contamination of rainfall before it percolates, and costeffectively reduce flood control requirements.

F. Renewable Energy and Organics Management

The energy crisis reminds all of us working on the water problems facing California how incredibly dependent the imported water infrastructure of southern California is on cheap, low cost electricity to pump imported water into our region.

IEUA in response to the energy crisis and our need to be a steward of our environment has developed a Chino Basin Organics Management Strategy that will:

- Produce through anaerobic digestion enough methane gas for 50 megawatts of clean, renewable electric energy by 2006;
- Cost effectively recycle organic wastes into fertilizer products in an environmentally safe manner that will reduce many thousands a year of long haul diesel truck trips per year;
- Reduce significantly air and water pollution from dairy cow manure; and
- Eliminate the need for electric power from the grid for operating the Chino Basin desalination and water recycling plants.

Last Friday, June 15 IEUA with NWRI and the Southern California Alliance of POTWs (SCAP) hosted a conference on the Chino Basin Organics Management Strategy. We were very pleased with the broad based endorsement of the Strategy and the strong support we have received to date from the State of California and the Bush Administration for this initiative.

III. Future Issues and Need for Federal Assistance

Southern California does have enormous water problems when you consider the following trends:

- The current population is about 17 million and will likely double over the 50 years.
- The imported water infrastructure from MWD can optimistically only deliver 3.2 million acre-feet, assuming full State Water Project entitlement deliveries of approximately 2 million acre-feet and the
- Colorado River Aqueduct staying full constantly at 1.2 million acre-feet.
- Importing water to southern California requires a large amount of electrical energy, substantially more than the alternative local supplies (recycled water, capturing stormwater, and groundwater recovery of poor quality water);
- The region will be over one million acre-feet short in 2050 with a full supply from the State Water Project and the Colorado River!

The issue for the region, as articulated in the MWD Integrated Water Resources Plan adopted in January 1996, is to developed a balanced approach to multiple sources of supplies with a clear priority to local resources management and emphasis on less energy intensive uses of water that protect water quality and the wildlife habitats of the region.

How do we accomplish that? My suggestions are as follows:

Coordinated regional infrastructure planning for water supply, groundwater management, stormwater, wastewater reuse and recycling needs to be integrated on a watershed scale. Regional leadership in the planning of flood control, wastewater and water facilities is an opportunity that can save billions over the next 5 decades. The Federal government should be a partner in this process. EPA, Army Corps, US Bureau of Reclamation, the USDA Natural Resources and Conservation Service all have significant activities within the region.

Excellent examples mufti-agency planning and coordination include:

- USBR and MWD co-funding of the Salinity Management Study.
- USBR Southern California Comprehensive Water Reclamation and Reuse Study.

I would recommend that your Committee hold a hearing on these studies.

Santa Ana River Watershed Group and the Los Angeles and San Gabriel Watershed Council are institutional forums for coordinating between local, state and federal agencies focused on a geographic planning area (a river basin).

Closely linked to the regional planning for infrastructure is water quality. In the future all water will be managed to maximize beneficial reuse and to avoid water quality problems (whether contaminating a beach, a groundwater aquifer, or a community stream). Drinking water quality—less than 5 percent of all water use in southern California is for in the house domestic uses (drinking, bathing, cooking). We need to rethink why we import water 500 miles and use it only once and than discharge into the ocean.

Listed below are key references of the water resources planning issues and opportunities facing southern California.

In closing, thank you for the opportunity to testify. If we can any additional information on the current and future water problems facing California, please do not hesitate to contact me.

References:

1. Urban Water Recycling Feasibility Assessment Guidebook, Richard Atwater, Frank Dryden, and Virginia Grebbien, California Urban Water Agencies with assistance from Watereuse Association of California. September, 1998 (www.watereuse.org).

2. Salinity Manament Study, Final Report June 1999, Metropolitan Water District of Southern California and U.S. Bureau of Reclamation (www.mwd.dst.ca.us).

3. Groundwater and Surface Water in Southern California, A Guide to Conjunctive Use, Association of Ground Water Agencies, October 2000 (www.agwa.org)

4. Chino Basin Optimum Basin Management Plan, Chino Basin Watermaster, July, 2000 (www.cbwa.org).

5. IEUA Urban Water Management Plan, December 2000 (www.ieua.org).

6. IEUA Seven Point Emergency Action Plan, March 2001 (www.ieua.org).

7. Rates, Rights, and Resource Management: Metropolitan's Strategic Planning Process and Southern California's Water Future, draft 2001, Richard Atwater and William Bloomquist

8. Chino Basin Organics Management Strategy, IEUA, May 2001(www.ieau.org).

STATEMENT OF TOM LEVY, GENERAL MANAGER, COACHELLA VALLEY WATER DISTRICT

Mr. LEVY. Thank you. I appreciate opportunity to be here today and testify. I would like to start off by saying I support your leadership on this bill and I am looking forward to working with you and the Committee to ensure that it is passed.

I would like to talk a little about the Colorado River and it is probably the most important source of water for Southern California. We get about 5.2 to 5.3 million acre-feet a year from the Colorado River. However, California is only entitled to 4.4 million acre-feet in normal years.

We have been overusing the Colorado River water by about 800,000 acre-feet a year. This was allowed because the other lower-basin states were not using all of their entitlement but they are now effectively utilizing their entitlement so we would be reduced except for interim surplus guidelines.

The guidelines allow California 15 years to reduce its use to 4.4 million acre-feet in normal years. These guidelines exist only because California Colorado River Agencies negotiated an agreement in October 1999.

This agreement results in the preparation of 39 other agreements that include the Quantification Settlement Agreement. State and Federal environmental reviews are required before the agreements can become effective.

Without the Quantification Settlement Agreement coastal Southern California would be cut by 750,000 acre-feet this year. This would have significant economic impacts on California as it would force Metropolitan to increase its demand from the State Water Project and from water markets. This would impact the Central Valley and the bay area. Significant water shortages would occur in California.

The Quantification Settlement Agreement is at risk because of delays in the restoration of the Salton Sea. The water transfers from Imperial Irrigation District which are a critical component if California is to reduce its Colorado River usage cannot and should not fund the restoration of the Salton Sea.

The restoration of the Salton Sea is a national and statewide responsibility. Congressional help is needed to ensure that these water transfers occur. Without this help the California economy will be damaged and the problems of the Salton Sea will continue to exist. The sea can be restored only through direct action and inaction is a decision not to save it.

Other Colorado River issues include a solution to the environmental issues of the Mexican Delta without negatively impacting U.S. water users, salinity control programs to reduce the amount of salt that the agencies that use Colorado River water would get, and development and funding of a multi-species habitat conservation plan for the lower Colorado River that restores critical and endangered fish without impacting water power users.

We are a State Water Project contractor and receive our State Water Project through an exchange with Metropolitan Water Dis-

trict. As a state water contractor, we need an adequate supply of safe and reliable water from the State Water Project.

The project is not meeting the commitments that we sign contracts for in the 1960's and we need to have CALFED implemented in a balanced manner. That is environmental restoration, additional storage now of reliable and efficient transportation facilities across the Delta, and solutions that work if global warming occurs. I believe your bill does this.

In terms of local initiatives, the failure of the State Water Project to meet its commitments has forced local agencies to attempt to implement solutions. These include conjunctive use, conservation programs, recycling, brackish water desalting, and local storage programs.

Many of these strategies require the availability of water supplies for them to work. All of them are costly. Federal and state funding both as grants and loans are needed to implement these to the fullest.

Thank you.

Mr. CALVERT. Thank you.

[The prepared statement of Mr. Levy follows:]

Statement of Tom Levy, General Manager–Chief Engineer, Coachella Valley Water District, Coachella, California

INTRODUCTION AND BACKGROUND

My name is Tom Levy. I am general manager-chief engineer of the Coachella Valley Water District.

The Coachella Valley Water District provides a variety of water-related services throughout a 1,000-square-mile service area in the southeastern California desert. It is primarily located in that portion of Riverside County commonly referred to as the greater Palm Springs area but it also provides domestic water service and sanitation in a portion of Imperial County along the Salton Sea and its boundaries extend into a small part of San Diego County.

The district was founded under the County Water District Act of the State of California in 1918. It acquired regional flood control responsibilities when it absorbed the Coachella Valley Stormwater District in the late 1930s. In addition to storm water protection, the district provides irrigation water from the Colorado River to about 70,000 acres of farmland. It provides domestic water to nearly 83,000 homes and businesses in the cities and communities of Cathedral City, Rancho Mirage, Palm Desert, Indian Wells, La Quinta, Thermal, Mecca, Oasis, Desert Shores, Salton City, North Shore, Bombay Beach and surrounding areas. Wastewater collected from nearly 72,000 sanitation hookups flows to six reclamation plants where most is converted to high quality water for reuse for golf course and greenbelt irrigation. The district also operates groundwater recharge facilities for much of Coachella Valley.

While all of Southern California is a desert, with an average annual rainfall of only about 12 inches on the coastal plain, Coachella Valley is especially arid with only about 3 inches of precipitation annually. There are no major rivers flowing through the area so most of Southern California's water supply must be imported from great distances—the eastern Sierra, Northern California and the Colorado River. Coachella Valley Water District has contracted to receive water from both Northern California and the Colorado River.

All domestic water the district delivers is pumped from a large groundwater basin, also in a state of overdraft. It currently is replenished by natural flows of snowmelt from surrounding mountains and by imported water from the Colorado River through a contract with the Bureau of Reclamation and from the California State Water Project.

Colorado River

Supply: California's Colorado River supply is limited by the U.S. Supreme Court and by the California Limitation Act to 4.4 million acre-feet per year. Accompanying charts show the division of the river's waters between the states and between agencies within California. Still, during the last 10 years the state has used more than 5 million acre-feet annually. The loss of 600,000 to 800,000 acre-feet of water annually to Southern California when California is limited by "normal" Colorado River flows carries with it significant adverse economic impacts unless enough time is granted to implement essential reductions in use and development of alternative sources.

Colorado River Water Distribution

Average annual flow	13.8 million acre feet

Basin divisions

Upper basin states*	7.5 million acre feet
Lower basin states**	75 million acre feet
Lower basin (if available)	1 million acre feet
Mexico	1.5 million acre feet
Evaporation & other losses	1 million acre feet
Total basic divisions	18.5 million acre feet

Lower basin state allotments

California	4.4 million acre feet
Arizona	2.8 million acre feet
Nevada	300,000 acre feet

Priorities within California

1. To irrigate 104,500 acres In Palo Verde	3.85
2. To irrigate 25,000 acres in Yuma Project	million
3a. Imperial Irrigation & Coachella Valley	acre feet
3b. To irrigate 16,000 more acres in Palo Verde	total
4. Metropolitan Water District of S. California	550,000 acre feet
5a. Metropolitan Water District	500,000 acre feet
4.4 million acre-feet basic entitlement	
6b. City & County of San Diego	112,000 acre feet
6a. Imperial Irrigation & Coachella Valley	300,000 acre feet
6b. To irrigate 16,000 more acres in Palo Verde	total
Total divisions within California	5.362 million acre feet

**Wyoming, Utah, Colorado & New Mexico **California, Nevada & Arizona*

Now that Arizona has developed uses for its full entitlement, excess water for California is a luxury of the past. Realizing this, and with prodding from the other basin states and the Secretary of the Interior, California and its Colorado River water purveyors have been working for several years on a plan to ultimately reduce the state's demand on the river to its basic entitlement. While negotiations continue to resolve individual agency supply concerns, enough progress had been made by the beginning of this year to earn the Secretary of the Interior's concurrence on Interim

Supply Guidelines which allow the state 15 years to orderly reduce its demand on the river to its basic entitlement. These guidelines are conditional on the Quantification Settlement Agreement being operational by Dec. 31, 2002. Arizona and Metropolitan Water District of Southern California have worked out an agreement where that state would allow California surplus supplies in exchange for Metropolitan protecting Arizona from shortage impacts. Currently, progress is being made concerning environmental impact documents for the Quantification Settlement Agreement.

All seven Colorado River Basin states support implementation of the California Plan to significantly reduce the state's Colorado River consumption. Unless water transfers pursuant to the Quantification Settlement Agreement begin in 2002 urban Southern California could lose up to 750,000 acre-feet per year of Colorado River water, resulting in a water crisis with severe economic impacts. To meet this schedule, all environmental compliance actions must first be secured. This requires congressional action because the Fish and Wildlife Service is unable to grant necessary permits before mitigation is authorized and funded.Without legislative action this year, the Quantification Settlement Agreement, Colorado River surplus guidelines, the seven state commitments and the ability of California to meet is obligations to stay within its Colorado River allocation would all be negated.

The sought legislation would also authorize development of off-stream water management reservoirs near the All–American Canal to enhance off-stream storage capability, would enhance the ability of Mexico to make efficient use of its Colorado River entitlement and would assist the development of a reliable water supply for the San Luis Rey Indian Water Rights Settlement.Quality: Historically, the Colorado River carries a heavy salt load—salt that leaches into the river naturally and salt that is added as water diverted for irrigation is returned to the river for downstream uses. By the time Coachella Valley Water District receives Colorado River water through the All–American Canal system, nearly a ton of salt is delivered with each acre-foot of water. Coping with this salt is costly both in terms of money and additional water consumed.

Salinity damage from Colorado River water in the United States typically range between $500 million and $750 million per year according to Bureau of Reclamation figures. High salinity levels make it difficult to grow fruits and winter vegetables and salt destroys domestic water pipelines and fixtures. Studies show that salinity damage could exceed $1.5 billion annually if future increases are not controlled. Several control projects have been completed since the 1974 Colorado River Basin Salinity Control Act, Public Law 93–320, was adopted. Projects currently under development include the Paradox Valley, Grand Valley and Las Vegas Wash Units. Cost of salinity control generally ranges from $20 to $100 per ton while a conservative analysis of benefit is estimated to be $340 per ton.Traces of perchlorate, an industrial byproduct leaching into Lake Mead from the Las Vegas Valley area, have been detected in Colorado River water entering the Coachella Valley.

And then, of course, there is the time bomb of the pile of uranium tailings sitting near the river's bank in Moab, Utah, with radioactive materials leaching into the water daily.Reliability: From the standpoint of having excellent storage facilities in Lakes Powell and Mead, the Colorado River has been extremely reliable to carry its users through extended droughts because of 60 million acre-feet of on-river storage. That reliability is at risk.

The threat to reliability comes from two sources, both caused by environmental concerns. Before dams were placed on the river to store water for droughts and to protect whole regions from devastating flooding the river flowed freely to the Gulf of California. Today, there is a strong environmental movement to return a portion of that historic flow to the gulf.

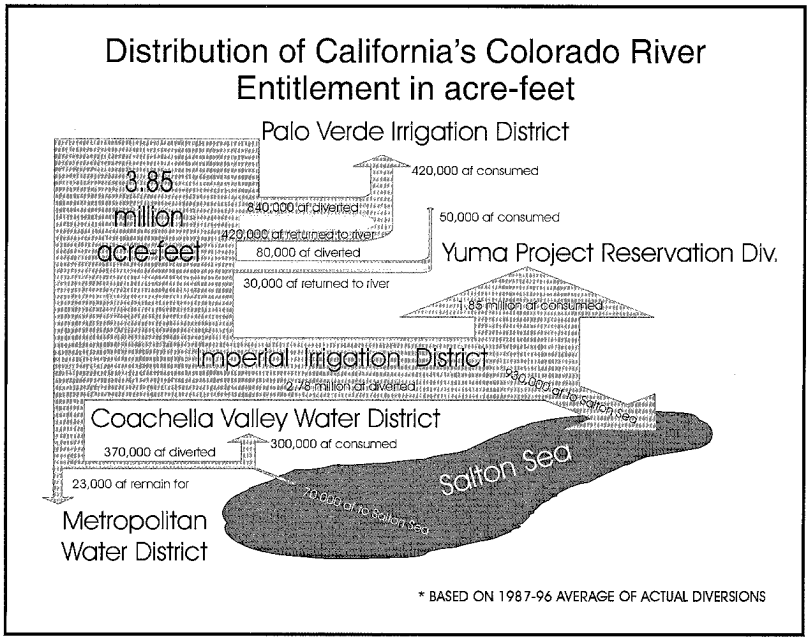
At the same time, the water conservation necessary to reduce California's demand on the river requires that the inflow to the Salton Sea be reduced. Unless the environmental consequences of the reduced inflow are addressed, California's Quantification Settlement Agreement is threatened.The Salton Sea was created shortly after the turn of the century when man accidentally diverted the entire flow of the Colorado River into the Salton Sink for two years. It has been maintained since by Colorado River water diverted to irrigate the Imperial and Coachella Valleys in California and the Mexicali Valley in Mexico.

Today the sea is a primary resting place for migratory birds, including some endangered species.With a surface elevation nearly 220 feet below sea level, the only way water leaves the Salton Sea is through evaporation which leaves the salts behind making today's sea saltier than ocean water. There has been much work done locally and in Washington toward saving the Salton Sea but this must remain a separate issue. Habitat such as wetlands adjacent to the sea can be created to address

the endangered species needs resulting from Colorado River water conservation and transfer programs which will reduce inflow to the sea.

Attempts to increase flows to the Colorado River Delta in Mexico for environmental enhancement also threaten the reliability of the river's water supply in the United States. Environmentalists claim only a "small" amount of water, about 100,000 acre-feet is needed for habitat enhancement in the delta. This is one-third of Nevada's annual entitlement. Mexico currently receives at least 1.5 million acre-feet of Colorado River water annually plus any surplus flows. So far, all of it has been diverted at Morales Dam in Mexico to irrigate farmland.

Any delta enhancement activity must be done creatively to assure that it doesn't contribute to shortages in California and to assure that it benefits delta habitat.



State Water Project

Quantity: The State Water Project was oversold and under-built. Even in a normal year, the State Department of Water Resources cannot meet commitments to its contractors. In a dry year it is incapable of producing half of the water it promised. This year it provides 35 percent of its commitments. Solutions are needed to move water through or around the Sacramento–San Joaquin Delta. The State of California needs to honor its 1960s commitment to finish the project. This requires an aggressive environmental restoration program coupled with storage and facilities to move water around the delta.Quality: State Project water requires the removal of many contaminants before it can be used for domestic purposes. Many of these are picked up as the water flows through the maze of delta waterways on its way to the beginning of the California Aqueduct.

Reliability: Without adequate storage and a cross-delta transfer facility, the State Water Project helps meet Southern California's water needs but, even in a normal year, it can't be called reliable. Global warming will reduce the reliability of the State Water Project and destroy many of the environmental benefits that are to be provided through CALFED. It needs to be considered in developing alternatives.Local agencies have been forced to develop programs to increase their reliability. This has shifted the responsibility from the State Water Project to the local agencies and requires more state and federal funding to assist them.

Local water agencies have worked to improve its reliability through development of innovative conjunctive use programs. For example, for more than 25 years the Coachella Valley Water District and Metropolitan Water District of Southern California have had an exchange agreement which improves water reliability to both.

Coachella Valley lies many miles from the end of the State Water Project but Metropolitan Water District's Colorado River Aqueduct passes through the valley. Coachella Valley exchanges its share of State Water Project water with Metropolitan for a like amount of Colorado River water which flows into percolation basins for groundwater recharge. To make the system even more flexible, Coachella takes water only during wet years when Metropolitan banks excess flows in the groundwater basin which Coachella draws upon during dry years when both state project and Colorado River entitlements go to Metropolitan. As part of the Colorado River Key Terms, both agencies are working on a 100,000 acre-foot wet year transfer that will improve reliability and reduce costs.

Both state project and Colorado River water supplies are extended through these types of conjunctive use programs.

Groundwater

Quantity: The amount of groundwater available to Southern California varies with the individual basins and sub basins. I will limit my remarks to the groundwater basin of Coachella Valley which, fortunately, is among the best in Southern California from the standpoint of large storage capacity.Still, it is in a state of overdraft and must be constantly replenished to provide stability and reduce the potential for ground subsidence and water quality problems.

The groundwater supply is large enough to sustain our water users through an extended drought if necessary.Because rainfall is so scarce in Coachella Valley, professional water users (farmers and golf course managers) have recognized water as a major cost of doing business and have become world leaders in the development of micro-irrigation, computerized delivery systems and other water conservation techniques now used in many arid areas.

Replenishment assessment fees are charged to major groundwater pumpers so they pay their proportionate share of the cost of replacing extracted water. Nearly all the water that we can reclaim from sewage is redistributed for golf course and greenbelt irrigation, further reducing demands on the groundwater supply.Quality: Generally, the quality of Coachella Valley's groundwater is very good but planned and proposed state and federal regulations can make that water very expensive for the consumer, probably without improving its healthfulness. Desert area groundwater often contains naturally occurring constituents such as radon, arsenic and chromium 6 at low levels but above levels proposed by some.

We believe it is vital to deliver healthful water to urban users and recognize the necessity for the costs those users must bear for healthful water. However, we do not believe it is appropriate to increase the costs of providing them with water without sound science to indicate that the additional money they are forced to spend will make their drinking water more healthful. Coachella Valley Water District had contributed significantly to funding of scientific research in these areas and has actively encouraged other agencies to do the same. Concurrently, we also are investing in studies to determine cost-effective ways of removing constituents that may be found to be harmful. The head of our water quality section is one of 16 people currently sitting on an EPA subcommittee studying costs of arsenic removal.We all agree that the current arsenic standard probably is too high but scientific studies to determine an appropriate level are still incomplete. If the level is set at 10 parts per billion, the annualized costs to Coachella Valley Water users will be about $2 million. Unfortunately, this will be assessed from a small amount of users in rural areas because our wells in large population centers are relatively arsenic-free.

Radon is a totally different story. Exposure to radon gas escaping from well water is very small compared to total amounts in ambient air. Still, Coachella Valley water users would be expected to pay as much as $8.3 million annually to meet requirements which have an almost non-existent health benefit.Fortunately, the federal EPA has stayed away from the chromium 6 debate but some California legislators at both the state and federal levels are pushing for standards without the benefit of science.

All current studies indicate that chromium 6 is not a carcinogen when ingested. In fact, it is rapidly converted to chromium 3, an element important to body functions, when ingested or exposed to organic matter. Because domestic well water generally is protected from organic contamination, chromium 6—as a percentage of total chromium—appears higher in groundwater than surface supplies. Very little is known about removal of chromium 6 but preliminary numbers indicate the cost per year in Coachella Valley could be in the $15 million range.Another concern facing all of California is the adverse effects of MTBE on the state's ground and surface water supplies. This has not yet become a problem in Coachella Valley but it is only a matter of time.

Reliability: The short- to mid-term reliability of the Coachella Valley groundwater basin is excellent and the district is currently in the public review stages of a valley-wide water management plan which will extend its reliability for decades. The plan requires implementation of a variety of conservation, conjunctive use, importation and reclamation activities designed to reduce use without damaging the valley's lifestyle or joint economic bases of tourism and agriculture.

It involves more use of Colorado River water to reduce the demand on the groundwater basin and increased availability of state project water for exchange to increase the availability of water for groundwater recharge. These issues are closely tied to current negotiations concerning the Colorado River Quantification Settlement Agreement.

MEASURES AND ASSISTANCE NEEDED

Colorado River

Probably the most important issue facing Southern California water users that requires federal participation is the Colorado River Quantification Settlement Agreement. To go forward, we need congressional help in the form of $60 million for enhancement programs to protect endangered species habitat around the sea and direction to accept and implement a habitat conservation plan for Imperial Valley and the Salton Sea. Restoration of the Salton Sea is an issue that Congress and the California legislature need to address. However, the schedule for this important action is behind the implementation of the Quantification Settlement Agreement and should not result in failure of the Quantification Settlement Agreement and the resulting devastating economic impacts on California.

An urgent short-term need is for the removal of the uranium tailings from the riverbank near Moab, Utah.An important long-term project is continued investment in desalting research. There is nearly one ton of salt in every acre-foot of Colorado River water delivered to Coachella Valley farms. The economic costs of such a salt load delivered throughout Southern California is tremendous.

We also need assistance in resolving the Mexican Colorado River delta issue with creative programs that reach environmental goals without the sacrifice of needed water supplies in the United States.

State Water Project

Concerning state waters, we need the CALFED process to work. Both state and federal officials must continue to work toward improving the water supply for most of the state by fixing the delta to improve both quality and quantity of water for the south.With the population of California growing, additional water supplies, including the benefits from storage, must be part of the solution.

Conservation

Grant and loan programs to implement conservation and reliability enhancement programs—including water banking, conjunctive use, desalting brackish water and recycling—would help Southern California get through future droughts. An example of such is Coachella Valley's Martinez Canyon Recharge program. Here, a groundwater recharge facility, similar to the one the district has operated for many years for urban users, will be constructed in the agricultural portion of the valley to receive water through the Coachella Branch of the All–American Canal. When completed, it will help rebuild a declining groundwater basin during normal years along the Colorado but, during years of shortage, farmers could ease up on their Colorado River demands and rely, instead, on a freshly recharged groundwater basin.

Quality: We need to make sure water quality issues are based on good science and, when good science determines that expenditures must be made beyond the ability of users to pay, federal subsidies should be available to make up the difference instead of granting waivers to small service areas. If the water is found to be unhealthful, it is unhealthful to small populations as well as large populations.

CONCLUDING REMARKS

Thank you for traveling to California to hear our concerns about the state's water future. We look forward to working closely with you to address some of these recommendations and concerns.

If you desire additional information about Coachella Valley Water District or some of the issues I have mentioned here we would welcome a visit to our web site: www.cvwd.org

Of course, I am available to respond to any questions.

STATEMENT OF DARRYL MILLER, GENERAL MANAGER, WEST BASIN MUNICIPAL WATER DISTRICT & CENTRAL BASIN MUNICIPAL WATER DISTRICT

Mr. MILLER. Thank you very much, Chairman Calvert, and Committee members for allowing me to be here today and primarily testify regarding the value of local projects regarding our water supply issues in Southern California.

My name is Darryl Miller. I'm General Manager for West Basin Municipal Water District, and Central Basin Municipal Water District. Two separate districts share one staff. Both are actively involved in wholesaling of imported water. Also in supplying recycled water in a very aggressive conservation program. We serve over 2.3 million people in total between both districts and it covers approximately 41 cities.

Regarding recycled water, when the West Basin recycle program is completed we expect to be serving the capacity of approximately 70,000 acre-feet. Today we serve about 150,000 acre-feet of imported water so that would replace half of the imported water sales with recycled water. That's significant.

We also serve five qualities of recycled water depending upon the needs of the end users whether it be irrigation or very technical industrial sites such as the refineries.

Central Basin has a similar goal. They have a fifty-mile system of existing pipes in the ground serving recycled water. We still need to expand that significantly and they are today serving 3,500 acre-feet. They plan to serve 10,500 acre-feet upon completion.

Recycled water has a very strong and clear economic benefit. It helps drought-proof the area. It supplies reliability for industry which keeps jobs in the area. It is also has very strong environmental benefits. Rather than discharging from the Hyperion Treatment Plant to the Santa Monica Bay area, we actually divert some of that discharge and recycle the water for beneficial use. The more of that we can do, then there will be less discharge into the ocean and it discharges into the federally designated National Marine Estuary.

The Federal Government has been investing in those projects and we appreciate that. Also you are very concerned with CALFED obviously in Colorado. The more use of recycled water is of a direct benefit and direct linkage to maintaining a reliable water supply for Southern California both for CALFED and for the Colorado River.

We have been supported by a number of Congressmen and Congresswomen that have really helped us out in the past such as in Central Basin Congresswoman Napolitano, Congressman Horn, Congressman Royce, Congresswoman Roybal-Allard. In West Basin Congressman Harman—Congresswoman Harman. Excuse me. Congressman Waxman, Congressman Sherman, and Congresswoman Millender-McDonald covers both areas and she's been in a very key leadership position.

Those are the attributes of the recycled water program. But despite the regional and Federal benefits, these programs are usually looked at as so-called local projects rather than having a beneficial regional asset and the responsibility of the local agencies.

A competitive grant program as proposed by you, Chairman Calvert, in the Western Water Enhancement Security Act, would play a critical role in the ability for local agencies to continue to develop projects creating new alternative water supplies through recycling, desalination, and groundwater recovery.

The creation of such a program is absolutely necessary. We strongly support it as part of the real solution for statewide water supply problems. In the absence of such a project, the CALFED initiative will severely limit the availability of funds for local projects and quickly provide a discouragement and an unlinking between the benefits of local projects and how it relates to CALFED.

We strongly encourage the Subcommittee, the Congress to consider the values of local projects when you consider the CALFED bills. Thank you very much on behalf of the directors of both Central Basin and West Basin for letting me testify to you today.

[The prepared statement of Mr. Miller follows:]

Statement of Darryl Miller, General Manager, West Basin Municipal Water District, Central Basin Municipal Water District

My name is Darryl Miller, and I am the General Manager of both the Central Basin Municipal Water District and the West Basin Municipal Water District. On behalf of the Central Basin District and the West Basin District, I thank Chairman Calvert and the Members of the Subcommittee on Water and Power for this opportunity to testify about the water supply challenges facing Southern California and the opportunities available to meet those challenges.

The Central Basin Municipal Water District and the West Basin Municipal Water District are both public agencies that wholesale imported water to cities, mutual water companies, investor-owned utilities and private companies in southern Los Angeles County. Both Districts also supply their service areas with recycled water for municipal, commercial and industrial use and both are aggressively involved in water conservation efforts. The Central Basin District also supplies water used for groundwater replenishment. Each of the two agencies has a five-member publicly elected Board of Directors that sets policy and governs operations. However, the two Districts share a common staff and headquarters in Carson, California.

The Central and West Basin Districts serve a combined area of over 400 square miles in southern Los Angeles County. The population in this combined service area is over 2.3 million people living in 41 cities and unincorporated areas of the County. Each year, these two Districts deliver about 475,000 acre-feet of water in the combined service area.

The Central Basin and West Basin Districts are each unique in the make-up of their service areas and the water supply challenges they face. While each is charged with ensuring a safe, adequate and reliable supply of water to its customers, each has its own specific obstacles to overcome in meeting that mission. Also, each District has initiated its own measures to improve its ability to meet the water supply needs of its service area.

The West Basin Municipal Water District was formed in the mid–1940's to preserve the limited underground water supplies in West Coast Groundwater Basin and to secure supplemental water supplies. Today, about 80% of the 210,00 acre feet of water used in the West Basin service area is imported water purchased by the District from the Metropolitan Water District if Southern California. Additional supplies come from local groundwater sources and from the District's aggressive water recycling program. Through water recycling and water conservation, the West Basin District is striving to significantly reduce the demand for imported water within its service area.

The West Basin District is currently constructing additional components to the largest water recycling system of its kind in the nation. Recycled water in the West Basin District is domestic wastewater originating from the County of Los Angeles' Hyperion Treatment Plant that is further purified through primary, secondary and tertiary treatment. Recycled water in the West Basin is not used for drinking water purposes. Instead, it is used for non-potable commercial, industrial and municipal applications. When all of the component projects of the West Basin Water Recycling Program are eventually completed, the program will have the capacity to recycle up to 70,000 acre-feet of water per year. The two main components of the West Basin

Water Recycling Program are the West Basin Water Recycling Project, now complete and developing 22,000 acre feet of water per year, and the Harbor/South Bay Water Recycling Project, which will add the capacity to develop another 48,000 acre feet of new water supplies.

The West Basin is proud to report that all of the new water supplies developed through its water recycling program are put to beneficial use. More than 140 facilities in our service area are currently using recycled water for non-potable applications. The West Basin also tailors its recycled water to meet the unique needs of end users. Local oil refineries, which are a major user of our recycled water, have specific water quality requirements that require additional treatment processes. The West Basin also supplies recycled water for injection into seawater intrusion barriers along the coast. In order to meet the strict standards required for barrier water more than 12 different treatment processes are utilized. While extra treatment means extra treatment costs, the end result is a dramatic reduction in the use of imported water and a more reliable supply of both drinking water and non-potable water.

The Central Basin Municipal Water District was established in 1952 to help mitigate the overpumping of underground water resources in southeast Los Angeles County. Local groundwater provided an inexpensive, but diminishing, source of water for the area. The Central Basin District was formed to supplement groundwater supplies with imported water, which is purchased from the Metropolitan Water District of Southern California. Today, in addition to groundwater and imported water, the Central Basin District provides recycled water for irrigation, commercial applications and industrial processes.

The Central Basin Municipal Water District obtains recycled water from the San Jose Creek Water Reclamation Plant in Whittier and the Los Coyotes Water Reclamation Plant in Cerritos. The Central Basin Water Recycling Program is comprised of two distribution systems, as well as three pumping stations and a reservoir. The two systems are interconnected by a 50 mile distribution system that annually delivers about 4500 acre-feet of recycled water to more than 150 industrial, commercial, landscape and irrigation sites throughout southeast Los Angeles County. The Metropolitan State Hospital in Norwalk and U.S. Gypsum's paper mill in South Gate are among the Central Basin's largest recycled water partners.

We all know that water is a finite resource. The water we are drinking today and using to water our lawns is the same water that dinosaurs drank thousands of years ago. Nature regularly uses, cleans and reuses water, and has done so for millions of years. Through water recycling programs, such as the West and Central Basin Districts', we are merely speeding up the natural process. However, for water recycling to play a role in the water supply problems facing California, the newly created water supply must be put to beneficial use in order to reduce the demand for imported supplies, which originate from the environmentally sensitive Bay/Delta or the federally controlled Colorado River.

Water recycling by the Central Basin and West Basin Municipal Water Districts has strong and clear economic benefits for southern Los Angeles County. The reliability of recycled water helps to drought-proof the region by ensuring a supply of water for non-potable purposes regardless of drought. This factor of reliability is both an attraction for new businesses to locate in our area and an incentive for existing businesses, and jobs, to stay.

The water recycling programs of the Central and West Basin Districts also have clear environmental benefits. Recycling water directly reduces the volume of effluent discharged into receiving waters. This is particularly important in the West Basin, where effluent form the Hyperion Treatment Plant would normally be discharged into the Santa Monica Bay. Eventually, the West Basin Water Recycling Program could reduce by 110 million gallons per day the amount of effluent discharged into the Bay, which is a federally designated National Marine Estuary.

In addition to the local economic and environmental benefits of water recycling, several established federal goals are also advanced. The federal government has already spent many millions of taxpayer dollars in the San Francisco/San Joaquin Bay/Delta. This Subcommittee is currently considering legislation that will authorize billions more to be spent on addressing the water supply and water quality issues that plague the Delta. Clearly, the issues in the Delta are of great federal concern, and the Central and West Basin programs directly contribute to advancing CALFED's goals.

The federal government is also deeply interested in the State of California reducing its demand for water from the Colorado River. California annually exceeds its allocation of Colorado River water by approximately 800,000 acre-feet. As Arizona, Nevada and other States with which California shares Colorado River water continue to grow into their existing allocations, water recycling will continue to play

a significant role in California's efforts to live within its own allocation. Also, a reduction in California's demand for Colorado River water will directly aid the efforts of the United States to meet its international treaty obligations with Mexico.

The advancement of federal goals accomplished through aggressive water recycling and conservation efforts has been a strong rationale for federal involvement in the development of these types of projects. Many of these projects are capital-intensive, with large amounts of funding needed up-front in order to ensure completion and begin the delivery of new water supplies. Also, in today's market, in order to encourage end-users to switch to recycled water and commit to the development of infrastructure needed to facilitate the delivery of this water, it is often imperative to offer some financial incentive. A finite, short-term federal investment in the construction of well-planned water recycling projects can allow water districts to offer recycled water at reduced prices and achieve the myriad of long-term benefits I have mentioned.

The long-term local, regional and federal benefits of the water recycling and conservation efforts of the Central Basin and West Basin Municipal Water Districts are well-known to our congressional representatives. In the Central Basin, Congresswoman Napolitano, Congressman Horn, Congressman Royce, and Congresswoman Roybal–Allard have supported the Central Basin's requests for federal funds to develop projects. In the West Basin, Congresswoman Harman, Congressman Waxman and Congressman Sherman have all supported federal cost-sharing for water recycling and water conservation programs. Congresswoman Millender–McDonald represents portions of both Districts, and continues to be a leader in the Districts' efforts to seek federal assistance to develop such projects.

Historically, the main obstacle to federal investments in water recycling projects has been the lack of budgeting priority placed on such programs, and the lack of a coherent federal policy addressing water infrastructure needs. The Bureau of Reclamation's Title XVI program, which provides a federal cost-share of 25% for the planning, design and construction of specifically authorized water recycling projects remains grossly underfunded. While the West Basin and Central Basin Municipal Water Districts have benefitted from this program, the vast majority of projects authorized to receive federal cost-sharing under this program are still waiting to participate.

Other federal funding for the development of water recycling programs is available through the Army Corps of Engineers and the Environmental Protection Agency. However, water recycling funds through these agencies is limited and not readily available for new projects. Despite the regional and federal benefits I have mentioned, many in Congress refer to water recycling programs as so-called "local projects" that should remain solely the responsibility of local agencies.

A competitive grant program such as the one proposed by Chairman Calvert in the "Western Water Enhancement Security Act" would play a critical role in the ability of local agencies to continue to develop projects creating new, alternative water supplies through recycling, desalination and groundwater recovery. The Central Basin Municipal Water District and West Basin Municipal Water District strongly believe that the creation of such a program is absolutely necessary as part of any real solution to the statewide water supply problem. In the absence of such a project grant program, the multi-billion dollar CALFED initiative will severely the limit the availability of funds for projects, especially in Southern California, that can quickly provide very quantifiable improvements in water supply.

The Central Basin and West Basin Municipal Water Districts are already planning new projects that will further enhance the region's water supply. In addition to its ongoing efforts to market recycled water to new users, the West Basin District is embarking on the development of a comprehensive desalination program. One component of this program will include cutting edge facilities to desalinate recycled wastewater to extremely high purity levels for sensitive industrial applications. This desalination project will also allow the West Basin District to further reduce the volume of potable water currently used for seawater intrusion barriers, which is currently a mix of 50% potable water and 50% recycled water. Another component of the West Basin program will use state-of-the-art technology to demonstrate the economic feasibility of desalinating seawater to create new potable water supplies.

The Central Basin District is also moving forward with plans to increase the use of recycled water within its service area. To accomplish this, the District will continue its efforts to market the benefits of recycled water to potential users. As new users commit to recycled water, the Central Basin District will need to construct additional links to its existing distribution system. As an example, the Montebello Loop project, currently under development, will connect users in the City of Montebello to the Central Basin's water recycling distribution system. The Central Basin is also developing a project that will connect the distinct water recycling sys-

tems of the Central Basin and West Basin Districts to create a truly regional water recycling treatment and distribution system throughout Los Angeles County.

Projects like these, and the benefits they offer, may not be feasible without some measure of federal investment. I encourage the Subcommittee, and the Congress, to consider the value of these projects when allocating existing resources and authorizing new programs, like CALFED, that may further limit the availability of federal infrastructure investment funds in other areas. The Central Basin and West Basin Municipal Water Districts applaud Chairman Calvert's recognition of the importance of projects throughout the state that directly contribute to the goals of the CALFED program. On behalf of the Boards of Directors of the Central Basin and West Basin Districts, I thank you for this opportunity to address these issues before the Subcommittee.

Mr. CALVERT. Thank you. Mr. Miller, you bring up a good point and I think this is a question for the entire panel. The issue has been brought up by some and so I'll bring it up here today and give you an opportunity to address it.

There is a record of decision with the Bay Delta, the original CALFED agreement. Our legislation goes beyond that obviously. We have a competitive grant program. We bring back reclamation loan program for the western states for ways in order to augment financial assistance to build projects, through the governance process obviously, if it's approved.

I obviously, and those who are sponsoring this bill, believe that is important and I want to hear it from all of you. Can California meet its future demand on water strictly with the existing CALFED process as it is envisioned today with the record of decision without the additional leverage of this program that we have put in place encouraging local water agencies to build groundwater reclamation projects, conjunctive use, etc., etc., etc. Mr. Miller, you can start with that first.

Mr. MILLER. I'll answer very simply and clearly no. It's going to take a multi-source water supply program to manage the needs for our demands in the future without a doubt. CALFED alone by itself cannot take care of it.

Mr. CALVERT. I appreciate that.

Mr. ATWATER. I agree with that. We need additional funding in order to implement the program the locals need in order to make sure they got a reliable water supply.

Mr. CALVERT. And while you're answering that question maybe you can augment that. People need to realize that if California is to meet its agreement to limit itself to 4.4 million acre-feet of water in the time line that was envisioned by the previous secretary, what does that mean if, in fact, we don't have a program to encourage all of California, not just Southern California?

We'll be doing hearings, by the way, in Central Valley and the northern part of the state to build these projects. What does that mean because we lose—what does that mean to water supply in California losing that much water that we presently get out of the river?

Mr. PISANO. If we lose—the only way California can continue to meet its needs with less water from the Colorado River is to implement programs that recycle and conserve and store wet-year water in groundwater basins for later use. We'll also recover basins that have been lost to contamination. We have to do all of those things

plus facilitate water transfers from agriculture to urban uses in order to meet those goals.

Mr. CALVERT. I appreciate that.

Mr. Atwater.

Mr. ATWATER. Yes, I would agree with both Tom and Darryl's points. The only thing I would add is when you look at the history of the CALFED Bay Delta program it is really focused on the Bay Delta and was less focused on Southern California.

Not that it didn't address it but it didn't look at the needs and what we need to do in Southern California at the level that your bills address that need and also the need that I know all three members of this hearing today clearly understand and that is that within Southern California we have local community needs that weren't given that level of detailed attention in CALFED.

Mr. CALVERT. And, Mr. Pisano, before you answer that, I want to point out, as we know, Southern California used 70 percent of the water or more in the state and we have an obligation to utilize that resource better than we have. That is the reason this legislation is drafted the way it is in order for us to do exactly that.

Mr. Pisano.

Mr. PISANO. Well, first of all, I want to agree with the first three panelists on the basic conclusion on CALFED. I know without additional resources we can't meet the commitments in the CALFED record of decision.

Secondly, I want to emphasize and stress the comments that Mr. Atwater made, and that is we need to look at the cost effectiveness trade off of expenditure of dollars in Southern California for water quality, water quantity, but control benefits and what that could produce for the region and trade those resources on a cost effectiveness basis that we would spend against resources that the south would contribute toward the Bay Delta.

And I'm not saying that the south shouldn't pay for the Bay Delta but let's have a level playing field and let's look at what the cost benefit ratios are of expenditures within our own region relative to the basins to the north.

Then finally on the Colorado River, I just want to note that in dry weather periods given the long-term growth that we're forecasting, we have up to a 1.3 million acre-feet shortfall.

Well, that is a shortfall that we need to address and we have multiple strategies of looking at that and that comes back to the previous point that I made. Resources to help us carry out some of our local regional strategies need to be put on the table with the same funding priority and the same degree of emphasis that resources to address the similar kind of multi-use issue in the north. There hasn't been a level playing field as far as we're concerned in the south on that issue.

Mr. CALVERT. Thank you, gentlemen.

Ms. Napolitano.

Ms. NAPOLITANO. Thank you, Mr. Chair. What I'm hearing from the first panel, as well as you, is that if we work together and are able to take into consideration the needs of the cities, the industry to conservation, recycling, storage, etc., etc., that we may be able to not only deal with the situation where we might run into a cycle

of water shortage again, but secondly that if we work together, we may be able to come up with a solution.

But has anybody done an assessment, qualitative or quantitative, to assess what if we do all of the above.You've stated them. Deal with the salinity issue, the storage, conservation, etc., etc.

How will that put us in a better position to be able to deal not only with the growth of California but with the problems that we've had in delivery of quality water. What do we gain or what do we lose?

Add to that the fact that EPA is requiring sanitation districts to do a fourth treatment of their recycled water which will cost billions of dollars to set up the treatment plant. At least, that's my impression.

Chairman Dreier, Chairman of Rules, was going to send a letter to EPA asking them where that came from because nobody seemed to know. Again, that is another imposition not only for California but for the rest of the nation on how we deal with recycled water. Add that to the mix and where do we stand and how can we working collectively toward the same goal with the leadership assistance do we package that and be able to do that.

Richard, you had in your statement—written testimony that we should have a hearing on the studies that are being conducted for salinity, and also encompass water recycling. Those are key for us but how do we put it all together.

Mr. PISANO. Congresswoman, let me begin by stating at best there is not an integrated system-wide study within Southern California as to how to do it for our entire region. There is in certain watersheds and you have heard previous testimony on work that has been done in the Santa Ana.

Let me just note some anecdotal information that we have acquired over the last 2 years. In LA City and LA County to handle the chloride problem in the north part of our county alone we are looking at $1.3 billion. That's to handle one pollutant of a TMDL program that EPA is administering and they—

Ms. NAPOLITANO. That's to handle what, sir?

Mr. PISANO. The chloride. To solve the problem.

Ms. NAPOLITANO. All right.

Mr. PISANO. And, in fact, to achieve the standard required just for one portion of our region, we are going to have to build probably a brine line in the northern part of the county going out to the ocean. That's probably the most cost-effective way to deal with it.

This is piece by piece, function by function, type of problem solving and if we don't integrate our southern needs as we have in the Bay Delta to the credit of the Bay Delta, then the northern part of our state has brought together an integrated multi-use strategy for that resource. You have a commonality in the Bay that has focused that kind of work.

I might suggest they have not done watershed analysis on some of the watersheds that drain into the Bay Delta in Northern California any more than we have in the south. That type of assessment is what we need. There are cost effective solutions with some interesting tradeoffs that need to be put on the table so we can bargain for funding and be part of the resource allocation process.

That integrated and coordinated assessment throughout Southern California, as Mr. Atwater said, is really needed. Hearings might be a way to further stimulate to bring our information together.

Mr. ATWATER. Let me just say that clearly in Southern California we've done a lot of good planning but we haven't done it in as comprehensive and with the new water quality issues facing us I do think this Committee would serve our region well if we had hearings on the salinity management issue. It's both a Colorado River and Northern California issue. It's a local sanitation district issue like Mark just alluded to, this chloride issue. It's a Santa Ana River issue. It's a Salton Sea issue so we need to address that.

I do think in both the Metropolitan Water District and its member agencies we are looking in the next year or two to update Southern California-wide our water plant. It needs to integrate and look at issues like storm water and needs to look at local watershed issues and needs to look at flight control and the other infrastructure.

Certainly the drinking water quality issues that we've talked about need to be incorporated because that is affecting all the communities throughout Southern California, as Congresswoman Solis pointed out in San Gabriel Valley. Those are critical community impacts.

Mr. LEVY. I think that we do a poor job of planning all of the functions that need to be looked at and that are involved in all aspects of water. There are for the most part agencies which only have very limited control.

My agency deals with the water from when it falls from the sky until when it runs into the Salton Sea. We are unique in that way but it is one that you have so many overlapping Federal and state mandates all of which are counter productive and we need to have some way of dealing with all of them in a unified manner.

Mr. MILLER. I agree with all that. We had a couple of other things like that that relate to the same question. Metropolitan has an integrated resources planning process that is an integrated approach and brings in many of the facets that you mentioned. However, it needs to bring in more. I think there can be a more concentrated IRP planning process that brings in the entire region of Southern California.

Another observation would be that the value of reliable water today is probably too cheap. The value is worth more than what we are paying for today. If we are to do treatment, a fourth treatment, the citizens are going to have to pay more money. Not a whole lot more money but a little bit is going to bring a lot more funding resources to solve some of these problems.

Ms. NAPOLITANO. Well, the expansion of the recycled water program has always been a funding issue. I am pretty sure that we are going to have to deal with it. You're right, we don't pay enough. We don't value it enough so that we can really conserve. That is something that I think is incumbent upon all the water agencies to educate the users but recycle mostly is commercial immuny.

Mr. PISANO. Congresswoman, I just want—

Ms. NAPOLITANO. Very quickly, Mark.

Mr. PISANO. MWD does have a great innovative program but it needs to be complemented with the area-wide waste water treatment activities of our sanitation districts. We need to pull that together. These are federally directed programs. There is a better way to do it than what we are doing right now under the TMDL program.

Ms. NAPOLITANO. Thank you. May I ask, gentlemen, if you have any additional information, please submit it so that we can consider it.

Mr. CALVERT. We will keep the record open for any additional information, certainly, submitted for the record. I appreciate that.

Ms. Solis.

Ms. SOLIS. Yes. Just a follow-up question for Mr. Pisano. You opened with some statements regarding current regulations that are in place now by EPA but haven't been funded. Could you elaborate a little bit more about that?

Mr. PISANO. The approach that Congress initially intended to control, storm water as well as other non-point source pollutions, was called an area-wide management approach to waste water. That program has not been active nor kept current. Rather, EPA has taken a permit, an NPDS permit with maximum daily loads associated or put on permits.

I argue you cannot manage what the waste stream through that type of approach. That was not the intent of Congress. That is the way the act has evolved and been managed over the last 20 years.

That is the program that I suggested to Congresswoman Napolitano that we change the approach so we integrate water quality and water supply and flood control. It is just as important in an arid era to do that as it is in a wet weather environment. We do not do that in Southern California.

Ms. SOLIS. Might that be something that our Committee could inquire about and perhaps ask EPA to provide us some information on?

Mr. PISANO. Certainly. We can work together.

Ms. SOLIS. Right. I think one of the panelists talked about the north and south issue and the fact that it is a constant tug of war with resources and funding and it appears to me that the north has been better at organizing themselves and that we ought to do a lot more here to provide assistance in anyway we can to better coordinate and become the same potential force that we see our friends in the north have because, indeed, our consumers are paid top dollar for the transportability of that water and they are expecting to have clean water as well.

I think it is incumbent upon us to see that we try to support that in any way we can. I know I'll be very open to work with all of you on that. Thank you.

Mr. CALVERT. I have a couple of quick questions just to tie this down. One is a comment on salinity. We plan to have a field hearing in Nevada in Las Vegas in July to talk about the Colorado River and water quality in the west and certainly salinity which is a big issue in Nevada. Probably later in the year we'll probably be in Phoenix for similar circumstances.

The issue of global warming came up. I used to be Chairman of the Energy and Environment Subcommittee and have done prob-

ably 20 hearings on the issue of global warming. Without getting into the debate of whether it's human incrementalism that is creating global warming or a natural condition, or whether it exists, apparently, you know, there is a lot of science to state that global warming, in fact, is changing the climate and a climate change is taking place. There is a study that was written recently by some very well-known scientists who I have worked with on the El Nino situation several years ago and they were proven to be correct and we prepared for that eventuality.

In that study it states that the snowpack in the Sierra Nevada will shrink because more rain and less snowfall. The snowpack has been, in effect, a regulator and, in effect, a storage mechanism in order to release water to our reservoir capability in the state.

If, in fact, you believe that global warming is taking place, if you believe that climate change is taking place, this is going to have a tremendous impact on planning for California's water future. One, you'll have significant increase in flood flow according to this study. And you will have less supply based upon the existing storage capability in the State of California.

Without this type of legislation in order to help increase the supply, and to help modulate if, in fact, this does occur, what is going to happen if, in fact, these predictions are true? I imagine Sacramento must be worried about that more than anybody. They have 75-year flood protection. If, in fact, the stories are true, they will have something to be concerned about. Any comment about the study? Has anybody been able to read it? Great nighttime reading.

Mr. PISANO. Congressman, I have seen the study. Let me also comment as a board member of the Resources for the Future, an organization in Washington that is looking at natural resources in the physical science area, our scientists, in fact, have looked at that study and others.

There is indication that we need to change some of our hydrologic regime assessments of what the flows will be long term in our rivers, as well as it potentially could affect snowpack much in the same way that the hydrologic regime could be affected. And it becomes an important element in long-range planning.

The reason I was attracted to the study and into the work of RFF is when you look out 10, 15, and 20 years, those co-efficients become extremely important, not minor. Also, your population forecasts become extremely important and we generally do not give that much attention to those policy parameters.

I urge the Committee to not only look at the short-term funding which we support it and we'll work with you, Congressman, but we also need to look what are these long-term baseline assumptions that are affecting our longer-term planning so we have the right strategies in place.

There is enough uncertainty on global warming that I don't think we can conclusively say that it will change but we need to have some what-if scenarios in our long-range planning should we see it's moving in that direction. Again, I'm urging Congress not to give short sight as well as our own region short sight to this longer-range consideration.

Mr. CALVERT. Any other comments on that?

Mr. MILLER. Very quickly, your prognostication if the snowpack decreases what happens is it's pretty obvious that the Delta, as well as the Colorado River quantities are going to decrease as far as flow of water, which brings us back to the local water planning.

There are really only about five major sources of water for us if you exclude the Colorado River and the Delta. That is an ocean desalination, recycling, conservation, water transfers of different types and storage. It puts more of an emphasis on exactly what we are talking about today, looking at that multi-faceted water resource approach locally.

Mr. CALVERT. Mr. Levy.

Mr. LEVY. I believe that when we look at solutions in CALFED we need to consider the impacts of global warming because we have a different—we'll have a different regime assuming the predictions on what happens with global warming. We'll have more rain, less snow. That means you need the ability to store water. I think if you look at the Colorado River, you have 60 million acre-feet of storage.

You look at the State Water Project and you have five or six million acre-feet. You cannot operate that system with limited storage under a global warming scenario.

You are going to have a hard time meeting the standards in the Delta if the ocean level raises because you won't have water in the reservoirs to be able to maintain the salinity interface. You have a higher water level so salinity is going to come back further and you have less water when you need it to push it out. We are going to see dramatic changes there.

Mr. CALVERT. It certainly is an interesting dynamic to add to this debate and we need to follow the science as this process moves along. Any other comments before we excuse the panel?

Ms. SOLIS. Mr. Chairman, do we agree with the panel that we do have a problem with global warming?

Mr. CALVERT. Well, I've been studying that issue for many years and I think whether or not you believe that there is climate change or global warming based upon human activity or whether it's a naturally occurring phenomenon on earth, nevertheless, we should follow the science. If you believe, in fact, it is happening, then it certainly adds a dynamic to this debate. It certainly adds more importance to the passage of this legislation.

So, with that, I'm going to also recognize some representatives from Yvonne Brathwaite Burke's office here, supervisor, Second District of the County of Los Angeles. Ta'Shara Murray and Miriam Long Simmons are here and they brought a statement to be submitted to the record. Without any objection, we will submit that statement for the record. Are we going to have them read part of it in the record? Okay.

To this panel I want to thank you very much for coming out this afternoon and giving your testimony and answering questions. Thank you very much.

STATEMENT OF TA'SHARA MURRAY, DEPUTY, WITH MIRIAM LONG SIMMONS, SENIOR DEPUTY, ON BEHALF OF REPRESENTATIVE YVONNE BRATHWAITE BURKE, COUNTY SUPERVISOR OF THE SECOND DISTRICT, COUNTY OF LOS ANGELES

Ms. MURRAY. Good afternoon.

Mr. CALVERT. Good afternoon. You may begin.

Ms. MURRAY. Good day, Mr. Chairman. My name is Ta'Shara Murray and I'm here today along with my colleague, Miriam Simmons, on behalf of Yvonne Brathwaite Burke.

Ms. NAPOLITANO. Pull the mike up closer to you, Hon, please.

Ms. MURRAY. We are here today on behalf of Supervisor Yvonne Brathwaite Burke, County Supervisor of the Second District, County of Los Angeles. We appreciate you coming to Southern California today to listen to our concern for a safe and reliable water supply for our state and region. We know that you share those concerns and we commend you for your ongoing efforts to achieve those goals.

Reliable water supply is of high importance in the Second District because business and industry don't have reliable water and many of our constituents don't have jobs.

Representative Calvert, we commend you for introducing the Western Water Enhancement Security Act, H.R. 1985, to authorize a comprehensive program to enhance California's environment, the water supply and water quality, promote water use efficiency and water transfers, and create a government to implement CALFED and a competitive grants program.

We thank you for allowing us to be here today. Thank you.

[The prepared statement of Yvonne Brathwaite Burke follows:]

Statement of Yvonne Brathwaite Burke, Supervisor, Los Angeles County, California

Good day, Mr. Chairman. I am Yvonne Brathwaite Burke, supervisor of the second district of the County of Los Angeles

I appreciate your coming to Southern California today to listen to our concern for a safe and reliable water supply for our state and region. I know you share those concerns, and I commend you for your ongoing efforts to achieve those goals.

My primary message today is to urge continued federal support of the CalFed process that is key to California's water supply dependability and tapwater quality.

The district that I have represented on the Los Angeles County Board of Supervisors since 1992 has a population of approximately 1.9 million people, and has a high concentration of industry and minorities.

A reliable water supply is of high importance in my district, because if business and industry don't have reliable water, some of my constituents don't have jobs.

And lower-income families also are less able than others to buy bottled water or expensive home treatment systems, which many people perceive are superior to tapwater for water safety and aesthetics.

Indeed, as wealthier households are more likely to have bottled water delivered to their homes and to install home-treatment equipment, water agencies are increasingly providing water to those who are least able to afford alternatives: children, elderly, people with compromised immune systems, and low income.

So, more than ever, it is incumbent on government to ensure reliable water and high-quality water for the public welfare. The CalFed process is critical to that endeavor.

Representative Calvert , I commend you for introducing the Western Water Enhancement Security Act, H.R. 1985, to authorize a comprehensive program to enhance California's environment, the water supply and water quality; promote water-use efficiency and water transfers; and create a governance board to implement CalFed and a competitive grants program.

I also am aware that California Senator Dianne Feinstein has introduced Senate Bill 976 with similar goals, and I recall that both you and Senator Feinstein held a joint press conference at which you expressed your openness to bipartisan dialogue and consensus solutions as your respective bills proceed. I salute you for your bipartisanship, which certainly is the key to legislative success.

As these bills proceed, may I suggest several principles that should be included in the final legislation:

A governance mechanism that will assure a stable and balanced implementation of the entire CalFed program, and which represents urban Southern California's interests;

Funding for water quality projects-including those called "complementary actions" in the Record of Decision;

Funds for state and local supply reliability projects, including additional surface and groundwater storage and improvements in through–Delta conveyance;

Funds for environmental restoration, specifically the Environmental Water Account and Environmental Restoration Program defined in the Record of Decision;

And provisions that require environmental restoration be accomplished in a way that assures reliable supplies for recipients of water from the state and federal projects.

Recently, the Bush Administration received deserved accolades for launching a massive federal effort to protect and restore Florida's Everglades.

Mr. Chairman, may I submit that California's Bay–Delta, an area of more than 1,00 square miles, is the Everglades of the West—both a natural environmental treasure and a water source for two-thirds of the state's population.

We urge Congress to join you and Senator Feinstein in launching a Bay–Delta restoration.

Mr. CALVERT. Thank you. Thank you very much for coming out this afternoon. We thank your supervisor. Thank you very much.

We are going to combine our last two panels into one so we will take a very short break and then we'll come back together here in about five or 10 minutes. If that panel can organize up here at the front, we'll be back in just a couple of minutes.

[Whereupon, at 11:59 a.m. off the record until 12:10 a.m.]

Mr. CALVERT. Please take your seats and we'll resume the Committee here very quickly.

Our next panel and last panel we kind of combined as we have a few folks on the panel. We have Mr. John Stovall, General Counsel, Kern County Water Agency; Mr. Art Gallucci, City Manager, City of Cerritos, Mr. Conner Everts, Executive Director, Southern California Watershed Alliance; Mr. Christopher Davis, City of Norwalk, and Mr. Ron Linsky, Executive Director, National Water Research Institute, and, of course, Mr. Larry Libeu, Director of Legislative Affairs, Eastern Municipal Water District.

With that, why don't we kind of go left to right. We'll start with you, Ron Linsky. Thanks for coming out this morning. I'll try to follow your PowerPoint here.

STATEMENT OF RON LINSKY, EXECUTIVE DIRECTOR, NATIONAL WATER RESEARCH INSTITUTE

Mr. LINSKY. Thank you very much, Mr. Chairman. Good morning. My name is Ronald Linsky. I'm the Executive Director of the National Water Research Institute located in Fountain Valley, California.

I thought that a change of pace would be appropriate. You have been looking this way for so long. If we turn the heads the other way, you can go in the other direction for awhile and look east as you are very familiar with that part of the geography.

The title of this hearing I find very unique because it aptly defines the problems that Southern California is facing which are basically to ensure a supply that is simultaneously available and sustainable for development, economic growth, and the environment.

The challenge that I view from the National Water Research Institute's perspective is the ability to take advantage of existing technologies, to address these critical issues. Remember however, that we live in an arid urban environment. The picture on the wall up there is a very, very, very telling image from NASA satellites. It is very difficult to see a natural environment there in Southern California.

In fact, what you are really seeing is a reflection of enormous amounts of an artificial environment referred to as the urban watershed. This is an area that we have engaged a significant amount of our effort in to try to come up with what is the definition or characterization of an urban environment. It's my opinion that the most important issue facing Southern California is the prudent management of the actual and potential supplies that we have right in front of us.

You are familiar with Washington, D.C., and Baltimore. If you look at the new image coming out this week from NASA, you will notice that the red area and the blue areas are the amount of paved surfaces in your second home back east that is growing at about 10 to 12 percent per year.

Ms. Solis, you referred to the natural watersheds. We live in an environment here that there is no such thing as a natural watershed. We live in an artificial watershed that we have very little knowledge from a research perspective of how it operates. We don't understand the dynamics.

In California the Department of Finances, you heard earlier today from various speakers, is expecting about 600,000 people a year, new people in this state, for the next 20 years. That means that there is a real conflict here because we are faced with a problem of trying to find new water.

The mission statement of the National Water Research Institute is to create new sources of water through research and technology and to protect the marine and aquatic environments.

From a water perspective, those 600,000 people a year refers to a demand that we have to anticipate which is about 184 acre-feet a day which is equivalent to 67,000 acre-feet per year of new water. Not water in the snowpack. Not water in the ground water. Not water in the surface water but new water. How do we create that?

Within Southern California it is interesting to note that on a daily basis a billion gallons a day are pushed out into the Pacific Ocean from treatment plants. That billion gallons a day is the equivalent of 6,000 acre-feet a day or, at the end of a year, over a million acre-feet a year of good quality, very high quality water is moving out into the ocean.

That is interesting, too, because the value of that water is wrapped up in the service it provides to the human population in Southern California. That service is it serves as a carrier. It carries waste material that we really don't want.

The water itself is extraordinarily good water. It is plain and simple, H_2O. It hasn't changed from its beginning. We have to start

looking at where are we going to find new sources of water. That is the margin between the water supply that we have and the demand of the population.

We have projected that in Southern California between reuse, desalination, efficiencies, and conservation we have an opportunity to find water that will supply that marginal need that we are looking at.

One of the rather interesting projects in Southern California that is attempting to do this is the Orange County groundwater replenishment system which will be a high tech advanced water treatment system that will take from the Orange County Sanitation District eventually about 100,000 gallons—excuse me, 100 million gallons a day.

It will reduce the ocean discharge. It's a high tech system with micro-filtration, RO, reverse osmosis, and ultraviolet disinfection. The project water will be used for seawater barrier and for groundwater recharge.

What it will provide the two million residents of Orange County is a decreased dependence on imported waters, it will produce over 100,000 acre-feet of new water a year, and it will have an approximate energy savings of 125 million kilowatt hours a year by recycling that water.

If you take and compare the Colorado River Aqueduct system, the delivery requirements of that water from the Colorado River is about 2,000 kilowatt hours per acre-feet. The State Water Project is about 3,260 kilowatt hours per acre-feet. The GWR system will have a total of only 1,700 kilowatt hours per acre-foot that it delivers. The differential there is quite significant.

When we look at the challenge of this hearing, and that, of course, is to look at the water security of Southern California, we have to rely upon imagination, we have to rely upon creativity, and we have to think out of the box, so to speak, when it comes to dealing with the challenges that we are faced with.

With that, since I just saw the red light just now, we'll go on to the next speaker, Mr. Chairman.

Mr. CALVERT. Thank you, gentlemen. If somebody could flip the lights up a little bit. I know we are trying to save electricity here today but we've got to see. I think Larry needs — you've got your glasses on. Larry Libeu, you are recognized.

[The prepared statement of Mr. Linsky follows:]

Statement of Ronald B. Linsky, Executive Director, National Water Research Institute

Good morning, Mr. Chairman.

My name is Ronald B. Linsky and I am the Executive Director of the National Water Research Institute (NWRI), located in Fountain Valley, California. I have attached a brief resume of my nearly 30 year professional career which includes research directorships at the University of Southern California and the University of Hawaii, and service as the Chief Technical Advisor to the United National Development Programme stationed on the Caribbean island nation of Trinidad Tobago.

The title of this Field Hearing, Southern California Water Supply Opportunities and Challenges, aptly defines the future in what is, in fact, a desert environment: challenges and opportunities. The challenge to all Southern California water utilities is to ensure a supply that will sustain development, economic growth, and the environment. The opportunities are to make use of existing technologies, anticipate through research new or emerging technologies and to apply technologies to the needs of the urban watershed, which is in fact nearly all of Southern California.

When viewing a satellite image of Southern California, you are immediately impressed with the extraordinary expanse of reflected light from the concrete surfaces arising from the mountains to the sea. In this vast urban watershed, the seemingly endless houses, concrete curbs and gutters, storm drains, streets, and freeways have become the metaphors for the rivers, streams, valleys, and hills of yesterday.

In my opinion, the most important issue facing Southern California is the need to provide a sustainable, high-quality supply of water to the expanding population for all purposes. The California State Department of Finance has projected that the population of California will increase at a conservative annual rate of over 600,000 persons a year for the next 20 years. From a water supply perspective (and if we take a conservative approach) this means that over 60 million gallons a day of new water must be created to satisfy all the needs associated with maintaining the population, (e.g., manufacturing, food production and processing, environmental, life support, and recreational). Southern California can expect to receive about 65 percent of that population increase and, therefore, will need to find water to meet the demand for approximately 36 million gallons of new water per day.

Water resource managers literally know where all the waters are in California. With considerable precision, they know the amount of snow pack available and, therefore, its potential contribution to the overall water supply equation. They also know with reasonable accuracy the amount of water banked in groundwater aquifers throughout the state, as well as what level of dependability they can expect from imported supplies. Yet, with all this knowledge, doubts continue to grow that current supplies are inadequate and future supplies will be more limited and unreliable. The major question is, therefore, not whether the managers can satisfy the increasing demands forecasted for the next two decades, but where will new supplies come from and will they sustain the current and projected populations and, at the same time, provide for growth and economic development.

Within the Southern California coastal counties, more than a billion gallons of water are released to ocean environment on a daily basis. Only 2 percent of that volume was used to support the drinking water habits of the population. The remaining 98 percent was used to support everything else associated with the maintenance of the population. However, all that water was treated to drinking water quality standards, which required considerable investments of capital resources.

Using water more than once is a critical strategy to assist overcome the water needs of southern California as well as the rest of the nation, especially the arid southwest and Florida. It is a strategy that should be given a higher priority and taken seriously by the federal government because, in reality, there is no new water on our horizon. I have stated many times that the only new water will have to come from existing water supplies.

A prime example of addressing this major issue is the Groundwater Replenishment (GWR) System. The project will take highly treated wastewater from the Orange County Sanitation District, where currently it is discharged into the ocean, and purify it through an advanced water treatment system that includes microfiltration, reverse osmosis, and ultraviolet disinfection. A portion of the product water will be injected along the coast to create a hydraulic barrier to prevent seawater intrusion into a large groundwater basin that provides water for over 2 million residents of Orange County, California. The remaining purified water will be pumped to percolation ponds and naturally introduced into the groundwater basin. The purified water is nearly distilled in quality and will eventually blend into existing groundwater supplies to be extracted over time for everyday domestic and commercial/industrial use.

The GWR project has many values and benefits. One of the most important to Southern California, especially at this particular time, deals with the energy savings potential of the project relative to imported water supplies.

In terms of energy savings, it takes approximately 2,000-kilowatt hours of electricity to move one acre foot (326,000 gallons) of water from the Colorado River to Orange County. It takes even more energy—3,260kilowatt hours of electricity—to bring one acre-foot of water from Northern California. It will take only 1,700kilowatt hours of electricity to produce an acre-foot of water from the GRW project. Every gallon of water produced from the GWR system will be one less gallons of water that must be transported from the Bay Delta or Colorado River. This alone is an extraordinary benefit, which has extraordinary value to the region.

The first phase of the project will produce 78,000 acre feet of new water and the energy savings from that will be approximately 140 million kilowatt hours each year, which is the enough energy to serve over 21,000 homes a year. At the completion of the project in 2005, the energy savings could increase to over 215 million kilowatt hours each year. The project has enormous value to California and adjacent states that provide power and water to this region.

By taking advantage of current technologies, this project will provide a reliable supply of high-quality water for over 2 million people to enhance their water security, avoid excessive energy requirements, and ensure that future environmental needs can be met.

The federal government needs to encourage projects like the GWR system. The development of not only a research and development program, but a partnership program that would provide incentives to incorporate water reclamation, reuse, desalting and desalination as a component of integrated resource management strategies must be a long-term priority goal of the House Committee on Resources and its Subcommittee on Water and Power.

STATEMENT OF LARRY LIBEU, DIRECTOR OF LEGISLATIVE AFFAIRS, EASTERN MUNICIPAL WATER DISTRICT

Mr. LIBEU. Thank you, Mr. Chairman and members of the Subcommittee for holding this timely oversight hearing with regard to Southern California water security.

My name is Larry Libeu and I am the Director of Legislative Affairs for the Eastern Municipal Water District, EMWD. I want to say from the onset that we support your efforts to achieve this hardy goal through your legislation.EMWD is located in southwestern Riverside County. Our Service area is about 555 square miles and we have a population of 440,000 people and we are growing.

Over the past 50 years our service area has transformed from an agricultural base to predominately urban. Like a majority of Southern California water suppliers, we have to rely on imported water supply. Today we import approximately 76 percent of our domestic water supply demands and we are experiencing growth at a rate faster than other portions of our region.

The challenge that we face today is an ever increasing demand for water and a supply that is being governed by state and Federal authorities. It is further being diminished by regulatory, environmental, and hydrological conditions. The reliability of imported water supplies to Southern California, Mr. Chairman, is less than ideal.

Aside from these challenges water agencies in California are now faced with a new political challenge. State legislation requires water supply agencies to provide certification of the capability to supply water demands of new development. Water serves as the foundation for economic development. California's economy cannot grow without water.

EMWD has responded to these challenges through a series of innovative programs to improve quantity, quality, and reliability of our customer's water supply. In conjunction with partners within our service area, we are developing and implementing regional groundwater management plans to optimize the use of local water resources. EMWD is constructing its first desalter and is planning two additional facilities to treat otherwise unusable brackish groundwater.

We are working with local, regional, and state agencies to utilize groundwater basins to store imported water. The conjunctive of available ground water storage will reduce EMWD's peak demand on imported water supplies and improve reliability during periods of drought.

We have fully implemented all the best management practices as recommended by the State of California for water conservation. We have through the Bureau of Reclamations Small Reclamation Projects Act made major investments in the water recycling program. Today during peak demands, EMWD markets 100 percent of its recycled water.

There are several areas where the water agencies of Southern California will require assistance in achieving long-term water security. The capital investment required to optimize local resources and implement regional conjunctive use programs will be a major financial burden. Most importantly, the long-term water supply planning for all of Southern California is contingent upon the completion of the CALFED process.

That process will determine the approaches, the programs, and the projects we need for cost-effective water supply security in Southern California. Long-term water supply planning cannot be completed until the CALFED process is complete.

Mr. Chairman, I've indicated the challenges facing EMWD. The CALFED process is critical to California's water quality, supply, reliability solutions, and its economic future. The structure and detail of how we want to govern such manners is a key component to our future ability in Southern California to meet our customer's needs.

Water quality projects must be a part of the program. Environmental regulation must be addressed. Funding mechanisms must be in place to implement the programs which meet the goals and objectives of the CALFED framework and the record of decision.

A competitive grant program to plan, design, and construct water resource projects is a strong motivator to achieve such results. Our path to assisting this challenge is to revitalize the Small Reclamations Project Act, Title II of your legislation. This program will provide agencies in Southern California as well as the rest of the west an opportunity to implement essential projects. Water resources management is not just a California crisis. It impacts all the west. It is time to look the 21st Century in the eye and invest in the west.

In conclusion, Mr. Chairman, there are many crises facing the west. Abundant water supply has been a critical issue for Southern California. As each year passes, the need increases. Your legislation, H.R. 1985, recognizes the need for the establishment of a CALFED program, creates an effective government mechanism, addresses the critical issues of water quality, and acknowledges the need for environmental considerations, and provides the essential funding.

EMWD's board applauds your efforts and will do everything within its powers and authority to assist in a successful enactment of this critical legislation. Thank you, Mr. Chairman.

Mr. CALVERT. Thank you, gentlemen.

[The prepared statement of Mr. Libeu follows:]

Statement of Lawrence M. Libeu, on behalf of the Eastern Municipal Water District, Perris, California

Mr. Chairman and Members of the Subcommittee:

I want to thank you, Chairman Calvert, for conducting this timely oversight hearing with regard to Southern California water security. My comments today are on behalf of the Eastern Municipal Water District (EMWD). Southern California water

agencies face a challenge: search for new water supplies or better manage what we have. EMWD recognizes the need to provide the necessary resources to manage, develop and sustain the reliability of California's ever dwindling water supplies, at the same time minimize the social and economic impacts to our customers. Let me say from the onset EMWD supports your efforts to achieve these goals through your legislation.

EMWD is located in southwestern Riverside County. Our Service area is approximately 555 square miles with a population of 440,000, which is forecast to double by the year 2020. The district is located in a semi-arid region of Southern California and encompasses the 43rd, 44th and 48th congressional districts. Over the past fifty (50) years EMWD's service area has transformed from an agricultural base to predominantly urban areas. As with a majority of Southern California regional and sub-regional suppliers, we must rely on an imported water supply. Today, we import approximately 76% (70,000 AF) to meet our domestic water supply demands. We are experiencing growth, at a pace much faster than other portions of the region. As the urban core moves toward lands in our service area which are available for development, EMWD is faced with the challenge of developing and providing water supply reliability to its customers, in a practical and economical manner.

CHALLENGES

The challenge that we face is, an ever increasing demand for water and a supply, governed by State and Federal authorities, that is further being diminished by regulatory, environmental, hydrological conditions and its own unique challenge with regard to quality. The ability, and reliability, of the State Water Project to deliver water allocations being requested by their contractors is being reduced for the previously mentioned reasons. The Colorado River, governed by the Law of the River—the main artery of Southern California water supply, can no longer be over appropriated because of the implementation of the California 4.4 Plan. Water quality from both the State Water Project and the Colorado River is suffering due to environmental tradeoffs. Every year, Colorado river water quality is becoming more saline. State Project water quality is affected by the environmental flow augmentations. Reliability of both of these major imported water supplies to deliver water to Southern California is less than ideal. Aside from the challenges I've already outlined water agencies in California are now faced with a new political challenge. Recently introduced State legislation, if enacted, will require water supply agencies to provide certification of the capability to supply the water demands of new development. Increasingly, Southern California water agencies are being placed at odds with land use authorities and development interests. Water serves as the foundation for economic development. California's economy cannot grow without water.

ACTIONS AND MEASURES

The Board and management of EMWD have been visionary since its establishment, with regard to projects and programs in our service area. That continued vision and your leadership on these issues, will help set the future for Southern California water supply security. In response to these emerging challenges, the District has undertaken a series of innovative programs intended to improve the quantity, quality and reliability of our customers' water supply.

In conjunction with the municipalities, local water agencies and private groundwater producers within our service area, the District is developing and implementing regional groundwater management plans to optimize the use of local water resources. This program will result in the collection of comprehensive data on groundwater conditions, the stabilization of groundwater levels, and improved salinity management. As a result of these programs, EMWD is constructing its first groundwater desalter and is planning two (2) additional facilities to treat otherwise unusable brackish groundwater.

EMWD is working with local agencies, the Metropolitan Water District of Southern California (MWD), the Santa Ana Watershed Project Authority (SAWPA) and the State Department of Water Resources (DWR) to utilize local groundwater basins to store imported water. This conjunctive use of available groundwater storage will reduce EMWD's peak demands on imported water supplies and improve supply reliability during periods of drought.

EMWD has fully implemented all "best management practices" recommended by the State of California for water conservation. EMWD is committed to further conservation efforts and has established an award-winning conservation outreach and public education program that is designed to pursue innovation and to challenge a new generation of thinking and approaches.

EMWD, through utilization of the Bureau of Reclamation's Small Reclamation Projects Act, has made major investments in its water recycling program. During

peak demands, EMWD markets 100% of the recycled water produced by its five (5) regional water reclamation plants. Uses include agricultural and landscape irrigation, environmental enhancement, and emerging industrial use.

In addition to expanded conservation and resource development, EMWD's concerns over future water supply have led to increased emphasis on inter-agency planning and partnerships. EMWD is working more closely with MWD and SAWPA to ensure reliable regional imported water supply. Additionally, EMWD, through interaction and partnering, is developing water resource strategies with the cities and subagencies within our service area.

There are several areas where the water agencies of Southern California will require assistance in achieving long-term water security. The capital investment required to optimize local resources and implement regional conjunctive use programs will be a major financial burden for local agencies. In particular, the costs of developing new water through desalinization, could inhibit indirect potable reuse and utilization of brackish groundwater.

Water quality will remain a major issue for local agencies. Regulatory issues may result in changes in the salinity of imported water delivered to Southern California. Salinity management will require extensive interregional and interstate cooperation that may require legislative assistance.

Most importantly, the long-term water supply planning of all Southern California water agencies is contingent upon the completion of the Cal–Fed process. That process will determine the approaches, programs and projects we need to have economic and water security in Southern California. True long-term water supply planning cannot be completed until Cal–Fed is complete. Southern California agencies will need the support of local, State and Federal legislators to ensure that the Cal–Fed process is completed in a reasonable amount of time.

ADDITIONAL MEASURES

Mr. Chairman, I've indicated the challenges facing EMWD as well as the actions we are taking to address these issues. The Cal–Fed process is critical to California's water quality, supply, reliability solutions and ultimately its economic future. The structure and details associated with how we want such matters governed is a key component to our future ability in Southern California to meet our customers' water needs. Water quality projects must be a part of the program. Environmental regulation must be addressed but not at the sacrifice of water quality. Funding mechanisms must be in place to allow local agencies to implement the programs which meet the goals and objectives of the Cal–FED framework and Record of Decision. Funding is a key issue. A competitive grant program to plan, design and construct water resource projects is a strong motivator to achieve such results.

Our path to assisting in this challenge is to revitalize the Small Reclamation Projects Act. EMWD has successfully used this program three (3) times in its history. Many of the projects and actions taken by EMWD to ensure water supply reliability and water resource management have been funded by this program. This program will provide agencies in Southern California, as well as the rest of the West, an opportunity to implement projects, which, in the bigger picture, will allow agencies to construct water resources management projects on a local level while at the same time potentially ease the burden on California's main import supply, and the Colorado River. The program works and all agencies, big or small, can access the various titles of the Act to build projects. Water resources management is not just a California crisis, it impacts all of the West. It's time to look the 21st century in the eye and "invest in the West." A 19.7% growth rate in the last decade is part of the reason we're here today.

CONCLUSION

In conclusion Mr. Chairman, there are many crises facing the West, energy is getting all the headlines today, but as the old adage says "this too shall pass." Abundant water supply, as noted from early history has been a critical issue for Southern California. As each year passes the need increases. Water agencies are being subjected to providing assurances to their constituents that: 1) there will be water when they turn on the tap 2) the water will of the highest quality 3) there will always bean ample supply and, 4) it won't be a challenge to their pocketbook. Your legislation, H.R. 1985, sets in motion the necessary components to help make those assurances. It recognizes the need for the establishment of a Cal–Fed program that embodies the principles of the Record of Decision, creates an effective Governance mechanism, addresses the critical issues of water quality, while at the same time, acknowledges the need for environmental considerations, timely decisions and permitting. EMWD applauds your effort and will do everything within it's power and authorities to assist in the successful enactment of this critical legislation.

STATEMENT OF JOHN STOVALL, GENERAL COUNSEL, KERN COUNTY WATER AGENCY

Mr. STOVALL. Thank you, Mr. Chairman. I would like to thank you and the other members of the Committee for being here to take this testimony. As indicated previously, my name is John Stovall.

I'm the Chairman—General Counsel, would like to be Chairman, of the Kern County Water Agency. I was just joking with Mr. Libeu a little earlier some people consider us part of Southern California. We just have this little mountain range in between us. We do have a lot in common because we are the second largest contractor on the State Water Project, the largest agricultural contractor, and, some people may not realize, the third largest municipal contractor on the State Water Project. We run a municipal water treatment plant, but we also wholesale water to other municipal and agricultural districts.

The problems that we have before us this year are really indicative of the problems we face in the future. In this first dry year, after a couple of wet years, we have a 65 percent shortage on the State Water Project. More significantly perhaps, our studies show that in a repeat of the last drought the average shortage during the drought period goes from 26 percent to 43 percent given current conditions. Of course, we all know that California is growing at the rate of several hundred thousand people per year. The situation will only get worse.

In our view the crux of the problem is the lack of development of infrastructure and that problem has arisen largely because of perpetual conflicts that we have gotten ourselves into between interest groups, with certain Federal regulatory agencies, and even among water users ourselves. Regulatory restrictions have, in fact, diminished the capacity of the existing infrastructure over the past few decades.

But the basic problem that causes all of this is a disrepair of the coalition that was brought together by Pat Brown for infrastructure development. He created the State Water Project through his skill in bringing a coalition of all Californians together. We would like to congratulate you and Mrs. Napolitano, your co-sponsors and your staff on bringing this bill which is beginning to reformulate that coalition of folks in California for progress.

At the local level what we've done is to improve our infrastructure. Along with our partners on the State Water Project we have created what is known as the Kern Water Bank, a large groundwater banking project. Metropolitan, of course, has been engaged in creation of the Diamond Valley Reservoir, and the other projects you've heard about here today.

More importantly, we've learned to work together to manage our water supplies more effectively. We are proud to call Metropolitan and its member agencies, Santa Clara Water District and others, our partners in putting together our water storage projects. We have also engaged in transfers that are mutually beneficial for us.

We have also learned to work together even with some of those environmental interest groups and Federal regulators, that we have fought with in the past, in the CALFED process. The CALFED process has been very successful. Kern County, as a

matter of fact, is one of the largest contributors to the environmental water account which came out of that CALFED process.

All of those things are good but much more is needed and that is why your bill is so significant. These infrastructure improvements at the local level take a lot of money. Even groundwater storage projects and recycling, which are among the most cost effective of these projects, require so much money that Federal investment is needed.

Certainly the CALFED projects themselves will require Federal investment to be implemented. The CALFED framework agreement and record of decision require an effective governance mechanism to ensure that we do all "get better together" as the CALFED saying goes.

Your bill is, in the medium term, critical for our future. But in the long-term future of California, you are right that CALFED and the projects identified there alone do not solve the problem. Californians need to come together to reformulate that coalition for infrastructure development that is environmentally sensitive and responsible.

There unfortunately is no substitute for creating that infrastructure and your bill goes a long way to putting us on that path. Again, we offer our congratulations to you, Mrs. Napolitano and your staff on a job well done.

Mr. CALVERT. Thank you, gentlemen.

Mr. Gallucci, City Manager of the city that we are in today, Cerritos.

[The prepared statement of Mr. Stovall follows:]

Statement of John F. Stovall, General Counsel, Kern County Water Agency, Bakersfield, California

INTRODUCTORY REMARKS

Thank you for the opportunity to present the views of the Kern County Water Agency on the important issues you are considering today related to the Western Water Enhancement Security Act. My name is John F. Stovall and I am the General Counsel of the Kern County Water Agency. Additional personal information will be submitted as an exhibit.

The Kern County Water Agency is a local governmental entity with political boundaries encompassing the County of Kern, a territory approximately the size of Massachusetts, Vermont and Rhode Island combined with a population of more than 600,000 people. Almost 1 million acres of the most productive farmland in the world and about 400,000 people rely on the Agency for a significant portion of their water supply. The Agency is the largest contractor for agricultural water on the State Water Project, and also the third largest contractor for municipal water.

We are proud of our partnership with the Metropolitan Water District of Southern California and other water suppliers in attempting to solve the water problems facing our constituents. As Californians become more aware of the looming water crisis, we look forward to the developing partnerships with all elements of the state and federal governments to solve the problems before us. Together we can significantly reduce the damage which will accompany the next drought. Let's address the three major questions before us.

1. The factors that have led to the challenges that Southern California is facing today in regards to water supply, quality, and reliability.

Inadequate Infrastructure

The short answer is that our population has more than doubled over the past quarter century with no development of meaningful new state infrastructure and an actual loss of water supply and system flexibility. In 1960 California had a population of 15.7 million people; today we have 33.8 million people. By the year 2040 some projections place us at 59 million people. To emphasize the point: yield of our major water supply systems (along with hydroelectric power generation capability)

has dropped significantly over the past decade. Our infrastructure is woefully inadequate to serve current needs, much less the significant growth which will occur in the coming decades.

We are not here to point fingers of blame, but we must recognize the basic problem to prevent its perpetual recurrence. Along with the Metropolitan Water District of Southern California and other local governmental entities, we have made the improvements we can, but they have been insufficient.

Perpetual Counter–Productive Conflict

Attempts to improve infrastructure development, water supply and drinking water quality have faced tremendous challenges born of competing interests. The challenges have come not only from those focused on a narrow environmental agenda, but from within our own ranks as battles have ensued over dwindling supplies. The promise of CalFed, and the bill we are discussing today, is to harness the talent and energy of all stakeholders in a constructive effort to minimize the conflicts that have generated more attorney's fees than water, and to pursue optimal and reasonable solutions for mutual benefits. The stakeholders involved in the CalFed process have begun the constructive effort to improve water supply, drinking water quality, and the Bay–Delta ecosystem. Before turning to that effort, we should look in more detail at the factors that have brought us to this point.

A new recognition of the need to appropriately protect the environment has attracted the interest of both the Congress and the legislature. It has also attracted the attention of interest groups focused on various narrow aspects of environmental law. As a simple statement of fact, the power of such groups to block water development has been significant. Some of these groups have responsibly pursued their agendas; some have not.

Additionally, regulatory agencies with a mission focused exclusively on narrow species preservation objectives have pursued those goals very zealously (we would say overzealously) in the past. The result has been significant litigation and impasses limiting water development. It has also resulted in the diminution of capacity of existing facilities.

Water districts and other water suppliers have responded with litigation to protect the rights of their constituents. An atmosphere of confrontation had arisen between water districts and species focused regulatory agencies.

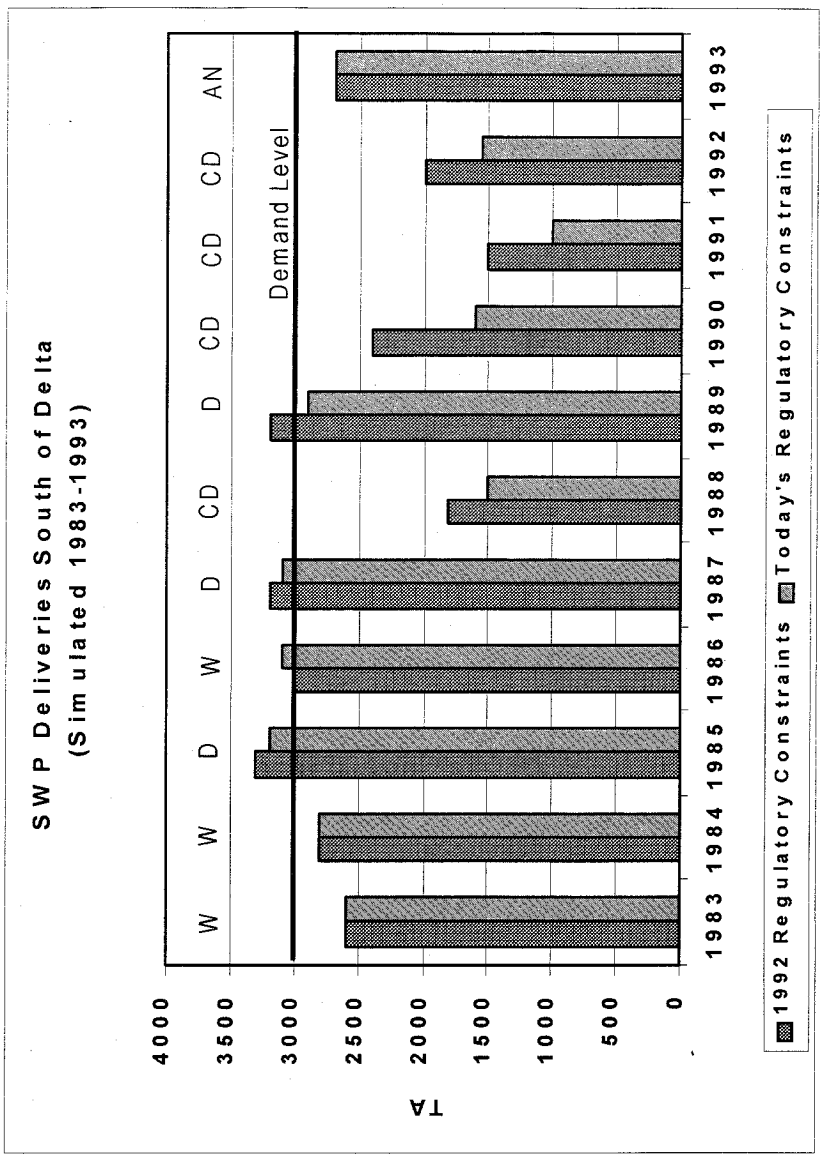
Mistrust between water users has led to much conflict. As the supply of water has dwindled, the temptation has been to resist any measures which have the slightest potential to impact our own water supplies. Unfortunately, some of this paranoia is reinforced by those within the water community who have attacked the rights of their neighbors.

These conflicts have not just expended energy and resources. More subtly, they have resulted in strident defenses of positions and inflexibility with little focus on creating compatibility of interests. They have limited the willingness to engage in creative and constructive problem solving efforts. They have resulted in a lack of trust which impairs the search for cooperative solutions.

Disrepair of the Coalition for Progress

Governor Pat Brown is a symbol of the generation that built California. His legacy is the infrastructure which made California life the envy of the world. The Edmund G. "Pat" Brown California Aqueduct—more than 800 miles of working concrete and steel—is a symbol of the achievements of a bipartisan coalition of laborers, farmers, businessmen, and Californians from all walks of life. It's crowning glory was the groundbreaking on joint federal and state facilities led by Governor Brown and President John Kennedy. A primary factor in our problems today is that the coalition needed to build meaningful infrastructure has fallen into disrepair.

The great State Water Project which contracted with local governments throughout the state to deliver 4.2 million acre-feet of water per year reliably, by most accounts can deliver less than 2 million acre-feet reliably though it once was able to deliver approximately 2.3 million acre-feet. During the last drought California suffered major water shortages and major economic loss. The situation has deteriorated, and in spite of the efforts of water suppliers the yield from the State Water Project and Central Valley Project have diminished. The graph on the following page depicts past deliveries from the State Water Project preliminary to and during the last drought cycle and in a hypothetical repetition of those years under current conditions. It illustrates the severity of the situation we face. During the last drought period average State Water Project shortages were 26%. Our projections indicate that during a repeat of that drought the average shortage would be 43%. This assumes a constant demand level. Of course, we know that despite our best conservation efforts demand will increase.



The situation may be worse than projected. In this first dry year, after a fortunate series of wet years, the State Water Project is only able to deliver a 35% supply. This is less than the projections indicate. We believe that a coalition for reasonable environmentally sensitive water development has already begun, but it must be fostered. We must focus on reasonable solutions to our water supply, water quality, and environmental problems. We cannot insist on unanimity in acceptance of these solutions because that simply gives a veto to interests opposed to water development under any circumstances. Instead, representatives of the people must determine what is reasonable. We must then seek a consensus, a coalition with critical mass, that will foster those reasonable solutions.

2. The actions and measures that you have taken to improve upon your water supply, quality and reliability.

We have learned that the most effective way of addressing the challenges before us is to do what we can at home and then engage in cooperative efforts with our friends such as the Metropolitan Water District of Southern California, the Santa Clara Valley Water District, and many others. We have also learned that we have to engage in cooperative efforts with other responsible groups with other interests that are willing to rationally and reasonably look for mutually beneficial solutions to California's problems. We are, for example, major suppliers for the Environmental Water Account.

Local Initiatives and Cooperation Among Districts

Among our friends we have made significant progress in diminishing the pending impacts of the decline in the state and federal water supply projects. These local agencies are working day and night to improve conservation, storage and conveyance at the local level.

The Diamond Valley Reservoir of the Metropolitan Water District of Southern California is an excellent example of a local agency investing heavily in facilities to minimize the impacts of water shortages. Our own Kern Water Bank project for underground storage of water is another example. Each of us work to improve our own situation.

Perhaps more importantly, we look for opportunities for joint efforts to improve the quantity and quality of our supplies. The efforts of our Semitropic Water Storage District in conjunction with Metropolitan, Santa Clara and others utilize underground storage available in Kern for the mutual benefit of these districts and all users of the Kern County ground water basin. Along with the Kern Water Bank Authority, many of our Member Units and the Agency are exploring additional efforts. Transfers, both short and long-term are another mechanism for more effective use of our existing water supplies. Such efforts require cooperation among water users, and tremendous investment in facilities. The state has provided significant funding to enhance our ability to make these investments thus far, but far more must be done to resolve the crisis at hand.

Responsible Water Development Yields Environmental Benefits

Underground storage of water can also have tremendous environmental benefits. The Kern Water Bank is an example of the successful multiple use of facilities that can provide significant ecosystem improvements while improving water storage. These projects, however, must have enough surface storage available to create enough flexibility in the overall system to maximize their benefits. Absent that surface storage, the benefits can be significantly impaired due to power requirements and conveyance restrictions.

Given the concerns regarding global warming, we believe that investment in surface storage enhancements can have significant environmental benefits in the production of more clean hydroelectric energy. Certainly additional flexibility in the water systems will create more opportunities for off-peak pumping and other capacity benefits.

Involvement in Statewide Cooperative Initiatives

On a larger scale, our Agency, along with other contractors on the State Water Project, has been actively engaged in cooperative processes. After the numerous and protracted conflicts of the 1980's resulted in no improvement to the yield of the State Water Project, we suffered catastrophic consequence in the last drought culminating in no State Water Project deliveries of agricultural water to our area in 1991. We also faced additional loss of tremendous amounts of water to overzealous enforcement of the federal Endangered Species Act in 1992 through 1994. We realized that the economic survival of our county required that we engage state and federal regulators, and even non-governmental interest groups in a cooperative effort to reach mutually beneficial solutions. Many others, including the Metropolitan Water District of Southern California, came to the same realization. The state and federal governments led the effort. The joint effort led to the Bay–Delta Accord, the birth of CalFed, and ultimately the CalFed Framework for Action ("Framework Agreement") which led to the current Record of Decision by the Department of the Interior and related actions by other state and federal agencies.

That effort did stop the hemorrhaging of our water supply due to the federal Endangered Species Act, but it did so at a significant cost in water supply. Yet, after years of the CalFed process we continue to believe it represents the best hope of achieving both water supply improvements and environmental improvements. But, we have also re-learned two great truths: the first is reflected in the phrase "trust but verify", and the second the reality that consensus does not and cannot mean unanimity.

By the former, we mean that mere promises of "getting better together" or mutual benefit must be backed by meaningful controls and commitments to ensure that balance is achieved; significant gains by ecosystem focused stakeholders must be balanced with benefits to water users. By the latter, we refer to the previously mentioned truth that it is impossible to have a meaningful solution which satisfies the agendas of all groups; if one group or person can veto a solution then no meaningful solution is possible.

CalFed has produced a Framework Agreement between the State and Federal governments which does provide significant benefits for water supply, water quality and the ecosystem if it is implemented to achieve mutual benefit. The Record of Decision, though ambiguous on some points, generally reflects that Framework Agreement. It is a meaningful beginning if its implementation tracks the Framework Agreement.

We must conclude this section, however, with the realistic assessment that all of these efforts, if successful, only partially solve the problem. Far more is required to begin to resolve the infrastructure deficit and water supply crisis that faces current Californians, and the many millions more who will join us in the next few decades. The bill before you not only supports CalFed's efforts, but moves forward with significant funding for more local projects to help solve the problem.

3. What additional measures or assistance may be needed in the short, mid, and long term to improve your water security.

We must continue to develop cooperation and facilities at the local level to minimize the damage which will be suffered in the next drought. The 65% shortage on the State Water Project this year reminds us of the woeful inadequacy of the state and federal systems. We are not suffering the catastrophic consequences of this shortage today, because of the facilities built by local governments. But if additional dry years ensue, local facilities will be inadequate.

We must also implement the existing Record of Decision and develop the water storage and conveyance facilities inherent in it. These are a minimum requirement to allow survival in the medium term.

The bill before you is of invaluable assistance in both of these efforts. The provisions of the grant and loan programs provide federal assistance in the significant capital cost of developing facilities in California as well as throughout the west. As mentioned, the cost of developing local facilities to maximize our effectiveness in managing supplies is enormous. Costs for single pumps of the capacities and depths required can average half a million dollar. The capital costs of recycling are also enormous. Of course, capital costs of surface storage are even greater, but these facilities are necessary components of a flexible system. While we might like to see a greater federal cost share, we understand the political realities involved and appreciate greatly the assistance which is provided by the bill.

The investment in CalFed facilities for water supply and quality improvement is also sorely needed. The facilities proposed are environmentally sound and we believe accepted by those responsible environmentalists who are committed mutually beneficial solutions in the Delta. We certainly anticipate, indeed expect, some opposition from some extreme interests. You must continue to pursue the high road of reasonable and balanced solutions to the problems before us. We encourage you to press on with the funding and controls in the Western Water Enhancement Security Act to ensure that the CalFed program is administered in a manner consistent with the Framework Agreement and ROD, i.e., a balanced approach to provide benefits to all stakeholders.

In the long term Californians must engage in more dialogue among themselves and federal regulators to move beyond this stage of CalFed and develop the trust and cooperation necessary to (1) further improve storage in an environmentally sound manner, (2) further improve conveyance facilities for water supply reliability and drinking water quality, and (3) further stabilize delta facilities from exposure to catastrophic earthquake related loss. We recognize that your bill cannot appropriately go beyond what it has done. Resolution of these additional matters must await development of more trust and cooperation among Californians.

STATEMENT OF ART GALLUCCI, CITY MANAGER, CITY OF CERRITOS, CALIFORNIA

Mr. GALLUCCI. Thank you, Congressman. First of all, the City of Cerritos operates two utilities, public utilities, water. One is a tertiary water system reused water, and the other is a potable system. I want to talk about the tertiary first.

When you approach the city of Cerritos and you came into this particular development, you saw very lush green lawns. I want to emphasize that every one of these lawns are irrigated with tertiary water. All of the center medians, our 24 parks, our 27 schools, and our college is all irrigated with tertiary water in the city. We are one of the few cities that can boast that. That was due to Jerry Brown.

Governor Jerry Brown put a grant in and we applied for the grant when he was governor. We did receive that grant along with city dollars. We developed this particular tertiary water system where we irrigate all of these facilities within the city of Cerritos. That is to us extremely important.

We use 2,000 acre-feet a year. We also sell our surplus tertiary water to our neighboring city Norwalk, to Caltrans. All of the freeways are irrigated adjacent here with tertiary water. We also sell to the City of Lakewood. We try to assist them in keeping their water rates down.

We sell it to them for the same price that we have so there is no mark up for that water. As you know, tertiary water is much, much cheaper than the potable water. For that 2,000 acre-feet of tertiary that we use, it saves us equal amount of potable water so there's 2,000 savings on our potable on an annual basis.

Now, to jump into our potable system, we have 16,000 connections in the city with out potable system. We use 15,000 acre-feet of water a year, potable water. That's not the tertiary, just the potable. Some of the important items to us is the unfunded mandates. I'm speaking on behalf of cities now.

Cities are just fearful of regulations that are coming down, unfunded mandates that are going to mandate additional cleanup of our potable water. Now, all of us want clean, potable water but the mandates that are passed, we are getting to the point where we are going to have to pump the water out of the ground through our system and use reverse osmosis eventually to clean it before it even goes into the system.

These are through one of the new issues that you are talking about and Washington is concerned about, some of the new toxins that they are finding in there that are in the water and they want them cleaned greater than they have ever been cleaned before. That is causing a major, major impact on cities for these unfunded mandates.

Fortunately, our utility we are in a very fine financial system with our utility. We can deal with it. Most of the cities in the area are having a difficult time. Fortunately, Congresswoman Napolitano and our neighbors in Norwalk, we work together on cleaning up military toxic base that she just said closed that had numerous oil storage facilities on it.

One of the byproducts of that is now we are dealing with MTBE that are down in the aquifer and Norwalk and Cerritos are working with the Federal Government on cleaning that up. It hasn't reached the aquifer but our tremendous fear is that it's going to reach the aquifer so we are pumping and cleaning. We are working with Congresswoman Solis' district on keeping the plume in the northern part and we are monitoring that.

We are all in an association, the City of Norwalk, all of the cities that she represents, Congresswoman Napolitano represents, to keep the plume isolated. The cost of that to cities and municipalities—I want to keep coming back as my whole function which is municipal financing and the issue to cities.

I can't emphasize enough the interest to cities is the unfunded mandates and the additional mandates placed on cleanup. Something that just occurred in California that I know is not an issue here but it is an issue that relates to water, and that is the cost of electricity. The local cities have to pump it out of the ground and then pump that water around. That is electric. Our bill just skyrocketed.

Every city around us has skyrocketed. Now, this is not your issue but it's an issue that deals with water and it has continued to raise with the price of water. Again, I want to emphasize the unfunded mandates that we are fearful of and I am and the MTBE issue that is also a major, major concern to myself and our city and the City of Norwalk who we share these common borders with.

With that, thank you for allowing me to testify.

Mr. CALVERT. Thank you.

Mr. Davis.

STATEMENT OF CHRISTOPHER DAVIS, CITY OF NORWALK, NORWALK MUNICIPAL WATER SYSTEM

Mr. DAVIS. Good afternoon, Chairman Calvert, members of the Subcommittee. Thank you for giving me the opportunity to address you this afternoon.

My name again for the record is Chris Davis. I'm with the Norwalk Municipal Water System. I'm here to give you kind of the local municipal perspective on water quality issues and infrastructure.

Just a little background. The Norwalk Municipal Water System services a population of about 3,400 homes and businesses, or about 14,000 residents or people. It's about 14 percent of the City of Norwalk. We are the third largest purveyor in the city of Norwalk. First, let me address the issue of water quality. This is clearly a very important issue for us, as Mr. Gallucci alluded to, with the recent closing of the Defense Fuel Supply Point in Norwalk. We are certainly concerned about the plumes off of that facility.

Additionally, in October 1999 we lost one of our three wells due to contamination. This forced us to increase our reliance on imported water where we had previously been servicing that area from groundwater.

Now, fortunately through a program with the Water Replenishment District of Southern California we are working on getting that well back on line. This is through their safe drinking water program. If all goes according to plan, we should have it back up between 12 and 18 months from now. That kind of illustrates how much of an impact water quality issues can have on us.

Another issue I wanted to touch on is Chromium 6 which has gotten a lot more attention due to the recent movie Erin Brockovich and the resulting lawsuits. We did go ahead and test our system for this substance. Fortunately it came up nondetect. We are very mindful of potential legislation and regulations coming

out of both Washington and Sacramento which could have a major impact on a small purveyor like us.

The second issue I wanted to touch on is infrastructure. As a small system we have not, unfortunately, been able to make the type of wholesale changes or upgrades to our system that we would like to. Nonetheless, our city council has made upgrading the infrastructure a top priority for our system.

Currently we are in the third year of a 4-year valve replacement program which would allow us to better isolate any potential problems so that it affects smaller areas of our population and basically to mitigate the damage that either a major leak or contamination would have.

Our major capital improvement priority, however, is the construction of a five million gallon water reservoir. The need for this reservoir was identified in a study by the U.S. Army Corps of Engineers which was conducted back in 1996. This would address storage capacity shortfalls and would provide a safe supply of drinking water. Right now we are working to secure funding for this program in order to proceed with construction.

That concludes my remarks.

Mr. CALVERT. I appreciate that, Mr. Davis.

Mr. Everts. Is that how you pronounce your name, sir?

STATEMENT OF CONNER EVERTS, EXECUTIVE DIRECTOR, SOUTHERN CALIFORNIA WATERSHED ALLIANCE

Mr. EVERTS. Thank you very much. I am honored not just to be last and give a little wrap-up but I want to thank both the Chair, the Representatives, the Committee staff, and your own staff who have helped me at the last moment put all this together.

I'm glad also the record is still open so I can submit some more information.

Mr. CALVERT. Without objection.

Mr. EVERTS. Thank you very much. I am here really to say that the watershed movement is alive and well in Southern California. Throughout Southern California I work with over 60 organizations on a very local level doing all the things we just talked about. This doesn't happen alone and without a regional approach.

I don't think we have a north/south issue here. I think we really have a perspective of what the rest of California—potentially what the rest of the country could look like with the stresses of growth and development and industry that is happening across Southern California without much long-term planning. We are now in the implementation stage of CALFED after the rod.

These things have not happened alone. While Southern California and major urban areas in Northern California have a flat water demand because of their investment and conservation reclamation, that has also included money from the Federal Government and the Bureau of Reclamation to make that happen.

It's also a challenge with public participation the educational issue goes on and on. We have a partnership with LADWPM, the San Fernando Westside Recycling Plant. San Diego has also voted down a recycling plant. The money and the investment is there but to really make reclamation work as we heard it has worked successfully in some municipalities, it's an ongoing issue.

The issue of energy keeps coming up. The direct link between the amount of water it takes to pump water from Kern County over to Hatchapies and the savings in the investment and conservation are now more apparent than ever. There is an excellent study that I'll include by Professor Bob Wilkinson that over a year ago before we hit these high prices and energy really pointed to that.

I also want to point out jobs and economic development that has come out of the community-based organizations that have made our water conservation programs work. They have not happened just, with all due respect, to the agencies who I am happy to be sitting here with. They have done a very good job but they have done it in partnership with community-based organizations. So it is very cost effective to put the demand before the supply.

I lastly wanted to touch on your comment on climate change. What we really see now are extremes in different places and where we may get our water from and traditionally expect water to come from. For instance, in the northeast part of California in the Feather River System they are low on water while we've got more water than the Seattle area this year in Southern California.

It really pushes the need for us to maximize our local resources and do all the things we've been talking about, cleaning up our local ground water, conjunctive use, better use of reclamation and conservation.

I haven't even talked about environmental restoration because I think we get to that through all these methods we have been talking to. Thank you very much.

Mr. CALVERT. Thank you. Mr. Everts, talking about the legislation that is being proposed, H.R. 1985, we have obviously gone beyond the initial CALFED legislation in that we have two additional sections in the bill. One that involves grants to local communities through California.

I want to stress for the record this is not just for Southern California. East Bay MUD, for instance, has some very important projects that they find very important for their region. Sacramento has a conjunctive water project that they think is very important for their water future.

Certainly whether Kern County is north or south depends on who you talk to but obviously they have some projects that they believe are very important to California's water future. We have a reclamation loan program that can fund either environmental enhancement programs or helps fund the same type of programs through a loan program to augment the grant program.

You have indicated in your testimony these are important. Are you in favor of those sections of the bill that help communities leverage resources to build those types of things?

Mr. EVERTS. Of course I am. I really see that it is a statewide and even the whole west is connected in terms of these water issues. As much as we can point to what we have done in Southern California, our water supplies come from other watersheds and so we have to be involved in those efforts as well.

I would like to say I am Convenor of the California Urban Water Conservation Council, a statewide agency, and there is a real opportunity now to push these programs on a regional level because

that is really how the governance works as our Southern California Association of Governments talk about their programs.

I would like to say just in response is that I think those conservation reclamation programs and the water quality have to come first before the investment goes into supply. I think that is where the cost effective and immediate results happen to be. They also happen to be the most environmentally beneficial.

Mr. CALVERT. Certainly there will be a debate on the entire legislation whether it be supply or reclamation or conjunctive use and whether it is the money portion or the storage portion. I don't think anybody denies a need for water and better utilization of water here in California. I appreciate your—

Mr. EVERTS. We hope to work with you from the environmental community. Thank you very much.

[The prepared statement of Mr. Everts follows:]

Congressman Ken Calvert
Chairman
Subcommittee on Water and Power

Hearing Testimony: ***Southern California Water Security- Opportunities and Challenges***
Monday, June 18th, 2001 at the Cerritos Center for the Performing Arts

Thank you for this opportunity to provide testimony today, here in Southern California. My name is Conner Everts, I represent the Southern California Watershed Alliance. I am also the Convenor, or chair, of the California Urban Water Conservation Council, a state wide organization made up of Water Utilities, Environmental Organizations, and vendors-committed to promoting implementation of the Best Management Practices of urban water conservation.

Southern California has a large and growing population, a semi-arid climate, and a history of finding a majority of its water supply elsewhere, and an aerospace manufacturing base that which left many of our groundwater basins polluted. These are some of the factors that provide a challenge to current and future water supply, quality, and reliability.

However, despite these factors, this region has managed, even through a recent long-term drought, to maintain level water demand even with increases of population. We have seen a view of the future, that can apply to the entire country, by investment with water conservation, water reclamation, and watershed management. These choices have provided a cost-effective alternative to the up and down reliability of just looking at supply options.

The value of these demand-side programs are even more apparent with the current energy pricing crisis and climate change-that has given us in southern California greater rainfall in the last year than areas from where we receive our water.

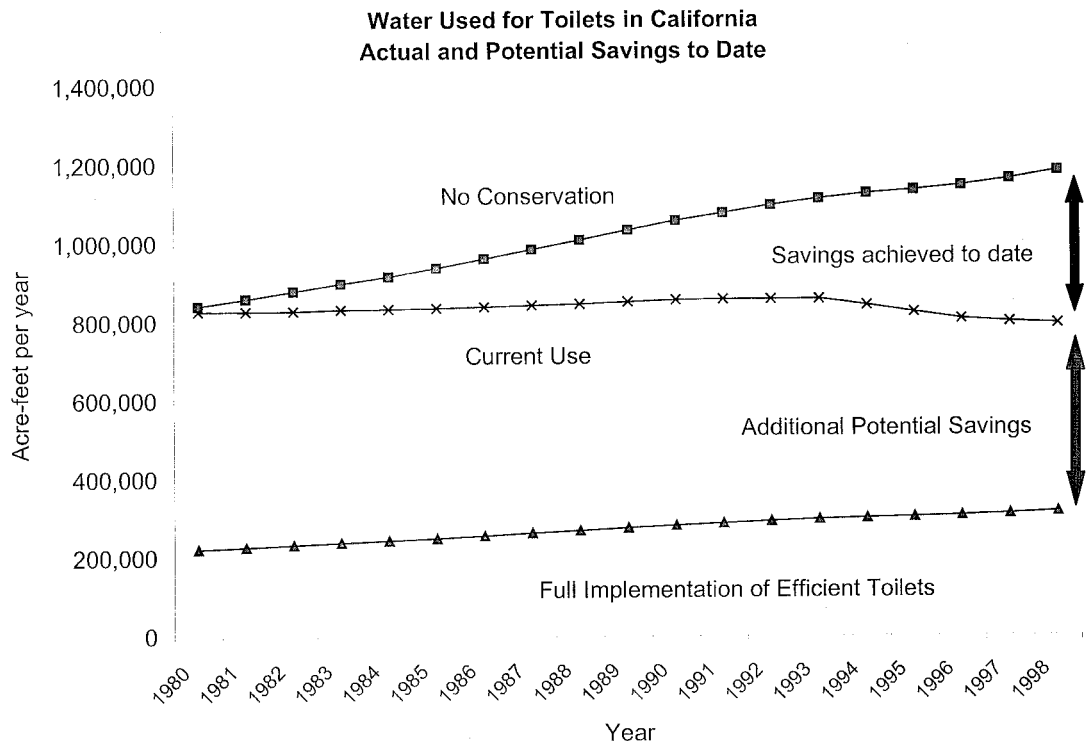
I am proud to be on this panel with many of the general managers of programs that making southern California drought proof and are investing in the long-term future of this region. In passage of Propositions 12 and 13 and state funding for CALFED we have begun to respond to the voters who have adopted this region's conservation ethic. As the CALFED record of decision reflected the value of conservation, reclamation and watershed management as the first phase of implementation. There are costs involved in these programs, but the paybacks are quick and effective. The comment has been made that conservation is not enough, yet improvements in technologies and involvement by local community groups, including churches and schools have shown how can be done and how much is left to do.

My recommendation to this subcommittee is: to support the thrust of these two popular initiatives-the bonds and CALFED-and focus your legislation on financial assistance for agriculture and urban water use efficiency-conservation and reclamation; water quality, including local salinity control; and watershed management-including harnessing local storm water as a future water supply. There will be strong consensus from through out the state and among all stakeholders for these projects.

We have two options for the future of this state, to rely on the failures of the past or to reinvest in the proven, cost-effective, productive solutions southern Californians shown can work for the rest of the country.

Thank you,

Conner Everts



Pacific Institute, Oakland, California

6/14/01

Mr. CALVERT. Larry, we have worked together over the years on various things and obviously one comment that hasn't been talked about, or we haven't talked about too much, is the reclamation process of this bill. You have been kind of involved in that over the years. Do you have any comment about that portion of the bill and what that means? Not just to California but to the western states and what they can do to help leverage water supply in the western states.

Mr. LIBEU. Yes, I do, Mr. Chairman. I thank you for the opportunity to respond to that.

As you said, we have worked on this legislation, or this part of your legislation for a long time. I think it's important for people to realize that your legislation—when you prepared this legislation you realized that water resource management and shortage of water supply is just not a California issue. You took into consideration that the entire west is faced with the same problems.

I commend you for your foresight in melting together with your CALFED legislation an additional piece of legislation which will allow the other western states, as well as members of the state of California, agencies in California, to access additional Federal dollars to build programs.

One of the things that I think is real interesting and unique about Title II of your legislation is that there are three separate titles within that. You can build relatively large projects with the maximum Federal exposure of $50 million. But for the smaller agencies like the City of Norwalk, places where the upper San Gabriel River Valley Basin need to implement smaller projects on a quicker basis. There is a small partnership program which allows grants of up to $5 million on a 50/50 basis.

And for our long-term or bigger projects there are loan guarantees for people. We have worked a long time to put this together. I commend you on adding it to your CALFED legislation in realizing that the Federal Government has got a tremendous financial commitment to infrastructure in California already.

We need to supplement that with new monies and partnership amongst the State of California and the agencies here to improve that and to put together the tools for the 21st Century that is going to make water supply and water management in the west the number one issue. Thank you.

Mr. CALVERT. Mr. Stovall, over the last 20 years your contract water supply has decreased obviously. What has been the major reasons for that reduction?

Mr. STOVALL. Well, a number of reasons. During the early '80's D1485 reduced supplies to improve salinity balances within the Delta. Since the early 1990's there have been restrictions imposed for endangered species protection that have sometimes impacted pumping and the cumulative effect of those has reduced the yield from about 2.3 million acre-feet down to somewhat less than 2 on the State Water Project.

Mr. CALVERT. Appreciate that.

Ms. Napolitano.

Ms. NAPOLITANO. Thank you, Mr. Chair. There is the same resounding message here, that we need to take a look at the overall picture and work in coalitions rather than continue the band-aid

approaches of the past. I tend to agree so much with that kind of approach. I've been working on the Colorado cleanup of the uranium tailings up in Moab for the last year and a half with Representative Chris Cannon because that is a potential detriment to the drinking water in Southern California. We get, what, 30 percent almost of that water and if we ever get a flood, a 100-year flood up there, we are in deep trouble because it contains uranium tailings.

What we were able to accomplish with a coalition is bring all the parties, the governors together, all of the water folks along the Colorado River that have an interest in the Colorado, my colleagues on both sides of the isle, as well as my Democratic colleagues. We were able to get that piece of legislation moved through last year. Now we are just looking for the funding.

What we thought we would have this year is the second step to that, and that would be to address the salinity from that area because there were 50 percent of the water fix-up. Fifty percent of the land that it traverses through are Federal lands. It is incumbent for the Federal Government to clean up some of that so you have less to clean up on the lower end or at the middle end and then down to Mexico.

The problem sometimes we find, and Mr. Stovall, you hit it on the head when you say in your statement the mistrust between water users has left much conflict. Unfortunately, it's egos. It is turf. It is many things that we tend to think are paramount to our success.

We are fortunate we have a Chairman who feels that working in conjunction is going to lead us to solutions rather than it is his turf because he is the Chairman. That is why I am thankful to him for holding the water hearings that are at least going to allow us together to listen to what the users are saying are going to lead us to the solutions rather than just the bandit approach again.

However, we must also consider that if we don't work in unison, that means you have your share of work to do. It is convincing your local Federal representatives to work together to get this to happen because we all will win. If not, we all lose.

I thank you very much. Especially Art, you and Chris, for coming in at the last minute subbing in for the city, the muni version of what you have to do. Since I come from the municipal government, I hold dear the fact that cities have to pay inordinate amounts to clean up their water wells so that they can provide for the cities and they are not even connected to the water supply. In other words, you can't melt them down to cut down the contaminants in those wells because they are separate and apart. Somehow we need to help the munis deal with their own issues so that we don't have to import more water thereby using less electricity and less of that source that Northern Californians would love to have.

In the meantime, I still think we have a long-term education process that we need to become more open to. As you speak, do not just speak to water users but speak to the children and the schools, the teachers, the media. Anybody who will listen because it's going to be all of us working together that we are going to be able to come to the solution.

I don't really have any more questions. You've covered them. But if you can sense the frustration in my voice, it is because I've been at it for a long time and we are still there trying. If it hadn't been for this man to bring it to our backyard and ask for our input, I think we would still be trying to figure out who is on first base. Thank you.

Mr. CALVERT. Ms. Solis.

Ms. SOLIS. I don't have any questions either except this was a very insightful last panel. There is a lot of good issues that came up, particularly the municipalities and the things that they have to go through.

Right now I have in two areas of my district where they have found chromium 6 in what happens to be a public city library in the City of Rosemead. Going about trying to assess who is responsible, how you pay for that cleanup, and where else it might be found obviously is a very sensitive issue and very controversial because our constituents are demanding that we do something as well.

The science is going on. I now there are some legislative efforts in Sacramento as well as through Congressman Adam Shift to start looking at how to identify what levels are safe and unsafe and what have you. Those are very important. I would hope we could continue to have those discussions on this Committee and likewise look at what current resources, natural resources we have now in our basin that are not being utilized.

I know in the San Gabriel Valley I worked very hard to get legislation passed to create a state conservancy at the San Gabriel River and LA River as they connect. There is a whole potential there to start looking at some ideas that you spoke about, Mr. Linsky, about trying to, if you will, create these artificial watersheds that we desperately need that perhaps some of our local municipalities and other organizations can also tap into and help us in providing that kind of support.

I am very interested in hearing more about whatever information you have and likewise understand the needs and pressures of our local municipalities. I want to thank the panel and I want to thank the Chairman for calling this Committee together.

Mr. CALVERT. Thank you.

Years ago, I'm a baseball fan, and I went out to watch a great movie, Field of Dreams. Remember the premise of that movie is build it and they will come. I think if we had a strategy in California, it would be don't build it and they will come anyway.

I think that has been proven here in our state. Infrastructure has been ignored for a number of years and I don't point any fingers at anyone. I think Republican administrations, Democratic administrations, as we prioritize how we spend money, other things get in the way. I think we have come to the point where we can't ignore it any longer.

I want to thank my colleague in the Senate, Senator Feinstein, who I think has stepped forward with legislation that she intended to move through the Senate to bring a process in the Senate as we are going to do in the House with H.R. 1985.

We have seen what crisis management is in the energy crisis. No matter where you stand on that, I think there are decisions that

are being made today that people in public service and policy would have found astounding several years ago.

I don't want to get to that point in water management. I think the environment would suffer because if we have to make decisions for people versus fish or for migrating birds, obviously decisions that would harm the environment probably would be made in order to safeguard people.

We have maybe—maybe some time if we are lucky to do the right thing and to move forward with legislation that will leverage Federal assets to encourage the state and local users and so forth throughout our great State of California to do what is necessary for the residents of our great state and the tax payers to encourage water development and enhancement throughout our regions.

With that, I look forward to future hearings. We are going to have several. We are going to have one on June 30th in the Central Valley and on July 2nd in San Jose, California. July 9th in Las Vegas was mentioned to talk about salinity and other issues in the upper basin states and why this legislation is not just for California, as Larry mentioned, but really for the entire west.

If anyone needs to contact our Committee or anything for additional information, please do so. I want to thank this panel for participating and answering our questions and I want to thank the City of Cerritos for being such wonderful hosts and to Grace Napolitano for suggesting it. This was a wonderful place to meet and great facility here in Cerritos.

With that, this hearing is adjourned.

[Whereupon, at 12:55 p.m. the Subcommittee Hearing was adjourned.]

The following additional materials were submitted for the record:

- Statement from Jan Breidenbach, Executive Director, Southern California Association of Non-Profit Housing
- Letter from Martha Guzman, United Farm Workers of America, AFL-CIO
- Letter from Richard Lambros, Executive Vice President, Building Industry Association of Southern California
- Letter from Robert Reeves, Sr., Executive President, AFSCME Local 1902
- Statement from Todd Spitzer, Supervisor, Third District, Orange County

Statement of Jan Breidenbach, Executive Director, Southern California Association of Non–Profit Housing

Good morning, Mr. Chairman and Members of the Subcommittee. My name is Jan Breidenbach, Executive Director of the Southern California Association of Non–Profit Housing. I would like to thank you for the opportunity to testify on behalf of affordable housing advocates throughout Southern California.

BACKGROUND ON SCANPH

The Southern California Association of Non–Profit Housing (SCANPH) is a non-profit membership organization dedicated to the development, preservation and management of permanently affordable housing for low-income people. SCANPH believes that the non-profit community development industry is the best vehicle of attainment of this goal.

SCANPH was founded in 1989 when a community of non-profit developers recognized that they had reached a level of growth that required the establishment of an umbrella organization . By 1996, SCANPH grew to over 500 members in the region -- including non-profit housing developers, social service agencies and community groups, private businesses, local government agencies, lenders, and numerous

individuals engaged in affordable housing issues. Our members are located in Los Angeles, Orange, Riverside, San Bernardino, Ventura and Santa Barbara Counties.

Non-profit housing is not just another way to develop real estate. Nor is it just good social policy. It is an economic development machine. Through the financing, production and management of this real estate, job opportunities are created and communities are strengthened. In short, the production of affordable housing, like all construction, is a major contributor to regional economic growth.

LINKING AFFORDABLE HOUSING AND NEED FOR RELIABLE, HIGH QUALITY WATER SUPPLY

However, without a reliable, high quality water supply our ability to provide affordable housing will not exist. California has 9 of the nation's 10 least affordable housing markets, including 7 of the top 7. A kindergarten teacher in Downtown Los Angeles needs over $78,096 in additional income to afford the median-priced home. Yet, we are under-producing housing. Last year

marked the 10th consecutive year of housing production at roughly 50 percent of demand. The annual housing deficit for Los Angeles County, forecast by the Department of Housing and Community development, is expected to be 28,000 units. We cannot continue down this path if we hope to achieve a higher quality of life for the citizens of our region.

Water availability is considered in every housing development decision made in California today. It is considered by the builder, the water agency, and the local government in the acquisition, planning, design, environmental analysis, project entitlement, construction, landscaping and mitigation monitoring stages. The California Environmental Quality Act (CEQA) requires consideration of the availability of water utility service and the California Water Code requires preparation of a water availability assessment for regionally significant housing projects. The reliability of current water supplies is being used increasingly as the basis for no-growth and NIMBY legal challenges to new housing developments.

The cost of water infrastructure influences the cost of housing. Unfortunately, the most recent trend has been to shift the responsibility of infrastructure costs away from the broad constituency that benefits from new public facilities to the next person to move into the neighborhood. The result has been higher housing prices, lower housing production, and an inadequate supply of housing to shelter California's families.

Improve Reliability

We would define an "equitable" distribution of the costs of new water infrastructure as one where new development pays for a fair share of new water facilities, but the trend of disproportionately burdening new home buyers for the costs of public facilities is broken. The reliability and quality of the water supply influences the operational costs to the homeowner or renter in their monthly water bills. Higher development fees, benefit assessments, and connection fees just lead to even higher monthly water utility expenses and to the challenge of providing affordable housing for our society.

We support development of a more comprehensive program to improve reliability of the existing California water delivery system through increased levee maintenance, reinforcement and repair. State, federal, and local agencies should examine options for maintaining and strengthening the aging State Water Project, Central Valley Project, Colorado River Aqueduct, Los Angeles Aqueduct, and other vital canals from seismic, flood or other failures. Contingency plans should be developed and updated annually to permit emergency water transfers in the event of failure of one or more of these major water arteries.

Increase Storage

We also recommend increasing off-stream storage facilities north and south of the Bay–Delta. With inherently inadequate water supplies and competing demands, as much flexibility should be built into California's water supply, storage and delivery system as possible. A key objective of future water management programs should be to alleviate potential regional water shortfalls. A water delivery system should be designed to minimize the suffering of any one region when statewide water shortages occur. We support increased storage capacity and new storage facilities as the best means to minimize the damaging consequences of future droughts.

WESTERN WATER ENHANCEMENT SECURITY ACT

H.R. 1985 (Rep. Calvert–R), or the "Water Enhancement Security Act," provides a ground-breaking approach to ensuring a reliable and high quality water supply for Southern Californians. The bill authorizes funding for a comprehensive plan that

will prevent a looming water crisis in California, and will result in tangible benefits to Southern California.

Short-term we need grants and loans to make Southern California less dependent upon imported water from the State Water Project and the Colorado River. We support the provisions in H.R. 1985 that could provide funding for new storage projects, surface or groundwater, in Southern California to make our region less dependent upon imported water. We also welcome the potential for increased local investments in water conservation and reclamation that increase our efficient use of currently available water supplies.

Mid-term we need funding for the first stage of CALFED water supply and quality projects as described in the CALFED Framework and Record of Decision. It is critical that the agreements reached between state and federal agencies be implemented in a balanced manner that increases water supplies and improves the water quality of the Sacramento–San Joaquin Delta. H.R. 1985 provides an important federal funding commitment necessary to support the policy agreements reached by state and federal agencies to enhance the Delta's ecosystem, increase the reliability of its water supply and improve its water quality.

Long-term we need to develop the water storage and conveyance facilities required to meet a growing population. Housing does not create population growth! Housing is a response to an increasing population's need for shelter. We need to responsibly plan for both California's future housing and water needs today, rather than react to increasing shortages of both. With the long lead times required for approval and construction of any major infrastructure project, we recommend that the feasibility of both new statewide level infrastructure, such as an isolated Delta conveyance facility, and regional water storage options continue to be pursued to meet future water needs. We also support aggressive research and development of new desalination technologies as a potential longer-term solution to our future water needs.

H.R. 1985 bill will enable the state to get ahead of a potential water shortage and environmental disaster in the Sacramento–San Joaquin Delta, a critical component of Southern California's water supply, providing nearly two-thirds of the drinking water for the state.

A high quality and reliable water supply has never been more important to our region. While demand for water is increasing in our ever-growing region, we face a decline in supply, with a federal mandate to reduce our dependence on the Colorado River.

CONCLUSION

In the next 20 years, California's population is expected to grow to more than 45 million people. The Department of Water Resources estimates that the gap between water supply and demand will total 2.4 million acre-feet in normal years of precipitation and up to 6.2 million acre feet in drought years by 2020.

The future of Southern California depends on managing our limited water resources wisely and responsibly. H.R. 1985 is a giant step toward the goal of clean, reliable water supplies for a growing population, as well as for farms, industry, and the environment.

I appreciate the opportunity to testify before you today on behalf of the many affordable housing advocates and most importantly, the countless families that need affordable housing in Southern California.

Thank you.

Environmental Justice Coalition for Water
c/o Pacific Institute for Studies in Development, Environment, and Security • 654 13th Street • Oakland, CA 94612 • Phone: (510) 251-1600 • Fax: (510) 251-2203

June 14, 2001

Congresswoman Hilda Solis
US House of Representatives
Longworth Bldg # 1641
Washington, DC 200515

RE: CALFED Reauthorization Bills

Dear Congresswoman Solis,

The Environmental Justice Coalition for Water includes over 40 community-based organizations and intermediary groups who have come together to make sure that California's water management and policy address the problems and concerns of disadvantaged communities and communities of color. We recognize that you have consistently championed environmental justice in California, and we look forward to the positive impact your leadership will have on federal policy.

We would like to begin by working with you to ensure that environmental justice principles and actions established in the Federal record of decision dated August 28, 2000 are included in the CALFED Reauthorization bills H.R. 1985 (Calvert) and S. 976 (Feinstein). Your leadership in the Subcommittee on Water and Power will be instrumental to the inclusion of environmental justice in CALFED.

We look forward to sharing our amendments with you and your staff to ensure that California's water is retained as a public resource that serves the greatest public good.

Sincerely,

Martha Guzmán
United Farm Workers of America, AFL-CIO
On behalf of the Steering Committee

cc: Kathryn Alcantar, Latino Issues Forum
Josh Bradt, Urban Creeks Council of California
Henry Clark, West County Toxics Coalition
Whitney Dotson, Neighborhood House of North Richmond
Robin Freeman, Environmental Science Institute/Merritt College
Myrna Hayes, Save San Pablo Bay Lands
Michael Stanley-Jones, Silicon Valley Toxics Coalition
Michael Warburton, Community Water Rights Project/Ecology Center
Arlene Wong, Pacific Institute for Studies in Development Environment & Security

Building Industry Association of Southern California

1330 South Valley Vista Drive
Diamond Bar, California 91765
909.396.9993
fax 909.396.9846
http://www.biase.org

June 15, 2001

The Honorable Ken Calvert
U.S. House of Representatives
Rayburn House Office Building, Room 2201
Washington, DC 20515

RE: H.R. 1985 – Water Enhancement Security Act

Dear Representative Calvert:

On behalf of the more than 1,750 members of the Building Industry Association of Southern California ("BIA/SC"), we would like to offer our support for H.R. 1985, or the "Water Enhancement Security Act".

BIA/SC members strive to make the American dream of home ownership a reality for all residents of Southern California. Our members are landowners, developers, homebuilders, and construction contractors throughout the region and state. All segments of our association are extremely dependant on a secure water supply, including land owners, potential builders requiring water resources to satisfy the ever growing demand for housing, and construction employees relying on jobs in the region.

Water availability is considered in every housing development decision made in California today. It is considered by the builder, the water agency, and the local government in the acquisition, planning, design, environmental analysis, project entitlement, construction, landscaping and mitigation monitoring stages. The reliability of a water supply affects housing in the following ways:

1. The initial entitlement to build housing is contingent upon the availability of a reliable water supply. The California Environmental Quality Act (CEQA) requires consideration of the availability of water utility service and the California Water Code requires preparation of a water availability assessment for regionally significant housing projects. The reliability of current water supplies is being used increasingly as the basis for no-growth and NIMBY legal challenges to new housing developments.

2. The cost of water infrastructure influences the cost of housing. Whether paying for the rehabilitation of aging water lines in existing urban areas or extending new water lines to new service areas, many water districts require housing developers to install water lines at their expense and/or charge substantial new connection fees. These substantial water infrastructure expenses must be factored into home prices and rents.

To help achieve a reliable water supply, we need grants and loans to make Southern California less dependent upon imported water from the State Water Project and the Colorado River. We support the provisions in H.R. 1985 that could provide funding for new storage projects, surface or groundwater, in Southern California to make our region less dependent upon imported water. We also welcome the potential for increased local investments in water conservation and reclamation that increase our efficient use of currently available water supplies.

Additionally, we need funding for the first stage of CALFED water supply and quality projects as described in the CALFED Framework and Record of Decision. It is critical that the agreements reached between state and federal agencies be implemented in a balanced manner that increases water supplies and improves the water quality of the Sacramento-San Joaquin Delta. H.R. 1985 provides an important federal funding commitment necessary to support the policy agreements reached by state and federal agencies to enhance the Delta's ecosystem, increase the reliability of its water supply and improve its water quality.

Over the long term we need to develop the water storage and conveyance facilities required to meet a growing population. Housing does not create population growth! Housing is a response to an increasing population's need for shelter. We need to responsibly plan for both California's future housing and water needs today, rather than react to increasing shortages of both. With the long lead times required for approval and construction of any major infrastructure project, we recommend that the feasibility of both new statewide level infrastructure, such as an isolated Delta conveyance facility, and regional water storage options continue to be pursued to meet future water needs. We also support aggressive research and development of new desalination technologies, as a potential longer-term solution to our future water needs.

The stakes involved in meeting our water needs are high. In May 2000, the California Department of Housing and Community Development ("HCD") issued a report to serve as the Statewide Housing Plan Update. "Raising the Roof: California Housing Development Projects and Constraints, 1997-2020" summarizes the crisis and outlook for California housing as follows:

> *"Few issues facing California are as important as the State being able to meet its future housing needs. Between 1997 and 2020, California will likely add more than 12.5 million new residents and should form approximately 5 million new households. Almost all of this growth will occur in metropolitan areas. To meet the housing needs of California's growing population, homebuilders and developers will have to build an average of 220,000 housing units each year between now and 2020."*

These housing needs can not be met without a reliable, high quality water supply. The future of Southern California depends on managing our limited water resources wisely and responsibly. H.R. 1985 is a giant step toward the goal of clean, reliable water supplies for a growing population, as well as for farms, industry, and the environment.

The Honorable Ken Calvert
June 15, 2001
Page Three

Once again, thank you for your leadership on this very important housing issues.

Should you have any questions, please feel free to me, or our Director of Environmental Affairs, Tim Piasky, or Director of Government Affairs, Charles Gale.

Sincerely,

Richard J. Lambros
Executive Vice President

RJL/TP/CG

Cc: The Honorable Dianne Feinstein, Senator
Jerry Howard, NAHB, Executive Vice President
Borre Winckel, BIA – Riverside County

AFSCME Local 1902

Employees' Association of MWD

Mr. Rick Breitenbach
CALFED Bay-Delta Program
1416 Ninth Street, Suite 1155
Sacramento, California 95814

Dear Mr. Breitenbach:

As the union representing the employees of the Metropolitan Water District (MWD), the largest wholesale water provider in California, we want to take this opportunity to offer our observations on the draft programmatic EIS/EIR. We are particularly concerned about the implication of the proposal on water marketing for rate payers, workers and the environment. Indeed, we need to reinforce the importance of a comprehensive examination of the questions around the EIS/EIR on third party impacts. These impacts will affect rate payers, workers and the environment.

The San Francisco Bay/San Joaquin Delta Estuary (Bay-Delta) is a major source of water for the MWD and Southern California. Future plans for the Bay-Delta will affect Southern California's water delivery systems during the next century. CALFED's actions are important to us as employees of MWD, whose long-range planning will be affected by this plan as will rate payers and consumers of our water rates. Therefore, we are offering the following policy questions and recommendations as you move forward in this decision making process.

POTENTIAL FOR THE CREATION OF WATER MARKETS & THE IMPACT ON THIRD PARTIES

Water markets turn water into a commodity to be bought and sold rather than a public good. The mere notion of a commodity implies that there is some level of control over its production. Water, by nature, does not possess these qualities. There is not an infinite supply of it nor is its production controllable. However, introduction of markets to public utilities is not a new phenomenon. Deregulation promised consumers more choice at competitive prices. Consumers were all but guaranteed lower utilities bills. The realities of deregulation proved to be less than promising. While consumers were offered choice, what they got in large measure was confusion. And if you ask consumers if they are now paying less for their telephone and cable service, most will tell you no. In fact, some will probably tell you that they are paying more for these services. This summer's power outages in the Midwest and East Coast have called into question companies' commitment to reliability in a deregulated environment. Many electric power companies, preparing for competition are cutting costs and deferring maintenance. Such cost-cutting could result in systems so overstretched that they may not be able to operate efficiently in times of peak demand or during storms, when many consumers are most vulnerable. The question before us is, do we want to replicate this in our water delivery system?

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In 1996, two University of Southern California professors, Stephen Morgan and Jeffrey Chapman, published a report entitled ***Issues Surrounding the Privatization of Public Water Service***. Some of the key findings of this report include:

- Water supply is considered a "natural monopoly" because it has the following characteristics: it is capital intensive (having significant fixed costs); it is viewed as a necessity; it is non-storable (yet subject to fluctuating demands).

- Private water utilities are accountable to two groups, neither of which directly represent their customers. First, they are accountable to shareholders, whose interest is in maximizing profits and who likely do not live in the communities served. Second, they are accountable to public regulatory bodies whose purpose is to represent the interests of citizens, but may be hundreds of miles from the service area, and often provides a poor substitute for marketplace discipline or ballot box accountability.

The 1996 Reason Foundation Report used the privatization of Great Britain's water system to illustrate the positive potential for such an undertaking in this county. However, the British experience with water privatization has been less than successful. The ***Wall Street Journal*** termed it a "disaster." Some of the by-products of Britain's experience have been price increases, on average, of 77 percent; private companies have not been able to meet demand during droughts, and in some cases, rationing has been imposed not because of drought, but because as much as 37 percent of the water supply is lost through leaks in the system.

Water markets also raise the question of public subsidies for private profits. For example, should farmers, who current pay little or nothing for water used for agricultural purposes, be permitted allow their land to go fallow in order to sell their water rights for a profit? Furthermore, in order to level the playing field, policies must address fair allocation of historic costs for existing infrastructure. Private companies seeking access to public conveyance systems must realize that taxpayers funded these projects and will continue to support ongoing maintenance of said systems. Pending legislation that would limit the amount of infrastructure costs that MWD and public water agencies could charge to private companies to transport water would severely hamstring public water agencies in maintaining their delivery systems. This may also lead to reduced reliability and increase the risk of environmental hazards. Without consideration of these costs, private companies could be said to have an unfair advantage constituting subsidized access to the statewide aqueduct system.

OTHER THIRD PARTY IMPACTS

The transfer of water creates a whole host of potential problems that must be considered when contemplating water marketing. These impacts include:

- An increase in wholesale and retail produce and grain prices which will also have an effect on livestock prices - If farmers are permitted to sell their water for a profit and forego farming, decreases in farm production will affect food prices.

•Farm worker job losses - Local economies will also feel the pinch, particularly farm workers who may lose their jobs as a result of turning working farms into water sources.

•Public sector job losses - With the introduction of water markets, public employees of water agencies may loss their jobs as these agencies compete with the private sector.

•Potential loss of suppliers of last resort - Once privatization shifts the production of services from the government to the private sector, what are the short-term and long-term consequences of dismantling the ability of the public sector, especially in the event that privatization turns out to be less desirable than initially promised? Not only may the skills and expertise of experienced personnel be lost, but the cost of re-acquiring parts of the physical plant may be prohibitive.

•Sprawl and environmental hazards - There also exists the potential for unwanted effects of a water transfer on cities, such as, will it feed suburban sprawl and exacerbate land-use and environmental problems?

•Political accountability - Who will be responsible for ensuring reliability, cost efficiencies and health and safety in a water market environment?

•Stranded infrastructure and personnel costs - Will rates be structured in such a way as to ensure recover of sunk costs for capital expenditures as well as "stranded" employees who may be negatively affected by water markets?

We are very aware of the challenges you face in ensuring safe, reliable and affordable water to the citizens of California. We, too, engage in this process daily and hope that your deliberations will take our thoughts and concerns into consideration as you develop a plan for CALFED. If we may be of further assistance, please feel free to contact us.

Sincerely,

R. A. Reeves Sr.

Robert Reeves, Sr.
Executive President
AFSCME Local 1902

TODD SPITZER
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U.S. House of Representatives
Committee on Resources
Subcommittee on Water and Power

Honorable Ken Calvert, Chairman

Testimony of Orange County Supervisor Todd Spitzer
June 18, 2001
Cerritos, California

Mr. Chairman and subcommittee members, thank you for the opportunity to address you today on the subject of Southern California Water Security – Opportunities and Challenges.

My name is Todd Spitzer. I serve on the Orange County Board of Supervisors, representing the southern end of the county.

Mr. Chairman, I believe that the CALFED authorization bill you introduced on May 24th would go far toward ensuring Southern California's water security.

It would reaffirm the commitment made to Orange County that there would be federal funds adequate to strike a balance between protecting our environment and securing a high-quality, reliable water supply.

It would fund the Environmental Water Account, which would allow Southern California to make up for the water diverted to protect fisheries and comply with the Endangered Species Act.

Orange County's nearly 3 million residents are counting on CALFED to fulfill its pledge to protect Bay-Delta water at the source by tackling its salinity problem. CALFED also drive down high levels of organic materials that bedevil reservoirs and drives up the cost of complying with stringent regulations on disinfection byproducts and pathogens.

One promising avenue is the proposed arrangement between the Friant Water Users Authority and the Metropolitan Water District of Southern California. It would provide a high-quality source of Sierra water for Orange County and the rest of the 17 million people in Metropolitan's service area, while improving the water supply reliability for Central Valley farmers.

The Friant deal is among the worthy proposals that have been tacked on as "complementary actions" to the CALFED document. It deserves a chance to compete on equal footing with other projects.

Solving the water-quality problem would allow North Orange County to recharge its groundwater basins and lessen its reliance on imported water during a drought. South Orange County could expand its pioneering use of recycled water.

When I testified at the Bay-Delta hearings in 1999, I spoke of the need to move forward with surface storage options. Since then, Metropolitan is half way to its goal of filling Diamond Valley Lake in Hemet. Orange County and the rest of the Southland are breathing a lot easier in this year of below-average rainfall and snowpack. The success of Diamond Valley Lake points out the need for expanding storage south of the delta.

CALFED is about fairness, and it's also about self-reliance. Your legislation can help us to help ourselves. We hope that message rings loud and clear in Washington.

Sincerely,

TODD SPITZER
Supervisor, Third District

OVERSIGHT FIELD HEARING ON CENTRAL CALIFORNIA WATER SECURITY -- OPPORTUNITIES AND CHALLENGES

Saturday, June 30, 2001
U.S. House of Representatives
Subcommittee on Water and Power
Committee on Resources
Modesto, California

The Subcommittee met, pursuant to call, at 9 a.m., at the Modesto Board/Council Chambers, 1010 10th Street, Modesto, California, Hon. Ken Calvert [Chairman of the Subcommittee] presiding.

STATEMENT OF THE HONORABLE KEN CALVERT, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. CALVERT. Good morning. First I want to thank everybody for attending and it's great to be here in Modesto with my good friend Gary Condit and his congressional district and a delightful evening last night here in Modesto. It reminded me of my hometown with all of those great muscle cars going down on the main drag of Modesto. It's a wonderful community.

The reason we're here is to talk about water and certainly the future of California depends on the future of California's water security.

Everyone that has taken time to come here today understands the importance of water and water availability, reliability and supplies to our well-being, our environment and this state and country.

We've convened this hearing as an opportunity to listen to the perspective of those closest to the issue. An important work of addressing California's water security has a strong foundation in the CalFed Bay-Delta program and the record decisions. This program contains a balanced holistic approach dealing with water security and the Bay-Delta Area and the impacts on water issues across the state and the West.

We have introduced legislation to assure that this important program continues to progress from the formative stage to grow into a strong cohesive and balanced program as needed into the distant future.

As Chairman of the Water and Power Subcommittee I believe Congress should focus on continued support of this important environmental undertaking and to further recognize that our water

security depends upon the healthy environment and reliable water supply and good quality water.

The legislation I introduced undertakes that broad perspective. No specific projects are authorized and it leaves the state and Federal agencies working in close consultation with the public and local stake holders to develop the governing structure to assure proper balance among all competing water interests. I emphasize that a balanced approach is necessary.

We must provide to the environment an enhanced ecosystem while also working to honor contracts of water users and insure a water supply for every Californian who depends upon a clean, reliable water supply. To achieve these goals we need to carefully balance the use of existing water and serve and recycle that water and look for ways to augment the supply of water.

That's the heart of what I believe and it's embodied in H.R. 1985, the Western Water Security Enhancement Act. We must stop thinking in a fashion that pits the environment against all other factors. The mentality that if you increase water supply and quality, it must be at the expense of the environment is detrimental to working constructively on water issues in the West. When water supply and quality are improved, the environment is benefitted by this additional water. When the environment is benefitted, water supply and quality are increased. With California's water security in the lurch we must take this approach to the situation, as the CalFed program attempts to do and this bill certainly assures.

And with that I'd like to ask my good friend, and our host this morning here in Modesto, Gary Condit to have his opening statement.

The prepared statement of Mr. Calvert follows:]

Statement of The Honorable Ken Calvert, Chairman, Subcommittee on Water and Power

The future of California depends on the future of California's Water Security. Everyone that has taken the time to come here, and certainly those that have agreed to provide testimony for us today, understand the importance of water availability, reliability and supply to our well-being, our environment, and to this state and our country. We have convened this Hearing as an opportunity to listen to the perspectives of those closest to the issues, here in California.

The important work of addressing California's Water Security has a strong foundation in the CALFED Bay–Delta Program, and the Record of Decision that was released by that program in August of 2000. This program contains a balanced, holistic approach to dealing with Water Security in the Bay–Delta area, and the impacts on water issues across the state and West. As some of you already know, I have introduced legislation to assure that this important program continues to progress from the formative stage to grow into the strong, cohesive and balanced program that is needed into the distant future. As Chairman of the Water and Power Subcommittee, I believe Congress should focus on our continued support of this important environmental undertaking, and to further recognize that our water security depends upon a healthy environment, a reliable water supply, and good quality water. The legislation I introduced with more than half of my California colleagues takes that broad perspective. No specific projects are authorized and it leaves to State and Federal agencies, working in close consultation with the public and local stakeholders, to develop the governing structure to assure proper balance amongst all competing water interests.

I would emphasize that a balanced approach is necessary. We must provide for the environment and enhance ecosystems, while also working to honor contracts of water users, and assure a water supply for every Californian who depends on a clean, reliable water supply. To achieve these goals, we need to carefully balance the use of existing water, conserve and recycle that water, and also look for ways

to augment the supply of water. That is at the heart of what I believe, and it is embodied in H.R. 1985, "Western Water Security Enhancement Act", which I have introduced in Congress. This bill clarifies that the Governance Board, in carrying forward the CALFED program, should consider economic/social and ecosystem restoration as coequal objectives. In fact, in the short term, while the stakeholder developed Governance Board is being formulated, it ensures that equal funding is provided for assuring a reliable water supply and for environmental benefits.

We must stop thinking in a fashion that pits the environment against all other factors. The mentality that if you increase water supply and quality it must be at the expense of the environment is detrimental to working constructively on water issues in the West. When water supply and quality are improved, the environment is benefitted by this additional water. When the environment is benefitted, water supply and quality are increased. With California's water security in the lurch, we must take a holistic approach to the situation, as the CALFED program attempts to do and this bill assures.

STATEMENT OF THE HONORABLE GARY CONDIT, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. CONDIT. Thank you, Mr. Chairman. I would like to welcome all my colleagues to the City of Modesto. We're honored to have all of you here today and we're very proud of this facility and if you get out today, you'll see some of the renewal, redevelopment of the downtown area. We're very excited and very proud of that.

I'm pleased that the Chairman selected Modesto. This area illustrates tremendous benefit of water security. It's no surprise to some of us who are from the Central Valley and the foothills that water is the lifeblood of agriculture.

Several weeks ago I and all the members sitting up here today and several other members in the House of Representatives introduced the Water Enhancement Security Act. This bill is balanced and comprehensive. Let me underscore balance is the cornerstone of this bill. It links progress of water supply and water quality with the progress on the environment. The link puts agricultural cities and environmental interests on equal footing. One interest cannot advance without the other.

And as we discuss this today and as the Chairman takes these hearings around the state, one of the things that we should continually remind ourselves is that we all have to get well together if we're going to be successful with water policy facing the State of California. No one interest can get ahead of the other. That's what this bill does. That's what all the people that are committed to do—to work on it today are trying to do. That's what our objective is, to make sure that we all get well together as it relates to a solution for water facing California.

We need to do this as quick as we possibly can. CalFed's been hanging around a long time. It's time we begin to put some meat on the bones. This is, I think, a major effort and I commend the Chairman, Mr. Calvert, who has taken sort of the bull by the horns and move this thing in a very pro-aggressive way.

Once again, welcome to all the members here today.

Mr. CALVERT. I'd like to add to that that Gary and I have worked very closely putting this bill together as well as all the members here on the dais today. Obviously they are all very wise people.

Any other opening statements?

STATEMENT OF THE HONORABLE GEORGE P. RADANOVICH, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. RADANOVICH. Yes, as soon as I learn how to use this microphone. I guess I don't have to pull a switch or anything.

Mr. Chairman, thank you for all your work in putting this bill together. As Mr. Condit had mentioned, it is a good, balanced approach to California's water needs, and I also want to thank my friend Vern Moss from Madera County for coming here to testify. You'll be hearing his wisdom here very shortly. He's a good man and wise man.

I do want to mention when CVPIA was passed many, many years ago it really made water a scarce source in the state. And since then I think that we have just not had enough water to meet needs. I'm really concerned about a bill that does—at least in this time of water shortage—that doesn't put urban and ag water uses at least ahead of the environment until we get more supply to it all. I think this water shortage is just going to be as serious as the electricity crisis if we don't do something about it soon enough.

Until we get water supply that can meet all the needs of the state, I just think that human beings need to come first and then we can take care of everybody else just a little bit later. I think this bill does that. That's why it's been my concern on reliability until we get some long-term water supply in, not for a specific water agency in a particular part of the state, but for all urban and ag users in California until we get supply on that can take care of all the water needs in our state. So I applaud the Chairman for putting a bill together that does that.

I also want to thank Senator Feinstein for her work for putting together a similar bill on her side and look forward to the testimony today.

Mr. CALVERT. Any other statements?

STATEMENT OF THE HONORABLE CALVIN M. DOOLEY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. DOOLEY. Yes, I just want to thank you, Mr. Calvert, for holding this hearing. As someone who represents maybe a part of the state that has been most negatively impacted by the reduction in the supplies of water, obviously this legislation is something that holds some promise to how we can move forward with increasing the certainty of the supplies that are delivered to the south of the Delta and also insuring that we can move forward in a manner where the Federal Government will step up with its commitment financially and otherwise to meet not only the water supply demands of the State of California, but also are able to provide for some of the environmental investments that are going to be needed.

I think what all of us are very much aware of and I hope the people who are going to be engaged in the legislative process and some of the people that are testifying here, anyone can kill a piece of legislation that we're dealing with in Congress. I would hope as we're moving forward here that everyone would maintain a commitment to be constructive. And hopefully throughout this hearing,

those people who have some questions or concerns about the legislation would go beyond just voicing their opposition, but identify remedies that would allow us to put together a compromise that can meet the objectives of this legislation which I think all of us would agree are sound and responsible.

Mr. CALVERT. Okay. Ms. Napolitano.

STATEMENT OF THE HONORABLE GRACE F. NAPOLITANO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mrs. NAPOLITANO. Well, I echo the sentiments of all my colleagues and I tell you this is a truly bipartisan bill. When I was in state legislature and—to me this is one of the first pieces of legislation that we have been able to set on the table and actually formulate areas of concern and their inclusion into a bill, so especially my charge is municipalities. Those are the ones that are more affected in my area. That's all I have. I have very little ag, almost none.

So the assistance to the munis is very critical and the Chairman has been very open about the process, so we're all hoping that we get solutions, not only as my colleague Dooley is indicating is the objections, but what would be the solutions to be able to have everybody have a piece of that pie that we all want to formulate and make sure that benefits all of California.

Thank you, Mr. Chairman.

Mr. CALVERT. Thank you. Also, I'd like to read one paragraph from a letter from Senator Feinstein.

The bill—this is her. "The bill I introduced into the Senate brings on line ecosystem protection, water storage in a balanced and concurrent way. I will not support authorizing legislation and appropriations that do not protect the environment and increase California's water supply.".

She indicates that we're doing the same thing on the House side, so we appreciate her support.

Mr. CALVERT. Our first panel is Dr. Marcia Sablan, City Council Member, City of Firebaugh, and Mr. Vern D. Moss, Supervisor of Madera County. If you would please step up and take our witness stand here, I guess.

Let me explain a little rule. We have these little lights. We're on a 5-minute rule to make sure we have plenty of time for questions. The green light indicates that obviously you have time. The yellow light indicates you have 1 minute remaining. The red light means the 5 minutes expired. We try to stay in that as much as possible in order to have time for questions.

With that, Doctor, you may begin.

STATEMENT OF MARCIA SABLAN, CITY COUNCIL MEMBER, CITY OF FIREBAUGH

Dr.. SABLAN. Thank you, Congressman Calvert. I am honored to have this opportunity to represent the citizens of the San Joaquin Valley. I also echo the sentiments of the congressman here to applaud you for this work that you have done to try to bring this bill forward.

To give you a little bit of my background, I'm a Board Certified Family Physician in practice in Firebaugh with my husband who's an internist. We were scholarship recipients of the National Health Service Corp back in 1981 and when we finished our obligation, the beauties of Firebaugh kept us there.

For those of you that aren't familiar with Firebaugh, and I think almost everybody here is, it's a river town, a historic river town along the San Joaquin River with a population today of 6,500 people. It was the headquarters for the Miller and Lux Ranch that began valley irrigation, so I think it's an important place to talk about the history of valley irrigation.

It began a long time ago in the 1840's as a ferry crossing when the San Joaquin River was big enough to hold steam ships to come down before the dams were placed.

A lot of my knowledge came—about the water issues came from living there in Firebaugh but also from being a member of the BDAC, the Bay-Delta Advisory Committee. I've also been a member of the Firebaugh City Council for—since 1983 and the mayor for 10 years.

Most of our citizens like you know are dependent on agriculture for their livelihood. We often think of the farmers in this equation, but I would just like to represent today the farm workers, the service providers, the people that serve the farms.

In my medical practice, which is the thing I think I can bring to this table, is the fact that our society depends on the health of the environment, healthy economy. When the water supply can't be guaranteed and the layoffs start, it's always the farm workers that have the layoffs and suffering first. And that reflects in our society health.

During the drought, for example, we saw a lot of the people that had been farm managers, farm workers laid off and their health insurance was interrupted. Therefore, they have become dependent on governmental systems. We've seen interruptions in treatment for their diabetes, hypertension and other chronic diseases with disastrous effects.

The town of Firebaugh wants to get ahead. The people want to get ahead. Most of the town has become stabilized now. We don't really have as many migrant workers as before. There are citizens now.

Our budget is dependent on the sales tax from the farm equipment sales. In the past the drought years have previewed for us the inability of the cities to provide basic services. In fact, the City of Mendota, our neighbor to the south, lost their police force during the last drought and are now dependent on sheriff coverage.

What's the progress that's been made that we can look forward to if the water bill is completed? We have in Firebaugh 400 new low to moderate income homes that are almost completely owned by farm workers. Those people are first time homeowners that have moved in from the ranches, become productive citizens of our town. Those are the people that are most vulnerable to water supply changes.

The city has joined with five other groups in the West side of Fresno County to farm the I-5 business development district, which is a collaborative for economic growth. The city has been able to at-

tract two value-added tomato paste plants within the past 2 years. Like the congressman stated, this is the lifeblood of our area. Please consider the citizens of Firebaugh, the citizens of the West side and the farm workers also as we look at these water bills. Thank you.

The prepared statement of Dr. Sablan follows:]

Statement of Marcia E. Sablan, M.D., City Council Member, City of Firebaugh, California

I would like to thank Congressman Calvert and the members of the Subcommittee for giving me the opportunity to testify. I am grateful to Congressman Calvert for spearheading this effort to obtain consensus for H.R. 1985 and addressing the difficult problem of water supply.

I am a Board Certified Family Physician in practice with my husband in Firebaugh, California. We were both National Health Service Corp's Scholarship recipients assigned to Firebaugh and have lived there for almost 20 years. Much of my knowledge of complex water supply issues stem from my appointment to the Bay Delta Advisory Committee. I have been a member of the Firebaugh City Council since 1983 and Mayor for 10 years. I would briefly like to talk about the socioeconomic demographics of western Fresno County. Firebaugh is a historic river town of 6,500 residents, located 50 miles west of Fresno. Firebaugh began as a ferry crossing on the San Joaquin river (before the dam) and in the late 1800's served as the headquarters for the Miller & Lux Ranch, where Valley irrigation began. Firebaugh and other west Valley cities (Mendota, San Joaquin) grew along with agriculture.

Most of Firebaugh's citizens are dependent on agriculture for their livelihood: farm workers, ranch foremen, mechanics, secretaries, farm equipment sales.

In my medical practice, we see and feel the effects of agricultural water supply. When the water supply cannot be guaranteed and lay-offs start, the farmworkers are the most vulnerable. Unemployment problems are reflected in society's health. Many workers have lost health insurance benefits, resulting in interruption of treatment for diabetes, hypertension and many other diseases that when left untreated, can produce disastrous effects. Many have increased dependence on governmental programs like Medi–Cal and welfare.

The budget of the City of Firebaugh is heavily dependent on sales tax from farm equipment sales. The drought years of the past have previewed the decrease in the ability of the cities to provide basic services. For example, the City of Mendota lost its police force during the last long drought.

What progress has been made? Almost 400 new low and moderate housing units have been developed over the past decade. Most of those have been purchased by first time homeowners who previously lived in farm housing. This has stabilized the population and allowed the city to increase services. Those advances would be the first to be lost with a decrease in the agricultural water supply. Five cities on the Westside joined together seven years ago to form the I–5 Business Development District, collaborating in regional economic development. The City of Firebaugh has been able to attract two value added tomato factories from this.

California's water supply affects everyone, but it is the lifeblood of the Valley's cities and their citizens.

Thank you, Congressman Calvert and Subcommittee members for your work in introducing this bill to authorize the CalFed projects and continue California's vision of a dependable water supply.

Mr. CALVERT. Thank you, Doctor. Supervisor.

STATEMENT OF VERN D. MOSS, SUPERVISOR, MADERA COUNTY

Mr. VERN MOSS. Mr. Chairman, members of the Subcommittee, I want to thank you for the opportunity to provide testimony on behalf of the Regional Council of Rural Counties (RCRC) to the Subcommittee regarding California water security.

I'm the Chairman of the RCRC Water Committee, which is an advisory body to our Board of Directors. RCRC is an organization

of 28 rural Northern California counties. We have over 140 elected county supervisors in our membership. Our member counties include the San Joaquin, Sacramento and Trinity watersheds.

Collectively, our counties are the source areas for the San Francisco Bay-Delta's water. It is from our membership area that over 80 percent of the water for the Delta comes. Our counties comprise nearly 40 percent of the state's land mass and hold significant groundwater resources, over which the counties exercise regulatory authority.

I want to take this opportunity to thank you and your Subcommittee staff for the hard work they have put into making this a fix, and to help us out here, we on the ground, to fix the system that we feel is broken.

The environment in the San Francisco Bay-Delta is broken. We could spend endless and probably pointless hours pointing fingers about who did what when to cause this problem. We must pass up that temptation.

We must recognize that the water supply and water quality protections for the people of our state is also broken. That places our economy and our very future at risk. We have a duty to not only proclaim the problem, but to solve it.

Much of the situations regarding water supply and water quality that the Subcommittee heard from witnesses during your field hearings in Cerritos on June 18th are the same in the north state.

We support regional sustainability and investment in water resources. We believe that the Santa Ana watershed project and others like it in the south state are great projects. We in RCRC supported funding for these projects even though they were at the opposite end of the state. We also could do other similar large scale projects in our areas. We just need the funding.

We support new functional surface storage projects. By functional we mean ones that supply water locally, as well as regionally, and that recognize California's area of origin and watershed of origin protections for our part of the state.

We support ecosystem restoration. However, you must recognize that many of our counties are over 75 percent federally owned. Therefore, additional land acquisitions for ecosystem restoration must consider the economic consequences to the communities and local governments.

The payment in lieu of taxes by the Federal Government is critical to our local government coffers in order to provide adequate services.

We support groundwater storage projects, but we point out that California law has spoken on the point of who may regulate that resource, manage it, and maintain the resource in long-term, safe yield. It is the counties.

We support a process that helps achieve these goals, but one that leaves the decision making at the local level. The best ideas we have found come from the people closest to the ground and who have to live with the problem.

We know how to do the work. We know how to fix what's broken. Therefore, a decision making process that allows innovative, locally supported solutions is the best one.

Calling in air strikes in Vietnam from Washington didn't work decades ago. Calling in project mandates from Washington to California won't work today. Local decisions made by accountable, locally elected officials will produce sustained solutions.

Thank you for the opportunity to testify. I will be glad to answer any questions that you have.

The prepared statement of Vern Moss follows:]

Statement of The Honorable Vern D. Moss, Chair of the Water Committee, Regional Council of Rural Counties

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE:

I want to thank you for the opportunity to provide testimony on behalf of the Regional Council of Rural Counties (RCRC) to the Subcommittee regarding California's Water Security.

I am the Chairman of the RCRC Water Committee, which is an advisory body to our Board of Directors. RCRC is an organization of twenty-eight rural northern California Counties. We have over one hundred and forty elected County Supervisors in our membership. Our member Counties include the San Joaquin, Sacramento and Trinity Watersheds. Collectively, our counties are the "source" areas for the San Francisco Bay–Delta's water. It is from our membership area, that over eighty percent of the water for the Delta comes. Our Counties comprise nearly 40% of the State's landmass and hold significant ground water resources, over which the Counties exercise regulatory authority.

I want to take this opportunity to thank you and your subcommittee staff for the hard work they have put into trying to help those of us out here—on the ground—to fix a system that is broken. The environment in the San Francisco Bay Delta is broken. We could spend endless and probably pointless hours pointing fingers about who did what when to cause this problem. We must move past that temptation.

We must recognize that the water supply and water quality protections for the people of our state are also broken. That places our economy and our very future at risk. We have a duty to not only proclaim this problem but to solve it.

Much of the situations regarding water supply and water quality that the subcommittee heard from witnesses during your field hearing in Cerritos on June 18 are the same in the north state.

We support regional sustainability and investment in water resources. We believe that the Santa Ana Watershed Project and others like it in the south state are great projects. We in RCRC supported funding for these projects even though they were at the opposite end of the state. We also could do similar large-scale projects in our areas. We just need the funding.

We support new functional surface storage projects. By functional, we mean ones that supply water locally, as well as regionally, and that recognizes California's Area of Origin and Watershed of Origin protections for our part of the state.

We support ecosystem restoration. However, you must recognize that many of our Counties are over 75% federally owned. Therefore, additional land acquisitions for ecosystem restoration must consider the economic consequences to communities and local governments. The Payment of In Lieu Taxes by the Federal Government is critical to our local government coffers in order to provide adequate services.

We support ground water storage projects, but we point out that California law has spoken on the point of who may regulate that resource, manage it, and maintain the resource in long-term safe yield. It is the Counties.

We support a process that helps achieve these goals, but one that leaves the decision making at the local level. The best ideas we have found come from the people closest to the ground and who have to live with the problem. We know how to do the work. We know how to fix what's broken. Therefore, a decision making process that allows an innovative, locally supported solution is the best one.

Calling in air strikes in Vietnam from Washington didn't work decades ago. Calling in project mandates from Washington to California won't work today. Local decisions made by accountable, locally elected, officials will produce sustainable solutions.

Thank you for this opportunity to testify and I will be very happy to answer any questions.

Mr. CALVERT. Thank you, Supervisor. I appreciate both of your testimony.

I first want to reiterate that the local decision-making process is an extremely important part of H.R. 1985 and certainly RCRC's played an important role in making sure that we brought that to the attention of both state and local officials.

As you are aware, we have a portion of the bill that in the governance—that would allow for the stake holders, obviously the locals, the people in here in the state to be a part of that process in determining where projects should be or should not be built and because we don't predetermine, in spite of what some people may have said, whether or not certain projects should be completed or not, we think that you all should be a part of that process and go through a process of regular order.

Would you like to further explain surface storage projects that potentially could be up in the—your part of the state? I know that Mr. Herger has been very helpful in talking about various things up in your area. He's done a very good job, by the way, for your region.

Mr. VERN MOSS. Maybe I could just talk a little bit about the water supply within the area, if that would be all right, Mr. Chairman.

Mr. CALVERT. Sure.

Mr. VERN MOSS. The primary challenge for our area is to maintain a water supply for our agriculturally based economy, while increasing supplies for urban growth occurring within our areas. We also must maintain or improve our water quality to meet the new standards. This sometimes is very difficult. It sounds like it's easy, but when you deal with a delivery system in some cases that was created during—shortly after the gold rush, it makes it rather difficult.

Water transfers are a challenge for most of our counties. If water is treated as a commodity which can be bought and sold and transferred into private sector as if it were a share of stock, then California agriculture in our part of the state will end. We shouldn't rush to deregulate water and end up with a situation similar to where we find ourselves in electricity.

Linked to transfers is the fact that the only entity in California which can use the regulatory power it holds to remove water's value and purchase it for use elsewhere is the Federal Government and its agencies within the Department of Interior of Commerce. The specter of the Federal treasury being used to create willing sellers is frightening. Thus, the so-called assurance that only willing sellers would sell water is not a real protection.

Much of our membership area's population grows at the same annual rate as the urban areas of the state. However, we have fewer options to develop new water supplies to meet that demand. For example, in much of the foothill and mountainous areas of the north state there are virtually no opportunities for new surface storage projects except on live streams. Thus, we must have the flexibility to increase the capacity of some reservoirs and build new reservoirs if alternatives should be taken off the table until it has undergone a complete analysis with review by Congress.

Groundwater resources in some areas of the north can be managed to create a sustained yield which is measurable and safe. In other areas there is no true groundwater basin. The groundwater,

where it exists, is located in small fractures within the geologic strata far below the surface. There are, as yet, no proven methods to even determine safe yield in those areas. In other areas, the groundwater basin is either impaired through low water quality or is in overdraft. Nevertheless, those resources are protected and secured to the overlying land through state and local laws.

Mr. CALVERT. Thank you.

Doctor, do you want to also expand a little bit on water shortage affect upon farm worker housing and certainly in the food processing business, uses a substantial amount of water also. I know that's a big industry in your area.

Dr. SABLAN. Yes, thank you. I think what I would just like to emphasize, Congressman, is that farming is about planning. People have to have a dependable supply. They have to know the amount of water that they are going to get before they are willing to make the investment into planting a field for that year. The farm workers are left waiting for that decision every year.

Most people work for a farm labor contractor and that contractor works hard to get positions for their people on different ranches that are planted. And those water decisions are what we see holding up the progress. Sometimes the decisions come too late for the farmer to work and to plant that field and to hire his people. People move on to different places.

We've seen a new trend even in small towns like Firebaugh and Mendota that people are taking off for the Midwest when these announcements come in the middle of the winter that there won't be farm water. People don't know how to put those things—I don't think we know how to put those things into perspective when it says in the paper that they are going to have a 25 percent water supply for this year. What does that mean? Should I wait around and see if I can get a job in April or go to Nebraska, go someplace else and destroy the fabric of the society that's being built around that area.

Mr. CALVERT. Thank you.

Mr. CONDIT. First of all, let me thank both of the witnesses and thank them for the work they do on both of their committees. I was on the city council and county of supervisors. I know how difficult that job is. I'm not sure it's as hard as the one I've got today, but it's tough.

First of all, Doctor, let me commend you and your husband for the fine work you do in Firebaugh with farm workers and the farmers. You do a great service to the people of that area and I know they are appreciative of it. I'm certainly appreciative of it as well.

I also want to acknowledge, you've had a big role in helping influence the State of California, particularly Governor Davis, to be more aggressive and visionary in a water stand for California. You've made presentations before him and I know that you impacted him in his view of what it is we should be doing and I want to thank you for doing that. You did that on all of our behalf.

The question I have is similar to Congressman Calvert's question. We've had several years of chronic shortage in the valley. Could you describe sort of the impact of that when you have a

water shortage on the community, on the economic base of the community, what actually happens to that community.

And if that continues, if we have a shortage every year and announce shortage in advance on the West side, what will actually happen to Firebaugh from your point of view?

Dr. SABLAN. Thank you. Well, the thing that interests me the most probably is the city budget. We have, like I mentioned, our sales tax based on farm equipment sales. I think that's the first weather vane that shows us that the economy is not right when the farm sales go down. The people that work in that industry represent our town, pay our taxes, provides our police force, provide our fire protection. That's really—the property value in the City of Firebaugh is very low in comparison to the sales tax revenue. That's our big use.

But I think the more important thing that I see on a daily basis, Congressman Condit, is the people's view of their future. We have people that are—a lot of them are first generation Americans that want to see progress, want to send their kids to school. They do it through farm work. Those of us that have paid college tuition know how hard that is and imagine doing that on a farm worker's salary and not knowing whether we're going to have a job next year or not or how long we are going to work.

Just a little example of how things change. Most women work in the spring chopping cotton, cleaning weeds from the cotton fields. This year one farmer decided because of the economy not to plant cotton and the cotton he did plant he used herbicide to clean the weeds with instead.

I heard that same complaint five times in 1 day in the office that I'm not going to work this year because of that certain farmer's not planting. That's—people don't have bank accounts. They are pretty much living from month to month. Those are the people that are very vulnerable in that type of thing.

I think—I can't emphasize enough the dependability, the planning that has to go into farming. Everybody else is a spin-off and dependent on that, but the farmer is the one that needs to make the investment.

Mr. CONDIT. Thank you. Mr. Chairman.

Mr. CALVERT. Mr. Radanovich.

Mr. RADANOVICH. Good morning, Dr. Sablan. I appreciate your testimony. I do have a question.

Can you give me an idea what the current rate of unemployment is in Firebaugh?

Dr. SABLAN. Yes. It's in the 20's, 20 percent. Probably Firebaugh may be—Congressman, I don't know, may be a little bit better off than some of the other communities because we have more ranch owners living in Firebaugh. Mendota which is just south of us has in the 40's their unemployment rate and that would probably be closer to most of the rates in some of the towns.

Mr. RADANOVICH. As you know, when the state kind of reprioritized its water needs as a result of the CVPIA Act that was passed in 1992, I think it was, provided then historic water shortages to your part of the state. In particular the West side's water district, which was under contract, and then typically got anywhere between 25 to 45 percent of their contracts supply.

As a result of that, there's been attempts to get that water supply back up to 100 percent of contract, but there's also been discussion about retiring lands, somewhere up to about 200,000 acres in that area due to the antifill contracts and also a refusal to open the drains. There's land that has become unfarmable with salt.

What would be the consequences of Firebaugh if there would be an eventual buy out of that large amount of land in your part of the state?

Dr. SABLAN. Thank you. Well, of course, it would affect everything that I talked about. I think it's really important for us to remember that we need to replace that somehow. And as I mentioned, we have the two tomato paste plants going on in Firebaugh now.

I would love to see in an agreement that's made like that reparations, so to speak, to the citizens of that area, an investment in value-added agriculture in jobs that can take the place of those things. We have enough product in that area and that's what we've produced, but typically the western part of the Fresno County hasn't added anything to that product and that's what I would be asking to see.

Mr. RADANOVICH. Would you venture to say what the unemployment rate might be if there's a significant supply of water in the area, closer to 100 percent of contract?

Dr. SABLAN. Probably be closer to the rest of the state then in the 10 percent range I would be guessing. You know, you probably know that farm workers have a very hard job and sometimes peoples in the second generation don't want to do that job anymore and that's why the city council, we've been trying very hard to have other diversified—still based on agriculture. Like I mentioned, we have plenty of product there, but we don't have the investment in the factories and things we need to increase the value added.

Mr. RADANOVICH. Thank you very much.

Good morning, Mr. Moss.

Mr. VERN MOSS. Good morning, Congressman.

Mr. RADANOVICH. Thank you for being here. Can you give me an idea at least in Madera County, and you're welcome to go into the outlying areas, too, some of the water projects that have been there historically, some that may have been thought of recently that might be part of a statewide plan to increase water to the State of California?

Mr. VERN MOSS. There's actually two projects under consideration right now. One in a permitting process which is commonly referred to as the Madera Ranch Project or we call it the Old Pico Ranch, which would accommodate underground storage and aquifer of up to around 400,000 acre feet. We are—right now we are providing a permit so that the individual can have an opportunity to apply. We want to be sure that the science will work.

That particular ground is at 13,600 acres and it has not too far to move from there to the San Joaquin River. Much of what we're doing right now is dependent upon where we stand with the river and the restoration projects.

Second item, very quickly, there's a study proposed as part of a Prop 13 grant to study a groundwater banking project and what they refer to as gravity four and it's actually in the (phonetic) Elisa

Water District. That's just in its infancy and we don't know quite where that's going to go.

Mr. RADANOVICH. And then the discussion has been raising Friant Dam in San Joaquin as part of the CalFed project here.

Has there been much discussion regarding Rogers Crossing on the Kings River? That's not in your watershed.

Mr. VERN MOSS. I am aware that there is talk of a four foot increase to Friant to increase capacity. The last I heard that nothing had gone forward on that. I know that there was more progress on Shasta than on Friant.

Mr. RADANOVICH. Thank you.

Mr. CALVERT. Thank you. Mr. Dooley.

Mr. DOOLEY. Thank you. Dr. Sablan, it's good to see you here. I compliment you on the work that you've done in terms of providing not only health care for a lot of the farm worker families in that region, as well as the I-5 corridor in the work that you've done there. We're seeing some real benefits in terms of the ability to meet some of the real social and human costs that are affected there.

I guess one of the areas of this legislation that has received some attention deals with the assurances, and that is the portion which would try to insure that we would provide 70 percent of contracted water supply to contractors south of the Delta, which would obviously encompass the I-5 corridor.

I guess from your perspective, just counting the impact that it would have to your local economy, if you would have that certainty in a normal year, that 70 percent of deliveries.

Dr. SABLAN. Yes, of course, the farmers would be very, very happy with that. But I think, Congressman, like you mentioned, as far as business investment, I think that's the thing the people look at. What's the future of building homes in that area? What's the future of building tomato paste plants in that area, if it's going to be every single year that same uncertainty?

So I think that you are saying it exactly correctly that that's the thing that would give us the foundation to look for this type of economic development if we had that assurance that the farming industry would have its supply that's needed.

Mr. DOOLEY. Supervisor Moss, that provision obviously has a greater impact on Fresno County and Madera County.

Is that a provision that you would also support?

Mr. VERN MOSS. Would you restate it?

Mr. DOOLEY. The portion of the bill that deals with trying—that says that in normal years, which we have a criteria of normal rainfall years, that we would commit to try to provide 70 percent of water deliveries south of the Delta, with the provision that we wouldn't harm any other water user's interest.

Mr. VERN MOSS. Well, I think I'd support that, yes, Congressman.

Mr. DOOLEY. The other significant provision in the legislation deals with the investigation of potential water storage, both above ground as well as underground. And I was unclear in terms of the position of the Board of Supervisors in Madera County on studies that would investigate the potential of gravity four, is this—does

the board have a position on that? Are you supportive of a study going forward to understand the full potential of that?

Mr. VERN MOSS. At this particular point in time, the board does not have a position. It is agendized for Tuesday, item four on the agenda, and it will come from the Water Oversight Committee without recommendation just for consideration.

Mr. DOOLEY. Do you personally have a position on that?

Mr. VERN MOSS. I have not taken a position until I hear what testimony is going to be given. I have talked to Mr. Halcan (phonetic) in fact as late as yesterday to talk about some of the prospects of that and he was asking me the same question. I said until it comes before the board, I have not taken a position.

Mr. DOOLEY. Just for the record, someone who represents—I represent part of Kern County, too, and we were able to establish the Kern County water basin has the potential now to store a million acre feet of what we have almost filled up.

In a year such as this where we only are seeing about 45 percent of Federal deliveries and 25 percent of state deliveries, this has been one of the best investments we have made. Hopefully Madera County, as they look forward to this, can spend some time understanding the benefits that were accrued in Kern County both with the project on the Kern River or Kern Water Bank as well as some of the work that the syntropic irrigation has done just a little bit further north of there.

Mr. CALVERT. Ms. Napolitano.

Mrs. NAPOLITANO. Thank you, sir.

I'm very impressed, Dr. Sablan, by some of your background. Coming from a municipal citizen or a government spot before, I understand some of the issues that you're faced with. It is quite a difference between the metro area that I come from to the area that you represent and I'm sure that a lot of the issues are very much the same.

One of the questions that I would like to know whether or not you have underground water storage. Have you looked at what is happening to your area due to the pesticides that might affect your clients, your patients, and how does the city provide for cyclical drought delivery of water surfaces to your community? I'm not just talking farming. I'm talking about the residents.

Dr. SABLAN. Thank you. The City of Firebaugh has a good water supply underneath the clayed levels. We haven't had that problem with our own water supply. We don't use—unlike some of the other cities in the area, we've been lucky enough to have only well water to be used. Dos Palos north of us I believe is using surface water and enters exactly into the problems that you're talking about.

I think our position on the San Joaquin River affords us to have—we don't use San Joaquin River water, but affords us the replenishment of the wells that we've used traditionally and so our city water supply is in very good condition and has never, to my knowledge, been contaminated with pesticides.

Surface water is another whole complete problem. I think I don't understand this completely, but I think it has to do with the clay layer in that area.

Mrs. NAPOLITANO. The filters.

Dr. SABLAN. Yes, filters the water. We're in a good position as far as that is what I'm told.

Mrs. NAPOLITANO. You have no problems with your wells at all?

Dr. SABLAN. We haven't to this moment had one. We have five active wells right now. It sounds like a small amount, but that's enough to provide. And we also have room for expansion.

That was one of the parts that is very difficult in the I-5 business development corridor is to provide water services. Every imaginative tomato paste plant uses a lot of water. That's been an important infrastructure project that the Federal and state government has helped to provide that area is to provide water infrastructure. Right now fortunately enough we have the water supply to attract other industries.

Mrs. NAPOLITANO. Are you at any point utilizing or providing recycled water?

Dr. SABLAN. Yes. One of the tomato paste plants that we have, the Tomatec is the name it, we actually use that water for irrigation on the city's—the citizens refer to it as a sewer farm. It's not really a sewer farm. It's the land that was bought along with the sewer farm.

So that tomato washing water is used for irrigation of an alfalfa field. Interestingly enough, what came out of that was that that land has very little need for any type of fertilizer, pesticides because of that—the products that come—the natural products that come off the tomato. It's been an interesting project.

Mrs. NAPOLITANO. Very good. Mr. Moss, is there any areas that you have an issue with, the recycling of water or putting wells back into service that have been contaminated or closed?

Mr. VERN MOSS. We have no problem with the contaminated wells. I would make a comment, if it's appropriate. The concerns that local residents have had on the Madera Ranch Project has more to do with the aquifer and whether or not the science will work on it. That's why it's rather important that we pursue a permitting process, so that we're sure that it doesn't do damage to adjacent lands.

The concern of bringing 400,000 acres into an area for storage during wet season could very well cause a flow outward rather than downward and it's surrounded by permanent crops of fruit trees, which would be damaged. So we're waiting to see what the science is to see if it works for us.

Mrs. NAPOLITANO. One of the problems that we're beginning to face is that EPA is going to be mandating sanitation districts to bring forth treatment to recycle water. That is going to mean additional establishment of treatment plants for the fourth treatment, which will be in the billions of dollars and you need to—one of the things that I would want to see happen is that we can address that through this bill so that if it does happen, and we are mandated in California, that is, that we have the ability to assist municipalities that have treatment plants, be able to utilize that—the bill to assist in building or addressing the needs of that fourth treatment because if we're going to have to cut our water consumption by the year 2015, then we need to be able to make good use of the recycled water for everybody.

Thank you, sir.

Mr. CALVERT. Thank you. And I want to thank both of you for your excellent testimony and answering our questions. We appreciate your coming out here on a beautiful Saturday morning. With that we'll be introducing our next panel.

Our next panel—we're setting up the chairs. I think we're going to be splitting between the two areas here—is Mr. David Guy, the Executive Director of the Northern California Water Association; Mr. Tom Birmingham, the General Manager, General Counsel for the Westlands Water District; Mr. Richard Moss, General Manager of the Friant Water Users Authority; Mr. Dan Nelson, General Manager of the San Luis and Delta-Mendota Water Authority; Mr. Chris White, General Manager, Central California Irrigation District, San Joaquin River Exchange Contractors; and Mr. John Herrick, General Manager of South Delta Water Agency.

Mr. Guy, you may begin. I think you may have heard the 5-minute rule. Especially a panel of this size, please try to stay within the 5-minute rule. You may begin.

STATEMENT OF DAVID GUY, EXECUTIVE DIRECTOR, NORTHERN CALIFORNIA WATER ASSOCIATION

Mr. GUY. Thank you, Chairman Calvert. Members of the delegation, thank you for coming to Modesto today and the great Central Valley. I appreciate the opportunity to be here today and to provide a perspective on the northern part of the great Central Valley, the Sacramento Valley, and some of the great things that are going on in the Sacramento Valley.

I'm the executive director for the Northern California Water Association. We represent about 70 water suppliers throughout the Sacramento Valley irrigating about 850,000 acres.

You know about a lot of the great things that have gone on in the Sacramento Valley. I think all of you have been up there about one time or another and seen the progress that we have made to achieve water reliability and to provide benefits for the ecosystem and to protect the endangered fish in the Sacramento Valley as well as provide water for refuges.

Today I'd like to talk about an innovative program for the Sacramento Valley, which I believe is a very significant development and is really a new way of doing business in California.

I think you all are generally aware that in the last year we have been working with a lot of water users from throughout the state and one of the points that brought us together was what could have been a very ugly water rights proceeding before the State Water Resources Control Board. And rather than going to a proceeding where we killed each other, we decided to try to work together and to try to increase the water security for folks not only in the Sacramento Valley, but also in the remainder of the Central Valley, in Southern California and the Central Coast. What came out of this is what we are now calling the Sacramento Valley Water Management Agreement.

What that does is really give rise to this idea of integrated water management in the Sacramento Valley. That includes a range of things. It includes, of course, fish passage improvements, which you're generally aware of, water use efficiency. It includes new offstream storage at Sites Reservoir, an enlarged Shasta reservoir.

It talks about flood protection. It talks about environmental protection and a whole range of programs in an integrated manner.

We believe and we think we're going to be able to show here over the next several years that if we can manage the system in the Sacramento Valley in an integrated manner, that we will foremost, because of course, that is in our interest, we are going to be able to provide water security for people within the Sacramento Valley and for the environment and the refuges within the Sacramento Valley. And at the same time this will help improve the water supplies and the water quality in the Bay-Delta and that, of course, will benefit everybody in the rest of the state.

We are now developing work plans through this process to make this real and to try to—to flush this out a little bit and put it onto paper to show exactly what we mean. I think it's a very significant development.

We have a tremendous partnership, not only with the Bureau of Reclamation, DWR, in this process with a lot of the folks sitting around the dais right now, from again the San Joaquin Valley, from Central Coast and Southern California, as well as the Delta.

So we are very much looking forward to working in that integrated program. I think there's three things that I would like to suggest that I think are going to be important to make this integrated program a reality. I'll just touch on those very briefly.

The first is that I think this idea of empowering regional solutions is going to be critical. There's been a lot of discussion about regional solutions and I think this is a classic example of an opportunity to empower regional and local solutions to water in California. Of course, that's where the success has always been in California and this is no different.

The second thing, of course, is I think we need to make major investments in infrastructure and that I think goes without saying. If we're going to have this integrated program, we're going to need to have the investments that are necessary to move that program forward.

And then the third and the final piece of this I believe is we're going to need to have the regulatory streamlining and reform that I believe is necessary to put a program of this magnitude together and to be able to put all the pieces together in a coordinated and integrated fashion, so that we can in fact achieve all the multiple benefits we've talked about for the Sacramento Valley, for the environment, and for the water users in the rest of the state.

I want to commend you in H.R. 1985, all of you in your efforts to move this forward. I believe it's an excellent bill. We really look forward to working with you to make this bill a reality and thank you for your efforts and time you've been spending in the Central Valley and hope you'll continue to work with us in the Sacramento Valley to make our integrated program a reality.

[The prepared statement of Mr. Guy follows:]

Statement of David J. Guy, Executive Director, Northern California Water Association

Mr. Chairman and members of the Subcommittee, my name is David Guy. I am the Executive Director of the Northern California Water Association (NCWA). NCWA is a geographically diverse organization, extending from California's Coast Range to the Sierra Nevada foothills, and nearly 180 miles from Redding to Sac-

ramento. Our members rely on the waters of the Sacramento, Feather, Yuba and American Rivers, smaller tributaries and groundwater to irrigate nearly 850,000 acres that produce every type of food and fiber grown in the region. Many of our members also provide water supplies to state and federal wildlife refuges, and much of this land serves as important seasonal wetlands for migrating waterfowl, shorebirds and other wildlife.

We welcome the opportunity to provide the Northern California perspective on water security and to present both the opportunities and challenges we now face. The Subcommittee's interest in California water security is appropriate and very timely given the importance of a successful resolution to the environmental and water supply problems in the Sacramento San Joaquin River Delta and San Francisco Bay (Bay–Delta). The Bay–Delta is a tremendous economic and environmental resource to California and the nation, and there is much at stake in how we implement the numerous ecosystem restoration and water management actions.

For many years, the Sacramento Valley (the northern half of the Great Central Valley) has been targeted as the primary source of water to meet California's burgeoning demands. Water users and landowners in the Sacramento Valley have also faced restrictions under the Endangered Species Act (ESA), the Central Valley Project Improvement Act (CVPIA) and other environmental restrictions. These actions have posed many challenges for Northern California water users and their ability to provide secure water supplies for the farms, cities and wildlife refuges in Northern California. Rather than focus on these challenges (which we could do in painstaking detail), we believe it is more constructive to focus on the exciting solutions that are currently being advanced by and from within the Sacramento Valley. These projects or programs, if properly implemented, will go a long way to provide water security not only for Northern California, but for other regions in California as well.

AN INTEGRATED WATER MANAGEMENT PROGRAM FOR THE SACRAMENTO VALLEY WILL IMPROVE WATER SUPPLY, QUALITY AND RELIABILITY

Northern California water users have committed to help improve water supply reliability, water quality and environmental benefits. The Sacramento Valley's initiative and effort to help protect salmon and other aquatic species is unprecedented and is now recognized as one of the most exciting and progressive voluntary salmon restoration efforts in the United States. Today, more than a dozen NCWA members, representing over 500,000 acres of irrigable land, have either completed or are in various stages of developing screens to prevent fish entrainment at their diversions. Many NCWA members have also initiated far-reaching efforts to refurbish fish ladders, construct siphons, remove dams, create habitat conservation plans and implement other habitat improvement projects to enhance the environment, while at the same time improving water supply reliability.

Additionally, NCWA and the Northern California water users have embarked on an integrated water management program that has broad support from water suppliers and local governments throughout the Sacramento Valley. This integrated program includes these fish passage improvements (fish screens and siphons), groundwater management, evaluation of the Sites off-stream reservoir, flood protection, water use efficiency programs, potential expanded storage in Lake Shasta, intra-regional water transfers and exchanges, and watershed management. (See attached map.)

During the past year this integrated program led to an unprecedented water rights settlement among water users throughout California. This settlement, now known as the Sacramento Valley Water Management Agreement, and the ensuing integrated water management program, avoided the extremely contentious Phase 8 Bay–Delta water rights proceedings before the State Water Resources Control Board. The parties to the agreement include NCWA, the Bureau of Reclamation (BOR), the Department of Water Resources (DWR), the federal contractors in the San Luis and Delta–Mendota Water Authority, the State Water Contractors, and the Contra Costa Water District. This proceeding would have pitted these parties from throughout the state against each other. This integrated program will now serve as the heart of a regional strategy for the Sacramento Valley.

The Sacramento Valley Water Management Agreement and integrated water management program focus on meeting 100% of the water supply demands within the Sacramento Valley during all year types, both now and into the future. Northern California water users believe that, once the full demands within the Sacramento Valley are met, this integrated program will help make water supplies available for use in and beyond the Bay–Delta to meet water quality standards, and provide for export water users in the San Joaquin Valley, Southern California, the

Central Coast, and as assets for the Environmental Water Account (EWA) and other environmental programs.

The parties to the agreement will, during the next five months, prepare a joint work plan for short-term Sacramento Valley water management projects to implement the agreement that will describe this integrated program in more detail. Work plans on longer-term projects will follow.

SIGNIFICANT EFFORTS ARE NOW NECESSARY TO IMPROVE WATER SECURITY FOR THE SACRAMENTO VALLEY AND CALIFORNIA.

To improve water security for the Sacramento Valley, leadership is now critical to empower regional solutions, provide for infrastructure throughout California and streamline and reform the regulatory process to accomplish these goals.

• Empower a Regional Solution For the Sacramento Valley

California history has shown that solutions to water problems in the state have typically been successful at the local and regional level. Very few solutions fit every part of our extremely diverse state. Put differently, there have been few instances when a top-down, one-size-fits all, bureaucratic policy or law has helped the state or has been implemented. Instead, California water users are now poised to advance a series of regional solutions and local partnerships that will serve California's needs for many years to come. The integrated program described above is an exciting example of a regional solution for the Sacramento Valley, but it can only be implemented with state and federal leadership empowering local interests to take the actions necessary for these programs to succeed. Any bureaucratic efforts to impose top-down solutions, like past efforts, are doomed to failure and have the potential to destroy the tremendous progress that has been made on these regional solutions.

Like the Sacramento Valley integrated program described above, every regional strategy will include the appropriate mix of infrastructure needs, storage, conveyance, water transfers and exchanges, fish passage improvements, water conservation and efficiency, groundwater management, flood protection, watershed management and environmental improvements. To fully empower these regional solutions requires state and federal funding and the regulatory streamlining necessary to implement these programs.

• Provide for Infrastructure Needs in California

The California Business Roundtable has estimated that California must invest $90 billion on infrastructure over the next ten years in order to meet the demands of a state growing by nearly 600,000 people a year. Perhaps the most critical infrastructure elements include the ability to store, convey and better manage our water resources on behalf of cities, farms, and fish and wildlife.

To provide for these water infrastructure needs will require an aggressive funding program to facilitate and fully empower regional solutions. There is an important role for both Congress and the state legislature to ensure that appropriate funding is allocated in a manner that achieves noticeable results. It is also important that the regional and local entities are accountable for using these funds to implement the regional solutions in an effective and cost-efficient manner.

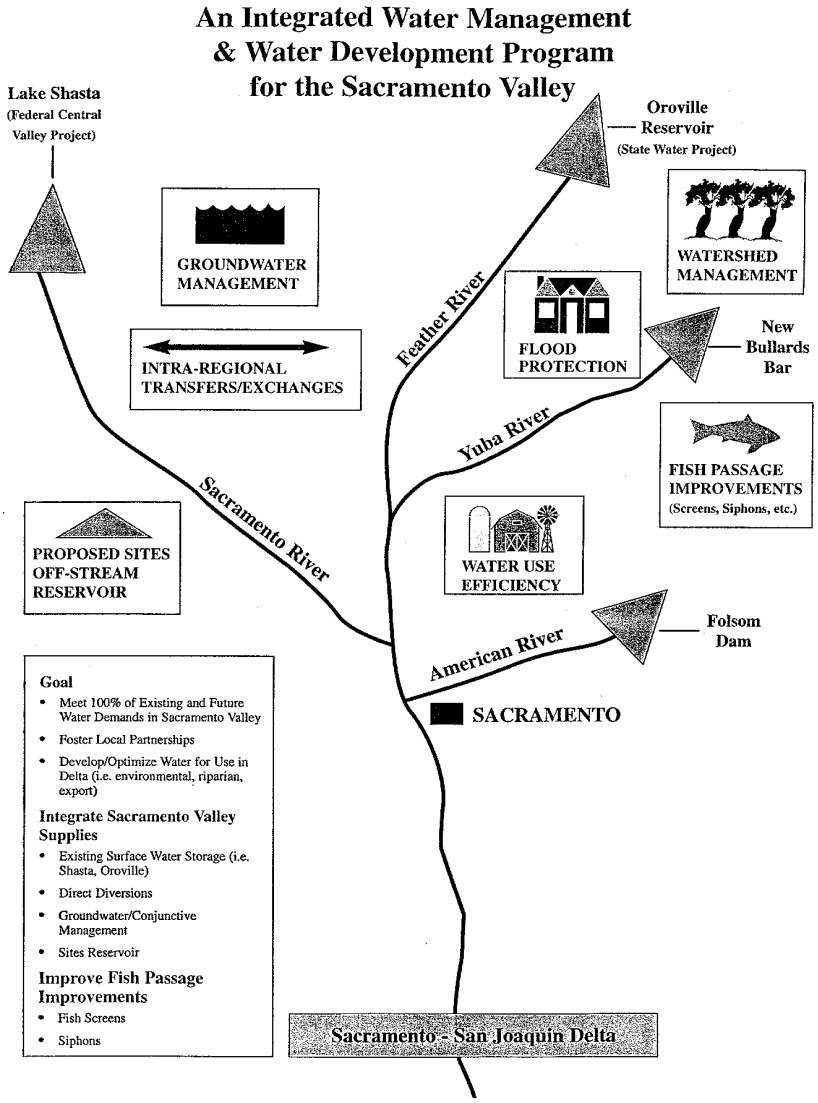
• Streamline and Reform the Regulatory Process

With nearly18 federal and state agencies under the respective executive branches that dictate California water policy, it is critical to coordinate and ultimately streamline the plethora of agencies with jurisdiction over water resources in California.

The framework to create CALFED in June 1994 called for cooperation and collaboration between the federal and state agencies that oversee water in California. It is essential that these agencies continue to work together in this manner. Over the past 7 years, CALFED has evolved from a concept to streamline agency efforts to a massive bureaucratic program. For CALFED to be successful as it transitions from a planning program to an implementation agency, it must move from a top-down bureaucratic organization to an organization that facilitates and fosters a series of regional strategies with local control and governance. Most notably, it must streamline the regulatory process to assure that these programs will be implemented. Specific examples include the facilitation of intra- regional water transfers and exchanges and expedited permitting by the U.S. Army Corps of Engineers and Environmental Protection Agency.

Significantly, this means that CALFED and its member agencies will serve in a more limited, albeit more effective role, to advance water and environmental policy in the state. It is also means that CALFED will serve a critical role to coordinate regional strategies to ensure that they fit together in a manner that provides statewide benefits, and also provide a broad-based governance strategy and oversight capability to ensure appropriate and efficient implementation of all CALFED program elements.

[An attachment to Mr. Guy's statement follows:]



Mr. CALVERT. Thank you, Mr. Guy.
Mr. Birmingham.

STATEMENT OF TOM BIRMINGHAM, GENERAL MANAGER/ GENERAL COUNSEL, WESTLANDS WATER DISTRICT

Mr. BIRMINGHAM. Mr. Chairman, members of the Committee, good morning. I appreciate the opportunity to appear before you today to discuss an issue which is of vital importance to the State of California.

At the outset thank you for introducing H.R. 1985. Westlands strongly supports this legislation and is grateful for the leadership that each of you has demonstrated through the introduction of this bill. It is apparent from the bill that you and your staff worked hard to develop legislation that would insure that the CalFed program is implemented in a balanced, innovative manner that links progress on environmental restoration and enhancement with progress on water supply and water qualities improvements.

Westland's Water District serves irrigation water to 605,000 acres of land on the West side of the San Joaquin Valley and Fresno and Kings counties. The demand for irrigation water in Westlands is 1.4 million acre-feet per year.

Westlands is one of the most fertile, productive and diversified farming regions in the nation. Westlands farmers produce over 50 different crops worth more than a billion dollars. Like every other region of the area west the ability of our farmers to produce crops and generate economic activity depends upon the availability of an adequate reliable source of water.

Historically demand in Westlands has been satisfied through the use of groundwater, water made available from the Central Valley Project pursuant to contracts with the United States for the delivery of 1.5 million acre feet and annual water transfers.

Prior to 1981 our water supplies were reduced only once in the CVP, during the 1977 drought period, 1977 being the driest period in California on record. However, in 1991 a new era of project operations began.

In 1991, the winter-Chinook salmon was listed as a threatened species and new limitations were imposed on operation of the Central Valley Project. In 1992, the Delta smelt was listed as a threatened species and again new limitations were imposed on the operations of the CVP. In 1992 the Central Valley Project Improvement Act was enacted.

Although one of the purposes of this act was to achieve a reasonable balance among competing demands for the Central Valley uses of water, the act has been implemented in a way that has added to the environment. This water was taken away from ranches, farmers and businesses that relied upon its availability for decades.

Moreover, the entire burden of the water supply reductions resulting from implementation of the Central Valley Project Improvement Act have been borne entirely by the West side of the San Joaquin Valley. For this reason the reliability of water supplies for agricultural water users on the West side of the valley has gone from 92 percent on average in 1991 to less than 50 percent today.

The impact of Implementing CVPIA is best demonstrated by the allocations to contractors last year, the sixth year of the wettest

period on record in California. Last year CVP contractors south of the Delta received only 65 percent allocation notwithstanding the optimum water supply conditions that existed in this state.

Governor Gray Davis and former Secretary Bruce Babbitt recognized the disproportionate nature of these actions in June 2000 when they signed the document entitled, "California's Water Future, A Framework For Action." The framework accurately noted that agricultural water contractors had been disproportionately affected by regulatory actions.

The key commitment in the Framework for Action was a provision that in normal years south-of-Delta Central Valley agricultural contractors increased water supplies from 60 to 70 percent.

Westlands and other San Joaquin Valley agricultural contractors supported the framework based upon this commitment, but somehow between signing the Framework for Action in June 2000 and the issuance of the Record of Decision in August 2000, that commitment became ambiguous.

In response to diminished water supplies from the project, Westlands farmers have substantially modified their irrigation techniques. First, unreasonable reliance has been placed upon groundwater. For instance, last year farmers in Westlands extracted more than 337,000 acre feet of water for irrigation. This is more than double the safe yield of the project. Excuse me, of the groundwater basin.

In addition, farmers in Westlands have gone to more efficient water irrigation techniques and today farmers in Westlands have one of the highest seasonal efficiency applications in the region, over 83 percent.

The loss of water for irrigation, as you've heard here today, also means loss of jobs, both on farm jobs and jobs in the communities that provide goods and services to farmers in Westlands. For instance, this year, Westlands estimates that because of inadequate water supplies more than 70,000 acres will be fallowed. This represents a loss of 105 million dollars in crop values and a loss of 367 million dollars to the regional economy. But in human terms it means a loss of more than 875 on farm jobs and an unknown number of jobs in the local communities.

As I indicated at the beginning of my remarks, the CalFed program has the potential to be a great benefit to the State of California. Congress can help solve California's water problem by authorizing a CalFed program that will give equal priority to restoring Bay-Delta watersheds, restoring water supplies that have been lost over the last decades and protecting and enhancing water quality from municipal investment agencies.

In its present form H.R. 1985 will ensure that the CalFed program is implemented in a balanced manner. Westlands looks forward to working with the members of the Committee toward a passage of this important legislation.

Thank you, and I would be happy to answer any questions that you might have.

The prepared statement of Mr. Birmingham follows:]

Statement of Thomas W. Birmingham, General Manager/General Counsel, Westlands Water District

Mr. Chairman, members of the Committee: Good morning. I am Thomas Birmingham, General Manager/General Counsel of Westlands Water District, and I appreciate the opportunity to appear before you today to discuss an issue of vital importance to the State of California, indeed, the nation.

At the outset, I would like to extend our appreciation for your introduction of H.R. 1985, the Western Water Enhancement Security Act. Westlands strongly supports this legislation and is grateful for the leadership that you and your colleagues have demonstrated through introduction of this bill. This legislation would ensure that the CALFED Program is implemented in a balanced and innovative manner that links progress on environmental restoration and enhancement with progress on water supply and water quality improvements.

Particularly important to west side agricultural water users are the bill's provisions ensuring a 70% allocation to south-of–Delta agricultural Central Valley Project service contractors in normal years, increasing limits on pumping at the Harvey O. Banks Pumping Plant to 8200 cubic feet per second pursuant to the Record of Decision, and providing direction on the management of the Environmental Water Account. Inclusion of these provisions in H.R. 1985 will help sustain agriculture in the San Joaquin Valley, an industry that provides significant benefit to the state and the nation.

Westlands Water District is a California water district that serves irrigation water to a 605,000 acre area on the west side of the San Joaquin Valley in Fresno and Kings counties. The District averages 15 miles in width and is 70 miles long. The demand for irrigation water in Westlands is 1.4 million acre-feet per year. Historically, that demand has been satisfied through the use of groundwater, water made available to the District from the Central Valley Project under contracts with the United States for the delivery of 1.15 million acre-feet, and annual transfers of water from other water agencies.

Westlands is one of the most fertile, productive and diversified farming regions in the nation. Rich soil, a good climate, and innovative farm management have helped make the area served by Westlands one of the most productive farming areas in the San Joaquin Valley and the nation. Westlands farmers produce over 50 different commercial fiber and food crops sold for the fresh, dry, canned or frozen food markets; domestic and export. A list of the crops grown in the District last year and the acres planted to each crop is attached hereto as Appendix A.

Westlands estimates that the value of crops produced by farmers in the District exceeds $1 billion per year. Using a well-accepted economic assumption that every $1 produced on-farm generates another $3.50 in the economy, Westlands farmers produce nearly $3.5 billion in economic activity annually. Like every other region of the arid west, the ability of our farmers to produce crops and generate this economic activity depends on the availability of an adequate, reliable source of water.

As indicated above, farmers in Westlands have relied on three sources of water: (1) groundwater; (2) water made available to Westlands from the Central Valley Project under its water service contracts with the United States; and (3) annual water transfers. Water deliveries from the Project began in 1967. Until 1991, those deliveries were reliable, and in fact were the principal source of water for irrigation within Westland's. From 1967 to 1991, our water supplies were reduced only two times; in 1977 and 1978. This reduction was a result of the extraordinary drought conditions in 1977, the driest year on record in California. However, in 1991 a new era of Project operations began.

In 1991, the winter–Chinook salmon was listed as a threatened species under the federal Endangered Species Act. Because of this listing, new restrictions were imposed on the Project. In 1992, the Delta smelt was listed as a threatened species under the federal Endangered Species Act, and additional restrictions were imposed on the Project to provide protection to this listed species. Also in 1992, the Central Valley Project Improvement Act was passed by Congress and signed into law by former President George Bush.

The purposes of this Act were:

(a) to protect, restore, and enhance fish, wildlife, and associated habitats in the Central Valley and Trinity River basins of California;
(b) to address impacts of the Central Valley Project on fish, wildlife and associated habitats;
(c) to improve the operational flexibility of the Central Valley Project;
(d) to increase water-related benefits provided by the Central Valley Project to the State of California through expanded use of voluntary water transfers and improved water conservation;

(e) to contribute to the State of California's interim and long-term efforts to protect the San Francisco Bay/Sacramento–San Joaquin Delta Estuary;

(f) to achieve a reasonable balance among competing demands for use of Central Valley Project water, including the requirements of fish and wildlife, agricultural, municipal and industrial and power contractors.

The CVPIA has been implemented by the Department of the Interior in a manner that has reallocated more than 1,000,000 acre-feet of Project water away from farms, ranches and business that relied upon this water for decades to the environment—for the restoration and enhancement of fish and wildlife. Moreover, virtually all of the water supply reductions that have resulted from implementation of the Act have been imposed on south-of–Delta Central Valley Project agricultural water service contractors. The reliability of water supplies for these contractors, including Westlands, has gone from 92% on average in 1991 to 50% today. The impact of implementing the CVPIA is best demonstrated by allocations to south-of–Delta agricultural water service contractors last year, the sixth wet year of one of the wettest periods on record. In 2000, these contractors received only a 65% allocation. The disproportionate impact of these regulatory requirements on the water supplies of west side farmers was recognized by Governor Gray Davis and former Secretary of the Interior Bruce Babbitt in June 2000, when they signed the CALFED document entitled "California's Water Future, A Framework for Action."

The Framework for Action correctly noted that Westlands and other San Joaquin Valley agricultural water contractors have been "disproportionately affected by recent regulatory actions." A key commitment in the Framework was a provision stating that in a normal water year, south-of–Delta Central Valley Project agricultural contractors would receive 65 to 70 percent of their contractual water supplies.

Westlands and other San Joaquin Valley agricultural contractors supported the Framework for Action based on this commitment. But somehow between the signing of the Framework for Action and the issuing of the formal Record of Decision, that commitment was amended, and Westlands and other contractors lost more of their allocation.

In response to diminished water supplies from the Central Valley Project, Westlands' farmers have substantially modified their irrigation techniques. First, more reliance has been placed on the use of groundwater. In 2000, farmers in Westlands pumped more than 337,000 acre-feet of groundwater for irrigation. This is more than double the USGS estimate of the safe yield of the groundwater basin, 135,000 acre-feet. The extent to which farmers relied on groundwater last year is disturbing because precipitation and runoff in 2000 were above normal. Sound principals of conjunctive use dictate that in wet or above normal years, groundwater use should be reduced to allow the groundwater table to recover.

To maximize the limited supplies, farmers in Westlands have also converted to more efficient irrigation systems. The conversion to more efficient irrigation methods is depicted in the following table:

PERCENT OF LANDS IRRIGATED					
TYPE OF SYSTEM	1985	1990	1996	1999	2000
Surface					
Furrow	60	38	34	30	28
Border Strip	3	5	2	2	2
Combination Sprinkler/Furrow	15	38	43	44	43
Pressurized					
Sprinkler	21	16	15	13	14
Drip/Trickle	1	3	6	11	13

Since 1996 Westlands has encouraged this conversion to more efficient irrigation techniques by offering low-interest loans to its farmers for the purchase of more efficient irrigation systems. By using improved plant varieties, sprinklers, drip and micro-irrigation, improved furrow and sprinkler management and water recycling, Westlands farmers continue to have one of the highest seasonal application efficiency ratings in the nation, over 83 percent District-wide.

The value of water from the Central Valley Project includes the production value of the water, the employment generated by farming of land irrigated with the water and the income generated for the District by water charges based on the water delivered. The average quantity of water needed to produce a crop on land within the District is approximately 2.5 acre-feet/acre. Therefore, unless there is a replacement supply, for every 1,000 acre-feet of CVP water supply reduction, approximately 400

acres of land must be removed from production. A conservative estimate of average annual gross crop value is $1,500 per harvested acre of land within the District. So the lost revenue resulting from the fallowing of 400 acres is approximately $600,000. And using the same economic assumption that every $1 produced on-farm generates another $3.50 in the economy, this impact to the broader economy is $2.1 million. In addition, approximately one full time farm worker is associated with every 80 acres of land in production. Therefore, for that same 400 acres removed from production, five people will probably become or remain unemployed.

This year Westlands has received a 45% allocation of its Project water supply, and it estimates that because of inadequate water supplies, more than 70,000 acres will be fallowed. This represents a loss of $105,000,000 in lost crop values and a loss of $367,000,000 to the regional economy. In human terms, it means a loss of 875 on-farm jobs, and an unknown number of jobs in the communities and businesses that provide services and equipment to farmers in Westlands.

This analysis is consistent with a 1996 study by the California Institute of Rural Studies entitled 93640 at Risk: Farmers, Workers and Townspeople in an Era of Water Uncertainty. This profound study reported a decline in farm and packing wage incomes of $4.8 million, and the loss of 360 to 720 farm jobs due to drought induced changes in crops during a six-year period from 1987–92. The study also showed an 11 percent drop in retail sales, and a drop of nearly 30 percent in farmland values compared to increased farmland values in other areas of Fresno County.

The CALFED Program has the potential to solve California's greatest water problem. To succeed, the Program must be implemented in a balanced, innovative manner that links progress on water supply improvements with progress on environmental restoration and progress on water quality improvements. This is critically important because notwithstanding the potential benefits to all Californians that could result from the CALFED Program, if it is implemented in a way that gives priority to any one of its many purposes, the Program will fail.

Congress can help CALFED solve California's water problem, and in so doing, restore some of the water supplies that Westlands has lost over the last decade. In its present form H.R. 1985 will ensure the CALFED Program is implemented in a balanced manner that will ensure success. Westlands looks forward to working with the members of the Committee and its staff toward passage of this important legislation.

Thank you.

[An attachment to Mr. Birmingham's statement follows:]

APPENDIX A

WESTLANDS WATER DISTRICT
2000 Crop Acreage Report

Alfalfa-Hay	13,304
Alfalfa-Seed	8,915
Almonds	29,178
Apples	1,127
Apricots	604
Artichokes	32
Asparagus	866
Barley	6,851
Beans-Dry	1,106
Beans-Garbanzo	8,082
Beans-Green	1,247
Broccoli	2,412
Cabbage	27
Cantaloupes	18,193
Carrots-Bulk	328
Cauliflower	29
Cherries	123
Corn-Field	694
Corn-Sweet	4,240
Corn Nuts	179
Cotton-Lint-Acala/Upland	180,141
Cotton-Lint-Pima	28,024
Cucumbers	214
Eucalyptus	59
Garlic	14,064
Grains-Sorghum	1,259
Grapefruit	38
Grapes-Table	1,014
Grapes-Wine	8,776
Honeydews	1,732
Jojoba	11
Lettuce-Fall	10,400
Lettuce-Spring	13,691
Melons-Mixed	642
Nectarines	32
Oats	284
Olives	312
Onions-Dehy.	10,471
Onions-Fresh	2,410
Oranges	216
Parsley	421
Pasture	1,554
Peaches	226
Peppers-Misc.	1,747
Pistachios	5,131
Pomegranates	1,178
Potatoes	29
Prunes	149
Pumpkins	62
Radicchio	4
Safflower	2,209
Seed Crop-Misc.	1,630
Sugar Beets	8,543
Tangerines	50
Tomatoes-Fresh	3,235
Tomatoes-Proc.	94,982
Walnuts	459
Watermelons	1,399
Wheat	28,436
NB Trees & Vines	7,077
Fallow	46,748
Nonharvested	850
SUBTOTAL	**564,191**
DOUBLE CROP	13.255
TOTAL	577,446

Mr. CALVERT. Thank you, John. Mr. Moss.

STATEMENT OF RICHARD MOSS, GENERAL MANAGER, FRIANT WATER USERS AUTHORITY

Mr. RICHARD MOSS. Mr. Calvert, Chairman Calvert and members of the Committee, I as well wanted to welcome you to the Central Valley and thank you very much for taking time out of your potential holiday weekend to spend with us and to discuss the needs for water security in the region.

I'm Richard Moss. I'm the general manager at least for the time being of the Friant Water Users Authority which represents the million acres on the east side of San Joaquin Valley. I'm an engineer by trade and I couldn't do this without a map to speak to, so if you'll indulge me for a second.

It's important for you to understand how the Friant division fits within the context of the Central Valley. The area in pink here is the Friant Division of the CVP served by Millerton Lake on the San Joaquin River to the Madera canal that serves Madera County and the Friant Canal that serves the County of Fresno, Tulare and Kern; the number one, number two, number three producing counties in the nation.

The Friant Division was predicated on, as I mentioned, the development of water from Friant Dam. When Congress authorized the construction of Friant Dam in 1939 and built the dam in 1945 one of the things that it did was extirpate the last remaining salmon run that existed on the San Joaquin River, which was the most furthest extent the Chinook salmon would travel in terms of spawning in the area, which is currently under the Friant Dam. So it's important for you to understand that in essence this reach of the river from here all the way down to the Merced for the most part is dry with the exception of water that may be available in flood years.

The reason for my bringing that point up is to be able to discuss with you today the—what we see as the most significant threat to our water supply security to that one million acres of and four billion dollar agricultural economy of the Friant Division.

That biggest threat I think actually can be turned into a very big opportunity for all of us. And really that is that rewatering and the reestablishment of the salmon fishery in the San Joaquin River below the Friant Dam.

We've been involved in litigation with the environmental community since 1988. We took the opportunity to put a stay to that litigation here a couple of years ago in an effort to try to move toward being cooperative and finding a way to resolve this issue of putting a salmon run back in the San Joaquin River in a way that keeps our growers whole from a water supply and cost standpoint. We've actually made great progress in pulling that program together.

We have two sets of studies underway with a lot of help from both the state and Federal Government in terms of funding, but those studies will study what it's going to take to put the fish back in the river from a biological and hydrological standpoint. And the other study is where is the water going to come from to meet this new need for river outflow.

So we're progressing with those studies and we're intending them to be completed probably within the next year, which will allow us then to put together a plan for restoration that we hope can get broader and broader acceptance.

The Water Enhancement Security Act and CalFed in general has been very supportive of our efforts and needs to continue to be supportive of our efforts. The CalFed Record of Decision has a major component in it for San Joaquin River restoration but it doesn't go all the way in terms of potentially restoring salmon to our part of the river. So we're—we see a need or a gap—to fill the gap in terms of funding for river restoration ultimately and we're very pleased to see the competitive grants program in the bill in a hope that aspect of the bill can be—the Water Enhancement Security Act can fill that gap in terms of funding to bring us to a program of complete river restoration.

We're obviously—given the fact that if we're trying to return an anadromous fishery to the upper San Joaquin River, we need a robust program of ecosystem improvement in the Delta itself. These fish are going to have to travel all the way down the river in and through to the Delta, out the bay and to the ocean if they are going to have a successful restoration program of salmon. So we need a healthy Delta, a viable ecosystem there in order to maintain that fishery as it moves all the way through the system.

So funding CalFed, getting a robust ecosystem restoration program is very important to Friant Division in terms of ultimately making our salmon recovery project well.

We are concerned that in establishing—that there not be anything in the bill that would establish priorities or cause problems for our effort in terms of restoration work. We see that as a real potential of upsetting some delicate priorities in terms of existing CVP operations and setting out some mandates that will be very difficult to fulfill in terms of assurances. We would just provide that caution to you as you go forward.

I think, as you're well aware, Friant Water Users Authority have come out in strong support of the Water Security and Water Enhancement Security Act and we do look very much forward to continuing to work with this Committee and all of you. We very much appreciate your leadership in pulling this bill together and very much hope it can be a success. We're pleased to answer any questions.

Mr. CALVERT. Thank you, Mr. Moss.

The prepared statement of Richard Moss follows:]

Statement of Richard M. Moss, General Manager, Friant Water Users Authority

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE:

I very much appreciate being given the opportunity to testify before the Subcommittee to provide responses to your questions about the state of our water supply reliability in the Friant Division of the federal Central Valley Project ("CVP"), the actions or activities we have undertaken to improve that reliability and the assistance that federal legislation may be able to provide. I am testifying today as the General Manager of the Friant Water Users Authority and as a small citrus grower in the Friant Division service area.

I provided testimony to this Committee in March of last year in which I laid out the hope and the expectations of what water users in our service area would derive from a CalFed plan that was, at the time, deep in development/negotiation between the federal Clinton administration and the California Davis administration. A lot

has happened since March 2000. A much better understanding of the blueprint for the CalFed actions anticipated over the next several years is now in place. Thus, I also intend to update you herein with our most current views of the CalFed Program and how it should reauthorized. In that regard, I have attached as Exhibit A to my testimony the policy document adopted by the Friant Water Users Authority Board of Directors that provides these views in summary policy form. Please forgive me if some of this testimony covers ground I touched upon in previous testimony.

Introduction

I am Richard M. Moss, the General Manager of the Friant Water Users Authority. The Friant Water Users Authority is a joint powers authority formed under state law comprised of 25 member agencies that all get water from the Friant Division of the CVP.

The Friant Division service area is comprised of approximately 1 million acres of the world's richest farmland. It ranges from the southern part of Merced County, all the way to the Grapevine in Kern County. The majority of the service area is in Madera, Fresno, Tulare and Kern counties. This one-million-acre area annually produces about $4 billion in gross agricultural production. We grow a tremendous variety of crops. The majority of the area is dedicated to permanent plantings of grapes, nuts, tree fruit and citrus. We also have a significant amount of row and field crops, as well as leading the nation in dairy production. This area is truly unique in its quality of agriculture and in its ability to produce all of this on small family farms that average approximately 100 acres in size. The area is also renowned for its highly efficient use of irrigation water, having been a "hot bed" for the development of drip and low volume irrigation technology. We can boast of some of the highest irrigation efficiencies found anywhere in the world.

The Friant Division of the CVP consists of Friant Dam and Millerton Lake on the San Joaquin River northeast of Fresno, the 152-mile Friant–Kern Canal that runs south all the way to Bakersfield and the 36-mile Madera Canal that runs north to the Chowchilla River. The Friant Division of the CVP annually delivers approximately 1.5 million acre-feet of water. This water supply is principally used as a supplemental water supply, providing only 1.5 acre-feet per acre on average. However, there are some parts of the service area that rely totally on the Friant Division water as their sole source of supply. The area is blessed with good quality groundwater aquifers. Groundwater is the firm source of supply for the majority of the service area. The Friant Division is unique in the west in that it employs a two-class system of water deliveries. The Class 1 water is the first water to develop behind Friant Dam and is delivered to those parts of the service area that have limited or no access to groundwater supplies. The Class 2 water develops only after the Class 1 demands have been met and is delivered to those parts of the service area that can rely on groundwater. Class 2 water is typically used to replenish the groundwater through "in-lieu" recharge—providing growers with surface water in-lieu of using their wells, and through direct recharge—percolating water in recharge basins, natural water ways and unlined canals into the underground aquifers. The Friant Division has been in service for 50 years and has been successful in arresting the serious condition of groundwater overdraft that existed prior to the project. It should be noted, however, that a condition of critical groundwater overdraft still exists in parts of the service area and in neighboring areas in the southern San Joaquin Valley.

The majority of the water rights to the San Joaquin River allowing for the diversion of water at Friant Dam were obtained by the U.S. Bureau of Reclamation through purchase and exchange agreements with the individuals and entities that held those rights at the time the Friant Division was developed. The single largest of these agreements requires annual delivery of 840,000 acre-feet of water to the central San Joaquin Valley near Mendota (commonly referred to as the Exchange Contract). Thus, the Friant Division is dependent upon other features of the CVP, including Shasta Dam, the Tracy Pumping Plant and the Delta–Mendota Canal, to facilitate this required exchange. It is important to note that if for some reason the U.S. Bureau of Reclamation is unable to meet the demands of the Exchange Contract out of Delta export supplies, the Exchange Contract provides for the release of water from Friant Dam to meet Exchange Contractor demands.

Factors Leading to Challenges that California is Facing Today in Regards to Water Supply, Quality and Reliability

The Committee has asked about what I believe are the factors that led to the water challenges we face today in California.

There are a number of factors that have led to the challenges, more accurately the crisis, we are facing in terms of a chronic water shortage for the state and in particularly for the San Joaquin Valley as a region.

The state population growth is an underlying force that continues to drive the need for developing additional water supplies. Yet, we have placed very few new water projects on line over the past twenty years. This lack of new water supply infrastructure to meet growing population needs means that we have had to live off of the "extra" capacity of the system that our forefathers designed and built 30, 40 or 50 years ago. That extra capacity is gone. There is now very limited ability to weather a one or two year drought, much less a drought comparable to even the most recent drought of the late 1980's and early 1990's.

Beyond the lack of new construction of water supply facilities, are the needs associated with the development of a new environmental ethic in the state and the nation that has sought to address a perceived lack of consideration given to the environment with the construction of much of our water supply system. I remember vividly discussing with my Central Valley Project manager counterparts how we were going to share the remaining unallocated yield of the CVP of some 1.2 million acre-feet as short a time ago as in 1989. Since that time, we have had the passage and implementation of the Central Valley Project Improvement Act and other regulatory actions to protect and enhance the environment that have resulted in less and less water being available for human uses, including agricultural production. A great deal of this lessening water supply impact has come to rest on the San Joaquin Valley as a region. Water supplies that were historically very dependable are now very unreliable. The region suffers from a well-documented groundwater overdraft that has been significantly worsened as a result of lessening availability of surface water supplies.

The reliability of Friant Division water supplies is currently at risk as a result of a couple of major actions or activities.

In the first, litigation brought in 1988 by a number of environmental and fishing organizations seeks to return sufficient flow to the upper mainstem of the San Joaquin River for the restoration of a salmon fishery. Estimates of the need for additional water to restore this fishery range from 150,000 acre-feet to some 600,000 acre-feet per year on the average. If Friant water users were ordered by the courts to release existing supplies for this purpose, it obviously would have a major impact on the availability of water to Friant Division water users unless additional water supplies were developed to meet this need. It is important to note that a stay to this litigation was developed by the parties to the action in November of 1999 that allowed the parties a limited period of time to explore ways of restoring flow and natural processes to the upper mainstem of the San Joaquin River which would provide for the restoration of a fishery while not adversely impacting the available water supply or cost of water to Friant water users. The development of a plan of restoration has been progressing for a year, with study results expected to be available at the end of this year or early next year.

The second risk to Friant Division water supplies lies within the fact that the region is now chronically water short. Generally, those areas of the San Joaquin Valley that were the last to develop their land and their rights to water are the first to be shorted when the inevitable droughts occur. In particular, with the loss of water supply reliability of waters being exported out of the Sacramento/San Joaquin River Delta, some of the water users served by the Delta export pumps apparently feel compelled to attack the water rights and water supplies of their neighbors within the region. These attacks have taken the form of several legal challenges to CVP operations or other legal maneuvering to avail themselves of the very limited water supplies that exist for the balance of the region. It is important to note that not everyone suffering from the water supply cutbacks has taken this aggressive approach. Many, such as the Kern County Water Agency and others, look to a more cooperative approach to dealing with their water shortages; relying upon creativity and partnerships as compared to litigation and divisiveness. The legal challenges and attacks on our continued beneficial use of Friant Division water supplies have consistently been defeated. However, the cost of defending these claims has been extraordinary, both monetarily and in terms of the uncertainty and acrimony created.

There also exists a threat to the continued use of the available water supplies for our agricultural economy that are driven by our own regional growth. The San Joaquin Valley is one of the fastest growing regions in the state. Balancing urban area growth with maintenance of the most productive agricultural region in the world presents constant challenges. Keeping prime farmland in production next to burgeoning cities is becoming more and more difficult. Moving growth to non-irrigated lands, like the San Joaquin Valley's foothills, can only be accomplished if the new development brings a water supply with it. Given the region's already chronically

water short condition, where will this water supply come from unless new supplies are developed?

Actions and Measures that Friant Water Users Have Taken to Improve Our Water Supply, Quality and Reliability

Friant water users believe strongly in joining with others to try and create mutually beneficial partnerships that address our problems and the problems of others.

If you were to have asked what the greatest threat to Friant Division water supplies was four years ago, I would have said it was the potential of an adverse outcome in the effort to allocate the responsibility for meeting Bay/Delta water quality standards. The stage was set for a massive fight before the California State Water Resources Control Board between the major water users on the San Joaquin River upstream of the point where it enters the Bay/Delta, including entities such as Modesto Irrigation District, Turlock Irrigation District, Merced Irrigation District, the City and County of San Francisco, Delta Export interests, Friant water users and others. Coming out of the1994 Bay/Delta Accord, the California State Water Resources Control Board was charged with allocating the responsibility for meeting the flow and water quality standards to the water right holders for waters tributary to the Bay/Delta. On the San Joaquin River, the responsibility for meeting the new standards was negotiated and agreed to by the major water right holders on the river. This agreement is known as the San Joaquin River Agreement and was formally adopted by the State Board in December 1999. The Friant Water Users Authority, on behalf of the Friant Division districts, was a major contributor towards the development of this agreement. This agreement provides for a twelve-year timeframe to test theories of river flow augmentation combined with export pumping regimes and operation of a barrier at the head of the Old River Channel, designed to provide the greatest benefit, in terms of survival, for fall run Chinook salmon. The technical aspects of the San Joaquin River Agreement are known as the Vernalis Adaptive Management Plan or "VAMP." In essence, twelve years have been provided for the users of waters from the San Joaquin River (including Friant water users) to develop a long-term sustainable plan for the protection of San Joaquin River fisheries based upon sound scientific evidence that will be generated from the VAMP analysis. This is considered by virtually everyone in the California water community to be a victory for compromise over conflict. These once adverse interests now meet several times a year to adaptively manage the experimental program and to optimize the value of the San Joaquin River Agreement to the parties and to the environment.

The previously mentioned stay in the litigation to restore a salmon fishery to the upper mainstem of the San Joaquin River should also be considered a valuable partnership activity on the behalf of Friant water users to address an issue of tremendous concern. While there is a considerable way to go to completion of a plan for restoration that keeps Friant Division water users whole from a water supply and cost standpoint, I have every belief that this effort will be a success. Ten years of litigation have led to this consensus-based attempt to find resolution to some otherwise intractable issues. The litigation has the potential to go on for at least another ten years. Even if the plaintiffs were successful, there would be no measurable improvement in the environmental condition of the San Joaquin River below Friant Dam for a long, long time. Environmental restoration is now being accomplished and, importantly, the economy of the eastside of the San Joaquin Valley is being maintained.

Lastly, let me mention the fledgling cooperative efforts between the Friant Water Users Authority and the Metropolitan Water District of Southern California ("MWD") to find mutually beneficial ways to improve water management. Within the past year, Friant interests and MWD representatives began what we hope will be a productive partnership to assist MWD to significantly improve the water quality to its Southern California water users while at the same time improving the capabilities of Friant Division water districts to manage available and new water supplies to meet existing needs, including the need to develop water supplies for San Joaquin River restoration. This new partnership has great potential to provide significant benefits to the San Joaquin Valley and to Southern California. This partnership, when combined with the partnering efforts involved with San Joaquin River restoration, clearly has the potential to lead to actions that can benefit virtually the entire state.

Additional Measures or Assistance Needed in the Short, Mid and Long Term to Improve Water Security

As I know you are aware, the Friant Water Users Authority is supportive of the Western Water Enhancement Security Act Congressman Calvert has introduce

along with many of the members of this Committee. We very much appreciate the leadership of this Committee in developing this legislation. We have sought to have it strengthened in a couple of regards in order to be more supportive of the actions and programs we have underway and actions and programs we foresee in the future, importantly including those just previously mentioned.

As noted earlier, in order to address a significant threat to the Friant Division's water security, we are developing and implementing a program of restoration for the upper mainstem of the San Joaquin River below Friant Dam. Congress clearly recognized the environmental tradeoffs it was making when it authorized the construction of the Friant Division of the CVP back in 1939. We expect Congress and the federal government to have a major role in the restoration of the river and return of a fishery. Our progress on the studies and development of a plan for restoration are "out of synch" from a timing perspective with the immediately needed reauthorization of the CalFed Program. We know the funding needs for the San Joaquin River restoration program will be significant and we are concerned that they have not been adequately considered in the CalFed Framework Agreement and the subsequent record of decision. However, we are excited about the provision of a new program contemplated in the Western Water Enhancement Security Act that will allow projects for water supply development and water quality improvements to compete for federal grant funding. We believe that with some assurance that our multi-benefit programs for environmental restoration, water supply improvement and water quality improvement can qualify for the program, that we can compete effectively for such monies in the future to help meet our local water supply and river restoration needs.

Certainly, creating a well-funded, balanced and scientifically based program of environmental restoration of the Bay/Delta and its tributaries will be consistent with and supportive of our needed San Joaquin River restoration effort. Even if we are successful in returning the conditions favorable to an anadromous fishery below Friant Dam, the conditions all of the way down the river, through the Delta, through the Bay and to the ocean must also be conducive to successful salmon smolt out-migration and the return of the adults. In this regard, it is easy to understand why we believe CalFed must be reauthorized and the environmental restoration program get underway quickly in order for Friant water users to ultimately obtain their needed water supply security.

New water supply infrastructure, including the new storage contemplated in the record of decision, must be supported and the regulatory hurdles leading to construction minimized. This does not mean abandoning existing law and regulation and running the risk of making environmental or economic mistakes. However, a plan of water supply development and water quality improvements that takes too long to come to fruition will only create new mistrust of the process and new reasons for individual interests to think and act only for themselves. Being able to move effectively and efficiently in making the necessary determinations to effect water system improvements is essential.

Finally, we have experienced first-hand the cost and anguish of defending our water rights and water supplies from those who would interpret existing law to an end never intended by the legislature. We remain concerned about any current or future effort to weaken our ability to meet the needs of our service area, including the needs of the San Joaquin River, by those desperate for additional water supplies within the region. In that regard, we see great potential for the inadvertent upset of existing water rights and operational priorities for the CVP with otherwise well-intentioned law to provide assurances of a water supply where, truly, no assurance can be found. Clearly, an assurance to some has the potential to become a huge liability to others and must be avoided unless all interests are in agreement and the source of the assurance is clear.

Closing

In closing, let me extend my appreciation for the invitation to appear before the Committee today. Friant water users very much appreciate you coming to the Central Valley to hear our concerns and look forward to working with you to address these important issues. Thank you.

[An attachment to Richard Moss' statement follows:]

Exhibit A

April 26, 2001

Friant Water Users Authority
Policy Principles Regarding CalFed

Recitals – In consideration of the policy principles regarding CalFed, the Board of Directors of the Friant Water Users Authority finds the following things to be true and correct:

1. The Friant Water Users Authority was created to protect the water and water rights of its member agencies and to assist in maintaining an adequate, reliable and affordable water supply for the water users served by its member agencies;

2. The Friant Division of the Central Valley Project is predicated upon a program of exchange of water between the U.S. Bureau of Reclamation and the entities and agencies known as the Exchange Contractors, memorialized as the Exchange Contract revised and dated December 6, 1967. Thus, the Friant Division is indirectly dependant upon exports of the U.S. Bureau of Reclamation from the Sacramento/San Joaquin River Delta;

3. A number of Friant Water Users Authority member agencies have contracts for delivery of water from the U.S. Bureau of Reclamation taken directly from the Sacramento/San Joaquin River Delta;

4. The region served by the member agencies of the Friant Water Users Authority is currently water short. This shortage manifests itself in the form of groundwater overdraft;

5. The Friant Water Users Authority is currently engaged in a program of study and pilot project implementation resulting from litigation known as NRDC vs. Patterson which seeks to restore, on a mutually acceptable basis, the environmental values of the San Joaquin River downstream from Friant Dam while not adversely impacting the overall sufficiency, reliability and costs of water to the Friant Division of the Central Valley Project, more particularly described in the Mutual Goals Statement dated June 3, 1999;

6. The Friant Water Users Authority is signatory and supports the San Joaquin River Agreement and the principles of cooperation and sound water management it represents;

7. The Central Valley Project Improvement Act was passed into law in 1992. It made sweeping changes to the amount of water available from the Central Valley Project, the cost of water available from the Central Valley Project, the priorities for Central Valley Project deliveries and the terms of contracting for water with the federal government. As a result of the Central Valley Project Improvement Act, the Friant Division of the Central Valley Project currently pays an average of $20 million per year into the Central Valley Project Improvement Act Restoration Fund.

Exhibit A

Principles – The Board of Directors directs the Friant Water Users Authority's support of and participation in the CalFed Bay-Delta Program, as a means to further the interests of the Friant Water Users Authority and its members agencies, provided that implementation of CalFed is consistent with the following policy principles and guidelines:

1. In meeting all of these stated principles, it is the belief of the Friant Water Users Authority that significant additional surface and ground water storage will be needed in the San Joaquin Valley and elsewhere within California.
2. Implementation of CalFed should provide for opportunities to improve Friant Water Users Authority member agency water supply availability and reliability with no significant degradation in overall water quality. In no case should Authority member water supplies be put at greater risk or reduced in their sufficiency or reliability;
3. CalFed should promote programs consistent with the goals of San Joaquin River restoration;
4. The facilities depended upon, either directly or indirectly, by Friant Water Users Authority member agencies must be protected from degradation;
5. Oversight and management of the CalFed Bay-Delta Program should achieve the following results:
    a. Provide opportunities for meaningful participation by Friant Water Users Authority representatives in actual decisions in prioritization, program calibration and regulatory adaptive management.
    b. Decision making based upon the best available science;
    c. Provide long-term stability and regulatory assurances;
    d. Provide fiscal responsibility while providing value to Friant Water Users Authority member agency water users;
    e. Provide a fair allocation of costs, commensurate with benefits received;
6. CalFed should recognize the regulatory and water supply baseline from which benefits are measured as being the conditions as they existed prior to the implementation of the protections for the winter run salmon and the passage of the Central Valley Project Improvement Act;
7. CalFed should promote efficient water use through incentive-based, cost-effective (to those paying the costs) implementation of conservation and recycling programs;
8. Implementation of CalFed should be consistent with the San Joaquin River Agreement;
9. Implementation of CalFed should not jeopardize the continued ability of the U.S. Bureau of Reclamation to perform under the Exchange Contract by providing water sources other then as a result of water releases from Friant Dam, in fulfillment of that contract; and
10. Implementation of CalFed should not result in any involuntary redistribution or taking of water supplies or water rights from existing users currently putting water to beneficial use within their rights as provided for under state and federal law.

Mr. CALVERT. Mr. Nelson.

STATEMENT OF DAN NELSON, GENERAL MANAGER, SAN LUIS & DELTA-MENDOTA WATER AUTHORITY

Mr. NELSON. Chairman Calvert and members of the Subcommittee, first of all, welcome to the San Joaquin Valley and thank you very much for the opportunity to speak before you today on the Central California Water Security on Opportunities and Challenges. My name is Dan Nelson, I'm the executive director of the San Luis and Delta-Mendota Water Authority.

First off, on behalf of the Board of Directors and member agencies, thank you, and your colleague cosponsors for the development and introduction of H.R. 1985, the Western Water Enhancement Security Act. Your effort has resulted in legislation that balances agricultural, urban and environmental objectives and sets CalFed in motion on the right path.

I've submitted written testimony and will go over some of the highlights of that testimony in shorter form. First of all, I'd like to leave you with three points today and three key issues.

The first issue would be that California's headed full steam into a water supply crisis and that there is a very large block of about a million acres on the western side of the San Joaquin Valley that's already fully engulfed in that crisis.

The second key point I'd like to leave you with today are water users and purveyors are doing the best that they can to cope with that crisis through conservation, transfers, reclamation, land retirement, et cetera, but it's become obvious that through those coping mechanisms alone that they won't be able to be sustainable.

The third point is that California is in dire need of the implementation of a comprehensive master plan. This comprehensive master plan is going to have to include additional infrastructure for additional supplies, regulatory balance and assurances, and continued restoration of fisheries in the environment.

On the water supplies and impacts, over the last 10 years there's been several million acre feet of water shifted each year to meet evolving and environmental mandates. This rededication of resources coupled with rapid population growth has vastly destabilized California's water picture. Nowhere in the state is this more evident than the CVP ag contractors south of the Delta.

Mr. Birmingham has already indicated to you we've gone from stability that we've had from 1950 through 1990 to a situation of where our ag users have about 50 to 55 percent average supply today.

As part of the development of an integrated resource plan, the U.S. Bureau of Reclamation has recently done a gap analysis of agriculture on the West side of San Joaquin. And essentially the most recent—it's still a working document, but the most recent draft of this gap analysis has indicated that even with a 70 percent supply for the ag surface contractors on the West side of the valley, that there is a—and also taking into consideration the sustainable groundwater and transfers available to the region, that there is a gap of over 800,000 acre feet between the legitimate needs to the region and the supplies available. And that's assuming that this area gets 70 percent supply.

The water shortage and instability contribute to increased unemployment in an area that already has some of the highest unemployment in the state. The loss of equity as land values plummet lowers the tax base for schools and local services and subsidence through lowered groundwater.

The shortage that we're experiencing on the West side of the San Joaquin Valley is predominantly as a result of the implementation of three Federal statutes, the Central Valley Project Improvement Act, the Endangered Species Act, and the Clean Water Act of which we have under the Clean Water Act the State Water Resources of 1995 Water Quality Control Plan.

There's been a tremendous amount of contentiousness and mistrust that has surfaced as a result of how these acts have been implemented. It's our feeling that there is—there is discretion to implement those acts in a more balanced way that meet the objectives of the environment and the objectives of the statutes themselves while still resulting in reasonable amount of and sustainable water supply for agriculture.

Some of the—some of the coping mechanisms as I indicated before is high-tech conservation. You're not going to find any ag area in the world that is spreading their water thinner and getting more bang for their buck from the water supply that they have.

In addition to that, they are very, very active out in the transfer market and have been very successful. I do need to add we're a little concerned about the future of that market as we implement additional plans such as the environmental water count, public purchases for Level 4 refuge supplies.

There are several programs currently underway of public purchases of additional water and we're a little concerned about what they may do to the market and ultimately how realistically are we looking at the opportunities in future water transfers to meet reduced water supplies.

In closing, the West side of the San Joaquin Valley is looking at the fixes for themselves through the framework of an integrated resource plan and essentially that resource plan is going to be multifaceted. It will include additional conservation. It will include utilizing our sustainable groundwater as best as we can and maximizing its use, but maintaining its sustainability as well as the need for some additional supplies and there will be an element of land retirement.

Right now there's some proposals of even up to a couple of hundred thousand acres of land proposed or being looked at as being retired on the West side of the valley. Even with 200,000 acres of land to be retired on the West side of the valley, that still leaves close to 3 or 400,000 acre foot gap of sustainability for the remainder of the lands.

A balanced approach for development and managing California's water resources into the future is long overdue. Defining and implementing that balance has eluded Californians through decades of contentiousness amongst the major stake holders. South of Delta water users and south of Delta rural communities dependent on the CVP have experienced a downward spiral in their water supplies and economy. H.R. 1985 has provided the region with hope,

hope for immediate stability and opportunities to move toward long-term sustainability.

We once again thank the authors and cosponsors for their vision and leadership and fully support the passage of this legislation.

Mr. CALVERT. Thank you, Mr. Nelson.

The prepared statement of Mr. Nelson follows:]

Statement of Daniel G. Nelson, San Luis & Delta–Mendota Water Authority

I. Introduction

Chairman Calvert and members of the Subcommittee, thank you for the opportunity to speak before you today on Central California Water Security–Opportunities and Challenges. My name is Dan Nelson, and I am the executive director of the San Luis & Delta–Mendota Water Authority.

First off, on behalf of our Board of Directors and member agencies, "thank you" and your colleague cosponsors for the development and introduction of H.R. 1985, The Western Water Enhancement Security Act. Your effort has resulted in legislation that balances agricultural, urban and environmental objectives and sets Calfed in motion on the right path.

The San Luis & Delta–Mendota Water Authority (Authority) was formed as a joint powers authority in January 1992. The Authority represents its member agencies at the state and federal levels and advocates on issues that affect their water supply and the ability to deliver that supply. The Authority's member agencies take water from the federal Central Valley Project (CVP) through the Tracy Pumping Plant and the Delta–Mendota Canal, which the Authority also operates and maintains.

The Authority's service area stretches from the City of Tracy in Stanislaus County, along the west side of the San Joaquin Valley to Kettleman City in Kings County. Its service area also includes the Santa Clara Valley, as well as farmland in San Benito County and in the Pajaro Valley. In all, the Authority's membership consists of 32 water agencies representing agricultural, urban and wetland water suppliers.

The Authority's members have contracts totaling 3.3 million acre-feet of water from the CVP and includes over 1 million acres of the most efficient and productive farmland in the nation. It also includes more than 100,000 acres of seasonally flooded and managed wetlands. Those wetlands, located along the Pacific Flyway, are home to 1.5 million migratory geese and ducks annually. The service area also includes the Silicon Valley, home to the billion-dollar computer industry and many industrial and municipal water users.

II. CHALLENGES

A. Water Supply/Impacts

Over the last ten years, there has been several million acre-feet of water shifted each year to meet evolving environmental mandates. This rededication of resources, coupled with rapid population growth, has vastly destabilized California's water picture. No where in the state is this more evident than the CVP agricultural contractors south of the delta. Prior to 1989, there was only 2 years in the 45 years of CVP operations in which these contractors didn't receive 100% or more of their contract supplies. Recent modeling has shown that these same farmers can now expect a 50-55% supply on average. Furthermore if there was a repeat of the 1987–1992 drought there would be a few years with no water available at all. (Please note graphs below).

As part of the development of an integrated resource plan the U. S. Bureau of Reclamation (USBR) has initiated an analysis to determine the gap between the water supply available to south delta agricultural users vs. their needs. The most recent draft of the analysis indicates that even with a 70% allocation from the CVP supplemented by local groundwater and surface water, there is still a gap of over 850,000 acre-feet. The analysis clearly indicates that status quo for the region is not sustainable.

The water supply shortage and instability contribute to increased unemployment in an area that already has some of the highest unemployment in the state, loss of equity as land values plummet, lowered tax base for schools and local services, subsidence from lowered ground water, and in general an underlying instability and uncertainty within the region.

B. Regulations

The shortage for south of delta CVP contractors is predominantly the result of the implementation of three federal statutes:

1) the Central Valley Project Improvement Act;
   a. Dedication of CVP water for wildlife refuges
   b. Dedication of 800,000 acre-feet of CVP yield for fisheries.
   c. Trinity River restoration
2) the Endangered Species Act; and
   a. Winter Run Salmon
   b. Delta Smelt
3) the Clean Water Act.
   a. 1995 State Water Resource Control Board Water Quality Control Plan

These statutes make additional commitments for deliveries south of the delta to wetlands and wildlife habitat while at the same time reducing the overall amount of water available to the region through restrictions on pumping from the delta for fishery and water quality purposes.

Discretion -- There has been a tremendous amount of contentiousness & mistrust that has developed from the manner in which these statutes have been implemented. It is widely acknowledged that there is broad discretion in how they are implemented. We strongly believe that the environmental objectives of these statutes could be obtained through a more balanced implementation approach that would be more efficient for the environment and could have significantly less impacts.

Science -- Contributing to the contentiousness and mistrust is the lack of peer review opportunities and collaboration in the determination of the regulatory requirements. The scientific validity of most of these requirements has never been subject to independent scientific review. Implicit are a number of important assumptions whose scientific validity has not been assessed, or worse, assumptions whose validity has been assessed and found wanting. In addition, although their effect on water supplies is large, no attempt has been made to estimate the effect of these requirements on the fish populations. There is therefore no substantive means to prioritize actions for the sake of restoration and water supply efficiencies. The Calfed Science Program offers great promise. The program has assembled an impressive interim Science Board. Agencies and stakeholders appear to have considerable good will toward and respect for this new program. The key to its success will be the linkage between the Science Program and the Calfed agencies decision making process on regulations, the Environmental Water Account, and other biologically sensitive actions.

C. Infrastructure

Compounding the problem of the rededication of agricultural water to environmental uses and population growth has been the lack of development of new supplies over the last couple of decades. Stymied by conflict, disputes and strict regulations California has had to rely almost entirely on an infrastructure built decades ago. This infrastructure is insufficient for us to be able to accomplish our environmental & agricultural objectives while meeting the needs of an expanding population.

D. Conservation, land retirement and transfers

Conservation -- Water managers and farmers have gone to great lengths and at great expense to stretch existing water supplies. Irrigation technology, methodology and efficiencies for south of delta agricultural contractors are renown for both district and farm level efficiencies. Water users and purveyors continue to seek techniques and opportunities to hone their water use and conveyance.

Land Retirement -- To address chronic water shortages and assist in local drainage problems local districts have developed and begun to implement land retirement programs. Efforts to identify and address third party impacts have been intensified for larger scale retirement proposals.

Transfers -- South of delta water users have participated successfully in water transfers over the last decade. There are however, rising concerns about the cumulative effect on the water market by large public water acquisition programs such as CVPIA Level 4 refuge purchases, Environmental Water Account, Governors Drought Bank, Calfed Environmental Restoration Program, Vernalis Adaptive Management Plan, and the CVPIA Acquisition Program. In and of themselves these programs have merit but we need to assess the cumulative effects and be more realistic about future transfer opportunities outside of these programs.

III. OPPORTUNITIES

The solutions to south of delta CVP contractors supply deficiency and instability will need to include both a reduction of demand and recovery of some of the supplies that have been rededicated. The solutions will be a variety of regional based projects/programs coupled with CVP and state-wide based projects/programs.

A. Integrated Resource Plan (IRP)

South of delta CVP contractors are supportive of the development and implementation of a comprehensive IRP as the framework for moving toward the resolution of their short and long term water supply issues.

The Mid-Pacific Region of the USBR is undertaking an Integrated Resources Plan for the west side of the San Joaquin Valley in cooperation with the Authority and other local stakeholders. The IRP will be a resources management master plan to consider water management in the context of environmental and socioeconomic factors. The focus of the study will be on alternative means of reducing the imbalance between water demand and supply. Water quality, land use, environment, flood control, drainage, groundwater, and local economic issues will be considered. The IRP will be used by USBR, water districts, and others to guide water supply development and management in the future.

The Plan will be based on a detailed water supply and demand analysis. Essential to this base is a reasonable CVP allocation and a balanced and stable regulatory regime that accomplishes environmental objectives while minimizing water supply impacts.

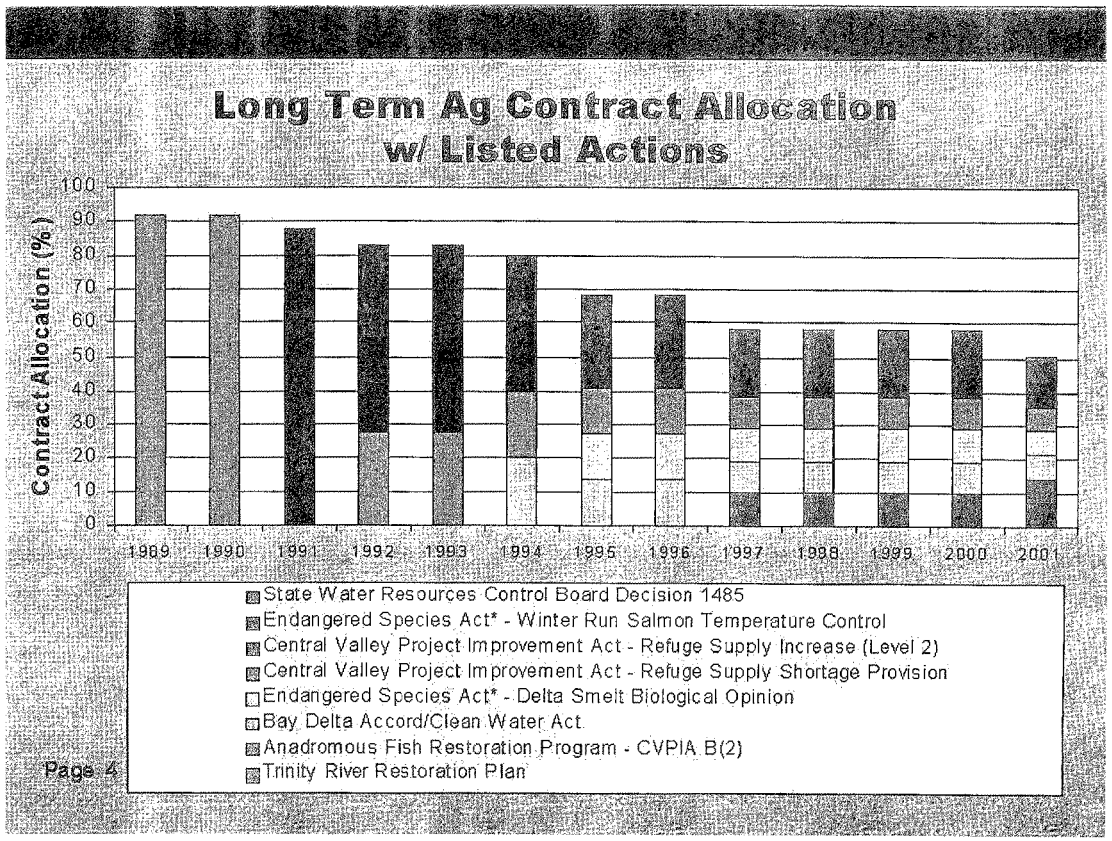
Water management options include ongoing programs, options identified in the Calfed Record of Decision, and other local and regional options. These options could include:

- Additional water conservation, water transfers and exchanges;
- Management of agricultural drainage including additional land retirement, water treatment and tailwater reuse;
- Surface and groundwater storage;
- Projects that improve local flood control that also have a water supply benefit;
- Conveyance improvements such as the Delta–Mendota Canal and California Aqueduct Intertie, the San Luis Bypass, and canal enlargements; and
- Environmental restoration and enhancement projects within the region.

B. H.R. 1985, the Western Water Enhancement Security Act

A balanced approach for developing and managing California's water resources into the future is long overdue. Defining and implementing that balance has eluded Californians through decades of contentiousness among the major stakeholders. South of delta water users and south of delta rural communities dependent on the CVP have experienced a downward spiral in their water supplies and economy. H.R. 1985 has provided the region with hope. Hope for immediate stability, and opportunities to move toward long term sustain-ability. We once again thank the authors and cosponsors for their vision and leadership and fully support the passage of this legislation.

[Attachments to Mr. Nelson's statement follow:]


Long Term Ag Contract Allocation
w/ Listed Actions
Contract Allocation (%)
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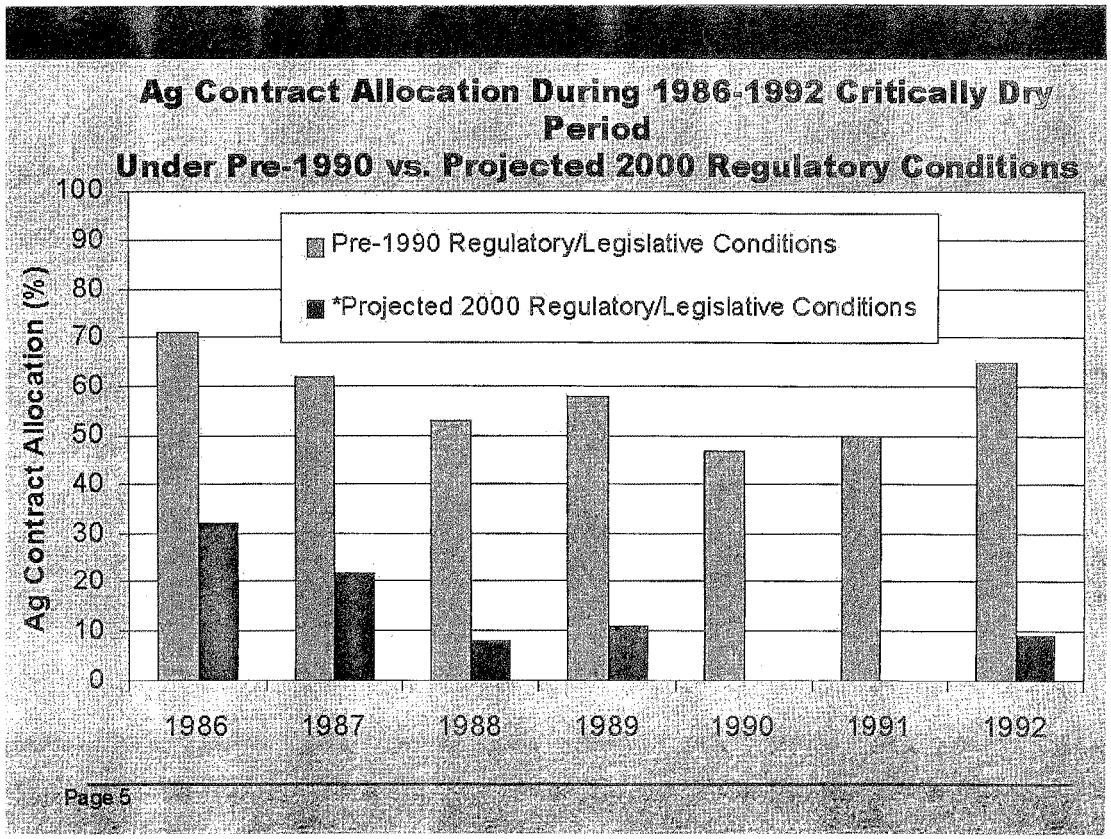
State Water Resources Control Board Decision 1485
Endangered Species Act* - Winter Run Salmon Temperature Control
Central Valley Project Improvement Act - Refuge Supply Increase (Level 2)
Central Valley Project Improvement Act - Refuge Supply Shortage Provision
Endangered Species Act* - Delta Smelt Biological Opinion
Bay Delta Accord/Clean Water Act
Anadromous Fish Restoration Program - CVPIA B(2)
Trinity River Restoration Plan
Page 4


Ag Contract Allocation During 1986-1992 Critically Dry Period
Under Pre-1990 vs. Projected 2000 Regulatory Conditions
Ag Contract Allocation (%)
100
90
80
70
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40
30
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Pre-1990 Regulatory/Legislative Conditions
*Projected 2000 Regulatory/Legislative Conditions
1986
1987
1988
1989
1990
1991
1992
Page 5

Mr. Herrick.

STATEMENT OF JOHN HERRICK, ATTORNEY FOR SOUTH DELTA WATER AGENCY

Mr. HERRICK. Thank you, Mr. Calvert. My name isJohn Herrick. I'm the attorney for the South Delta Water Agency, not the general manager. I appreciate being invited here, obviously. These problems are very significant as well as threatening to all the parties involved here. But I'd like to take a certain different focus than the other speakers.

When the Central Valley and state water projects were built, they were finalized based on certain promises that were made and those promises were then put into statutes in California. Specifically those statutes include the Delta Protection Act, which said that you will maintain a supply of good quality water in the Delta for all purposes, but including current and future Delta needs.

The statutes that were passed were the Area of Origin Watershed Protection Acts, which said basically that as those areas grow, they will be able to take advantage of this newly restored water so that their future has not been mortgaged at the expense of somebody else's future.

Those two acts contemplated unless there is an increased supply that there will be less available for exports. That's what they say. That's what was promised and that's what's in the statutes.

Now the representative from the Regional Council of Rural Counties didn't tell you what we've been discussing with them a lot. Their general plans for the next 30 years to 2030 anticipate that they will need 3 to 5 million acre feet more of water. If we don't increase the pie, there's zero export.

Now, that's a slight overstatement. That's the magnitude of the problem. And so if we do not figure out how to have more water for everybody, then you will simply be choosing sides as to who will get what is there.

One of the problems that we have with the current—the current thought process is that increased supply is always the promise. We're studying the raising of Friant. We're studying the raising of Shasta. We're looking into the Sites Reservoir. But while you're looking into that, you're now trying to promise somebody will have a greater supply right now. We don't want to be the opponents of the rest of the ag in the state.

We heard Mr. Birmingham say after 6 years of the wettest time we've had, 6 years wettest record on—six years wettest on record they are getting 50, 60 percent. If you say now I'm going to look into more storage, but I want to give them more, where is it going to come from? There's no extra supply of water that's not being used.

What you're doing is pitting one part of the state against another when you select somebody to protect. You did it in 19—I don't mean you specifically. You did it in 1992 when you said I think the environment needs 800,000 acre feet. We just heard the speaker say they are 800,000 acre feet short. Where did that come from?

You can't simply say this group needs more money if you don't have a larger supply. And CalFed is not helping. CalFed undertook its preferred alternative based on the assumption that the Delta

water will get worse in quality. The preferred alternative makes it worse for my clients.

Now, they are trying to make it better for export quality versus cities because they have problems with treatment. It gets worse for my client. So when we talk about everybody getting better together, it's not happening. CalFed wants to export more water. These people need more water. So do the cities.

You know what happens when you export more water? You increase the level of harm to my clients. My clients are harmed every day by your export projects, every day. Last week and the week before I received calls from diverters on Old River. John, my siphons won't work. You know why they won't work? Because the water levels have been dropped to a point where they can't be diverted.

Those people who live in the Delta, those people are supposed to be provided with protections not only from the Delta Protection Act, which says you'll take care of them, but from the general laws which say you shouldn't be able to operate without harming somebody else. That's what's happening now.

If you think that CalFed is solving those problems, you're wrong. CalFed has embarked upon a method to change the way that the state project diverts. That's fine. They are going to do that, too. Not only get more water, which their clients need, but in order to protect fisheries, too, they are going to try to restay the intake at Clinton Forebay in a manner that protects fish. You should know now when you salvage fish you kill them. There's no protection of fish now.

We're going to do that in a manner which forces them to change the way and the rate in which they draw water into the forebay. DWR water says it will double the amount of draw down that my clients are experiencing. Double it. There's no plan to address that. They are going to look into it. But there's no plan to address that.

There's also no plan to address the amount of salt coming down the river. The state and Federal projects import 100 million tons of salt every year and then the users use the water, it gets concentrated and up to 400,000 tons of that gets poured back into the San Joaquin River and guess where that goes. It goes down to my client.

DWR and the USBR have no plan by which to meet the four interior Delta salinity standards, but CalFed wants to import more water down there. We're not trying to fight these guys, but you can't address one problem without the other. It's all redirected impacts. Every time you choose something to do it, it's redirected impacts.

Unless you go forward and say you have to mitigate what you're going to do and we're going to have X amount of water, you're not solving the problem. If you try to redivide the pie now, you're simply harming some other people.

I'd like to add one more thing. I understand I'm going long here. You all know the peripheral canal, what that was, right? A tremendous fight, we thought it was decided. CalFed wants to store water in the Delta and son of a gun they decide on a way that buys up the heart of the Delta, six islands now, six, and enough water is not going to go through the Delta. It's going to be piped from one island to another island. Oh, son of a gun, we got a way now to

transport the fresh water from the Sacramento River system across the Delta to the export pumps without the uncomfortable necessity of it going through the Delta channels.

That's not right. Please don't force us to fight the same battle again. We need new supplies. We don't need reliabilities. We need sufficiency. We don't need new storage. We need new yield. And unless you make those distinctions and embark upon a plan to get a bigger pie, we will be fighting forever and nobody's going to win.

But the first group that's going to lose are my clients. When you buy up a third of the Delta to mitigate the impasse of the export project, you're just admitting that we're just in the way of what you're trying to accomplish.

Thank you for your time very much. There's numerous issues that we can discuss tonight. I'm looking forward to more questions. Thank you.

The prepared statement of Mr. Herrick follows:]

Statement of John Herrick, Attorney for South Delta Water Agency, Stockton, California

Mr. Chairman and Committee Members:

I would like to thank you for inviting me to speak before this Committee. As you can imagine, it is very difficult for us to schedule time to attend any Committee hearings in Washington D.C., and so holding one here is greatly appreciated.

My name is John Herrick. I am the attorney for the South Delta Water Agency and work closely with counsel for the Central Delta Water Agency. I am appearing here today on behalf of both Agencies. Our Agencies encompass a large part of the Sacramento–San Joaquin Delta ("Delta") from which both the State and Federal projects export water. The Delta is the end of the line for most of the major rivers of the state and suffers the impacts of decreased flows, degraded water quality, lowered water levels and reverse flows. In light of this, the Delta Water Agencies have a unique perspective with regard to the water problems facing our State.

The problems are monumental, and because they are not being adequately addressed, the State as a whole and our clients in particular continue to suffer while the various interests fight over how to re-divide an already too small pie. We originally hoped that CALFED would work towards solving these problems, but its wrongly focused and mutually exclusive goals will worsen the problems so desperately in need of fixing.

As you know, over twenty million Californians rely on the Delta for all or some of their water needs. Most of this water is delivered to them by the State and Federal projects, known as the State Water Project and the Central Valley Project, respectively. These projects built extensive systems of dams, canals, aqueducts and pumps to deliver surplus flows and stored water to agricultural users in the San Joaquin Valley and municipal users throughout the southern half of the State. The California statutes which allowed these projects to proceed, either created or reserved certain rights for those areas from which the water originates or is exported. These statutes generally include the Delta Protection statutes, the Area of Origin statutes, and the Watershed of Origin statutes. Taken as a whole, these statutes require that the Delta and upstream areas are entitled to protection from the projects, and as they grow, they will be able to use the water developed by the projects. In other words, the underlying principle of the projects is that as time goes on, there will be less water available for export.

Contrary to the law, the projects refuse to supply the current needs of area of origin and in–Delta users. In addition, we are now at the point where the growing needs of those areas of origin are being circumvented because State and Federal agencies are trying to increase the amount of water for export without increasing new supply or yield. The Regional Council of Rural Counties, which includes most of the areas of origin for the Sacramento and San Joaquin Rivers has estimated from the General Plans of its constituent that those counties will need an additional 3–5 million acre feet of water by 2030. It is simple mathematics to see that in a relatively few short years, all of the current yield of the projects will be needed for the areas of origin, with little left for exports.

This is the crux of the problem facing us. Any efforts that seek to increase exports without corresponding increases in yield or developed water forces the various areas

of the State to fight each other in order to both survive and to protect their future growth. Currently the State and Federal governments are taking sides, thereby promoting the conflict. Since CALFED began, we have asked and demanded it catalog and estimate current water needs, then compare that to projected needs for all uses, and determine the shortfall. Rather than do this, CALFED has simply assumed that reallocating current supplies will provided sufficient quantity. This incredible assumption is based on an unwritten plan to slowly take the water away from agriculture to meet environmental and urban needs. Notwithstanding that this assumption is simply wrong, such a policy should be subject to public debate before the bureaucracy tramples the underlying rights of the parties. CALFED's approach creates confusion and misunderstanding because it talks of "water reliability" without discussing the inadequacy of the supply. It also masks the true situation by referring to "new storage" it will create without explaining how this will (or will not) affect the overall yield of the system.

The bottom line is California needs additional supply; not reliable shortages and not new storage that is not new yield. Our State has only been able to survive droughts by over-drafting its groundwater basins. CALFED makes no effort to address this situation, rather it exacerbates the situation by promoting water transfers of surface supplies which leads sellers to rely more on groundwater. Recent draft legislation attempts to delve into these issues, but gets sidetracked in creating preferences to protect certain interest groups.

Another issue facing California's water future deals with whether or not the projects will be required to operate in a manner that does not simply shift burdens to innocent third parties and interests. Currently the projects redirect impacts to two main groups. The first is our clients, the users in the Delta. The operation of the State and Federal projects does four things: (i) decreases the level of the water in the Delta to the point where local diverters cannot exercise their riparian and other superior rights, (ii) fundamentally alters the direction of flow in the Delta which creates stagnant zones where contaminants concentrate, (iii) decreases the amount of water flowing into the Delta during times when local needs are not being met, and (iv) causes upstream drainage of a quality that greatly exceeds downstream water quality objectives.

In spite of the existence of these problems and the ongoing failure to address them, CALFED has undertaken to increase the activities which cause these problems, before (and sometimes instead of) first curing these problems. As an example, in order to export more water in a supposed fish-friendly manner, a new place of diversion for the State project has been chosen. Operation of this new diversion site will, according to the State's modeling, double the existing draw down of water. In other words, CalFed has undertaken to increase the harm to third parties before it has figured out how to mitigate the current level of harm. You should know that it is the expressed position of the Bureau of Reclamation that it need not operate in a manner that protects Delta diverters.

The second group suffering the impacts of the operation of the projects is the environment, including and especially fisheries. This is a complicated issue, not well understood or handled. The Fish and Wildlife Service, Department of Fish and Game, and National Marine Fishery Service seek large amounts of money and water to mitigate the loss of habitat and lessen the threat to endangered species. At the same time, those agencies are allowing the State and Federal export projects to kill large amounts of endangered species. This year, 18,000 endangered salmon were killed and in the last two years over 100,000 Delta smelt. While allowing this, those fishery agencies actively seek to prevent other actions which would mitigate the adverse affects those same projects have on in–Delta users, specifically my clients. It's okay to kill endangered species, but it's not okay to protect riparians.

Either the fisheries are endangered or they are not. If they are, then the projects should be operated in a manner that does not kill thousands of endangered species in order to provide a certain level of exports. Regardless, those projects should be required to operate in a manner that does not harm innocent third parties who existed well before the export projects began and who have water rights superior to theirs.

CALFED's environmental water account, or EWA, is a curious example. This proposal naturally sounds beneficial; a supply of water for use to help fisheries. The problem is that it simply shifts a burden from one party to another. Remember, there is no extra, unused supply of water. First, the account is used to protect the junior most water right holders from the obligation of mitigating their adverse effects on fisheries. If they are allowed to cap the amount of mitigation needed to address the impacts they have caused, then the remaining needs simply get reallocated to others, directly or indirectly. This redirection of the obligation to mitigate impacts on fisheries is best evidenced by New Melones dam and reservoir, a portion

of the Federal project on the Stanislaus River. In order to help restore Delta fishery needs, New Melones must release 1500 cfs at some times when other similar size rivers have downstream obligations one tenth that amount. To justify this and maintain control of this water, the Fish and Wildlife Service claims the water is for Stanislaus fisheries, but it coincidentally provides the lion's share of Delta needs . This tremendous loss of water directly decreases the amounts available to San Joaquin county which borders the river.

Second, purchasing water encourages diverters and reservoir operators to collect or control more water than they consume so they can both sell water and still meet their needs. Again, since there is no unused or extra supply of water in the system, the control of this water simply shifts the shortage to someone else.

One of the most prevalent fallacies in water is that conservation is the key to more supply. Such a position ignores the distinction between consumption of water, and use or application of water. Conservation in practice means that a party still consumes the same amount of water, but prevents the loss of some of its applied or un-consumed water. However, this simply reallocates a shortage. On the Sacramento and San Joaquin River systems, everybody's return flow, drainage, or "wasted water" helps meet someone else's needs, including fishery needs. This is because that water adds to downstream river flows or groundwater supplies. When you conserve water in Sacramento, there is less water in the river and Delta. As a consequence, there is a greater need for upstream releases to meet standards such as Delta outflow which protects many interests including fisheries. This "conservation" simple reallocates the shortage of the entire system.

Conservation in some areas is beneficial. When you put a brick in your toilet in San Francisco, less fresh water is discharged into the ocean, and thus there is more net supply. For this reason, our agencies advocate efforts to make areas which rely on imported water more self sufficient. Installing gray water lines in new construction, trapping seasonal flows to the ocean, and desalinating brackish groundwater are just a few of the possibilities. It is important for any Federal legislation to recognize the distinctions in what conservation means in any particular area. Previous efforts toward this end have been universally ignored by the Bureau of Reclamation. In the 1992 Central Valley Project Improvement Act encouraged transfers of water, but only water that was made available from a decrease in consumption or a decrease in water previously irretrievably lost. After the numerous transfers which resulted, I know of none that complied with this provision.

Please bear in mind, when any conservation results in a reallocation of the shortage, it may increase the amount available for fisheries at one time, but almost always decreases the water available at another time. We rob Peter to pay Paul.

The implementation of the EWA is also done in a manner that causes harm to third parties who are already being impacted by the export pumps. The fishery agencies won't allow my clients to be protected from the exports during times environmental water is being used. The permit conditions for the South Delta tidal barriers, which mitigate some of the effects caused by the export pumps, preclude barrier operations when EWA water is being released. Whether or not the barriers themselves impact fish (as the agencies claim) is irrelevant. The point is that in order to help fish, the Federal government stops helping others who it is also harming; redirecting the shortage of water.

As you can see, the consequence of creating an environmental water account is to simply transfer the shortage of water available for fish to someone else. Incredibly, CALFED transfers the shortage to the senior water right holders in order to protect the junior water right holders.

It is common today to "seek consensus" and "balance needs" while addressing the problems. These are terms that make people feel good; mostly people who get their water out of a faucet. But when balancing means a riparian in the Delta has no water so that exports can continue, the term is a direct challenge to the existing law. You don't balance needs when Water Code § 12204 states . . . "no water shall be exported which is necessary to meet" in–Delta needs. The natural consequence of this feel good attitude is to ask senior water right holders to suffer so that junior ones get more. This reversal of California water right priorities continues at an accelerated pace. It began with the Delta Accord wherein the State and Federal projects worked out a deal to help fisheries as long as exports didn't decrease further. It continued with the projects asking the State Water Resources Control Board to adopt a Water Quality Control Plan for the Delta which also guaranteed exports would not decrease. Now, CALFED not only continues the principal of "no net loss" of exports, but seeks to increase the amount available to certain export contractors. There is no magic wand that makes more water. If the Federal government mandates more for one interest, some other will have less. Since the proposal is to

deliver more to junior right holders, then necessarily, senior right holders will have less.

Another example of redirected impacts is found in the salinity issue. The export projects deliver up to 100,000,000 tons of salt to the San Joaquin Valley each year. Up to 400,000 tons of that comes back into the San Joaquin River as either surface or subsurface drainage and in concentrations sometimes 10 to 20 times that of the applicable water quality standard. If the Federal government wants to help California, it should begin to solve this problem rather than continually make it worse. Not only does the drainage ruin the San Joaquin River and harm downstream users, but the accumulation of salts in the San Joaquin Valley is dooming the next generation of agriculture. You should bear in mind that CALFED is doing nothing to address this problem; its trying to increase the amount of salt to be imported.

CALFED seeks to embark on a monumental program of ecosystem restoration, including the creation of upwards of 300,000 acres of habitat in the Delta. The consequences of such a loss of farm land are virtually ignored by the bureaucrats who view Delta agriculture as an obstacle. Any such project should require approval by local governmental agencies in order to insure that the State and Federal Governments are not simply imposing their will on others. This loss of agricultural land and production is virtually ignored by CALFED. The impacts to future food and fiber supply of the nation must be considered.

We have already seen though, that CALFED will try to avoid the legal obligations of examining the impacts of land purchases. As an example, rather than go through the CEQA and NEPA processes, CALFED simply gave a grant to the Nature Conservancy in order to purchase Staten Island in the north part of the Delta. This sort of end run of the law should not be tolerated. Actions like this continue to make us suspicious of the motives involved. As you can see from my attachment and the in–Delta storage discussion below, Staten Island just happens to be part of the pathway for a Peripheral Canal.

Further, local, State, and Federal agencies already own or control significant acreage in the Delta and yet have not attempted to maximize its habitat value. There is no reason to embark on additional purchases of land if the government does not use what it already has.

Finally on this point, you should understand the underlying lack of logic for what is being done. In order to export water to certain areas of the State, we create a system that harms the Delta, fisheries and the environment. In order to mitigate for that harm, the State and Federal governments seek to buy up large parts of the Delta and decrease the amount of water available therein which puts the Delta farmers out of business and strangles the local economy. The net effect is that the government is trying to promote one areas' growth at the expense of other areas.

Lastly, I would like to explain another way in which CALFED threatens the Delta rather than help it. Twenty years ago, the people of California voted down a project known as the Peripheral Canal. That project was a component of the State Water Project and proposed to move Sacramento River water to the export pumps without having the water go through the channels of the Delta; rather it would go through an isolated canal around the Delta. Obviously, removing more of the good quality water from the Delta does not improve the Delta. CALFED began by advocating some similar isolated facility, either across the Delta or around it. After a tremendous outcry from the public, CALFED changed its position and stated it would not seek any isolated facility unless and until current efforts to use Delta channels proved ineffective in improving water quality. The time frame given for the efforts was seven years.

Last minute negotiations leading to the CALFED Record of Decision (conducted without public involvement) inserted a decision to "fast track" in–Delta storage. We recently discovered that a previously proposed private project to flood Delta islands for storage has been "reconfigured" to add a fifth island and to allow water to pass from flooded island to flooded island without the water flowing through Delta channels. Attached hereto is an overhead/map of the Delta indicating those Delta islands the government seeks to purchase or control and thus accomplish the isolated transfer of water across the Delta, not through it. The sad fact is that CALFED intentionally misled us on this issue.

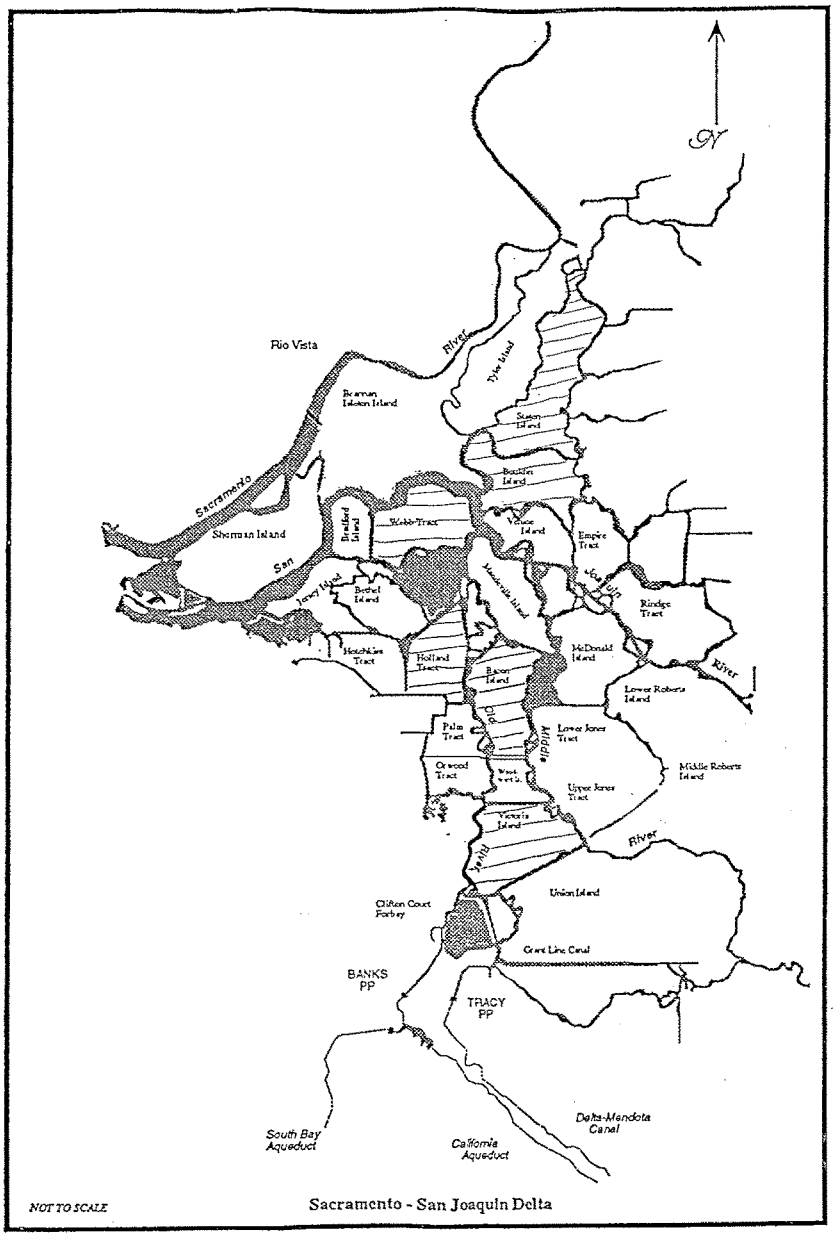
Of all the threats to beneficial uses in the Delta, especially agriculture, I believe this is the most serious. Once the State and Federal projects can isolate the Delta from the fresh water of the Sacramento River, they will. In that event, the incentive to restore and protect in–Delta water quality and quantity, as required by law, will evaporate and the Delta will die.

In conclusion, I request that you be very cautious before considering Federal legislation to force our system to provide more water or more protection to any particular

interest. A better approach would be to first require the Federal Central Valley Project to fully mitigate its adverse effects on third parties and the environment; that way you stop trying to accomplish your goals by taking away from some to give to others. Second, you should authorize actions that will help contribute to the overall supply of water in California so that the existing laws of priority can be followed and everyone can be supplied. Finally, you should endeavor to protect agriculture which is and will continue to be necessary to feed California and the nation.

Thank you for your time.

[A map attached to Mr. Herrick's statement follows:]



Sacramento - San Joaquin Delta

Mr. CALVERT. Thank you.
Mr. White.

STATEMENT OF CHRIS WHITE, GENERAL MANAGER, CENTRAL CALIFORNIA IRRIGATION DISTRICT, SAN JOAQUIN RIVER EXCHANGE CONTRACTORS W.A.

Mr. WHITE. Thank you. Good morning, Mr. Chairman and members of the Committee. My name is Chris White. I'm the general manager of the Central California Irrigation District. I am testifying today on behalf of the San Joaquin River Exchange Contractors Water Authority. We're about 250,000 acres on the West side of San Joaquin Valley near Los Banos, California.

First, we would like to commend you on the hard work you and your staff have done in a very short period of time. In addition to grasping this topic, you've produced some very promising legislation.

The Exchange Contractors hold a very unique position in the California water system. We hold both riparian and pre-1914 water rights from the San Joaquin River.

In 1939 through historic purchase agreement an exchange with the Bureau of Reclamation, we exchanged the right to utilize that historic water for sources from the Delta. That Exchange Contractor Act of over 60 years ago allowed for the development of the Friant system of water delivery and storage and the water distribution of storage on the Kings River. This should remind us all that we have a history in California of being able to make decisions on a local level and having them benefit the entire state including the urban interest.

Under your leadership, Mr. Chairman, current efforts by the Congress seem to express the position that the Federal Government will no longer tolerate endless agonizing in an effort to find the infamous win-win for everyone plan. This approach is guaranteed that nothing has been done to increase water supplies for the last 10 years.

For the last 40 years the Exchange Contractors have led in the fight for drainage in our area. The regional board, EPA and State Water Resources Control Board, in various forms worry about the quality of the San Joaquin and wish to regulate discharges.

In 1963 and again in 1967 the Bureau promised in Federal Court the San Luis Drain would be built. More recently in response to contractors, Exchange Contractors, the bureau has again been required to submit a drainage plan to the court.

The plan that the Bureau of Reclamation has ultimately submitted appears to emphasize land retirement. Based on the Exchange Contractor's many years of dealing with this drainage problem, I would like to offer the following observations.

One, land retirement is a part of the solution or can be part of the solution. But to rely upon it alone is again to adopt a short-term approach in which the only acceptable alternative is one that garners the least opposition. In some way the point has to be made that this type of short-term approach to problem solving on water issues is no longer adequate.

Two, the construction of the San Luis drain was stopped on the theory that more studies were needed. Since that time the Federal

Government has spent hundreds of millions of dollars and yet no solution or long-term solution has been found.

If the local citizens and growers in our area in 1960 had been offered a solution or a way to solve the problem, we're going to give you grants and loans and we're also going to quit worrying about whether we might someday, somehow make a mistake, this problem would not exist today.

In light of this experience of the Exchange Contractors we enthusiastically endorse your concept, Mr. Chairman, of a grant program to fund worthy projects.

Third, new water supply facilities, new facilities to carry on the flexibility and sources and deliveries with which the Exchange Contractors made possible in the 1939 exchange have all been a part of this debate. Government must rid themselves of the notion that it is possible to study and consider alternatives and call that progress.

The implementing parties must be local agencies. Progress can only occur, however, if government is required to grant all the permits in such a fashion that the project is not stalled indefinitely. All we need is for the Congress to provide us with the ability to develop new water sources and systems for transportation of water which will provide water supply security, enhance the environment and the economic well-being of this country.

Again, Mr. Chairman, we'd like to thank you for the opportunity to testify today and we are happy to answer any questions.

The prepared statement of Mr. White follows:]

Statement of Chris White, General Manager, Central California Irrigation District, on behalf of the San Joaquin River Exchange Contractors Water Authority

Good morning, Mr. Chairman and members of the Committee. My name is Chris White, and I am the General Manager of the Central California Irrigation District. I am testifying today on behalf of the San Joaquin River Exchange Contractors Water Authority which consists of the Central California Irrigation District, Firebaugh Canal Water District, San Luis Canal Company and Columbia Canal Company, situated in the central San Joaquin Valley near Los Banos, California.

First, I would like to commend you on the hard work you and your staff have done in a very short period of time. Since becoming Chairman of the Subcommittee of Water and Power, you have had to learn a lot about a very complicated topic. In addition to grasping this topic you have produced a very promising piece of legislation.

The Exchange Contractors hold a very unique position in the California water system. We hold riparian and pre-l9l4 water rights from the San Joaquin River. Historically, water was diverted from the San Joaquin River at Mendota Dam into extensive canals in a Northerly direction. This water irrigates approximately 250,000 acres of land on the West side of the San Joaquin River.

In l939, through a historic Purchase Agreement and Exchange Agreement with the Bureau of Reclamation, the Exchange Contractors exchanged the right to utilize their historic water sources in the Kings River and the San Joaquin River for receipt of water through the CVP diverted from the Tracy Pumps.

Today, Congress must understand that a great deal can be accomplished by local interests and entities, and the benefits of their acts can be felt statewide. A perfect example of that is reflected in what the Exchange Contractors did over 60 years ago to substitute their historic water source, in order to allow for development of the Friant Kern Canal and the development of new water storage and distribution facilities upon the Kings River. This should remind us all that we have a history in California of being able to make decisions at the local level which benefit the whole State, including urban interests.

It should remind us as well that the proper role of the Federal Government is to assist in the financing that allows those beneficial projects and facilities to be built with local impetus and organization that allow all of our needs to be met.

Today, the Exchange Contractors provide for groundwater management of the underground aquifers under their 250,000 acre service area by conjunctively using surface water, coordinating the extraction of groundwater, and carefully monitoring recharge sources. These groundwater areas appear to be in balance and are not overdrafted. How was this accomplished? Through grant programs and low interest loans offered by members of the Exchange Contractors to their landowners and tenants to encourage water conservation and control and by the Exchange Contractors themselves investing in capital facilities. Over the years, there has been a tendency to study and consider alternatives endlessly. The Exchange Contractors, on the other hand, have found that failing to act out of a fear of making a mistake poses the greatest risk.

Under your leadership, Mr. Chairman, current efforts by the Congress seem to express the position that the Federal Government, while inviting the State of California as a partner in the process, will no longer tolerate endless agonizing in an effort to find the infamous "win, win for everyone". This approach has guaranteed that nothing has been done to increase water supplies for the last 30 years. And, and we are grateful for this proactive—and indeed courageous—approach.

The Exchange Contractors, in addition to developing long-term solutions to water problems in California, have some experience dealing with short term thinking and solutions of the recent past which may be helpful in this process. In l960 the San Luis Act provided that drainage would be provided for the San Luis Unit as part of the Central Valley Project. It was well known that lands in the San Luis Unit, many of which are at a higher elevation than the service area of the Exchange Contractors, would become salinized if not properly drained. Worse yet for the Exchange Contractors, these lands would drain downhill into our service area resulting in intolerable shallow groundwater and poor quality water rising to the surface—destroying some of the most productive agricultural land in California.

For the last 40 years, the Exchange Contractors have led the fight to require that drainage be done. During that time, we have watched as shallow groundwater levels have risen to the surface of the Exchange Contractors' land, watched as salinity and boron levels of our drainage system increase due to these pressures, and have watched as the rising dysfunction of the State and Federal regulatory approach to the "drainage problem" has made little progress toward a solution.

The Regional Board , EPA and the State Water Resources Control Board in various forums worry about the quality of the San Joaquin River and wish to regulate discharges. In 1963, and again in 1967, the Bureau of Reclamation promised, in Federal Court, that the San Luis Drain would be built. More recently, in response to yet another action filed by landowners and the Exchange Contractors, the Bureau has again been required to submit a drainage plan to the Court.

The plan that the Bureau ultimately submitted emphasizes land retirement. Unfortunately, this is only part of the solution. Based on the Exchange Contractors' many years of dealing with this problem, I would like to offer the following observations:

l. After irrigation of the upslope lands for 30 or more years without an adequate drainage system, to suggest that the solution is now simply to stop irrigation on those lands ignores the quantity of water which was been applied over this period and which is perpetually going to rise to the surface within the Exchange Contractors' service area. Land retirement is part of a solution, but to rely upon it alone is to again adopt a short term approach in which the only acceptable alternative is the one that garners the least opposition. In some way, the point has to be made that this type of short-term approach to problem solving on water issues will no longer be adequate.

2. Efforts to solve the drainage problem in the San Luis Unit are emblematic of the history of water decision making over the last 30 years in California. It was the State of California which stopped construction of the San Luis Drain, not Federal inaction, on the theory that more studies were needed. Since that time, the Federal Government has spent hundreds of millions of dollars studying the problem and no long term solution has been found. Unfortunately, the interplay between State and Federal Government has been a leading cause of the lack of progress. The lesson the Exchange Contractors take from this experience is that if the local citizens in the area had in l960 been told that the way that we are going to solve the drainage problem is to provide grants—part from the State and part from the Federal government—and that we are going to stop worrying about making a mistake to the degree that it paralyzes all action and instead, build or do something about the water itself, we would not continue to have the problems that exist today.

In light of this experience, the Exchange Contractors enthusiastically endorse your concept, Mr. Chairman, of a grant program to fund worthy projects.

3. With any solution, Congress must be explicit. New water supply facilities, new facilities to carry on the tradition of flexibility in sources and deliveries which the Exchange Contractors made possible in 1939 in the area South-of-the–Delta have all been a part of the debate. Similarly, it appears that there has been agreement that the State government and Federal government bureaucracies must rid themselves of the notion that it is possible to study and consider alternatives and call this progress. The implementing parties are local agencies rather than the State or Federal government. Our experience tells us that this is where progress can be made. That progress can only occur however if the State and Federal bureaucracies are required to grant all permits required to implement a project deemed worthy of a grant in such a fashion that the project is not stalled indefinitely. The example of California and the power crisis is overused but one theme that everyone agrees is present—the mix of combative regulatory and legislative bodies do not make a good cake.

In conclusion, the Exchange Contractor's experience and historical perspective may be of help to you in considering how to avoid the collapse of the California water infrastructure in the same way that the California power infrastructure has collapsed. The nationwide effects of a significant loss of California productivity due to water shortages is much greater than rolling blackouts and increased power bills. The Exchange Contractors, and others like us, have the resolution and the energy and the willingness to work with all of the stakeholders to resolve many of the problems we are discussing here today. All we need is for the Congress to provide us with the ability to develop new water sources and systems for transportation of water which will provide water supply security, enhance the environment and the economic well being of this country.

Again, Mr. Chairman, I want to thank you for taking the time to hold this series of hearings on this important topic. With your leadership, I am optimistic that we can find some common ground and ultimately, find a solution to these problems. If there are any questions, I would be happy to answer them.

Mr. CALVERT. Thank you. I appreciate all your testimony and I think I've met with each one of you separately, together and you have helped teach me about what's going on here in this part of the state in regards to water.

Obviously, as Mr. Herrick very ably pointed out along with the rest of you, is that we've got a problem. That's why we're here today and we'll be in San Jose on Monday. We were in Cerritos and we'll be at other places around the state to listen and learn.

As I approach a question, it's important to point out that you can't say this enough that we don't have enough water and if we don't honestly deal with that problem, we will have continued conflict and no one will win and so we're trying to put together a piece of legislation that will move the process forward that will work in a balanced way for the environment, for the rural community and the urban community where we all can hopefully win or we'll all lose.

So with that, we put together a legislation, H.R. 1985, which also has two other sections to the bill. One, we didn't take anything out of CalFed as the Record of Decision, but we did add to it and we put a process upon it where it would move things forward.

Two sections, of course, the grant section which was talked about and bringing back a small loan reclamation project through the Bureau to the western states, which would allow not only for water projects, but for environmental mitigation, something we've been talking about for some time. Those two sections, by the way, are necessary and expensive, but the Federal Government should

participate because we've imposed Federal law upon all water users in the deal, so any comment about those two sections and whether or not the State of California or even more specifically your areas could meet future needs or existing needs without those two sections. I'll just open it up for 5 minutes of any comments.

Mr. BIRMINGHAM. I'll start and say absolutely not. I think the CalFed program is one element of the development of the water resources necessary to sustain the economy of the State of California and to allow that economy to grow. But it's not—it is not the sole element.

And the other two titles of your bill are equally as important to helping the State of California continue to grow its economy through the development of the infrastructure needed, principally storage and conveyance to have reliable adequate supplies of water.

Mr. CALVERT. Any other comments?

Mr. GUY. I will echo what Mr. Birmingham said in large part. In my comments I focused on two particular pieces. One, of course, was empowering regional solutions and the other is investment in infrastructure. It seems those two sections of the bill are absolutely essential and really provide the foundation to do exactly that. So I think they are absolutely imperative parts of the bill. We'll do everything we can to make them work.

Mr. RICHARD MOSS. I would echo that sentiment. Adding that CalFed isn't the only environmental restoration program in the state that needs funding, so this provides an opportunity for that as well. The state system has lost a valuable commodity I think called flexibility by virtue of all the mandates and the limitations placed on the operations of the projects.

These two other sections of the bill will help in adding in particular local capability to be more flexible and creative on how they manage and operate their systems. So it's a very much needed part of the bill.

Mr. NELSON. We look at our solutions, as I said earlier, in the context of eliminating the gap that we have between supply and demand. And although CalFed establishes and stabilizes where we are within that gap and helps us close that gap somewhat, it doesn't nearly come close to helping us close it all the way. And the other two sections of the bill, we look at those as being opportunities to assist us in moving toward the closure of that gap.

Mr. HERRICK. I would just like to say that we agree encouraging local projects and funding that federally is a good idea, but the practice is the 800 pound gorilla of the Federal Government agencies destroyed it all. CalFed had a redact council referenced earlier that came up with numerous pages of recommendations and said thank you.

The government agencies didn't take any of that into consideration. They trumped everything that the local people wanted.

The issue of ecosystem restoration, very few people come out here and say we shouldn't help the environment, but again your intentions get perverted in practice. We have an environmental water act that says let's buy some water and release it for fisheries so we can protect exports. They put a condition on the barriers that protect my client that say you can't use them if environmental water is in the system. So in order to protect a certain amount of exports

and fish you slit my clients' throats. That's what happens. That's what's going on right now.

So you guys have to decide how you get these good intentions implemented without the lunacy of the bureaucracy in between you and me destroying everything and they are doing it. Excuse me for being—

Mr. CALVERT. That's why we're trying to fix it.

Any other comments, Mr. White?

Mr. WHITE. The opportunity for these—this new yield that we've been discussing, you know, restoration along a river, let's say, is an opportunity to provide water flow for restoration purposes, but on the other end of that there are other beneficial uses that can be used as a conveyance system at the same time.

There are other opportunities if we look at it in the right way and some of these comments relating to the regulatory agencies is right on line.

Mr. CALVERT. Thank you.

Mr. Condit.

Mr. CONDIT. Thank you, Mr. Chairman. Thanks all of you for your testimony here today. It's appreciated. It's not like I haven't heard it before. I appreciate it very much.

I'd like to kind of get into the gap analysis. The gap analysis assumes a 70 percent supply. What does the gap show if there's a 50 percent supply and what if you had 100 percent supply, is there still a gap? You need to kind of help us understand that.

Mr. NELSON. I don't have the specific numbers in front of you, but I think off the top of my head, if we had another 20 percent decline from the 70 percent supply, that would equate to another 3, 400,000 acre feet. We're talking about 1.9 million acre feet in total here and so I would—it would just increase that gap. Of course, we had a 50 percent supply of where we are today. Even when we had 100 percent supply, that's about 1.9 million acre feet and along with the sustainable yield in groundwater that's been determined, we would still have to be out on the transfer market to be able to meet the needs and the needs that are anticipated through the year 2025.

In fact, in history when prior to the 1990's when we had 100 percent supply, in many years we had what was called interim water available which actually supplemented our 100 percent supply to the region, so we were able to get up and above 100 percent supply in many of the years prior to 1990 and many years took advantage of that.

And so we're looking—70 percent supply doesn't get us out of the woods. What it does is it provides a baseline for us from which we—a reasonable baseline from which we feel that we can get better and along with the other provisions of the act be able to become sustainable.

So 70 percent supply by no means meets our needs. However, it does provide a reasonable baseline from where we are today from which we can get better.

Mr. CONDIT. If you have 100 percent, you still have a gap?

Mr. NELSON. That's correct.

Mr. CONDIT. I guess that's the point I want to make.

Go ahead, Mr. Moss.

Mr. RICHARD MOSS. Congressman, I'd like to add to that. Prior to 1990 in the '80's there was active consideration of how we were going to split up the balance of the CVP yield of some 1.2 million acre feet that was left over in the project, hadn't been allocated yet.

One of the main projects being considered was the Mid Valley Canal Project, which would have brought water into the middle of the Central Valley and served a million, million and a half acres. To take this additionally, why? Because the region suffers from a chronic groundwater overdraft.

We already have an existing need that is beyond our supply that manifests itself as groundwater overdraft to the tune of half a million to a million acre feet. That's not counting the shortages they have on the West side because they have a limited access to that supply. From a regional standpoint we started this debate in the '90's water shortage and it's only gotten worse and worse.

Mr. CONDIT. Can you fill the gap with—you mentioned water transfers, conservation, land retirement, underground storage, pumping, whatever, Mr. Nelson?

Mr. NELSON. We look at the sustainable yield and it's been—we're learning more and more about what the sustainable yield is for groundwater in the West side of the San Joaquin Valley. And it's probably noteworthy that groundwater banking opportunities on the West side are pretty limited. We have both geologically and water quality-wise the groundwater availability is just kind of spotty in both quantity and quality. So we have a very limited access and limited opportunities to be able to—to develop the type of conjunctive use that we even have down in Kern County.

So those types of opportunities aren't available to us, but what we do plan to do is to identify and maximize the amount of sustainable groundwater that we can use each and every year and that would be a couple of hundred thousand acre feet.

Congressman, in the question can we use conservation and groundwater and transfers to eliminate the gap? Absolutely. And we're using those on a daily basis. I will say that the numbers that I have presented to you have already taken into consideration the sustainable yield in groundwater and a very—and an assumption of a very, very high level of conservation and efficiencies, and so they are already assumed that we're going to be doing those things in the analysis.

Mr. CONDIT. This question is for Mr. Nelson and Mr. Birmingham both. I'm a strong supporter of the assurances provision of the bill. I think it's important. It is my understanding that this provision can be accomplished without impacting other water users.

Do you have a different viewpoint? And from your point of view would you please describe for me the provision whether it can be achieved without impacting other water users or not?

Mr. BIRMINGHAM. I think the answer to that question is an absolute yes. Mr. Herrick observed that to provide the 70 percent supply to CVP contractors south of the Delta, it's necessary to take water away from others. And that simply is not correct.

As Mr. Nelson said in his testimony, it is possible to operate the Central Valley Project in a manner that is—that achieves the objectives of the three statutes, Federal statutes that Mr. Nelson

identified, the Clean Water Act, CVPIA and the ESA, and at the same time achieve a more reasonable balance in terms of water supply.

The Department of the Interior has a tremendous amount of discretion in the way it operates the project and implements those three laws. And to date over the course of the last 10 years, the discretion has been exercised in a manner that reduces rather than increases water supplies, but within the existing regulatory baseline, discretion can be exercised in the manner that would easily achieve a 70 percent supply in a normal year. I want to emphasize that.

We're talking about a 70 percent supply in a normal water year and it can be achieved without doing unreasonable harm to the environment and without taking water away from any other water agency and without degrading water quality.

Mr. CONDIT. Mr. Nelson, do you have anything to add to that?

Mr. NELSON. No. It's certainly our intent that this be accomplished without impacting another water user in the state.

Mr. CONDIT. My colleagues have been generous with the time. I have one additional question for Mr. Guy.

I agree with you that we must advance the infrastructure project and streamline the regulatory process. Could you please update us on the use of the progress of Sites Reservoir in Sacramento Valley and provide specific information of why the streamlined regulatory process is so important. I think we kind of get that, but I'm not sure everybody in the room gets that.

Mr. GUY. Thank you, Congressman Condit, for the question. For most of you Sites Reservoir is located on the west side of the Sacramento Valley, about ten miles west of the town of Maxwell and it was one of the projects that was identified in the CalFed Record of Decision.

What the CalFed Record of Decision stated is that CalFed would join with local partners in evaluating the feasibility of the project and in doing the environmental review. In fact, that is what is being done at this time.

There is an MOU that was completed late last year between the Department of Water Resources, the Bureau of Reclamation, several of the fishery agencies, and then several of the local water entities, probably about ten of the local water entities, to move forward with this process.

And what is happening right now is that we are getting a handle on what the work that has been done by the Department of Water Resources on that particular project, hopefully the environmental review and the feasibility work for that project will begin in seriousness later this summer. There will be scoping on the environmental part of the project and the feasibility work will begin.

I am pleased to say that—partnerships, as everybody knows, are challenging and difficult. I think all in all the partnership between the local agencies and the CalFed agencies are so far working pretty darn well in the Sites Reservoir situation and we are hoping to meet the CalFed target of completing the environmental review and having the permitting completed by the summer of 2004. That's pretty ambitious at this time. But that's the goal of the CalFed decision and we're ready to make that commitment.

Mr. CONDIT. Thank you, Mr. Chairman. I apologize to my colleagues. Thank you.

Mr. RADANOVICH. Thank you, Mr. Chairman. Did you mention the possibilities of establishing or re-establishing a fishery below Friant Dam? If that's possible, would that take additional water, which I assume it would? If you're talking about that gap between Friant and Merced River, where would the water come from? Are you going to build another dam? Are we going to raise the dam?

Mr. RICHARD MOSS. CalFed contemplates new San Joaquin storage. In our studies we're looking at any additional source we can find to meet that water need, because it will be significant; in the order of 200 to 600,000 acre feet in an area that's already water short.

Friant Dam and Millerton Lake has storage capability of 385,000 acre feet of active storage on a river that annually produces about 1.9 million acre feet. It's too small for the watershed behind it. So we think new surface storage to capture the peak runoff, reregulate it, and allows us to put it into our underground long-term storage has some real potential to generate a significant chunk of that new yield that's going to be needed.

CalFed is beginning the studies. The Bureau of Reclamation is putting together with us a Memorandum of Understanding to begin a study of new San Joaquin River storage. It's a delicate process given that we are in a program and a process with our new environmental partners of studying where the water is going to come from.

We don't want to get out in front of that process in pushing new storages being the only solution when in fact we know it won't be. It will require water transfers. It will require again more conjunctive use, possibly tying into other watersheds with the conveyance to be able to move water around and bring more water into the region.

Mr. RADANOVICH. With regard to the assurance language on the bill, Friant, have we worked out the disagreements there? I think is—

Mr. RICHARD MOSS. Well, we're attempting to. Quite frankly, Congressman, I'm not sure they can be worked out. We're giving it a shot. We share the concerns expressed by Mr. Herrick as to having greater definition of where the water will come from in order to provide this assurance.

It's difficult given our needs for river restoration. It's difficult being the only other part of the CVP, south of the Delta, that could possibly be impacted by a Federal mandate to provide a certain water supply. So we're very anxious about how that process goes forward and the answer to your question is no, we have not come to closure yet on that.

Mr. RADANOVICH. I want to state for the record, too, my original motives for being so strong on this reliability issue was to prioritize urban and ag interest over the environmental interests at least until we get to the point where we can accommodate them all, which I am fully supportive of. I'm sorry it's gotten to problems like this, but I think—to me it all boils down to if we can't put human needs above the environmental needs on a temporary basis until we get more water supply, then I think we're doing something

morally wrong here. I hope we can work this language out and move it forward.

Dan, I want to ask you a question. Should we begin a study in this CalFed—in this bill land retirement in Westlands, possible purchasing of land to make up for the contract deficiencies historically?

Mr. NELSON. I think that there are definitely opportunities through this bill to take a look at that. Let me take on the broader issue, if I may.

Unfortunately, it's becoming broadly acknowledged that land retirement is going to be one of the components necessary to bring sustainability on the West side of the San Joaquin Valley. I look at primarily as a result of a water supply situation in it, but there's also some drainage issues of course involved, too.

The land retirement program is going to have to be a very thorough program, and as Dr. Sablan had mentioned, is going to have to take into consideration all the third party impacts, and it is my sense that CalFed could be a useful form for some of the discussions on that.

Mr. RADANOVICH. You mentioned 70 percent shortfall of about 800,000 acre feet in your area of the state.

Can you translate that acre foot number into acres of production?

Mr. NELSON. In the analysis, they use about 2.3 acre feet per acre and so the 800,000 acres would be what, about 350,000 acres.

Mr. RADANOVICH. If you were still—if you had 100 percent, what would be the land then that you would still be short to farm on the water?

Mr. NELSON. If you're talking about geographically, where is that land, I would assume it would be in the upper portion of the San Luis unit.

Excuse me, Congressman. That's where their allocation per acre even in their contract supplies is much less than other areas of the CVP.

Mr. RADANOVICH. Would that include land in Westlands as affected by the nonopening of the drain, the 50,000 acres that's tied up in the lawsuit?

Mr. NELSON. I imagine there would be a component of that, but most of the land that I was referring to that has a short—an allocation that is less than the other areas is in another region, in the plains.

Mr. RADANOVICH. Thank you, Mr. Nelson. I do have more questions.

Mr. CALVERT. Thank you, Mr. Radanovich.

Mr. Dooley.

Mr. DOOLEY. Thank you, Mr. Chairman, I just want to touch again on the Chairman's language and how we work through this because it's absolutely critical.

In the ongoing discussions that, Mr. Moss, you've been having with Mr. Birmingham and others, in the language that you are suggesting, especially in terms of some language that refers specifically to cost, is that there will not be any adverse impact also in cost.

I guess I'm a little bit concerned that if you do have something in that nature and does it also though preclude what might be a

decision to move forward with projects to increase yield and supply that might in fact have an increased cost associated with that that we would think would be a good investment because of the benefit.

How are we to assure that we wouldn't have an adverse implication in being able to increase yield and supply if we have this language in the bill?

Mr. RICHARD MOSS. Very good question, Congressman. There's great concern about cost of water. And as you well know, the cost in the Friant Division of CVP supplies as a result of new contracts and CVPIA have meant an increasing cost of 1000 to 1500 percent over the last 10 years. That cost was very difficult for the districts to deal with, but nonetheless they have.

The CVP is integrated from a cost standpoint. And one of our concerns is that if the—if there is a major expenditure to try to find additional water supplies to meet this assurance, that our grower—our growers would not be the beneficiaries of that additional water, they don't want to have to pay the additional cost.

Heretofore, before the contracts were renewed, contracts were on a fixed-rate basis and that there wouldn't be any change in cost to other contractors as a result of new projects being added and those kinds of things. But ever since 1986 and the passage of legislation that required a full repayment of OM costs and the repayment of all capital costs by the year 2030, the CVP is taking on another direction.

Mr. DOOLEY. I understand that. I'm concerned with the potential negative impacts if you have something in this. Even from the Friant perspective—

Mr. RICHARD MOSS. Our growers would love to be able to support a new project that they can see new benefits.

Mr. DOOLEY. Let's play this out a little bit, though. In terms of some of the Cross Valley contracts and some—that provide some benefit to Friant, if you do have increased yield that goes to south of the Delta to meet the 70 percent assurances, it could have significant impacts even on some of the availability and costs of water that might be benefitting Friant.

And if you have this provision in there, my concern is, are we setting the standard that actually can have a negative impact, maybe not just simply on the contract price of the water, but on other water that's being accessed by members of your unit?

Mr. RICHARD MOSS. Again, I don't think so. If there's a benefit to be derived to my growers from additional water supply, they are willing to pay for it. There's nothing in the bill that precludes them from doing that and in coming to an agreement that they are in fact being benefitted.

Mr. DOOLEY. Wouldn't this language, though, preclude an investment by—

Mr. RICHARD MOSS. Why?

Mr. DOOLEY. If it had a—

Mr. RICHARD MOSS. All it says in providing this assurance that it wouldn't cost anybody more money that isn't being directly benefitted by the program. I don't see where that provision would necessarily preclude my growers or other growers who are actually benefitting directly as a result of providing more water to being able to pay for it.

Mr. DOOLEY. I hope we can do that. I guess, Mr. Nelson or Mr. Birmingham, if you have any comments on that.

Mr. NELSON. One of the dilemmas we have with the cost provision is that historically the CVP has been based on a postage stamp rate. Essentially this would stray from the postage stamp rate cost allocations that the CVP has historically been.

My sense is that's opening a very large can of worms not just for meeting the 60, 70 percent supply component of this legislation or the 70 percent supply, but it also has implications on any future CVP projects. I guess the biggest concern we have is that we think there are large implications in how it is that we've been allocating costs throughout the last 50 years that the CVP based on this language.

Mr. DOOLEY. It's unfortunate we're not going to have the opportunity to respond to some of the questions that's going to be carried in the next panel. I'd just like to read you a statement from Nick DiCroce from California Trout.

It says—talking about the potential water savings. They are talking about the 10 percent increase of price of water to agriculture, which they indicate to be 1.20 to 4.20, anticipated by one study, 3.2 percent decrease in water demand. And they contend that that 3.2 percent reduction would apply to agriculture's current usage of more than million acre feet is a reduction of more than one million acre feet per year.

"At those rates, a modest 10 percent reduction in agriculture water usage for a relatively small increase in the price of water would theoretically solve the state's predicted shortage of 2.9 million acre feet by the year 2020 with water left to spare for urban growth and river habitats."

I guess what they are contending is that if we had a 10 percent increase in the price of water, that we would solve our water supply needs. I appreciate any comments you might have.

Mr. BIRMINGHAM. With the Chairman's permission, I'd like to respond to that. The suggestion that is being made raises a very fundamental question. That is, are we going to solve California's water problem by eliminating agriculture as an industry in this state? That's a—the fundamental question.

The premise for the suggestion is that increased costs will lead to increased conservation. As Mr. Nelson has already indicated, farmers in the San Joaquin Valley have almost exhausted the opportunities for conservation. There may be some room for additional conservation, but not much more.

And so the question is, shall we take agriculture out of California's economy and rely entirely on industrial uses of water or should we continue to maintain ag?

And that is one of the fundamental benefits that we see from H.R. 1985 is that the balanced implementation of the CalFed program will help sustain agriculture, because from our perspective ag is a vital component of our economy and produces benefits well beyond the food and fiber that we all enjoy as a result of it.

For instance, the question I would ask is how much oxygen is produced by all of the orchards that exist up and down the San Joaquin Valley and I would submit it's—that there is a benefit to having agriculture production in the valley that is an environ-

mental benefit. The use of land for agriculture is a valuable resource.

Mr. CALVERT. Thank you.

Ms. Napolitano.

Mrs. NAPOLITANO. Thank you, Mr. Chairman. My questions are more directed to the issue of salinity. I think I need to know from either Mr. Herrick or from somebody else that might be able to answer is where does most of that salt come from? Where is the major portion? Is it Federal lands? Is it due to the farming areas of—go ahead. Of course, that leads to the issue of the saving of the Bay-Delta.

The sanitation district in the Los Angeles County has a project with the beach where they are pumping recycled water to help maintain the salt water intrusion. Could that be used to be able to help maintain the flow? Those are questions—would that hurt the restoration of the ecosystem? Those are questions that kind of beg answers in my mind.

Mr. HERRICK. That's a huge can of worms and I'll see if I can address that briefly. First of all, reuse of water in various areas is a very good idea. We encourage the government to try to promote greater self-sufficiency in lots of areas. But when you go upstream of the Delta and try to conserve water or redirect it for other purposes, you simply decrease the downstream of flow. So if some municipality of farmers upstream decrease the amount of water that they have that drains back into the river or into the underground, somebody else gets less.

So when you decrease a flow upstream, then New Melones Dam has to release more fresh water in order to meet the salinity standards in the Delta.

Now, the soils on the western side of the San Joaquin Valley these gentlemen are more better able to comment on them than I am. But the Central Valley Project by importing or exporting water from the Delta takes water of 200 to 400 tds in terms of salt, which is a measure of salt and salinity, and takes that down to the valley. If those areas got the water out of the river like they previously did, I'm not saying they should do that now, if they did, that water was extremely good quality water. That was a hundred or less tds.

When you import 200 to 400 tds water and then consume a large part of it, which is what plants do and that's fine, you have concentrated the salt. The plants don't use the salt. So although there are salts and things like selenium in the grounds down there, the problem is that you keep importing tons and tons of salt.

My testimony mentions the raw numbers. It's a million tons, not a hundred million. That's a huge amount of salt that's just gathering down there. Some of it gets back down there and that's what causes the salinity of the rivers problems, because it comes in tremendous concentrations, so that comes back into the river.

The issues about saving the bay we don't think are quite well focused, because they say don't you let that salt go down to the bay and flush out, don't give us your problem. That salt came from the bay. Now it should be at the right concentration, get out and we have to address that problem. It's the same salt.

The selenium that comes out of the foothills down there, historically that just made its way to the river and went out the ocean,

too. Now, if we're going to increase the way that happens and the concentration, that's one thing, but you can't collect it down there. You have to get rid of it some way.

Now, the salt to our purposes is the bigger problem because that constantly harms my clients, but you have to be able to get rid of it. And there's all sorts of ways we can do this. We would support the other gentleman here that talk about the promises of the Federal Government that went unfulfilled regarding the drain. You have to do something. To say they should keep their salt is a fundamental misunderstanding of the problem.

Mrs. NAPOLITANO. How much of the land usage is lost to salinity? Can anybody answer that?

Mr. BIRMINGHAM. In Westlands today because of inadequate drainage there are approximately 15,000 acres of land that have been taken out of production. We estimate that there are approximately 250,000 acres of land in Westlands that ultimately will require drainage.

You've heard discussions about a land retirement program. We are involved in discussions about the potential retirement of some of those lands to deal with the drainage issue. It's important for me to point out, however, the lands within Westlands that have drainage problems do not drain to the San Joaquin River. Salts imported to Westlands don't make their way back to the river because Westlands doesn't discharge drain water outside of its boundaries.

The question becomes how to deal with the drainage problem. The retirement of the land, as Mr. White suggested, is not going to in and of itself solve the drainage problem on the West side of the San Joaquin Valley.

People talk about the West side of the San Joaquin Valley and some people think that refers to Westlands. In fact, the West side of the San Joaquin Valley refers to the entire area from Tracy all the way to Bakersfield to Kern County.

Land retirement is potentially one element of a means of dealing with drainage, but there will have to be additional studies and additional measures taken to deal with drainage in other areas that are not retired.

Mrs. NAPOLITANO. Is there a threat that future utilization of these lands may be threatened by the increase of salinity usage of that irrigation—increased water in that irrigation water that's being imported?

Mr. BIRMINGHAM. Absolutely. As water with high concentrations of salt are imported, unless the water is drained, the water and the salt accumulate within the soils and ultimately the salinity accumulates in the soil and will eliminate the productivity of those lands.

That's why within Westlands there have been lands that have already been taken out of production because they are incapable of growing crops.

Mr. White is an expert on this subject. If you have specific questions, I would encourage you to direct them to him.

Mrs. NAPOLITANO. I think all of you should answer them because I think this affects everybody. I think the reduction of water plus the salinity is going to affect the agricultural industry in California. So if you don't put that into context and I think we're

missing the boat in that particular area because it's all in one. It's not separate from.

Mr. WHITE. Congressman, could I add a little something?

Mr. CALVERT. Final comment and then we'll go back around.

Mr. WHITE. Various agencies are looking at areas in the San Joaquin River. They are tinkering around with water quality discharge limits and so forth. The thing you must understand is that the better water quality is available in bigger quantities, so as you try to restrict water, let's say you set a standard at 500 tds for discharging into the river, there's a lot of 550 part water that you're going to take out of the system, you're going to make the downstream water quality worse.

It's not an easy problem that can be solved with a regulatory approach. The solutions are facility type solutions, not regulatory. We can turn into a—very quickly into a spiralling type situation with water quality.

Mrs. NAPOLITANO. Explain who would be able to go clean up the discharge.

Mr. WHITE. Some of the projects that are offered up in the CalFed authorization, and to the extent that there's new yield in the system, this can be used in the riverine system for environmental benefits and as well as for water quality benefits.

Mrs. NAPOLITANO. EPA is mandating some of the sanitation districts to even treat groundwater runoff in Southern California, so expect something to happen along those lines. Thank you.

Mr. CALVERT. Thank you. Go through another round very quickly.

Mr. Nelson, I have a question very quickly. How much water has been shifted in the last 10 years from water contract users for other purposes? Do you have an approximate number?

Mr. NELSON. Yes. It's well over 1.5 million acre feet with both the state and Federal contractors.

Mr. CALVERT. 1.5 million acre feet?

Mr. NELSON. That's annually by the way.

Mr. CALVERT. Now, we've heard numbers in normal years that we need about an additional six million acre feet of water in order to meet the needs of the various water contractors and environmental demands that are being placed within the system.

Would this panel agree that that's approximately the right amount of additional yield that we would need in order to meet the all those requirements? Any comments on that?

Mr. HERRICK. I'll comment and say I don't know. It's impossible to get six million acre feet in any term that you're considering.

Mr. CALVERT. What is possible, Mr. Herrick?

Mr. HERRICK. That's a tough one. I have a disagreement with the rest of the panel members about what water is available now. If there are ways to reoperate Shasta and the Delta cross channel pumps to get more water, we would encourage that. Transfers don't do that. Transfers take somebody's water for money and cause third party impacts. I hope I'm not digressing too much. Let me just say one of the ways they are trying to get additional supplies is to go in the tributaries and buy surplus water.

A good example of that happened in this last December where they purchased from Merced Irrigation District, so the water came

down in December instead of summer power releases. That water was pumped across the Delta at a time when diverters on Middle River had no water.

When you decrease the summer flows from Merced, you put an incremental additional obligation to New Melones to meet water quality standards in the summer. So that can be described and is described every time we fight it as no third party impacts, but it does have third party impacts.

Again, I'm sorry, I'm the crazy cousin that nobody would like to look at in these kind of things. But it's accomplished in a manner—and I'm not blaming these gentlemen here. I'll blame the Bureau of Reclamation. It's accomplished in a manner that I describe as cheapening.

If the Bureau wanted to buy more water from wetlands down in the valley and bought it itself and had the state pump it, which they didn't have surplus pumping capacity, then a limitation on pumping kicks in, which was set forth. That limitation is what on—the feds using the state's pumps. That limitation protects my clients.

So they needed this water for the wetlands, the Bureau did, so the Bureau paid the seller to temporarily change its point of diversion from the Merced River to the state pumps. So Merced Irrigation District was diverting water to state pumps instead of at its dam. When you do it that way, those limitations on export pumping don't apply.

So if you describe it—don't do anything differently, but describe it differently, the protection to my clients evaporates and we complained about that and the answer was, well, if you describe it that way, we don't have to protect you.

So anything you come up with here, somebody will twist and bend and cheat because I submit there isn't any extra supply out there.

Now, there are ways of getting incremental benefits from doing this and changing that, I agree with that completely. There are ways to do it. But any significant amount of water is simply a reallocation in type and place. If you can do that with those wet time of year flows, wonderful, we'll back you up all the way. But that's not how it happens.

Mr. CALVERT. Mr. Condit.

Mr. CONDIT. I'll be real quick. Mr. Birmingham made a comment about the action plan that Governor Davis and Senator Babbitt signed and you made a reference that it was sort of totally ignore.

I know a lot of people in this room and a lot of people across the state from all the interests were involved in that process. Why is it being ignored and who's ignoring it?

Mr. BIRMINGHAM. I know, Mr. Condit, that you were intimately involved in the discussions that led up to the execution of the Framework for Action as were a number of other Members of Congress and Senator Feinstein.

What is stated in the Framework for Action is unambiguous. It states that in normal years the CVP contractors south of the Delta that have been disproportionately impacted by recent regulator actions should receive an increased supply of 15 percent to a 65 or a 70 percent allocation.

When that document was executed, we as affected parties were told that in developing the Record of Decision, we would be able to participate, as would all interested parties, including municipal water users and environmental water users, to insure that that promise became real.

Well, the Record of Decision was prepared by the Federal agencies and the state agencies that make up CalFed and we were told that because of the process, we would not be included in developing the Record of Decision.

And when the Record of Decision came out, there were new provisions concerning the operation of the projects under biological opinions obtained in connection with the Record of Decision that suggested to us that it would be very difficult for the projects to be operated in a manner to accomplish the improved water supply.

So the specific answer to your question of who's ignoring it, I would say bluntly, it's the Fish and Wildlife Service and it is the National Marine Fisheries Service. The projects can be operated in a manner to protect listed species. It's vitally important to us that those species be protected. Our water supplies aren't really going to begin to improve until the environment is restored. That's why we think it's critically important that H.R. 1985 mandate be a balanced approach. Our water supplies aren't going to improve until the environment improves. That's important.

But the discretion that was exercised by Fish and Wildlife Service, and hence in developing those biological opinions, created a tremendous amount of ambiguity and uncertainty concerning the ability of the CVP to affirm the framework made in the action.

Mr. CONDIT. So the action plan was basically ignored administratively, there was an administrative fix that could have happened, but didn't happen? Is that what I understand you to say? I don't want to put words in your mouth.

Mr. BIRMINGHAM. I don't want to say it was totally ignored, but I would say it was manipulated.

Mr. CONDIT. Don't you think—I'm sorry, Mr. Nelson.

Mr. NELSON. I'd like to expand on that a little bit and it goes back to what Mr. Herrick said earlier.

On a policy level I think there was full intent and full expectations that this 15 percent up to 70 percent would be done. However, the translation between that policy discussion and those policy agreements from the folks actually out in the field making the operational day-to-day decisions got lost. And so—although it wasn't ignored maybe by those policy folks that made that commitment, it certainly was—the commitment was made in such a way that allowed the regulatory folks to ignore it entirely and it was ignored. There was no consideration of that 15 percent when coming up with the operations for this year's supply.

Mr. BIRMINGHAM. As an example, the initial forecast of operations developed by the Department of the Interior 2 months after the Record of Decision was signed, or 3 months after the Record of Decision was signed, said that if the next water year is a normal water year, CVP contractors south of the Delta will get 45 percent of 45 percent supply. That was immediately after execution of the Record of Decision and I know that there was a lot of pressure put on the Department of the Interior at the end of the last administra-

tion to fulfill the promise that was made in the Framework for Action.

Mr. CONDIT. That's my point. I thought it was pretty phenomenal that you had Governor Davis and Senator Babbitt sign that had some security for you guys to get your allotment of 70 percent. So I was just trying to figure out where it fell off the chart. You're saying administratively. That's what I understand.

Mr. NELSON. Yes.

Mr. BIRMINGHAM. Yes.

Mr. CONDIT. Let me just make one other point. I think Mr. Birmingham makes an excellent point. Actually, I think the State of California and the Federal Government has to decide whether the agricultural is going to be in business in California. I think that's how crucial water policy is here is whether or not we survive.

We make reference to the West side, people do think I'm talking about Westlands when you said west side, but the west side is a whole region of the State of California that produces a tremendous amount of the economy for California, the agriculture of California.

If we continue with this policy where we have land retirement or you don't get your allocation, you're down to 45 percent or what have you, from your point of view, you guys, some of you work in these small communities on the West side, what happens?

I mean, we used to talk about a thing called plant closure and force companies who were going to close down plants to do some sort of compensation to employees for a month or a year or what have you. This is quite a controversial issue.

My perception is if you wipe agriculture out in California, you're going to end up with plant closures. You're going to end up with a whole region of the state with no economy. You already have a massive problem with unemployment.

In your perspective, you guys work over there, live over there, what do you think happens if we continue down this path of no comprehensive water policy that keeps agriculture strong in California?

Mr. BIRMINGHAM. We are on the verge of a collapse of the agricultural economy on the West side of the San Joaquin Valley. As you say, that goes well beyond Westlands. That is not an exaggeration. It isn't due totally to inadequate water supplies. Low commodity prices, high cost of energy plays a part in that.

As Dr. Sablan very eloquently stated, when farmers and farm workers and businesses people hear in December that next year if it's a normal year, you're going to get a 45 percent supply, farm workers leave and no reasonable businessman is going to want to invest the money necessary to develop and maintain plants in the area.

We've already seen the failure of processing plants. I mean, the best example is Tri-Valley Growers last year. And again, you can't lay that entirely at the feet of inadequate water supplies, but inadequate water supplies and unreliable water supplies certainly play a major role in the failure of that cooperative.

Mr. CONDIT. Dan, I know you're over there.

Mr. NELSON. Just simply put, the rural economies are based entirely on agriculture and agriculture—the sustainability of agriculture is entirely based on a sustainable supply. So taking away

that supply obviously just guts the economy for a wide group of rural communities and those dependent on them.

Mr. CONDIT. David.

Mr. GUY. If I could just add, too, there's also a west side of the Sacramento Valley that is in much the same predicament in that they received 60 percent of contract supplies this year. They also receive water from the Central Valley Project. Not to rehash things that have already been said, but I think everybody's aware of the agricultural crisis.

I think what you're seeing is increasing pressure upon the water managers to make sure that one particular input, being water, is just that much more reliable and that much more affordable.

And that's again going back to the bill, why I think these investments in infrastructure and empowering regional solutions are so important so that we can try to maintain and sustain that agricultural and rural economy.

Mr. CONDIT. Thank you.

Mr. CALVERT. Mr. Radanovich.

Mr. RADANOVICH. Thank you, Mr. Chairman. On the issue of reliability, I somehow think that this has gone from setting statewide priorities while we're in a short term or while we're in a low supply period and setting standards or priorities until we get into enough supply that we can satisfy all the needs of water in California and somehow has gotten to an issue that is strictly for Westland's own water supply.

I'm kind of discouraged at the fact that it's come to that. To me it's a reliability issue for all the needs, human needs of Californians throughout the state.

Is there a way to get it off of strictly a Westlands issue or a Westlands/Friant issue and get it back to a statewide priority issue?

Somebody had mentioned the fact that there was plenty of flexibility in the agencies that implement DSA, CVPIA, and some of these other standards so that there might be flexibility enough to meet these needs.

Is there a way we can get that flexibility down in law so we get this being off a Westlands and/or a Westlands/Friant issue and set it—get a statewide priority system that puts urban and ag uses above environmental issues on a temporary basis so we can get to a supply point to meet the needs of all?

Do you have any questions, Tom, because I'm frustrated that it's gotten to this point. I really am and it shouldn't be that way.

Mr. BIRMINGHAM. I agree completely. I have heard people say and the people that say this are misinformed, that—I don't think they are misinformed, I know they are misinformed. That the shortages are being imposed on the West side, AKA Westlands, because that's the most recently developed area. They are the newest contractors. That's just wrong.

First, Bill Harrison who is the general manager of Del Puerto water district who is in the audience, they were one of the first contractors in the CVP. Del Puerto Water District is also on the West side. San Joaquin Valley is suffering from the same shortage as is Westland.

Mr. RADANOVICH. Tom, then, how do we get reliability into this bill so that it works for everybody in California rather than being a Westland issue?

In my mind it is not only California is short of water and it will be until we get additional supply. We've got to figure out a way to make this thing work without it looking like California's agriculture is eating each other up and this issue is going to go down the tubes.

Mr. BIRMINGHAM. I think one solution to that is by mandating, that none of these uses—when I say these uses, I mean municipal use, agricultural use and environmental use has priority. The CVPIA—as I said in my comments, one of the purposes of CVPIA is to achieve municipal balance. Unfortunately, that was interpreted by the last administration as giving environmental usage a priority.

All of the work that has been done to date in the CalFed program has been to restore the environment. Maybe that was appropriate, but we are at a point now—and I think this is what you are saying. We are at a point now where we have to accomplish benefits for the other CalFed purposes in addition to restoring and enhancing the environment. That means implementing the program in a way that accomplishes a balanced implementation.

Mr. RADANOVICH. I applaud the fact that you're working together. You guys are doing good. But rather than coming up with language that's going to satisfy both Friant and Westlands in this thing, can you come up with language that satisfies the state in general and really goes toward the reliability issues that I want to see that I think most of the rest of Californians want to see? Is it possible to come up with something like that?

Mr. BIRMINGHAM. The answer is yes, and we would look forward with working with you and your staff to come up with that kind of language.

Mr. RADANOVICH. I'd love to see it.

Mr. RICHARD MOSS. Not to be a wet blanket, but you can't think of a more complicated system of water allocation and water priorities than the California water law system. I don't think there's any appetite—at least I've never seen any appetite on the Federal front, especially in this Committee, to preempt California water law and California water rights.

Beyond that, there is an established set of priorities as to how the project gets operated. We just had a very recent court case which again reaffirmed the priorities, if you will, to pump water to Tracy by Exchange Contractors that was trying to be upset and overturned.

So you have to be very careful when you come in and try to overlay a Federal mandate that's going to set—upset, potentially upset existing priorities of operations and existing law of both on the state and Federal level by just a broad brush priority system.

I'd be glad to work with you on it, Congressman. I'm not sure it can be accomplished.

Mr. BIRMINGHAM. It won't surprise you, on this issue I disagree with Mr. Moss. I don't think it's a matter of imposing Federal law on state water law. I think it's a discretion of describing to Federal

agencies how they should exercise discretion in implementing Federal statutes. That is one of the purposes of Congress.

Mr. RADANOVICH. I guess I would like to leave it as being—if you could help me with a priority system for a reliability system for California urban and ag water uses rather than something strictly for Westlands, I'd like to work on that.

Mr. NELSON. Just a brief comment. Again, this 70 percent provision isn't strictly for Westlands. There are— as has been noted quite a few times, there are 24 other ag service CVP contractors south of the Delta that are experiencing the exact same shortages and the exact same restrictions as Westlands.

The 70 percent supply was the—and the assurance of the 70 percent supply was as a result of a broad acknowledgment by everyone from Governor Davis to Senator Feinstein to Congressman Condit to actually anyone that's involved in California water that there has been disproportionate impacts as a result of redistributing water over the last decade from water uses to environmental uses, that there have been disproportionate—

Mr. RADANOVICH. That's the way it started a year ago. Now metropolitan water is calling up and saying we're not sure this is very good in weighing on behalf of the urban community and I'm saying it's not necessarily going to benefit them. Now you've got problems with Friant even in the agriculture community.

What I'm asking you to do is come up with something that works for all of urban and ag water uses in the state that will also serve Westlands' needs as well. Otherwise we're going to have problems.

Mr. NELSON. We are committed—and we thought that the language accomplished the increased water for the west side of the San Joaquin districts while not impacting anybody else and we thought we had come to closure on that particular part of it and that's our intent. And we're committed to continue working toward making sure that the legislation assures this while not impacting anybody else.

[Discussion held off the record.]

Mr. DOOLEY. I guess again a little bit of frustration in representing the area which is arguably having some of the highest levels of unemployment in the nation that associated impacts in terms of some of the highest incidence of childhood poverty and highest incidence of teenage pregnancies and the lowest rate of health insurances being offered, which is all attributed to the state of economy.

When we're dealing with public policy issues here in terms of—there's some groups out there that are going to testify on the next panel that we don't need additional supply which would contribute additional yield—advocating a policy that we can have what sounds like a very modest proposal in terms of a 10 percent increase in water prices which is going to be $1.20 to $4.20 cents acre foot as they testified, that that can be the future needs of the state's water usage.

In spite of the empirical data that you can rely on rather than theoretical projections they are making in terms of what they faced in the last 10 years, what has been the increase in water prices that you folks have faced?

What has that contributed to increased supplies and, Dan, you talk, and what has been the percentage increase that you've seen?

Mr. RICHARD MOSS. Well, we've seen increases in our water rates for our Class I firm supply from $3.50 acre foot up to I think it's right about $38.00 acre foot. Class II went from—which is the unstorable wet season water that we use for groundwater recharge from $1.50 up to $25.00. There has been no reduction in water use as a result of those increase in costs. There's been a lot of money taken out of our local economies as a result of that, but not a decrease in water use. We have some of the highest efficiencies in the world. Where water shortage is already, we have lots of incentives to use our water as efficiently and effectively as possible.

Mr. DOOLEY. What are the relative increases that you've seen?

Mr. NELSON. Those numbers are fairly comparable. We do have some areas up to 60 or 70 dollars per acre foot. The other point that's probably noteworthy here is not only do we have increased costs on the CVP water we get, but we're also being chronically short. We're out on the water market every year. That gets up into the $150 range per year.

Mr. CALVERT. Thank you. We'll take a 10-minute break and we'll introduce our next panel.

[Recess.]

Mr. CALVERT. We'll be introducing our third and last panel. While they are coming forward, I have a couple of announcements to make.

First I'll introduce them, Mr. Ryan Broddrick, Director of Conservation Programs, Valley/Bay CARE, Ducks Unlimited; Martha Guzman, United Farm Workers of America, AFL-CIO; Susan Redfern, landowner; and Mr. Nick DiCroce, Member of Board of Governors, California Trout.

I would like to submit for the record a list of endorsements that we just received, including the Association of California Water Agency, Associated General Contractors of California, Bay Area Council, California Building Industry, California Business Property Associations, California Business Round Table, California Chamber of Commerce, California Council of Manufacturers Technology Association, California State Council of Labors, Valley Industry and Commerce Association, State Water Contractors, Southern California Water Committee, Orange County Business Council, Northern California Water Association, Mountain County Water Resources Association, Los Angeles Area Chamber of Commerce, Central Valley Project Water Association, and Cal-Nev Conference of Operating Engineers.

If no objections, we'll submit these for the record.

[A letter submitted for the record by California Action on Water follows:]

CALIFORNIA
Action On Water

PROMOTING INVESTMENT IN CALIFORNIA'S WATER FUTURE

June 29, 2001

Dear California Congressional Delegation:

California business, labor and water leaders strongly support bipartisan federal legislation needed this year to authorize the crucial CALFED Bay-Delta implementation plan. We urge you to become a co-sponsor of H.R. 1985 and to work with us in securing its passage.

California is growing and will quickly outpace the modest investments made to its water infrastructure over the past 30 years. As the energy crisis has shown, there is a tremendous price to pay for being caught without adequate resources. There is broad agreement among our state's elected and opinion leaders that water will be the next crisis for California unless steps are taken now.

With support from business, labor and water interests, California has committed substantial funding to begin that investment through the CALFED Bay-Delta Program. Today, federal action in the form of S. 976 sponsored by Senator Dianne Feinstein and H.R. 1985, by Congressman Ken Calvert, is needed to keep the effort on track and prevent a water supply crisis in California's near future.

Without an adequate water supply our environment and economy will be severely impacted. The Bay-Delta Program is the largest and most comprehensive environmental restoration project in our state's history. At the same time, the plan outlines needed improvements to water supply reliability and quality in the Bay-Delta – vital to public health and our quality of life.

Whether it is megawatts of power or a reliable water supply, we can't afford to neglect our infrastructure. California jobs depend on it.

California's water challenges demand the solutions offered in the Bay-Delta Plan. S. 976 and H.R. 1985 will help make that plan a reality.

Sincerely,

Action on Water Signatories

cc: Representative Ken Calvert
Senator Dianne Feinstein
Senator Barbara Boxer
Governor Gray Davis

Associated General Contractors of California • Association of California Water Agencies • Bay Area Council • California Building Industry Association • California Business Properties Association • California Business Roundtable • California Chamber of Commerce • California Council for Environmental and Economic Balance • California Manufacturers &Technology Association • California State Council of Laborers • Cal-Nevada Conference of Operating Engineers • Central Valley Project Water Association • Los Angeles Area Chamber of Commerce • Mountain Counties Water Resources Association • Northern California Water Association • Orange County Business Council • Southern California Water Committee, Inc. • State Water Contractors • Valley Industry and Commerce Association

C/O ASSOCIATION OF CALIFORNIA WATER AGENCIES • 910 K STREET • SUITE 100 • SACRAMENTO, CA • 95814-3514
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California Congressional Delegation
June 29, 2001
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David Guy
Executive Director
Northern California Water Association

Stan Oftelie
President and CEO
Orange County Business Council

Steve Zapoticzny
Chairman
Southern California Water Committee

John Coburn
General Manager
State Water Contractors

Bonnie Herman
President / CEO
Valley Industry and Commerce Association

Mr. CALVERT. Welcome, thank you for coming out today and if you weren't here, we have a 5-minute rule. We try to stay within that for testimony so we can allow plenty of time for questions. You'll see a green light, then a yellow light, 1 minute remaining, and then the red light comes on.

With that, Mr. Broddrick, you may begin.

STATEMENT OF RYAN BRODDRICK, DIRECTOR OF CONSERVATION PROGRAMS, VALLEY/BAY CARE, DUCKS UNLIMITED

Mr. BRODDRICK. Mr. Chairman, members of the Subcommittee, thank you for the opportunity to speak before you today. I provided written testimony. I'll just try to highlight a few key points to stay within the time allotted.

I am the Director of Conservation Programs for Ducks Unlimited's Western Regional Office. That regional office was established in 1987. Prior to that time Ducks Unlimited invested primarily in Canada to ensure the conservation of the continental waterfowl population.

I think the parallel is in the mid '80's the Central Valley of California was recognized as critical to the conservation of waterfowl and Pacific Flyway. Up to 60 percent of all the waterfowl, and I'm not just referring to those that are ducks and geese, but to shore birds as well, reside in this Central Valley during the annual migration. So the Central Valley and the water security for that Central Valley and how we meet the challenges of water security in the Central Valley dictate essentially the health of 60 percent of the Pacific Flyway.

The Flyway obviously does not have a similar status of endangered and threatened species that some of the salmon and native fish enjoy. That should not be a criticism. That should be a succeed statement.

The issue as it relates to water security in California and why Ducks Unlimited's mission is absolutely tied to California's water future is the wetlands and the wetlands we manage, associated uplands, the riparian habitat and all the environmental benefits associated with wetlands are tied directly to the managed agricultural irrigation system in California. Whether it be Northern California, Central California, both the Sacramento component, the San Joaquin component, much of what the public and private wetlands of this state are dependent upon managed water.

So security of that water, the ability to have water both for aqueduct and terrestrial resources, the ability to have water to be introduced into the wetlands during that peak migration when we have 8 to 12 million waterfowl visiting this state, that is an obligation by the way to provide habitat to them—whether they are hunted or not, that is a habitat issue. That is why we are here testifying.

The questions you raised with respect to what has contributed to the declines or to the conflicts we currently have, obviously we focussed in the testimony earlier and then today probably over the last decade of issues, CVPIA, CalFed, the Bay-Delta Act, the Bay-Delta Accord.

Certainly those were—if those documents in the CalFed Record of Decision and the framework established in August haven't identified the challenges and opportunities for California, there is no

other document that's more definitive. I think that has been established for us.

I think the issues of fisheries dominating how and where we use environmental water has been merely a function and I don't want to trivialize this—dramatic declines in fisheries from the '70's, Federal Endangered Species Act on some anadromous salmonids and delta smelt, cause and effect relationship was very easy to establish. Water was a common habitat issue.

The state and Federal water projects were the easiest and most direct response to reduce those declines. That's not to trivialize how complex that is, but it's certainly the sum total of where we are today.

We have established in the CalFed process, both the science program and environmental water account program a variety of balance components that resulted in the Record of Decision in August. From Ducks Unlimited's viewpoint, our wetlands values and our mission is limited to wetlands values understanding those are a lot broader than just ducks that are best served as nested underneath a broader restoration plan and absent investing in water security, whether it be surface storage, groundwater use, additional groundwater use or conjunctive use, we will have a drought. When we have that drought, there will be demands for water in a crisis mode and my greatest fear and my experience of history will suggest that fisheries and waterfowl and wetland dependent species in a crisis will lose, so we need to invest now, whether it be surface supply, additional groundwater storage, make decisions, implement the CalFed Record of Decision in a balanced fashion that requires capital.

And I urge your support. Thank you for the opportunity to testify to that. We need implementation that requires Federal and state leadership in critical Federal funding.

The prepared statement of Mr. Broddrick follows:]

Statement of Ryan Broddrick, Director of Conservation Programs, Valley/Bay CARE, Ducks Unlimited, Inc.

Introduction

Chairman Calvert, members of the subcommittee, thank you for the opportunity to speak before you today. I am the Director of Conservation Programs for Ducks Unlimited's Western Regional Office, Valley/Bay CARE Initiative in California.

Ducks Unlimited was founded in 1937 by concerned and farsighted sportsmen and conservationists. It has grown from a handful of people to an organization of over 800,000 members. At the inception of Ducks Unlimited, Inc., and for many years thereafter, the focus in waterfowl conservation was protection, restoration, and enhancement of wetlands and associated uplands in the Canadian prairie breeding grounds.

In 1984, Ducks Unlimited, Inc., while maintaining financial support for continued conservation in the breeding grounds of Canada, recognized the increasing need to secure wintering and breeding habitat within the continental United States. The Western Regional Office of Ducks Unlimited, Inc. was opened in 1987 in recognition that California was critical to maintaining the health of the Pacific Flyway. The Central Valley supports up to 60% of the total duck and goose population of the Pacific Flyway. On a continental scale, the Central Valley provides a wintering home for 100% of the world's population of Aleutian Canada Geese; 100% of the Pacific Tule Geese; 66% of North America's Tundra Swans; and up to 65% of North America's pintails. It is important to note that California has lost approximately 95% of its historic wetlands and currently cereal grain agriculture provides a large seasonal offset to the loss of historic wetland habitat in meeting waterfowl forage needs.

Since 1987, Ducks Unlimited, Inc. in California, has worked through partnerships on private and public lands to enhance, restore, and protect approximately 205,00

acres of wetlands and 23,500 acres of associated uplands at a cost of over $60 million. Much of this work to date focuses not on large net expansion of wetland acreage (approximately a 45,000 acre increase that DU has participated in) relative to historical wetlands, but rather insuring that wetland values are enhanced biologically and improved operationally with respect to water management.

Waterfowl are not the only beneficiaries of Ducks Unlimited, Inc's habitat work. Wetlands improve the overall health of our environment by recharging and purifying groundwater, moderating floods, reducing soil erosion and providing recreation. The wetlands, riparian, upland, and agricultural lands that provide habitat for waterfowl, also provide essential habitats for hundreds of other wetland dependent plant and animal species, supporting over 50% of California's threatened and endangered species during some stage of their life cycle. The majority of seasonal wetlands critical to support peak winter migratory waterfowl and shorebirds in the Central Valley, whether public or private lands, are dependent upon managed water. The same reservoirs and conveyance structures that provide water for agricultural, urban, and industrial use, provide water for managed wetlands, two thirds of which remain in private ownership. In a similar fashion the seasonal wetland benefits of rice and other cereal grains in the Central Valley, play a critical role and once again are dependent upon managed water.

The mission of Ducks Unlimited, Inc. is to fulfill the annual life cycle needs of North American waterfowl by protecting, enhancing, restoring and managing important wetlands and associated uplands. The Ducks Unlimited, Inc. mission, combined with the goal of the North American Waterfowl Management Plan (NAWMP), which is to rebuild waterfowl populations to the levels of the 1970's, necessitates our involvement in the work of this subcommittee related to Central California Water Security- Opportunities and Challenges.

Ducks Unlimited, Inc. fundamental role is making habitat improvements on the ground. Uncertainty and indecision with respect to water reliability risks progress made to date, and frustrates intelligent conservation strategies for the future.

Factors Leading To The Challenges Facing California Today

The vast over simplification, is that the Central Valley Project developed in the 1930's, and the State Water Project developed in the 1960's, were developed to meet project purposes for a state with roughly a third of the current population. Those project purposes did not include societal values reflected in mandates such as the National Environmental Protection Act, Federal Endangered Species Act, Federal Clean Water Act, California Environmental Quality Act, California Endangered Species Act, or the North American Waterfowl Management Plan. Reconciling the conflict is further complicated by the reality that much of the ecosystem capacity has been dramatically altered long before the respective water projects were completed, making the challenge of ecosystem restoration as a response to individual species recovery a difficult task. Of the hundreds of species of wildlife in California that have attained threatened or endangered species status, it was relatively easy to identify causes of direct and indirect mortality for anadromous salmonids and delta smelt. The declines were dramatic, the common habitat demand was water, and modification of the Central Valley Project and State Water Project operations was the principal response to reverse the declines.

Actions and Measures Taken to Improve Water Supply, Quality, and Reliability

From a wetlands perspective Ducks Unlimited, Inc. has focused on the following components that attempt to improve water supply, quality, and reliability in both direct and indirect fashion.

- Improve water use efficiency through state of the art survey and design of wetland enhancement and restoration projects while still maintaining habitat diversity.
- Develop alternate water supplies including the use of wells, recognizing that ground water may improve flexibility in maintaining wetland values and moist soil management.
- Improve fish passage by working to develop fish screening projects and water management strategies that contribute to fisheries recovery while still maintaining habitat values for wetland and terrestrial species.
- Continue research to refine our understanding of the biological needs of waterfowl and wetland dependent species.
- Establish GIS interactive models that assist in making land use and conservation decisions, and ranking relative priorities with respect to wetland conservation investment. (Refer to attachments for examples)
- Integrate wetlands restoration into the broader mosaic of ecosystem restoration that provides benefits for wildlife while at the same time contributes to flood

control, improved water quality, conjunctive water use, and maintenance of wildlife friendly agricultural lands.

It is obvious that the ability of Ducks Unlimited, Inc. to accomplish the above actions is dictated by much broader and complex public policy decisions related to agriculture, environmental restoration, and water reliability.

From an on the ground habitat restoration perspective, the influence of the endangered and threatened species provides opportunity for habitat development consistent with our mission, while at the same time often creates indecision from partner agencies related to implementing actual habitat improvements as we attempt to meet competing habitat needs. By necessity, the decision making process is longer and more expensive. Opportunity for biological disagreement seems to increase in an exponential versus linear fashion as habitat species preferences are added to the desired habitat outcome. Accordingly, an over arching multi agency organization such as CALFED and specifically the components related to Ecosystem Restoration Plan and Science Program provide the opportunity to reach agreement in a more timely fashion and proceed with the on the ground restoration.

For highly managed seasonal wetlands of the Sacramento and San Joaquin Valley, the availability (quantity, quality, time, and duration) of water is the critical component to not only flooding seasonal wetlands for the fall migration, but also meeting the diverse habitat needs hundreds of resident species and other migratory non game species that require the upland and riparian habitats so often associated with wetlands. Absent a reliable water supply, these habitat values cannot be maintained. Accordingly, the commitment made to refuge water supplies (including private wetlands in the Grasslands Water District) contained in the Central Valley Project Improvement Act, Section 3406(d) have been critical to wetlands conservation.

Additional Measures or Assistance Needed In Short, Mid, and Long Term To Improve Water Security

To provide a context for the additional measures or assistance needed, I think it is important to recognize the progress that has been made to date. The establishment of Central Valley Improvement Act, Bay–Delta Accord, and CALFED–Bay Delta Program in the last decade identified the challenges and opportunities. Investments in ecosystem restoration from CVPIA restoration funds, Bay–Delta Act, Category III, State Propositions 204, 12, and 13 provide an unprecedented investment in resolving the accumulated conflicts of our current level of development.

The most dramatic progress has been in improving salmonid fish passage with the screening and/or consolidation of diversions, removal of barriers, and in stream flow improvements. This progress was possible because landowners and water agencies recognized that enhancing salmon survival improved the reliability of their water supplies by addressing the risk of regulatory intervention disrupting delivery and substantial public funding made improvements a good business decision. I believe this dynamic must be replicated across the CALFED program areas to insure continued improvement. The Environmental Water Account (EWA) is another example of development of a tool that would have never occurred absent the CALFED process. EWA provides an alternative to strict regulation that is adaptable to the realities of water supply and biological needs. It needs the opportunity to prove it's utility as an effective tool. It is important to recognize that the CALFED record of decision developed during a period of time uninterrupted by prolonged drought and before the effects on water supply are realized in meeting contractual limits from the Colorado River.

The following, we believe are important to consider in developing water security, while at the same time improving ecosystem function and insuring environmental benefits.

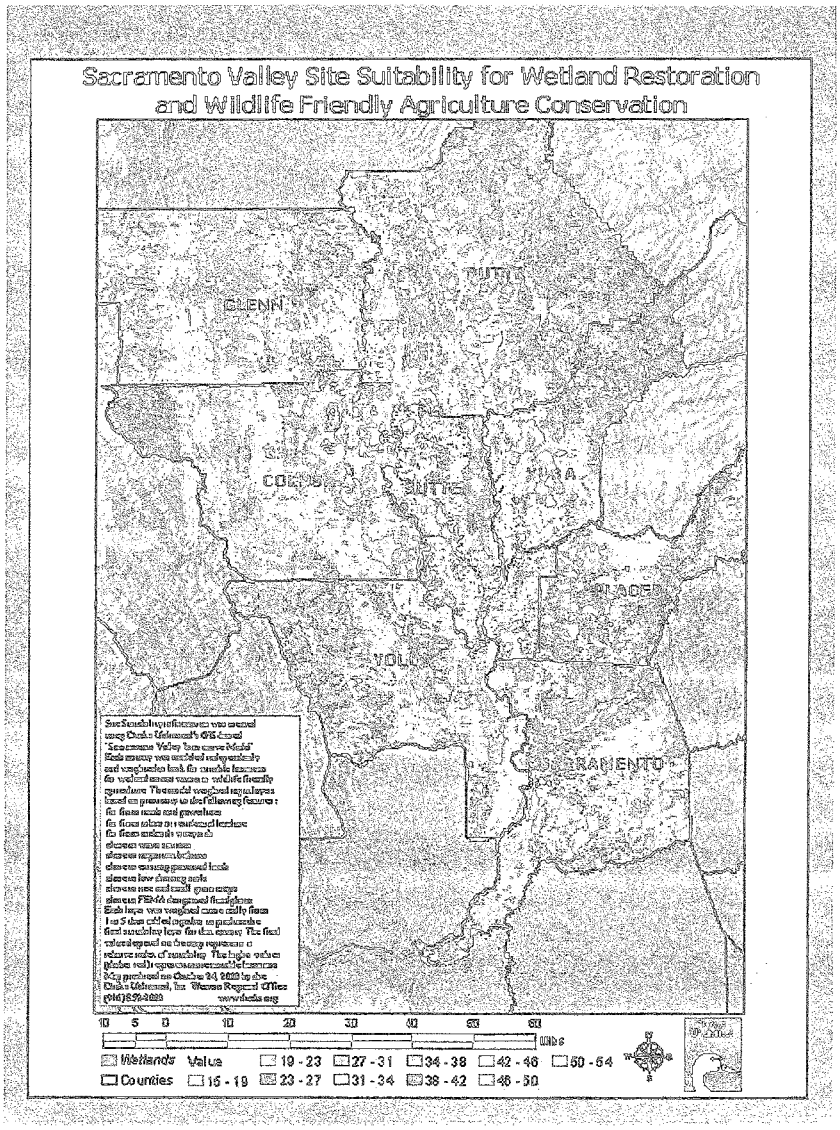
- Recognize that without a commitment to continue the process of identifying additional surface supplies, it will be very difficult to overcome the hesitancy of landowners and water agencies to innovate and enter into partnerships to provide environmental benefits.
- Approach surface water supply development with the objective of incorporating carryover capacity to help meet water demands for agricultural, urban, municipal, and environmental needs, for the predictable drought cycle that inevitably occurs in California. For in Delta and/or south of delta storage, provisions should be considered to insure that CVPIA, Section 3406(d) water supplies for refuges and Grasslands Water District be included to provide long term flexibility, assurance of supply, and integration with regional water management.
- Approach existing and new conveyance capacity as a tool to not only provide direct delivery and delivery to storage, but also provide flexibility in exchanges

and transfers which incorporate environmental benefits that serve regional urban, municipal and agricultural needs.

- The future of wildlife in California, as across the nation, is inseparably tied to actions undertaken on private lands. In the Central Valley, agriculture remains the dominant use on these lands. It is our view that conservation of agricultural resources provide significant additional opportunities for developing seasonal wetlands, associated uplands, and riparian corridors that can provide multiple environmental benefits. This opportunity can only be realized if agricultural interests can undertake partnerships as a prudent business decision that compliments their core business, rather than compromises it.

I offer this testimony from the perspective that the mission of Ducks Unlimited, Inc. as it relates to the Central Valley, is inseparably tied to implementing a comprehensive water plan that addresses competing needs. Ducks Unlimited, Inc. applauds Chairman Calvert and members of the Subcommittee for conducting this field hearing and urge your continued leadership in this critical endeavor.

[An attachment to Mr. Broddrick's statement follows:]


Sacramento Valley Site Suitability for Wetland Restoration
and Wildlife Friendly Agriculture Conservation
GLENN
BUTTE
COLUSA
SUTTER
YUBA
PLACER
YOLO
SACRAMENTO
10 5 0 10 20 30 40 50 60
Miles
Wetlands Value
19 - 23
27 - 31
34 - 38
42 - 46
50 - 54
Counties
16 - 19
23 - 27
31 - 34
38 - 42
46 - 50

Mr. CALVERT. Thank you.
Ms. Guzman.

STATEMENT OF MARTHA GUZMAN, UNITED FARM WORKERS OF AMERICA, AFL-CIO

Ms. GUZMAN. Good morning. My name is Martha Guzman. I'm a legislative analyst for the United Farm Workers of America, AFL-CIO. I'm also the technical researcher for the California Safe Drinking Water Program which is an EPA water program that has targeted over 20 communities in the Central Valley from Fresno to urban.

We are here to give a perspective of how a reliable water supply impacts farm workers. We heard earlier from Dr. Sablan and others of the direct relationship that exists between farm workers and agricultural production, that without farm workers we would not have the industry that exists today.

But the inverse exists as well, that without the resources of land and water for the ability to produce there can be no demand for labor. Farm workers are undeniably directly impacted and integrated by any changes in the agricultural production.

As you continue to examine the needs for this reliable source of water, we ask that you examine a little deeper into why—what the reason is for this reliable source of water. For the UFW a reliable water supply is essential for a sustainable agricultural industry and a necessary component for sustainable agriculture is having a sustainable income and a sustainable—and a standard of living for workers that allows it to function and prosper.

We are committed to the Constitution of California that requires the beneficial use of water for the right to use the water. This beneficial use of water means providing a benefit to the economy, the environment, the land, air, and more importantly the workers in the communities that are impacted by its use. The beneficial use of this public resource is also found in Federal law.

In the late '30's and early '40's with the Central Valley Project there was the intention to embrace the concept of using water as a tool for fostering sustainable development by providing water to family farmers with the previous limit of 160 acres.

The concept of providing water for the—providing environmental and economic sustainability for our communities must continue to be a driving force behind Federal and state water policy.

The United Farm Workers is currently involved with the CalFed Bay-Delta program and was instrumental in putting environmental justice requirements and guidelines in the Record of Decision.

The guidelines for these projects are put in place for programs and for specific projects before they are completed and before they are authorized.

There are various ways that communities can be adversely and positively impacted from these water projects and programs. They range from the potential increased health risks from a wetlands project in the Delta, on the community that subsides off of a contaminated fish population, to the socioeconomic impacts on rural communities from either a guaranteed water supply to contractors or an ecosystem restoration project.

The United Farm Workers is committed to working with CalFed and our elected officials to ensure that our quality water supply is used to foster sustainable community development in the Central Valley and look forward to providing some friendly amendments through some of our congressional friends.

The prepared statement of Ms. Guzman follows:]

Statement of Martha Guzman, Legislative Analyst, United Farm Workers of America (AFL–CIO)

The direct relationship that exists between farm workers and the agricultural industry is mainly defined by the worker's contribution on the field and in other areas of production and processing. Without farm workers we would not have the vast agricultural industry that exists today. The inverse is true as well, without the resources in land and water for the ability to produce there can be no demand for labor. Farm workers are undeniably directly integrated and impacted by changes in agricultural production.

As you continue to examine the needs for a reliable water supply in the Central Valley we ask not only that you recognize the intrinsic relationship that farm workers have to agricultural production, but also to reflect deeper on the ultimate reason for attain reliable water supply. For the United Farm Workers a reliable water supply is essential for a sustainable agricultural industry and a necessary component of sustainable agriculture is having a sustainable income and standard of living for the workers that allow it to function and prosper. We are committed to the Constitution of California that requires the beneficial use of water for the right to water. The beneficial use of water means providing a benefit to the economy, environment, land, air and the workers and community impacted by its use. The beneficial use of this public resource is also found in Federal Law. The Central Valley Project was intended to embrace the concept of using water as a tool for fostering sustainable development by providing water to family farmers (160 acres) throughout the Valley. The concept of water providing environmental and economic sustainability for our communities must continue to be the driving force behind federal and state water policy.

The United Farm Workers in conjunction with the Environmental Justice Coalition on Water continue to work with the CALFED Bay–Delta Program on the goals and guidelines established in the Record of Decision (R.O.D.) issued August 28, 2000. The R.O.D. requires that every Program include community outreach and participation, guidelines for project proposals and requirements to factor in the community impacts of a project or program before receiving funding or authorization. There are various ways that communities can be adversely and positively impacted from water projects and programs. They range from the potential increased health risks from a wetlands project in the Delta on the communities that subside off of contaminated fish to the socioeconomic impacts on rural communities from either a guaranteed water supply to contractors or an ecosystem restoration project.

The United Farm Workers is committed to working with CALFED and our elected officials to ensure that a reliable water supply is used to foster sustainable community development in the Central Valley.

Mr. CALVERT. Thank you.

Ms. Redfern.

STATEMENT OF SUZANNE REDFERN, LANDOWNER

Ms. REDFERN. Good morning. Chairman Calvert, and other members of the Subcommittee, particularly those of you who have traveled such a long way on this early Saturday morning, I would like to thank you for holding this hearing here today and for introducing H.R. 1985, which we strongly support.

My name is Susan Redfern and when I say that we support your bill, I'm speaking for Redfern Ranches, a family farm situated in the Dos Palos Flyway area on the West side of the San Joaquin Valley.

My father Floyd Redfern started out farming in 1927 growing corn on a rented 160 acres with a Case tractor, which we still have. Over the next 30 years of boom and bust, he managed to accumulate the 13,000 acres we're farming today. We grow cannery tomatoes, garlic, onions, peppers, almonds, prunes, cotton, berries, grapes, alfalfa, hay, sugar beets and various grains. Our work force ranges from 40 to 70 people and we have an annual budget of about nine million dollars.

Today I'll try to briefly describe the challenges we face since the passage of the CVPIA. I speak for Redfern Ranches as well as for the other farmers in the four Federal districts which serve our lands because I think we're all facing the same dilemmas and I'm sure that we've all just about exhausted our resources trying to survive them.

I will try to tell you what the challenges are. I'll summarize the various investments we've made to adapt to our changing circumstances, try to articulate why despite our best efforts we're still in an unsustainable situation and to explain the unexplainable, why we're still out there farming.

Since the CVPIA we received 100 percent of our full allocation only once in a flood year when we were already drowning. In other years we received as little as 25 percent. This year we're getting 45 percent. In most Federal districts 45 percent translates to about an acre foot per acre. Crop requirements are about two and a half acre feet per acre. So to compensate, growers must either pump groundwater contributing to serious overdrafting and subsidence, try to purchase costly supplemental water or fallow.

The most visible of these options is fallowing and the one which most deeply impacts the local economies. In Redfern Ranches we were forced to fallow about a thousand acres every year due to water shortages. It's estimated that 20 percent of the ag land surface area is fallow this year. By extrapolation how much prime ag land will I fallow during a drought? What will be the repercussions of this agricultural brown-out on the people it puts out of work and on the communities they support? How will it affect the annual Fresno County gross farm income of three billion dollars and the state's fragile economic condition?

Along with the problems created by our reduced water supply, we're plagued by the lack of certainty of that supply from year to year, which makes it impossible for us to plan and to finance our operations.

In preparing for the next year's crops a farmer starts working his land as early as August and so needs to line up his crop financing by early fall. By December he will have invested at least one-third of the total cost of growing his crop in land prep, preirrigation and weed control activities. By the end of January he will have made commitments to rent pipe and other equipment and made substantial deposits to his water districts.

He can estimate his inputs down to the dollar, but he won't even get any preliminary estimate about how much water he can put on that crop until February. And he won't get anything he can hang his hat on until May when the crops are already in the ground. No wonder lenders are balking. Why should a banker take a risk on a crop that might die of thirst in the middle of July?

Few would dispute that west side ag has been put under enormous pressure since the passage of the CVPIA, but some have asked what we've done to adapt to these challenges. Farmers are resourceful by definition. My neighbors more than most. We're trying to manage to its fullest every resource, whether natural, human, mechanical or economic.

In the last 10 years at Redfern Ranches we've invested one and a half million dollars into sprinklers, surface pipes, drips and portable booster pumps. Other efforts we've made to increase water use efficiency include hiring a water soils manager, using farm wide leveling, employing on-farm recirculation and reuse and hiring outside consultants to evaluate irrigation and pump efficiencies.

Besides these on-farm measures, we've supported all district and regional efforts to maximize water savings, such practices as tiered pricing, canal lining, drain water recirculation and reuse and drain water treatment research.

Finally, the whole area has made major shifts in cropping patterns with the goal that each acre foot of water we use would go into production of a high value crop. Redfern Ranches has gone from 4,000 acres of cotton to 1500 and installed over 500 acres of orchard and prunes. However, the price of installing and operating orchard crops in drip irrigation is enormous.

We are also putting off road and ditch maintenance and weed control. We're not replacing equipment and vehicles. Essentially just deferring what will catch up with us. Until CalFed can give all of us assurances of water quantity, none of us can afford to continue to invest in more high-tech irrigation and drainage.

You may wonder why under such grim circumstances we're still out there farming. From a practical standpoint it doesn't make much sense. It's more than a practical matter, not only in our operations, but also in our way of life and in the well-being of our employees and our communities. Many of us have deep roots in the area. When my father died at age 98 in 1993 I was advised to sell the ranch, pay the estate taxes and live worry free. I couldn't do it.

The nine million dollars our ranch sent into the local economy every year may sound like small change from an urban perspective, but it's the lifeblood of small rural towns. They depend on our ranch and others like it as do our employees, most of whom are with us for many years. This summer we have three generations of Joe Munozes on our payroll. No one at Redfern Ranch is paid minimum wage. And all regular employees and their families at the present are provided health care coverage at no cost.

We value these human resources as highly as any other and it's in their interest as well as our own that we keep at it, but we are tapped out.

And so, Chairman Calvert, we look to you and your Subcommittee for relief. We believe that H.R. 1985 can offer us such relief. We're firmly in support of the bill for the following reasons:

First, we understand that California's water wars will continue unabated until larger environmental problems are addressed. H.R. 1985 will provide the funding and authorization the Bay-Delta program needs to tackle those issues.

Second, we believe it's unreasonable to solve one sector's problems on the back of another and trust that the provisions of 1985 will correct this inequity.

Finally, we feel that H.R. 1985 will provide the assurances that CalFed will restore certainty to water deliveries to agricultural contractors. That's certainly what we need in order to continue producing food and fiber in the nation's most productive ag region. Again, thank you for this opportunity to testify today.

The prepared statement of Ms. Redfern follows:]

Statement of Suzanne Redfern, President, Redfern Ranches, Inc.

I. BACKGROUND:

A. Salutation, thank you, self-introduction.
B. Redfern Ranches—history, crops, employees, water supply sources

II. DILEMMAS FACING WEST SIDE FARMERS as result of CVPIA:

A. SUPPLY SHORTAGES, leading to fallowing
B. SUPPLY UNCERTAINTY, creating planning and borrowing problems.
C. WATER COSTS increased, compounding higher fuel and power costs and low commodity prices.

III. WESTSIDE FARMERS' RECENT EFFORTS TO ADAPT TO THESE CHALLENGES (using Redfern Ranches as the model):

A. On-farm water efficiency measures (drip installations, sprinkler and gated pipe, additional personnel, ecirculation systems, laser-leveling)
B. District Wide Efficiency Measures we've supported (Tiered pricing, drain water reuse, drain water treatment research, canal lining)
C. New cropping patterns we've initiated to increase dollar value of products created by each acre-foot of water applied (almond and prune orchards, tomatoes, onions, garlic, peppers, seed crops replacing traditional cotton/alfalfa/sugar beet rotation)

IV. WHY WE'RE STILL HERE:

A. The financial investments we've made in efficiency measures and permanent crops.
B. The emotional investment, responsibility to our employees, communities, heritage, belief in the land and its ability to feed people and provide for us.

V. WHY THE PRESENT SITUATION IS UNSUSTAINABLE (summary):

A. Insufficient water means fallowing, inability to support operations, overheads, workforce.
B. Uncertain supplies, late Bureau announcements make planning and financing arrangements impossible.
C. Increasing costs of water along with fuel, power, etc. erase profit.

VI. SOLUTIONS:

A. BAY DELTA process is our best hope to finding a truce in California's water wars. No stability to be had until the larger environmental problems are addressed, and Bay Delta is set up to address them.
B. One problem can't be solved entirely on the backs of another segment. We strongly support CONGRESSMAN CALVERT'S BILL and its practical, regional approach to restoring balance to water allocations.

Mr. CALVERT. Thank you.

Mr. DiCroce.

STATEMENT OF NICK DiCROCE, MEMBER, BOARD OF GOVERNORS, CALIFORNIA TROUT

Mr. DICROCE. Good afternoon, Mr. Chairman, members of the Subcommittee. I appreciate the opportunity to appear before you and present an alternative point of view from most who are here today.

I am a member of California Trout, a statewide fisheries organization and we are members of the Environmental Water Caucus, a group of local and national organizations focussed on CalFed and California water policies.

California Trout shares a vision with many of the leading organizations that make up the Environmental Water Caucus and it is a vision that we would like state and Federal legislators and water planners to adopt.

The vision is that you view California water as a finite and sustainable resource, and that the currently economically wasteful and harmful uses of California water needs to change. We believe that your Committee is in a unique position to become a champion for sustainable and efficient use of this critical resource.

There's no question that California's population will continue to grow. We are blessed with a 60 billion dollar recreation and tourism industry that depends on healthy rivers, bays and beaches, and we are blessed with an agricultural industry that feeds a nation and accounts for more than 28 billion dollars to the state's economy and continues to grow even through drought years. However, we would probably not be at this hearing today if all was well in this nirvana that we call California.

Let's take a look at some of the indicators that all is not well. One, California now holds the prize for the largest number of endangered species in the country.

Two, California already captures, stores and uses 43 million acre feet of water in a given year. That's enough water to accommodate a population of 200 million people. That's just used as a middle strength indicator.

Three, California ag now uses 75 to 80 percent of our water supply in a normal year. The water is provided at subsidized prices. Much of it we feel is used in wasteful ways and on low value, price supported crops.

Four, despite the obvious damage that has been done to our California landscape and the huge amounts of waters being stored and used, we still battle, we still sue, and we legislate over whether more of the same or—whether we're going to do more of the same or whether there aren't some better ways to solve our issues.

We think we have some better ways and I will discuss them in a moment, but first some pertinent observations. Water subsidies are comparable to a drug habit in three significant ways. They breed an insatiable appetite. It seems as though we can never get enough. We've heard some of that today.

Secondly, there is little or no concern for the side impacts of the habit. Thirdly, it breeds irrational actions. The most recent example of those irrational actions is Westlands' current claim for San Joaquin water is a perfect example of all three of those characteristics.

Another observation, it has always intrigued me that legislators and others who are fiscal conservatives, and I put myself in the category of a fiscal conservative, can continue to support water pricing subsidies that have done so much to upset market economics and to breed inefficiencies.

In our belief that the state has already developed abundant water supplies for our future and that the current supply needs to

be utilized in a more economical and sustainable way, we suggest the following actions and overall directions for your Subcommittee.

One, required water conservation goals and plans for each of the three main water users in place of the current voluntary programs.

Two, special programs and investments that will cause changes in water use practices by agriculture, including reasonably graduated pricing structures and investment incentives on the use of higher technology irrigation equipment where it's applicable.

Three, gradual reduction and an eventual elimination of agricultural water subsidies which is a disincentive to the wise use of water.

Four, establishment of a brokerage to facilitate market based water transfers, market price water transfers, which can provide some profit incentive to agricultural water rights holders that supply the water.

Five, a much heavier reliance on groundwater storage as well as improved legislative controls on the use of groundwater.

And six, a CalFed sponsored, high priority program to improve desalinization technology and make it available to urban areas for future water supply.

With the Pacific Coast as our border it—and so much of the population in urban areas on the coast, it makes sense.

Compared with this vision described above, H.R. 1985, with all due respect, Mr. Chairman, we feel is upside down and backwards. On the other hand, the cumulative impact of the above steps can provide California with enough water for the future and for drought supply periods. It could enhance supply. It could make us get well together. It could increase yield and it could be a more balanced approach and it would assure the continued growth of all the sectors of California's economy. Thank you.

The prepared statement of Mr. DiCroce follows:]

Statement of Nick DiCroce, Vice President, Board of Governors, and Chairman, Board Conservation Committee, California Trout, Inc.

I appreciate the opportunity to appear before your committee and to present the views of the organizations I represent. I am a member of California Trout, a statewide membership-based fisheries conservation organization that was established in 1971. Our mission is to protect and restore wild trout and steelhead and their habitats. Our organization has a track record of working cooperatively with state and federal agencies and we have been instrumental in a number of significant actions such as the Mono Lake decision. We are also members of the Environmental Water Caucus, a group of local and national organizations focused on the issues of the San Francisco Bay Delta and the Central Valley rivers connected to the Delta. The Environmental Water Caucus has been heavily involved in the CALFED process and similar actions to restore the Bay–Delta and Central Valley habitats.

California Trout shares a vision with many of the leading conservation organizations that make up the Environmental Water Caucus, and it is a vision that we would like state and federal legislators and water planners to adopt. The vision is that you view California water as a finite and a sustainable resource, and that the current economically wasteful and harmful uses of California water need to change. We believe that your committee is in a unique position to become a champion for sustainable and efficient uses of this critical public resource.

There is no question that California will continue to grow; our population is predicted to reach almost 50 million by the year 2020. Our state economy is now at $7 trillion—the third largest in the world. The economic future of California will demand that adequate supplies of good quality water be made available to accommodate this growth and the growth of our largest industry—a $60 billion recreation and tourism industry that is supported only by healthy rivers and bays.

California is blessed with an agriculture industry that feeds the nation and contributes $28 billion to the state's economy. The agricultural industry is a significant employer and has always been a significant influence in the state. Assurances that water will be available to accommodate growth and that it will be available during drought periods are vital to the industry—and we clearly recognize that all is not well.

However, we would probably not be having this hearing today if all was well in this Nirvana that we call California. Let's take a look at some of the indicators that all is not well:

1. California now holds the prize for the largest number of endangered species of all kinds—one of the legacies of our past propensity to build large dams and divert waters out of our natural ecosystems at a dangerously excessive level.
2. California already captures, stores and uses 43 million acre feet of water in a typical year. This is enough water to accommodate—on a theoretical basis—a population of more than 200 million people.
3. California agriculture now uses 75 to 80% of our water supply in a normal year. The water is provided at subsidized prices which allows it to be used in wasteful ways and on low value, price supported crops. It is obvious that changes in water practices by California agriculture can be the key to our usage and distribution problems.
   - A few statistics will help make the case; Only 15% of California farms use efficient drip technology, most of the remainder are using wasteful flood and furrow irrigation, similar to what was done in the 1890's; 60 percent of the total water is applied to three low-value subsidized crops—cotton, rice and alfalfa; rice-growing in the state evaporates more water in a year than Los Angeles uses. Clearly these are not efficient or sustainable practices.
4. Despite the obvious damage that has been done to our California landscape and the huge amounts of water being stored and used, we still battle, sue, and legislate over whether we need more of the same or whether there aren't some better ways to solve our problems.

We think we do have some better ways, and I will discuss those in a moment. But first some observations.

Water subsidies are comparable to a drug habit in three significant ways. They breed an insatiable appetite; it seems as though it can never be satisfied. Secondly, there is little or no concern for the side impacts of the habit. And finally, it breeds irrational actions. The most recent example of those irrational actions is Westlands current claim against their brother water districts for San Joaquin water, based on a "county of origin" justification. If anybody has a county of origin justification, it is Trinity County who provides all of Westlands' Central Valley Project water.

Another observation: It has always intrigued me that legislators and others who are fiscal conservatives—and I put myself in the category of a fiscal conservative—how you can continue to support water pricing subsidies that have done so much to upset market economics and that help maintain the current sub-optimal production practices.

State and federal water planners and legislators have a responsibility to address this pricing issue. In the last California State Water Plan, agricultural water pricing was relegated to four pages of an appendix near the end of the 775-page report with the conclusion that the demand for agricultural water is inelastic and will not be affected by the price. While that conclusion seems to fly into the face of logic, the plan's sample data allows a very different conclusion. According to the plan, a 10% increase in the price of water to agriculture ($1.20 to $4.20 an acre foot in the Central Valley) produces only a 3.2% decrease in water demand. But that 3.2% reduction, if applied to agriculture's current usage of more than million acre feet, is a reduction of more than 1 million acre feet per year. At those rates, a modest 10% reduction in agriculture water usage for a relatively small increase in the price of water would theoretically solve the state's predicted shortage of 2.9 million acre feet by the year 2020—with water left to spare for urban growth and river habitats.

What would happen if the price of water for agriculture were to increase and approach something akin to a market price? Like most competitive businesses when faced with increases in costs, the alternative is to become more efficient in order to reduce other costs. The technologies are available and can be implemented with favorable returns on investment. Since most of California agricultural production is controlled by corporations that gross over $1 million annually, we can expect them to make business-like choices that reduce the amount and cost of their water. The elimination of the current rate of subsidized pricing would produce trickle down benefits for all: Gone would be the multi billion dollar costs to California taxpayers to build dams and reservoirs to "develop" more water supply. Gone would be the need

for more water imports from out of state. Down would go the price of water for urban users. And gone would be this outdated corporate welfare program for California agriculture.

Changes of this nature require incentives. Urban areas have shown that they can reduce water requirements by 30% when the pricing "incentive" is there. A baseline charge with higher costs for usage above a baseline works in urban areas. It's just one of the solutions that could be applied to agriculture to cause efficient water usage.

Major urban areas such as Monterey, San Francisco and Marin counties already have shown that 30% reductions through water conservation are achievable; it's an embarrassment to Northern Californians that Los Angeles probably has the best water conservation record in the state—using the same amount of water that it used in 1972, despite a population increase of nearly 1 million people. It's now time to invest.

Perhaps you feel that I'm being too tough on California's agriculture industry. But California agriculture can be the real heroes in this situation. We have seen many examples of farm operations that have achieved significant water savings through modifications to their water use practices and they are well documented in separate studies conducted by the Natural Resources Defense Council and the Pacific Institute. By enacting meaningful water conservation programs, the industry can improve their operations, improve water quality, continue their growth and profitability, reduce the harmful side impacts of their current practices, and bring an end to the historic water wars of California. They could be true heroes and leaders for both the state and the business world.

As I mentioned, our organizations have been closely involved in the CALFED process. While we regard the CALFED Record of Decision as an imperfect solution—especially the emphasis on increased water diversions out of the Delta—we are very supportive of the ecosystem restoration and water conservation directions that CALFED has initiated. We view the ongoing analytical process and the detailed examination of the costs and benefits of significant water projects as a necessary step to arrive at solutions that will provide long-range solutions for all Californians.

In our belief that the state has already developed abundant water supplies for our future and that the current supply needs to be utilized in a more economical and sustainable way, we suggest the following actions and overall directions for your committee:

- Required water conservation goals and accomplishments by each of the three main water users—urban, agricultural, and industrial—in place of the current voluntary programs. CALFED calls for an anemic 1% conservation goal for agriculture. Experience in both the agriculture and municipal sectors has clearly proven that higher goals are achievable.
- Special programs that will cause changes in water use practices by agriculture, including reasonably graduated pricing structures, investment incentives for the use of higher technology irrigation equipment where applicable, and incentives for fallowing marginal land during drought periods. Although CALFED plans to invest $2.9 billion in "water use efficiency," their investment doesn't begin to challenge the largest water user in the state.
- Gradual reduction and eventual elimination of agricultural water subsidies, which is a disincentive to the wise use of water. The impact on food prices can be minimized by the economic benefits of water conservation.
- Establishment of a brokerage to facilitate market priced water transfers. This would allow the conserved water to be transferred to needy urban areas and provide some profit incentive to the agricultural water rights holders that supply the water.
- A much heavier reliance on ground water storage as well as legislative changes to place controls on the use of groundwater. California and Texas are the only western states that have no controls on groundwater even though it is a large part of the annual water supply. Groundwater storage is a far more economical alternative and less damaging to our environment than the increases in surface storage dams planned by CALFED.
- A CALFED sponsored, high priority program to improve desalinization technology and make it available to urban areas for future water supply, especially during drought periods. With the Pacific Ocean as our border, desalinization is too logical a solution to be crowded out by continuing our existing practices.

H.R. 1985, the Western Water Enhancement Security Act, does not fit with the vision and actions described above. In fact, the authorizing of new and expanded dams, the priority on delivery of subsidized water for Central Valley agricultural contractors, and the lack of emphasis on ecosystem restoration will only perpetuate

the current institutional practices of California agriculture. Compared with the vision described above, H.R. 1985 is upside down and backwards.

On the other hand, the cumulative impact of the above steps would provide California with more than enough water for the future and for drought periods. They would assure the continued growth of all sectors of the state's economy.

A similar positive vision is stated in a report published by the Pacific Institute, entitled California Water 2020. It requires "...no significant new supply infrastructures to be built, nor any drastic advances in technology." As also stated in the report: "No "heroic" or extraordinary actions are required of any individual or sector. The changes necessary to achieve a sustainable water future for California can be brought about by encouraging and guiding positive trends that are already under way."

The current CALFED Framework, which calls for spending $8.7 billion over the next seven years, has some of the elements described above. But the continued dependence on building more surface storage facilities to capture and export more of our already over-committed water supply as well as the unwillingness to tackle the unnecessary waste of so much water are major flaws in the plan. It dooms the state to a continuous degradation of our natural environment at a time when it is more important to its citizens and the state's economy. It also presents the California agricultural industry with an opportunity to be environmental and economic heroes.

Mr. CALVERT. Thank you, I think. A couple of questions.

Mr. Broddrick, you brought up an excellent point. I was offered the Chairmanship of this position, I thought about it long and hard because I was Chairman of another Committee that I was quite happy being Chairman of, but I knew that this was going to be quite an interesting field to get into.

One issue you bring up that I think is very important, and we can't say it enough, is that we found out with this crisis that we're presently having with electricity, there are decisions being made today that people a year ago or 2 years ago wouldn't have dreamed of making. Things that were absolutely opposite of their philosophical positions. I see it every day in some of the decisions that are being made both in Sacramento and Washington.

If a crisis with water comes along, which could come along very soon, we will start making decisions that obviously have the most political impact, quite frankly, on the people who send us to office and keep us elected. We don't want to make those kind of decisions.

If a drought hits California or the West, we'll be making decisions that would be, I think, unfortunate for the environment because we'll probably put people first. So what we're trying to do in H.R. 1985 is to address those issues of additional supply and flexibility both for the urban and rural communities and for the environmental community.

Now, you've looked at the bill. Obviously you're a well-known conservation group. Would you agree that we've tried to move in that direction to have a balanced approach to hopefully not have these crisis management decisions?

Mr. BRODDRICK. Chairman Calvert, first I need to say thank you for taking on this Chairmanship because when you're getting into California water, obviously it's a tar pit that has had many victims before. I hope that you are not one of them.

Mr. CALVERT. Me, too.

Mr. BRODDRICK. I think that what you've proposed is addressed, frankly, in one of the underlying intentions that's occurred for the last 10 years. That is, are we going to provide water supply and are we going to provide security for that supply? We have invested

in the last 10 years the—obviously with Federal and state appropriations huge improvements in our ecosystem restoration and I don't want to understate the need for additional improvements, but if you look at what we've been able to accomplish for San Luis, the Sacramento River, I think folks, whether it be ag or governmental, should really applaud that progress.

I watched the '97 floods. During those '97 floods, as it should have been, human health and safety drove all public decisions and responses. I am convinced that if we don't build on the success that we have today from CalFed and from CVPIA, from category three, from the investment of the ag and urban folks and we go into a drought, as we had at the turn of '87 through '92, that we will have dramatic impacts to our economy and to the wildlife.

Water and agriculture right now is certainly one of the components. I don't pretend that Ducks Unlimited in its wetlands conservation issues comes anywhere close to touching the issues with ag policy that are driving the economics in the valley, water policy and the energy cost issues. Water's certainly gone up.

I can talk to friends that are telling me they are paying $180 a ton now for fertilizer that they were paying a $110 a ton last year on commodities that aren't at the same rate they are last year. They are less.

So I think on private lands and agricultural lands in California that essentially the private lands in California or Central Valley that are ag related, that if we can't get a marriage with existing ag lands with improved water supplies and efficiencies and conservation, the message of—the mission of Ducks Unlimited as it relates to wetlands conservation and all that's associated with it are all going to be compromised. It compromises the Pacific Flyway in total.

Mr. CALVERT. Miss Redfern, I want to thank you for putting a human face on an industry that I think is important to our state. I know that the computer industry is important, the entertainment industry is important, the aerospace is important. The farming industry is still the largest industry in the State of California and employs the most people in the State of California. And I think that we have a responsibility to make sure that that industry isn't harmed any more than it already is being harmed.

I hear the various opponents of what we're trying to accomplish here say that we're subsidizing the agriculture industry. I am a conservative Republican. I think most people at this table would probably agree with it. I think most people were surprised when we put together a pretty aggressive bill to accomplish additional water storage and delivery hopefully for California, for everyone, for the environment, industry and so on.

But your industry is maybe—probably over the last number of years is beginning to be the most controlled industry. When it comes to Endangered Species Act or the Clean Water Act or the EPA regulating pesticide usage, competition from outside the United States, we're not picking up our responsibility and promoting better trade policies where you can promote and deliver California agriculture throughout the world.

And so I don't apologize for trying to do what I can to keep agriculture viable in the State of California and I hope that you and

the people within your community hang in there because I think it would be terrible if we lost a great industry and all the ramifications that would go along with that in this state, so thank you for being here and I'll now turn it to Mr. Condit.

Mr. CONDIT. If I may, Mr. Chairman, Mr. Dooley has a time problem, I'm going to yield to him and let him go first.

Mr. DOOLEY. Thank you very much, Gary. I guess I took exception to Mr. DiCroce to some of your testimony that was printed that you didn't acknowledge. In part, because I'm beginning to be increasingly frustrated with some of the myths and fallacies that are continuing to be perpetrated.

In your written testimony it talks about a 10 percent increase in water costs was going to solve a good portion of our problems, which the empirical data has indicated otherwise.

Other parts of your testimony you identify that there's a tremendous amount of waste to water that is occurring throughout the state. I would ask you to go into the Westland Irrigation District, the Friant Irrigation District where there has been a significant number of studies by academic institutions that have demonstrated that they are among the most efficient in the world and the level of conservation that can be implemented there to increase more efficiencies is marginal at best.

And yet we have people that continue to try to create this perception that we can solve all of our problems by increasing prices and by increasing conservation.

Even the issue of the water subsidies. Do you know what the level of water subsidies are for the Friant and the Westland unit?

Mr. DICROCE. Significant.

Mr. DOOLEY. What are they? Do you know?

Mr. DICROCE. I don't know exactly. I know the average price according to the central district water plan that farmers pay.

Mr. DOOLEY. The water subsidy that is benefitted by users on the CVP is the interest that is foregone by the capital investment. So our predecessors in Congress thought it was a good public policy that we would have an investment in the development of the Federal Water Project and that that subsidy that we were going to provide at this time that you act like is so outlandish is that we weren't going to have to repay the interest on that capital investment. Every dime on that capital investment is being repaid by the users. I don't make any apology for that.

Furthermore, if it was just the water subsidy that was a problem, I have no confidence that if we eliminated the water subsidy that you folks would be happy if we still got the same amount of water.

The other thing I get increasingly frustrated with is I don't know how many people or part of your organization even yourself that has visited some of the areas that have been so adversely impacted.

I'm a real Democrat when it comes to the social issues. When I see the human suffering that's occurring in my district and I have people that do not think that it's an appropriate public policy for us to find a way to provide increased certainty of water delivery to that region in order to maintain an economy to provide a better future for these children that oftentimes are low income, I get very frustrated.

The reason why I'm taking exception to what you testified is because this is why we never solve the problem, by considering Mr. Calvert's bill that is supported by all co-sponsors is an upside-down approach doesn't do anything to allow us to move forward.

When there's a lack of acknowledgment that water supply is going to have to be a part of increasing the yield to meet the future needs of the environment, which your membership is interested in and also economic needs, I think does an injustice for the work that we're trying to do.

I apologize for getting a little bit angry here, but this type of approach doesn't get us anywhere and I would hope that before members in your organization that are one of the leading ones in the environmental community would understand and acknowledge the facts because when we have the presentation of some of the past arguments that have no substantiation, it doesn't get us to an—to a point where we can really solve our problems. I would be more than pleased to let you respond just out of being—

Mr. DICROCE. I'll respond to a number of your points, I hope. I think the solutions and the recommendations that we have made are the only solution that I have heard today that allows us to increase yield without the redirected impacts, which is a nice buzz word in the industry. It allows us to do that. We feel that it is a much more balanced approach.

I recognize that balance—the word balance is in the eyes of the beholder. We also feel as though this is a more efficient and more economical way to enhance and increase our supply of water, which is what we would like to do.

I would also like to address the area that you brought up about the price of water and its impact, the data about raising the price of water a little bit and having it impact demand, having it reduce demand is straight out of the state water plan, the last version of the state water plan. The conclusions that were reached then I take responsibility for. Those were mine that says, gee, if you increase the price a little bit more, you could generate 10 percent savings. And if you could generate 10 percent savings, you would solve our water supply problem. It's worth the chance to try that.

Mr. DOOLEY. Excuse me. Did you acknowledge what Mr. Moss said on the Friant unit as well as what Mr. Birmingham said on the Westlands unit where the increases in the last 5 years have been on the tune of at least almost 600 percent?

Mr. DICROCE. I'm not as familiar with that data. I'd love to see it.

I think the last point that I'd like to respond to is that I come from a background—a business background and my last 15 years I spent with one of the global manufacturing organizations of the world. We saw in the 1980's and the early 1990's American manufacturing relatively inefficient, relatively slow responding and so on, having our lunches eaten by imports.

And in the '90's we changed an awful lot of what we were doing. We became more efficient. We slimmed down. We cut costs. And American manufacturing and the American automobile industry rebounded to where it is healthy. It continues to grow, it is profitable, and it employs more people than it employed a decade or more ago.

We think that the same kinds or similar efficiencies in the agricultural industry can make heroes of the agricultural industry in the same way that American manufacturing are heroes today in our economy and we would look forward to that.

Mr. DOOLEY. Thank you.

Mr. CALVERT. Mr. Condit.

Mr. CONDIT. Since Mr. Dooley did so well, I'm going to let Grace go next.

Mrs. NAPOLITANO. Thank you, Mr. Chairman, and thank you for deferring, Mr. Condit.

One of the things that I keep hearing is everybody has specific areas of interest. However, I have yet to hear anybody talk about education of the populous on conservation and other areas that are going to be critical, because it isn't just one solution, it's many solutions and we have to look for it.

In looking at those solutions I think we need to be more—that's one of the reasons I'm here is to learn how my neighbors to the north feel about the water that they use and how we can benefit by helping address the issues from this area through Mr. Calvert's bill.

I don't know what we can do, like in farm areas, the farm workers, but I know that in schools we can begin to have our young children learn about water conservation, about better use of water in homes, in factories, in many other areas. I don't think we're even beginning to talk about that.

I have questions for some of you, but I defer back to Mr. Condit and to the Chair. But it just seems to me that as one of the areas we have not even begun to address is how do we not train people's long acceptance that you turn on the faucet, you have water.

Mr. DICROCE. May I respond to that? Los Angeles takes a bad rap for lots of reasons, but in one area that Los Angeles has done an outstanding job and that's water conservation. The public responds when water conservation becomes an important agenda. And Los Angeles in 1972 began to tackle water conservation and water usage to the point where since 1972 with a population growth of one million people they use the same amount of water that they used in 1972.

Mrs. NAPOLITANO. I'm glad you brought that point up.

Mr. DICROCE. People will respond, they will.

Mrs. NAPOLITANO. I think that all of us, special interest included, need to work together and come up with solutions that are going to be beneficial to everybody rather than attacking each other or saying that that does not work. I think that's just a challenge for me is how to make it work.

Mr. DICROCE. I want the agricultural industry to be heroes in this area.

Mrs. NAPOLITANO. Well, I understand that. When I was in the state legislature I was Chair of international trade, I continued to support the outreach of my small businesses into foreign countries, not to leave California, but to expand to everybody, be it Hong Kong or Thailand, people looked to California product. We certainly need to protect the workers that labor in the fields and also users in California. I look forward to working with everybody.

Thank you, Mr. Chairman.

Mr. CALVERT. Thank you.

Mr. Condit.

Mr. CONDIT. Thank you, Mr. Chairman. I'm going to associate myself with Mr. Dooley's remarks as it relates to Mr. DiCroce. I would invite you, if you have not, to take a little tour of the West side of this area so that you can get an idea of what's been done. You make reference that you want agriculture to be heroes. I'm telling you that the farmers and the farm workers in this state are heroes in terms of the industry. They build a very strong economy. We can compete with anyone in the world.

Mr. DICROCE. No question.

Mr. CONDIT. Anyone in the world. Just give us a fair shake and we'll do it. If you haven't been, and I don't know if you have or you have not, you should make the effort to do it.

Mr. DICROCE. I will be happy to take you up on that.

Mr. CONDIT. I would also like just for the record to comment that I know that the Committee extended invitations to some other environmental groups and RDC, et cetera. They are not here today.

Mr. DICROCE. RDC will be with you Monday in San Jose.

Mr. CONDIT. That is great. We're here in the Central Valley of California and agriculture where water is the lifeblood. We're sorry they couldn't get loose on Saturday to show up. This is the place they should have been.

They should have done the same thing I invited you to do, take a little trip on the West side and see what they have done, see how efficiently these people operate. They don't have much margin for error at all. I'm a little concerned that they really didn't want to come over here and I'm sorry that they didn't. It's their loss.

Ms. Redfern—

Mr. DICROCE. I think Barry Nelson of RDC and I decided to split the workload, if you will. I would be here, he would be in San Jose.

Mr. CONDIT. Are you representing them today?

Mr. DICROCE. Not representing him.

Mr. CONDIT. You are working with the organization?

Mr. DICROCE. We both work with the Environmental Caucus, both our organizations.

Mr. CONDIT. Ms. Redfern, thank you for being here today. I want to associate myself with the remarks of Mr. Calvert as it relates to your comments. You certainly do put a human face on this and you are—you and your family are certainly heroes to the agricultural industry.

I would like, if you would, for you to speak to the impact on resources for water and I hope explain this correctly, water for preirrigation, chemicals for and labor that was used during the early months of the year going into December. I would like for you to explain to us all that preparation that you made and then you find out later that you're not going to have enough water so those fields over on the West side lay fallow and you've done all this prelabor, prespraying, pre-everything.

What's the loss to you and to the industry to that? Does that make sense to you, the question?

Ms. REDFERN. Yes. On a per acre basis by January we put perhaps $150 an acre into a crop. With present commodity prices and present water deliveries, if we can earn approximately $5 an acre

a crop net we are feeling as if it's been a successful year. We're just hanging on. So with those acres, should they not receive water, the ones that have already received those preirrigations and work which we do as a matter of course, that $150 an acre is in the red.

Mr. CONDIT. And from my observation on the West side, there are a lot of acreage in that category right now where people have done this prework and been told later that they are not going to receive the water, so the land will lay fallow and the money invested in the prework is lost.

Ms. REDFERN. That's exactly right, thank you.

Mr. CONDIT. So it goes to the heart of creating some reliable commitment so that people don't make—that's a waste of water, it's a waste of everything, for you if you don't have a long-term commitment; is that not correct?

Ms. REDFERN. Yes, that's a waste of fuel. Every resource that we have on our ranch is wasted.

Mr. CONDIT. Thank you very much. I want to thank all of you again for your testimony.

I want to, Mr. Broddrick, get to you real quick. I want to acknowledge and compliment you because I know of anyone sitting in this building today that you have a great deal of knowledge about CalFed and that when you were at Fish and Game you worked very hard on CalFed and you're an integral part of the state team that negotiated the action plan and I want to thank you and congratulate you and commend you for that.

One of the little known provisions of the CVPIA directs the Secretary of the Interior to develop a replacement water supply for refuge. This water supply currently comes from the—comes from and impacts agricultural service contractors.

Now I just want to know in your current position are you willing to work with us to develop a replacement water supply as to—directed under law?

Mr. BRODDRICK. The answer as written in the testimony that I didn't speak to is yes. I as everyone else who has a vested interest by organizational association are nervous about the loss of the utility of the refuge water supply provisions. I am concerned just as maybe others are that there's a zero sum game in water and if fisheries are driving all the priorities, then some of the terrestrial species, whether they be ducks or some of your threatened species, may be a little short on the stick when they are all allocated, especially in a crisis.

My response very directly to the question, I think we've got a bill here with all the flexibility we have in conveyance and needs for essential surface storage and existing conveyance of water south and back up to the grassland system and I don't think that unless we have water security that potential partners, whether they be agricultural districts, farm districts, private landowners or other environmental organizations are going to be willing to commit to anything very innovative if we continue to position left, right, center or depending on your point of view on the compass away from each other.

I think there's opportunities to meet all the refuge demands. When I say refuge, I mean grassland water districts, private lands there as well, but no one is willing to offer that flexibility when

there isn't water security. Certainly there's this dramatic option there that we're afraid to explore because of the scarcity.

Mr. CONDIT. Thank you. Miss Guzman, if you could, for me, we talked a little bit about the economy and the high unemployment rate of the West side of this region and how the loss of water would impact the economy.

If we don't solve the water problem and make sure there's some certainty and security for agriculture, what is the plight of the farm workers who make this whole thing work anyway? I mean, what do they do when there's no—when those lands lay fallow? Where do they go, what do they do? Has your organization had—have they done any studies to that, what the options are, et cetera?

Ms. GUZMAN. Our organizations haven't done any studies. There have been studies done not to land or fallow due to salinity, but there have been some studies done of a land retirement due to drought. That was done by Don Redifo (phonetic) when he was at the California Institute for World Studies.

But I think what was mentioned earlier also by Dr. Sablan and some other of the representatives on the West side on the impact to the rural communities is that there is nowhere for them to go. This is a problem—this is a situation that is here currently.

I've also been confronted with something that Tom has, I'm sure repeatedly, that this is an industry that's only been on the West side for 50 years, but regardless of how long it's been there, it's there today.

One of the other issues I wanted to bring about was—that tied to this about workers having not much of another choice and it being tied really to some of the contracts and some of the insurance languages that's in the contracts. It's not that we're opposed to that guarantee, but just a concern. And this is found not only on the West side, but also on the east side.

When the contracts are determined—are defined by use for purely irrigation use, then it's a limit to the diversification of the economies in these rural areas. There's a case that I'd like to give in Orange Cove where they—the small city of Orange Cove wanted to put in a tortilla packaging plant, but they are maxed out on their water supply from the Friant and were looking for some sort of guarantee—they basically couldn't bid on this plant because they couldn't guarantee them the water supply and they don't have—they have some limitations on working on the agreement with the irrigation district there and that's based on how the contracts are written.

And this is also, I'm sure, a case that Dr. Sablan is facing in Firebaugh where they have to look, as she mentioned, to their packaging and processing sheds and companies that they also need a reliable source of water, whether or not irrigated agriculture is adjacent to them, but those tomatoes come to them from up and down the valley, so they need to process them there and have a guaranteed water supply.

That's something we would like to work with Congressman Calvert on his bill and really assuring the communities that there will be a water source for their economic development.

One other thing I'd like to add as a solution is that if there was some way to tie into these contracts that they would all be as good as Mrs. Redfern, then we'd be all for that as well.

Mr. CONDIT. Thank you very much. You bring up a good point and I noticed that Mr. Calvert made note of that. Thank you all for being here today. I appreciate it.

Mr. CALVERT. I have just a couple of other questions and, Ms. Guzman, you make a good point. Assurity of water not just for farming, but for other uses that may help the local economy and provide for better and higher paying jobs and that works for everybody's benefit. That's why we're here today, to try to expand the supply of water to meet those needs.

Mr. DiCroce, I listened to your testimony and read your testimony. I'm just kind of curious, obviously you don't like H.R. 1985. Specifically, you don't like the section that reauthorizes CalFed. Is that all right, the three billion dollars, the Federal money that we're going to put into CalFed as our share? Is that part of it okay?

Mr. DICROCE. I think our view is that to a great extent with the tenancy, the way it's written it appears to preauthorize damage—

Mr. CALVERT. I was going to ask that question. How does it preauthorize—

Mr. DICROCE. I feel as though it subverts or walks around—

Mr. CALVERT. How specifically does it subvert? The way that legislation is written is that we must agree to a government scheme within 1 year from the completion of the bill assuming that the bill is signed into law and we have a law and authorization bill. The state legislature, the governor of California, this Committee, would work together to put together a government scheme. All the project would have to go to that with all the stake holders, including yourself would be involved in that process, then would have to come back to Congress and then would have to be appropriated. And it still would have to go through the legal requirements and all the other permissions that must be branded from various Federal and state, local organizations.

So how does it predetermine anything?

Mr. DICROCE. If all of that is so, Mr. Chairman—

Mr. CALVERT. It is so.

Mr. DICROCE. —then I don't think that we would object to it. It doesn't appear to be that way.

Mr. CALVERT. The other section of the bill allows for Federal participation to allow local communities, for instance, put in reclamation. Are you opposed to reclamation?

Mr. DICROCE. No.

Mr. CALVERT. Are you opposed to conjunctive use?

Mr. DICROCE. Absolutely not.

Mr. CALVERT. But you're opposed to the Federal Government participating in those projects. Is that what I heard in your testimony?

Mr. DICROCE. No. I'm not following, so I can't answer that one.

Mr. CALVERT. I guess what I get to is are we—are you—is your organization or the organizations you represent opposed to the Federal Government participating in augmenting water supply to the State of California?

Mr. DICROCE. No.

Mr. CALVERT. But in your testimony you said yes, you were.

Mr. DICROCE. You said Federal—

Mr. CALVERT. Federal money.

Mr. DICROCE. To augment water supply.

Mr. CALVERT. Federal money to be used to help augment water supply in the State of California for both urban, rural and environmental purposes. Are you opposed or in favor of that?

Mr. DICROCE. Stated that way we would have no objection to it. If it predetermines the construction of some major dams that CalFed is going—

Mr. CALVERT. Where in the legislation does it say that we are to predetermine anything?

Mr. DICROCE. I think that's the conclusion—

Mr. CALVERT. That's the conclusion that's possibly arrived at by people who are opposed to H.R. 1985 and are quite frankly going to create a water crisis in the State of California, which I don't believe is necessary, nor good for the future of this state. And then we need to go out and educate people in the environmental community that we don't take one nickel, one dollar out of the environmental projects that were originally outlined within the CalFed agreement. I think Mr. Broddrick would testify to that fact.

At any time have you seen where we take any money out of environmental litigation?

Mr. BRODDRICK. The CalFed issues that you identified in terms of continuing with a Record of Decision embedded in the CalFed Record of Decision is 150 million dollars a year in environmental programs, 150 million dollars a year in environmental water account. If CalFed stays as projected, but not fully funded, your bill will actually help ensure that those provisions are funded versus compromising. So if you stay with the CalFed Record of Decision, then we're in—with those components embedded, they are part of the biological opinion. They are there.

Mr. CALVERT. Basically it's a point that needs to be driven home over and over again. This is CalFed plus plus. We added a section on grants to assist local communities to build water projects that augments their water supply, reclamation, conjunctive use. I haven't talked to an environmental organization yet that's opposed to that.

We add back another section for bringing back the Department of the Interior Bureau of Reclamation Loan Program which can also be used for environmental mitigation. We augment that from the original legislation. I haven't talked to many people who are opposed to that.

And so I come to the conclusion that there's some people in this state that just don't want extra water.

Mr. DICROCE. I think if you can go back to the comments I made, I think our vision and we feel that the state does already have adequate water supply. The challenge is to use it more efficiently.

Mr. CALVERT. Well, I would state that based upon the number of hearings that I've had, in a number of the counties, I suspect every county in the state will end up endorsing this bill, every major city would find that very dubious, in fact. Especially in the West that we had a hearing, by the way, in Northern California, which was the most attended hearing in the history of United

States of America. The most—now, I think there was 4,000 people who came and left that hearing during the day. Unfortunately I couldn't Chair it that day. I had a previous commitment.

But this isn't healthy. We've got to find solutions to the problem and we need to work together to find these solutions. Water transfers and increased costs of water forcing the farm industry into bankruptcy and I guess that would in effect create a water transfer is not an acceptable solution as far as I'm concerned.

Mr. DICROCE. I would agree with you, that is not an acceptable solution.

Mr. CALVERT. Any further comments?

Mr. CONDIT. I don't want to—this gentleman here I certainly don't want to do that. As I was sitting here thinking, do you guys take the position on other infrastructures other than water? With your theory we can conserve our way out of an electrical crisis that we're in. We don't need to build anything, you know, just keep conserving.

With the growth that you have in the state—I don't know, I don't mean to be disrespectful to you. It's just illogical to think that because we have a tremendous amount of growth—and I don't want people to think this is going to happen here in the Central Valley if we don't continue farming. What do you think is going to happen? Do you think we're just going to have land sitting out there? These people are going to build houses. People are going to come here and they are going to commute in their cars.

I mean, I just don't understand what the logic is of that rationale. I mean, we're in an infrastructure crisis all across this country in terms of roads, in terms of water facilities, in terms of electrical stuff. And you are to tell me that we just conserve our way out of it is the answer. I don't mean to be—that's what it sounds like you're saying.

Mr. DICROCE. I am saying that generally, not the total solution, but a good part of it. May I respond to a couple?

Mr. CONDIT. You've taken enough shots today. You're welcome to respond.

Mr. DICROCE. Your analogy to the energy crisis, I'd like to give you my personal view, not necessarily the California view. I think we have an energy pricing crisis. We don't have so much of an energy supply problem. There are some shortfalls.

The energy usage in the state has been going up modestly year after year. There hasn't been a lot of building and there are some shortfalls that have been solved in less than a year. Our crisis in energy is more a crisis of pricing, not supply.

We feel the same way for supply in the water issue. We don't have a crisis of supply. We have a crisis of efficient use and summary distribution.

Mr. CALVERT. So increasing the price is the answer?

Mr. DICROCE. No, that's not the only answer. Improving investing in technology is one of the items I mentioned. More groundwater storage is one of the items I mentioned. A number of other actions to go along with it, not just the reduction of subsidies.

Mr. CONDIT. California in the last decade the population rose 30 percent. Increase in water is less than 2 percent, so you can conserve your way out of that. That's like saying we shouldn't build

any more highways because we have to figure out another option. Obviously we have to figure out all kinds of options. It sounds like to me you're opposed to any kind of infrastructure developing.

Mr. DICROCE. No, I do not say that. I know nothing about highways. I don't know a lot about electricity either. I only know a little bit about water.

Mr. CONDIT. Thank you, sir, you've been very kind in allowing us to go back and forth.

Mr. CALVERT. I want to thank you, this panel and I thank the audience for attending today. It was a very informative hearing. I want to thank you, Mr. Condit, for his hospitality in his wonderful City of Modesto. I look forward to doing that. But we do have a crisis in California and not as visible as the electric crisis is today, but we want to be proactive in trying to deal with it and work with all the communities, environmental community, the farming community, and certainly the urban areas in order to come up with a common solution that can work with the best interest of all of us here in the wonderful State of California.

So have a great day, God bless and we'll see you at the next hearing, hopefully.

[Whereupon, at 1 p.m., the Subcommittee was adjourned.]

OVERSIGHT FIELD HEARING ON NORTHERN CALIFORNIA WATER SECURITY -- OPPORTUNITIES AND CHALLENGES

Monday, July 2, 2001
U.S. House of Representatives
Subcommittee on Water and Power
Committee on Resources
San José, California

The Subcommittee met, pursuant to call, at 9 a.m., in the City Council Chambers, 801 N. First Street, Room 205, San Jose, California, Hon. Ken Calvert [Chairman of the Subcommittee], presiding.

Present: Representatives Calvert and Lofgren.

Staff Present: Steve Lanich, Staff; Jeannine Campos, Staff; and Joshua Johnson.

STATEMENT OF THE HON. KEN CALVERT, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. CALVERT. The committee will come to order. If everyone will please take their seats, we'll convene the meeting here shortly. Thank you.

In the meantime, if the witnesses in the first panel will please proceed to the front table, we would appreciate that. Thank you.

First, I want to thank my host today, Zoe Lofgren, for allowing me to come up here to the beautiful city of San Jose. I had a delightful evening here last evening and you certainly have a community I'm sure you're very proud of and certainly well represented. It's a pleasure to be here.

I have been going around the state having a number of hearings on the future of California's water security. Everyone has taken time to come here today understands the importance of water availability, reliability and supply to our well being, our environment, and this state and our country.

We have convened this hearing as an opportunity to listen to perspectives of those closest to the issues. Important work addressing California's water security has a strong foundation in the CALFED Bay-Delta Program and the Record of Decision. This program contains a balanced holistic approach to dealing with water security in the Bay-Delta area and the impacts on the water issues across the board.

We need to certainly achieve the goals toward a balanced approach to water use to conserve and recycle that water and look for ways to augment the water supply. This is in the heart of what I believe is embodied in H.R. 1985, the Western Water Security Enhancement Act.

We must stop thinking in a fashion that pits the environment against all other factors, a mentality that if we increase water supply and quality, it must be at the expense of the environment and is detrimental to the working constructive on water issues in the west.

When water supply and quality improve, the environment is benefitted by this additional water. When the environment is benefitted, water supply certainly helps the state and the west. We have a number of stakeholders here today that have various perspectives on water and we are certainly looking forward to listening to them. We certainly, I think, can all agree that we have a problem with water supply in the state of California—we always have.

It's one historic truth that we've had in this state for many years and certainly in the west. We would like to come up with a proactive solution where we don't get into decision processes that we are faced today with electricity which sometimes are not the best solutions.

With that, I thank the witnesses for being here and recognize Congresswoman Zoe Lofgren.

STATEMENT OF THE HON. ZOE LOFGREN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Ms. LOFGREN. I'll be very brief because I'm eager to listen to the witnesses. First, let me welcome you, Mr. Chairman, to this beautiful city and this wonderful valley where I have lived all my life.

It's a dynamic area, although we have an overall downturn in the American economy right now. We all know that. This still remains an area that is energetic. It really represents the economic future of the United States and the world.

Clearly the ability to have a clean environment and ample water supply is something that matters a great deal to this community, not only to industry but to our residents. I think this hearing is an important one. I'm appreciative that I've been invited to join you here today even though I'm not a member of the Subcommittee.

Clearly this is an issue that all Members of Congress will be dealing with along with our partners in state and local government and the private sector. I hope that we can get ahead of the curve on the challenges that face us here today. We know that the next major challenge that will face our state is water supply and there are several others following behind. With that, thank you once again for coming to San Jose.

Mr. CALVERT. Thank you. With that, we'll start with our first panel and we'll just kind of go left to right and start with Mr. Jim Cunneen. Welcome.

By the way, let me explain our little 5 minute rule, all these little colored lights. We try to limit the testimony to 5 minutes. The green light indicates that you're into the 4 minutes and the yellow

light indicates 1 minute is left. The red light indicates please wrap it up.

With that, Jim, please begin.

STATEMENT OF JIM CUNNEEN, PRESIDENT AND CEO OF SAN JOSE SILICON VALLEY CHAMBER OF COMMERCE

Mr. CUNNEEN. I can hardly say my name in 5 minutes, Mr. Chairman. Delighted to have you to Silicon Valley. Welcome from the Central Valley. In hearing Congresswoman Zoe Lofgren's opening remarks and yours, it does remind me how much we have in common as two regions.

Both the agricultural community and Silicon Valley do depend on a clean, stable water supply. We both handle hazardous materials daily for the manufacture of our products and farming. We both depend on international trade to a great degree.

I look forward to partnering more between the Silicon Valley delegation and the Central Valley delegation. I think we have much in common on some core issues.

I am Jim Cunneen, President and CEO of the San José Silicon Valley Chamber of Commerce. We want to thank you for inviting our organization to address the Subcommittee this morning.

We would like to express our strong support for your efforts, Chairman Calvert, and Senator Feinstein's efforts to reauthorize the CALFED and to provide the Federal appropriation that is necessary for the program's implementation.

The Chamber of Commerce, by way of background, represents a powerful network of small retailers, small manufacturers, mid-size service sector firms, accounting, PR, legal, and large high-tech enterprises. We're the metro Chamber and the companies that make up our organization have created Silicon Valley's resilient economy.

We represent nearly 2,000 companies throughout the metro area and we are the largest nonprofit organization that represents the entire supply chain, the value chain of our business economy.

As a large urban Chamber we have long witnesses our region's ups and downs. Our take is simple. Silicon Valley's technological revolution is far from over, and our best days as a successful community lie ahead. A clean, stable water supply, however, is a prerequisite for future growth, and to maintain our regions leadership position in the nation's economy. Here is what's at stake.

The nation's largest high-tech presence and number of jobs; with a combined high-tech payroll of $56 billion, with $22 billion of that in San José alone; a labor force in which high-tech firms employ 1 out of every 4 private sector workers; and with at least one computer in 77 percent of all households, the #1 ranking in the entire nation.

I cannot stress enough the importance of water to the fulfillment of our future. The challenge is clear, to provide a reliable source of water for everyone in the state and still provide required flows for environmental purposes. We don't believe that these goals are mutually exclusive.

From a business perspective it is pretty straightforward. If we are perceived as a region by others that is short on water in addition to the high cost of living and traffic congestion and other issues, it will be difficult to maintain and sustain the businesses

that compliment the high-tech and biotech industrial base that is so important to our future.

We believe your committee and policy makers at both the state and Federal level must address three key areas.

1. First, Federal investments in the Delta must continue to be increased. The Delta is at the center of our water delivery system. While the State of California has stepped up and passed Proposition 13 in the March 2000 ballot providing nearly $2 billion, no new Federal money was allocated in the last session of Congress for this important purpose.

Also, state legislation providing for governance of CALFED was defeated in the final days of the '99 2000 session so the time to act is now. The Delta must be rehabilitated through the immediate commencement of a number of crucial repairs and only with new Federal investment in this priority area can the Delta be restored to deliver on its dual purpose, transporting water while maintaining a health ecosystem that minimizes the new listings of species, something we all want to avoid.

2. California must have additional Federal guidance to develop a plan showing how we intend to stay within our allotted 4.4 million acre-feet a year of Colorado river water. We have always exceeded our allocation, yet we are being asked now to stay within that allocation. At the same time, demand for water continues to increase. It's a problem that we are going to need to continue to work on with our Federal partners.

3. Finally, any solutions within the CALFED process must include storage and conveyance elements. While the Phase II Record of Decision and EIR do include a call for surface storage, it lacks any specifics. This is a crucial element to any fair, balanced plan.

We want to offer you our committed support for efforts to reauthorize the CALFED project. This important program, controversial in elements, provides the best hope available to insure a reliable, clean water supply in an equitable fashion for the Silicon Valley and all of California.

You are to be commended, Chairman Calvert, for coming to Silicon Valley, for holding this hearing, and for fostering an atmosphere of cooperation among the various sectors of the state's economy and major business and environmental stakeholders.

We are going to depend on you and Congresswoman Lofgren and Senator Feinstein for continued leadership that will be essential to create a positive political will to address the water supply problems facing our state and we look forward to answering any questions you might have as well. Thank you very much.

[The prepared statement of Mr. Cunneen follows:]

Statement of Jim Cunneen, President and CEO, San José Silicon Valley Chamber of Commerce

Good morning. I'm Jim Cunneen, President and CEO of the San José Silicon Valley Chamber of Commerce.

Thank you, Chairman Calvert, for inviting our organization to address the Subcommittee this morning. I'd like to express the San José Silicon Valley Chamber of Commerce's support for your efforts to re-authorize CalFed and to provide the federal appropriation necessary for program implementation.

The Chamber of Commerce represents a powerful network of small retailers, small manufacturers, mid-size service-sector firms and large high tech enterprises—companies that have together created Silicon Valley's resilient economy. Rep-

resenting nearly 2,000 companies, our Chamber is the largest non-profit organization representing the entire supply chain of business enterprises throughout the San José Metropolitan Area. As a large, urban Chamber, we have long witnessed our region's ups and downs. Our take? Silicon Valley's technological revolution is far from over, and our best days as a successful community lie ahead.

A clean, stable water supply, however, is a prerequisite for future growth, and to maintain our regions leadership position as:

- The nation's largest high-tech presence and number of jobs;
- With a combined high-tech payroll of $56 billion, with $22 billion of that in San José alone;
- A labor force in which high-tech firms employ 1 out of every 4 private sector workers;
- And with at least one computer in 77 percent of all households, the 1 ranking area in the entire nation.

I cannot stress enough the importance of water to the fulfillment of our promising future. The challenge is clear: To provide a reliable source of water for everyone in the state and still provide required flows for environmental purposes. These goals are not mutually exclusive.

From the business perspective it's straightforward: If we are perceived by others as a region that is water short (in addition to high cost of living, traffic congestion, and other issues), it will be difficult to be able to sustain the businesses that complement the high-tech and biotech industrial base that is so important to our nation and its standing in the global marketplace.

We believe your committee and policymakers at both the state and federal level must address these key areas:

1. Federal investments in the Delta must be increased. The Delta is at the center of our water delivery system. While the State of California passed Proposition 13 in March 2000 providing nearly $2 billion, no new federal money was allocated in the last session of Congress. Also, state legislation providing for governance of CalFed was defeated in the final days of the 1999–2000 session. The Delta must be rehabilitated through the immediate commencement of a number of crucial repairs. Only with new federal investment in this priority area can the Delta be restored to deliver on its dual purpose—transporting water while maintaining a healthy ecosystem that minimizes the new listings of species.
2. California must have additional federal guidance to develop a plan showing how we intend to stay within our allotted 4.4 million acre-feet a year of Colorado River water. We consistently exceed our allocation at present. Yet demand for water increases.
3. Any solutions within the CalFed process must include storage and conveyance elements. While the Phase II Record of Decision and EIR do include a call for surface storage, it lacks any specifics. This is a crucial element to any fair, balanced plan.

I want to offer you our committed support for efforts to reauthorize the CalFed project. This important program, controversial though it is, provides the best hope available to insure a reliable, clean water supply in an equitable fashion for the Silicon Valley—and all of California. You are to be commended for holding this hearing and for fostering an atmosphere of cooperation among the various sectors of the state's economy and major business and environmental stakeholders. Your continued leadership will be essential to create the positive political will to address the water supply problems facing our state.

Thank you.

Mr. CALVERT. Thank you, gentlemen.

Mr. Gaines.

STATEMENT OF BILL GAINES, DIRECTOR OF GOVERNMENT AFFAIRS, CALIFORNIA WATERFOWL ASSOCIATION

Mr. GAINES. Thank you. Mr. Chairman, members of the committee, my name is Bill Gaines. I'm the Director of Government Affairs for the California Waterfowl Association. On behalf of our association's 15,000 members throughout California I would like to thank you for coming to San José today and for allowing us to

provide testimony on the CALFED Program and your legislation dealing with CALFED Program as well.

Historically, California's Bay- Delta watershed provided about 4 million acres of naturally occurring seasonal wetlands for waterfowl and other wetland-dependent wildlife. Unfortunately, over the course of the last century or so, about 90 percent of those wetlands have been removed due to converting land to agricultural uses, urbanization, flood control, and navigation projects.

Today we have, as I mentioned, about 10 percent of our historic wetlands remaining. Unfortunately, about 60 percent of our Pacific Flyway waterfowl still must depend upon these few remaining wetlands to meet their annual migratory and nesting needs.

In addition, we estimate that about 50 percent of California's threatened and endangered species are also in some way wetland dependent.

Due to significant changes in California's natural hydrology, most of these few remaining wetlands must also be managed today. In other words, they must be artificially irrigated and intensely managed to recreate and maintain marsh conditions.

In essence, public and private wetland managers must farm for ducks. In other words, we are dependent upon surface water supplies and groundwater supplies just like every other farmer out there in the Central Valley is, just like our urban users are, we are dependent upon water to provide those managed wetlands for waterfowl and other wetland dependent species that depend upon them.

Definitely water is the lifeblood of California's waterfowl conservation effort. About 10 years ago, in response to this concern and the fact that almost all of our remaining wetlands were of minimal habitat quality in almost all but the wettest of years, California Waterfowl Association worked with Congress and a variety of other water interests to pass the Central Valley Project Improvement Act.

The refuge water provisions within the CVPIA played a critical role in helping to provide the Central Valley Federal refuges, the state wildlife areas, and the private wetlands within the Grasslands Resource Conservation District with a guarantee of some water supplies, good water supplies in all but the driest of years.

Unfortunately, the CVPIA refuge water provisions also had some shortage provisions which would allow those water supplies to be cut in dry years and I'll talk about those in a second. I must commend Congressman Miller for his assistance with passing the CVPIA. Obviously he was a key player in that many years ago and we thank him to this day for that, as well as many other Members of Congress.

Although the CVPIA plays an important role in providing water supplies, to roughly about 50 percent of our remaining Central Valley wetlands, there is still much to be done considering that we only have about 10 percent of our historic wetlands remaining. Even if that 10 percent could be managed to provide pretty good waterfowl and wetland-dependent species habitat year in and year out. With only 10 percent provided on the ground, we had a lot of work to be done.

The CALFED Program was initiated a couple of years later and its intent, of course, was to address ecosystem health, water quality, water supply reliability and levee system integrity in the Bay-Delta watershed as well.

Because the restoration enhancement of the wetland areas in the Bay-Delta watershed depends largely upon these wetland water supplies as well, CALFED is a very, very important program to us.

Back in November of '96 the State of California's public supported the CALFED Program and made a financial commitment to it, if you will, with the passage of Proposition 204 which committed about $995 million in state funding for implementation of CALFED related activities.

Clearly this was an important step toward giving the CALFED Program the fuel that it needed to address the water supply reliability problems that we have in the Central Valley but it simply is not enough.

Federal funding to supplement the state funding is critical to the success of the CALFED Program and we believe that your H.R. 1985, Congressman, takes an important step in this direction.

Our association is pleased to provide this legislation with our support, but we do have some concerns, most notably the Westlands water provision, which guarantees south of the Delta water users minimum deliveries, if you will, above what they are receiving now on a typical year in, year out.

That provides us with great concern because the bill lacks specificity as to where that water is going to come from.

Clearly the Central Valley refuges and the private wetlands in the Grasslands Resource Conservation District that benefitted so greatly from the CVPIA could be severely hurt under H.R. 1985 if those appropriate safeguards to provide protections from environmental water supplies, most notably wetland water supplies, aren't somehow included. We look forward to working with you on providing those safeguards within the bill.

We also ask for your assistance on a couple of other points. One of the long concerns that we've had with the CALFED Program is the fact that the CALFED Program is primarily a fish program.

Now, we recognize that if you are going to address the water delivery and water liability concerns in our Central Valley and throughout California, you need to address listed fish species concerns. There is no question about that because it is the same listed fish species that are creating many of the regulatory pinches, if you will, that are restricting some of the important water users south of the Delta from receiving their water supplies.

Nevertheless, if you are going to have an ecosystem restoration program and you want to address the ecosystem as a whole, it is critical that you address the significant wetland loss that we have experienced here in our Central Valley.

We ask for your help in providing some guidance to CALFED to make it a program that takes into greater consideration wetland and waterfowl species that have suffered so greatly from the loss of the 90 percent of their habitat here in California.

We are here today to provide our support for H.R. 1985. We do ask for your assistance in providing us with some of the language

in there that we need to make it a better bill. We thank you for the opportunity to be here today.

[The prepared statement of Mr. Gaines follows:]

Statement of Bill Gaines, Director, Government Affairs, California Waterfowl Association

Good morning. Mr. Chairman and Members of the Committee, my name is Bill Gaines, and I am the Director of Government Affairs for the California Waterfowl Association. On behalf of our Association's 15,000 members, and waterfowl enthusiasts throughout the Pacific Flyway, I would like to thank you for the opportunity to come before you today to discuss Northern California Water Security—Opportunities and Challenges.

Founded in 1945, the California Waterfowl Association (CWA) is a private non-profit organization dedicated to the conservation of California's waterfowl, wetlands and our hunting heritage. The California Waterfowl Association effectively pursues this mission through waterfowl research, habitat projects, education and outreach programs, and Government Affairs activities.

Historically, California's Bay/Delta watershed provided over 4 million acres of naturally occurring wetland habitat for Pacific Flyway waterfowl and other wetland-dependent species. Over the course of the last century, largely due to the construction of the federal Central Valley Project, the State Water Project, the conversion of land to agriculture, urban expansion, and flood control and navigation projects, over 90% of this once vast habitat base has been destroyed. The greatest percentage loss of this important habitat type in North America. Yet, today, our few remaining wetlands must still provide critically important nesting and wintering habitat for roughly 60% of Pacific Flyway waterfowl—representing nearly 25% of our continental waterfowl population. In addition to placing serious stress on our waterfowl resource, the significant loss of this habitat type has also had a substantial impact on many of our State's other native species. In fact, an estimated fifty percent of California's threatened and endangered species are, in some way, wetland-dependent.

Due to significant changes in California's natural hydrology, most of our few remaining interior wetlands must now be "managed"—artificially irrigated and intensively managed to create and maintain marsh conditions. As a result of this very unique condition, the quantity and quality of wetland and waterfowl habitat available in California in any given year is highly dependent upon the availability of water supplies for wetland management. Recognizing this unique and serious condition, for more than half a century, our Association has worked cooperatively with State and federal legislators and agencies, other organizations and private landowners to obtain reliable water supplies for wetlands and to develop, influence, fund and implement wetland programs which facilitate the much needed enhancement, restoration and on-going maintenance of California's critical wetland habitat.

Yes, water is the lifeblood of California's wetland and waterfowl conservation effort. Unfortunately, for many years, the lack of a firm wetland water supply has minimized our ability to fully manage California's few remaining habitat areas in all but the absolute wettest of years. Ten years ago, in response to this concern, our Association worked closely with Congress to draft the "refuge water" provisions of the Central Valley Project Improvement Act (CVPIA). When the Act was signed by President Bush in the fall of 1992, a significant positive step was taken towards addressing these critical annual wetland water needs. By "guaranteeing" firm annual water supplies to Central Valley federal refuges and State wildlife areas, and private wetlands within the Grasslands Resource Conservation District, this landmark legislation marked a critical, positive milestone in the California wetland conservation effort. But, with only about ten percent of our historical habitat still in place, much remains to be done.

More recently, the CALFED Program was initiated to address ecosystem health, water quality, water supply reliability, and levee system integrity in the Bay/Delta watershed. Because the restoration, enhancement and maintenance of waterfowl habitat throughout much of this watershed also depends upon on these areas of concern, properly implemented, the CALFED Bay/Delta Program represents a tremendous opportunity to address the needs of migratory and nesting waterfowl, and other wetland-dependent species.

The CALFED Program is a cooperative, inter-agency effort of 18 State and federal agencies. In November of 1996, the people of California formally embraced the CALFED Program as the vehicle for addressing our State's water concerns by passing Proposition 204, the "Clean, Safe, Reliable Water for Cities, Farms and the

Environment" Bond Act—a measure which committed $995 million in State funding for the implementation of CALFED related activities. But, although these State dollars may appear significant, they alone are simply not enough to fuel this essential effort. CALFED is certainly the most significant and positive multi-interest endeavor ever undertaken to address water and environmental concerns in California, and perhaps throughout the entire nation. Yet, without the necessary funding to fully implement its many important facets, the Program will fall short of its considerable goal of providing all of California's urban, agricultural and environmental water interests with reliable long-term water supplies. Significant supplemental federal funding is integral to the success of this important Program.

Congressman 4Ken Calvert's H.R. 1985, the "Western Water Enhancement Security Act", would address this serious concern in the near-term by authorizing significant federal funding for the CALFED Program, beginning in fiscal year 2002. Our Association firmly believes that the funding, guidance and appropriate governance that Representative Calvert's bill would provide are critical to the success of the CALFED Program, and we are pleased to offer this important measure our full support.

Although we fully support this bill, we would also like to provide some specific thoughts on how this bill could more effectively help the CALFED Program to better achieve it's environmental goals. As currently written, Section 103 of H.R. 1985, entitled "California Water Supply Security", would require the Secretary of the Interior to operate the Central Valley Project (CVP) in a manner which assures south-of–Delta CVP agricultural water service contractors at least 70% of their existing contracts in a normal water year. At the same time, the Section also includes language that states that "the increased supply shall be accomplished without reducing deliveries to other water agencies that rely on water diverted from the Bay/Delta watershed or degrading the quality of water...for municipal and industrial uses." With no specific similar protections called out for environmental users, we believe this provision, as currently written, places south-of–Delta managed wetlands at considerable risk. Although the CVPIA does offer some protections for many of these habitats, the Act specifically allows for shortages in "Level 2" and "Level 4" wetland water deliveries. To address this concern, we ask that Section 103(a)(3) of H.R. 1985 be amended to also specifically protect managed wetlands from reduced deliveries to meet the increased south-of–Delta agricultural supply called out by the bill.

Our Association would also like to offer the following general thoughts on how the environmental benefits provided by the CALFED Program could, and should be improved. To begin, it is important to note that we appreciate and fully support the overall goal of the CALFED Program to address water supply reliability, and we recognize the importance of addressing the habitat needs of listed fish species in achieving this objective. California's "managed" wetlands—which are also highly dependent upon surface water availability—will benefit greatly from achieving this goal as well. Yet, if the Program is to make an honest effort to restore the integrity of the Bay/Delta ecosystem, it must fully consider the serious habitat needs of native wildlife—most notably wintering and nesting waterfowl, and the listed "non-fish" species and other wildlife which share their habitats.

The tremendous loss of our historic Central Valley wetlands, and the resulting impact to many species—several of which are now threatened or endangered—is well documented. These species of concern are very low in profile compared with winter and spring run chinook salmon, delta smelt, and the other high-profile listed fish species CALFED has focused on, but they are every bit as threatened or endangered. The CALFED Program's ecosystem restoration effort could, and should play a significant role in addressing the habitat needs of these wetland-dependent species. Yet, thus far, the continued requests by our Association, and our conservation partners, to elevate wetland-dependent species and their habitats to a high priority of the CALFED Program have largely been ignored.

In the mid–1980's, in response to serious reductions in North American waterfowl populations, the North American Waterfowl Management Plan (NAWMP) was signed by the federal governments of Canada, the United States, and Mexico. This Plan established broad waterfowl populations goals, and identified seven initial priority areas on the North American continent in greatest need of habitat restoration and enhancement. California's Central Valley was one of these identified top priority areas.

Two years later, in 1988, a habitat restoration program, in many ways like CALFED, was initiated to address NAWMP objectives in our Central Valley. Known as the Central Valley Habitat Joint Venture (CVHJV), this public/private partnership—consisting of nearly twenty State and federal resource agencies and private conservation organizations—carefully established biologically based acreage objectives for the preservation, enhancement, restoration and maintenance of waterfowl

habitat throughout much of the CALFED project area. For the past 13 years, by working closely with private landowners and the agricultural sector to achieve its objectives, the CVHJV partnership has made great strides in addressing its identified habitat goals, and has gained considerable acceptance within the private sector.

Representative Calvert's H.R. 1985 recognizes the importance of utilizing partnerships to achieve CALFED's goals. Yet, the Program itself continues to ignore what is arguably the most successful environmental restoration partnership ever created—the Central Valley Habitat Joint Venture. Today, we ask for you to use H.R. 1985 as a vehicle for reshaping CALFED into a program which takes advantage of the effective partnerships and extensive goodwill the CVHJV has created over the course of the past decade. We also ask for your assistance in guiding CALFED to more appropriately address all of our Bay/Delta ecosystem restoration needs. We request that language be inserted in the bill which requires the Program to fully recognize the many listed non-fish species who depend upon seasonal wetland habitats, and that a portion of the funding authorized in the measure be earmarked for projects consistent with the habitat objectives called out in the Implementation Plan of the Central Valley Habitat Joint Venture. Carefully amended in this way, H.R. 1985 could not only help CALFED to take advantage of the substantial private sector support currently enjoyed by the CVHJV, but also help the Program to bring the many public and private partners of the Joint Venture—and their available funding—to the CALFED table to assist in the delivery of the Program's ecosystem restoration goals.

In conclusion, the California Waterfowl Association would like to applaud Representative Calvert for introducing H.R. 1985, and Members of the Committee for holding today's hearing. We also ask Congress to help us fully realize the potential of the CALFED Program to appropriately address the needs of our North American waterfowl populations and the other native plant and animal species who share their habitats.

On behalf of the members of the California Waterfowl Association, and waterfowl enthusiasts throughout the North American continent, I thank you for the opportunity to come before you today, and I would be happy to answer any questions you may have at this time.

Mr. CALVERT. Thank you for your testimony.

Ms. Davis.

STATEMENT OF GRACE DAVIS, GOVERNMENT AFFAIRS MANAGER, INTEL CORPORATION

Ms. DAVIS. First, I would like to thank you, Chairman Calvert, and Zoe Lofgren for allowing me to speak to you today on behalf of Intel Corporation regarding the economic impacts and benefits of a clean water supply.

By way of background, Intel Corporation has 120 site facilities located in 50 different countries. California is home to two of our largest sites, the first located here in Santa Clara employing approximately 8,000 people, and another in Folsom which employs approximately 7,500.

We employ 18,000 people in California alone with a worldwide employment base of 86,000 people. Moreover, we added approximately 20,000 of those jobs in the year 2000 recently.

The year 2000 was our 14th consecutive year of revenue growth with sales totally $33.7 billion. Our industry as a whole is proud to provide high paying jobs for our local communities.

To start, in the words of our CEO Craig Barrett, we have long said that product and environmental stewardship, as well as employee health and safety can go hand in hand with successful business practices.

With this in mind, it is important to note that a clean, dependable water supply is a crucial element of our microprocessor manu-

facturing process. Simply put, the industry can't produce microprocessors without a clean, consistent quality water source.

Additionally, when looking toward the future, this clean, sustainable water supply is a key determinant in our expansion plans within California and across the nation. Intel uses the water to rinse off computer chips of impurities and imperfections so they work flawlessly inside computer products.

Each year we use approximately 6 billion gallons of water to manufacture and assemble our microprocessors worldwide. At face value, that's a lot of water. But the amount of water used by Intel as a whole is much smaller than most people believe.

For example, a typical golf course in Arizona uses the same amount of water per day as an Intel wafer fab. Of all water users in the United States, industry accounts for 6 percent of water consumption while electric and electronic equipment manufacturing, including Intel's products, account for about 1 percent of that.

Because we recognize how critical a clean ultra-pure water supply is, we have taken great measures to ensure we use our water supply as efficiently and responsibly as absolutely possible. From an external perspective, water quality and conservation are our Intel's top environmental issues.

As a result, we have taken every measure to ensure we are maximizing our own water efficiency. For example, we have created an industrial water management program combining some of our best water conservation strategies from various Intel sites into what we call our best-known methods.

Rather than reinvent the wheel, if a site is in need of water conservation, we know how much the program costs, what it takes to design it, run it, and we can implement it at the needed site.

This program can reduce the amount of fresh water used at an individual factory by 50 to 60 percent. Even with Intel's healthy growth, normalized water use has remained relatively constant and flat.

Overall, Intel recycles about 1 billion gallons of water per year. Between 1998 to 2001, Intel will save about 20,000 acre-feet of water, or the amount used by 100,000 people per year. This is equal to all the water that falls over Niagara Falls in two and a half hours.

As part of our long-term strategy, we have established a new working group chartered to develop a water management strategy and an implementation plan that includes a reduction in overall water consumption for our major manufacturing sites.

Finally, as we continue to grow, I can assure you we will continue to expand our resource reduction strategies to lessen the impact on our local environments. At the same time, the overall health of the high-tech economy is reliant upon crucial resources and clean water is a critical component of the manufacturing process.

Once again, simply put, we can't do it without a clean water supply. As such, our industry sector needs to have access to this critical resource.

On behalf of Intel Corporation, I would like to thank you for allowing me to speak to you today and I look forward to answering any questions you may have.

[The prepared statement of Ms. Davis follows:]

Statement of Grace Davis, Government Affairs Manager, Intel Corporation, Santa Clara, California

First, I would like to thank you, Chairman Calvert as well as your esteemed colleagues on the Water and Power Resource committee for allowing me to speak to you today on behalf of Intel Corporation regarding the economic impacts and benefits of a clean water supply.

By way of background, Intel Corporation has 120 site facilities located in 50 different countries. California is home to two of our larger sites, the first located here in Santa Clara with an employment base of approximately 8,000 people and another in Folsom with 7,500 employees. We employ 18,000 people in California alone with a worldwide employment base of 86,000 people. Moreover, we added approximately 20,000 of those employees last year alone.

The year 2000 was our 14th consecutive year of revenue growth, with sales of $33.7 billion dollars. Net income was up 44% including acquisition-related costs. Our industry as a whole provides high paying jobs to our local communities.

To start, in the words of our CEO Craig Barrett, we have long said that product and environmental stewardship, as well as employee health and safety can go hand in hand with successful business practices.

With this in mind, it is important to note that a clean, dependable water supply is a crucial element of our microprocessor manufacturing process. Simply put, the industry can't produce microprocessors without a clean, consistent quality water source. Additionally, when looking towards the future, this clean, sustainable water supply is a key determinant in our expansion plans within California and across the nation.

Intel uses the water to rinse off computer chips of impurities and imperfections so they work flawlessly inside computer products.

Each year, we use approximately 6 billion gallons of water to manufacture and assemble our microprocessors, worldwide. At face value, that's a lot of water. But the amount of water used by Intel as a whole is much smaller than many people believe. For example, a typical golf course in Arizona uses the same amount of water per day as an Intel wafer fab. Of all water users in the United States, industry accounts for six percent of water consumption while electric and electronic equipment manufacturing, including Intel's products account for about one percent of that.

Because we recognize how critical a clean ultra-pure water supply is, we have taken great measures to ensure we use our water supply as efficiently and responsibly as absolutely possible. From an external perspective, water quality and conservation are our Intel's top environmental issues. As a result, Intel has taken every measure to ensure we are maximizing our own water efficiency. For example, we have created an industrial water management program combining some of our best water conservation strategies from various Intel sites-into what we call our best-known methods.

Rather then reinvent the wheel, if a site is in need of water conservation, we know how much the program costs, what it takes to design it, run it, and we can implement it at the needed site.

This program can reduce the amount of fresh water used at an individual factory by 50–60 percent. Even with Intel's healthy growth, normalized water use, has remained relatively flat.

Overall, Intel recycles about 1 billion gallons of water per year. Between 1998 to 2001, Intel will save about 20,000 acre feet of water—or the amount used by 100,000 people in a year. This is equal to all the water that falls over Niagara Falls in 2 and a half hours.

As part of our long term strategy, we have established a new working group chartered to develop a water management strategy and an implementation plan that includes a reduction in overall water consumption for Intel's major manufacturing sites. The scope of this team is to set goals, develop water use models and evaluate water use reduction, recycling and reclamation technologies. The team will establish roadmaps of existing and future site.

Intel is committed to saving water. At the same time, in order for this industry to continue, it's critical that we have access to an abundant clean water supply for the manufacturing process. Our Hudsen Massachusetts site has proven to be an efficient, cost-competitive addition to Intel's manufacturing network. Intel has invested nearly 5 pecentof the cost of the project in water recycling and conservation measures that use innovative technology and exceed state requirements. It's among the world's first semiconductor manufacturing plant to reuse, clean and recycle the ultra

pure water it uses to rinse computer chips. This 10 million dollar investment will enable Intel to use less water than the increased production level would ordinarily require.

Finally, as we continue to grow, I can assure you we will continue to expand our resource reduction strategies to lessen the impact on local environments. At the same time, the overall health of the high tech economy is reliant upon crucial resources and clean water is a critical component of the manufacturing process. As such, our industry sector needs to have access to this resource. On behalf of Intel Corporation, I would like to thank you for allowing me to speak to you today.

Mr. CALVERT. Thank you, Ms. Davis.

Mr. Wenger.

STATEMENT OF PAUL J. WENGER, SECOND VICE PRESIDENT, CALIFORNIA FARM BUREAU FEDERATION

Mr. WENGER. Thank you, Mr. Chairman, for the opportunity to present testimony to the committee today. My name is Paul Wenger. I am the Second Vice President of the California Farm Bureau Federation and a farmer from Modesto. I raise walnuts and alfalfa on my family's farm that was purchased by my grandfather in 1910.

On behalf of the Farm Bureau, I would like to announce our support for H.R. 1985, the "Western Water Enhancement Security Act," and express our appreciation for your leadership on the difficult and complex issues that surround California's water supply.

The Farm Bureau has supported the CALFED process since its inception in 1994 and continues to actively participate in the CALFED Program. In 1996 the Farm Bureau supported the Safe, Clean, Reliable Water Supply Act, otherwise known as Proposition 204, because we believed in the promise of CALFED. CALFED promised that California's water users would "get better together," and we believe CALFED can and should deliver on that promise.

As you move forward in the legislative process, we ask you to look for alternative ways to accomplish the environmental goals of the CALFED Program. The Farm Bureau urges you to maximize the ecosystem restoration potential of CALFED by fully embracing the locally driven and cooperative programs, in lieu of outright government land acquisitions and regulation.

The Farm Bureau believes that government land acquisitions are not the best way to support habitat development. The most fiscally responsible and effective means to develop habitat is through a program like Partnerships for Restoration.

This program would be a voluntary local landowner/local government driven process where framers and ranchers take proactive steps to increase the habitat value of their land in return for financial compensation and protection from prosecution under the Endangered Species Acts.

Landowner "assurances" are a vital component of the program because landowners should not be criminally prosecuted for accidental interference with protected species when they are trying to support and preserve these species for future generations.

I sat through your discussion in Modesto on Saturday and it was interesting to hear about how agriculture has been said to use 85 percent of the developed water. According to Bulletin 160 of the Department of Water Resources, agriculture currently uses

43 percent of the developed water in California, environment 46 percent, municipal and industrial 11 percent.

Conservation we keep hearing and agriculture will settle all the problems of water in California. Conservation is a misnomer when you talk about agriculture. Agricultural water is not lost. It is interesting as we flood and furrow irrigate some of our ground, even the University of California at Davis said the most effective and efficient way to use water, depending on your soil type, of course, is through flood irrigation.

It's interesting in the Modesto area where you were at on Saturday that they are now facing a problem as people have converted to drip and micro-irrigation but there is less water being applied to the surface.

We apply just enough water for the plants to use and there's nothing that is going and percolating down in the underground aquifers when usually we took that water and about 15 or 20 percent of the water was used by the plant and the rest of it found its way down through the soil stratus and into the underground aquifers.

Instead we now have Modesto irrigation district and other areas putting in reinjection wells taking possibly contaminated surface waters and trying to reinject them into underground aquifers, and yet we are telling farmers not to apply more water onto their land. I find it ironic.

We heard that if you could increase the price of water, that we would have conservation and those who could pay for it would get it. I find this unfair. I am a farmer and I raise, like I said, alfalfa and walnuts. I will not know until December this year what I will get for my walnuts I raised last year. I don't know too many people in business today that wait that long to find out if they are going to have a profit or a loss.

Agriculture is a price taker, not a price setter. If we could just say whatever we pay for the price of water, we'll pass it on to the ultimate consumer which is all of us here. Fine. We can't do that. We produce a crop and then we ask somebody what they are going to pay us for it and we've got to figure out how to make a profit in between.

When you look at the current farm prices that we all know about, we are selling our products at prices that we haven't seen for 30 years. I know our costs are a lot more than they were 30 years ago. Farmers are stewards of the land. We are true conservationists.

I can remember 20 years ago, 30 years ago when I started farming in my dad's, and even in my grandfather's time, we always let the fence lines grow so you have habitat for quail and other things. It's funny that now all of a sudden people are focusing on our farms and we have people from outside the farm telling us what is best for our land, how best to manage it.

You can't really blame farmers when all of a sudden they say, "We're going to clear our fence rows because of a thing called the Endangered Species Act and other people that think they know what is best for our land." I find it ironic that we have endangered species on our land currently. We should be applauded and not regulated.

Real quickly because the light went on and we would just like to say that we do have some things that we would like to see just a little as far as in the Act but we do support H.R. 1985.

We look forward to working with you and your staff to cooperate to implement the goals of CALFED while minimizing the program's effects upon our state's valuable agricultural resources. We will be discussing some clarifications with your staff. We also have some attachments, I think, written, changes that we would maybe like to see, some little things.

Thank you for having this hearing today.

[The prepared statement of Mr. Wenger follows:]

Statement of Paul Wenger, Second Vice President of the California Farm Bureau Federation

Thank you, Mr. Chairman, for the opportunity to present testimony to the committee today. My name is Paul Wenger. I am the Second Vice President of the California Farm Bureau Federation ("Farm Bureau"), and a farmer. I grow walnuts and alfalfa on my family's farm that was purchased by my grandfather in 1910. On behalf of Farm Bureau, I would like to announce our support for H.R. 1985, the "Western Water Enhancement Security Act," and express our appreciation for your leadership on the difficult and complex issues that surround California's water supply.

The Farm Bureau has supported the CALFED process since its inception in 1994 and continues to actively participate in the CALFED Program. In 1996, the Farm Bureau supported the Safe, Clean, Reliable Water Supply Act, otherwise known as Proposition 204, because we believed in the promise of CALFED. CALFED promised that California's water users would "get better together," and we believe CALFED can and should deliver on that promise.

As we move forward in the legislative process, we ask you to look for alternative ways to accomplish the environmental goals of the CALFED Program. The Farm Bureau urges you to maximize the ecosystem restoration potential of CALFED by fully embracing the locally driven and cooperative programs, in lieu of outright government land acquisitions.

1. The Farm Bureau believes that government land acquisitions are not the best way to support habitat development:

The Farm Bureau believes the most fiscally responsible and effective means to develop habitat is through a program like Partnerships for Restoration. This program would be a voluntary local landowner/local government driven process where farmers and ranchers take proactive steps to increase the habitat value of their land in return for financial compensation and protection from prosecution under the Endangered Species Acts. Landowner "assurances" are a vital component of the program because landowners should not be criminally prosecuted for accidental interference with protected species when they are trying to support and preserve these species for future generations.

Wildlife and farming are compatible. Our farms and ranches have been supporting wildlife of every variety for generations because our family farmers are excellent stewards of the land. In fact, farmers and ranchers are the most qualified guardians of these resources because the soil, weather, seasons, wildlife, and vegetation guide every aspect of their lives and livelihoods. We do not need pilot programs to see if a program like Partnerships for Restoration could be successful because we are surrounded by examples of farmers and ranchers taking proactive steps to support wildlife.

For example there is Dave Fisher, a high desert cattleman in San Bernardino County, who is continuing his family's 150-year tradition of ranching and wildlife preservation. Through water development and responsible grazing practices, he has created a haven for wildlife. Because of his efforts, his ranch is the home of a flourishing population of big horn sheep and the most viable population of desert tortoises in the state.

There is Tom Muller who farms 6,000 acres with his partners in Yolo County, in addition to the 850-acre vineyard Muller personally manages. Muller has provided significant nesting habitat on his farm by letting his ditches and field lines be covered with grassy vegetation, and he even plants native grasses and trees in these areas and at the low ends of his fields. His vineyards also provide cover for wildlife

because he mows between the vines instead of discing. Muller has also introduced an Integrated Pest Management Program to reduce the need for spraying.

There is Charlie Matthews who was a pioneer of using rice rollers on his Yuba County property. The farm, which was bought by Mathews' great-grandfather in 1860, is located in an area noted for its waterfowl populations. The rice straw roller is used to incorporate rice straw into the soil after harvest, allowing for easier breakdown and helping to establish artificial wetlands for migrating waterfowl. Mathews floods his rice fields from October to March, allowing time for the later migrating species to stop and rest on his farm. Mathews' rice farming techniques are not unusual, and are now, in fact, the predominant practice in Northern California.

A program like Partnerships for Restoration would be a viable alternative to the significant government land purchases proposed as a part of the CALFED Program. With adequate protection from liability and some financing, California's farmers and ranchers could work with the regulatory agencies to create many times over the amount of habitat that can be supported through outright government ownership.

The Farm Bureau is concerned about the government's continuing consumption of California's privately owned land and water resources because each purchase threatens our state's farming and ranching infrastructure.

2. There is a baseline of agricultural land and water resources that must be maintained by each community:

When the resources within a community drop below the agricultural resources baseline, the region is no longer able to support the farming infrastructure. The processing plants, equipment dealers, transportation links, farm workers and other necessary farm support services either go out of business or leave the area. Once this occurs, the remaining agricultural lands within the region are sold to the highest bidder because the farmers and ranchers are no longer able to sell and transport their fresh fruits, vegetables, nursery, meat and dairy products to the urban markets, and the farm workers must make other arrangements to support their families.

3. Cooperative habitat restoration projects are less expensive and provide greater fishery benefits than government water purchases.

There is strong evidence to suggest that physical restoration of habitat, like planting trees on stream banks and putting gravel in stream beds, is less expensive than purchasing water, and results in greater increases in fish populations. In particular, the Farm Bureau is troubled by the substantial CALFED Environmental Water Account (EWA) purchases because this water is being converted from agricultural use.

Since the EWA water is only for "recovery" of protected fish species, in theory, this water would not be otherwise involuntarily taken by the regulatory agencies to protect the fish from "jeopardy." The agencies have more discretion in how they "recover" species than they do in avoiding jeopardy. As such, the Farm Bureau urges CALFED to find alternatives to unnecessarily converting agricultural water resources to non-agricultural use.

The Farm Bureau supports H.R. 1985 and looks forward to working with your staff to cooperatively implement the goals of CALFED while minimizing the program's effects upon our state's valuable agricultural resources.

Mr. Chairman, we will be discussing some clarifications with your staff as the bill progresses. Please refer to our attachment for information regarding how this bill could be even better. Thank you very much for the opportunity to provide the perspective of California's farmers and ranchers.

ATTACHMENT

Mr. Chairman, there are a number of places within H.R. 1985 where the California Farm Bureau Federation would like to see the bill clarified, as follows:

H.R. 1985, May 23, 2001 (10:57 AM), p.4, lines 20–25 and p.5, lines 1–2.

* * * * *

"ENVIRONMENTAL WATER ACCOUNT.—The term 'Environmental Water Account' means the water account established by the CALFED agencies to provide water for the protection and recovery of species of fish listed under section 4(c) of the Endangered Species Act of 1973 (16 U.S.C. 1533(c)) at no direct cost and no indirect cost to the water users, in the Bay–Delta watershed and export areas".[1]

[1] We continue to question whether scientifically and economically the EWA can be justified, especially given the available alternatives to water purchases.

* * * * *

Id. H.R. 1985, at p.10, lines 20–24, change lines 24–25 and delete all of lines 1–10 on p. 11, substituting the following language:

* * * * *

"(c)PROMOTION OF PARTNERSHIPS.—The joint structure proposed under this section shall provide the following:

(1) The Governance Board shall adopt, no later than January 1, 2002, a safe harbors/assurances program voluntarily established by private landowners and local agencies, such as the Partnerships For Restoration Program. Under this program, the CALFED agencies shall partner with landowners and local agencies to develop cooperating landowner commitments that will meet co-equal objectives to achieve local agricultural resources baseline goals as defined in (2) below and to implement the ecosystem restoration goals in the Record of Decision.

(2) AGRICULTURAL RESOURCES BASELINE—It is necessary for a viable agricultural community to have a minimum acreage of prime, unique, and statewide importance farmland and associated water supply. This land and water must remain available for agricultural production in the [defined geographic area, e.g., Yolo County] for disposition as agreed upon by the affected farming community.

(iii) "Establish an Agricultural Water Account (AWA) similar in concept to the Environmental Water Account (EWA) as identified in the Record of Decision that requires a portion of any newly developed Bay–Delta Program water supply to be used as agricultural mitigation water, based on the amount of agricultural water redirected to other uses as a result of Bay–Delta Program actions. The AWA may be a component of the EWA."

* * * * *

Id. H.R. 1985, p.12, change lines 13–17 to read as stated below and delete rest of section.

* * * * *

"(f) PRELIMINARY REQUIREMENTS.—The joint structure proposed under this section shall provide that -

(1) before acquiring land as part of the CALFED program, the Governance Board shall first conduct a survey to determine what land is currently owned by the Federal Government and is available to achieve identified CALFED program objectives."[2]

* * * * *

Id. H.R. 1985, p.13, change lines 1–8, as follows:

* * * * *

"(g) ACHIEVEMENT OF GOALS OF RECORD OF DECISION—The joint structure proposed under this section shall provide that the Governance Board shall partner with private landowners and local agencies to develop cooperating landowner commitments that will meet coequal objectives of achieving local economic and social goals and to implement the ecosystem restoration goals in the record of decision."

* * * * *

Id. H.R. 1985, p.17, change to lines 5–13 to the following and delete rest of section.

* * * * *

"(1) If, by December 31 of any year, the Environmental Water Account water purchase targets, or their functional equivalents, have not been met, the Federal agencies shall continue their efforts to meet the water purchase targets and shall make use of the available Environmental Water Account assets to provide protection and

[2] CALFED should return to Congress to authorize appropriations for any additional land acquisitions.

recovery for any species listed under section 4(c) of the Endangered Species Act of 1973 (16 U.S.C, 1533(c))."[3]

* * * * *

Id. H.R. 1985, p.18, line 5, change the date to 2002.

* * * * *

"(c) LAND ACQUISITION; MANAGEMENT PLAN REQUIRED FOR EXISTING LANDS.—The State agencies and the Federal agencies may not, under the interim governance structure described in Attachment 3 of the record of decision, acquire any additional lands for ecosystem restoration unless such agencies, through the Secretary and by not later than January 1, 2002 develop a management plan for all lands acquired by such agencies under such structure before the date of the enactment of this Act.

* * * * *

Id. H.R. 1985, p.19 at line 9, change "affect" to "supercede".

* * * * *

"Nothing in this paragraph is intended no shall be construed to supercede the requirements for the issuance of such permits and approvals."

* * * * *

Id. H.R. 1985, p.20, lines 14–18, delete subsection A(ii).

* * * * *

"(A) Whether a project—(i) increases yield.[4]

* * * * *

Id. H.R. 1985, p.25, lines 11–18, add SOUTH DELTA IMPROVEMENTS.

* * * * *

"(3) NEW PROJECTS REQUIRED TO BE INCLUDED.—The Governance Board, through the Secretary, shall include in reports under this subsection each of the following new CALFED projects, as identified in the record of decision, by the dates indicated:

(A) A project to raise the height of Shasta Dam, by January 1, 2004.

(B) South Delta Improvements and In–Delta storage; by January 1, 2002."

* * * * *

The Farm Bureau supports H.R. 1985 and looks forward to working with your staff to cooperatively implement the goals of CALFED while minimizing the program's effects upon our state's valuable agricultural resources.

Mr. CALVERT. Thank you, Mr. Wenger.

Ms. McPeak.

STATEMENT OF SUNNE MCPEAK, PRESIDENT/CEO, BAY AREA COUNCIL

Ms. MCPEAK. Mr. Chairman, it is a pleasure to be able to appear before you again today and also to have the opportunity to address Congressmember Lofgren.

I represent the Bay Area Council, a business sponsored public policy organization that covers the nine counties in the Bay Area.

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[3] This provision is inconsistent with section 4(8), especially lines 1 and 2 on p.5.

[4] Delete for 2 reasons: (1) Taking agricultural land out of production would qualify under A(ii); and (2) section A(ii) does not take into account groundwater.

The nine counties represent a population of about 6.5 million people and an economy that is approaching $250 billion annually.

I'm going to be a little bit provincial in my testimony talking about the region. Clearly an economy of $250 billion requires water quality and water supply in order to operate. But we have also built our economy around a very fragile and special ecology, the Bay-Delta estuary.

The Bay Area Council has a business set of leaders who have been engaged in water policy for more than a decade closely following the CALFED process. I personally have been involved in water for about 28 years in California.

We served on the Bay-Delta Advisory Committee. In fact, I cochaired it. Others will testify before you today also served and those in the audience who are members of BDAC. The message we want to underscore is one you've heard from us before.

I will reference a letter we sent dated June 1 to you supporting your efforts and Senator Feinstein to introduce legislation to implement CALFED. The Bay Area Council also has joined with a number of other business organizations and labor organizations in California and that letter was submitted as testimony on Saturday in Modesto.

The message that is conveyed in this correspondence is the following. We have worked long and hard to come to an agreement in California through the CALFED process and now with your leadership please let us move forward in implementing those agreements.

It is not time to go back and reopen and renegotiate what was a solution put forward that not only was balanced. You've heard that word. Sometimes that means we are addressing simultaneously water supply, water quality, and fisheries, or that we are fairly taking into account all of the needs of the region of the state.

That solution was also integrated. I'm going to use that word and try to explain it. We advanced recommendations through the CALFED process that said absolutely restore the Bay-Delta estuary, the environment. The ecosystem has to be fixed.

We also advanced recommendations that said please use water as efficiently as possible. That means we save every last drop we possibly can. We use every water efficiency measure that is available to us by conservation to reclamation to water marketing.

We also said you have to do facilities. Anyone who thinks we can take care of the environment let alone the economy of this region and all of California without that integrated solution simply doesn't understand the facts.

We come forward as, yes, the business community but also as ardent supporters of a restored environment that says please move forward on CALFED.

In April I was also questioned by members of your committee regarding energy and power and perhaps the lessons to be learned from the correct crisis that we are enduring in California so I brought for you a report that I can submit in testimony that Jim Cunneen and I and the Silicon Valley manufacturing group released in April that documents the situation, how do we get into it, and also solutions.

The lessons that I think should be drawn from our energy predicament and applied to the water challenge facing us is the following one. If you delay investing in infrastructure, you are ultimately going to pay a higher price.

Secondly, we have to have adequate supply. You have to have capacity in the system. Thirdly, an integrated solution is the way to be the most cost effective and environmentally sensitive. Optimize conservation but also invest in infrastructure.

For water, yes, we need to pursue water efficiency measures and do that immediately and simultaneously also pursue our investment in our storage, conjunctive use, storage underground and above ground, and appropriate conveyance if we are going to have improvement in our environment and fisheries, if we are going to have adequate water supply, and sufficient quality to support not only our economy but also our ecology. Thank you.

[The prepared statement of Ms. McPeak follows:]

Statement of Sunne Wright McPeak, President & CEO, Bay Area Council

The Bay Area Council is a business-sponsored, CEO-led, public-policy organization founded in 1945 to promote economic prosperity and quality of life in the region. The Bay Area region encompasses the nine counties that rim San Francisco Bay and 100 cities, including Oakland, San Francisco and San Jose, the heart of Silicon Valley. The economy of the Bay Area is approaching $250 billion annually. The regional economy not only is dependent on an adequate supply of quality water to thrive, but also is closely linked to the environmental health of the Bay–Delta Ecosystem. As an association of major employers, the Bay Area Council has been involved in California water policy issues for more than a decade and since 1994 has been deeply engaged in the Bay–Delta CALFED process.

The following points summarize the perspectives of the Bay Area Council as a regional organization of major employers with a history of involvement in California water policy.

- California water policy is at a critical juncture. Decisions that are being made today about how to improve California's water infrastructure will having profound and lasting implications for the nation and the state, now the 5th largest economic power in the world.
- Water policy decisions and the manner in which they are implemented will affect every resident and every business in California, which in turn has major implications for the national economy.
- While we have come along way over the last several years to craft an action plan to restore the critical hub of the state's water system, the Bay–Delta, we need investment to move that plan to reality.
- That is why the employers who are members of the Bay Area Council have invested in the development of the solutions and are now focusing authorize of the funds necessary to implement the solutions. We have joined with other business organizations in California to advance workable solutions.
- Following the prolonged drought of the late 80s and early 90s, California businesses invested literally billions of dollars to increase their water efficiency, getting more production out of every gallon.
- Those efforts have paid off tremendously. California water agencies now serve more people and industries than in the early 80s with almost the same amount of water. However, as the limits of efficiency from the current supply are approached, new investments must be made.
- As we know, permanent reductions in water usage that have been achieved through retrofitting industries with water efficient hardware lead to demand hardening. This means that conservation efforts in the future will not free up the additional water that will be needed to sustain a strong economy.
- Ironically, businesses that drive economic growth and productivity are among the most dependent on reliable, high quality water.
- To ensure that the economy continues to thrive, business needs a reliable, good quality supply of water. This is especially true in the high tech industry where variances in supply and quality can translate into more costs and a higher bottom line.

- It goes without saying that thriving businesses lead to more jobs which leads to a strong economy. Water is one of the key threads that holds those pieces together.
- The demand for jobs will only increase as California's population is estimated to reach 40 million by 2010 and almost 50 million by 2020. The Bay Area is projected to generate more than 1 million new jobs by 2020 and grow by perhaps as much as 1.4 million people.
- Last year, the state and federal government and stakeholders, including the business community, supported the final plan to fix the Bay–Delta, California's major water infrastructure system. The plan is multi-faceted and calls for enormous investment in water quality and supply, as well as restoration of the environment.
- Severe water shortages and economic impacts are predicted for California if the investments are not made now. In fact, it is likely that significant shortages and economic impacts will be experienced before all of the improvements and facilities included in the Bay–Delta plan can be completed and brought on line.
- The current energy crisis in California is a stark reminder of what can happen when investments are not made in infrastructure, resulting in deterioration of both capacity and flexibility to meet normal demand levels, not to mention the ability to respond in case of emergencies.
- The Bay–Delta program provides essential ingredients to rebuild the nation's water infrastructure in California. But significant financial resources will be needed at both the federal and state level.
- The program calls for $1 billion to expand existing storage facilities and construct new ones. It includes $1 billion toward environmental and ecosystem restoration. Another $1 billion is earmarked to upgrade the aging water conveyance system. Improvements to drinking water quality for all water users is slated to receive $800 million. Approximately $1 billion is earmarked for water conservation and reclamation programs.
- These investments are critical to drought proof California and to protect this vital economy.
- A federal funding authorization is pivotal to improving California's water infrastructure.

Agreement last year on a plan of action signaled a new era of cooperation and water management that is historic. It is time to seize this opportunity and move forward. The Bay Area Council and major employers in the region join with business organizations throughout California in urging Congressional action to invest in the water infrastructure needed to support the nation's economy for the 21st Century. Attached is our letter of support for CALFED implementation legislation.

Mr. CALVERT. Thank you. Thank you for your testimony.

Mr. Estremera. It's good to see you again.

STATEMENT OF TONY ESTREMERA, CHAIRMAN OF THE SANTA CLARA VALLEY WATER DISTRICT BOARD OF DIRECTORS

Mr. ESTREMERA. Thank you. Mr. Chairman, members of the Subcommittee including, of course, my own Representative Lofgren, thank you for the opportunity to provide testimony today.

My name is Tony Estremera and I'm Chairman of the Santa Clara Valley Water District Board of Directors. Let me begin by welcoming you and the members of the Subcommittee to San Jose, our home, and to express to you our appreciation for your leadership in moving forward with H.R. 1985.

Our Board recently took a support position on your bill and we look forward to working with you and your staff as the bill moves through the legislative process.

The Santa Clara Water District is the principal water supply agency for Santa Clara County and the Silicon Valley. Our duties include providing drinking water for more than 1.7 million people, managing the local groundwater basin and providing flood management service for the entire county.

In an average water year more than half of the water used in the county comes from the Bay-Delta watershed and in drier years our reliance on Bay-Delta water reached as high as 90 percent so I'm sure you can see why the reliability of our Bay-Delta supplies is so important to us.

The residents and businesses of Silicon Valley also need a high-quality water supply. Unfortunately, the quality of our Delta sources ranks in the bottom 10th percentile nationwide and poses constant challenges to us in treating this water to meet public health standards.

Mr. Chairman, you asked us three questions. The first question was what challenges do we face with regards to our water supply, quality, and reliability. The principal challenge that we face is how to provide a reliable high- quality water supply to our customers in a practical, cost effective, and environmentally sensitive manner.

Our challenge has been made more difficult by regulatory changes and fishery protection measures that resulted in a less secure lower quality water supply for our region. Restrictions in the Delta have reduced the reliability of our imported supplies. Historically we could count on receiving most, if not all, of our entitlement right from the Delta. Unfortunately, this is no longer the case.

Another problem is what we refer to as the low-point problem that we have at St. Louis Reservoir. Before the last 5 years we have been threatened with reservoir levels predicted to drop so low and the object counties so high that we have suffered supply outages.

Fortunately, through heroic efforts we were able to avoid the situation but we can't continue to operate in this way. That is why the St. Louis Bypass Project is extremely important to our region. The project will provide us with improved water supply, quality, and greater flexibility in the operation of our St. Louis reservoir.

As I mentioned previously the reliability of our water supply has decreased. This is particularly true of our supply from the CVP. Therefore, it is essential that the Department of the Interior finalize the municipal and industrial water shortage policy so that we know how reliable our CV supplies will be.

You also asked what steps we are taking to improve the quality and reliability of our own water supplies. The District is implementing our integrated water resource plan that includes increased levels of water conservation, recycling, banking, and transfer. Our advanced planning has allowed us to cope with the 35 percent state water project delivery this year but if the reduced deliveries continue, our local supplies will be exhausted.

The District is also leading the Bay Area Blending and Exchange effort to explore opportunities to improve water quality and water supply reliability at the regional level.

Finally, you asked what additional measures we needed to meet our region's immediate and long-term needs for secure water supply. We see those measures as the following:

1. Adequate Federal funding for the CALFED Bay-Delta Program including complementary actions like San Louis Bypass Project and Bay-Area Blending and Exchange Program.

2. Clear, consistent, and coordinated implementation of administrative policies, regulatory decisions, and project operations so the reliability of our supplies won't suffer from any new initiatives.

3. An effective stakeholder based governance structure for the CALFED Program.

4. A strong commitment by CALFED and the CALFED agencies to invest in measures to improve Delta drinking water quality from the source to the tap.

Mr. Chairman, and members of the Subcommittee, thank you again for holding this hearing here in San Jose. On behalf of the District Board of Directors I want to thank you for the leadership that you have shown on what may be the most important resource issue facing our state. For our part we pledge to work closely with you and your staff as the CALFED bill moves through the legislative process. Thank you.

[Statement of Mr. Estremera follows:]

Statement of Tony Estremera, Chairman of the Board of Directors, Santa Clara Valley Water District

Mr. Chairman and members of the Subcommittee, thank you for the opportunity to provide testimony on Northern California Water Security—Opportunities and Challenges. My name is Tony Estremera and I am Chairman of the Board of Directors of the Santa Clara Valley Water District.

Let me begin by welcoming you and the members of the Subcommittee to San Jose, our home, and to express to you our appreciation for your leadership in moving forward with H.R. 1985. As you are aware our Board of Directors recently took a support position for H.R. 1985 and we look forward to working with you and your staff as the bill moves through the legislative process.

The District is the stream management and wholesale water agency serving Santa Clara County, including the high-tech area known as "Silicon Valley." The District provides the water supply that supports more than 1.7 million residents and more than 6,000 high-tech businesses.

In an average year, more than half of the water supply in Santa Clara County is imported from three sources: the federal Central Valley Project (CVP), the State Water Project, and the Hetch Hetchy system owned and operated by the City and County of San Francisco. Of the three imported sources, our federal Central Valley Project water is the largest source of imported water. In drier years like the drought from 1987 to 1992, the county's dependence on imported water increases to as much as 90 percent of the total supply. You can immediately see why the reliability of our imported supplies from the Sacramento–San Joaquin Delta is of such paramount importance to us.

The residents and businesses of Silicon Valley also demand a high quality water supply. Unfortunately, the quality of our Delta sources ranks in the bottom 10th percentile nationwide and poses constant challenges to urban water agencies that need to treat this water to meet increasingly stringent standards for drinking water. The high-tech and pharmaceutical industries in Silicon Valley also need a reliable and consistently high quality supply to remain competitive worldwide.

Mr. Chairman, in your letter of invitation, you asked me to provide testimony to the Subcommittee that focuses on three questions.

Question 1: What factors have led to the challenges that California is facing today in regards to water supply, quality and reliability?

The fundamental challenge that faces our district is this: How do we provide a reliable, high quality water supply to our customers in a practical, cost-effective and environmentally sensitive manner? You will find that other urban water agencies around the Bay Area share similar challenges, although some of us are more dependent on the Delta, while others may have a more secure source of water.

Our task is made more difficult by regulatory changes that have occurred over the past decade. Implementation of fishery protection measures under the Central Valley Project Improvement Act and Endangered Species Act has resulted in a less secure, lower quality water supply for our region. One example of this is the so-called "low point" problem at San Luis Reservoir, which has become a chronic worry for the District.

In four of the last five years, operations forecasts during the spring months have projected that San Luis Reservoir storage levels would drop during the late summer months to a level that would cause serious water quality problems, and potentially an interruption in federal water service. So far, each time this threat has occurred we have been saved by a combination of extraordinary federal and state actions, and cool weather that minimized demand. However, this year, we once again find ourselves facing a low point problem, this time without the benefit of above normal rainfall.

This is the first dry year after a string of wet years, and we see that the federal and state water systems already are being stretched to the limit. The CVP delivery to South-of–Delta agricultural contractors is at 45 percent and the State Water Project is only able to deliver 35 percent of our entitlements. What this demonstrates is the degree to which the system has been over extended to meet competing needs in the Delta, and the extent our deliveries have suffered as a consequence.

This year, and probably for the next few years, we'll see our water supply challenges compounded by the power crisis in the Western states. The plumbing systems, ranging from individual wells to the gigantic federal system, are dependent on a reliable and reasonably priced power supply to move the water from its source to its final place of use. We have been threatened with additional "emergency" water shortages because of power blackouts.

Another dimension of the additional challenge imposed by the power crisis is the need for water for power generation. Many of the new power generation plants require water for cooling, which could lead to additional demand on an already limited resource. Furthermore, we fear that existing reservoirs could be operated differently to serve power generation needs and compete with water supply and delivery needs.

As the water management agency for a large metropolitan area, the District has always been responsible for meeting the long-range water needs of its constituents. Silicon Valley is still a dynamic economic engine for the whole nation. The District will continue to be challenged to come up with the best and most comprehensive way to meet existing and future water supply and water quality needs while protecting the environment and enhancing the quality of life for its constituents.

Question 2: What actions and measures have you taken to improve on the supply, quality and reliability of your water?

The District adopted an Integrated Water Resource Plan in 1996 and has been implementing that preferred strategy. The strategy includes a combination of increased conservation, recycling, banking and transfers. We have been building up reserves in our local groundwater basins, as well as our banking program. Our advance planning has allowed us to cope with the 35 percent State Water Project delivery this year.

The District has developed a comprehensive water conservation program, which includes implementation of all of the Best Management Practices for urban water conservation. Examples include incentives for the installation of ultra low-flow toilets and other water saving appliances and programs to increase landscape irrigation efficiency.

The District is also a partner in the South Bay Water Recycling Project, which serves the cities of Santa Clara, San José and Milpitas, and the South County Regional Wastewater Authority, which serves the City of Gilroy. The District Board has set a policy goal that by the year 2020, recycled water will account for 10 percent of the total water supply in Santa Clara County. Presently, the District is negotiating with the South Bay Water Recycling Project to own and operate the southern portion of the recycled water system as part of the new power plant being built by Calpine–Bechtel.

The highlight of the District's Integrated Water Resource Plan is its emphasis on flexibility to react to future changes. We are updating our plan to reflect the changes that have occurred since 1996 and to adjust for new challenges in the future.

The District is also participating with other Bay Area water agencies to explore opportunities to improve water quality and water-supply reliability at the regional level. We are finishing Phase 1 of a CalFed-funded study that identified the needs in the Bay Area. We are looking forward to Phase 2 of the study to more fully explore some of the opportunities that have been identified.

Earlier in my testimony, I mentioned that the power crisis has compounded our water-supply challenges. The District is meeting that challenge head-on by instituting a "Water for Summer" campaign and program. We started to implement an extensive outreach program to educate our constituents about the linkage between power and water use, and that power conservation and water conservation go hand in hand. Internally, the District has invested in backup power supplies and has

been working with our retail agencies to cope with what could be a long, hot summer.

Question 3: What additional measures may be needed in the short-, mid- and long-term future to improve your water security?

Four additional measures are needed to meet our region's immediate and long-term needs for a secure water supply. Those measures are:

- Adequate federal funding for the CalFed Bay–Delta Program, including the complementary actions.
- Clear, consistent and coordinated implementation of administrative policies, regulatory decisions, and project operations.
- An effective, stakeholder-based governance structure for the CalFed program.
- A strong commitment by CalFed and the CalFed agencies to invest in measures to improve Delta drinking-water quality from source to tap.

I will address each of these measures individually.

CalFed has made great progress toward restoring the health of the Bay–Delta ecosystem under the combined efforts of the state and federal governments and a broad group of stakeholders. During CalFed's planning stage, nearly $675 million in federal, state and local funding was spent or committed to 266 approved ecosystem restoration projects. As a result, salmon populations have rebounded in the Sacramento River and its tributaries and in other key watersheds.

The CalFed Record of Decision calls for similar investments in the areas of a reliable water supply, water quality and a stable levee system. The state's voters approved funding for these investments with the passage of Proposition 13, a $1.97 billion state bond issue. Local interests are also investing billions of dollars in new management techniques to address these issues. Now, it is time for the federal government to fund its share of the CalFed Program. The first step in this process is the passage of legislation that authorizes federal funding for the entire CalFed program, including complementary actions such as the San Luis Bypass Project and Bay–Area Blending and Exchange Program.

A second immediate need concerns the coordination and implementation of administrative policies, regulatory conditions, and state and federal project operations. As you are no doubt aware, the federal agencies with regulatory authority over the Bay–Delta have competing and sometimes conflicting missions and mandates. CalFed was established, in part, to address this issue. And, while the CalFed agencies have worked toward better coordination of their policies and regulatory conditions, the results have been imperfect. To avoid conflicts between competing priorities for resource management, the CalFed reauthorization legislation should encourage the clear, consistent and coordinated implementation of policies, regulatory decisions and project operations. For example, to ensure that water-delivery goals for Central Valley Project agricultural contractors do not result in adverse impacts, the legislation should clarify water delivery goals for municipal and industrial customers consistent with the Bureau of Reclamation's Municipal and Industrial Interim Reliability Policy.

We believe that many of these conflicts can be addressed through the establishment of a strong, stakeholder-based governance structure for the CalFed program. We are pleased to see that H.R. 1985 envisions such a structure, and would require the new governance board to coordinate implementation of all relevant programs, including the Central Valley Project Improvement Act. The bill would also require the board to coordinate and integrate goal setting and funding to ensure the most cost-effective and biologically effective investment of federal funds. We would add to that list of responsibilities that important task of ensuring balanced and timely implementation of the projects and programs in the CalFed Record of Decision.

Finally, we are looking for a strong commitment from the CalFed agencies to invest in those improvements needed to achieve the targets for drinking-water quality identified in the Record of Decision. As an urban agency dependent on the Delta for its drinking water supplies, we are concerned about the quality of that water and the cost of treating water to meet increasingly stringent standards for drinking water. The CalFed reauthorization legislation should make water quality a priority on a par with water supply and ecosystem improvements.

Mr. Chairman and members of the Subcommittee, thank you again for holding this hearing and providing me the opportunity to discuss the Silicon Valley region's water-security concerns. On behalf of the Santa Clara Valley Water District's Board of Directors, I want to thank you for the leadership you have shown on what may be the most important resource issue facing this state—how to reconcile the needs of urban and agricultural economies and the ecosystem for high-quality, reliable water supplies. For our part, we pledge to work closely with both you and Senator Feinstein as both bills move through the legislative process.

Mr. CALVERT. Thank you. Thank you for your testimony.

As many of you know, I've been traveling around the state and have met most of you individually or with groups or other testimony over the last number of months. I took on this responsibility understanding the fact that water in California is probably the most controversial subject, or one of the most controversial subjects that we deal with but something that we must deal with.

With the CALFED authorization expiring, we need to move forward with that legislation. Those here most understand what we attempted to do in H.R. 1985 which one is obviously reauthorized CALFED. Also to move toward what is determined within that agreement, that additional storage, as Ms. McPeak very ably pointed out, and both Senator Feinstein and I do that on her legislation and mine..

And then added to that and I call it CALFED Plus, what Mr. Estremera also pointed out, was that we have water shortages beyond what is involved in CALFED; to allow local communities to develop water resources-reclamation.

I don't know very many people that are opposed to reclamation and reutilizing our water supply. Conjunctive use, groundwater storage, other ways of developing water resources throughout the State of California and, quite frankly, put the Federal resources there to help instigate those type of projects, $4 billion in authorization for leverages both state and local money to build those projects that are absolutely necessary.

As Mr. Cunneen pointed out, we are going to be limited to the Colorado River to our proper allocation, as the upper basin states would say, to 4.4 million acre-feet. We are drafting about 5.6 million acre-feet presently.

Court orders, and probably properly so, have restricted the city of Los Angeles to Owens Valley to Mona Lake and right here in the northern part of the state the Trinity River decision which loses an additional 300,000 acre-feet of water.

What does that say? We have a diminishing supply and increasing demand so we are attempting in a responsible way to address that in H.R. 1985. I appreciate your testimony.

One question from a business perspective. I heard from Mr. Cunneen, Ms. Davis, Ms. McPeak about long-term business decisions. I used to be in the business community and I understand when you are making decisions to expand a plant or to build a new plant facility that you have to look at the local economy.

You have to look at if you're going to have enough electricity, if you're going to have enough water, what is the cost of those basic commodities and how that is going to effect your manufacturing process in your competitiveness in the world market place.

So what about that? How is industry today looking at California and, obviously, specifically water? I mean, obviously we have an electricity problem in this state that we are trying to address but how is that playing with water right now? Maybe we can start with Mr. Cunneen and any other person who might want to make a point. We're rationing microphones, too.

Mr. CUNNEEN. Well, I think that the direct answer is that we may be losing some short-term decisions, tactical decisions that companies make as to where to expand some operations. I do be-

lieve that is short-term. I believe the industries here are committed for the long-term still to Silicon Valley and to California.

What they really desperately want is a feeling that there is a plan out there whether it's in the case of electric utility reorganizations or if it's in the case of water. They want to make sure that we are all on the same page, going in the same direction, and that there's an honest plan.

I remember on the floor of the Assembly in the State Legislature when we were debating the electric deregulation issue the issue of supply came up. The answer was very clear. Don't worry. The flow of power from out of state will continue unimpeded to California while we require utilities to divest from their own power generating ability.

Now, that sounds almost silly now looking back at it. It's easy to see that would not occur. That would not be the case. From the business community's perspective we are asking you, Chairman Calvert, and Congresswoman Lofgren, and Senator Feinstein, please don't let it get to an absolute crisis like this because it will be more severe in the case of water. It will be lasting damage.

We'll ride out some of these rolling blackouts but in the case of water, it is crucial to the manufacturing process. It's crucial that we have storage conveyance and strong environmental protections. Don't let it get to a crisis. Act now in this session of Congress.

Ms. DAVIS. Thank you, Chairman Calvert. Santa Clara is Intel's corporate headquarters and it's our home and it will always be our home. Having said that, to put it in perspective, what we do in Santa Clara is we build the mask which is the mold for the microprocessor. Then that product is then shipped to other facilities in which they make the actual product.

It is a critical component of the whole process. You can't build it without the mask obviously. We do look at resource as a major impact to our manufacturing process. My thought on the question that you asked is that on the heels of the energy issue it is definitely something that not just Intel but every corporation looks at and has to consider.We appreciate all the work that you've done with regards to the water issue, and Congresswoman Lofgren as well.

But, do answer your question, Santa Clara is our corporate headquarters and our home and we want it to remain that way and do plan that it stays that way. Anything that you can do in your committee and Congresswoman Lofgren to ensure that California remain a solid economy, a solid place to do business is greatly, greatly appreciated.

Ms. MCPEAK. We do hear that water, water supply and water quality, are issues that are taken into account in making decisions for expansion and location. I have not heard in the last, say, 3 years a company who says, "I'm moving because we don't have an adequate water supply," but they will say they are taking it into account for their future plans.

That really does speak to quality as well as quantity, particularly in the high-tech manufacturing sector.

But I do want to underscore something I've had personal experience with out of state, out of state campaigns or other regions trying to recruit businesses and, of course, they site among the rea-

sons why somebody should leave California or the Bay Area water, now power.

Zoe will remember an effort where we had the national wind tunnel complex that we were very much in competition pursuing with NASA Ames and it took a ton of effort to be able to demonstrate to the aerospace industry that there could be available water through reclamation, i.e., recycling, that actually would satisfy their needs, and (b) that we were addressing the problem through CALFED.

We do not want to take a big step backwards by not now going forward to implement as you have well outlined. Yes, it's a real issue that is taken into account.

Mr. CALVERT. Thank you.

Ms. MCPEAK. May I also add what we consider business and employment in California and in the Bay Area as well, agriculture is part of the business community so I didn't want to overlook what Mr. Wenger had said. You heard firsthand the perspective that the agricultural community now has in California which is greater uncertainty and we do not want to lose that segment of our industry in either the region or the state.

Mr. CALVERT. In spite of the success of the high-tech industry and the entertainment industry here in California, certainly aerospace industry in California, we should not forget that the largest industry in the State of California is still agriculture.

They have done a great job not only for this region but for our state and for our country. It's one of our bright spots on the balance sheet on our trade program throughout the world so we certainly appreciate that industry and hope it can survive a very difficult year. I know many farmers are having a very difficult time.

Ms. Lofgren.

Ms. LOFGREN. It's fun to see you, Sunne, and I think we first met each other when I was on the board of supervisors of this county and you were on the board of supervisors in Contra Costa. I was thinking back to the water wars of that time.

I remember growing up in this valley. We felt that we were northern Californians and they were taking our water. It really wasn't until much later that I realized that Santa Clara County is really in exactly the same spot in terms of water importation as Los Angeles or Southern California. We are dependent on the water of others as much as our neighbors to the south.

Having said that, however, we are also quite fond of our Bay and we want to make sure that whatever we do does not adversely impact our environment. As you and I both know, that is an intense priority for the people of the Bay Area including Santa Clara County.

In a way I'm almost afraid to ask this question but I think it is important that we face up to the challenges that are heading for us and come up with the plan that is reasonably designed to meet those challenges. I think reasonable people can differ on the details but all of us should agree that is something we need to do.

As you know, Senator Feinstein has a bill that is not exactly the same but quite similar to Mr. Calvert's bill. Mr. Miller has a bill that has different elements. I'm wondering if any of the members have had a chance to analyze the differences between the Miller

approach, the Calvert approach, the Feinstein approach and are there elements that ought to be brought to—

Mr. CALVERT. Mine's better.

Ms. LOFGREN. I know that you believe that—that are missing in each. Are there conglomerations that should occur or criticisms that you can offer on shortfallings so that we can come up with the best solution for our state?

Ms. MCPEAK. Let me try to address it. I will tell you that I could not do a line-by-line comparison, although I have—

Ms. LOFGREN. I wouldn't ask you to do that.

Ms. MCPEAK. —read the legislation. There is a difference, a fundamental difference and approach that also reflects what had been sort of one of the divisions within the CALFED process at BDAC and within the state that goes to the fact that people of good will can have sincere differences and almost two different world views.

That was all I could do to explain it when Secretary Babbitt asked me why is there such a divide between a lot of us who are supporting a package that had a presumption that we were going to need facilities and others with whom I had stood in the past who presumed that it could be done without facilities and also wanted to delay taking the steps toward those facilities. It comes down to that fundamentally different world view.

I think it bears a little bit of elaboration so I'm going to do so. The advocates who have suggested Federal legislation that still doesn't streamline getting to a decision on facilities is sort of one camp.

I view what Chairman Calvert and Senator Feinstein are doing, although there are differences within their legislation, as taking all of the CALFED Record of Decision as a package. That's why I tried to emphasize that there is an integrated solution as the Bay Area Council views this, and I think the business community largely within the Bay Area.

There are times when we have no rain fall, sometimes we have a lot of rainfall. We look at the fact that we need more water for the environment and we need water of sufficient temperature at the right time in the estuary. But if that is going to happen and still sustain the economy and deliver water in other regions of the state, we've got to be able to capture that water when it comes down in bucketsful, either precipitation or snowmelt.

That is why we have gone forward saying we respectfully disagreement with those who say you can do it only with conservation or reclamation because, yes, we can get a whole lot of water efficiency and stretch the average supply in that method and we add to that water marketing.

We want to introduce price signals into the management of water. We need to be aware of what kind of dislocation that has, third-party impacts, and I could elaborate on that as well.

However, having said that, we also think in order to have enough water for the environment in times of low rainfall, particularly that third, fourth, fifth year of, say, a drought and water on an ongoing basis for the economy that we've got to have off-stream storage and we have to improve some of the on-stream storage capturing capability.

That's how I actually explain what we've got to divide again in Congress, we've got to divide in camps in California. It's different world views who will say no more facilities because anymore water you take out of the environment is an injury to the environment.

I will sit here and tell you I've got at least enough battle scars presumably to have the credentials in fighting for the environment that says I will make that trade to have more water in periods of low rainfall of the right temperature to release into the estuary and that requires storage.

Mr. CUNNEEN. I just want to make sure the most important point of that isn't lost, which is that Congressman Calvert's approach and Senator's Feinstein's approach we believe incorporate that integrated view that Sunne is talking about.

The Phase II Record of Decision was a careful balance but it included storage and conveyance off- stream/on-stream has to be included in a final package with Federal leadership. I think that is the biggest divide between those two approaches and Congressman Miller's approach and why we prefer Chairman Calvert's approach.

Mr. WENGER. From our perspective with the Congressman's bill we feel there is the timeliness involved. We've heard a lot of lip service over the years of we'll study storage, we'll study storage, we'll study storage. Certainly in the Congressman's bill there are timeliness. If we are going to do them, let's do it by a certain timeline and take a look.

That's not going to say what facility is going to be built or where but if we say we're going to do it, then let's do it. Let's have some time frames so we can get on with at least getting these studies done and know what the results of those studies are going to be.

Ms. LOFGREN. Thank you.

Mr. CALVERT. And I appreciate that. I wanted to point out and ask a couple of other questions. This legislation attempts to be a little proactive and try to get ahead of the problem in attempting to hopefully not have a problem—as big a problem as we may have in California and to prevent making bad choices.

I would say as we had a witness from Ducks Unlimited up in Modesto who made a point that we don't want bad choices being made. What that witness meant by that was if, in fact, there is a crisis in California in the future where we start making choices for farming or water for the environment or water for urban users or industrial users, there's no happy solution.

If from a political perspective he indicated probably the environment would lose the most if we had to make those kinds of decisions because of the reality of politics today in trying to satisfy the most number of people with a limited amount of supply. We don't want to get to that and that is what we're trying to do.

Mr. Estremera, I wanted to ask a question of you. Even if we move forward with the Record of Decision including the part that would augment storage in California based upon the fact that, as I mentioned earlier, diminishing supply not including what we would get through the Record of Decision.

These reclamation projects that I hear about from every water district in the state and conjunctive use and all these other things we went through, the section that we put in the bill that induces, you know, gives a lot of encouragement to these agencies to move

forward because we put money there, do you think—what do you think would happen if those types of projects aren't built in the state of California?

Mr. ESTREMERA. Mr. Chairman, I can certainly respond with respect to our own county. As you know, we have our own long-term resources plan and we have tried to be prudent as most of our business community has said. We try to plan as best as we can.

As you know, our approach here as a water district has been that our role is not to determine how fast we grow, whether we grow or not. Our role is to provide the water that people need in the county. The decisions are made by other municipalities so we try our best to have the resources planned.

In our resources plan we have about a 20 percent plan of recycled water being a real necessary portion of our water supply in the future so if we didn't have that capability, if we didn't build that capability, we would be, I think, in serious trouble.

This is one reason why we have adamantly tried to participate in recycling over the years. This is why we are, in fact, right now in negotiations with respect to extension of the present pipeline of recycled water down into the Coyote Valley because we want to make sure that recycling is an effective portion of our supply.

If we don't have the support either nationally or statewide and, of course, in our case where we match money all the time, we're not going to be an effective provider of water. There is no question that our economy is going to seriously suffer from it so these projects and this support is really important. In fact, as I say, it is ultimately important for our provision of supply locally.

We try and plan as best as we can but we also have to provide and we have to provide consistent with that plan and consistent with the needs of the economy. We can't do without that help so we really appreciate that provision. Thank you.

Mr. CALVERT. Any other comments on this?

Ms. MCPEAK. Just to quickly add to what Tony said. The reclamation is essential not only for the mix; that is, to have that additional supply. It is also for timing because it's not likely that we are going to be able to bring on line the amount of supply that is going to be contributed by new storage before we can do the reclamation. We need to do that first and optimize it.

It also allows us to minimize the amount of surface storage. That is the other role so it is a blend of our supply sources and, therefore, greater flexibility. It is a timing issue. We need to do it as soon as possible. We also are able to minimize the amount of surface storage and conjective use because of reclamation.

Mr. CALVERT. Thank you.

Mr. GAINES. Mr. Chairman, one last comment if I could. Our association does support increased storage. The devil is in the details, of course. Where that storage is, how it's built, how the water is delivered, and so forth, is something we would take a very, very close look at.

Clearly if they are going to put an additional storage, though, the loss of habitat, the possible loss of the environment by putting that storage in place is something that would be of great concern to us.

Our waterfowl, of course, would benefit from increased storage as well. You talked about choices, though, and it's not always simply

a choice between the environment or a choice between urban users or farming users. I would like to point to the Klamath Basin and what is going on right now as a sample of that.

As you probably know, there's three listed species of fish up there that are holding not only the local agricultural community, the local community as a whole, but also one of the most important refuges in the entire National Wildlife Refuge System hostage right now.

We have a documented 430 wildlife species that depend upon the Klamath Refuge Complex. Those 430 species are being held hostage by simply three species so it's a case where there's decisions within the environment as well.

If they had additional storage up there right now, we wouldn't be looking at zero water to the agricultural community and zero water to the refuges. That is an example of where it can get much, much worse than it is in the Central Valley right now. I think we need to look outside our Central Valley borders and see what is happening elsewhere, most notably in the Klamath Basin. If we don't act now, we simply may not have time to act in the future. Thank you.

Mr. CALVERT. Unfortunately I wasn't able to chair that hearing. It was the largest Congressional hearing in the history of the United States, as I understand it, in a small town. A lot of tragedy going on. I heard many people are losing everything that they own and it cries for—those types of problems none of us in elected office like to come up with or deal with. We would rather try to stop that before it gets that bad.

Any comments?

Mr. GAINES. We view that as the canary in the mine shaft. We really do. It will happen down here sometime in the future if we don't deal with these issues now.

Ms. LOFGREN. Just one quick follow-up question on the supply. Sunne, what do you anticipate in terms of volume that will come from the new storage capacities? Is there an amount that has been identified?

Ms. MCPEAK. If you're talking about yield versus capacity, a lot of that is still going to go through further study and analysis and it's surface and groundwater for conjunctive use that would make a difference.

But I can assure you that actually when we do the math and look at the water that can be generated from efficiencies, conservation, reclamation, conservation urban, ag reclamation, watershed management, water marketing, which we can probably get to, I don't know, maybe 2 or 2.5 million acre-feet or perhaps more, and look at the growing demands and the reduction such as the Colorado River or the Trinity groundwater pumping overdraft, there's a gap that is anywhere from depending on the year half a million to maybe 1.5 million acre-feet in the next 20 years.

We think storage needs to contribute about, at least what we're trying to plan, hopefully anywhere from 250,000 to 500,000 acre-feet in yield. That is possibly what you can get from looking at a large Shasta, doing maybe a new reservoir conjunctive use, and perhaps Eel River has been identified as a in-Delta facility.

There are others who can give you more detail but that is the order of magnitude.

If, for example, you'll hear maybe testimony about climate changes will reduce snowpack making more precipitation. The implications there are that we need to have the off-stream storage to actually capture the precipitation which comes down faster than snowmelt as an example. You've got to have the ability to suck up the water fast and put it into storage, off-stream storage, so you are not impairing in-stream flows.

Mr. CALVERT. Yes, Mr. Wenger.

Mr. WENGER. Just to make a comment. When you talk about storage, we're living off the storage that our forefathers did 70 or 80 years ago to put people to work. They always talk about the big dam. As we heard here earlier, the loss of habitat for reservoirs. I would just like to make a comment.

I grew up on the Stanislaus River and I can remember back in '76 when people were chaining themselves to rocks because they didn't want to see the New Melones raise because the water was going to inundate some areas. If you look at the salmon fishery in the Stanislaus River today, it is better than it has ever been in my lifetime and it is in no small part because of New Melones having the water that can release at times it needs to release it.

Certainly there's some gravel beds that may weaken reconstitute gravel beds and do things like that. When you start talking about multiple uses, you just think about this weekend where everybody is going to be. They are going to be at Don Pedro. They are going to be at Shasta. They are going to be at all those places recreating. You think about all the habitat that is created.

Between here as I drove here, there's a lot of dry hills and I've got some friends that are cattle ranchers up there. They put in a one-acre little pond. You wouldn't believe the wildlife that comes because of water. We've got to have the water. We've got to have the storage. I don't think we can just focus on what are we going to need in 20 years. We had better be focusing on what we are going to need in 50, 75, and 100 years.

Mr. CALVERT. Thank you. I want to thank this panel for your testimony and answering our questions. We certain appreciate your coming out on this July 4th week. Thank you very much.

We will now call our second panel.

We want to thank all of you for coming out today. You probably heard my prior announcement about the five- minutes and all the little lights here. We appreciate that you keep the testimony within 5 minutes were we have time for Q&A.

With that, Mr. Guardino, you may begin.

STATEMENT OF CARL GUARDINO, PRESIDENT AND CEO OF THE SILICON VALLEY MANUFACTURING GROUP

Mr. GUARDINO. Good morning, Chairman Calvert and Congressmember Lofgren. Thank you so much for holding this important hearing in Silicon Valley.

As you may know, the Silicon Valley Manufacturing Group was founded in 1977 by David Packard, co-founder of Hewlett Packard Company. Today it represents 190 of the largest private sector em-

ployers in all of Silicon Valley who collectively provide 275,000 jobs just in this valley alone, or one of every four private sector workers.

Quick overview of Silicon Valley. Where we are this morning the population of the valley, which is Alameda, San Mateo, and Santa Clara Counties, is only 11 percent of our state's population but produces more than 20 percent of the personal income taxes for 1999 and 2000 for the State of California.

Mr. CALVERT. Thank you.

Mr. GUARDINO. Our pleasure. Silicon Valley is responsible for 16 percent of the state's revenues from taxable sales in 1999. And relative to exports, just two-thirds of Silicon Valley, Santa Clara and Alameda Counties alone, which are only 8 percent of the state's population, account for 33 percent of the state's export sales in 1999.

Truly Silicon Valley's current and future success is coughing up a substantial amount of revenue for state and Federal coffers. We want to continue to prosper so that we can do our share to protect this great state and nation's economy and quality of life.

Relative to water, after energy, we see water as potentially the next big crisis facing our state and nation. Yet, this time, unlike the energy crisis that we are currently in, we have a chance to divert a crisis rather than dig out from it so we really commend you, Chairman Calvert, Congressmember Lofgren, for having the foresight to move forward now as expeditiously and thoughtfully as possible rather than to react to the crisis that is coming.

The Manufacturing Group sees four key points critical to any legislation that moves forward and these are actually in order.

First, an effective stakeholder-based governance structure for the CALFED Program. Second, an adequate Federal funding for the CALFED Bay-Delta Program. Third, a strong commitment by CALFED and the CALFED agencies to invest in measures to improve Delta drinking water quality from stream to spigot. Fourth, a clear, consistent, and coordinated implementation of administrative policies, regulatory decisions, and project operations.

Chairman Calvert, we commend you and Senator Feinstein for continuing to try to work together to harmonize your bills in a bipartisan/bicameral fashion and strike a balance that protects our environment, enhances our quality of life, and strengthens our economy for every employer and working family in California.

In a past life I was Chief Assistant to a state legislature who was a dairy farmer. On issues regarding water we viewed these as so critical that we always saw the link as you referred to earlier between the importance of major industries in California from agriculture to high-tech or, as we lovingly refer to, from cow chips to computer chips. Because we see the link, we want to work with you for the good of all Californians in the prosperity of California's economy. Thank you for your time.

[The prepared statement of Mr. Guardino follows:]

Statement of Carl Guardino, President and CEO, Silicon Valley Manufacturing Group

Mr. Chairman and members of the Subcommittee, as President and CEO of the Silicon Valley Manufacturing Group, I am speaking for the interests of a diverse range of member companies from the Silicon Valley area. The Silicon Valley Manufacturing Group was founded in 1977 by David Packard, and today represents 190

companies employing one quarter of the Silicon Valley workforce. The Manufacturing Group focuses their efforts on public policy issues regarding business competitiveness and quality of life in the region.

The significance of a reliable and clean supply of water to the region cannot be overstated. Constraints on water supply are increasing on all sides. Some constraints are the result of our growing awareness and consideration of environmental and habitat values and the economic and quality of life contributions they make to the region. Other constraints are the price we pay for our success. With an increase in employment of approximately 25% over the last 5 years, there are more people, more businesses, and a greater overall demand for quality water supplies. An infrastructure that reliably provides high quality water is a foundation of both economic prosperity and community quality of life. Wise and efficient management of water that ensures a balance of all water needs: agricultural, urban, environmental, and commercial/industrial should not be impeded by an inadequate infrastructure. An infrastructure that permits water transfers, recycled water distribution, and efficient water use will become increasingly important as constraints upon water supply and quality increase as the region continues to grow.

The Valley's high-tech and pharmaceutical/biotech industries demand a consistent, high-quality supply to support their manufacturing, research and development needs. Companies such as Intel and LSI Logic invest in additional treatment processes to remove any traces of metals, organics, and salts. Variability in quality can cause plant shut downs for recalibration. If local water suppliers experience variations in the quality of water supplies from state or federal project sources, or must switch sources of supply due to interruptions in service, this can have significant adverse economic impacts for companies that are vulnerable to these changes.

Similarly, our region's research institutions, the R&D portions of our pharmaceutical/biotech companies and industries with water-dependent processes would be devastated by interruptions in supply.

Recently, the Bay Area Water Users Association publicized a San Francisco PUC finding that a significant seismic event could leave the region's residents supplied by the Hetch–Hetchy system without water for 20 to 60 days. So many critical systems rely upon water: cooling and heating our buildings, providing sanitation, irrigation, fire suppression, critical cleaning and manufacturing processes in industry. The need for water permeates all facets of our modern life. The cost of a rolling blackout can be fairly well accounted for. But, the cost of lost research, lost product, lost business and the social costs of this kind of infrastructure failure are simply incalculable.

The Manufacturing Group has participated in water quality and supply planning with regional partners, including the Santa Clara Valley Water District and the Bay Area Water Users Association. Locally these efforts have included plans for increasing conservation, recycling and recycled water distribution, water transfers and groundwater banking. Because the integrity of water supply infrastructures is essential, we are encouraging the San Francisco PUC to hasten their progress on their Capital Improvement Plan to upgrade the aging and seismically vulnerable Hetch–Hetchy system that 2.4 million residents of the Bay Area rely upon.

The continued growth of industry in the Silicon Valley region depends as much on maintaining the region's quality of life as it does on maintaining business-related infrastructure. The need for clean, quality, reliable water for drinking, recreation and habitat maintenance is just as important. Business leaders understand that water supply and water quality are fundamental indicators of the quality of life. Based on my personal knowledge of business leader's concerns, I can state that if we don't have the best air, water and land, we're not going to have the best people.

Meeting the region's and the state's diverse water needs in the future will require the most creative, coordinated and thoughtful efforts of community, government and business acting in partnership. We support the efforts of the State and federal agencies to find a solution to improve water supply, water quality and environmental resources through the CALFED process.

We thank you for the concern and leadership you have shown on this issue. We look forward to working with you and your staff in the future. On behalf of the Silicon Valley Manufacturing Group, thank you for giving me this opportunity to provide these comments.

Mr. CALVERT. Thank you.

Ms. Wells.

STATEMENT OF MARY WELLS, CHAIRWOMAN, NORTHERN CALIFORNIA WATER ASSOCIATION

Ms. WELLS. Mr. Chairman and members of the Subcommittee. My name is Mary Wells. I'm a landowner on the west side of the Sacramento Valley where my husband, Charles, and I own row crop ground and farm rice in three irrigation districts all delivered from and dependent upon the great Sacramento river.

In addition, we own rangeland where we live and our family cattle operation continues in the small foothill community known as Sites.

I appreciate the opportunity to testify before you today and provide a farming landowner's perspective on the water supply challenges that have spawned years of effort and action.

Today, however, I applaud the tremendous opportunity in my part of the state not only to provide water efficiency and security in my region, but also to effectively assist in the resolution of water issues in the San Francisco Bay-Delta and far beyond.

A reliable and affordable water supply is vital to my family's farming operation. Because of this, I serve as a Director on the boards of Tehama Colusa Canal Authority, known as the T-C, and two irrigation districts. Because water issues transcend local impacts, I became a founding Director of the Northern California Water Association in 1992 where today I serve as Chairman.

For years Sacramento Valley residents have experienced a continuing increase in environmental and other regulatory demands. For 25 years landowners in my area have been involved in aggressive conservation and restoration efforts to meet these needs, but our struggle to meet these demands grows more and more difficult.

For example, I have personally experienced water shortages as low as 25 percent allocation during seven out of the last 20 years. I have spoken for many years about our despair but today I am here to speak of opportunity as offered in H.R. 1985.

In integrated water management program for the Sacramento Valley will improve water supply, quality, and reliability. This plan is reflected in the development of the Sacramento Valley Water Management Agreement which was finalized when the State Water Resources Control Board postponed Phase 8 of the Bay- Delta Water Rights Proceedings. This agreement is now the template for our regional strategy in the Sacramento Valley.

The Sacramento Valley water management agreement will concentrate efforts most notably through groundwater management activities, evaluation of the sites, off-stream reservoir, flood protection, water transfers and exchanges, watershed management, fish passage, and other environmental improvements.

The resulting regional commitments is focused on meeting all of the water supply needs within the Sacramento Valley first every year while helping to provide for Bay-Delta water quality standards, export supplies, and even the environmental water account.

The following actions as part of the regional integrated management plan will begin to achieve the commitment to landowners like me within the basin who face increased water shortages.

The first item would be the intra-regional water transfers. The Central Valley Project, or CVPIA, contains a provision to facilitate and endorse this intra-regional transfers in the Sacramento Valley

for CVP project water. For many years the T-C has benefitted from some water transfers. However, there is a need for the Bureau of Reclamation, as a partner, to further exercise its discretion in a manner that will expedite and make affordable such transfers from neighboring water suppliers.

The second action would be the conveyance of water in Federal facilities. There is now a tremendous opportunity to convey water including transferred, exchanged, or remanaged water through Federal facilities. This can be done under the CVPIA or the Warren Act. The key, however, is for the Bureau of Reclamation to utilize its discretion again under these laws to expedite rather than hinder conveyance of this water in an economically feasible manner to the landowners in the region.

A third action is Sites off-stream reservoir. The flexibility of the state's water system would be greatly enhanced with the construction of Sites reservoir. I have a unique interest in the development of this project. As I mentioned, my property is in the footprint of the proposed Sites reservoir.

My rangeland and home of 27 years will be flooded by the Sites reservoir once it is filled. I only have to look over the hill into the Sacramento Valley where all of our irrigated farmland, our livelihood, and that of my children and that of my grandchildren are so dependent upon securing reliable water supplies. If we succeed in this integrated endeavor, so shall the rest of California have an opportunity for a more secure and adaptable water supply.

In closing, there is a vision in the north that the Sacramento Valley will be able to provide substantial contributions to help provide water security throughout the state but this can only occur when we are empowered a regional solution like the integrated program of water management and supply activities that I have described today.

The combination of facilities, management, regulatory streamlining, and sound use of discretion by Federal and state agencies can assure local landowners like me that are needs will be met. Such local solutions will far better utilize each region's water resources, and thereby make water available to resolve much of California's growing water needs.

I thank you and I thank you for your continued support of agriculture.

[The prepared statement of Ms. Wells follows:]

Statement of Mary Wells, Sacramento Valley Landowner, Maxwell, California

Mr. Chairman, Members of the Subcommittee, my name is Mary Wells. I am a landowner on the west side of the Sacramento Valley, where my husband, Charles, and I own row crop ground and farm rice in three irrigation districts all diverting water from and dependent upon the great Sacramento River. In addition, we own rangeland where we live and our family cattle operation continues, in the rolling foothill community known as Sites, located 10 miles west of Interstate 5 and the small town of Maxwell. I appreciate the opportunity to testify before you today to provide a farming landowner's perspective on the water supply challenges that have spawned years of effort and action. However, today, I must applaud the tremendous opportunity in my part of the state to not only provide water efficiency and security to my region, but also to effectively assist in the resolution of water issues in the San Francisco Bay–Delta and beyond.

A reliable and affordable water supply is vital to my family's farming operation. Because of this, I serve as a Director to the boards of Westside Water District, Max-

well Irrigation District, and the Tehama Colusa Canal Authority (T–C). Because water issues transcend local impacts, I became a founding Director of the Northern California Water Association in 1992, where today I serve as Chairman. My perspective has further been shaped by the 21 years of water-related employment, including General Manager of Westside Water District and Administrator to Maxwell Irrigation District.

Water is delivered to our row crop ground from Lake Shasta, down the Sacramento River to the Red Bluff diversion dam, where it is diverted into the Tehama–Colusa Canal for a severity to ninety mile journey to the Westside Water District. The eighteen T–C districts are water service contractors with the Central Valley Project (CVP).

For years, Sacramento Valley residents have experienced a continuing increase in environmental and other regulatory demands on the region's water supply both from within the region and from other areas of the state. Landowners and other water users have been involved in aggressive conservation and restoration efforts to meet all of the needs in the region. But, our struggle to meet these demands grows more difficult. For example, agricultural water users on the T–C are only receiving 60 percent of their contract allocation this year, after five consecutive wet years in California. As a result, I have personally experienced water shortages during seven out of the last twenty years. For two of these seven years, we received only 25 percent of our contract allocation.

This hopefully dispels a common misperception that water users north of the Bay–Delta are flush in water and always receive a full allocation every year. In fact, many of the diverters in my region, particularly along the T–C are short of water even in 100 percent supply years due to the moratorium placed on additional contracts in 1977 while these districts were still being completed. This condition is only made worse in years of reduced supply. Because of increased shortages and other system-wide issues in the Sacramento Valley, we now have an opportunity and a need to manage our water supplies in a more integrated manner. We have, therefore, embarked upon an integrated water management program to meet local needs in Northern California and thereby help provide solutions to problems in other regions of the state.

AN INTEGRATED WATER MANAGEMENT PROGRAM FOR THE SACRAMENTO VALLEY WILL IMPROVE WATER SUPPLY, QUALITY AND RELIABILITY

T–C contractors and other Northern California water users have committed to help improve water supply reliability, water quality and environmental benefits. Most notably, we have been involved in the development of an integrated water management program for the Sacramento Valley. This program includes fish passage improvements, groundwater management activities, evaluation of the Sites offstream reservoir, flood protection, water transfers and exchanges, watershed management and other environmental improvements.

This plan is reflected in the development of the Sacramento Valley Water Management Agreement, which was finalized when the State Water Resources Control Board postponed Phase 8 of the Bay–Delta water rights proceedings. This agreement is now the template for a regional strategy in the Sacramento Valley. The Sacramento Valley Water Management Agreement will concentrate efforts on meeting all of the water supply demands within the Sacramento Valley every year, and it will help to provide water supplies for use in the Bay–Delta region for a number of uses, including meeting water quality standards and providing export supplies to areas south of the Bay–Delta, and as an asset for the Environmental Water Account (EWA) and other environmental programs.

PROVIDING WATER SECURITY FOR THE WEST SIDE OF THE VALLEY

Water security for water users in my area and throughout the Sacramento Valley enables Northern California water users to enhance water security throughout the state. As I mentioned earlier, water users on the T–C are only receiving 60 percent of their water allocation from the CVP this year. Water users in the Sacramento Valley can assist in more effectively utilizing the resource to provide water supplies for needs in other parts of the state, but we first are committed to meet local water demands in the Sacramento Valley.

To meet these needs, leadership and direction must be provided to support the development of this regional integrated management program. For me and the water users on the T–C, the following actions will begin to achieve this goal.

Infra–Regional Water Transfers

A critical component of any plan to meet all of the water needs in the Sacramento Valley is the ability to transfer water within the region. The Central Valley Project Improvement Act (CVPIA) contains a provision to facilitate and endorse these types

of infra-regional transfers in the Sacramento Valley for CVP project water. These transfers allow water diverters in the Sacramento Valley to assist their neighbors in meeting their individual water needs. For the past several years, the T–C has benefited from certain water transfers, however, there is a need for the Bureau of Reclamation, as a partner, to further exercise its discretion in a manner that will expedite and make affordable such transfers from neighboring water suppliers. These intraregional transfers promote partnerships among the local water users and allow local needs to be met.

Conveyance of Water in Federal Facilities

Intra-regional water transfers to the T–C water users and other creative management tools will require conveyance of water through federal facilities. There is now a tremendous opportunity to convey water, including transferred, exchanged and remanaged water, through federal facilities to help provide water security on the west side of the Sacramento Valley. This can be done under the CVPIA or the federal Warren Act. The key, however, is for the Bureau of Reclamation to utilize its discretion under these laws to expedite rather than hinder conveyance of this water in an economically feasible manner to the landowners in the region.

Fish Passage Improvements

Water users on the west side of the Sacramento Valley are currently initiating efforts to improve water delivery reliability while improving fish migration past the Red Bluff diversion dam on the Sacramento River. This is a continuation of a historical commitment on the part of T–C to protect Endangered Species Act (ESA) listed species while meeting water delivery obligations. These efforts are reflective of projects developed by water diverters throughout the Sacramento Valley, such as fish screens, fish ladders, siphons, dam removal, habitat conservation plans, and other habitat improvement projects to enhance the environment while ensuring water supply reliability.

Sites Off–Stream Reservoir

The flexibility of the state's water system would be greatly enhanced with the construction of Sites reservoir. I am very much interested in the development of this project. As I mentioned earlier, my property is in the footprint of the proposed Sites reservoir. My home ranch and much of my rangeland will be flooded by Sites reservoir once it is filled. Although I will be losing my home of twenty-seven years, I only have to look to the east over the hills into the Sacramento Valley where all of our irrigated farming, our livelihood, and that of my children and grandchildren are so dependent upon securing water reliability. If we succeed in this integrated endeavor, so shall the rest of California have the opportunity for more secure water supplies.

This off-stream storage project would provide additional water availability for a number of uses including improvements to habitat and water quality. This reservoir would provide water supplies in average and dry years for urban, agricultural and environmental purposes, increase Bay–Delta outflows during critical times, improve flood control, enhance groundwater recharge, contribute to the EWA and improve flexibility for existing projects.

In closing, developing solutions for California's water needs requires the implementation of an integrated program of water management and supply activities that includes the components I have mentioned today. The Sacramento Valley will be able to provide substantial contributions to help provide water security throughout the state. But, this can only occur when we empower regional solutions, like the integrated program described above, and local needs are satisfied by a combination of facility management, regulatory streamlining and the sound use of discretion by federal and state agencies. Such local solutions will far better utilize each region's water resources, and thereby make water available to resolve much of the State's growing water needs.

Mr. CALVERT. Thank you.

Dr. Gleick.

STATEMENT OF DR. PETER GLEICK, DIRECTOR OF THE PACIFIC INSTITUTE FOR STUDIES AND DEVELOPMENT, ENVIRONMENT, AND SECURITY

Mr. GLEICK. Mr. Chairman, Congresswoman, thank you for the opportunity to speak to you today.

I'm the Director of the Pacific Institute in Oakland. It's a nonprofit research institute. We look at a wide range of things, most of them related to water resources, and climate change.

I also serve as a member of the National Academy of Sciences Water Science and Technology Board. I have been given a challenge today to talk about two completely different things in 5 minutes. I'll do the best I can.

The first is something that you believe to be true that I think is no longer true. The second is something that you probably think is not true but turns out to be true.

The first one has to do with water use efficiency and the potential for improving water use efficiency. It used to be true in the State of California and in many other places that building new reservoirs and dams and aqueducts was the best way to solve our water problems in California. We did a wonderful job in that regard but that is no longer the case.

In fact, the good news is that far more water is available at far less cost far more quickly by improving the way we use water by improving the efficiency of water use statewide than could ever be made available by new dams and reservoirs. I'll come back to that point in a moment.

The second issue is that climate change turns out to be a real problem. Despite what many people have believed for a long time, climate change is now acknowledged to be a real problem, something in our future if not already in our present, and that state and Federal water agencies need to do a much better job of thinking about what climate change means for water resources.

In particular, we must avoid funding unnecessary infrastructure or, in particular, infrastructure that is designed for conditions that may no longer exist or may not exist in the future. We must not build things we don't need and can't afford.

Now, let me come back to the first point briefly. In my written testimony there are a number of figures. If you could perhaps look at the first one only. This is somewhat of a mundane example but I think the importance of it will become clear.

This figure looks at how much water the State of California uses to flush toilets. Now, it may sound somewhat mundane but, in fact, toilets are the largest indoor user of water for all of us.

The top line shows how much water we would use to flush toilets every year in California if there were no conservation and efficiency. The blue line in the middle shows how much water we use today to flush toilets based on the current mix of inefficient and efficient toilets. And the bottom line is how much we would use to flush toilets if all of the toilets in the State of California were efficient models.

Now, as you probably know, President Bush signed into law in the early '90's the National Energy Policy Act which includes standards for new efficient toilets. All the toilets you buy nationwide now are efficient toilets. But there are still plenty of inefficient toilets statewide and nationwide despite the great efforts that have been made to replace inefficient toilets.

In fact, our estimate is that there are 500,000 acre-feet of water used every year to flush toilets that are inefficient. A mundane example but a huge amount of water. You heard in the first part of

the testimony this morning that the yield from the expected new supply projects proposed under CALFED is 250,000 to 500,000 acre-feet.

There is potential for improving water use efficiency in every sector of our economy, not just toilets. Toilets is just one example, but these are huge savings in the agricultural area, in the industrial area, and in many other aspects of our use in homes.

In terms of future need for storage, the state may need more storage. I'm not disputing that, but I would argue that we don't need to fast track that new storage and if we do, we are risking making the wrong decision early. I would urge you very carefully to look at the agreements that CALFED has come to, the balance of choices presented in the CALFED agreement, and not fast track storage that we may not need and may not be able to afford.

Let me address the second point, climate change. This is a very complicated issue but not as complicated as some might expect. Let me offer a quick summary, given my limited time, based on the conclusions of the recently completed National Assessment.

Again, President Bush in 1990 passed a law that required that a "National Assessment" of the impacts of climate change be done. Such a National Assessment has been done and was presented to Congress and to the President in the last several months.

The results that I would like to talk about come from the National Assessment Water Report, which was funded by the Department of the Interior. All of your offices have received them.

Very briefly, the findings are as follows: Climate change is a real problem. Some climate change now seems unavoidable no matter what we do. The evidence is accumulating and convincing that the climate is already changing. There are close and complex connections between California's water system and our climate. Our water is very dependent on the climate system.

There are likely to be serious negative impacts for the state's water resources. There may also be some positive ones depending on the way the climate changes and the speed at which it changes. There are many remaining uncertainties including the nature of the changes and extreme events, changes in precipitation patterns, details of regional effects.

There are things we should be doing right now. California water planners have not adequately addressed this issue. For example, the California water plan done by the Department of Water Resources has not addressed this issue and CALFED has not addressed this issue. It is, I believe, a requirement now from the Secretary of the Interior that all agencies and bureaus under the Secretary's jurisdiction look at the issue of climate change.

In sum, there doesn't have to be a water crisis in California. There are a wide range of innovative and successful projects and efforts that have been done and are underway that can reduce the severity of California's water resource problems.

The bad news is that there are new challenges coming. A crisis in California's water policy making. There are problems at the state and Federal level in the way we think about water policy.

I urge you to make sure that legislation that you propose and pass including, for example, H.R. 1985, ensure that the potential for water use efficiency statewide receives its appropriate priority

and attention, that taxpayer money is not spent on expensive and unnecessary infrastructure before it's needed, and that the risks of climate change are addressed soon by the appropriate Federal and state agencies. Thank you.

[The prepared statement of Mr. Gleick follows:]

Statement of Peter H. Gleick, President, Pacific Institute for Studies in Development, Environment, and Security [1]

Mr. Chairman and members of the Committee, thank you for the opportunity to testify today. I am a scientist by training and direct the policy research activities at the Pacific Institute for Studies in Development, Environment, and Security in Oakland, California. The Pacific Institute is an independent, non-partisan research center looking at a wide range of national and international water issues. I have served on a wide range of boards and committees, including the Public Advisory Forum of the American Water Works Association, the International Water Resources Association, scientific panels of the American Geophysical Union, the American Association for the Advancement of Science, and others. I am currently a member of the National Academy of Science's Water Science and Technology Board. A full resume is attached.

The Institute works extensively on California water policy issues and provides analysis and policy recommendations to State, Federal, and local policymakers. The Institute is a participant in the ongoing California Water Plan effort of the state DWR. We were chosen by the U.S. Department of the Interior to do a formal independent review of CALFED's water-use efficiency analysis. I served as co-chair and lead author of the National Assessment Water Sector report looking at the implications of climate change for the nation's water resources.

SUMMARY TESTIMONY

My testimony today addresses two critical points: first, the vast potential to improve the efficient use of water statewide; and second, the coming risks of climate change. In summary, the good news is that far more water is available, at a far lower cost, through efforts to cut the inefficient and wasteful use of water, than could ever be made available by new reservoirs and dams. The bad news is that climate change is a real problem and the State and Federal agencies looking at our water problems need to do a better job of addressing it. In particular, members of Congress have the responsibility to avoid funding expensive infrastructure that is either unnecessary or designed for conditions we no longer expect to occur. We must not build things we don't need and can't afford.

Let me start with the potential for improving our water use. One example should really open your eyes. As you know, there is a national standard (the National Energy Policy Act of 1992, PL 102–486) that has required all toilets sold in the U.S. for the past seven years to be "ULFTs——highly efficient, low-flow toilets. California has made great progress in replacing old, inefficient toilets, and the new ones pay for themselves within a year in water savings. Yet we estimate that at least two-thirds of the old inefficient ones are still in place, wasting 2 to 4 gallons every time we flush them. What does this mean? As Figure 1 shows, it means that there are 500,000 acre-feet of clean, cheap water wasted every year just from our inefficient toilets. It means that California residents are flushing more than $250 million dollars every year down the drain. This is more water than could be produced as reliable yield from any of the new proposed reservoirs. And it is the cheapest water available.

[1] 654 13th Street, Preservation Park, Oakland, California 94612, 510 251–1600.

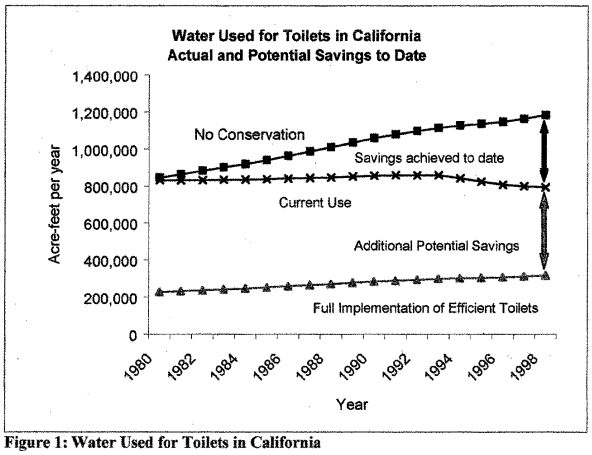

Figure 1: Water Used for Toilets in California

This is just one example: improvements in water-use efficiency are possible in every single sector of our economy, from our industrial, commercial, and agricultural sectors. We estimate that no new water supplies are necessary for at least two decades, even with expected increases in population and economic growth, beyond projects that are designed to store and use groundwater, increase our use of reclaimed water, and improve efficient use.

Let me address the second point: global climate change. This is a complicated issue, but not as complicated as some think. Let me offer you a summary, using the conclusions of the recently completed National Assessment Water Sector report. This report, part of the overall National Assessment requested by President George Bush and the Congress in the 1990 Global Change Research Act (Public Law 101–606), was released several months ago. I served as co-chair and lead author of the Water Sector report, which was funded by the Department of the Interior and the U.S. Geological Survey. The scientific community and the public extensively reviewed the report. (The full report is available for this committee, and members of the public can find it at www.pacinst.org/naw.html).

Let me summarize some of its major findings:

- Climate change is a real problem
- Some climate change now appears unavoidable.
- The evidence is accumulating and convincing that the climate is already changing.
- There are close and complex connections between California's water system and our climate.
- California's water resources and some of the infrastructure already in place are especially vulnerable to climate changes.
- There are likely to be serious negative impacts for the state's water resources; there are also likely to be positive impacts and some reductions in the severity of negative ones we already experience. There are also many remaining uncertainties, including the nature of changes in extreme events, precipitation patterns, and the details of regional effects.

There are things we should be doing right now. California water planners have not adequately addressed this issue, at the federal, state, or local levels. In particular, the California Water Plan has not addressed this issue adequately, nor has CALFED. I note that a new order from the Secretary of the Interior, Order No. 3226, now requires that every bureau and office of the Department of the Interior consider and analyze potential climate change impacts in long-range planning, developing water plans, and when making major decisions about resources under the Department's purview. This order applies to all CALFED activities, and to much more.

BACKGROUND TO TESTIMONY

1. Water Use Efficiency: What is the Good News?

Out of the limelight, every single economic sector in California is working to resolve water problems and having some success. Water use is becoming more efficient in every sector. Smart collaborations are finding ways of restoring natural eco-

systems while maintaining California's excellent agricultural productivity and protecting landowners. California farmers are continuing to innovate and modernize, using less water while producing more food, fiber, and profit. Urban water-use efficiency improvements are keeping ahead of population growth. In other words, even as populations grow, the amount of water each person needs is dropping, and in some cases, even total water use is dropping. The potential for even more improvements in efficiency is enormous.

This kind of good news means that the number of successful tools that we have for solving California's water problems is growing. Let me offer some specific examples:

Urban Highlights

Cities are becoming much more water efficient, breaking the link between population growth and growing water use.

- Water use in Santa Clara County peaked in 1985, and is lower today than it was 15 years ago.
- San Diego County is using less water—13 percent less—than it was using ten years ago, even though its population has grown 10 percent.
- Water demands for the Metropolitan Water District peaked in 1989 and 1990. They are using less water now then they were 10 years ago.
- Los Angeles used 593,000 acre-feet of water in 1970. Demand rose in the late 1980s and then began to drop back. In 1998 they used 594,000 acre-feet. Figure 2 shows this history. Population during this same period rose from 2.8 million to 3.75 million people—a 32 percent increase.

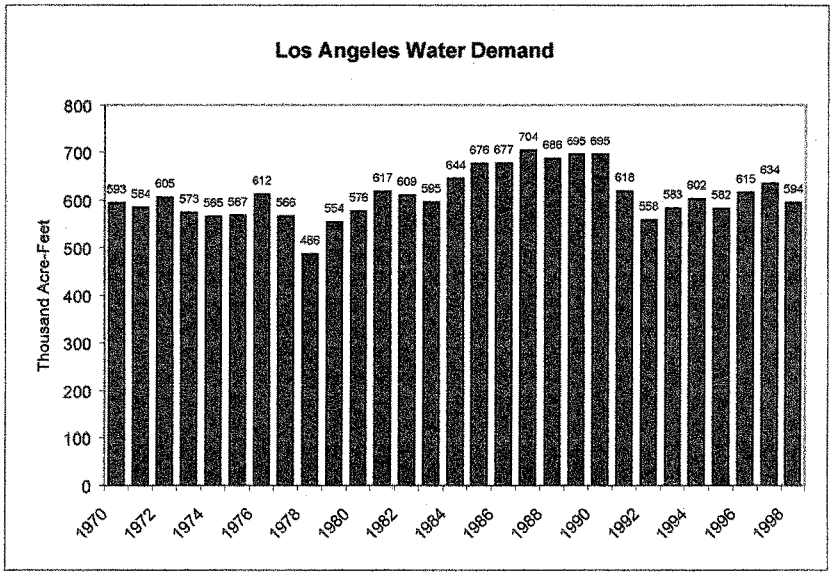

Figure 2: Water Use in Los Angeles: 1970 to 1998.

Water recycling is reducing wastewater volumes and providing water supply, reliability, and environmental benefits.

Statewide, industrial, commercial, and institutional water use efficiency is rising dramatically. Between 1980 and 1990, industrial water use in California dropped 30 percent, while the State's economic production rose 30 percent. This trend has continued in recent years.

Contrary to some beliefs that no "new storage" for water is being built in the State, substantial increases in "storage" in the form of massive groundwater banks have been created. Just two examples:

- In the past 20 years at one facility alone near Bakersfield, nearly 1 million acre-feet of water have been stored.
- The Semitropic Water District groundwater-banking program has stored 500,000 acre-feet of water in the past decade.

Agricultural Highlights

For decades, with no official policy or recognition, California growers have been moving toward higher-valued crops that use less water per acre and per dollar earned. Figure 3 shows the drop in field and grain crops and increases in vegetable and fruit crops.

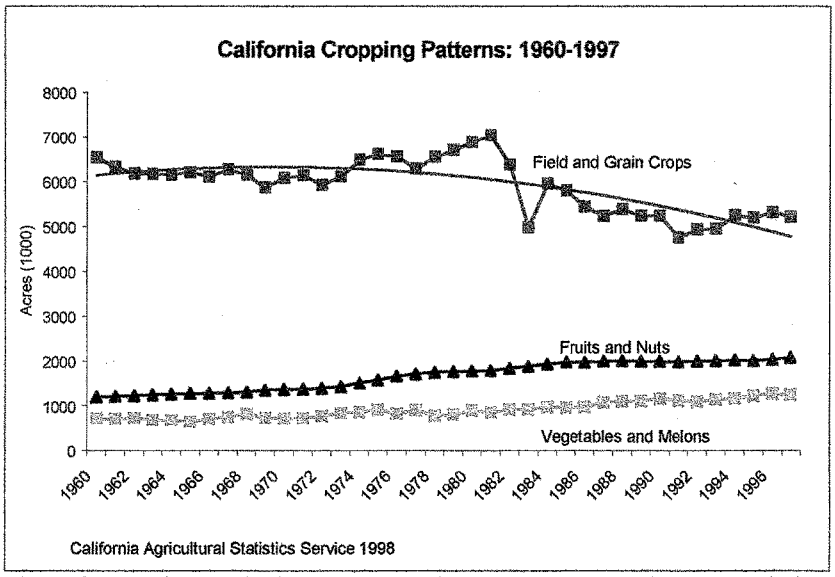

Figure 3: Crop Trends in California: Moving to High Valued, Low Water Using Crops.

Growers are also moving toward more efficient irrigation technologies, saving money, water, and energy, and increasing yields. Yet, much more potential exists, as Figure 4 shows.

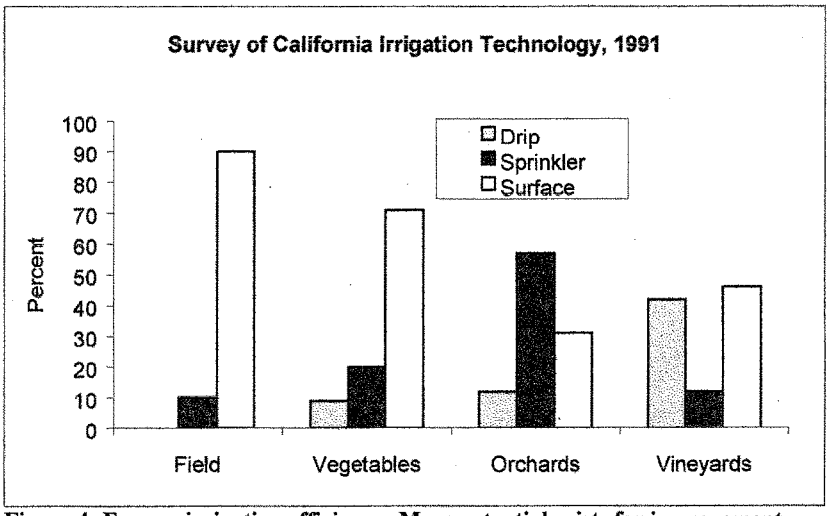

Figure 4: Farmer irrigation efficiency: More potential exists for improvement.

Smart collaborations between local landowners and urban agencies are providing high-quality, reliable recycled water for agricultural irrigation.

The technological and communications revolution sweeping the country and the world is also having an effect in agriculture. Farmers are learning how to get the information they need to improve productivity, reduce water use, and increase profits.

Some Bad News?

Great efforts have been expended to improve California's formal water planning process—both at the state Department of Water Resources and in the CalFed process. The result has been an imperfect, but improved effort to balance competing needs and desires. That balance is threatened by imbalanced legislation at the federal level—legislation that favors political preferences over economic rationality, and large infrastructure over more effective and cheaper efficiency improvements.

Recommendations

Existing technologies for improving water-use efficiency, improving water supply reliability, and cleaning wastewater have enormous untapped potential. The potential for improving the efficiency of water use is greatly underestimated by official agencies.

- Regulatory incentives and motivation can be effective tools. Smart regulation is better than no regulation.
- Economic innovation leads to cost-effective changes. The power of proper pricing of water is underestimated.
- Ignorance is not bliss: the more water users know about their own use and the options and alternatives available to them, the better decisions they make.
- The most successful water projects have individuals and groups with different agendas working together.

2. Nature of Climate Impacts for California Water

- There will be very important effects on water availability.
  - * Significant changes in the timing of runoff from the Sierra Nevada;
  - * Less snow, more rain, more late winter and early spring runoff;
  - * Less late spring and early summer runoff;
  - * Less summer soil moisture (more need for irrigation water)
- Everyone seems to worry about droughts, but the risks of flooding may be as great or greater. Worse, we may see increases in the risks of both.
- Water quality will also be affected: salt water may penetrate farther into the Sacramento/San Joaquin Delta to where the pumps for our water supplies take freshwater for Bay Area and Southern California.
- The Colorado River will also be directly affected.
- There is an increased risk of contamination of coastal groundwater due to rising sea level.

Sidebar
Impacts of Climate Change for Lake Folsom and the American River

Georgia Tech completed a series of studies for the National Assessment on the response of Lake Folsom on the American River to potential climate and management scenarios. Folsom's main water uses are flood control, energy generation, water supply, and maintenance of low flows for environmental quality. One of the climate scenarios suggests that Central California will experience wetter and more variable climate under a CO_2 increase. When this new climate was put into the Lake Folsom system, the climate changes cause Folsom's energy generation and revenues to increase by 24%, spillage (defined as water released above turbine capacity) to increase by 80%, and potential flood damage to increase. What is most interesting is that the results are critically dependent on how the system is operated. If we operate Folsom the way it is operated today, this climate scenario leads to flood damages over a 30-year period of $4.3 billion. Using a more sophisticated method of system operation, not currently used by Folsom, could reduce flood damages to $220 million – 1/20th of the damages. (Source: National Assessment Water Report, 2000)

Some Climate Change is Unavoidable.

Some climate change is unavoidable. There is nothing we can do (or more accurately, nothing we will do) to prevent at least some change from occurring. Indeed, the National Assessment water sector report presents evidence that change is already occurring (Figure 5).

What Should We Do?

- Research on climate change must not only continue, it must accelerate, just as greenhouse gas emissions are accelerating. (This is a federal and international responsibility.)

- Research on climate impacts must greatly expand. What we don't know seriously swamps what we do know. (This is a federal and state responsibility.)
- The risks of climate change must be incorporated into all water planning, including the design and operation of federal and state water facilities, CalFed, and the California Water Plan.
- We must begin now, and should have begun a decade ago, to evaluate policies for adapting to and mitigating the worst threats. (This is a federal, state, local, agency, and individual responsibility.)

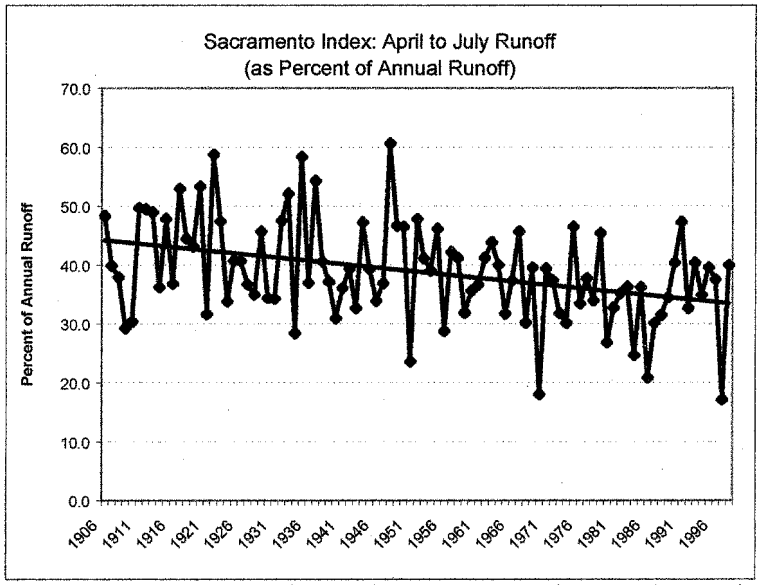

Figure 5: April to July runoff in the Sacramento Basin is decreasing as a fraction of total annual runoff. [Source: California Department of Water Resources data, the National Assessment Water Sector report.]

Despite rhetoric to the contrary, there doesn't have to be a water crisis in California. There is a wide range of innovative and successful projects and activities already underway showing how to address California's diverse water problems. The bad news is that there are new challenges coming, and a crisis in California water policymaking—real problems at the state and federal levels in the way we think about water policy. I urge you to make sure that the legislation you propose and pass, including HR 1985, ensures that the potential for improving water-use efficiency receives its appropriate priority, that taxpayer money is not spent on expensive and unnecessary infrastructure, and that the risks of climate change be addressed soon by the appropriate federal and state agencies.

Thank you for the opportunity to testify before you today. I will be happy to answer any questions you might have.

Mr. CALVERT. Thank you. You get these high-tech folks here in Silicon Valley to invent a low-flow toilet that works.

Mr. GLEICK. They do work, Mr. Chairman. I would be happy to address that issue.

Mr. CALVERT. A better one.

Mr. Nelson.

STATEMENT OF BARRY NELSON, SENIOR POLICY ANALYST, NATURAL RESOURCES DEFENSE COUNCIL

Mr. NELSON. Thank you, Mr. Chairman, and Congresswoman Lofgren. I appreciate the opportunity to speak with you today. My

name is Barry Nelson with the Natural Resources Defense Council. We have been working on California water issues for nearly 20 years.

Congressman, the good news from the perspective of the topic you are hearing today is that CALFED has been working on these issues in a very cooperative manner since 1995. That CALFED plan has been adopted by state and Federal agencies and is supported by a very broad range of stakeholders throughout the State of California.

We look forward to working with you in drafting legislation to implement that program. Unfortunately, we can't support either H.R. 1985 or S. 976 at the moment and you have received a letter to that effect from approximately 25 organizations, most of the environmental and fishing organizations that have worked in the CALFED process.

On the other hand, we do believe that Congressman Miller's newly introduced legislation would support balanced CALFED implementation. I would like to briefly discuss some of our concerns and focus as well on our recommendations for moving forward.

In short to begin, we fear very much that the CALFED Program may be beginning to unravel and the early warning sign there is the diminished level of state funding and Federal funding that we have been seeing. We are very concerned that if this trend continues, it could lead to gridlock and damage not just the environment but also water supply throughout the state. We are strongly supportive of a balanced state and Federal program to fund the CALFED program and we would like to move forward with that as rapidly as possible.

I would, however, like to mention a couple of concerns about H.R. 1985 and I'll start with its potential impacts on water supply reliability. The first of those concerns is that by establishing essentially seniority for a very small group of farmers in the Central Valley, there is the potential to undermine state water rights and also to affect the water supplies of Silicon Valley here in the South Bay, of the East Bay, of water users in a variety of parts of the state. We are very concerned about that.

Second, we are concerned about the potential of the bill to undermine the ecosystem restoration program coming out of CALFED, Trinity River restoration, wetlands water supplies, wildlife refuge supplies, protection of the Bay-Delta endangered species.

We are also concerned about the premature authorization of facilities. Sunne McPeak mentioned that we need facilities to move forward. We completely agree that we are going to need smart, intelligently designed facilities. We don't believe we can get there if we short circuit the analysis of those facilities.

Some of the facilities that H.R. 1985 would authorize are so premature that they literally don't have a spot on the map. A site hasn't been selected. A name for these facilities has not been selected in the San Joaquin Basin. I'll get to another one of those facilities in a moment.

If this bill were enacted, we are very concerned as well that it would change the record of decision as it would affect Federal agencies. It would not change that record of decision as it affects state agencies. We are very concerned that would undermine that state

and Federal partnership that has been essential for this program and for the successes it has seen so far.

Our recommendations. We have worked very hard to present recommendations to the CALFED Program. Not just NRDC but the environmental community at large. We have presented your office with a briefing book on these issues and a detailed blueprint for meeting California's water supply needs.

In our testimony we mention five principles. I'll mention four rapidly and then spend a moment on the fifth. The first is in order to move forward with the program to meet California's water supply needs, we need to make sure we are moving forward with the program that is compatible with the Record of Decision so we don't set aside five, 6 years really, of hard work.

The second is that we make sure we are not just compatible with the decision but that we are implementing that decision in a balanced fashion delivering the full range of benefits, not just ecosystem, not just water supply, water quality, levee stability, and so forth.

The third is making sure that we have a program compatible with ecosystem restoration. The fourth is making sure we are doing analysis before we make decisions.

The fifth is economic analysis. We are concerned that we haven't focused enough on economic analysis in making decisions in the CALFED Program. They have done some credible analysis. NRDC recently completed an analysis that showed, for example, Sites reservoir, one of the facilities that CALFED recommends be studied but not yet authorized.

That facility, according to our analysis, would cost approximately $400 an acre foot to deliver water to the agricultural community. Dramatically more to the urban community. More to the urban community, we believe, than any urban water agency would be likely to pay. And in the agricultural community that amount of money is simply beyond the capability of the ag community.

Some of the folks who have advocated the construction of Sites reservoir have been found by the Bureau of Reclamation to be unable to pay more than $12 an acre foot for their water supply. Frankly, we don't think it's likely that the state or Federal Governments are going to construct a reservoir that would cost $400 to deliver water to folks who can afford to pay $12 for their water supply.

The principles that NRDC has recommended aren't abstract. We don't believe it means we should not act. We think we should move forward rapidly. That's why we supported things like the Bay-Delta Accord, the water bond passed last year, Prop 204, state and Federal funding for the CALFED Program.

In light of the time, I'm not going to mention all the different tools that we believe can and should be implemented to strengthen water supply reliability and in the long run protect water quality and the health of the ecosystem. The good news again is from the perspective of CALFED's own economic analysis.

The more benign water policy, water supply tools or also, as Dr. Gleick mentioned, the less expensive tools. They are the ones that are less controversial, less expensive, more environmentally benign and, frankly, clearly more likely to happen in the short-term.

Mr. Chairman, Congresswoman Lofgren, thank you for this opportunity to speak with you. We look forward, as I said, to putting together a broadly supported piece of legislation to implement the CALFED Program. Thank you.

[The prepared statement of Mr. Nelson follows:]

Statement of Barry Nelson, Senior Policy Analyst, Natural Resources Defense Council

Mr. Chairman and members of the subcommittee, thank you for the opportunity to speak with you today regarding California water supply reliability and related issues. My name is Barry Nelson and I am a Senior Policy Analyst with the Natural Resources Defense Council's Western Water Project. I have been involved in California water policy issues for over a decade and have been involved in the CALFED Bay–Delta Program since its inception. NRDC has over 500,000 members, nearly 100,000 of whom live in California.

NRDC works actively to restore the health of the Bay–Delta ecosystem, to improve California drinking water quality and to improve water supply reliability. We believe, for two reasons, that it is essential that Californians act to improve water supply reliability. The first is that unwise water supply activities can undermine ecosystem restoration efforts. The best way to avoid these conflicts is to invest in intelligent water supply activities that are compatible with a healthy ecosystem. The second reason comes from our understanding that providing tangible water supply reliability benefits is essential to broadening support for ambitious ecosystem restoration efforts. In short, we recognize the need to move forward with a balanced program that will benefit the environment and the California economy. The genius of the CALFED Bay–Delta Program is in its recognition that improved water supply reliability, improved water quality and restored ecosystem health are all compatible and must be pursued through a coordinated, interdisciplinary strategy.

The good news, with respect to the topic of your hearing today, is that the CALFED program has been investigating these issues since 1995. Its plan was adopted last year. This plan has been endorsed by state and federal agencies and a broad, bi-partisan range of stakeholders. We support the CALFED program. But the CALFED plan is not simply a list of projects. It is a carefully constructed strategy to assure broad benefits and to allow phased decision-making to take place on controversial issues as adequate information becomes available.

NRDC believes that federal funding for balanced implementation of the CALFED plan is an important key to improving water supply reliability. We look forward to working with you in drafting legislation that will promote this goal. Unfortunately, neither H.R. 1985 or S. 976 is such a balanced bill. I will return to our concerns in a moment, and to other obstacles to progress, but first, I would like to discuss the principles that, we believe, provide the keys to a balanced approach to improving water supply reliability in the coming several years.

Keys to Improving Water Supply Reliability

NRDC and the California environmental community have worked carefully to develop recommendations for the improvement of water supply reliability in California. We have separately provided you with the environmental community's briefing book and blueprint for improved water supply reliability. I have copies with me today. This work leads us to suggest five principles for moving forward with an effective program.

Compatibility with the CALFED Record of Decision: The CALFED process has required leadership, six years and enormous resources from Congress, the state legislature, state and federal agencies and stakeholders. The plan, adopted last August, lays out a road map for moving forward in a balanced manner. Any effort designed to provide water supply reliability benefits for Californians must be compatible with this plan. If efforts that would undermine the CALFED program gain strong support, they will bring down this broad-based effort and weaken other collaborative efforts to meet water supply, water quality and ecosystem restoration needs.

Balanced Implementation of the CALFED Program: Compatibility with CALFED is the first step. The second step is assuring that state and federal agencies are moving forward with a balanced program designed to provide the full range of benefits promised by the CALFED plan. Without such balanced implementation, support for the CALFED program would inevitably erode.

Credible Economic Analysis and "Beneficiary Pays" Financing: For far too long, water supply planning efforts have excluded credible economic analysis and focused on forcing taxpayers to subsidize water development. We believe that we must turn

towards realistic water prices designed to pay for needed improvements and provide incentives to use water efficiently. The failure to incorporate credible economics and financing has led some water users to conclude, erroneously, that a new wave of dam building is required to meet future water needs. Water users cannot pay for such improvements. State and federal budget realities make massive taxpayer subsidies for these projects unlikely. Credible economics and financing are essential to developing realistic projects that will deliver real benefits. The CALFED program has initiated some credible economic analysis, with results I will discuss later. The CALFED plan also requires beneficiaries to pay for proposed new surface storage facilities. These are, we believe, significant steps forward.

Compatibility with Ecosystem Restoration: A healthy ecosystem improves water supply reliability. If the Bay–Delta were allowed to continue to degrade, it would inevitably lead to more listings under the state and federal endangered species acts, additional litigation, additional operational restrictions, increased conflict and reduced water supply reliability. In addition, proposals for future development that would further damage the ecosystem are inevitably met with opposition, delays and escalating costs. Fortunately, in the CALFED plan, in propositions 12, 13 and 204, and in previous federal funding for CALFED, agencies, legislators and stakeholders have accepted this principle.

Analysis Before Decision–Making: As I mentioned above, the CALFED plan is not simply a list of projects. The program did a tremendous amount of analysis to develop its recommended actions. However, in some areas, CALFED recognized that additional analysis was required before making final decisions, particularly regarding controversial, expensive, potentially damaging and questionably viable projects such as new surface storage and proposed new Delta facilities. The CALFED plan lays out an ambitious program of evaluation in these areas, to provide a solid basis for decision-making. In short, to develop workable water supply solutions, we need to make sure that adequate analysis precedes decision-making.

These principles are not abstract, nor are they reasons to delay action. For example, these principles led NRDC to strongly support the water bond last year in California. This bond was consistent with these principles. As a result, it attracted board support, provided broad benefits and was approved by nearly a two-thirds vote of the public. We believe that a similar approach could be successful in crafting federal legislation.

Recent Obstacles to Progress

During recent months, several significant obstacles have emerged, which are hindering progress towards programs to provide improvements in water supply reliability, water quality and ecosystem health. Many of these obstacles indicate that the CALFED "deal" may be unraveling. If this trend continues, it will lead to gridlock, to the detriment of water users and the environment. In short, it would throw out six years of planning, squander broad support for the CALFED plan and make it difficult for a similar broad-based planning process to emerge for years to come.

Imbalanced State Funding: NRDC has supported full funding for CALFED at the state level, even for the portions of the CALFED plan with which we have serious concerns. However, it appears unlikely that state legislators will fully fund CALFED. It appears that storage investigations are likely to receive full funding and that disproportionally large cuts will be focused on the CALFED water user efficiency and water quality programs. The result is that water supply reliability efforts will be undermined. In addition, some water users also succeeded in deleting from the budget language that reflected the CALFED plan beneficiary pays requirement and the requirement that the state create new user fees to support ecosystem restoration. We hope that these problems will be remedied before the budget is finalized. To date, however, pressure from water users is responsible for distorting the state budget to undermine the CALFED program.

Inadequate Federal Appropriations: The CALFED plan will be nearly meaningless if it is not funded. Last year, Congress provided no funds for CALFED. This year, the federal appropriations process again raises serious cause for concern. The Administration is seeking only $20 million in funding for CALFED, down from $60 million in the Administration's budget request last year. The situation in the House is even more dire. The House Energy and Water Appropriations bill includes no funds for CALFED ecosystem restoration, water quality or water use efficiency activities. However, the House bill does include funding for studies for Sites Reservoir. Unfortunately, it appears unlikely that we will see balanced federal funding for water supply reliability or ecosystem restoration activities. With some Californians seeking to undermine the CALFED plan, the likelihood of substantial federal funding in the near future for CALFED's water supply reliability efforts is very low.

Unfortunately, the state and federal appropriations processes appear to be establishing surface storage—the most expensive, controversial, environmentally damaging and speculative projects—as the highest priority for funding.

Sites Reservoir: Because CALFED developed remarkably little information regarding the proposed Sites reservoir, CALFED indicated that additional analysis is required. CALFED did not, for example, determine who might receive benefits from the reservoir, if it were built. However, the CALFED plan does require new facilities to be paid for by beneficiaries, not the taxpayers. Since the adoption of that plan, several developments threaten to undermine the CALFED strategy regarding this facility. A memorandum of understanding signed by the Bureau of Reclamation appears to promise benefits from Sites to specific water users. This document ignores the beneficiary pays requirement and calls for taxpayer funding for the project. As I mentioned above, water users have also succeeded in stripping language from the state budget that simply repeated the CALFED requirement that beneficiaries pay for these projects.

CALFED did not complete an analysis regarding the likely cost of water from a Sites Reservoir to agricultural water users. However, NRDC, using CALFED's methodology and data, has completed such an analysis. A summary is attached. We discovered that, even before considering the needs of the environment, water from Sites would cost over $400 per acre-foot to North of Delta users and $470 to South of Delta agriculture. The cost for urban water users would be much higher, far more than any urban agency would be likely to pay. The strongest supporters of Sites are Sacramento Valley water users, such as the Tehama–Colusa Canal Authority. Some water users in the Tehama–Colusa Canal Authority currently pay just over $11 per acre-foot. In fact, the Bureau of Reclamation has found that these water users are incapable of paying more. As a result, they are not paying the Bureau what they already owe taxpayers for capital repayment, operations and maintenance costs and restoration fund charges. In summary, the strongest supporters for Sites Reservoir, a project that would produce water costing $400 per acre-foot, have been officially found by the Bureau of Reclamation to be incapable of paying more than $12.00 per acre-foot. We found that operating the project to provide water for South of Delta CVP customers would require an annual subsidy of nearly 100 million dollars. State and federal agencies are well aware of these problems with Sites Reservoir, which is why CALFED proposed going no farther than preparing additional studies.

H.R. 1985 and S. 976: Unfortunately, these two pieces of federal legislation both violate all of the principles I outlined above. Neither is compatible with the CALFED plan. Neither would effectively promote improved water supply reliability. I have attached a short summary of our concerns regarding H.R. 1985. We have also provided your office with a much more detailed analysis of the many ways in which this bill conflicts with the CALFED program. I would like to mention just a few of the obstacles to improving water supply reliability that this bill would create.

1. Undermining State Water Rights. The bill would give federal agricultural water contractors South of the Delta first claim on any water controlled by federal agencies, in order to guarantee a specified level of delivery. This provision would turn California water rights on its head—essentially turning junior contractors, such as the Westlands Water District, into senior water rights holders. This provision could be used by West side water users to undermine the reliability of water supplies for Silicon Valley, for the East Bay and for other parts of the state. The near certainty of this threat is demonstrated by the Westlands Water District's attack on water supplies for farmers on the East side of the San Joaquin Valley.

2. Undermining Ecosystem Restoration. The Westlands Water District has sought for years to weaken legally required environmental protections for the Bay and Delta, endangered fish species, wildlife refuges and the Trinity River. These interests have already sued to block restoration actions on several fronts. In 1995, they sought to repeal much of the Central Valley Project Improvement Act. The proposed delivery guarantees would provide them with another tool in this effort. If passed, this language would be immediately cited in Westlands' existing legal attacks on environmental protection. The bill would also redefine the CALFED ecosystem restoration program and create numerous new obstacles to federal and even state participation in ecosystem restoration efforts. The lack of clarity in these provisions would be certain to lead to decades of litigation.

3. Prematurely Authorizing Water Development Facilities. The CALFED plan clearly calls for careful analysis of proposed new surface storage facilities prior to seeking congressional authorization. H.R. 1985, on the other hand, would authorize these facilities, following the submission of a report to Congress. The bill would allow authorization to be withdrawn if a report is rejected by two congressional committees within 60 days; however, this timeline makes such congressional action extremely unlikely. This approach would violate the CALFED plan and long-standing

congressional precedent. The bill would also pre-authorize Sites Reservoir and unnamed facilities in the San Joaquin Basin that CALFED concluded were so premature and problematic that the program did not even project possible dates for a recommendation to Congress. As I discussed previously, economic analysis by CALFED and NRDC suggest that, even without considering environmental needs, none of these projects is viable as a water supply facility. And finally, the bill would allow the Secretary of Interior, in cooperation with a CALFED governance body that does not yet exist, to trigger authorization for virtually any facility in the Central Valley, including some, such as the Peripheral Canal and Auburn Dam, that CALFED has explicitly rejected.

4. Undermining the Environmental Water Account. The bill would also redefine the Environmental Water Account (EWA) in a way that could harm South of Delta water users. The EWA is designed to help restore the Bay–Delta and protect endangered species without affecting the water supplies of South of Delta water users. If the EWA is redefined, as proposed in H.R. 1985, it would render the EWA inadequate to achieve this goal. As a result, South of Delta water users, including the Santa Clara Valley and Southern California, would almost certainly see increased disruptions in water deliveries.

In each of the above ways and more, H.R. 1985 would undermine the CALFED plan. We have similar concerns regarding S. 976's treatment of storage facilities and CVP deliver assurances.

The CALFED plan is binding on both state and federal agencies. H.R. 1985 would fundamentally alter the plan in a number of respects. These changes would bind federal agencies. However, California agencies would continue to be bound by the existing plan. If the bill were to be enacted, state and federal agencies would be working to implement different and conflicting programs. At its heart, CALFED is a cooperative arrangement between state and federal agencies. By legislatively altering the CALFED plan and commitments made by federal agencies, the bill would undermine this partnership.

Westlands' Attack on the San Joaquin River has Blocked Transfers. As I mentioned above, the Westlands Water District has attacked farmers on the East side of the Central Valley in an attempt to take one third of the flow of the San Joaquin River. Many of the farmers on the East side have a long history of selling water to help Westlands growers meet their needs. Indeed, the emergence of a vital water market among South of Delta water users is a striking success story. We have strongly supported these transfers, which help meet agricultural water needs and provide incentives for growers to use water efficiently. However, it is not surprising that these East side farmers are now unwilling to sell water to Westlands. As a result, this year, the San Joaquin River petition is probably costing Westlands Water District growers hundreds of thousands of acre-feet of water.

Bureau of Reclamation's Failure to Reform Expiring CVP Contracts: One of the primary causes of concerns regarding water supply reliability is the Bureau of Reclamation's practice of developing water without regard to efficient use or environmental impact. Thus, massive exports from the Delta were promised to water users, regardless of their willingness to pay the cost of that water and regardless of impacts on California's wildlife, fisheries and water quality. Today, laws passed because of strong public support for environmental protection have properly, if belatedly, imposed some outer limits on how much destruction can be caused by water projects. As a result of these modest movements towards balance, exporters who came to rely on free or virtually free water from the Delta, now complain of reliability problems.

Unfortunately, the Bureau of Reclamation is proposing to worsen these problems. Instead of charging the true value of water to its customers, it is offering new 25 and 50 year contracts for water at a fraction of its true cost. Instead of reducing quantities to the amount that is actually available, the Bureau is rolling over unrealistic quantities from the 1940s and 1950s. Instead of requiring efficiency and reasonable use of water, the Bureau is proposing to provide water to water rights holders and other prior rights holders at virtually no cost and with no conservation requirements.

Fundamentally, the Bureau of Reclamation's position regarding the renewal of expiring Central Valley Project contracts is decreasing water supply reliability by promising more water than it knows it can deliver, by charging prices that encourage water wasting and by failing to require conservation efforts.

Recommendations

So how should we move forward to improve water supply reliability? NRDC recommends that any water supply program be consistent with the principles presented above. We support federal funding and believe that there is an important

role for federal agencies to play in implementing a wide range of tools with dramatic potential water supply reliability benefits. These tools include:

- Agricultural water conservation
- Urban water conservation
- Voluntary water transfers
- Conjunctive use
- Cleaning up contaminated groundwater basins
- Dry-year land fallowing
- Permanent retirement of drainage-impaired agricultural land
- Urban water recycling
- Desalination

CALFED's own economic analysis reveals that these approaches are all less expensive than destructive new surface storage projects. They are also far less controversial, potentially less environmentally damaging and far more likely to produce benefits in the short run. This is why the CALFED plan sets the stage for an ambitious, multi-disciplinary strategy, including these tools, to help California meet its current water needs. These recommendations are discussed at length in the environmental community's Blueprint for an Environmentally and Economically Sound CALFED Water Supply Reliability Program. We have provided your office with a copy of this document.

We firmly believe that it is possible to develop broadly-supported federal legislation that will improve water supply reliability, as well as ecosystem health and water quality. Neither H.R. 1985 nor S.976 will achieve this goal. We believe that new language being prepared by Congressman Miller and Senator Boxer may come closer to this goal of balanced implementation. Unfortunately, some water users appear to see this moment as an opportunity to rewrite the CALFED deal and to advantage themselves at the expense of the environment, urban and other agricultural water users. We believe that this effort will be unsuccessful. The result, we fear, could be gridlock in Washington and in Sacramento, reduced funding levels, decreasing confidence that cooperative ventures such as CALFED can produce results, decreased state and federal leadership, missed opportunities, litigation and, most importantly, declining water supply reliability, water quality and ecosystem health.

In a time of constrained state and federal budgets, it is essential that public investment in water issues be designed for maximum benefit. The stakes are too high to squander resources on ineffective, unwise projects. The CALFED plan is far from perfect. However, our choice today is a simple one, join together to implement this program in a balanced manner or throw away six years of work, return to the water wars and gridlock of a decade ago, wait for a drought, and pray.

We appreciate this opportunity to speak with you. NRDC looks forward to working with you to craft legislation that will meet the needs of California's environment and economy.

Attachments:

- Summary of concerns regarding H.R. 1985
- Summary of NRDC's economic analysis of proposed surface storage facilities and financing

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SUMMARY OF CONCERNS REGARDING THE WESTERN WATER ENHANCEMENT SECURITY ACT

JUNE 18, 2001

Congressman Ken Calvert has introduced legislation regarding California water issues. NRDC supports federal legislation to help restore the San Francisco Bay–Delta environment, to improve water quality and improve California's water supply reliability. However, NRDC opposes this bill due to the following concerns. As currently written, the legislation would:

Authorize Environmentally and Economically Unjustified Surface Storage Projects: The bill would authorize new and expanded dams that could further damage an already overtapped San Francisco Bay–Delta ecosystem, endangered species such as the winter run Chinook salmon and valuable commercial and recreational fisheries. The total amount of storage contemplated by the bill is roughly equal to the capacity of Lake Shasta, the state's largest reservoir.

Provide Unprecedented Authority to the Department of the Interior to Construct New and Expanded Dams: The bill would provide the Department of Interior with unprecedented authority to authorize projects in California's vast Central Valley. Projects would be authorized if Congressional committees fail to reject, within 60 days, a report on proposed projects from the Department of Interior. These projects

would not receive any review from the full House or Senate. The bill would also give the Secretary authority to authorize projects that CALFED has rejected, such as the Peripheral Canal and Auburn Dam.

Mandate Agribusiness Water Delivery Levels at the Expense of Critical Needs: The bill would make the delivery of subsidized water for a small group of Central Valley agricultural contractors the highest federal priority in California. Such guarantees are unprecedented and dangerous. This language would override other CALFED programs and create many problems, potentially including:

- Undermining State Law and Other Water Users: The bill would appear to create a legal entitlement which Westlands could use in existing and likely future litigation to attack other water users (EBMUD, Friant, Sac Valley, etc.).
- Undermining Environmental Protections: Perhaps the most likely short-term outcome of this provision would be to force DOI to try to roll back environmental protections under the Clean Water Act, the ESA or the CVPIA.
- Prohibiting Purchases: The bill could prevent the Environmental Water Account from purchasing water, which has provided approximately half of the water for the EWA.
- Require development of new supplies: The bill would essentially give CVP contractors "first call" on all storage and on all water supply reliability funding through CALFED until they had achieved clear reliability at this mandated level.

The bill would turn the CALFED program into a permanent mitigation fund for water users: The bill would require the CALFED ecosystem restoration program to offset all impacts from Endangered Species Act protections on all water rights holders in most of California. This provision could also be read to require CALFED to pay all ESA-related water costs from future water development in the entire Bay–Delta solution area, forever.

The bill interferes with ecosystem restoration: The bill would prohibit federal OR State land purchases for ecosystem restoration until a management plan is adopted. The bill could prohibit all state and federal CALFED ecosystem land acquisition to be halted permanently if, for any reason, this plan not be adopted by January 1, 2003. The bill also creates a new undefined mitigation responsibility for "cumulative impact on the local government and communities" from all CALFED land acquisitions. Finally, the bill requires the CALFED ecosystem program to meet "coequal objectives of achieving local economic and social goals and to implement the ecosystem restoration goals in the record of decision." (section 102(g). These provisions are poorly defined and would create new obstacles and legal liabilities for the ecosystem restoration program.

Abandon the CALFED Process. The joint state-federal CALFED Bay–Delta Program has prepared an ambitious, if imperfect, plan regarding water supply, water quality and aquatic ecosystem restoration. However, the bill would abandon the CALFED plan and return California to the old approach of asking taxpayers to pay for destructive water projects to deliver subsidized water to agricultural users. The bill would overturn or ignore CALFED requirements regarding:

- "Beneficiary Pays : The CALFED plan requires new surface storage to be paid for by users, not taxpayers.
- Ecosystem Funding: The CALFED plan requires $150 million per year in ecosystem restoration funding (from state, federal and local sources.) The bill would steer scarce federal resources into new surface storage projects.
- Water User Fees: The CALFED plan requires $35 million per year in new water user fees to help pay for the CALFED program. User fees are not discussed in the bill.
- Analysis Before Decisions: The CALFED plan includes timelines for evaluating new storage facilities before Congress would vote to authorize individual projects. The bill would authorize projects without analyzing costs, benefits, financing and environmental impacts.
- Management of Any New Facilities. The CALFED plan includes requirements for the operation of any new storage facilities (such as providing flows for fish restoration), to assure balanced projects. The bill abandons this approach in favor of a legislative guarantee of water deliveries for a small segment of the agricultural community, at the expense of other water users and the environment.
- Implementing Current Law: The CALFED plan includes decisions regarding the implementation of the Endangered Species Act and the Central Valley Project Improvement Act, signed in 1992 by President Bush. Implementation of these laws could be required to be revisited if they interfered with the water delivery mandate.

- Balance: The CALFED plan includes interconnected programs designed to assure progress on water supply reliability, water quality and ecosystem restoration. The bill would abandon this approach and fail to serve the California environment or its economy.

The Path to Success: California's recent experience with passing $4 billion in parks and water bonds suggests a workable Congressional strategy. In 1998, the California legislature considered and rejected a water bond that featured expensive and controversial dam projects. At the end of 1999, the legislature refused to make this mistake again. It stripped out controversial provisions and passed a water bond with broad support. The resulting bonds were passed by a 2/3 vote of the public, with strong urban, agricultural and environmental support. A similar congressional strategy would lead to a bill with real environmental, water supply and water quality benefits.

SUMMARY OF THE CONCLUSIONS OF NATURAL RESOURCE ASSOCIATES' ANALYSIS OF PROPOSED NEW SURFACE STORAGE FACILITIES AND FINANCING

MARCH 30, 2001

This analysis investigated the cost of proposed new surface storage facilities under evaluation by the CALFED Bay–Delta program and their cost-effectiveness for providing water supply for Central Valley agriculture. To assure its credibility, this analysis was prepared in consultation with CALFED staff. The analysis has produced several important results.

CALFED Overestimated Potential Yield from New Surface Storage: This analysis revealed that CALFED's analysis significantly overstated the potential water supply from new and expanded dams. Specifically, the CALFED analysis failed to consider the impact of groundwater, land retirement and other programs on the demand for and yield of water from these projects. Given ongoing efforts to improve groundwater management and calls from the Westlands Water District to retire 200,000 acres of farmland from that district, these impacts are certain to be significant. This new analysis suggests that, CALFED overestimated potential yields as indicated below.

Revised Maximum Yield Estimates		
Potential New Surface Storage Project	**CALFED Yield Estimate**	**Revised Maximum Yield Estimate**
Raised Shasta Dam	80,000 acre-feet	76,000 acre-feet (for agricultural use)* 25,000 acre-feet (for urban use)*
Sites Reservoir	450,000 acre-feet	242,000 acre - feet (for agricultural use)* 58,000 acre-feet (for urban use)*

*These projects would provide different water supply yields for agricultural and urban water use, because of different demand patterns and other available supplies.

Even These Revised Yield Estimates are Unrealistically High: The revised estimates in this analysis are likely to be optimistic regarding potential yield from these facilities, because neither CALFED nor this analysis have yet incorporated the needs of the environment. Protecting the Sacramento River, the Bay–Delta and natural resources such as the endangered winter run Chinook salmon would require restrictions such as limiting the filling of any new storage. Further analysis will certainly show that, unless these facilities ignore the needs of the environment and the requirements of the Endangered Species Act, actual water yields would be significantly lower than indicated here.

Water from New Surface Storage is Too Expensive for Agriculture: This analysis reveals that Central Valley agricultural interests are unable to pay the cost of water from these proposed facilities. For example, the Westlands Water District, the agricultural district in the Central Valley most vocal about its need for more water, now pays $58 to $68 per acre-foot for water from the

Central Valley Project. Water from new surface storage, however, would cost $207 to $1,064 per acre-foot—far more than this water would be worth to farmers. These cost estimates are almost certainly too low, because this analysis has not yet considered likely cost overruns or the needs of the environment.

Agricultural Willingess to Pay for Water from New Surface Storage Projects		
Current Westlands Water District CVP Agricultural Water Rates (per acre-foot)	Value of Additional Water in Agriculture (additional revenue per acre-foot)	Revised Cost of Water for Agriculture from New Dams (per acre-foot)
$58-$68	$40-$160	$207 – Shasta $470 – Sites $1,064 – Los Vaqueros

Total Possible Subsidies: The Westlands Water District alone would be willing to take the entire yield of new proposed facilities. Westlands and other agricultural interests have requested that they receive water from these facilities at current water rates. If this request were granted and if Sites Reservoir were constructed and operated to deliver 242,000 acre-feet of water annually to the Westlands Water District, it could result in a subsidy of nearly $100 million per year. This is an unlikely outcome, but, this estimate provides a sense of the scope of potential new subsidies.

These Cost Estimates Raise Questions about the Willingness of Urban Water Users to Pay for These Facilities: Although urban willingness to pay for new surface storage was not the focus of this analysis, these new cost estimates raise serious questions about the willingness of urban water agencies to pay for new surface storage, given the availability of less expensive options (such as conservation, reclamation, water transfers and even desalination).

Background: Central Valley agricultural interests have led the charge for the construction of new and expanded dams to divert more water from California's already overtapped rivers. Water subsidies have long encouraged inefficient and excessive water use. Further subsidized water projects could harm threatened ecosystems and salmon runs. The CALFED plan requires that any future surface storage projects be paid for by water users, not taxpayers. However, CALFED has not prepared specific proposals regarding the operation or financing of the new facilities it is evaluating.

Recommendations: As a result of this analysis, NRDC recommends that the CALFED program:

- Re-estimate the water supply benefits of proposed new and expanded dams.
- Revise its economic analysis regarding the cost-effectiveness of water supply tools.
- Increase the role of economics as a key tool to avoid unjustified projects and to develop meaningful water supply reliability goals.
- Prepare draft operation plans for proposed new surface storage facilities to protect natural resources.
- Prepare specific draft financing plans for proposed new facilities, identifying beneficiaries, willingness to pay, and implementing the CALFED "beneficiary pays" principle.

Finally, we recommend that the CALFED program wait for full analyses to be completed prior to making decisions regarding the justification for any individual new surface storage facility.

CONFLICTS BETWEEN THE WESTERN WATER ENHANCEMENT SECURITY ACT AND THE CALFED RECORD OF DECISION

JUNE 18, 2001

The bill conflicts with the state-federal partnership that is essential to the success of CALFED.

The CALFED ROD is binding on both state and federal agencies. The bill would fundamentally alter the ROD in a number of respects. These changes would bind federal agencies. However, California agencies would continue to be bound by the ROD. If the bill were to be enacted, state and federal agencies would be working to implement different and, in some respects, conflicting programs. This would necessarily create conflicts between state and federal agencies regarding funding, findings regarding balanced implementation, as well as individual projects. At its heart, CALFED is a cooperative arrangement between state and federal agencies. By legislatively altering the ROD and commitments made by federal agencies, the bill would undermine this partnership.

The bill would undermine the CALFED ROD regarding surface storage.

The bill would eliminate congressional oversight and prematurely and inappropriately authorize dam projects, in conflict with the ROD: The CALFED ROD states that once extensive required evaluations are completed and if specified criteria are satisfied, it could be appropriate to seek authorization for expanded Shasta and Los

Vaqueros reservoirs at the end of 2004 (ROD, p. 44–45). Thus, the ROD reflects Congress' traditional requirement that the Bureau of Reclamation provide such analyses (operations plans, financing plans, environmental documentation, etc.) before Congress votes to authorize construction. In contrast, the bill would require the Secretary of the Interior to submit a report regarding specified projects to two committees. If those reports were not rejected by both committees within 60 days—a nearly impossible timeline, given the congressional calendar—projects would be automatically authorized (Sec105(c)(4)). Of course, Congress always has the ability to withdraw authorization from a project. The bill would essentially provide full authorization to construct projects, contingent only on the submittal of a report to Congress. The bill also eliminates any role for the Senate Committee on Environment and Public Works.

The bill would authorize projects that the CALFED ROD does not find worthy of authorization: The CALFED ROD states that Site Reservoir and San Joaquin River storage should be studied. However, both of these projects are very conceptual and existing information regarding both suggest that they are infeasible. Indeed for the San Joaquin River, CALFED has not even selected a site for a possible project. Given the problems facing these projects and their highly preliminary nature, the ROD does not even discuss dates for possible Congressional authorization (p. 45). In contrast, the bill would authorize both of these projects, subject only to the submission of a report to Congress (Sec105(c)(4)).

The bill would give the Secretary unprecedented authority to authorize projects not included in, or even rejected by, the CALFED ROD: The CALFED program considered and rejected facilities such as Auburn Dam and the Peripheral Canal. However, the bill would provide the Secretary with authority to authorize for construction these or nearly any other facility in the CALFED solution area (Sec. 105((b)(1)). The Secretary is directed to submit reports to authorize projects on behalf of the governance board and in "cooperation" with the State of California. However, the governance board has not been created, nor has the process by which this board would make decisions been determined. Therefore, the bill would impose little practical constrain on the Secretary's ability to authorize virtually any project in the CALFED solution area, even projects explicitly rejected by CALFED.

The bill would require CALFED to pursue projects even if they are determined not to be viable: The CALFED ROD calls for careful evaluation of proposed storage projects prior to determining if they are viable and worthy of submission to Congress for authorization. Of course, should individual projects be determined to be not viable, CALFED would conclude its analysis. However, the bill would require CALFED to continue evaluations for facilities even if they are determined not to be viable. For example, if CALFED determined that one of the listed projects is not economically viable, the draft would still require the preparation and submission to Congress of full, final environmental impact studies.

The bill would change the CALFED timeline: The bill shortens the timeline for surface storage investigations in the San Joaquin Basin. The CALFED ROD does not include a construction date for these projects, because they are currently so speculative and expensive. The ROD does call for initial evaluations to be completed by the middle of 2006. The bill requires a full report (final EIS, etc.) to be submitted to Congress by January 2005.

The bill conflicts with CALFED commitments regarding the operation of storage.

The bill contains no safeguards that any new surface storage would be operated as described in the ROD. Indeed, the operational goals envisioned by CALFED conflict with the historic CVP operation and current CVP contracts. The CALFED ROD indicates that new surface storage would only be constructed if it would have broad benefits. CALFED has explicitly rejected the Central Valley Project's historic primary operational goal of maximizing yield. Instead, CALFED is investigating the potential for storage to create "much needed flexibility in the system to improve water quality and support fish restoration efforts" (ROD, p. 42). However, the bill fails to implement this new direction. It is likely that new federal construction funds would be directed to the Bureau of Reclamation. Such funds would likely to be used to construct facilities such as expanding the Central Valley Project's Shasta Dam. The Central Valley Project (CVP) is already overcommitted. Specifically, the project is unable to deliver full contract amounts for all CVP contractors. The Department's position regarding the renewal of CVP contracts would continue to commit to unrealistically high water delivery levels. If Shasta Dam were raised, or if other facilities were constructed through the Bureau of Reclamation, it is highly likely that these facilities would be operated as are current facilities. For example, 90 percent of the water from the CVP is delivered to agricultural contractors at subsidized rates. The CVP delivery assurances raise this probability to a near certainty. Such an operation for new storage facilities would not be consistent with the CALFED ROD,

however, the bill fails to require the operation of new storage facilities to be different from the status quo in the CVP.

The bill conflicts with the CALFED beneficiary pays financing requirements for surface storage.

Current CVP operations present obstacles to a beneficiary pays program: The ROD discussion of surface storage requires that "final cost allocations, however, will be based on the principle of "beneficiaries pay " (ROD, p. 47). There is, however, no beneficiaries pay requirement in the bill regarding CALFED implementation. In fact, the Bureau's current interpretation of reclamation law does not permit them to charge interest to CVP agricultural service contractors. Additional language would be necessary to implement the CALFED beneficiaries pay principle.

The CALFED program has not completed cost allocations for surface storage: Repayment of principal and interest is only one facet of a credible beneficiary pays financing program. Equally important is the cost allocation process, by which total project costs are allocated to beneficiaries. Traditionally, a large percentage of the cost of water projects has been assigned, often without justification, to the public. Despite repeated requests, CALFED has not developed a credible basis for the required cost allocations for proposed facilities. The bill fails to require a credible cost allocation process.

CVP agricultural and even urban water contractors have paid only pennies on each taxpayer dollar invested in the CVP. CALFED has clearly rejected this subsidized approach to water development. The bill, however, fails to implement the new direction required by CALFED. A beneficiary pays financing program is essential to assure that the CALFED water supply program does not encourage inefficient water use and environmentally and economically unsound projects.

The bill would provide CVP growers with assurances that would undermine the CALFED plan, ecosystem restoration, and other water users and increase pressure for subsidies.

The CALFED ROD states that CALFED agencies "expect" the program to result in 65 to 70 percent deliveries in average years. On the other hand, the bill would guarantee 70 percent deliveries in years within 5 percent of normal (Sec. 103(a)(3)). Thus, the bill directly undermines one of the most carefully written sections of the ROD. It would provide a legal guarantee that was rejected by CALFED agencies. It would also redefine the definition of a normal water year and increase the required level of delivery. The bill does not discuss what would happen if the CVP were unable to meet the mandated delivery level. Several outcomes are possible.

- Undermining State Law and Other Water Users: Despite some revisions to previous drafts, the language would appear to create a legal entitlement which Westlands could use in existing and likely future litigation to attack many other water users (EBMUD, Friant, Sac Valley, etc.) In this way, despite the language in section 102(h), the bill appears to interfere with state water law.
- Undermining Environmental Protections: Perhaps the most likely short-term outcome of this provision would be to force DOI to try to roll back environmental protections under the Clean Water Act, the ESA or the CVPIA.
- Prohibiting Purchases: The bill requires that CVP deliveries be maintained without "reducing deliveries" to other users. Because voluntary transfers result in reduced deliveries, the draft could be read to prohibit South of Delta transfers to maintain CVP delivery levels. This provision could prevent the EWA from using water purchases, which have provided approximately half of the water for the Environmental Water Account.
- Require development of new supplies: The bill would essentially give CVP contractors "first call" on all storage and on all water supply reliability funding through CALFED until they had achieved clear reliability at this mandated level. If the bill resulted in a requirement that deliveries be maintained at current costs, it would violate the "beneficiary pays" requirement of CALFED. The bill would force water supply funding and CALFED tools to be designed to benefit CVP agricultural service contractors, at the expense of other water users and other CALFED programs.

At a minimum, this provision would result in years of litigation and an ongoing, and worsening problem. Westlands' CVP contract expires in 2008. This provision, however, would be permanent. It would create an enormous obstacle to negotiating a realistic contract total. This problem would become worse over time as areas of origin increase their demand, thereby reducing Delta supplies. This language could be read as creating a permanent federal "export" right conflicting with state "area of origin" rights.

The bill redefines the Environmental Water Account.

The bill would narrow the focus of the EWA: The definition of the EWA focuses exclusively on ESA compliance (Sec.4(8)) and excludes the requirement in the ROD

that ROD the EWA also contribute to broader ecosystem restoration (p. 4). The bill also requires first priority in managing the EWA to be given to meeting assurances in the ROD (Sec. 103(b)(2)). This provision also establishes ecosystem restoration as a secondary priority. This open ended language could be interpreted as guaranteeing water users first call on EWA water, even when there is no corresponding reduction in Delta pumping as described in the ROD.

The bill would eliminate the "tier 3 water" required by the ROD: The bill would establish the maximum legal exposure of water users, in case of a failure of the EWA (Sec. 103(b)(2). This definition excludes "tier 3" water which the ROD indicates may be required under some circumstances.

The bill is inconsistent with the ROD with regard to increased pumping from the Delta: The ROD clearly indicates that the impacts of proposed increases in State Pumping are not "covered" by the EWA (p. 49). The bill could be read to violate the ROD by requiring the EWA and the ERP to "maximize the water supply benefits to be provided by the increased pumping capacity" (Sec. 103(a)(4)(B)). The impacts of this increase should be addressed through mitigation in a new operations plan required by the ROD. They should not be addressed by using the EWA and the ERP as a mitigation fund for increases in Banks pumping.

The bill would turn the EWA and the Ecosystem Restoration Program (ERP) into a permanent mitigation fund for water users throughout nearly the entire state.

The bill would require the EWA and the ERP to be used to offset all impacts from ESA protections on all water rights holders in the Bay–Delta solution area. This provision would insulate most California water users from ESA actions related to water allocations, even those having nothing to do with the Bay–Delta. It could also be read to require CALFED to pay all ESA-related water costs from future water development in the entire Bay–Delta solution area, forever. The lack of a clearly defined baseline (an issue carefully addressed in the ROD) would likely result in significant legal uncertainty.

The bill interferes with ecosystem restoration.

The bill blocks land acquisition: The bill would prohibit federal OR State land purchases for ecosystem restoration until a management plan is adopted (Sec. 103(c)). The bill could override state initiatives through CALFED program and halt essential ecosystem restoration efforts. In addition, the bill would require all state and federal CALFED ecosystem land acquisition efforts to be halted permanently if, for any reason, this plan not be adopted by January 1, 2003.

The bill creates a new mitigation responsibility: The bill requires mitigation for "cumulative impact on the local government and communities" from all CALFED land acquisitions. These impacts are not defined, nor is mitigation. This provision would create a new open-ended mitigation obligation that could be a significant obstacle to ecosystem restoration and a significant legal liability for CALFED (Sec. 102(f)).

The bill redefines the CALFED program. The bill would require CALFED to develop partnerships with "landowners and local governments" to meet "coequal objectives of achieving local economic and social goals and to implement the ecosystem restoration goals in the record of decision." (section 102(g). This provision would redefine the purpose of any CALFED ecosystem restoration project that required land acquisition. Such "local economic and social goals" are undefined and have never been discussed in the CALFED program. This requirement could hamstring the ecosystem restoration program.

The bill limits ecosystem funding: The bill requires "equal funding" for yield improvements and environmental benefits in 2002 (Sec. 101(b)(2)). This requirement ignores the fact that some "ecosystem" funding provides direct water user benefits (e.g. fish screens). Such a requirement could reduce funding for ecosystem restoration and interfere with a balanced program. It could also reduce funding for the Environmental Water Account, which could effectively terminate CALFED's efforts to reduce the impacts of the Endangered Species Act on water users.

The bill would give water users first priority in allocating Ecosystem Restoration Program assets. The bill would establish the delivery of water to CVP and SWP contractors as the first priority of the Ecosystem Restoration Program (Sec. 103(b)(2)). This provision, which is discussed above, would turn the EWA and the Ecosystem Restoration Program into a mitigation fund for existing and future water development.

The bill would interfere with balanced funding of the CALFED program.

The specificity in the bill regarding the storage and deliver assurances would establish these as the de facto priorities for federal funding. There are no comparable requirements for any other section of the CALFED program. The likely result is that funding for other CALFED programs (e.g. water use efficiency, ecosystem restoration, water quality) would receive lower priority in the appropriation process.

The bill does not clarify the relationship between the Small Reclamation Projects (Title II) and the CALFED program.

Would the Small Reclamation Projects be consistent with the CALFED Ecosystem Restoration Program? The CALFED ROD requires water supply activities to be compatible with, indeed to further, the ecosystem restoration program. However, given the damaging impacts of much water development, projects funded through the Small Reclamation Projects could undermine the CALFED ecosystem restoration program.

How would the Small Reclamation Projects be considered in the annual balancing determination process? The CALFED program requires an annual finding of balanced implementation. It is not clear, however, how the Small Reclamation Projects be considered in this finding.

The bill does not clarify the scope of the Small Reclamation Projects. The bill does not provide clarity regarding the scope of the program. Is funding from this title intended to be for activities that are not eligible for CALFED funding? Could the Water Supply Program fund projects that CALFED has rejected as inappropriate?

The bill contains a clear bias towards supply-side actions.

The bill abandons CALFED's water supply reliability goal, which treats equally water management actions that would improve reliability through increasing supply or decreasing demand. The bill incorporates a "yield" concept that CALFED rejected (Sec. 3(1), Sec. 4(14), Sec. 104(b)(1)(A)) . This "yield" approach does not discuss, and may exclude, key reliability tools such as water transfers and land retirement.

The bill would create guarantees that could allow water users to avoid repayment of loans.

The bill would create loan guarantees that would allow water users to default on loans. This provision would defeat other sections of the bill that would require repayment of loans with interest (Sec. 105(b)(2)). It would also violate the "beneficiary pays" provision of the ROD.

The bill would fail to promote balanced implementation of the CALFED program.

The bill would direct the Department of Interior to emphasize CVP deliveries and surface storage development, at the expense of other elements of the CALFED program. The bill fails to encourage the implementation of other key CALFED ROD requirements, including:

Dedicated Ecosystem Restoration Funding: The ROD requires the establishment of new broad-based water user fees of at least $35 million per year to support ecosystem restoration (ROD, page 38). The bill should provide that establishment of such a dedicated restoration funding is necessary for a federal finding of balanced implementation of the CALFED program. In addition, the bill should direct DOI, in concert with the state, to develop recommendations for a diverse set of funding mechanisms to ensure stability in funding for the restoration program over the long-term.

Beneficiary Pays Financing Plans for Proposed Surface Storage: The ROD requires beneficiaries to pay the true costs of new surface storage facilities. The bill should require DOI to complete a financing plan reflecting CALFED's beneficiary pays requirement for each proposed surface storage facility. Such plans should be submitted at least one year prior to congressional consideration of any proposed facility (ROD, pages 45 and 47).

Environmental Restoration Water: The ROD requires CALFED to acquire a minimum of 100,000 acre-feet of additional water per year to implement the ecosystem restoration program on upstream tributaries (ROD, page 36).

Program Consistency: The bill fails to require all agencies receiving federal support to ensure that CALFED supported water projects constructed or operated in the Central Valley contribute to the CALFED ecosystem restoration program and do not undermine the achievement of the CALFED restoration objectives (ROD, page 43).

Water Use Efficiency Funding: The bill fails to require DOI to submit to Congress, by July 2001, a detailed finance proposal, including local cost sharing, to assure that federal taxpayer investments in water use efficiency are cost-effective and provide near-term benefits for water users and ecosystem restoration (ROD, page 62).

Agricultural Water Use Efficiency Implementation: The bill fails to require the DOI to complete, by August 2001, specific milestones, associated benefits, remedies and consequences for the agricultural water use efficiency program (ROD, page 62).

Delta Drinking Water Quality: The bill fails to require the EPA, in cooperation with the State, to establish a comprehensive drinking water policy for the Delta and upstream tributaries by the end of 2004 (ROD, page 67).

Science: The bill fails to require DOI to develop and implement the science-based milestones, models, indicators, reports and programs described in the ROD (ROD, page 76). The bill does not provide dedicated funding to implement the science

program or ensure that the scope of the science program includes review of all aspects of the CALFED program, not just the restoration element.

Mr. CALVERT. Thank you.

Mr. Diridon, you may begin.

STATEMENT OF ROD DIRIDON, JR., COUNCIL MEMBER, CITY OF SANTA CLARA, CALIFORNIA

Mr. DIRIDON. Mr. Chairman, Congresswoman Lofgren, thank you for the opportunity to speak with you today and to provide some testimony on Northern California's water security, opportunities, and challenges.

My name is Rod Diridon, Jr., and I'm a City Council Member for the City of Santa Clara and Chairman of the Treatment Plant Advisory Committee for the jointly owned San Jose, Santa Clara Water Pollution Control Plan also know as WPCP. I also have the endorsement of San José Mayor Ron Gonzales for these comments.

The City of Santa Clara has consistently supported the progress of CALFED which provides the most promising in resolving the problems in the Bay-Delta. My comments today will focus on the regions cooperative efforts to improve the water shed, protect endangered species, and provide a drought-proof water supply through an aggressive and successful recycled water program.

The San Jose, Santa Clara WPCP is one of the nation's largest advanced watershed treatment plants serving 1.3 million residents and businesses in eight cities and the adjacent unincorporated county areas of the South Bay.

In 1991 with assistance from the U.S. Bureau of Reclamation Santa Clara, San Jose, and other agencies involved with the Water Pollution and Control Plan designed and built a regional water recycling project, the largest of its kind in Northern California. It consist of over 60 miles of distribution pipeline, three pump stations, and a 4 million gallon reservoir.

The initial impetus for constructing this system was to protect endangered species by avoiding the potential for salt marsh conversion at the watershed discharge point into the San Francisco Bay.

Water recycling provides other environmental and economic benefits such as watershed protection and drought-proof water supplies. Although the plan is designed for capacity of up to 167 million gallons per day, a trigger of only 120 million gallons a day was set by the state and Federal Governments in 1990 to protect against potential marsh conversion.

Phase 1 of the South Bay Water Recycling Program was completed at a cost of $140 million and became fully operational in 1998. This summer we expect to deliver an average of 10 million gallons a day with peak demand up to 15 million gallons. The system has the potential to divert 50 to 100 million gallons per day, depending on additional distribution pipelines and pumps.

To ensure the economy of Silicon Valley can maximize its potential and contribute to state and national economies as well, we are fully engaged in expanding our commitment and reliance on this incredibly valuable resource.

There are over 300 customers of the system currently, and more are added each quarter. The City of San José has been negotiating

a cooperative agreement with Calpine/Bechtel in the event that the California Energy Commission approves an operating license this summer for the proposed 600 megawatt Metcalf Energy Center.

This is a key element of the agreement and this is how to meet the power plant's need for an average of 3 million gallons of water per day. This will be recycled water when it comes on line in 2003.

A 10-mile pipeline extension would be required to serve the power plant. If sized to supply other customers further south, the projected cost of $50 million would be required to implement this program.

The water district, hence the City of San Jose, are beginning to negotiations to work out a partnership for funding and operation of this pipeline. We are proceeding with an $82 million expansion of the South Bay Water Recycling Program expected to increase the system capacity, improve operational flexibility, and manage the treatment plants diversional requirements to 2006.

South Bay Water Recycling could potentially be even further expanded and fully integrated into the overall water supply of Santa Clara County and play a strategic role in environmental protection, water use efficiency, and water supply reliability through 2020.

Through all of these efforts by local cities, the Santa Clara Valley Water District, and other agencies, this region is becoming a leader in sustainable water use, integrating water supply and waste water discharge through innovations in water recycling and conservation.

Federal financial support of recycled water through CALFED and other mechanisms cannot help Silicon Valley leverage local funding and realize its vision of water supply reliability, water use efficiency, and water protection. We ask for your help to reduce the projected deficit in local water supplies, meet the EPA mandate to protect endangered species, and ask for your continued funding.

Mr. Chairman, thank you for providing us with the opportunity to address our progress and our concerns and we look forward to working with you and Senator Feinstein as both bills move through the process. Thank you.

[The prepared statement of Mr. Diridon follows:]

Statement of Rod Diridon, Jr., Council Member, City of Santa Clara, and Chairman, Treatment Plant Advisory Committee, San José/Santa Clara Water Pollution Control Plant

Mr. Chairman and members of the Subcommittee, thank you for the opportunity to provide testimony on Northern California Water Security—Opportunities and Challenges. My name is Rod Diridon, Jr., and I am a Council Member from the City of Santa Clara and Chairman of the Treatment Plant Advisory Committee for the jointly-owned San José/Santa Clara Water Pollution Control Plant. I also have the endorsement of San José Mayor Ron Gonzales.

The City of Santa Clara has consistently supported the progress of CALFED which provides the most promise in resolving the problems in the Bay–Delta. We appreciate the opportunity to address the water recycling in our region, given the important role it can play in providing a more reliable water system in Silicon Valley.

As you have heard in other testimony, securing additional high quality water supplies is of paramount importance. Instead of restating this concern, I will focus on the region's cooperative efforts to improve the watershed, protect endangered species, and provide a drought-proof water supply through an aggressive and successful recycled water program.

The San José/Santa Clara Water Pollution Control Plant is one of the nation's largest advanced wastewater treatment plants. The regional plant serves 1.3 million residents and businesses of eight cities, and the adjacent unincorporated county

areas in the South Bay. It is jointly owned by the cities of San José and Santa Clara, with representation of the tributary agencies provided through a Treatment Plant Advisory Committee (or TPAC).

In 1991, with assistance from the U.S. Bureau of Reclamation, Santa Clara, San José and other agencies involved with the Water Pollution Control Plant designed and built a regional water recycling project, the largest of its kind in Northern California. It consists of over sixty miles of distribution pipeline, three pump stations, and a four million-gallon reservoir.

Initial impetus for constructing the system was to protect endangered species by avoiding the potential for salt marsh conversion at the wastewater discharge point into San Francisco Bay. Water recycling provides other environmental and economic benefits—such as watershed protection and a drought-proof supply of water. Although the plant has a design capacity of 167 million gallons a day, a trigger of only 120 million gallons a day was set by state and federal governments in 1990 to protect against potential marsh conversion.

Phase 1 of the South Bay Water Recycling Program was completed at a cost of $140 million and became fully operational in 1998. This summer we expect to deliver an average of 10 million gallons a day with peak demand up to 15 million gallons. The system has the potential to divert 50 to 100 million gallons per day, depending on additional distribution pipelines and pumps.

To ensure the economy of Silicon Valley can maximize its potential and contribute to state and national economies as well, we are fully engaged in expanding our commitment and reliance on this incredibly valuable resource:

- There are over 300 customers of the system currently, and more are added each quarter.
- The City of San José has been negotiating a cooperative agreement with Calpine/Bechtel in the event that the California Energy Commission approves an operating license this summer for the proposed 600 megawatt Metcalf Energy Center. A key element of that agreement is how to meet the power plant's need for an average of 3 million gallons a day of recycled water when it comes on line in 2003. A 10-mile pipeline extension would be required to serve the power plant. If sized to supply other customers further south, the projected cost is $50 million. The Water District and San José are beginning negotiations to work out a partnership for funding and operating this pipeline.
- We are proceeding with an $82 million expansion of the South Bay Water Recycling Program, expected to increase system capacity, improve operational flexibility, and manage the Treatment Plant's diversion requirements to 2006.
- South Bay Water Recycling could potentially be even further expanded and fully integrated into the overall water supply of Santa Clara County and play a strategic role in environmental protection, water use efficiency, and water supply reliability through 2020.

Through all of these efforts by local cities, the Santa Clara Valley Water District, and other agencies, this region is becoming a leader in sustainable water use, integrating water supply and wastewater discharge through innovations in water recycling and conservation.

Federal financial support of water recycling through CALFED and other mechanisms can help Silicon Valley leverage local funding and realize its vision of water supply reliability, water use efficiency, and environmental protection. Otherwise, we may not meet our goals in helping reduce the projected deficit in local water supplies, and the EPA mandate to protect endangered species.

Mr. Chairman, thank you for providing us with the opportunity to address our progress, and our concerns. We look forward to working with you and Senator Feinstein as both bills move through the process.

Mr. CALVERT. Thank you.

Couple of comments. I've heard people refer to both H.R. 1985 and Senator Feinstein's bill as fast tracking or preauthorization of projects within CALFED. It's difficult to say fast track and Federal Government in the same sentence without losing half the audience.

The reality of it is that we, I think, create a better process. At least that's in my mind's eye, to move toward potential development of those additional water storage projects.

It certainly isn't fast track and it certainly does not stop for continued input into the development of those projects. Certainly it

has to go through an ongoing authorization process and it has to go through an appropriation process which in itself is a difficult one at best. When people say that, I obviously disagree but, nevertheless, everyone certainly has the right to their own opinion.

As far as the development of some of these additional storage projects, too, people must realize that it's not just storage for additional quantities of water, but it is also storage for flexibility and water quality. As I'm sure some of the people here at the table understand, that we also have the need for flexibility during periods of drought and also a better quality of water for various purposes.

But to start off the question, Dr. Gleick, I used to be Chairman of the Energy Environment Committee so I spent many days and evenings going to hearings on global warming so I am somewhat familiar with the issue. I've read a number of papers. As a matter of fact, the last one that just came out regarding global warming and its effect on the snowpack in the High Sierras.

Obviously, the snowpack is a storage vehicle in itself because it releases water as it melts and our existing water storage availability in California is somewhat dependent upon that type of activity.

So if, in fact, you believe in global warming, then that changes the paradigm. It could possibly change that paradigm in that we could have less snow melt but more water flow. We're not quite sure based upon the studies I've read but that could happen.

And the problem would be that we would be unable to trap water if, in fact, that occurs because we may have to release water because we don't have enough storage capability if, in fact, those kind of things occur.

So as we look down the road, and I'm sure we'll be studying this as we do here, does that mean that we should have additional storage in California if, in fact, you follow that new paradigm. If, in fact, global warming is going to occur as some people say it is, and this will change the Sierra amount of storage that we are having in snowpack, what does that do to the existing paradigm of storage in California?

Mr. GLEICK. Thank you, Mr. Chairman. Your point is exactly right. Despite the many uncertainties about climate change, the thing in California that we are perhaps most certain of is that higher temperatures will mean dramatic changes in the snowpack, changes in the timing of runoff in California which, in turn, poses challenges for water management.

Our snow runoff already poses challenges for our water management. And our system, the system of reservoirs, and the way we manage those reservoirs is designed based on the assumption that the future will look like the past and that is no longer the case.

Will that mean a requirement for more storage is a question that we don't know the answer to yet. What is recommended in the National Assessment Water Report is that it's time to begin evaluating the way we manage the existing system.

First of all, the existing system is managed in terms of timing of releases and filling for flood control and a water supply regime based on past climate. It's time to start looking at the way that system might operate if climate change becomes a reality, or as climate change becomes a reality.

Let me give you one example. A study was done at Georgia Tech for the National Assessment looking at Folsom. Folsom, as you know, provides flood control for Sacramento and there's a great deal of concern now about the ability of Folsom to adequately provide protection.

Under one of the scenarios of climate change, which is warmer and also wetter, if we operate Folsom the way it is currently operated, flood damages downstream go up enormously on the order of $220 million a year increase in flood damages.

The study also looked at changing the way we operate Folsom. The results suggested that if we change the way we operate the system, not build a different size—

Mr. CALVERT. I read the same report. That indicates you have to have 100 percent depletion of the water within Folsom.

Mr. GLEICK. No, no, no. Not at all.

Mr. CALVERT. As I understood it, you have to dramatically lower the reservoir capacity in order to make sure you have enough capacity to capture snowmelt because without even additional levee construction downstream because Sacramento right now has about—it depends on who you talk to—anywhere from 70 to 80-year flood protection. You're saying you can go ahead and leave Folsom's existing level with the existing water commitments and contracts downstream without any modification and still provide for that kind of flood control?

Mr. GLEICK. Yes, that's correct. I'll be happy to send this study on to your office.

Mr. CALVERT. Send that over to me. I would love to see it.

Mr. GLEICK. The conclusion is that changing operations at any of our reservoirs may turn out to be much more effective than we think but we haven't done those studies yet. The first line of defense is to look at that. It's much cheaper to model the way we operate the system and figure out what we have to do than to try and build storage.

Mr. CALVERT. I think we agree that if, in fact, that we are going to have a change of climate for whatever reason, I mean, we could get into a debate of whether it's caused by humans or caused by a naturally occurring change in weather that we go through from time to time.

If, in fact, we are going through a stage of global warming, that we probably ought to plan on that and have long-term analysis of what kinds of effects both positive and negatives that can happen to our state as long-term planners we should look at that. That is the point I wanted to make.

Mr. Nelson, I've been hearing this continuing criticism of fast tracking or preauthorizing projects. Which project did we preauthorize outside of the Record of Decision?

Mr. NELSON. A host of projects. There are a number. The projects include Los Vaqueros.

Mr. CALVERT. When you say preauthorizing, are you saying that the state legislature and the U.S. House of Representatives, in fact, are preauthorizing the construction of these projects?

How is that done in the aspect of you have to go out and get money and you still have to go through the environmental process and NEPA process in order to get the various permissions that are

involved in developing any kind of water project or anything in the State of California.

Mr. NELSON. If I could, I'll contrast the CALFED Program with what is in H.R. 1985.

The CALFED Program very clearly laid out in the timeliness in the CALFED Record of Decision says that operational plans and financial analyses—economic analyses and a financing plan, environmental analyses would be completed before Congress was asked to approve construction. As you know, Congressman—

Mr. CALVERT. We're a long ways from approving construction. I mean if, in fact, we are successful in moving forward H.R. 1985 and Senator Feinstein is successful in moving her legislation and we are successful in coming together with a conference, and if we are successful in getting the President of the United States to sign it, then we have to go through another process of looking at these projects that may or may not be developed, and then we need to come back to the United States House of Representatives, ask for an appropriation United States Senate, ask for an appropriation, go back to Congress, ask for an appropriation, have the President of the United States agree to it.

Now, you know, if there isn't enough checks and balances in that. I tell my friends that and they say, "What kind of preauthorization is that?" If I had the power to preauthorize and preappropriate things, I would like to do it but I don't. A legislative process is a slow and cumbersome one at best.

I would attest to you, sir, that there is nothing that is going to be built without plenty of time and opportunity for our various friends in the environmental community to have a lot of input if, in fact, these projects are built.

I think perceptually we are trying to create some balance here and that we need to move the process forward in a more balanced and equitable way but we may have a difference of opinion there. Certainly we are not preauthorizing anything.

Mr. NELSON. I'm a little confused, Congressman. As I read your bill, it would eliminate a vote of full Congress to authorize construction.

Mr. CALVERT. We certainly streamlined the process but there is plenty of time for various groups and organizations to stay involved in the process to the point of appropriation of actual development of a project.

Mr. NELSON. Our concern, though, is precisely the one you mentioned, and that is if appropriations become the primary venue for discussion of facilities, we are very concerned with regard to facing what we saw with Auburn Dam last week and that is the necessity for a floor fight in the House of Representatives regarding a facility that we believe, most believe, the City of Sacramento and a variety of other folks believe is simply not necessary. The Corps of Engineers as well.

Mr. CALVERT. Obviously that didn't happen so I would attest we are going to try to move a bill that is balanced and working with everyone. As you well know, we've had discussions with, I think, everyone in this room I've talked to on one occasion or another. Controversies around water are very well known in the state and,

by the way, in the western United States that we are trying to deal with in a reasonable way, I think.

Ms. Lofgren.

Ms. LOFGREN. Yes. This has been a very helpful discussion to understand where the disagreements are and even potential points of agreement in how we might move forward. I'm one of the co-founders of the Climate Change Caucus in the House of Representatives which is a bipartisan group that meets on a regular basis looking at the science of climate change and the implications for our country and our planet.

I think it is quite clear that we are well along in the climate change scenario and no matter what we do, it cannot be averted even. If we did everything right in terms of our emissions policies, which we probably will not do, we are up for several decades before we could effect—at the best before we could effect that curve.

One of the questions I have, and I don't have the answer, and maybe I could ask Dr.—is it Gleick?

Mr. GLEICK. Gleick.

Ms. LOFGREN. We don't know what the implications will be because the analysis of the climate is so incredibly complex you can't make sure predictions. One of the issues that we discussed today is the snowpack issue.

Clearly if temperatures rise snowpacks will fall but there is no guarantee that the rainfall for this region would also be impacted.

At least some of the scenarios show a rather important decrease in rainfall over all and precipitation over all. That's not to say that those analyses are correct.

I notice in your written testimony, as well as Mr. Nelson's, and I think the prior panel, there was discussion of desalinization as an option for California. I'm interested in your comments in two ways. First, in looking at this, and Congressman Drew Cunningham is someone who spent a lot of time on this issue from Southern California. He and I have often discussed that the impediment seems to be, first, sufficient inexpensive and reliable energy to make that a viable option.

I have a question. How do we put that into the equation? Certainly our infrastructure is not set up for that option. If you have a comment on the infrastructure and delivery implications for desalination being a portion of our solution if you could address that.

Mr. GLEICK. I would be happy to. Desalinization is a well understood technology. Probably 1 percent of the world's drinking water supply actually now is desalinated in one form or another, mostly in areas that are extremely water short and extremely energy rich. The Persian Gulf in particular.

Desalination, I think, is unlikely to play a significant role in California's future for quite a while for two reasons. One is it is still very expensive. It is still twice as expensive as what the average urban residential homeowner pays.

In fact, the experiment that Santa Barbara went through in building a desalination plant was quite informative. They built a desalination plant during the last drought. The water from that plant was so expensive that local homeowners turned to conservation and were extremely effective at reducing their water use. That plant is now shut down. It's mothballed.

Desalination has become cheaper since then and there are some opportunities to reduce the cost further. I think it will never be—

Ms. LOFGREN. Never say never.

Mr. GLEICK. Never say never.

Ms. LOFGREN. We've got our fusion bill coming online.

Mr. GLEICK. For a long time it's not going to be cheaper than other options available to us. Water use efficiency improvements are enormously more cost effective. I might go so far as to say it will never be cheap enough for agricultural use.

It may be cheap enough for very high-valued industrial use at the coast but the minute you have to move it anywhere, the costs go even higher. Small uses perhaps. Santa Barbara is exploring the possibility—I'm sorry, San Diego is exploring the possibility of building a plant but I don't think it will be a big contributor to California's water supply.

Ms. LOFGREN. If I could, one of the criticisms that you made, Mr. Nelson, in your written testimony was your belief that the bill that Mr. Calvert has introduced advantages the Central Valley farmers to the detriment of other water users. Could you explain your thinking on that so I understand it?

Mr. NELSON. I would be happy to. There are actually two ways in which that would take place. The Santa Clara Water District is a contractor of the Central Valley project, as are Central Valley agricultural interests. The bill establishes guaranteed level of delivery for the Westlands Water District for agricultural use in the Central Valley.

As I read the bill, it sets up certainly the possibility that some of the water that would be necessarily provided to Central Valley agriculture could come out of water supplies that would be demanded by East Bay MUD, by Santa Clara Valley, by a number of other water users.

The second way in which it could affect water users here in Silicon Valley is with regard to what is called the environmental water account set up as an insurance policy to allow protection of the Delta to take place without affecting south of Delta water users. A real win/win. It is a program that we support if we can make sure that it works properly.

H.R. 1985 would expand that program, we think, to the breaking point. Expanding it so it would be designed to benefit folks in other parts of the state who the program simply wasn't designed to benefit.

If that were to take place, we believe the environmental water account wouldn't work. Those protections would fall apart and we would probably see litigation and what we have seen in the past which is less predictable water supplies out of the Delta for Santa Clara County and other folks as well.

Mr. CALVERT. Obviously I disagree with that, Mr. Nelson. We don't tough the 800,000 acre-feet in the primary environmental account, nor do we want to move ahead with a separate environmental account on water.

And we're talking about 70 percent of normal year guarantee on water which was outlined in the agreement with Secretary Babbitt and Mr. Hayes prior to their departure, and Governor Davis. Obviously these are issues that we continue to work on and are very

emotional throughout the State of California certainly to the farming industry.

But I think certainly farming is an important industry in the state as we have heard from various testimony. They have done probably more in the last few years to move toward conserving water and using water in a better way than they have in the last 50 years. I think we ought to work toward a solution to this problem.

I think if we work, I obviously believe, with creating more water supply, we'll have more water for the environment and still be able to maintain a viable agriculture industry in the State of California.

On the desalination issue, because I've been kind of following this thing a little bit, and I agree with you. I think desalination is probably way off because of its utilization of water until we get a cheap energy source. Congresswoman Lofgren and I have worked together on fusion and other science issues in the past and will continue to do so.

By the way, there are several areas, the City of Carson and the City of Long Beach, primarily preheated water that is coming out of the power utilization that they could bring the cost down of desalination. There are some new technologies. Some people believe we could do it between $700 and $800 an acre-foot. I find that somewhat dubious but, nevertheless, we are working toward that.

Desalination really works on brackish water and the efforts that we are doing on reclamation and utilization of those type of water resources to reuse are somewhat successful and we can do it at an economical cost, $100 to $200 an acre-foot.

This legislation allows for Federal dollars to be used to be leveraged with state and local money to do exactly that. I don't know very many people that are opposed to those projects being developed. Certainly here in Northern California and the Central Valley and Southern California and throughout the State of California and through the West are these types of projects.

Do any of you want to comment whether you agree that these kind of projects are necessary in the state for us to meet future water needs?

Dr. Gleick and Mr. Nelson.

Mr. GLEICK. Which projects in particular?

Mr. CALVERT. Well, we have a project, one down south that SAWPA is developing, for instance, to develop 100,000 acre-feet of water through reclamation recharging an aquifer and being able to bring that water back up and actually will clean up the aquifer because the water going in will be cleaner than the water that is in the aquifer at the present time. There are other reclamation projects. The City of San Diego is interested in doing those types of things certainly right up in this area as was mentioned in prior testimony.

Certainly, Mr. Diridon, you may want to comment about reclamation efforts here in the Santa Clara, San José area. Conjunctive use between San Francisco and Sacramento. It is remarkable to have some of these communities working together that have been at war on water. I find out there are about 100 water wars going on in the State of California and we are trying to resolve one at a time.

Mr. GLEICK. Yes, Mr. Chairman. In general I'm a big fan of innovative projects. We actually testified previously in front of your committee on a report we did on 40 examples of successful sustainable water resource management that include reclamation and efficiency and innovative projects with farmers and environmentalists to restore ecosystem.There are a lot of very smart innovative things going on.

Mr. CALVERT. You think the Federal Government should participate in things like this to help leverage state and local money to develop these kind of water resources?

Mr. GLEICK. In certain cases, yes. Without being specific it's hard to judge. I'm also not—

Mr. CALVERT. What about Mr. Diridon on his project. Do you think his project should have some Federal assistance in helping him out? I bet Mr. Diridon would say yes.

Mr. DIRIDON. It might help a little.

Mr. CALVERT. How about Mr. Nelson. You had a comment. Do you want to support Mr. Diridon in his water project?

Mr. NELSON. You bet. You bet we do. A couple of comments. First, Congressman, I agree with you. I think the energy cost of desalination is substantial. That cost is coming down in some cases, as you mentioned. With brackish water it is certainly more affordable.

We would love to find a way to make that the silver bullet for California's water needs. Right now it clearly isn't. We don't oppose. We believe we should be putting some Federal resources in that area. We also think it's very important we make sure our state money, our Federal money, and our local money is spent where it is going to be most effective.

Right now it appears that desalination is not in that place. Is it a technology of the future? Maybe, and we shouldn't ignore it. I would also note that when CALFED did its own economic analysis, desalination was not the most expensive tool. Some of the surface storage facilities we are looking at are more expensive than desalination.

Mr. CALVERT. Well, we get into that surface storage. Obviously we're not doing on-stream storage anymore. That is virtually impossible to do. Most of the storage that we're talking about is off-stream storage. Off-stream storage by definition is more expensive because we have to get water to that.

A great example of that, of course, in my district in Southern California with Diamond Valley Lake to store 800,000 acre-feet of water. Very expensive. Very expensive. No one disputes that Sites, the reservoir I suppose you were talking about, would be very expensive but it also adds flexibility with existing water supplies, blended water supplies, which brings down the real cost of that number. I suspect that number at $400 an acre-foot, you are bringing in the capital cost and the real cost of water based upon whatever formula you may have used.

Mr. NELSON. We used the formula that CALFED used. We simply used their formula for calculating cost.

Mr. CALVERT. But it certainly adds flexibility and certainly adds water quality to the system which is, in my mind, necessary and

something we've been studying. I think probably Sites is about as studied as most any water project that we've ever gone through.

Obviously it is expensive but it is, in my mind, necessary along with water reclamation. As far as desalination is concerned, we probably will look toward a couple of demonstration projects in California to try to bring that technology along because I think that's important.

We won't probably put a lot of resources in it but some because science is important and to understand desalination in a better way and new technologies that are coming up I think is important. The utilization of desalination on brackish water is economical. It works. SAWPA I think is a great example of that and I think we ought to move it forward.

Any other comments? Yes, ma'am.

Ms. WELLS. I would like to say that for 20 some years those of us on the CVP side in the Sacramento Valley have implemented and have been following a very stringent water management and conservation plan. I would say that we are in the 80 percentile efficiency.

The interesting thing, if I could sort of characterize my position as a landowner, I have often felt in the last 20 years that it was at the bottom of the food chain relative to watching my supply diminish. The difference now is that I view this as an opportunity to be a cornerstone or a building block. With such simple things as streamlining transfers in basin, facilitating conveyance.

These are obstacles because of price or facilities. Often times they are not very expensive things. They are just a willingness for the agencies and those involved and our neighbors who supply us with additional water. We have a world of water rights and resources in Northern California. We are now looking to approach it that what can we do in an integrated management plan.

The cornerstone of it is meeting the needs of those in basin that have been facing water shortages. By doing that you develop groundwater. If there is groundwater, you monitor it so there is not the fear so much of shipping everything out of the basin. There is so much going on right now and I think legislation such as what you are proposing does leverage with Federal and state funding to get those things done.

At the same time we don't believe that is enough to result all of the state's problem relative to the growing population. Look at the increased demands from the environment. As I said in my testimony, every year we see more and more of our water be taken for that.

It's not to say that it shouldn't occur but we have to meet that need. We do it in basin with all of the less expensive things and as we develop off-stream storage, yes, there is a very expensive price component. But the way I understand it, the flexibility, as you have mentioned, is phenomenal.

Look at water temperature alone. If you were to put a drop of green dye in Sites and blue in Shasta and we had an excessive winter, we had a very good winter supply, you could release water out of Shasta into Sites. There are times then you could hold the cold water. We may actually use water for the farming in the valley out of Sites but use the pricing structure.

It's an exchange situation where water would then be made available for temperature purposes and then move to the Delta and supply water to the south at a price that is more affordable to them. There is just a host of flexibility and exchange issues that certainly warrant the leveraging and the possibility of doing these things.

Mr. CALVERT. Thank you.

Mr. Diridon, do you have any other comments?

Mr. DIRIDON. A last word on water recycling. A reminder we currently recycle 10 to 15 million gallons a day through WCPC and the water recycling programs but the potential to 50 to 100 million gallons that we could recycle every day.

That's a good thing. That's good for the environment because it helps us avoid salt marsh conversion. It's good for industry because it provides reliable, clean water supply. It's good for our communities because if our economy is strong and our environment is strong, it leads to a better quality of life.

We need continued help from CALFED and from the Federal Government. I'll ask that while you work through some of these issues that have been talked about today, that you do continue to advocate on behalf of that funding and allow us to continue to do our job locally.

Mr. CALVERT. Thank you.

Ms. Lofgren.

Ms. LOFGREN. Well, like so many things, there is no one answer and we are going to have to do all sorts of things. I was recently talking to a Member of Congress from a different part of the country in explaining that we are conserving energy. We are the most efficient among all the 50 states in per capita energy usage in California.

Really a lot of it was the trading of the last drought. I remember 1978, which was the first memory I have on the drought, how all of a sudden you couldn't take showers and you couldn't—I mean, it was intense. To this day I don't leave the water running when I brush my teeth. It drives me crazy when people do that. You permanently change habits and conservation is going to be part of this answer for water as well as using technology.

We have been financial partners on the reclamation effort here. I think actually we should do a little bit more, not only in this county but throughout the state of California. That is clearly part of the solution. I don't think anyone is arguing it.

I would like to take a moment to pitch the bill that we're working on. Fusion energy obviously is a longer-term project, but I do believe that we need to use the best science minds we have to secure that sort of energy for our country and the world of decades hence when we come to grips with the finite quality of some of our other energy resources. That will also be part of the water solution if we manage to achieve in that area.

Thinking about energy, and that clearly is the constraint on desalination, there are energy costs to move water as well. When we were trying to cope with the energy crises, one of the little facts delivered to us was that the single biggest user of energy in the State of California was the Central Valley Project which I guess it makes a lot of sense. I hadn't really thought of that.

If we are going to be—let's say a scenario what if, if we do some additional storage and it's going to be moved. Dr. Gleick, for example, have you calculated the energy cost of the impact of moving that water from storage?

Mr. GLEICK. Those numbers are available. I don't have them in my head but, as you point out, the largest single user of electricity is, in fact, the pumping of the water over Tehachapis into Southern California.

For that reason, in addition any gallon of water that you don't need to use south of the Tehachapis saves you not just water but energy as well. That makes water use efficiency improvements even that much more cost effective. If you include the energy savings from saving water, the combined savings are tremendously important.

Mr. NELSON. We have recently completed that analysis and to do that we looked at the facility in the Central Valley that would generate the most water per acre-foot. Raising Shasta Dam would be the project that would generate the most energy per acre-foot of new storage.

People intuitively understand it when they think of new and raised dams as generating energy but when you have to pump that water over the coast range to get it here, over the Tehachapis to get it to Southern California.

Certainly in the case of Southern California we have looked at those numbers closely and the more storage we build in the Central Valley to deliver water to Southern California in particular, the more energy they consume. These projects right now are energy losers.

Ms. LOFGREN. It looks like Ms. Wells has—

Ms. WELLS. I would like to comment. I'm certainly not an expert in power. I'm trying to stay up with it as it is but you have to remember the CVP is also a producer of power in excess of what it needs often. We're not at a point in Sites to know exactly how.

Certainly there is power needed to pump the water in as an offstream storage facility, but there is also the opportunity to create power. Generally speaking it could almost be power neutral in terms of what you put in it's got to come out and you can generate power so there is always that concept, too.

Ms. LOFGREN. It would be interesting. I don't know what the answer is. I mean, they tell you in law school never ask the question unless you know the answer but I don't know the answer and I would be interested in any of the analyses done.

Clearly, we live in the desert. It's the Cadillac desert and we have benefitted, or some would say not, but I wouldn't redo what Governor Brown did decades ago. We wouldn't have an economy. None of us would living here in these numbers. The question is now what? I think this has been a very useful discussion in terms of the policy choices that we face to maintain a healthy environment and a healthy economy. I really appreciate the very thoughtful comments.

Mr. CALVERT. I also want to thank this panel. I think Congresswoman Lofgren is right. There is no one answer, though I would say that H.R. 1985 helps. We obviously are going to conserve more.

We need to conserve more. I don't think anyone in this room doesn't think we should conserve.

We need better farming practices. I think we've seen a lot of evidence of that in the last number of years. We are going to need ground water storage. We are going to need off-stream storage. We are going to need reclamation. We are going to need water transfers. Those are going to take place.

All of these things are going to take place or we're not going to meet demand. We know what happens when you don't have enough supply and you have too much demand. I mean, I learned that in ECON 101 class back many years ago. We don't want to face that choice. As we move forward on this, we look forward to working with everybody and everyone's participation.

I'm happy to say that we have a number of endorsements of this so far. The Association of California Water Agencies, the Bay Area Council, California Business Properties Association, California Business Round Table, California Chamber of Commerce, California Manufacturers Technology Association, California State Council of Labors, Conference of Operating Engineers, Central Valley Project Water Association, LA Chamber of Commerce, Mountain Counties Water Resources, Northern California Water Association. That's just a portion of a number of endorsements along with what you heard from California Waterfowl, Ducks Unlimited, and others.

This is process. We are moving forward and hopefully we are a successful process because I can assure you that we must get an authorization bill or those dog gone appropriators won't give us any money.

With that, I appreciate you coming out. God bless. We're adjourned.

(Whereupon, at 11:27 a.m. the meeting was adjourned.)

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