

TITLE XVI OF P.L. 102-575

HEARING
BEFORE THE
SUBCOMMITTEE ON WATER AND POWER
OF THE
COMMITTEE ON
ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE
ONE HUNDRED NINTH CONGRESS

SECOND SESSION

TO

RECEIVE TESTIMONY ON THE BUREAU OF RECLAMATION'S REUSE AND
RECYCLING PROGRAM (TITLE XVI OF P.L. 102-575)

FEBRUARY 28, 2006



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TITLE XVI OF P.L. 102-575

TUESDAY, FEBRUARY 28, 2006

U.S. SENATE,
SUBCOMMITTEE ON WATER AND POWER,
COMMITTEE ON ENERGY AND NATURAL RESOURCES,
Washington, DC.

The committee met, pursuant to notice, at 2:44 p.m., in room SD-366, Dirksen Senate Office Building, Hon. Lisa Murkowski presiding.

OPENING STATEMENT OF HON. LISA MURKOWSKI, U.S. SENATOR FROM ALASKA

Senator MURKOWSKI. I call to order the Water and Power Subcommittee hearing of the Energy Committee. It is my pleasure to welcome you all here today. We have a pretty packed house, which is nice.

We have before us this afternoon an oversight hearing on the Bureau of Reclamation's Title XVI Water Reclamation and Reuse program. I understand that joining us in the audience today are some members of the Association of California Water Agencies. I appreciate your interest in the hearing.

The Bureau's Title XVI program originated in 1992 in response to the Southwestern drought in the late 1980's and early 1990's. At that time, Congress authorized the program in an attempt to alleviate pressure on the Colorado River system by augmenting existing supplies and developing new water sources. Since then, Congress has authorized some 31 projects and appropriated about \$325 million for the program. However, only three of these projects have received full Federal funding. Nine are listed as inactive, meaning that they have received little or no Federal moneys. The administration has not been supportive of these new authorizations, arguing that M&I water supply is largely a State and local responsibility that is outside of the Bureau's core functions of delivering power and irrigation water. Last Congress, Commissioner Keys, who will be our first person to testify this afternoon, testified that there was a 15-year funding backlog for authorized projects that threatened to overwhelm the Bureau's budget. Now currently, there are some 11 Title XVI bills that would authorize an additional 19 projects pending before Congress. Before acting on these bills, this subcommittee asked the Congressional Research Service to undertake the first ever overview of the program. This process has taken several months and has led us to today's oversight hearing.

We are pleased this afternoon to welcome Betsy Cody, the CRS analyst who performed the study, as a witness this afternoon. It's my understanding that shortly after this hearing, CRS will finalize its report and make it available to the public.* Now, in undertaking this review, we have been faced with some important and fundamental questions. First, what should the Federal role be in developing new sources of M&I water supply? Second, should the Title XVI program be terminated? Should we maintain the status quo, or should we work to reshape the program to make it more effective? And finally, if we develop legislation, what should the legislation look like? Should we decrease the Federal cost share, require a regional focus?

So, this afternoon, we have a number of witnesses to help us address the question of Title XVI's future. First off, I would like to welcome Commissioner John Keys from the Bureau of Reclamation. It is my understanding that the administration is currently developing a legislative proposal to reform the Title XVI program. So, I'm pleased that the administration is taking a proactive approach in this area and look forward to hearing more about the forthcoming proposal.

We will also have a second panel this afternoon, the stakeholder panel. We'll be hearing from Mr. Rich Atwater from the WaterReuse Association, Mr. Tom Donnelly from the National Water Resources Association and Ms. Virginia Grebbien from the Orange Country Water District, which is a member of the Metropolitan Water District.

The subcommittee is interested in learning about these stakeholders' experiences with the Title XVI program and any suggestions that they might have in order to make the program more effective. With that, Commissioner Keys, I'm delighted to have you here this afternoon and look forward to your testimony and your input on this issue of great importance to many of our States. Welcome.

[The prepared statement of Senator Johnson follows:]

PREPARED STATEMENT OF HON. TIM JOHNSON, U.S. SENATOR FROM SOUTH DAKOTA

Thank you, Madame Chairman, for convening today's hearing. I would like to extend a welcome to Commissioner Keys of the Bureau of Reclamation, and to the other witnesses who have traveled here to provide us with their views on the Bureau of Reclamation's Title XVI Water Reclamation and Reuse Program.

While we haven't yet made use of the Title XVI program in South Dakota, it does appear to me that water reuse and recycling is going to be a key part of the overall set of actions needed to meet future water demands—particularly in areas of rapidly increasing population. For that reason, I think this oversight hearing is a very valuable exercise to determine whether there is a consensus on some changes that can be made to the Program to strengthen it, and make it much more likely to gain support from the Administration in future budget cycles.

I appreciate that the witnesses have come here today prepared to discuss their ideas for moving forward with the Title XVI program, and therefore look forward to a very good discussion this afternoon.

Thank you again for your leadership on the subcommittee Madame Chairman. I look forward to working with you on this issue.

*CRS Reports are made available to Congress. Members of Congress may then make them available to the public.

**STATEMENT OF JOHN W. KEYS, III, COMMISSIONER, BUREAU
OF RECLAMATION, DEPARTMENT OF THE INTERIOR**

Mr. KEYS. Madam Chairman, it's a pleasure to be here today and discuss the Title XVI program with you and what we can do together to make it better for the American people. I have submitted a formal statement, and I would appreciate it being included for the record.

Senator MURKOWSKI. It will be included in its entirety.

Mr. KEYS. Madam Chairman, in the early years of Title XVI, the projects that were authorized and funded demonstrated new technologies that, once proven, could be adopted by others to improve water resources for communities in the Western United States. Since that new technology was demonstrated, Title XVI has not been producing the benefits for the taxpayers, Congress and the administration, the benefits that we should expect from that program. Since that new technology's been demonstrated, the program has gone a different direction, and that's what we would like to talk about.

To understand why, let me start with a brief overview of Title XVI's history. In 1992, Congress authorized five Title XVI projects. The Secretary was also authorized to identify other water recycling opportunities throughout the 17 Western States and to conduct appraisal-level and feasibility-level studies to determine if those opportunities were worth pursuing at that time. Even though we have authority to conduct appraisal investigations and feasibility studies to help Congress evaluate those proposals, Title XVI project sponsors have sought project authorizations from Congress before completion of those studies in most cases.

The result? They have been authorized without consistent criterion to determine whether they are technically and fiscally sound and whether they would help fulfill regional and Western water supply goals. Not applying these tests to Title XVI projects is inconsistent with the scrutiny and the analysis that we, in Reclamation, and you, in Congress, apply to every other water management infrastructure decision that we make. In 1996, Congress authorized 18 additional projects, including two desalination research and development units.

Since 1996, additional Title XVI amendments and other pieces of legislation have been enacted, and there are now 32 projects authorized for construction in nine States.

Since 1974, construction projects have generally been initiated by Congress. The administration has confined its funding requests to previously budgeted projects. Of the 32 specific projects authorized to date, 21 have received funding. Of those, nine have been included in the President's budget.

Reclamation will have spent nearly \$325 million on these projects by the end of this fiscal year. Three projects have been fully funded. Two will complete their full funding in fiscal year 2006. The remaining projects are currently in various stages of planning or construction. Thirteen of the 21 projects are currently producing reclaimed water. Based on current project plans, more than \$340 million in post-2006 Federal funding could be required to complete just those projects that have already received funding. Neither detailed project specifics nor feasibility analysis are cur-

rently available for most of the 11 projects that have yet to receive Federal funding assistance. Some of these projects are not being pursued by project sponsors at this time. That's the history.

Now, let's talk about possible reforms of the Title XVI program. First, we believe that before projects are authorized for construction, their appraisal and feasibility studies should be completed, reviewed and approved by the Bureau of Reclamation and the Office of Management and Budget and submitted to Congress just as other conventional Reclamation projects are. That is not the current practice.

Congress is asked to authorize projects without the benefit of adequate analysis that a feasibility study can and should provide at early stages of project screening. Second, we believe that the program needs explicit criterion by which project sponsors, Reclamation, and the Congress can measure the merit of the proposed projects. Some of these criterion could determine threshold eligibility in the earliest stages of the project planning. For example, does the project qualify for funding under some other Federal program? Does the project sponsor have a comprehensive water conservation program? Is the project located where it could help Reclamation carry out its core mission? Can the project proponent show that it can and will pay its share of the study, ultimately construction and operation and maintenance of the project?

Beyond threshold eligibility criterion, we think that as projects progress through appraisal and feasibility, they should be rated among several ranking criteria that would help Congress and the administration prioritize those projects. For example, would the project actually alleviate water conflict or shortage? Would it add water supply in one of the hot spot areas that we have focused on in the Water 2025 program of Reclamation? Can it be brought on-line in a reasonable length of time?

Now, solving the problem of how to justify these projects for future construction is one issue. Dealing with projects that have already been authorized for construction is another. These currently authorized projects fall into three categories: projects that have received Federal construction funds; projects that have not yet received funding, but whose project sponsors remain interested in their construction; and the third are projects that our best information says are no longer being pursued at this time. We believe that eligibility criteria similar to ones we suggest for use in pre-authorization studies and appraisals should also be legislated for projects that have not yet initiated construction.

We would certainly like to explore with the committee solutions to the problems of obsolete authorizations. By that, I mean authorizations to build projects that the projects' own sponsors are now not pursuing. The administration is currently developing a legislative proposal to bring such proposals reforms to Title XVI. We need a framework under which Title XVI projects will be screened to ensure that they complement Reclamation's mission rather than simply consuming scarce budget dollars needed to meet our core obligations.

Madam Chairman, we're looking forward to a project evaluation process similar to what we're doing in S. 895, the Rural Water Supply Act, reported by this committee and approved by the U.S. Sen-

ate last year. We're committed to working with this committee on this critical effort. The Title XVI program has a future. The reuse of wastewater and recycled water, we think, at times could be the next river of the Western United States to tap for critical water supply. It's up to us to figure the best way to do that. We think that having feasibility studies that show how those projects are done and that they meet a certain criterion before they are authorized for construction is the right way to go. We also think that there should be some criteria that says where they go, how they're built and what they address in the areas.

Madam Chairman, that completes my statement, and I would be happy to answer any questions you may have.

[The prepared statement of Mr. Keys follows:]

PREPARED STATEMENT OF JOHN W. KEYS, III, COMMISSIONER, BUREAU OF
RECLAMATION, DEPARTMENT OF THE INTERIOR

Mr. Chairman and Members of the Subcommittee, I am John Keys, Commissioner of the Bureau of Reclamation. I am pleased to appear today to talk about Reclamation's Title XVI water recycling and reuse activities, including the history of Title XVI and the current status of authorized projects. I will also outline Reclamation's proposal to refocus Title XVI in the context of Reclamation's broader mission as the leading water resource agency in the West

BACKGROUND

Beyond demonstrating then-new technology in the program's early years, Title XVI has not been producing the benefits that taxpayers, Congress, the Administration, and potential project sponsors deserve. To understand why, let me start with a brief overview of Title XVI's history. In 1992, Congress enacted the Reclamation Projects Authorization and Adjustment Act (Public Law 102-575). Title XVI of this Act, the Wastewater and Groundwater Study and Facilities Act, authorized the Secretary of the Interior to participate in the planning, design, and construction of five water reclamation and reuse projects. The Secretary was also authorized to develop a program that would identify other water recycling opportunities throughout the 17 Western states, and to conduct appraisal-level and feasibility-level studies to determine if those opportunities are worthy of implementation. Finally, Title XVI authorized the Secretary to conduct research and construct demonstration facilities. Despite the authorization to conduct appraisal investigations and feasibility studies, Title XVI project sponsors have sought project authorizations from Congress before completion of such studies. Title XVI projects have therefore been authorized in an ad hoc manner, without consistent criteria to determine whether they are technically and fiscally sound and would help fulfill the Administration's goals. The failure to apply these tests to Title XVI projects is inconsistent with the scrutiny and analysis that should apply to every water management infrastructure decision we make.

In 1996, Congress enacted Public Law 104-266, the Reclamation Recycling and Water Conservation Act. This law amended Title XVI of Public Law 102-575 and authorized the Secretary to participate in the planning, design, and construction of 18 additional projects, including two desalination research and development projects. Since 1996, additional Title XVI amendments and other pieces of legislation have been enacted and now there are 32 projects authorized for construction in nine states.

In addition to significantly increasing the number of authorized construction projects, the Reclamation Recycling and Water Conservation Act of 1996 also placed several important limitations on Reclamation's involvement in water recycling projects. First, the maximum Federal cost share for new projects or projects that have yet to receive funding was limited to the lesser of 25 percent of total project costs or \$20 million. Four of the five projects that were authorized in 1992 and that had already received Federal funding were limited to the amounts specified in Reclamation's Fiscal Year 1997 budget justifications, which in each case was substantially higher than \$20 million. Second, the legislation originally stipulated that no Federal funding may be appropriated on an authorized project for construction activities until the Secretary or the non-Federal project sponsor completes a feasibility study, the Secretary has determined that the non-Federal project sponsor is finan-

cially capable of funding the non-Federal share of the project costs, and a cost-share agreement with the non-Federal project sponsor is in place.

Despite these stipulations, since 1994 construction projects have generally been initiated by Congress. The principle exception to this occurred in FY 2000, when Reclamation evaluated and ranked unfunded authorized projects for the purpose of prioritizing available construction funding for four new starts. Reclamation has not used a competitive process to allocate funds since FY 2000. Instead the Administration has confined its funding requests to previously budgeted projects.

Of the 32 specific projects authorized to date, 21 have received funding. Of these, nine have been included in the President's budget request. Including anticipated expenditures during FY 2006, approximately \$325 million will have been expended by Reclamation on these authorized projects by the end of the current fiscal year. Three of the projects have been funded to the full extent of their authorization. Two more should be fully funded in 2006.

The remaining projects are currently in various stages of planning or construction. Thirteen of the 21 projects are currently producing and delivering reclaimed water. According to the project sponsors, approximately 118,000 acre-feet of reclaimed water were put to beneficial use in FY 2005. The sponsors indicate that further construction this year should result in an increase of about 42,000 acre-feet in the amount of reclaimed water delivered for a total annual yield of about 160,000 acre-feet in FY 2006.

Based on current project plans, more than \$340 million in post-FY 2006 Federal funding could be required to complete the maximum Federal cost share for those projects that have already received financial assistance. More than half of this amount, or approximately \$182 million, would go to just three projects that were authorized prior to the 1996 Title XVI amendments limiting the Federal cost-share to \$20 million per project. By the end of FY 2006, collectively, these three projects alone will have received approximately \$138.5 million.

Neither detailed project specifics nor feasibility analysis are currently available for most of the 11 projects that have yet to receive Federal funding assistance. Some of those projects are no longer being pursued by the project sponsors at this time; however, each of the unfunded projects has a Federal cost-share ceiling of \$20 million or 25%, whichever is less.

PART REVIEW

In 2004, Reclamation worked with the Office of Management and Budget (OMB) to evaluate the Title XVI program using OMB's Program Assessment Rating Tool (PART), which overall was found to be Moderately Effective. The PART highlighted many of the problems and challenges we are discussing today. While the program is effective at obligating funds, and has helped to make new supplies of water available, two main problems can be inferred from the assessment: 1) it is difficult to assess progress, because the program's goals and timelines are unclear, mostly due to the large extent of local control; and 2) there is insufficient Reclamation involvement and oversight early in the project development process, leading to a proliferation of projects, many of which may have planning deficiencies or be inconsistent with the program's goals. Finally, a recent review of this PART concluded that its goals of promoting water reuse and recycling are consistent with the Water 2025 program's goals of diversifying water supplies, with the aim of proactively addressing water-related crises in the Reclamation states.

PROPOSED REFORMS

Mr. Chairman, as population growth and diverse demands for water stress already limited supplies, Reclamation stakeholders throughout the West want Reclamation to address shortages and help avert conflicts. Title XVI projects have demonstrated that water recycling can be a viable water supply alternative in water short urban areas of the West. However, Title XVI has outgrown its original purpose—demonstrating new technology. Fundamental reform is needed to ensure that the program produces results for the current needs of the West.

First, we believe that before projects are authorized for construction their appraisal and feasibility studies should be completed, reviewed, and approved by Reclamation and the Office of Management and Budget and submitted to Congress. As we have often said, this is not current practice. As a result, Congress is asked to authorize projects without the benefit of adequate analysis that a feasibility study can and should provide at early stages of project screening. This information is essential to making informed decisions and establishing funding priorities.

Second, we believe that project sponsors should understand the explicit criteria by which they, Reclamation, and Congress can measure the merit of their proposals.

Some of these criteria could determine threshold eligibility in the earliest stages of project planning. For example, does the project qualify for funding under some other Federal program? Does the project sponsor have a comprehensive water conservation program? Is the project located where it could help Reclamation carry out its core mission? Can the project proponent show that it can and will pay its share of study and, ultimately, construction and Operations and Maintenance costs?

Beyond threshold eligibility criteria, we think that as projects progress through appraisal and, if warranted, feasibility study phases, they should be rated against several ranking criteria that would help Congress and the Administration prioritize projects. For example, would the project actually alleviate water conflict? Would it add or diversify water supply in one of the "hot spot" areas that are also the focus of the Water 2025 program? Can it be brought on-line within a reasonable time-frame?

Solving the problem of how to justify select projects for construction authorization does not address what should be done with projects that have already been authorized for construction. These currently authorized projects fall into at least three categories: projects that have received Federal construction funds; projects that have not yet received funding but whose project sponsors remain interested in pursuing them, and projects that our best information indicates are no longer being pursued by project sponsors.

We believe that eligibility criteria similar to what we suggest for use in pre-authorization studies and appraisals should also be legislated for projects that have not yet initiated construction. Additionally, we would like to explore with this Committee solutions to the problem of obsolete authorizations (authorizations to fund projects that the sponsors are no longer pursuing). The Administration is currently developing a legislative proposal to bring such reforms to Title XVI. The proposal aims to create a framework under which Title XVI projects will be screened to ensure they complement Reclamation's mission, rather than diminishing Reclamation's ongoing core programs.

Reclamation's desire to make project funding more competitive is shared by both non-Federal entities and a growing number in Congress; introducing more competition to the process should ultimately result in more on-the-ground benefits where they are most needed, and in better use of taxpayer funds. To make this a reality, Reclamation is considering different models for a project evaluation process to form the heart of Title XVI reform; among the options we are considering is the process contained in S. 895, the Rural Water Supply Act reported by this Committee and approved by the U.S. Senate unanimously in 2005. We are committed to working with this Committee on this critical effort. If Title XVI is to have a future, it must be adapted so that Congress, the Administration, and the American people can screen and prioritize projects to ensure that they serve Reclamation's core mission, target resources where they can have the greatest impact, and meet the needs of all American taxpayers.

That concludes my testimony. I am pleased to answer any questions.

Senator MURKOWSKI. Thank you, Commissioner Keys. I appreciate you kind of putting in perspective, in the historical context, where we have come from on Title XVI. You made the comment that, initially, that the program was designed to demonstrate certain technologies; do you think that the original intent, then, of Title XVI, which was to demonstrate the water recycling technology and their applicability, do you think that that original intent has been completed and that the purposes of what we started out with, with Title XVI, are no longer needed? You've indicated that you believe that Title XVI has a future, but did we do what we set out to do, and now we need to look to phase two of Title XVI?

Mr. KEYS. Madam Chairman, I think that's a great way to put it. If you look at the whole Title XVI process, we were actually authorized in doing feasibility studies looking at demonstration projects before the Title XVI legislation was passed. We were looking at different areas in California where it may apply. Title XVI came along, gave that some funding and authorized five projects for construction. The purpose of those that were authorized for construction was to demonstrate that the theories that we had put to-

gether would work. I would tell you that I think we can claim success in the original Title XVI purpose and process.

Senator MURKOWSKI. So, you feel that the first part of this was a success. We have demonstrated these technologies, but we're beyond that demonstration phase now. And how would you describe, then, this second phase of Title XVI?

Mr. KEYS. Madam Chairman, I think—I don't think the whole process is flawed.

Senator MURKOWSKI. Okay.

Mr. KEYS. I think the purpose of looking at wastewater reuse and recycled water as a component of a water resources project, a conservation program, is still valid. What we're saying is that rather than have the projects authorized on an ad hoc or a random basis, there should be some method to it. And the method would be that you, in the Congress, authorize feasibility studies, we do those studies and then see where the projects are feasible, where they fit with the regional needs, where they fit with the hot spot maps, in other words, where we have ongoing conflict and contention out there, and then direct those projects into those areas.

Our Water 2025 program is a good example of where we are directing resources, challenge grants into areas that have existing needs and where we can get something on the ground in a fairly short time. So, the original purpose is still there. We think there's a better way to do it.

Senator MURKOWSKI. I'd like to recognize that Senator Feinstein has joined us. Thank you, Senator.

So, is it fair to say that if you perceive any flaws to the Title XVI program at this point, it is in the lack of a criteria or eligibility requirement, and that's the direction that reform needs to go, in your opinion?

Mr. KEYS. That's a big part of it, yes.

Senator MURKOWSKI. Is it the No. 1 concern as far as you would state?

Mr. KEYS. I would say it's the number one, followed very closely by needing the ability to have competition there, competition wherein the projects are implemented and where the most competitive ones are put in, in other words, the ones that give you the most saved water for the dollar. I think that is a close second to having some control over the authorization process.

Senator MURKOWSKI. I'm kind of skipping around here looking at the notes that I made while you were testifying. You made reference to eliminating, I guess, the obsolete authorizations. Can you tell me how many of the projects that we're looking at of the 31-some-odd you would consider to be obsolete authorizations and why they're obsolete?

Mr. KEYS. Madam Chairman, there are a number of projects that we understand the—even the project proponents are not following through on them anymore.

Senator MURKOWSKI. In terms of their share?

Mr. KEYS. They have either found alternate funding for them, or they have decided to find their water supply somewhere else. I think our view on the thing is we would look—those that are already being funded, let's get them done.

Senator MURKOWSKI. Okay.

Mr. KEYS. Those that are on-line, that are authorized and want to continue and that we have started funding, we will keep funding them.

Senator MURKOWSKI. And those are the nine programs that you've identified, then?

Mr. KEYS. Yes.

Senator MURKOWSKI. Okay.

Mr. KEYS. There are some that we have not started funding that have maybe not even finished their planning. They should have another look at them to be sure that they're consistent with the criteria that we're applying to new projects. Those that we talk about not funding or de-authorizing are those who—there are several, there are people that had them authorized, and now they don't want to do them anymore. Those are the ones we're talking about. And we would certainly work with you and the project sponsors. We're not trying to just kick some of them out.

Senator MURKOWSKI. Sure.

Mr. KEYS. We would certainly work with them and you to decide which ones we're not interested in pursuing anymore.

Senator MURKOWSKI. Let me ask you a little bit about the eligibility criteria, recognizing that you might perhaps have a different set of eligibility criteria for preauthorization, as opposed to those that are currently booked now.

Mr. KEYS. Okay.

Senator MURKOWSKI. Am I correct in assuming that there would be some differences or not?

Mr. KEYS. I think that that's something you and—your committee and us in Reclamation, with our stakeholders' input into that, could decide. In other words, if a project had already been authorized, I think that the step of just completing the feasibility may be adequate to say yes, we should go ahead. For one that has not even been authorized, then we go through the feasibility, look at the authorization and consider where it might be located or where there may be some competition of two or three projects, and we would say yes, this one fits that criteria, and the others don't.

Senator MURKOWSKI. You have testified to the need for legislation. It's your belief then that what has to happen in order to adequately address the reforms must come through legislation as opposed to an administrative directive?

Mr. KEYS. Madam Chairman, there are a number of the activities that we've talked about that could be done administratively. In other words, we could do the studies, some of the feasibility studies, under current authorizations. Requiring that feasibility study before construction authorization is something we would need legislation for. Being able to have competition among the different projects that are being considered for construction is something that we would need legislation for. So, there is some of it we could do administratively. There's others that we think that there should be some legislation.

Senator MURKOWSKI. Now, you also mentioned reference to the Rural Water program, that specific legislation. Do you also believe that the Federal share of the cost of the Title XVI program should be modeled after the rural water program?

Mr. KEYS. That's something that we could discuss. The different cost-share levels are something that are always contentious. In the rural water program, I think we ended up at 25 to 30 percent that should be Federally funded or locally funded. The Title XVI program, so far, we have been limited to 25 percent, or \$20 million. I think that's something for us to consider with you and your committee as we develop the new legislation and what the proper levels should be.

Senator MURKOWSKI. Okay. Now, you also mentioned the Water 2025 program and a desire to kind of realign Reclamation's water reuse activities to come into alignment with the goals of Water 2025. Do you see any fundamental differences between the Title XVI program as it now exists and what we're trying to achieve in Water 2025?

Mr. KEYS. I think there are three fundamental differences that we would consider. The first one is that the challenge grant program under Water 2025, they're targeted into those hot spot areas, those areas in the Western United States where we have identified conflict and the need for water conservation programs that will ease some of the water resource requirements.

The second one is our Water 2025 programs are relatively short-term. Our challenge grants are just for 2 years, and they typically have to be done, and the whole project then is producing water within a relatively short term. Some of our Water 2025 ones are long-term developments.

And the third part is that our Water 2025 programs are relatively small. In other words, it's unusual for us to have a Water 2025 program above \$5 million, and some of our Title XVI programs are over \$100 million and in the multiple tens of millions of dollars. So, those are the three fundamental differences between those two.

Senator MURKOWSKI. When speaking to the aspect of the funding and the funding levels, if the funding levels had stayed at their peak that we saw in 1999, how long would it have taken to reach the Federal ceiling for those original five projects that were authorized in 1992?

Mr. KEYS. Two of them are done.

Senator MURKOWSKI. Right.

Mr. KEYS. If you looked at San Diego, and if we had maintained the \$28 million that was funded in 1999 that you mentioned, it would still have taken about 11 years to finish that project.

Senator MURKOWSKI. To get that one project or all five of them?

Mr. KEYS. That one project.

Senator MURKOWSKI. That one project.

Mr. KEYS. Yes.

Senator MURKOWSKI. Senator Feinstein, I don't know if you would like to make an opening statement, but I would certainly offer that to you and give you an opportunity to ask the Commissioner some questions. And I may have a few more for you when we've concluded.

Senator FEINSTEIN. Well, Madam Chairman, let me just say thank you for having this hearing. I believe I requested that you hold this hearing, and I'm really very grateful to you. I've been trying to sort out what the problem is, but there clearly is a big prob-

lem for my State, California, in that there have been a number of projects submitted, 1999, 2000, and nothing seems to happen with them. So, the question comes that if, in fact, it's \$200,000 a project for them to study them, is this the best way to do it, since it's now 2006, and none of these projects are able to move ahead, as I understand it?

It would almost seem to me that if the Bureau gave the local jurisdictions a set of criteria that they would need for approval and then let the local jurisdictions say this project meets your criteria or not, things would be sped up. As I understand it, the bottom line is in California none of these projects are moving forward. So, my question to Mr. Keys would be why is that?

Mr. KEYS. Senator Feinstein, there are a number of them that are moving forward. We have nine of them in our program this year that are being funded. I would tell you that—

Senator FEINSTEIN. Could you indicate which projects those are?

Mr. KEYS. Yes, ma'am. In our 2007 request, the Calleguas Municipal Water District has been proposed for money, the Long Beach Area Water Reclamation has been recognized, North San Diego County, Orange County, San Diego Area—boy, San Diego's got two in there—San Gabriel, San Jose and then our Water Reuse Foundation money. So, one, two, three, four, five, six, seven, eight. I said nine, and it appears that one of them is in Arizona, so there—that would be eight in California.

Senator FEINSTEIN. And could you tell me how many California projects are pending?

Mr. KEYS. Yes, ma'am. It looks like we have about 20 or 21 on the books.

Senator FEINSTEIN. Okay. Now, how long will it take before those 21—if I understand what you're saying, you're saying the 2007 bill approves nine specific California projects; is that right?

Mr. KEYS. There are funds in our request for fiscal year 2007 that are targeted for nine Title XVI projects.

Senator FEINSTEIN. Okay. Now, for the other 21, is it true that it takes about \$200,000 per project for the study?

Mr. KEYS. Well, Senator Feinstein, they are at different levels. Some of them have completed feasibility studies. Some of them have not. And I could not tell you that it's \$200,000 each. I don't know that figure.

Senator FEINSTEIN. Well—

Mr. KEYS. But we could certainly supply that for you.

Senator FEINSTEIN. I think what I'm looking for is the most cost-effective way to move these projects forward. In my State, this is a very big deal, and we get constant importunings—please, please move the project, it's caught up in bureaucracy, it's been there year after year after year.

So, the question comes, what do you do to break this? And I wonder, would it make sense if you just submitted the criteria that a project would have to meet for Federal funding and then let the local jurisdiction certify that, in fact, that project would meet that criteria?

Mr. KEYS. Senator Feinstein, we put out guidelines for those proposals in 1998, and they've been out there for folks to follow all along. I would tell you that a good share of those that have been

authorized, they have not completed the feasibility studies along those guidelines.

Senator FEINSTEIN. Then there's a problem, because my staff just said many of them have submitted the studies.

Mr. KEYS. Right, some of them have.

Senator FEINSTEIN. They can't get action.

Mr. KEYS. Well, Senator Feinstein, we live in a time of flat budgets, or even decreasing budgets, and we only have so much money to go around. What we're trying to do is concentrate the money that we have onto those that are already under construction. For us to start construction on some that have not received money already, I think would be irresponsible, because we would then be making promises that we couldn't keep. So, we're trying to concentrate on those that we already have under construction.

Senator FEINSTEIN. So, you're saying that no new projects are being considered? Is that correct?

Mr. KEYS. Senator, we never say never. The Appropriations Committee at times funds things that we don't propose.

Senator FEINSTEIN. Madam Chairman, this is the problem. What I hear is constant frustration, that people have submitted their information, and it doesn't get approved, and so they come to us year after year after year importuning something to happen, because for many, this recycling is a very big deal and very important.

And I'm just wondering if there isn't any way we can't save money for the Federal Government if, in fact, each one of these nine projects has cost \$200,000 to study before it gets granted, if it isn't possible to be able to do it another way.

And if I understand, Mr. Keys, you're reluctant to admit there is a better way.

Mr. KEYS. Senator Feinstein, I think there is a better way. I think the better way is for us to be sure that we have those feasibility studies done, and then, after they're done, come back to Congress and let Congress authorize them for construction and be sure that they're directed into those areas that fit with where Reclamation belongs. In a lot of cases, a lot of those projects that are authorized are not even within Reclamation project boundaries or in some of our territory there.

Senator FEINSTEIN. Oh.

Mr. KEYS. So, we're reluctant to start some of those, but we—like I said, we do what Congress says.

Senator FEINSTEIN. So, what you're saying is even if a project is authorized, if it doesn't fit your parameters, you don't fund it?

Mr. KEYS. Currently, that is not the case, because we don't have the authority to do that. We're asking to work with this committee to develop criterion so that they can be directed into those areas where we're short, where there are potentials for conflicts between water users, and this would help solve part of their water resource problem.

Senator FEINSTEIN. Would it be asking too much to ask you to give us a list of these projects, the nine plus the 21, the 30 in California, with exactly where each one is, and if there is a problem, what that problem is?

Mr. KEYS. Senator, we'd be glad to furnish that.

Senator FEINSTEIN. Thank you very much. Could I receive it soonest?

Mr. KEYS. Yes, ma'am.

Senator FEINSTEIN. I appreciate that very much.

Mr. KEYS. Will do.

Senator FEINSTEIN. Thank you. Thanks, Madam Chairman.

Senator MURKOWSKI. Thank you, Senator Feinstein. Commissioner, I've got a question now. I thought that I kind of had a sense, in terms of these nine projects, that you are proposing to move forward for funding, and in looking at some of the charts that we have, for instance, the—and I'm going to mispronounce it, the Calleguas—

Mr. KEYS. Calleguas.

Senator FEINSTEIN. Calleguas, you said?

Senator MURKOWSKI. I'll let you say it, Calleguas. The Calleguas water study is included in your recommendations as one of the projects. And as I understand, that has already received Title XVI funding, about 44 percent of the Federal share. So, these projects that we're talking about, the nine that you have identified, are not necessarily for a feasibility study because—is that correct?

Mr. KEYS. The nine that I mentioned are ones that have already been authorized.

Senator MURKOWSKI. Okay.

Mr. KEYS. We have started construction, and we have put money into them.

Senator MURKOWSKI. Right, so we're not going back and doing a feasibility study on these. We're moving forward with these Federal funds to get—

Mr. KEYS. They—for example—

Senator MURKOWSKI [continuing]. Completion.

Mr. KEYS. Yes, ma'am.

Senator MURKOWSKI. Go ahead.

Mr. KEYS. For example, the Calleguas one, the money that we had put in through 2006 was \$8.85 million. That means that the money that would potentially be put into there later on is up to \$11 million, under the \$20 million dollar cap. So, it's one of the ones that we have included in the President's request for fiscal year 2007, so that we can get it done.

Senator MURKOWSKI. Right.

Mr. KEYS. And these nine that I mentioned, that's what those are, the ones that had been funded previously, and we think should go ahead and be completed.

Senator MURKOWSKI. With these nine, if in fact, they go forward at these levels that you have recommended, how many of these nine then will be 100 percent complete?

Mr. KEYS. At the end of 2006, which is the current fiscal year, two of them will be complete. There are none that we would finish up in 2007.

Senator MURKOWSKI. Okay. All right. But what you're saying, though, is that it gets these nine projects further down the road toward completion, we're not looking at feasibility study money for any of these nine.

Mr. KEYS. That's correct.

Senator MURKOWSKI. Okay.

Mr. KEYS. That's correct.

Senator MURKOWSKI. All right, that helps me in just kind of understanding what we're doing there then. I had a question just in terms of how Title XVI is rated. Do you evaluate Title XVI using the program assessment rating tool utilized by OMB? And if so, how does that work or how did it work?

Mr. KEYS. Well, Madam Chairman, the PART exercise was an effort by the Office of Management and Budget to rate our program in how it's functioning. It does not rate the individual elements, in other words, the different projects that are authorized for construction. It evaluates the process and the program that is there.

It was rated moderately effective, and what that means is that it has a primary weakness, and the primary weakness is that Reclamation has little impact on the program accomplishments, on the construction, on the methodology, on finishing the projects. In other words, we just pass the money through. And we were rated moderately effective because of that.

Senator MURKOWSKI. So, OMB gives you that rating. Have you, then, done anything in response to that PART rating to address the concerns or the issues that were raised in that review?

Mr. KEYS. Madam Chairman, that's one of the reasons we're here.

Senator MURKOWSKI. Okay, all right. Well, whatever it takes to get the program to function. I believe you stated that Title XVI does have a future. It's quite clear, from those who are listening, that there is a keen interest in figuring out how we can provide for the funding for these projects. But probably more importantly is how we prioritize them, because in times where we recognize that we've got budgets that are tighter, prioritization is something that is key. And I guess I look at what I understand of the program, and there's very little to give you a sense as to what has been given a priority.

We, here in the Congress, can move forward to authorize something, but from the Bureau's perspective, you then have these projects that you're looking to, but in terms of where you put the funding next is an issue. So, I guess I'm looking at this and saying if we can enhance the process by having criteria that I think, as Senator Feinstein points out, people know in advance, they know what it is that they've got to meet in terms of eligibility criteria, you can perhaps have a more successful program. Senator Feinstein, do you have any further questions that you would like to address to the commissioner?

Senator FEINSTEIN. No, I think that's it. I really appreciate what you're doing, Madam Chairman, because I think we do need clarity. Did you want to say something, Mr. Keys?

Mr. KEYS. Yes, ma'am. Let me just say that the goals of Title XVI need to be done. Wastewater is a valuable asset out there that we should take advantage of, and what we're saying is that the Title XVI program, as it was originally formed and enacted and so forth, we can claim success from that because we have demonstrated the methodologies, we've demonstrated that it's a valuable part of water resource management.

We think it's time to move to the next stage in that and be sure that we are getting the best result for the dollars that we're put-

ting into it. In other words, we are supporting good, feasible projects, and they're being directed into those areas that are most challenged for water supply now. I think that kind of summarizes what we're trying to say, and we're willing to work with this committee and the Congress to try to produce a bill that will make it easier to do that.

Senator FEINSTEIN. I think that's very good. From my State, for example, I'm an appropriator, and I'm on that Appropriation Subcommittee. It would be very useful to have some prioritization so that we knew that the best projects were the ones that were getting the money. Right now, that really isn't possible, and that's why this list would be very useful. And then if somebody has a problem, they can find out what that problem is.

Mr. KEYS. Right.

Senator FEINSTEIN. I appreciate that.

Mr. KEYS. We will certainly provide that for you.

Senator FEINSTEIN. Thank you.

Senator MURKOWSKI. Thank you, Commissioner. I appreciate you being here today. With that, we'll call up the second panel. Welcome to all of you. On our second panel, we have Betsy Cody, who is with the Congressional Research Service. We also have Mr. Richard Atwater, the chairman of the Legislative Committee of the WaterReuse Association; Mr. Thomas Donnelly, executive vice president of National Water Resources Association; and Ms. Virginia Grebbien, General Manager for Orange County Water District. Welcome to you all. We'll just start here at the end with Ms. Cody and move on down the line.

STATEMENT OF BETSY A. CODY, SPECIALIST IN NATURAL RESOURCES POLICY, RESOURCES, SCIENCE, AND INDUSTRY DIVISION, CONGRESSIONAL RESEARCH SERVICE, LIBRARY OF CONGRESS

Ms. CODY. Well, thank you, Madam Chairman for the opportunity to appear before the subcommittee today. My name again for the record is Betsy Cody. I am a specialist in Natural Resources Policy with the Congressional Research Service, Library of Congress, where I've worked on Western water and natural resource issues since 1989.

I've been asked by the subcommittee to provide information on the status of Reclamation's Title XVI Water Reuse and Reclamation program, as well as to highlight issues in its implementation. My written testimony, begins with a brief discussion of the broader context in which the Title XVI program is being implemented, as well as conflicts that have arisen in implementation and fundamental issues facing the 109th Congress regarding the program's future. As requested, my written testimony also provides background on the Title XVI program, its genesis and where it stands today. With your permission, I'd like to request that my written testimony be entered into the record.

Senator MURKOWSKI. It will be included, as will the written testimony of all the participants this afternoon. Thank you.

Ms. CODY. Thank you. I'd like to start with the context of where we are today, and we've heard some of that from Reclamation. Today, growing populations and changing values have increased

demands on water supply throughout the West, as you're all familiar with.

Senator FEINSTEIN. Is your microphone on? It's hard to hear.

Senator MURKOWSKI. Pull it closer.

Ms. CODY. Okay, all right. Growing populations and changing values have increased demands on water supplies and river systems, resulting in water use management conflicts throughout the country, particularly in the West where population growth and climate variability make managing water supplies especially challenging. As you know, in many Western States, agricultural demands are often in direct conflict with urban demands and other resource demands.

Two figures in appendix A of my written testimony illustrate these points. The first is a copy of the Department of the Interior's hot spots figure where the Department has identified areas of potential water supply crises or conflicts. It's important to note that these areas are identified by Reclamation as areas already experiencing tension between available water supplies and water demand.

The second figure shows the rapid growth in Western States, particularly in the Colorado River Basin region and southern California. The figure also shows the ranking of each State in growth as compared to the rest of the country. Five of the country's fastest growing States are among the 17 Reclamation states, and eight of the top 12 are among the traditional 17 Western Reclamation States. If it pleases the Chair, I'd also like to introduce a third figure for the record, and I've asked staff to pass this out to members, who should have it by now.

Senator MURKOWSKI. We do, and it will be included as part of the record.

Ms. CODY. All right, thank you. This figure, produced by CRS/the Library of Congress, depicts the Title XVI projects that have been authorized in the 17 traditional Reclamation States. It depicts them as an overlay on the first illustration, Reclamation's identification of hot spots in the West. The numbers on the left indicate the total number of projects. Our numbers differ slightly from Reclamation's mainly due to the way we count projects. They count one that we don't count, and we count one that they count as three, but those are minor details. The point—the major point—remains the same, that there are more than 30 reuse projects authorized for construction in the eight traditional Reclamation States and in the State of Hawaii.

In the CRS figure, the darkest blue triangles represent completed projects. The grayish-blue triangles represent the other projects that have received some Title XVI funding. That doesn't mean they're in this year's budget request necessarily. Together, these total approximately 21 projects that have received Title XVI funding. The light-blue triangles represent the authorized projects that have not received Title XVI funding or have been identified by Reclamation in the recent past as inactive. And that's a moving target, so don't get too settled on those numbers.

The projects are largely ordered by their authorization, that is, the earliest ones, No. 1, would be the initial 1992 authorization, and if you count down about—well, there were 18 authorized in

1996 and so on—so, they're largely ordered by their authorization, and then they correspond roughly to their location on the illustration, except for the San Joaquin Recycling Project and the Hawaii Authorization. Those two are not depicted. One, Hawaii was not in the original Reclamation Act, and we've had information from the San Joaquin project sponsors that they may not be pursuing that project, so it's not shown on the illustration.

As you can see, nearly half of these projects are located in southern California. This concentration largely reflects the direction of the original program authorization, which, many in this room will recall, was begun in the midst of a 6-year drought in California and the Southwest. I have more on this early history in my written testimony.

A total capacity of 750,000 acre-feet is estimated to be available when construction is complete on the active projects. CRS estimates that another 30,000 to 50,000 would be available if authorized projects for which we would be able to obtain information were to be constructed as contemplated, today. CRS found that at least six of the unfunded projects are still contemplating future development. However, they're in various stages of planning. One or two have started construction. The others are still in pre-feasibility study phase, so they differ. We were not able to contact all of those unauthorized projects; however, we'll continue to try.

I'd like to turn now to issues. There's more on project status in the table and in my testimony. As Commissioner Keys has explained, the program has been controversial in recent years, and as members of the committee have commented on as well. While demand for these projects appears to be increasing, and Congress has authorized several new Title XVI projects over the years, the administration has opposed most new projects and accordingly has requested funding only for projects it has previously budgeted. The administration has also stated that Title XVI projects are not part of its core mission, and at times, has stated the activities are a local responsibility. These latter two issues may relate—from a water resources professional standpoint—to the traditional role of water resource development agencies, primarily developing water supply for M&I purposes, municipal and industrial purposes, as they are connected to multipurpose projects like flood control, navigation, hydro power, and in the case of Reclamation, irrigation water supply. That's an issue, again, I touch on in the written testimony, that providing water specifically for M&I uses for Reclamation has not been a traditional role except in relation to these big projects.

Other issues appear to be largely concentrated on, one, project evaluation, which I think we've heard a lot about today; two, authorization, the issues that have been brought up in the questions of Commissioner Keys; and three, the funding issues. These issues are addressed in greater detail in my written testimony. Also, CRS has identified several policy options that Congress may wish to consider as it contemplates the future of the Title XVI program. A report on these options and assessment of how Reclamation's proposal, what we heard about today, might fit with these options, and a brief analysis of options is forthcoming—will be in a CRS report available for Congress.

In summary, it appears that the growing local demand for these projects combined with differences in congressional and administrative priorities in approving and in funding projects has resulted in a backlog of sparsely funded and unfunded projects and unmet demand. Ultimately, this has raised questions—a question of what is the future of the Title XVI program. Thank you, and this concludes my testimony.

[The prepared statement of Ms. Cody follows:]

PREPARED STATEMENT OF BETSY A. CODY, SPECIALIST IN NATURAL RESOURCES POLICY, RESOURCES, SCIENCE, AND INDUSTRY DIVISION, CONGRESSIONAL RESEARCH SERVICE¹

THE BUREAU OF RECLAMATION'S TITLE XVI PROGRAM: IMPLEMENTATION ISSUES

Thank you Madame Chairman for the opportunity to appear before the Subcommittee today. I have been asked to provide Members of the Subcommittee with background information on the Bureau of Reclamation's Title XVI water reuse and reclamation program, as well as to highlight issues in its implementation. My testimony begins with a brief discussion of the broader context in which this program is being implemented, conflicts that have arisen in implementation, and fundamental issues facing the 109th Congress regarding the program's future. As requested, my testimony also provides background on the Title XVI program, including its genesis, and where it stands today.

CONTEXT OF TITLE XVI IMPLEMENTATION IN 2006

Growing populations and changing values have increased demands on water supplies and river systems, resulting in water use and management conflicts throughout the country. These demands are particularly evident in the arid West, where population has increased dramatically since Title XVI was first authorized, and where climate variability makes managing water supplies especially challenging. In many western states, agricultural demands are often in direct conflict with urban demands, as well as with water demand for threatened and endangered species, recreation, and scenic enjoyment. Areas where these conflicts are especially prevalent are illustrated in a figure developed by the Department of the Interior to display potential areas of conflict over water resources, or "Hot-Spots" (see Appendix A).^{*} Further highlighting the population issue is a U.S. Geological Survey illustration showing recent population growth in the western states (see Appendix A).

Debate over western water resources revolves around the issue of how best to plan for and manage the use of this renewable, yet sometimes scarce and increasingly sought after, resource. Some observers advocate enhancing water supplies, such as through building new storage or diversion projects, expanding old ones, and funding water reclamation and reuse facilities. Others emphasize managing existing supplies more efficiently—through conservation and revision of policies that are seen as encouraging inefficient water use, such as using market mechanisms or providing better price signals, which theoretically would result in more efficient water use. In practice, all of these tools are used by western water managers to varying degrees; and all have been addressed by Congress, again to varying degrees.

To address some of the growing challenges in western water management in the early 1990s, Congress directed the Secretary of the Interior (Secretary) to establish a federal water reclamation, recycling and reuse program (Title XVI of P.L. 102-575; 43 U.S.C. §390h). Under the Title XVI program, the Secretary is directed to "investigate and identify" opportunities for water reclamation and reuse in the West, for design and construction of "demonstration and permanent facilities to reclaim and reuse wastewater, and to conduct research, including desalting, for the reclamation of wastewater and naturally impaired ground and surface waters" (43 U.S.C. §390h(a)).

Today, the Title XVI program seems to be at a cross-road. The program has been controversial in recent years because of concerns over its implementation. As reuse²

¹Nicole T. Carter, Analyst in Environmental Policy, Resources, Science, and Industry Division, assisted in the preparation of this testimony.

^{*}The appendix has been retained in subcommittee files.

²For the purposes of this testimony, water reuse connotes the planned beneficial use (e.g., landscape watering, agricultural irrigation, and industrial cooling) of treated municipal wastewater. Water reclamation is the treatment of wastewater or other impaired surface or ground-

and desalination have become more viable options for addressing a variety of water management issues, the number of legislative proposals for Title XVI project authorizations has increased. At the same time, Administration support for the program has encountered many changes—from full support prior to enactment of Title XVI in 1992—to the present, where the Administration has found it cannot support much of the proposed legislation to authorize new projects.³ Also during this time, congressional authorization of new projects has been significantly less than demand.⁴ This situation has created frustration and confusion over the existing program, its future, and to some degree, the future role of the Bureau of Reclamation in the rapidly growing West. Frustration is especially apparent among project sponsors whose authorized projects remain unfunded or receive limited funding, and sponsors of pending project proposals, resulting in increased pressure on Congress and the Administration to address program issues.

TITLE XVI OVERVIEW

The Bureau of Reclamation's Title XVI program is the only active federal program providing localities with financial and technical assistance for the development and construction of facilities for the reuse of wastewater and reclamation (including desalination) of impaired surface and ground waters.⁵ Although both the U.S. Army Corps of Engineers and the EPA have limited authorities to provide assistance to local entities for recycling projects (e.g., specific provisions in 1992 and 1999 Water Resources Development Acts,⁶ a pilot program by EPA under the Alternative Water Sources Act,⁷ and general Clean Water Act water treatment and wastewater authorities⁸), neither has an established, regularly funded program *dedicated* to such activities. However, in its review of federal agency programs, CEQ found that “a broad range of federal agency program activities employ water reuse, recycling, and reclamation technologies to achieve conservation and other program objectives.”⁹

PROGRAM BEGINNINGS

In 1992, Congress directed the Secretary to establish a program to investigate and identify opportunities for wastewater reuse and reclamation of naturally impaired ground and surface waters in the 17 western states (Reclamation Wastewater and Groundwater Study and Facilities Act, Title XVI of P.L. 102-575; 43 U.S.C. §390h(a)).⁹ Responsibility for undertaking the new program—commonly referred to as the Title XVI program—was assigned to the Department of the Interior's Bureau of Reclamation (Reclamation). As part of the original authorizing statute, the Secretary is directed to undertake appraisal investigations to identify opportunities for

waters (e.g., seawater, or groundwater with high levels of arsenic) to make it usable or reusable. Water recycling generally connotes the use of wastewater that is captured and redirected back into the same water scheme, such as the multiple reuse of water in a manufacturing facility.

³For example, the Administration, when asked, has testified against every Title XVI bill in the 108th Congress and most of the pending bills in the 109th Congress, mostly because of budgetary and project feasibility concerns (discussed below).

⁴Two of approximately 13 project authorization bills were enacted by the end of the 108th Congress, and 1 bill has been enacted thus far in the 109th, with 16 individual project proposals pending in legislation. A total of 6 new projects have been authorized since 1996.

⁵U.S. Executive Office of the President, Council on Environmental Quality, *Federal Agency Water Reuse Programs, A Report to Congress*, white paper published October 3, 2005, p. 3. This report confirms earlier findings of the Office of Management and Budget (OMB). Hereafter referred to as the CEQ report. See also, U.S. Executive Office of the President, Office of Management and Budget, *Performance and Management Assessments. Budget of the U.S. Government, Fiscal Year 2004* (Washington, DC: U.S. Govt. Print. Off., Feb. 2003), p. 173. See also, PART worksheets for the Department of the Interior's Title XVI water reclamation and reuse program at: <http://www.whitehouse.gov/omb/budget/fy2004/pma.html>, p. 2.

⁶§217 of P.L. 102-580, and §502 of P.L. 106-53, respectively. Some of these activities received funding for FY2003 in Title I of the Energy and Water Development Appropriation Act for FY2003 (P.L. 108-7; Division D). The Corps also has authority for design and construction of Everglades wastewater reuse technology (P.L. 106-541). In all, it appears \$110.5 million in assistance has been authorized for Corps water reuse activities, with approximately \$22.6 million appropriated as of FY2003.

⁷Title VI of P.L. 106-457. (Clean Water Act Section 220; 33 U.S.C. § 1300.)

⁸According to CEQ (CEQ report, p. 8 and 9), water reuse, recycling, and reclamation activities fall within larger EPA program areas of water treatment, wastewater management, or water resources management (33 U.S.C. 1376). According to the CEQ report, funding for certain aspects of water reuse, recycling, and reclamation project may be available via Clean Water Act and Safe Drinking Water Act State Revolving Funds. Although funds are not specifically authorized by Congress or targeted by EPA for such purposes, Congress has periodically specified funding for individual reuse projects. For example, project-specific reuse funding in FY2005 totaled \$6.4 million.

⁹Congress has since authorized Title XVI activities in Hawaii.

water reclamation and reuse, and is authorized to participate with federal, state, regional, and local authorities in developing feasibility studies.

The genesis for Reclamation's wastewater reclamation, recycling, and reuse program was a 6-year western drought of the late 1980s and early 1990s. The drought hit California and the Southwest particularly hard. In response, this subcommittee and its House counterpart, the House Resources Water and Power Subcommittee, spent much time debating federal water supply policies, including how to address conflicts between the need and desire for continued operation of federal reclamation projects and the application of state and federal environmental laws that could potentially limit water deliveries to protect certain species or to comply with water quality standards. The result of several years' effort in addressing this conflict was the Reclamation Projects Authorization and Adjustment Act of 1992 (P.L. 102-575). While much attention has been paid to Title XXXIV of this Act (the Central Valley Project Improvement Act), Title XVI, the Reclamation Wastewater and Groundwater Studies and Facilities Act, authorized construction of five specific water reuse and reclamation projects in Arizona and California and established what is known as the Title XVI program. The Act also authorized a comprehensive reuse study for Southern California, including Colorado River hydrologic regions. The latter provides specific statutory authority for activities that were underway in 1991 in response to then-Secretary Manuel Lujan's announcement of a "Comprehensive Water Reuse Initiative" for Southern California and speaks to what was perceived to be an important federal interest in the management of the Colorado River.¹⁰

In addition to increasing the water supplies available to the area [southern California], this program would also decrease the area's dependency on water imports from the Colorado River, California, and Los Angeles Aqueducts, help restore and protect the quality of existing ground-water reserves, and help meet environmental water needs. Lujan said . . . "Reclaimed water—one of the most dependable, abundant and underutilized water supplies available—could provide as much as 2 million acre-feet of water each year for the area."¹¹

The completion and submission of this study and whether or not it is a "feasibility study" has a long history and has remained a point of contention among southern California stakeholders and Reclamation to this day.¹² In sum, this large undertaking (capable of producing 450,000 acre-feet of water annually), which is directly linked to the Title XVI program's creation, became caught up in apparent shifts in Administration policy on, and congressional oversight of, the Title XVI program.¹³

¹⁰ U.S. Department of the Interior, *Interior Secretary Lujan Announces Comprehensive Water Reuse Initiative for Southern California*, News Release, Office of the Secretary, August 5, 1991. According to materials provided to CRS on October 25, 1991, Reclamation undertook a number of activities that fall, including developing a detailed action plan for promoting the initiative. By October 23, 1991, Reclamation had held its first pre-planning committee meeting for the Southern California Water Reclamation and Reuse Study.

¹¹ *Ibid.*, p.1.

¹² Reclamation undertook the "Southern California Comprehensive Water Reclamation and Reuse Study", along with eight state and local agencies. The effort was later broadened to include 70 water supply and wastewater treatment agencies in southern California. The study was largely completed by April 2001 and was published as a final report in July 2002 (2002 Report); however, the report was not officially submitted to Congress, as required under the Act (Section 1606(c), which requires submission of the study within six years of the first appropriations for the title (by FY2000)). According to an October 2003 letter to relevant project managers, the Department of the Interior found the original report contained "more detail than desired for a submittal [sic.] to Congress." The then-Assistant Secretary for Water and Science then asked Reclamation to prepare a ". . . concise, to-the-point version of that Report." *The Southern California Comprehensive Water Reclamation and Reuse Study, Reclamation Compendium* was submitted to Congress February 20, 2004. However, the word feasibility was stricken from the "compendium," raising the question of whether the submission complies with the directives of Section 1606.

¹³ An apparent policy shift occurred during preparation of the FY2004 Reclamation budget, a process that included an evaluation of the program's effectiveness by the Office of Management and Budget (OMB) through its Program Rating and Assessment Tool (PART), the results of which are discussed in the Title XVI Policy Issues section below. It appears that since that time, congressional project authorizations slowed, although many legislative proposals are pending. (Re: apparent policy shift, see: U.S. Department of the Interior, letter from the Secretary of the Interior, Gale A. Norton, and Deputy Secretary of the Interior, Steven Griles, to the Solicitor, Inspector General, Assistant Secretaries, and Heads of Bureaus and Offices, stamped Nov. 22, 2002. Subject: *Conclusion of the Fiscal Year 2004 Budget Formulation Process*. The letter thanks officials for their efforts in identifying activities that could be scaled back or eliminated and notes a Reclamation proposal to "devolve significant responsibilities in the Water Reclamation and Reuse (Title XVI) program" in order to conserve resources to "implement innovative, new approaches to address long-standing problems such as those relating to endangered species.")

TITLE XVI TODAY

Title XVI has been amended multiple times since 1992, resulting in a total of 31 currently authorized projects in 8 western states and Hawaii (see Table 1).¹⁴ To date, Reclamation has undertaken planning, design, and/or engineering activities for 21 projects. Although the program includes projects for both water reuse and desalination of saline water (both brackish groundwater and seawater), the majority of Title XVI projects have been authorized for reclamation of municipal wastewater.

Nearly half of the projects are concentrated in southern California. This concentration reflects the direction of the program as first authorized. Most of the largest projects were authorized in 1992, before federal contributions were capped.

Project Funding. The federal share of project costs under Title XVI is limited to 25% of total project costs. Amendments in 1996 (P.L. 104-266) authorized numerous new projects, and added new program guidance. Specifically, the amendments retained the 25%/75% federal/non-federal cost share, but limited the federal share of costs to no more than \$20 million per project.

Reclamation has completed its funding obligations for three projects: 1) the Los Angeles (CA) area water reclamation and reuse project; 2) the Tooele (UT) wastewater treatment and reuse project; and 3) the Port Hueneme (CA) Desalination project. Title XVI funding obligations are nearly complete (80% or more complete) for several other projects: San Gabriel Demonstration (CA); North San Diego County (CA); Orange County Regional (CA); Mission Basin Desalination (CA); Albuquerque Metropolitan (NM); and the City of El Paso (TX).¹⁵ Projects authorized prior to the 1996 amendments ranged in total costs from \$152 million (\$38 million for Reclamation's share), to \$690 million (\$172 million for Reclamation's share). Post-1996 projects have been much less expensive, ranging from \$10 million (\$2 million for Reclamation's share) to \$280 million (\$20 million for Reclamation's share).

Total Title XVI funding through 2006 is estimated by Reclamation to be \$324.5 million.¹⁶ (See Table 1.) The remaining total federal contribution for all authorized projects is estimated to be at least \$344 million. Non-federal Title XVI investment as of Sept. 30, 2004 is estimated to be \$1.1 billion.¹⁷ Title XVI funding for FY2006 is \$25.6 million; the budget request for FY2007 is \$10.1 million.¹⁸

Active and Inactive Projects. Projects have been authorized for construction in 9 states: Arizona, California, Hawaii, Nevada, New Mexico, Oregon, Texas, Utah, and Washington. These states represent many of the states that are especially active in reuse, but not all; two very active states, Florida and Colorado, do not have Title XVI projects. Florida is not eligible for Title XVI support because it is not a designated as a "reclamation state," as defined by the Reclamation Act of 1902, as amended (43 U.S.C. 391).

More than two-thirds of the 31 Title XVI projects have received some Title XVI funding. The 10 authorized projects that have not yet received funding from Reclamation, or received minor amounts, have been deemed "inactive" largely for accounting purposes. Projects shown in italics in Table 1 have not yet received Title XVI funding (with the exception of the Oregon project). Of these 10 projects, CRS has determined that at least 6 are, in some manner, moving forward with local funding.

¹⁴Total number of projects is subject to interpretation. Reclamation does not include the Port Hueneme Desalination project in its summation of total project authorizations or list of "active" projects, because it was authorized under general authority of the 1996 amendments, and was not specifically authorized by Congress as have been the other projects. However, because Reclamation includes the project in its budget itemization, including totals on estimated project funding to date and water to be reclaimed, etc., CRS includes it in its total project count. CRS also has counted the Hawaii authorization as one project; whereas, Reclamation counts it as three projects.

¹⁵U.S. Department of the Interior, Bureau of Reclamation, *Title XVI Water Reclamation and Reuse Program Funding History, Reclaimed Water Deliveries and Project Status*, January, 2006. Revised Chart provided to CRS via e-mail February 1, 2006. (Hereafter referred to as 2006 Reclamation Reuse Chart.)

¹⁶U.S. Department of the Interior, Bureau of Reclamation, *Title XVI Water Reclamation and Reuse Program Funding History, Reclaimed Water Deliveries and Project Status*, January, 2006. Revised Chart provided to CRS via e-mail February 1, 2006. (Hereafter referred to as 2006 Reclamation Reuse Chart.) Note: this figure represents actual expenditures, and is slightly lower than summation of annual appropriations, which total approximately \$350 million (not including rescissions).

¹⁷U.S. Department of the Interior, Bureau of Reclamation, *Title XVI Project Costs and Investment as of Sept. 30, 2004*, Chart provided to CRS via e-mail February, 2005.

¹⁸FY2006 figures reflect an Across-the-Board Rescission of 1% per P.L. 109-148. Prior to the rescission, the appropriation was \$25.9 million. (U.S. Department of the Interior, Bureau of Reclamation, *Budget Justifications and Performance Information, Fiscal Year 2007*, released February 6, 2006. Water and Related Resources—p. 8.)

A total capacity of nearly 800,000 acre-feet of water is slated to be reclaimed by the projects that have received Title XVI funding and for which CRS was able to acquire data (see Table 1).¹⁹ Reclamation estimates that the amount of water to be reclaimed (maximum design capacity) from its active projects is nearly 750,000 acre-feet.²⁰ The 50,000 acre-foot difference between these estimates represents the total reclaimed water potential of 6 inactive projects for which CRS gathered estimates from project sponsors or project websites. The potential of all inactive projects would necessarily be somewhat higher.

TITLE XVI POLICY ISSUES

Title XVI policy issues generally fall into two categories: broad policy issues, such as the federal role in water supply development (particularly for municipal and industrial (M&I) purposes); and more specific project evaluation and authorization issues.

Broad Policy Issues

Historically, federal water resource agencies' involvement in water supply was limited to developing irrigation projects and multiple use projects. Unlike other areas of water resources management in which the federal role is more prominent (e.g., irrigation, flood damage reduction, and navigation; or providing funding for wastewater and drinking water *treatment* through federal revolving loan programs), the federal role in water supply *development* for M&I uses has been secondary to the primary role of state and local governments. Water supply development for M&I purposes largely has generally been incidental to the primary project purposes of large, multi-purpose irrigation, flood reduction, hydro power, and navigation projects, pursuant to congressional policy established in the Water Supply Act of 1958.²¹

While occasional congressional directives have deviated from this policy (including Title XVI), as a general matter, local, regional, or state agencies have been responsible for water supply development, and they have been wary of federal involvement in allocating water.

In recent years, the Administration has maintained that some Title XVI activities (other than research) are not a "core function" for Reclamation and that the Title XVI program "serves a function that is a local responsibility."²² However, over the last two decades, Congress has increasingly, and incrementally, authorized the Department of the Interior to participate in construction of approximately 13 water supply projects for small and rural communities, as well as recycling and reuse projects under Title XIV. Although Congress has increasingly passed bills for site specific projects and established the Title XVI program, it has not re-articulated congressional policy regarding the federal role in water supply development since the 1958 Water Supply Act.

Project Evaluation, Authorization, and Funding Issues

Recent questions and concerns about the implementation of Reclamation's Title XVI program appear to have increased in part because of the nature of project evaluation and authorization processes and the lack of a clear program funding process that is typical of other federal water programs. Other federal water assistance programs, such as state revolving loan funds for wastewater and drinking water administered by EPA, have set criteria and competitive processes for project and funding, as do rural water supply programs administered by the USDA. Congress appropriates money annually for these programs; however, project funding is not appropriated by line item, as is the case for Reclamation projects. Instead, depending on

¹⁹ Figures are based on facility design capacities provided to CRS in the 2006 Reclamation Chart, and interviews with several sponsors of projects that have not received Title XVI funding.

²⁰ 2006 Reclamation Reuse Chart.

²¹ "It is hereby declared to be the policy of the Congress to recognize the primary responsibilities of the States and local interests in developing water supplies for domestic, municipal, industrial, and other purposes and that the Federal Government should participate and cooperate with States and local interests in developing such water supplies in connection with the construction, maintenance, and operation of Federal navigation, flood control, irrigation, or multiple purpose projects." (Water Supply Act of 1958, 72 Stat. 320; 43 U.S.C. §390b, note.)

²² Office of Management and Budget, *Performance and Management Assessments. Budget of the U.S. Government, Fiscal Year 2004* (Washington, DC: U.S. Govt. Print. Off., Feb. 2003), p. 173. See also, PART worksheets for the Department of the Interior's Title XVI water reclamation and reuse program at: [<http://www.whitehouse.gov/omb/budget/fy2004/pma/waterreuse.pdf>] p. 2. See also Administration testimony on Title XVI bills in the 108th and 109th Congresses.

the program, states or federal agencies allocate program funding based on program and project eligibility criteria.

Program Criteria and Project Evaluation

In contrast to several other federal water programs, there are no legislatively mandated or promulgated development criteria and no competitive grant processes for Title XVI projects. Sections 1603 and 1604 of Title XVI (43 U.S.C. §390h-1 (a)-(c) and 43 U.S.C. §390h-2 (a)-(c)) establish a project evaluation process, which directs the Secretary to undertake appraisal investigations before preparation of feasibility studies on potential reclamation and reuse measures and lists several “considerations” that must be addressed; however, the Act does not include clear program criteria, such as how to prioritize projects, or qualified eligibility criteria.

To implement the program, Reclamation developed guidelines for the development of Title XVI projects.²³ These guidelines provide more explicit evaluation and feasibility criteria than is provided in the statute. OMB in the past has noted Reclamation’s Title XVI guidelines provide “solid criteria . . . to evaluate potential projects prior to funding, and also to monitor and evaluate projects under construction.”²⁴ These guidelines have never been officially promulgated as official rules or regulations; nor do the guidelines criteria appear to be binding.

Project Authorization

Another issue relates to the project authorization process. Reclamation has interpreted the Title XVI authorization as requiring congressional authorization for each project, as is the case for traditional Reclamation projects. Under the evaluation process established in P.L. 102-575, as amended, and implemented by Reclamation, projects are to go through an appraisal phase, a feasibility phase, and receive a feasibility recommendation. Positive recommendations would then be forwarded to Congress for construction approval via a specific project authorization. Authorized projects would then be funded (or not) via the annual Energy and Water Development appropriations bill. However, in practice, many projects authorizations, and pending legislative proposals, are for projects that have not gone through the project evaluation phase outlined in Title XVI. It has generally been Reclamation policy to not support projects that have not gone through the evaluation phase and received a positive feasibility recommendation. At the same time, some projects have undergone what sponsors believe to be extensive evaluation and what they believed was a feasibility-level process. This has resulted in project sponsors’ frustration by the experience, and has resulted in them coming directly to Congress for authorization. Other projects appear to have been authorized by Congress without assessment or feasibility evaluation by Reclamation.

Project Funding Issues

Funding for Title XVI projects has been controversial in recent years because of differences in congressional and administration priorities. For example, Reclamation has limited its budget request to projects that have received prior federal funding, while Congress has provided substantially more funding for projects via the annual appropriations process. The budget request for the last 3 years has been 40%-67% less than the enacted appropriation for each of the last 3 years. The Administration’s request of \$10.1 million for Title XVI projects for FY2007 is 40% less than the FY2006 enacted appropriation of \$25.6 million.²⁵

While there is approximately \$1 million-to-\$3 million devoted to program management each year, there is no overall program funding per se. Instead, each project is authorized by a separate line item in Reclamation’s Water and Related Resources budget account. The Senate Committee on Appropriations noted, in report language accompanying FY1998 Energy and Water Development Appropriations, its concern about the potential costs of this program and noted that local sponsors who proceed on their own prior to a federal commitment to the project “do so at their own risk”

²³ U.S. Department of the Interior, Bureau of Reclamation, *Guidelines for Preparing, Reviewing, and Processing Water Reclamation and Reuse Project Proposals Under Title XVI of Public Law 102-575, as Amended*, (Washington DC: Bureau of Reclamation, 1998).

²⁴ U.S. Executive Office of the President, Office of Management and Budget, *OMB Program Assessment Rating Tool (PART), Competitive Grant Programs*. PART worksheet for the Department of the Interior’s Title XVI water reuse and recycling program at [<http://www.whitehouse.gov/omb/budget/fy2004/pma.html>], p. 6.

²⁵ Reflects FY2006 Across-the-Board Rescission of 1% per P.L. 109-148. Without the rescission, the appropriation is \$25.9 million. (U.S. Department of the Interior, Bureau of Reclamation, *Budget Justifications and Performance Information, Fiscal Year 2007*, released February 6, 2006. Water and Related Resources—p. 8.)

(S.Rept. 105-44). The Committee also noted its support of Reclamation's efforts to develop criteria to prioritize the authorized projects currently awaiting funding.

The above issues raise several questions. Is new or revised program guidance needed, via a formal rule-making process, congressional action, or both? Would new or revised guidance forestall the issue of projects being authorized by Congress prior to undergoing the Title XVI project evaluation process, or would it help to alleviate funding issues and controversy over differing administrative and congressional budget priorities?

WHERE TO GO FROM HERE? QUESTIONS FOR THE 109TH CONGRESS

Growing pressure on water supplies in the West make it likely that the demand for Title XVI projects and requests for federal assistance, and hence pressure on Congress to approve more projects, will increase. At the same time, the potential for future requests to escalate and create an entirely new class of water supply assistance appears to have increased congressional and administrative concern over the implementation and authorization of new Title XVI projects. Under the current process, the potential result is an ever-growing list of pending Title XVI legislative proposals, and for those gaining congressional approval, a growing list of projects competing for limited appropriations and administration support. Currently, almost a third of the 31 authorized projects are unfunded—a “backlog” the Administration has cited as reason to oppose new authorizations—and 16 additional project authorizations are pending before the 109th Congress.²⁶

Thus, the 109th Congress is faced with the question of what should be the future of the Title XVI program?

Fundamental to deciding the future of the program are underlying questions related to the federal role in municipal water recycling specifically, and perhaps municipal water supply more generally. The broader policy issues raised in the implementation of Reclamation's Title XVI program (particularly whether wastewater reuse and reclamation are local responsibilities or important to Reclamation's core functions), touch on several policy issues not unique to the Title XVI program. First, they highlight the tension between congressional and Administration priorities. Second, they raise questions regarding the appropriate federal role in water supply development for M&I uses. For example, is Congress redefining the federal government's role in M&I water supply and treatment as it authorizes new site-specific projects? If not, can or should such changes be made explicit through the kind of debate on implementation that is currently occurring, or through legislation?

To what degree should the federal government provide incentives for water supply development via new technologies, and what geographic, regional, or social factors should be considered if it does so? Lastly, is additional coordination or realignment of certain federal water activities needed to ensure efficient use of scarce federal resources? One or more of the options could be used to address many of the issues associated with these questions.

If Congress decides to affirm a federal role for water reuse in the West, a different set of questions arises: How does promoting or facilitating reuse in the West facilitate other federal goals, objectives, and legal obligations? How could the Title XVI program mesh with other federal activities (e.g., Interior's Water 2025 challenge grant initiative or CALFED water reuse and storage activities)? Should the program be tied to alleviating demand or reducing existing diversions where endangered species or other fish and wildlife concerns are at issue? Should it be used to help communities drought-proof their supplies, or to slow pressure on agricultural water supplies by possibly slowing conversion of “ag-to-urban” water transfers? Will promotion of recycling and reclamation simply encourage more growth in already water scarce areas? These questions are just a few that have been raised by interested parties in the course of discussing the future of the Title XVI program.

In conclusion, a wide range of options appears to be available for addressing the Title XVI implementation issues addressed above. Legislative options range from dismantling or phasing out the Title XVI program, to strengthening the program, and could include many less drastic adjustments, such as providing Reclamation with clearer direction on why it should carry out these activities. Administrative op-

²⁶A total of 19 bills amending the Title XVI program have been introduced thus far in the 109th Congress. One bill was enacted (Hawaii authorization, P.L. 109-70), and it had a closely related bill; leaving 17 bills actively pending. Of these, one pertains to an existing project, leaving 16 bills that would authorize new projects; however, many of these bills address the same project, or would authorize multiple projects. In all, it appears there are 16 new project proposals pending.

tions could potentially be pursued as well, such as strengthening agency guidelines or developing formal rules or regulations. While there is no silver bullet option likely to be supported by all stakeholders, examining these questions may help clarify differing perspectives on the appropriate federal role in reuse, define goals of federal participation in reuse, and understand the extent of problems with the existing program.

This concludes my testimony. I will be happy to answer questions from the Chairman and other Members of the Subcommittee. Thank you.

Table 1.—TITLE XVI PROJECTS BY STATE;²⁷
Federal Authorization, Estimated Contributions, and Actual Funding, and Water to be Reclaimed²⁸

Project Name and Authorization (Public Law Number)	Estimated Federal Contribution (\$ in thou- sands)	Total Estimated Funding (actual funding) FY1994- FY2006 (\$ in thou- sands)	Estimated Percent Title XVI Funding Complete	Estimated Project Completion Date	Water to be Reclaimed (acre-feet)	
					By 2006	Max. Project Capacity
Arizona						
Phoenix Metropolitan Water Reclamation and Reuse, AZ (P.L. 102-575; P.L. 106-53 repealed study cost-share limit)	20,000	1,260	06.30%	2010-2015	0	100,000
Subtotal Arizona	20,000	1,260			0	100,000
California						
Calleguas Municipal Water District Recycling, CA (P.L. 104-266)	20,000	8,853	44.27%	2010	9,500	10,000
High Desert Wastewater Collection and Reuse (Yucca Valley, CA) (P.L. 104-266)	⁴² 12,710	0	⁴²	⁴² 2010	0	1,100-5,500
Irvine Basin Project, CA (P.L. 108-233) ²⁹	18,836	9,857	51.88%	2011	10,000	18,000
Long Beach Area Water Reclamation, CA (P.L. 104-266)	20,000	4,599	23.00%	2014	0	8,960
Los Angeles Area Water Reclamation and Reuse, CA (P.L. 102-575)	69,970	69,970	100.00%	⁴⁴	35,640	102,000
Mission Basin Brackish Groundwater Desalting Demo, CA (P.L. 104-266)	3,112	2,543	81.72%	2006	3,360	3,360
North San Diego County Water Recycling, CA (P.L. 104-266)	20,000	17,063	85.32%	2008	4,916	13,532
Orange County Regional Water Reclamation, CA (P.L. 104-266)	20,000	16,164	80.82%	2008	5,040	72,000
Pasadena Reclaimed Water, CA (P.L. 104-266)	5,760	345	05.99%	⁴²	0	2,015
Port Hueneme Brackish Water, CA (P.L. 104-266)	4,000	4,000	100.00%	⁴³	3,970	4,370
San Diego Area Water Reclamation, CA (P.L. 102-575)	172,590	80,437	46.61%	2012	23,050	80,880
San Gabriel Basin, CA (P.L. 102-575)	38,090	30,935	81.22	2010	41,135	75,580
San Joaquin Area Water Reuse and Recycling, City of Tracy, CA (P.L. 104-266) ³⁰	⁴²	0	⁴²	⁴²	0	0
San Jose Area Water Reclamation & Reuse, CA (P.L. 102-575)	109,959	27,080	24.63%	2011	7,537	36,000
Watsonville Area Water Recycling, CA (P.L. 104-266)	17,975	2,870	15.97%	2008	0	4,000
Subtotal California	533,002	274,716			144,148	435,797
Hawaii						
Hawaii Water Resources Act Projects, HI (P.L. 109-70) ³¹	⁴²	0	⁴²	⁴²	43	43

	42	0	42	42	43	43
Subtotal Hawaii						
Nevada						
Las Vegas Shallow Aquifer Desalination R&D, NV (P.L. 104-266)	20,000	540	02.70%	42	0	20,000
North Las Vegas Water Reuse, NV (P.L. 104-266; P.L. 108-7)	20,000	4,105	20.52%	42	0	72,810
Southern Nevada Water Recycling, NV (P.L. 104-266)	20,000	20,000	100.00%	2006	9,391	113,000
Truckee Watershed Reclamation Project (P.L. 106-554) ³²	42	0	42	42	0	43
Subtotal Nevada	60,000	24,645			9,391	205,810
New Mexico						
Albuquerque Metropolitan WRRP, NM (P.L. 104-266; P.L. 105-62)	11,687	11,687	100.00%	2007	5,730	6,181
Subtotal New Mexico	11,687	11,687			5,730	6,181
Oregon						
Willow Lake/City of Salem Natural Treatment, OR (P.L. 105-321) ³³	950 ³⁴	0 ³⁵	42	2006 ⁴⁵	112	600-1,200
Subtotal Oregon	950	0			112	600-1,200
Texas						
El Paso Water Reclamation and Reuse, TX (Northwest Area) (P.L. 104-266)	8,691	8,670	99.76%	42	2,474	2,514
Williamson County Water Reclamation and Reuse, TX (P.L. 108-361)	20,000	95	0.48%	42	43	5,000
Subtotal Texas	28,691	8,765			2,474	7,514
Utah						
Central Valley Water Recycling, UT (P.L. 104-266)	7,750 ³⁶	0	42	42	0	9,000
St. George Area Water Recycling, UT (P.L. 104-266)	3,000 ³⁷	0 ³⁸	42	42	43	3,900-11,700
Tooele Water Reclamation and Reuse, UT (P.L. 104-266)	3,409	3,409	100.00%	44	1,500	2,537
West Jordan Water Reclamation and Reuse, UT (P.L. 104-266)	42	0	42	42	0	43
Subtotal Utah	14,159	3,409			1,500	15,437-123,237
Washington						
Lakehaven, WA (P.L. 107-344)	9,500 ³⁹	0	42	42	0	6,717-13,435
Subtotal Washington	9,500			0	6,717-13,435	

Table 1.—TITLE XVI PROJECTS BY STATE;²⁷—Continued
Federal Authorization, Estimated Contributions, and Actual Funding, and Water to be Reclaimed²⁸

Project Name and Authorization (Public Law Number)	Estimated Federal Contribution (\$ in thou- sands)	Total Estimated Funding (actual funding) FY1994- FY2006 (\$ in thou- sands)	Estimated Percent Title XVI Funding Complete	Estimated Project Completion Date	Water to be Reclaimed (acre-feet)	
					By 2006	Max. Project Capacity
Total	677,989	324,482 ⁴⁰			163,355 ⁴¹	778,056- 797,574

Sources: Information supplied to CRS by Reclamation in January and February 2005, 2006 Reclamation Reuse Chart, and CRS interviews with Project sponsors, November 2005-January 2006.

²⁷Projects in italics are considered “inactive” by Reclamation for budgeting purposes. According to Reclamation, projects are generally considered inactive if they are incomplete and not currently receiving federal funding or have received only a minor amount of federal funding (e.g., Oregon project) in prior years (i.e., overall, projects have not made substantial progress as a result of federal funding assistance).

²⁸Subtotals and totals indicate minimum estimated federal costs as this information was not available for all projects. Water to be Reclaimed column represents maximum project design capacity (or range for multi-phase projects). Numbers are based on project design capacity upon completion; they may not correspond to eventual amounts reclaimed or sold, which will likely be slightly less. Subtotals and totals indicate a lower bound estimate of water to be reclaimed, as water quality information was not available for all projects.

²⁹The Irvine project was inadvertently listed as “active” in Reclamation’s 2005 active/inactive table, so earlier accounting of inactive projects are underestimated by one project.

³⁰Sponsor has indicated the project is not currently being pursued.

³¹The Act authorizes design, planning, and construction of one desalination project and two recycling projects on three different islands.

³²The Truckee Watershed Reclamation Project (P.L. 106-554, Div. B, Sec. 106 of H.R. 5666) was inadvertently listed as the Sparks Water Reclamation and Reuse Project, NV in earlier Reclamation and CRS documents.

³³This project is listed here as inactive because it is not listed as a financially active project in the 2006 Reclamation Chart. However, it may be counted by Reclamation in other lists of “active” projects, as it meets other “active” criteria.

³⁴Based on total construction cost of \$3.8 million.

³⁵Actual funding for this project has been approximately \$270,000; however, it is not reported by Reclamation in funding tables provided to CRS because the project does not meet other “active” project budget criteria. In order to keep this column consistent with Reclamation estimates, we do not include the \$270,000 in actual funding totals.

³⁶Based on estimated construction cost of \$36 million.

³⁷Based on estimated construction cost of \$12.5 million.

³⁸The project has not received Title XVI funding via Reclamation; however, has received \$5.5 million from the Bureau of Indian Affairs (Dept. of the Interior) for the Shivwits Band portion of the project (to provide 200 acre-feet annually to the Tribe), which is part of an Indian settlement agreement. Additionally, EPA has provided a grant of \$0.2 million via the State of Utah.

³⁹Based on estimated construction cost of \$38 million.

⁴⁰Total shown here is slightly more than sum of the column listings due to rounding.

⁴¹Total reclaimed by end of FY2006 may be more than reported by Reclamation; this total includes estimates from interviews with project sponsors.

⁴²Undetermined.

⁴³N/A=not available.

⁴⁴Completed.

⁴⁵Demo phase.

Senator MURKOWSKI. Thank you, Ms. Cody.
Mr. Atwater.

STATEMENT OF RICHARD ATWATER, CHIEF EXECUTIVE OFFICER, INLAND EMPIRE UTILITIES AGENCY, ON BEHALF OF WATEREUSE ASSOCIATION

Mr. ATWATER. Good afternoon, Madam Chairman, Senator Feinstein. My name is Richard Atwater. I'm currently the general manager at the Inland Empire Utilities Agency located in Chino, California, southern California. But more importantly today, I'm testifying on behalf of the WateReuse Association as chair of their Federal Legislative Committee, and that's a national association from the east coast to the west coast, with over 300 members, and we have been working with the Bureau of Reclamation on the Title XVI program since its inception.

Let me just back up a little bit and give you my background. I've known Commissioner John Keys since about 1981-82, when I was at the Bureau of Reclamation, working here in Washington, DC, on the Colorado River and water problems throughout the West. And I think what I would like to highlight through my experience in working with the Bureau of Reclamation, and then I was one of the witnesses here before this committee. It was this committee who enacted Title XVI. It didn't come from the House. It was the leadership of this committee in 1990 and 1991 and 1992. And then, of course, all of the new starts were initiated through Congress, and I'll talk a little bit about that.

But first, let me just say again, going back to 1990, and I'd suggest for the record, the Department of the Interior initiated the southern California reuse study, and it was by Secretary Manuel Lujan and at that time, Commissioner Dennis Underwood. Dennis, of course, just recently passed away. He was the general manager of the Metropolitan Water District, but he recognized clearly what we all recognize, and that is throughout the West, throughout the United States, and frankly, throughout the world, water reuse, recycling, desalinization, using new cutting edge technology needs to be developed and applied if we're going to solve our water problems.

It was initiated by the administration in 1990 and 1991. In 1992, when this committee enacted and Congress approved the whole legislation, it clearly recognized, and I will submit for the record your committee report, that we are in a water crisis and that water reclamation and reuse is a critical part of solving our problems. It's certainly more true today than it was 15 years ago. One of the things that Commissioner Keys said, that I think is an important one to talk about since both members asked him questions about it, why doesn't the administration propose criteria, and why don't they propose projects to be funded.

As long as I've worked—when I was here in Washington, DC, and I've worked throughout the Western States, neither the Army Corps, and frankly, the Bureau of Reclamation, never proposes a new start. I was the general manager at West Basin Municipal Water District in 1992 when it was enacted. In 1994, we were the first new start on Title XVI working with the city of Los Angeles and the Mono Lake Committee. Senator Feinstein may remember

this because she sat here in this committee room with Senator Bennett Johnston, and we looked at the solution. We can provide a 20 percent cost share to fund this water recycling project, where L.A. discharges wastewater into an EPA-designated estuary, Santa Monica Bay, and we had this water right dispute that was very litigated for 15 years with a whole host of issues, including endangered species, Clean Air Act non-attainment, et cetera, and L.A. argued at that time that they would either go to the Colorado River or northern California to replace the lost water supply. We came up with an innovative solution to replace that with recycled water.

I bring that up because, although the administration at that time in 1994 was sympathetic, the long-standing policy of OMB is that they never propose any new starts.

Senator FEINSTEIN. They never—

Mr. ATWATER. They never propose new starts of new projects, whether it's Title XVI, Army Corps flight control projects, et cetera. In fact, I think you'll find that when we get into a discussion of CALFED and the levee issue, it's doubtful that the administration would propose it as a new start unless you were to advocate it.

And so, I just would remind you that every project that Commissioner Keys listed, the nine that have been funded, they were enacted in 1996 and authorized by Congress. And second, Congress appropriated the money first, before they put it in the President's budget. They've never done it the other way in the history of the program. They've never initiated it and proposed any project. And third, from the WaterReuse standpoint, for the last half a dozen years, we've had an outstanding relationship with the Bureau on Research and Development. Our foundation leverages 20 cents on the dollar of Federal investment with State agencies like Florida and California, local agencies, and academic universities to fund research because we all agree we need to promote the technology, and that's the kind of partnership that I think we ought to encourage.

What I want to just allude to is—and when you look at that history, after Congress re-authorized the program in 1996, the association—Commissioner Keys pointed out his bluebook, the guidelines, that's a great example, where we did work for 2 years with them to come up with their guidelines, and it was stakeholder consensus, and I think it's worked well over the years. But Senator Feinstein, you asked the right question. Starting in 1991, with Secretary Lujan's initiation of the southern California study, and Congress authorized it in the 1992 bill, we've spent about \$8 million in southern California, and another \$5 million in the bay area doing comprehensive engineering feasibility and financial feasibility studies on reuse, so that's an appropriate question.

In the 1996 to 1998 guidelines the Bureau did, we had suggested that we don't need to reinvent the wheel. The State of California, through their California State Water Resources Control Board, had existing criteria, and we already had to submit feasibility reports. Why wouldn't we—and that's a good question to ask here, whether it's Arizona or New Mexico or California, why couldn't we have identical criteria for both the State and the Bureau?

Senator FEINSTEIN. Yes, why not?

Senator MURKOWSKI. That's a good point.

Mr. ATWATER. We do that already in California with EPA. So, that's a key point. We don't need to reinvent the wheel. And frankly, after 15 years and spending \$15 million of engineering feasibility studies, I don't think we need to do more. In California—and I should also say, through the very extensive process of the CALFED Bay-Delta review—water recycling was rated as the most cost-effective new supply in California, and it's been fully vetted. The State of California just adopted its new State water plan, and it recommends it.

So, we have a lot of planning that's been done. And I think it's a good question, how do we coordinate and collaborate on that and not duplicate efforts? And I think that's one that I think the committee—I think the Department of the Interior and the Bureau would agree, but we need to probably nudge them along more, that we need to do that.

As a footnote, in January, I take a look at what the Secretary of the Interior submitted to OMB. It sent for the first time—Senator Feinstein requested this in her legislation—a cross-cut budget of all expenditures by the Federal Government on CALFED. Every one of these Title XVI projects is listed in the cross-cut budget. In fact, they take credit for the investments to reuse water in San Diego to reduce its demand in the delta for good reason. We all acknowledge that helped solve the problem, just like that also helped solve the problem on the Colorado River, but they aren't talking to each other. They have a report that accomplishes what you want.

So, the last thing I'd bring up, and just in conclusion, is that I think, overall, the program has had a huge success. And as we go forward over the next few decades, it's not unique to California, it's not unique to the Colorado River Basin States, and it's true, whether you are in Las Vegas, Phoenix, Tucson, Albuquerque, Salt Lake, or Denver, all the major metropolitan areas in the Colorado River Basin are developing reuse projects. Clearly, the Federal Government, given how important the Federal role is in the Colorado River and a lot of these issues that we deal with, they ought to be encouraging and promoting. And in this case, in the case of Title XVI, we're talking about the least amount of cost sharing of any Federal water project. We're talking a maximum of \$20 million and 25 percent. It is the smallest cost share of any Federal water program. And in fact, we would encourage more competition and more leveraging so that you spread the available funding, which is a policy issue. How much can you fund for the program, but have more competition so that it can be applied on a more competitive basis, so more people can have available funds?

And in fact, the association would also encourage—which is discussions we've had with the House for the last couple years, and you might want to consider it, it's probably a good idea too: why not make it a national program? There's actually more reuse in Florida. And you look at problems in Texas and in the Southeast, and it's something you might want to consider. Why not? In fact, one of your recent legislations was to do reuse in Hawaii. If they have a water problem, and if you're applying cutting-edge technology to solve a problem that has multiple water quality environmental supply issues, why should it be unique to the Western 17

States? And so, I would suggest that the committee might want to consider that.

I realize, from my days at the Bureau of Reclamation, it's been a tradition for a long time to keep it restricted to the 17 States. Every once in a while, the Bureau tries to help out Alaska, and every once in a while, it helps out Hawaii, but it hasn't reached out to the rest of the country. However, I would point out that the research and development program, we, in fact—the Bureau with the WateReuse Foundation—fund some really cutting-edge research projects in places like Florida, Georgia and Virginia. And that concludes my remarks.

[The prepared statement of Mr. Atwater follows:]

PREPARED STATEMENT OF RICHARD ATWATER, CHIEF EXECUTIVE OFFICER, INLAND EMPIRE UTILITIES AGENCY, ON BEHALF OF THE WATERREUSE ASSOCIATION

INTRODUCTION

Madam Chairman and members of the Subcommittee, the WateReuse Association is pleased to have the opportunity to present this testimony on the importance and role of the Bureau of Reclamation's Reuse and Recycling Program (Title XVI) in ensuring an adequate water supply for the nation in the 21st century. I am Richard Atwater, Chairman of the WateReuse Association's National Legislative Committee, and I am representing the Association today.

As a way of introduction, the WateReuse Association (WateReuse) is a non-profit organization whose mission is to advance the beneficial and efficient use of water resources through education, sound science, and technology using reclamation, recycling, reuse, and desalination for the benefit of our members, the public, and the environment. Across the United States and the world, communities are facing water supply challenges due to increasing demand, drought, and dependence on a single source of supply. WateReuse address these challenges by working with local agencies to implement water reuse and desalination projects that resolve water resource issues and create value for communities. The vision of WateReuse is to be the leading voice for reclamation, recycling, reuse, and desalination in the development and utilization of new sources of high quality water.

I am also Chief Executive Officer of Inland Empire Utilities Agency (IEUA), located in Chino, California. By implementing aggressive conservation programs and using innovative recycling and desalting technologies to reuse our water supplies, we have reduced our potable water demand by 20% over the past five years. IEUA is a municipal water district that distributes imported water from the Metropolitan Water District of Southern California and provides municipal/industrial wastewater collection and treatment services to more than 800,000 people within a 242 square mile area in the western portion of San Bernardino County. The Inland Empire region is the "economic engine" of California and among the top 10 job creating regions in the U.S.

The IEUA service area population is expected to double during the next 20 years. About 7000 new homes each year are being built in the IEUA service area. Inland Empire is *not* depending on new imported supplies from the Colorado River or northern California through the CALFED Bay-Delta Program to meet our future water supply needs. Instead, we have developed an integrated water resources plan that will develop 95,000 acre-feet of new recycled water, desalinate over 50,000 acre-feet of brackish groundwater supplies, and, with the Metropolitan Water District of Southern California, develop 150,000 acre-feet of conjunctive use in the Chino groundwater basin. These will be the primary new water supplies to meet the rapidly growing needs of the Inland Empire region of Southern California.

A critical partner in making these new local water supplies available in our region is the Federal government. Pending in Congress are Title XVI bills that would authorize a \$20 million grant to provide a 10% Federal cost-share for the IEUA regional water recycling project of 95,000 acre-feet (total cost is \$200 million). Without a doubt this cost-sharing arrangement to develop a critical new supply for a rapidly growing region without asking for more supplies from the Colorado River or northern California (CALFED) is incredibly cost-effective when compared to the other supply options available in the CALFED Bay-Delta Program.

On behalf of the Association's Board of Directors, I want to commend you, Madam Chairman, for convening this hearing. The hearing is especially timely, given the

increasing number of challenges facing local agencies in their continuing quest to ensure adequate water supplies in the future. It is our understanding that you would like our thoughts on the United States Bureau of Reclamation's (USBR) Title XVI Program. WateReuse is pleased to provide its views on this important and valuable program. We would also like to expand our comments beyond Title XVI and recommend some specific actions that the Federal government could take to address the nation's future water supply needs. Clearly if the U.S. is to address its future water supply needs in an effective manner, the Federal government must play a leadership role.

THE BUREAU OF RECLAMATION'S TITLE XVI REUSE AND RECYCLING PROGRAM

In your invitation letter, Madam Chairman, you requested that the Association address three specific topics: 1) our experiences with Title XVI; 2) the potential project benefits; and 3) suggestions for reshaping and improving the program. Let me address each of these topics.

Experiences with the Title XVI Program and Program Benefits

My personal history with Title XVI can be traced all the way back to the enactment of the legislation. As the General Manager of the West and Central Basin Water Management Districts at the time of the passage of the Title XVI legislation in 1992, I was strongly supportive of the legislation. Once the legislation was enacted, West Basin was fortunate to be one of the first recipients of grant funding. This grant funding had numerous benefits for West Basin as well as the approximately 30 other local agencies that have received grant funding over the past 13 years, including the Orange County Water District (OCWD), represented here today by Virginia Grebbien, OCWD's General Manager.

The Association and its members have a long-standing and productive working relationship with the USBR and its Title XVI program. The Title XVI program has benefited many communities in the West by providing grant funds that made these projects more affordable. The Federal cost share—although a relatively small portion of the overall project cost—often makes the difference in determining whether a project qualifies for financing. In addition, the Federal funding and the imprimatur of the United States government typically results in a reduced cost of capital.

The Association believes that the Title XVI program is an unqualified success and represents a sound investment in the future of the West by the Federal government. Through FY 2004, the Federal investment of \$272.5 million has been leveraged by a factor of approximately 5:1. According to a recently completed study by the Council on Environmental Quality (CEQ), the non-Federal investment to date during this same period amounted to \$1.085 billion.

In enumerating specific project benefits, we must not forget the intangible benefits that exist when this critical new water supply is brought on line in addition to the financial value of such projects. These include the following:

- Environmental benefits realized through the conversion of treated wastewater into a valuable new water supply;
- Reduction of the quantity of treated wastewater discharged to sensitive or impaired surface waters.
- Avoidance of construction impacts of new supply development (e.g., new dams and other expensive importation aqueducts);
- Reduced dependence on the Colorado River and on the CALFED Bay-Delta System, especially during drought years when conflicts on both of these water systems are particularly intense.
- Creation of a dependable and controllable local source of supply for cities in arid and semi-arid climates such as El Paso, Phoenix, and Las Vegas; and
- Reduced demand on existing potable supplies.
- Energy benefits, including reduced energy demand and transmission line constraints during peak use periods, realized by the replacement of more energy-intensive water supplies such as pumped imported water with less energy-intensive water sources like recycled water.

A fundamental question is "why would we want to use valuable, high quality water from the Bureau of Reclamation's Shasta Reservoir in northern California or Lake Powell in Utah and pump and transport it over 500 miles to irrigate a park or golf course in the Los Angeles or San Diego metropolitan areas?" Also remember that the replacement of that imported water with local recycled water will save enough energy from reduced pumping equivalent to a 500 megawatt power plant! Obviously the energy and water policy issues facing the arid West clearly justify a "strategically" small grant program to use recycled water as a means to continue

to support the economic vitality of the major metropolitan areas throughout the Colorado and Rio Grande River basins.

In its FY 2004 review of the Bureau's Title XVI program, the Office of Management and Budget (OMB) rated the program "moderately effective." OMB noted that "these water reuse and recycling projects help expand water supplies in areas that routinely face severe water shortages, and are especially important in helping to shift California from its dependence on Colorado River water." OMB was also complimentary of Bureau staff, noting that staff "generally work[s] very closely and effectively with local sponsors in project development and planning and are efficient in supplying grant funds and technical assistance." The Association concurs with OMB on both of these findings; our experience in working with the Bureau has been a very positive one. We would only add that, when compared to traditional Bureau of Reclamation multiple purpose water supply projects, Title XVI is very cost-effective and minimizes the need for future additional Federal obligations to solve interstate water problems.

Suggestions for Improvement of the Title XVI Program

The Association strongly supports the continuation of Title XVI funding. Unfortunately, communities in the East do not qualify for Title XVI funds. Hence, WaterReuse supports the establishment of a national competitive grants program that would provide Federal grant funding for which communities in all 50 states would be eligible.

Water reuse and recycling is now practiced all over the country, not just in the 17 western states. In addition to California, Texas, Arizona, and Florida, the states of New Mexico, Washington, Colorado, Nevada, Virginia, and New Jersey have growing water reuse programs. Water reuse is growing at a 15% compound annual growth rate as shown in Appendix A (Figure 1).^{*} Current planned reuse is estimated at 3.6 billion gallons per day and is projected to grow to 12 billion gallons per day by the year 2015. Substantial growth potential remains, however. According to EPA's most recent Needs Survey, 34.9 billion gallons per day of wastewater were generated in 2000. This means that only about 10% is being beneficially reclaimed and reused (see Figure 2). Statistics on actual use in California, Florida, Texas, and Arizona—which account for approximately 90% of all water reuse in the U.S.—are shown in Appendix A (Figure 3).

As the Subcommittee considers actions to make the Title XVI program stronger and more effective, we recommend that consideration be given to the following:

- 1) Creation of a competitive grants program;
- 2) Expansion of eligibility to include communities in all 50 states; and
- 3) Provision of an annual authorization of funding of \$200 million/year.

A policy and Federal leadership commitment with this relatively modest level of federal investment would mean that the nation would begin to respond to the demands placed on current limited water supplies and would address municipal, industrial and commercial demands as well as natural resources needs as documented in the Department of the Interior's Water 2025 assessment in 2002.

The current Title XVI program allows a Federal contribution of the lesser of \$20 million or 25% of the total project costs. To allow more communities to participate in this valuable program, the Association would support a reduction in Federal cost sharing to the lesser of \$20 million or 20% of total project costs. We think that, when compared to all other Bureau of Reclamation authorized projects, the Title XVI "targeted low cost share grant program" has the greatest benefits for solving regional water problems and at the lowest Federal investment cost.

Finally, the Association recommends that the Congress appropriate funds to conduct a national survey of water reuse and recycling needs. A national survey would serve a number of purposes, including 1) documentation of national, regional, and local water reuse and recycling needs, 2) documentation of willingness of local agencies to expend funds on water reuse projects if they could obtain some level of Federal support, and 3) a quantification of benefits—both financial and social—of existing Title XVI projects and future planned projects.

THE FEDERAL ROLE IN WATER REUSE AND DESALINATION

In the opinion of our Association, the Federal government should take a leadership role in promoting water reclamation and reuse, desalination, groundwater recharge technology, and water use efficiency/conservation innovation. If the appropriate Federal role is identified now and appropriate actions are taken, our nation will be well positioned to meet the water supply challenges of the future.

^{*}Appendix A has been retained in subcommittee files.

There are numerous ways in which the leadership role of the Federal government could manifest itself. Federal subsidies for local water reuse projects and targeted investment through demonstration grants could be used to promote reuse practices. The Federal government could promote increased use of recycled water at Federal facilities (e.g., military bases and new GSA buildings); these could be examples of good stewards of water efficiency and water reuse.

We also believe it is critically important for the Federal government to provide adequate funding for research. If this country is to have the wherewithal to provide cost-effective water supply facilities, we must be able to reduce the costs of production and to increase greater public acceptance and reliance on alternative water supplies.

One of the many issues faced by water researchers is to understand the meaning and potential health and ecological impacts of thousands of organic compounds that have been identified at trace levels in wastewater and other alternative supplies. The challenge is that analytical methods, which allow identification of emerging chemical contaminants for both drinking water and wastewater, are ahead of the science that allows us to understand what these emerging contaminants mean in terms of protection of public health and the environment, and ultimately what treatment technologies are needed to ensure safe and appropriate alternative supply development. The same challenge is true for microbial contaminants. This is not only a water reuse challenge, but also one that also applies to every municipality whose source of water supply is a major river or whose groundwater is impacted by impaired water sources. Only through conducting substantial research can local, state, and Federal governments provide proper assurance to the public that both drinking water and reclaimed water are safe.

WateReuse is also strongly supportive of additional Federal funding for water reuse and desalination projects. Although the President's budget typically includes less than \$20 million for USBR's Title XVI program (note: the FY 2007 budget includes only \$10 million), we have consistently encouraged the Congress to support this worthwhile program with an appropriate level of funding (i.e., \$100 million/year or more).

RECOMMENDATIONS

In summary, we believe that alternative water supplies, including water reuse and desalination, will be a critical component of the nation's water supply in the 21st century. To ensure that this important resource is fully utilized and that appropriate actions are taken now in order to avoid a future water crisis, the Federal government needs to play a leadership role. Some of the specific actions that should be taken by the Subcommittee include the following:

- Support additional research, technology demonstrations and technology transfer of water reuse that is essential to developing answers to questions on environmental pollutants of concerns, gaining public acceptance, and reducing the costs of production;
- Support increased funding for the Title XVI program;
- Support the enactment of legislation that would establish a competitive grants program for which local water agencies in all 50 states would be eligible that would provide funding for much needed water reuse and desalination projects. The Subcommittee should advocate an authorization of \$100 million/year for water reuse projects and \$100 million for desalination over at least a five year period.
- Increase Federal "venture capital" (i.e., seed capital assistance through innovative financing tools and targeted grants (e.g., Title XVI) to assist communities in developing innovative and new demonstrations of reuse and desalination technology.

CONCLUSION

Once again, the WateReuse Association wants to thank you, Madam Chairman, for convening this hearing. We would be pleased to work with you in addressing critical issues related to water reuse and recycling, desalination, and water use efficiency. We are strongly supportive of the Subcommittee's efforts to ensure adequate and safe supplies of water in the future for the entire country.

Senator MURKOWSKI. Thank you, Mr. Atwater.
Mr. Donnelly.

**STATEMENT OF THOMAS F. DONNELLY, EXECUTIVE VICE
PRESIDENT, NATIONAL WATER RESOURCE ASSOCIATION**

Mr. DONNELLY. Thank you, Madam Chairman and Senator Feinstein. Projects and programs that maximize the use and reuse of existing supplies are greatly needed in the Western United States. Title XVI of Public Law 102-575 was intended to be just such a program. Unfortunately, it appears to be currently dysfunctional and understandably out of favor with this administration. NWRA strongly supports a reconstituted Title XVI program which provides cost sharing, cost-shared funding for research demonstration programs and construction of projects that represent new and improved technologies for water recycling, reuse, desalinization and conservation in the arid and semi-arid West.

The single biggest flaw in the current program is the manner in which projects are selected for authorization and funding. We would recommend that Title XVI be amended to establish a more formal application process that requires the Commissioner of Reclamation to present to Congress a written report recommending or rejecting the project application before Congress authorizes those projects or funds those projects. That's not unlike programs in the Corps of Engineers and other Federal agencies.

It has been suggested that the program should be made a national program. We would strongly recommend that the program be made available only in those States whose communities are coping with long-range water supply programs. That's not to say simply Reclamation States. There are a few non-Reclamation States that are facing water supply challenges akin to the problems faced by water supply districts in the arid and semi-arid West, most notably Florida, as Mr. Atwater has mentioned. Congress could choose to extend Reclamation's Title XVI authority individually to these States.

The question of whether or not the Title XVI program should remain the responsibility of the Bureau of Reclamation depends largely upon Congress's vision of the future scope and direction of the program. If the objectives of Title XVI continue to be those stated in the authorized legislation, and it remains a program addressing the critical water supply needs in the arid and semi-arid States or additional States facing similar problems, we believe the program should remain under the purview of the Bureau of Reclamation.

In amending this program, Congress should consider increasing the Federal cost share and the maximum amount provided per project for those projects that satisfy national goals and objectives. Madam Chairman, we stand ready to assist the committee in any way to reconstitute the Title XVI program. We want to see this program work. Thank you very much.

[The prepared statement of Mr. Donnelly follows:]

PREPARED STATEMENT OF THOMAS F. DONNELLY, EXECUTIVE VICE PRESIDENT,
NATIONAL WATER RESOURCES ASSOCIATION

TITLE XVI OF PUBLIC LAW 102-575

The National Water Resources Association (NWRA) is a nonprofit federation of associations and individuals dedicated to the conservation, enhancement, and efficient management of our Nation's most precious natural resource—WATER. The NWRA

is the oldest and most active national association concerned with water resources policy and development. Its strength is a reflection of the tremendous "grassroots" participation it has generated on virtually every national issue affecting western water conservation, management, and development.

In the West, water infrastructure is every bit as important as transportation infrastructure. It is essential to the continued economic growth and development of the nation. Water infrastructure needs continue to exist, particularly considering the West's rapid population growth [9 out of 10 of the fastest growing states are Reclamation States]. However, on the whole, today's infrastructure needs are different from those of the past. No one envisions a future infrastructure development program and financing arrangements like the Reclamation program, which facilitated the development and economic growth of the West during much of the last century. It is time to recognize and address a new generation of infrastructure development needs and financing realities. Future projects are more likely to include non-structural features, environmental enhancement, proven best management practices, innovative approaches to water quality/quantity concerns and greater levels of non-federal financing.

Projects and programs that maximize the use and reuse of existing supplies are greatly needed in the West. Title XVI of Public Law 102-575 was intended to be such a program. Conceptually, Title XVI is a sound and much-needed federal program; however, it is currently dysfunctional and out of favor with the Administration. *NWRA strongly supports a reconstituted Title XVI program* which provides cost shared funding for research, demonstration programs and construction of projects that represent new or improved technologies for water recycling, reuse, desalination and conservation in the arid and semi-arid West.

RECOMMENDATIONS FOR IMPROVING TITLE XVI OF PUBLIC LAW 102-575

Application and Award Process

The single biggest flaw in the current program is the manner in which projects are selected for authorization and funding. In point of fact, the process has devolved into one that rewards those project sponsors employing the most connected and influential lobbyists rather than on the merits of the project or its technology and the needs of the communities applying for assistance.

We would recommend that the law be amended to establish a formal application process that requires the Bureau of Reclamation to present to Congress a written report recommending or rejecting the project application based upon factors such as, but not limited to, benefit/cost, ability to cost share at an increased level, promising new technology, and the prospect of impending water shortages in the project area.

If such a process was incorporated into the law, it would then be incumbent upon the authorizing and appropriating committee in Congress to reject projects for which a Commissioner's report had not been forwarded to the authorizing Committees.

Use and Use Restrictions

It has been suggested that the program should be made a national program. I suspect that water supply districts or agencies throughout the country could make use of such a program, but we would strongly recommend that the program be made available only in those States whose communities are coping with long-range water supply problems. There are a few non-Reclamation states that are facing water supply challenges akin to the problems faced by water supply districts in the arid and semi-arid West, most notably, Florida. Congress could choose to extend Reclamation's Title XVI authority individually to States facing long-term water supply problems as was done by Public Law 106-566 for the State of Hawaii.

Program Responsibility

The question of whether or not the Title XVI program should remain the responsibility of the Bureau of Reclamation depends largely upon Congress' vision of the future scope and direction of the program. First, we would oppose transferring the Title XVI program to the U.S. Army Corps of Engineers. The Army Corps' primary civil works mission is navigation and flood control. The only justification expressed to date for such a transfer of authority is the hope that under the Corps of Engineers the program would be funded at a much higher level. If the objectives of Title XVI continue to be those stated in the authorizing legislation and it remains a program addressing the critical water supply needs in arid and semi-arid states or additional states facing similar problems, we believe that the program should remain under the purview of the Bureau of Reclamation. Should Congress choose to expand the scope of the program and make it national in scope, we could see distinct advantages in transferring it to the Environmental Protection Agency. However, as stated previously, we strongly believe that the Title XVI program should benefit only those

States whose communities continue to struggle with meeting the water supply demands of a rapidly growing population—the Reclamation West.

Cost Sharing

Each year the federal budget provides millions of dollars to States and communities to provide water for environmental purposes, Native American trust responsibilities and other purposes. The restoration of the Everglades and California's Bay-Delta, water for anadromous fish and Indian water rights settlements have and will continue to cost the American taxpayers billions of dollars. Finding and/or providing additional water is the principle element in all of these mitigation or settlement programs.

The Title XVI program can be used effectively to explore and develop technologies that provide additional water to meet the future needs and competing demands of growing communities and environmental mitigation and enhancement.

The program currently calls for a minimum non-federal cost share of 75 percent on all projects and provides a maximum of \$20 million per project. In comparison to most other federal/non-federal cost shared programs, Title XVI is a bargain for the federal government.

In amending the program, Congress should consider increasing the federal cost share and the maximum provided per project for those projects that satisfy national goals and objectives such as the aforementioned projects and programs.

Summary

1. NWRA strongly supports a reconstituted Title XVI program under the U.S. Bureau of Reclamation
2. NWRA recommends that the Title XVI of P.L. 102-575 be amended to establish a formal application process that requires the Bureau of Reclamation to present to Congress a written report recommending or rejecting the project application before Congressional authorization or funding.
3. NWRA recommends that Title XVI remain principally a program benefiting the arid and semi-arid States which could be extended on an individual bases to States demonstrating a critical need.
4. NWRA recommends that the federal/non-federal cost sharing be made more flexible for projects creating new supplies of water that satisfy national goals and objectives.

In conclusion, the National Water Resources Association greatly appreciates the opportunity to present our views to the Senate Energy and Natural Resources Committee and we stand committed to assist the committee in its efforts to improve upon this important program.

Senator MURKOWSKI. Thank you, Mr. Donnelly.
Ms. Grebbien.

**STATEMENT OF VIRGINIA GREBBIEN, GENERAL MANAGER,
ORANGE COUNTY WATER DISTRICT, ORANGE COUNTY, CA**

Ms. GREBBIEN. Thank you, Madam Chairwoman and Senator Feinstein. I'm here today, I guess, representing the local color, if you will. I'm the general manager of the Orange County Water District. I'm also a public water official who has a lot of experience with Title XVI projects. I've personally been involved in the planning, design and construction of two Title XVI projects that are successfully operating. And currently, right now, my agency is building the groundwater replenishment system, which is a large, indirect potable reuse project which will be on-line in the summer of 2007.

In addition to that, I've helped numerous agencies with their Title XVI projects through their institutional issues and moving those projects forward to completion. I would tell you that I'm here with a bit of a different message than Commissioner Keys. My message is one of enthusiasm and hope for the Title XVI program, rather than one of concerns and issues. I would tell you that the Bureau of Reclamation has played a very important role in Title

XVI in the past and should continue to do so in the future. And the most important reason is what we've discovered in southern California, which is that water recycling is our future in order to increase our water reliability and supplement our imported water supplies. Despite the fact that the Title XVI program enjoys tremendous support from the Western and Sunbelt States, I'm really quite frankly disappointed that we're here today again asking questions that I've testified on before previously: Does the Title XVI program work? Does it provide value? Does it create new water? Is there a legitimate Federal role? Should the Title XVI program be modified?

I would strongly tell you that the Title XVI program very much works. It provides exceptional value. It creates new water. How many programs by the Federal Government actually create new water? The Title XVI program does. Given the economic vitality of the West and the Federal mandates that State and local communities must meet to assure a clean and safe water supply, a legitimate Federal role in water recycling in the Title XVI program does exist. Federal assistance that's provided through the Title XVI program delivers benefits by reducing borrowing costs, enhancing public acceptance of a project, providing a platform for speedy transfer of innovative technologies that can be used elsewhere in the Nation.

Our project, the Groundwater Replenishment project, the one we're building right now—72,000 acre-feet, enough water for 140,000 families a year—would not have been successful without Federal buy-in and support. It's a reality today because both the State of California and the Federal Government have chosen to financially participate in this project. The Federal role is critical because it provides a mechanism for local elected officials and decisionmakers to deal with the inherent risk when implementing a large-scale water recycling program. I was asked this rhetorical question: Would GWR be alive today, or what would have happened to it without Federal support? And the answer to that is we would not have as broad-based community support and political support for the project as we currently enjoy.

As we engage in outreach about our project, we start with the top, if you will, the Federal Government. They provide money technology transfer. The State of California provides money in regulatory oversight. Local government provides the majority of the money and the local will to implement the project. All six of Orange County's congressional leaders support the GWR project. California's two United States Senators—thank you very much, Senator Feinstein—support the GWR project, and that support is backed up by a Federal commitment with Federal dollars, and that's the foundation upon which we build community, environmental and business support for our project.

Federal involvement in Title XVI projects is warranted for several reasons. In California, we have a mandate to reduce our use of Colorado River water. In Arizona and Nevada, there's a similar mandate to appropriately use Colorado River supplies. In Texas, the Ogallala Aquifer and watershed supply shortages are creating the need for recycled water supply development. New Mexico water supplies are extremely limited from the Rio Grande and other local

watersheds. The common theme here, and there is a common theme, is that regional water supplies with direct Federal involvement must be augmented and enhanced through local water supply development, such as water recycling.

The Federal Government has established significant mandates for ecosystem maintenance and restoration, fisheries, in-stream flows, and habitat development. All that takes water, water that is typically diverted from ag and urban areas. At the same time, our water demands are not decreasing. The population is continuing to grow, and we have future water supplies we need to meet. And these new water supplies must be environmentally sustainable if they're going to be developed, as Mr. Atwater mentioned.

The Federal Government is instrumental in establishing these ecosystem mandates. How can we question the need for programs, such as Title XVI, that provide the necessary funds to implement alternative water supply projects?

Over the last decade, I've watched the Bureau of Reclamation struggle to define its role in the Title XVI program, and we heard some of that earlier today. Congress has continued to authorize projects while the administration has continued to decrease the overall funding, and this has created a backlog of unfunded projects. I find it amazing that people point to this issue and say that it's a problem, and it's proof that the Title XVI program is broken. Instead, I would tell you that this is proof that the Title XVI program works, and it's needed, and it has value, and it should be expanded.

One of the important lessons that I've learned from my years of working with Title XVI is the fact that we're at a stage where we need to implement a comprehensive Federal program of assistance to local agencies. And so, I would agree with all the witnesses here today that we do need to modify and amend, as well as augment and enhance the Title XVI program, not restrict it and cut it back. One of the things that we could do is identify the overall need, as you mentioned, Senator Feinstein, and have an annual survey of where these projects are at and have that survey be done by the Bureau of Reclamation based on data developed from the States. Establishing a set of criteria that would qualify for a project, I agree with that.

However, I'm very concerned, and you heard it in the previous testimony, that—as I believe Commissioner Keys said, I'm reading my notes—the primary weakness of the Title XVI program is that it's a pass-through program for the Bureau of Reclamation. In my area in my agency, we do a lot of work with the Corps of Engineers. We have multiple partnerships with the Corps of Engineers. It will take us 7, 8, 9 years and millions of dollars to get a feasibility study off the ground to implement a wetlands project, a natural treatment project to reduce nitrate and other chemicals in stream flows, urban runoff. Fantastic programs. There's no reason something that should take a \$400,000 or \$500,000 feasibility study should take \$5 million and 7 years, and that's our experience, quite frankly, with the Corps of Engineers. I do not want that to be my experience with the Bureau of Reclamation.

The Title XVI program is streamlined. These projects do have feasibility studies. They are looked at by regulatory agencies, by

local agencies, by State-level agencies. The Bureau of Reclamation has issued guidelines back in 1998. I think we have sufficient guidelines and criteria. I would encourage us to work on mechanisms where we can assure that the Title XVI project program is fully funded.

And again, I would point to the fact that the Title XVI program has produced water, actual new water, not stored water, not conserved water, not water moved around, actual new water, and that is money very well spent by the Federal Government.

In closing, I'd like to reiterate that the program's not broken. It definitely is not broken. It's a very valuable program that has facilitated the development of, I believe the CRS study said, 600,000 acre-feet a year of recycled water capacity. That's quite an achievement and something that we should all be proud of. The Title XVI project, GWR, a \$20 million investment by the Federal Government, has leveraged \$467 million of local and State revenue, primarily local revenue. Not only do Title XVI projects drought-proof areas by creating new water supply, but they reduce pressure on imported water supplies where there's a clear Federal mandate. It facilitates technology improvements. It enhances the science of groundwater monitoring and provides the opportunities for technology transfer and research. All of that is a lot of value for your buck, and I would say that it's been a great program. I look forward to working with the committee and the Bureau of Reclamation to continue the Title XVI program.

[The prepared statement of Ms. Grebbien follows:]

PREPARED STATEMENT OF VIRGINIA GREBBIEN, GENERAL MANAGER, ORANGE COUNTY WATER DISTRICT, ORANGE COUNTY, CA

Good afternoon, Chairwoman Murkowski and members of the subcommittee. Thank you for the opportunity to testify today on the Bureau of Reclamations' Title XVI Program. I am Virginia Grebbien and I appear before you as the General Manager of the Orange County Water District located in Orange County, California and on behalf of our Board of directors. I will summarize my remarks and would request that my formal testimony as well as background information on OCWD be included in the hearing record. OCWD was formed in 1933 and today is responsible for managing and protecting the vast groundwater basin under north and central Orange County. The groundwater basin provides about two-thirds of the water supply for 2.3 million people in our region which includes the cities of Anaheim, Buena Park, Costa Mesa, Cypress, Fountain Valley, Fullerton, Garden Grove, Huntington Beach, Newport Beach, Irvine, La Palma, Los Alamitos, Orange, Placentia, Santa Ana, Seal Beach, Stanton, Tustin, Villa Park, Westminster, and Yorba Linda.

I am pleased to appear before you today to review the development status of recycled water projects and the important role the U.S. Bureau of Reclamation Title XVI program has played and must continue to play in the future. In Southern California we realize that the future of water reliability lies in the ability to supplement our imported water supplies with local water supply development such as recycled water. It is important to note that this priority involves multiple uses such as irrigation, industrial and indirect potable reuse.

I have a long history with the Title XVI Program. I first testified in support of Title XVI in 1992 when the Program was originally authorized. In 1996 Congress amended the law. The changes included a "cap" of 25% on eligible project costs. I was part of the WateReuse Association Task Force that helped initiate this and other changes. As a public official, I have managed the planning, design and construction of three Title XVI projects. I have also been involved in the institutional development of numerous others. The Title XVI Program has successfully helped develop 30 recycled water projects. I would note that this subcommittee has been a major reason behind the program's success. I would also note that full committee Chairman, Senator Pete Domenici has been a key reason that we have enjoyed continued funding of Title XVI programs despite efforts by the past two Administra-

tions to reduce the federal role. We deeply appreciate Senator Domenici's commitment to ensure that we have a solid federal partnership.

Despite the fact that the Title XVI Program enjoys tremendous support from the Western and Sunbelt states and despite the fact that the Title XVI Program is over subscribed, we are being asked, again, some important and fundamental questions that I hope will guide us in developing an improved water recycling partnership with the federal government. These are:

- Does the Title XVI Program work?
- Does it provide value?
- Does it actually create new water?
- Is there a legitimate federal role?
- Should the Title XVI Program be modified?

From my humble perspective as one of the pioneers of implementing the original law, and an ardent supporter of recycled water, let me assure the subcommittee that the Title XVI Program works. It provides value. And, it creates new water. Given the economic vitality of the West (California alone is the 5th largest economy in the world; makes up 13% of the nation's GDP; and generates \$1.4 trillion in gross state product) and the federal mandates that state and local communities must meet to assure a clean and safe water supply, a legitimate federal role does exist. Let's be clear on one important point; the federal assistance that is provided through Title XVI delivers benefits by reducing borrowing costs, enhancing public acceptance of a project, and providing a platform for the speedy transfer of innovative technologies that can be used elsewhere in the nation.

Orange County Water District is currently constructing the Groundwater Replenishment System. This visionary indirect potable reuse project will be operational in the summer of 2007 and will produce 72,000 acre-feet per year (enough water to meet the annual needs of 140,000 families) of new water for the 2.3 million residents of Orange County. The Project uses state-of-the-art treatment, monitoring and groundwater replenishment technology. This technology is used to insure high quality water is produced from the project. All aspects of the project are monitored to insure quality objectives are met and maintained. The product water will be recharged into the Orange County Groundwater Basin increasing the sustainable yield from the basin. The Project not only provides direct benefits to the rate payers within our service area but it provides regional benefits as well. Recycled water is a drought proof supply that is available even in the driest years. Having recycled water available enables OCWD to make conserved and imported water available to other Southern California water agencies that are not as fortunate in their water supply portfolio during dry years. In addition, to the extent local water supply can be created than it relieves the pressure to import water from the Colorado River into the Southern California Region.

The Groundwater Replenishment System would not have been successful without federal buy-in and support. GWR is a reality today because both the State of California and the federal government have chosen to financially participate in this project. The federal role is critical because it provides a mechanism for local elected officials and decision makers to deal with the inherent risks when implementing a large scale recycled water project.

The total capital cost for the GWRS project is \$487 million. The Title XVI grant of \$20 million has leveraged \$80 million in State funds and \$387 million in local rate payer dollars. The federal cost share was critical as it provided a mechanism to solicit State grant funds and importantly provided a level of political acceptability and project legitimization that enabled our local decision makers to move forward with the project.

What would have happened to the GWRS project without federal support? We would not have as broad based community and political support for the project as we currently enjoy. As we engage in outreach about the project we start with the projects supporters; the federal government—they provide money and technology transfer; the state of California—they provide money and regulatory oversight; local government—they provide the majority of the money and the local will to implement the project. All six of Orange County's congressional leaders support the GWRS project. California's two United States Senators support the GWRS project. That support is backed up by federal dollars. This is the foundation upon which we have built community, environmental and business support for the GWRS project. Unlike some recycled water projects which unfortunately were built and then not operated due to lack of community support. I have 100% confidence that the GWRS project will be successfully producing recycled water next summer and the cornerstone of that confidence starts with a small federal investment.

Federal involvement in Title XVI projects is warranted for several reasons. In California we have a mandate to reduce our use of Colorado River water. In Arizona and Nevada there is a similar mandate to responsibly use Colorado River supplies. In Texas the Ogallala Aquifer and watershed supply shortages are creating the need for recycled water supply development. In Florida there is a critical groundwater supply shortage. In New Mexico water supplies are extremely limited from the Rio Grande River and other local watersheds. The common theme is that regional water supplies with direct federal involvement must be augmented and enhanced through local water supply development of recycled water.

The federal government has established significant mandates for ecosystem maintenance and restoration. Fisheries, in stream flows, habitat development all take water. Water that is typically being redirected from urban uses. At the same time, our water demands are not decreasing and neither are our future water supply projections. New water supplies that are environmentally sustainable must be developed if we are to meet our ecosystem mandates. Recycled water is one such supply. If the federal government is instrumental in establishing these ecosystem mandates how can we question the need for programs such as Title XVI that provide necessary funds to implement alternative water supply development?

It is important for the federal government to play a role in research and technology transfer. Large results can be gained at the local and regional levels with relatively small investments from the federal government. No single local water agency has the financial resources or expertise to research and investigate membrane processes, brine concentration technologies, the health risks of pharmaceuticals or alternative power technologies to name a few areas of interest. However, the federal government has the capability to bring disparate agencies together in cost sharing arrangements to jointly work on technology improvements that will make recycled water development even more cost effective and reliable. Again, a small federal investment leverages local dollars and technical talent for significant water resources gains.

Over the last decade I have watched the Bureau of Reclamation's struggle to define its role in the Title XVI Program. Congress has continued to authorize projects while the Administration has continued to decrease the overall funding for Title XVI. This has created a "backlog" of unfunded projects. Some point to this situation as proof that Title XVI is broken and needs fixing. I would instead say this is proof of the value of Title XVI and what is needed is an expansion of the program. A proposal has been floated that the federal government should offer loan guarantees rather than grant funding. In my view this is a tool that should be available along with other financing options. However, the suggestion that this tool could replace the existing grant program is an ineffective idea. As a local government agency, OCWD has access to a significant amount of tax free credit. We have an AA+ credit rating and our average cost of debt is 4%. A loan guarantee from the federal government will not provide political support or the political will to implement recycled water projects like the current Title XXVI program does. Similarly, a loan guarantee does not enhance a local government agencies' ability to raise capital.

What is missing from the Title XVI program is a comprehensive federal program similar to the federal Drinking Water supply Program that sets standards for federal support. This is an important point that I cannot emphasize enough. Title XVI is an effective program. The federal partnership made it possible for projects like GWR to get off the drawing board. However, a number of lessons have been learned since its original passage in 1992. Water recycling as well as desalination are foundations for our future public health, environmental and economic well being. I would add that on the heels of last year's natural disasters, these projects also serve to safeguard against water supply disruptions.

One of the important lessons that I take away from my years of working with Title XVI is the fact that we are at stage where we need to implement a comprehensive federal program of assistance to local agencies. This means that we need to amend Title XVI to address issues including:

- Identifying the overall need for assistance on a project by project basis among the states based on a bi-annual survey of need conducted by the U.S. Bureau of Reclamation based on State generated data.
- Establishing a series of criteria that would qualify a project for assistance such as ensuring a project provides multiple benefits or will contribute to other ongoing water conservation programs.
- Ensuring that any existing Title XVI project authorization is fully funded.
- Expanding Title XVI to advance the commercialization of promising technologies that can reduce the cost of water production and/or increase the safety and acceptance of recycled water by the public.

- Providing for a defined budget authorization to support a comprehensive federal water recycling program that can create stability and predictably to the management of this program need.

In closing I would like to reiterate that the Title XVI program is not broken. It is a very valuable program that has facilitated the development of 600,000 afy of recycled water supply capacity. Title XVI has produced projects such as GWRS. The federal government's investment of \$20 million has leveraged \$467 million in state and local dollars. GWRS, a Title XVI project, will not only help to drought proof Orange County by creating a new water supply, but it will also reduced pressure on Colorado River supplies, it will facilitate technology improvements, it enhances the science of groundwater monitoring and it provides opportunities for technology transfer and research.

Again, it is an honor to appear before you today and review the important ways that Title XVI has assisted OCWD's efforts to ensure a safe and reliable water supply and how we as a country should proceed into the future. Thank you.

Senator MURKOWSKI. Thank you, Ms. Grebbien. Let's go to some questions. Ms. Cody, is it fair to say that you believe that Title XVI is a value-added program, but we need to restructure it in order to make it more effective, based on your review?

Ms. CODY. Well, that's a difficult question for me to answer. First of all, CRS does not take positions, and we are not allowed to take positions on pending legislation or even in this case, pre-pending legislation, so I can't exactly answer that question.

However, what I can say is that I think that question is for Congress to decide—you have folks that believe, as we just heard, the program is not broken and others that do. I think what my conclusion would be—I can offer conclusions—is that you have a program that is stuck. Yes, some people are benefiting from it, some are continuing to go forward, some have been lucky enough or feisty enough to get the authorizations through Congress when they couldn't get engagement with the Bureau, but for the Bureau, that has created a problem. So, you have all these different views, and I think this hearing is a place where people can air those views and see exactly if the program is broken, and if so, where and gather information on how to fix it.

One thing I have observed about the program is it is, in a way, not really a program. It is very much like the traditional process of authorizing Corps and Bureau of Reclamation projects. Congress authorizes the projects, and then the appropriations are made by line item. What Mr. Keys has described is a proposal where it would be very similar to other existing infrastructure projects, where you have the appraisal phase, feasibility stage, a positive feasibility study comes before the Congress, and then it's authorized, and then you get appropriations.

I think what we're hearing from some of the folks at the table is that that may not work for these types of projects. I think where the problem comes in—and if I could just read something real quickly from my testimony?

Senator MURKOWSKI. Go ahead.

Ms. CODY. On page eight of my testimony, it also relates to questions, Senators Murkowski and Feinstein, you both asked, and it's that what we have here is kind of a disconnect between the way that Reclamation has traditionally operated and other Federal programs operate and the desire to meet local needs. If I could just read this. There's a clear lack of—or Reclamation has noted the clear lack of program funding process that's not typical of other

Federal agencies. Other Federal water assistance programs, such as the State revolving loan funds for waste water and drinking water administered by EPA, have set criteria and competitive processes. That's what Reclamation is now asking for, we heard today. So do rural water supply programs administered by USDA, and I think the new Rural Water Supply legislation passed by this committee last year is also in that vein, but Congress appropriates money annually for those programs.

However, project funding for projects under these other programs is not appropriated by line item as it is for the Title XVI projects. Instead, depending on the program, the States and the Federal agencies allocate the program funding under project eligibility criteria, and I think that's an important difference—that here you have—that Reclamation would have, if it were similar to other programs, a pot of money that would then be decided where that money goes based on set eligibility criteria that the program sponsors would know what that is, and it could be based on those criteria. I think that's what I'm hearing. It's kind of the combination of things thrown out here today, but I want to make it very clear CRS does not make recommendations to the Congress.

Senator MURKOWSKI. Well, then I won't be able to ask most of my questions to you on that.

Ms. CODY. I can frame issues, however, or come to conclusions.

Senator MURKOWSKI. But what I understand you are saying is that, based on the review that you have conducted of the various programs and where they are, either in the stages of funding or their obsolete authorization, whatever the status might be, that it would be helpful for the success of the programs if there were some form of eligibility criteria.

Ms. CODY. I think it would be helpful. There are eligibility criteria. I mean, I think that is important to note. I think Mr. Atwater noted it. There are feasibility—they're not really criteria, they are considerations that Reclamation must look into in the original statute. The Bureau also has pretty extensive guidelines. The issue is those guidelines do not have the—I don't want to say force of law, that's not the right term, but they are not binding on Reclamation—they have not gone through a formal rulemaking process, and they are not binding.

So, when people look at those, they may view them differently than they would if Congress were to legislate specific criteria that then—or if Reclamation on its own went through a rulemaking process on new criteria, I think that's one of the sticking points.

Senator MURKOWSKI. Okay. Well, we will look forward to this forthcoming report where you set forth the policy options there.

Ms. CODY. Okay.

Senator MURKOWSKI. Mr. Atwater, you have suggested expansion of Title XVI to a national program. We've been talking about the fate of some of these programs, that the reason they're not moving ahead is not because they don't have value or merit within their region or locality, it's just the dollars associated with it. Just as it relates to a budget, do you think that a national \$200 million a year program is realistic when the Bureau's budget is roughly a billion?

Mr. ATWATER. Well, when you look at the role of cost effectiveness and what we're accomplishing here, and if you look at the partnerships between those States, those local entities, and how you're developing a new water supply, what I would say is if you could use 10 or 20 percent of the Bureau of Reclamation's budget and then apply it as a competitive grant program, frankly, it would be probably the most effective way to solve the water problems in the United States, and it would clearly have a lot of benefits.

The bigger challenge, which is your job, is to figure out what are those priorities. But from my perspective, when you look at the experience of what the needs are in the country, \$100 to \$200 million for the economic vitality of many metropolitan areas and avoiding—I'll use my area as an example—in California, I'm developing 100,000 acre-feet of recycled water worth a 10-percent, \$20 million Federal grant, and it's the economic engine. It's creating more jobs. It's in the top ten in the United States. And when you look at the economic multiplier benefits there, that \$20 million bounces a lot of different ways when you consider the economic, environmental and social benefits of that kind of a program.

And going back to Ms. Grebbien's point, in Orange County, you look at that kind of economic benefit and the regional and statewide in the context of the Colorado River, how that helps a lot of other areas and avoids stresses and strains and conflicts, and we all know in the water world, we talk about, you know, conflict all the time.

I would suggest that's probably the most cost-effective way to encourage an appropriate level of Federal role.

Senator MURKOWSKI. What about Mr. Donnelly's suggestion that you do it on a State-by-State, case-by-case basis as opposed to a national approach?

Mr. ATWATER. It's probably true that maybe in Maine and maybe in parts of—I'll pick on Minnesota and Michigan, maybe they don't have a serious water problem. But clearly, from an association standpoint, we see that reuse, reclamation, cleaning up contaminated groundwater, whether it's perchlorate or arsenic in New Mexico, those types of technologies and how we reuse that water, whether it's for drinking water purposes or irrigating a golf course or putting it in a power plant, clearly, there's a lot of application throughout the country and internationally.

Senator MURKOWSKI. You made the point about the identical criteria between the States and the Bureau. I think that that's something that we would like to think is so common sense that we should be able to make something like that work. Mr. Donnelly, you mentioned just a more limited expansion as opposed to the national approach that Mr. Atwater had suggested. Again, the benefits of such an expansion moving beyond the traditional concept of the 17 States, I'm assuming you're coming at it from the same perspective as both Ms. Grebbien and Mr. Atwater, that by doing this, you do get a lot of bang for your buck, so to speak, with the dollars invested, and that there are areas beyond the 17 States that should have the opportunity to avail themselves with Title XVI funds.

Mr. DONNELLY. Basically, we're still—hydrologically, we're two countries. We're a water-poor West and a water-rich East. I mean, that's very general, and given the money that's in this program, I

would hate to see it spread out and diluted to States that really are not facing critical water supply challenges for the future. Now, Florida, I mentioned that as an example. Florida is. Florida mimics a lot of the problems that we have in the Western United States. Congress declared—for the purposes of this Act, I believe Congress declared in 1996 Hawaii to be a Reclamation State for the purposes of that Act. They could do the same thing for Florida, or if in the future another State develops the same type of problems, that could be done. But given the amount of money that's involved in this program right now, I would urge the Congress not to make it a national program.

Senator MURKOWSKI. I appreciated your comment about what you perceived to be the biggest flaw in the program, not that the program is broken, but that there is a flaw, and that flaw is the manner in which the projects are selected for funding. You made reference in your written testimony that it shouldn't come down to who has the biggest and best lobbyist in Washington, DC; it should really be based on merit that those projects go forward. And I think that's something that, from my perspective, we're looking at, and we want to make sure that we are addressing those needs where the need is greatest, but we need some assistance in being able to make those priorities as well. So the criteria that Commissioner Keys has suggested does not concern you? You would, in fact, welcome that; is that correct?

Mr. DONNELLY. I was kind of surprised at the dollar figure that was thrown around here, \$200,000 per project to evaluate it. I think that's ridiculous. I mean, it doesn't require that, and it doesn't have to be that laborious a process. It should be very simple for the Bureau staff to go through and say yes, this project meets the goals and objectives of the Title XVI program, this one doesn't. And that's all they have to do is send it forward to Congress, and then this committee and the Appropriation Committee decides how they're going to be funded.

Senator MURKOWSKI. Ms. Grebbien, you made the comment that you were frustrated, I guess, that we're here again talking about the status of this program. I think it is important to recognize—and I do appreciate CRS's review of this—it's a program that has been very successful for some, but very, very frustrating for so many. And we don't have anybody on the panel who has been on the other end of not being able to get those funds and not being able to speak to the good side of it, so it is high time that what we're doing with Title XVI is reviewed. I think Orange County is in an envious position of having that phase one just about complete. I understand you're about 80 percent now.

Ms. GREBBIEN. Yes.

Senator MURKOWSKI. This projected proposal going forward I think would probably get you complete, then you go onto a second phase. So you are one of the ones that is seeing the direct benefit.

Ms. GREBBIEN. Correct.

Senator MURKOWSKI. And that is important to recognize. But we also recognize that we're in a situation where we've got some 21 programs that are sitting there on hold with no real certainty as to who goes next or if anybody goes next, and therein lies the frus-

tration. Orange County is a relatively wealthy county; could you have done this without the Title XVI funds?

Ms. GREBBIEN. You know, it's interesting because folks always say Orange County, relatively wealthy county. Actually, Orange County is very much a melting pot, if you will, of demographics. We have some very depressed areas in our county, and then also we have the Newport Beach coast, it's an extremely diverse county. It's a county where there is no majority. We have the second highest Latino population, the second highest Asian population in the State, in Orange County.

And so, in my particular service area, as I mentioned, there's some cities who are very economically depressed and then others who are extremely wealthy. And of course, we always feel like poor stepchildren because Orange County is giving more money to the State and to the Federal Government than we're receiving back in return in property taxes and other issues. But we could have built the project financially, yes, without the Title XVI program. However, what the Title XVI program did, as I mentioned when I was speaking earlier, is it really is the foundation upon which we have built support for the program under a variety of different levels.

So, for example, when we sold debt to—municipal debt to finance our portion, the local cost share of the program, one of the things that we told the rating agencies is we had a grant from the Federal Government and also that the State was participating. Because of that and a few other factors, our interest rate costs were 25 basis points cheaper than it would have been otherwise, and that was a direct comment from our rating agencies. So, there's lots of value added by participating in the Title XVI program.

Senator MURKOWSKI. Then given where you are now and just about nearing completion on phase one, will you need the Title XVI assistance for phase two, or you've kind of established the project, established what it is that you need, gotten that community support? Are you on your own for this next phase?

Ms. GREBBIEN. Actually, for the next phase, we're going to need even more financial assistance. And we're working with—you know, our State is looking at a couple of bond issues, in more infrastructure bonds, and we're working very closely with NAWQA and other agencies to make sure that water recycling is included in those bond offerings. And because of what we've done, what Orange County Water District has done in the last 4 years, we've doubled our water rates—doubled our water rates at the local level to pay for this project. At the same time, our partner, Orange County Sanitation District, is under a mandate for full secondary treatment, and they're having significant sewer rate increases. And so, there's only so much that the local community can bear. And if we are diligent in getting Title XVI money and State grant funds, then we're doing our part to work really hard to bring the cost down so that there's the political will and the local community-level will to implement rate increases that are necessary to generate the local dollars.

Senator MURKOWSKI. Thank you. Thank you to all the panelists.

Senator Feinstein, I have certainly not kept within any time limit, so—

Senator FEINSTEIN. Oh, thank you. I'll try and be brief. Thanks, Madam Chairman. I want to ask a yes or no question. Do the panelists agree that the traditional Bureau project model of having the Bureau do a feasibility study for each project, do you agree that that is not cost effective? Could we go right down, just yes or no?

Ms. GREBBIEN. Yes.

Mr. DONNELLY. Yes.

Mr. ATWATER. Yes.

Ms. CODY. Senator Feinstein, I'm not sure I can answer the question.

Senator FEINSTEIN. Okay, if you can—

Mr. DONNELLY. You mean in relationship to Title XVI?

Senator FEINSTEIN. That's right.

Mr. DONNELLY. Yes.

Senator FEINSTEIN. See, I think this is the heart of the matter, and this is what, Madam Chairman, we need to change, to spend vital Federal dollars with the Bureau doing a feasibility study of each project, to me, makes no sense. It seems to me there ought to be a set of Federal criteria that if you want to come in for a Federal grant, these are the criteria that you must meet. And then the decision is made, yea or nay, you either meet that criteria or not. Now, you're going to have a lot of criteria. One of them might be does the project have a regional impact. You know, one of them is size. It could be a whole host, environmental conflicts, whatever the criteria are. But I suspect we would save a lot of money, and we would get more projects funded, and the frustration that the local jurisdictions feel, that they've had projects pending for 6, 7, 8 years, and they don't know.

So, I'd like to just respectfully suggest that we take a look at the law and make that change. And now, let me ask this question. In terms of Federal criteria, if there were to be specific Federal criteria, I've laid out some of them, I'd like to ask the panel, what do you believe the Federal criteria for Federal funding for that 20 percent should be?

Mr. ATWATER. Well, if I may?

Senator FEINSTEIN. Mr. Atwater.

Mr. ATWATER. What I would suggest, Senator Feinstein and Chairman Murkowski, is in fact, the 1998 guidelines are a good start. But in California, it's one example, in each of the States, as I indicated earlier, they have their own existing criteria for using the Clean Water Act State revolving fund, both for the drinking water programs, as Betsy pointed out, and for the Clean Water Act. And in California, we have a detailed criteria, and frankly, a good little process.

Senator FEINSTEIN. My question is, what should the Federal criteria be?

Mr. ATWATER. Well, that one was approved by EPA. And what my point is, why couldn't we have that merged? In this case, the Bureau, why couldn't you use the same criteria? They don't need to reinvent the wheel.

Senator FEINSTEIN. Mr. Donnelly?

Mr. DONNELLY. I agree with that. I guess the only thing I would add is that each of these projects should significantly contribute to

the additional water supply of the area, that it should support their future plans for providing water to their citizens.

Senator FEINSTEIN. In other words, a net addition of potable water.

Mr. DONNELLY. Correct.

Ms. GREBBIEN. I would say, Senator, that I would agree with Mr. Atwater. In California, most recycled water projects already conform with criteria established by the State Water Resources Control Board or the Department of Water Resources to get either SRF funds, low-interest loans or State grant moneys. And those criteria are adopted by or were put in conjunction with EPA, and they're relatively common sense things—is there new water developed, does it meet a minimum financial return, have you performed CEQA and/or NEPA, is it institutionally viable, are you meeting the health department regulations and requirements, is the treatment technology you're using proven.

So, they're relatively understandable and straightforward, and Mr. Donnelly's suggestion of kind of having a checklist, if you will, rather than a full-blown feasibility study, those existing criteria would lend themselves to that approach.

Senator FEINSTEIN. How about regional impact?

Ms. GREBBIEN. I personally like that criteria. I think the wave of the future in California is integrated watershed management planning, and we're starting to see more and more agencies cross political lines and developing projects that are regional in nature and provide watershed benefits. And I think that's something that is easy to evaluate and should push water agencies toward more global planning, which is a good thing.

Senator FEINSTEIN. Everybody recognizes that this would take the Bureau out of the feasibility study business?

Ms. GREBBIEN. Yes, we do.

Senator FEINSTEIN. And you all think that's appropriate?

Ms. GREBBIEN. Yes.

Mr. ATWATER. Yes.

Ms. GREBBIEN. I do.

Ms. CODY. I do have a comment on options, although I cannot say where the program should go.

Senator FEINSTEIN. You have a comment on options, okay.

Ms. CODY. I can at least look at options, and I think what we've done in our—partly in the testimony, and more so in the report, is look at options for Congress to articulate the Federal interest in these projects. And among those options are things like—I think you mentioned fish and wildlife, something that helps with fish and wildlife, whether it's in a stream that has endangered or threatened species that are covered under the ESA or some other fish and wildlife criteria, or water quality standards. You may also want to look at whether there is duplication among programs, can some of these projects be funded from existing clean water or safe drinking water SRF's. That might be another criterion to look at.

Also, I think Reclamation mentioned today that it is part of its core mission, and I think what they mean by that is—well, I shouldn't put words in their mouths, but I also heard Commissioner Keys say that it would be—ranking criteria would be alleviating conflict, so possibly some of the criteria that Congress

might want to look at is what is—what are those types of things. I think the Bureau hot spots map identifies some of those areas, but there may also be areas that are not on that map that have some of these issues.

Senator FEINSTEIN. Okay. Madam Chairman, that completes my questions, but once again, let me just thank you for doing this and offer to work with you on some revisions that might be able to affect this. I would hope we would keep the drought-inclined States and not the water-rich states in this, because the first priority really has to be those that don't have other water resources and therefore have to do recycling and desalination.

Senator MURKOWSKI. Thank you, Senator Feinstein.

I want to go back to your map, Ms. Cody. We don't do a very good job oftentimes in anticipating the need in advance. And just looking at your map and recognizing that yes, you've got the bright red spots that show the conflict potential as being highly likely, but the areas where we know we're going to have issues, we know we have unmet needs. We have conflict potential, and you know, interesting terminology. What exactly does that mean? You go to southern California, you know exactly what conflict potential is.

Senator FEINSTEIN. In more ways than one, Madam Chairman.

Senator MURKOWSKI. In more ways than one. You said that first.

Senator FEINSTEIN. Yes, right.

Senator MURKOWSKI. But our reality is we've got some very serious issues. I focus, primarily, in this Energy Committee, on oil and natural gas matters because that's what my State happens to be rich in, but the real crisis for the globe is not necessarily going to be oil, it's going to be water. And what Title XVI provides through the reuse, where we're working it now, is fine in certain areas. But the track record for completion, quite honestly, isn't as impressive as we would like it to be, recognizing the growing demands as our population increases, as we look at these water poor States that, quite honestly, are some of our fastest-growing States in population. So we've got to get ahead of the game here rather than just staying even. And I would suggest that maybe we're not even staying even, and that's one of the reasons that we're here today.

As far as the criteria go, I was just shown a description of the selection criteria that Metropolitan Water District of California uses, and it's a pretty—I mean, it looks like a pretty good list of things. So, you look at that and you say, well, if Metropolitan Water has it, and all of the other districts have something similar, what are we doing in terms of getting the criteria in sync so that there can be some level of certainty or just knowing what you—to expect before you get too far into the game?

We had some very good information here this afternoon from all of you. We appreciate the perspective, appreciate the guidance. I think I'm leaving this hearing with a clear understanding that Title XVI does have a future, and what we need to do is figure out how we make it work best for the maximum good. And we've got a task in front of us, but there's no shortage of good ideas. So, I appreciate those of you who presented them today, and the committee will be working as we move forward. Thank you. With that, we're adjourned.

[Whereupon, at 4:26 p.m., the hearing was adjourned.]

[The following letter was received for the record:]

EASTERN MUNICIPAL WATER DISTRICT,
Perris, CA, March 14, 2006.

Hon. LISA MURKOWSKI,
Chairman, Subcommittee on Water and Power, Committee on Energy and Natural Resources, U.S. Senate, Washington, DC.

DEAR CHAIRMAN MURKOWSKI: The Eastern Municipal Water District (EMWD) appreciates the opportunity to provide written testimony to the Committee as it reviews the important role of the U.S. Bureau of Reclamation in its mission to encourage water recycling and desalination technologies to solve water problems throughout the western United States.

The attached document presents our thoughts on invigorating the Bureau of Reclamation's Title XVI program and the associated benefits of making the needed improvements. If you need additional information, please feel free to contact me at 951-928-6109.

Sincerely,

ANTHONY J. PACK,
General Manager.

[Enclosure.]

STATEMENT OF ANTHONY J. PACK, GENERAL MANAGER,
EASTERN MUNICIPAL WATER DISTRICT

Madam Chairman and Members of the Committee: my name is Anthony J. Pack and I am the General Manager of the Eastern Municipal Water District (EMWD). On behalf of EMWD and its Board of Directors, it is my privilege to present this testimony to emphasize the benefits of invigorating the Bureau of Reclamation's (Bureau) Title XVI program which enables the Bureau to lead and unite the local and regional agencies and provide the necessary seed moneys to leverage local and State funds needed to develop and implement much needed water recycling programs to enhance the limited water supply in Southern California. The development of new water sources, such as recycled water, will help us relieve the overwhelming demand on the existing local, State and Federal water projects.

EMWD provides domestic water, irrigation water, and sanitation services for about 580,000 people in a service area of over 555 square miles in Western Riverside County in Southern California, one of the fastest growing areas in the nation. EMWD relies on water supply from the State and Federal water projects such as the State Water Project and the Colorado River to meet 65% of its needs, and supplements the remainder with recycled water, groundwater, and desalted brackish groundwater generated primarily through the development of local projects. Recognizing the limited availability of water from the existing sources and the need to meet the ever increasing demand, EMWD has ventured into an aggressive expansion of its water reuse program and an extensive brackish groundwater desalination program coupled with an integrated groundwater management strategy. We strongly believe that the successful implementation of these programs will create new water sources that will relieve the demand on the existing water projects for other State and national critical needs. This would not be feasible without the leadership and the financial participation of the Federal and State agencies and the desire to diligently invest local funds by the Board of Directors on innovative water projects.

EMWD is the fourth largest recycled water user in the State of California and currently utilizes about 60 percent of the available recycled water. If not for the Federal assistance provided by the Bureau through its Small Reclamation Loan Program in the early 1990s, EMWD would not have been able to build this recycled water infrastructure, which is core to our success. This recycled water system not only enabled us to deliver recycled water to the various users but also allowed us to interconnect our five regional reclamation plants and the various storage facilities to increase system reliability. The use of recycled water within our District extends beyond irrigating parks, golf courses and agriculture to environmental enhancement such as the San Jacinto Wildlife Sanctuary. In our estimate, our efforts to utilize 20,000 acre feet of recycled water per year has relieved enough water from the State and Federal water projects to sustain 4,000 acres of wetlands, 5,000 acres of agriculture or 40,000 homes elsewhere in the west.

EMWD strongly believes that any further increase in recycled water use cannot be accomplished without expanding local and regional recycled water infrastructure and without developing and implementing appropriate technology solutions to overcome the water quality regulations and constraints. Recognizing this, EMWD, as a member agency of the Santa Ana Watershed Project Authority, participated with

the Bureau in the Southern California Comprehensive Water Reclamation and Reuse Study. Most of the projects identified in this study are also included in the Santa Ana Integrated Watershed Program. In addition, the California Water Plan and the CALFED-Bay Delta Program has identified that recycling is the most cost effective and the largest source of new water supply state-wide. All of these efforts identify the blooming opportunities waiting to maximize water recycling, reuse, and desalination. Where we are today is because of the vision the Congress had in the 1990s. The Congress paved the way for the future by enacting Title XVI which directed the Secretary of the Interior to investigate and identify opportunities for water reclamation, recycling, and reuse to address the future water needs of the West. This legislation further directed the Secretary to design and construct demonstration and permanent facilities. It is just when most of the water communities are beginning to embrace the core intent of Title XVI that some are questioning the effectiveness and the future need of the only Federal program that provides the localities with financial and technical assistance needed for the successful implementation of the various project elements.

The Title XVI program, even during the early stages of recognition of the role of water reuse by water communities, has been very effective. It provided value and created new water by helping to develop 30 recycled water projects. Orange County Water District's Groundwater Replenishment System is an excellent example. It creates 72,000 acre feet of water; incorporates modern treatment, monitoring, and groundwater recharge technology; and relieves Colorado River water for other agencies in Southern California. In this project Federal participation has enhanced broad based community and political support. Most significantly, Federal financial participation, at a very nominal level, has helped the agency to leverage significant State funds and local ratepayer dollars.

Now, EMWD, like many other Southern California water agencies, has plans to further increase its recycling efforts by building more transmission and storage facilities and by incorporating desalting technology for both brackish water and recycled water to maximize recycling, reuse, and salinity management. This is not the time to question the effectiveness of the Title XVI program but it is the time to invigorate the program to make it better. Title XVI program is not broken. It requires more fuel, lubrication, and an updated maintenance manual.

1. The Title XVI program needs fuel in the form of annual appropriation, not intermittent but ongoing. The Bureau should be directed to determine the national demand for water recycling, reuse, and desalination projects and recommend a reasonable level of annual funding needed to the Congress for appropriation.

2. The Title XVI program requires political lubrication. The program has to be extended to all 50 states to minimize friction between reclamation and non-reclamation states. This will make it palatable to the Congressional representatives of the non-reclamation states and help the program gain political support. In reality, there are other states that could significantly benefit from the Title XVI program.

3. The Title XVI program needs an updated maintenance manual. This Federal program should be made comprehensive and it should include standards for Federal support. The Bureau should be directed to establish a series of criteria that would qualify projects for assistance such as ensuring that projects provide multiple benefits and/or will contribute to ongoing water conservation programs.

In conclusion, I would like to emphasize the need to invigorate and enhance the Title XVI program to specifically target implementation of water recycling, reuse, and desalination programs. These are the basic and the cheapest building blocks for the new sources of water that are much needed to quench the thirst of the rapidly growing West. This valuable program has facilitated the development of 600,000 acre feet per year of recycled water capacity and the Federal contribution of \$278 million, to date, has leveraged at a ratio of 5:1 with local and State funds to produce over \$1.3 billion in benefits. I thank you and your esteemed committee for allowing me, on behalf of my Board, to provide this testimony.

APPENDIX

RESPONSES TO ADDITIONAL QUESTIONS

RESPONSES OF BETSY A. CODY TO QUESTIONS FROM SENATOR MURKOWSKI

Question 1. CRS counts 31 project authorizations, while the Administration believes there are 32 authorizations. This also impacts the number of “inactive” projects. Please explain the discrepancy.

Answer. CRS and the Bureau of Reclamation have made decisions in counting authorized projects, or project authorizations, that have resulted in slightly different project totals. The discrepancy can be explained by the way CRS and Reclamation treated one project and one project authorization bill.

In its count of authorized projects, Reclamation did not include the Port Hueneme (CA) desalination project, because it was authorized under the general authority of the 1996 amendments, and was not specifically authorized by Congress, as were the other projects. However, Reclamation did include the project in its budget summary, which included statistics on estimated project funding to date, and water to be reclaimed. For this reason, CRS included the Port Hueneme project in the total project count.

Additionally, CRS counted the Hawaii authorization as one project, whereas Reclamation counted it as three projects. While the Title XVI authorization for Hawaii is just one authorization, it does appear to authorize three separate projects. In the future, CRS will count this authorization as three projects, and thus will be consistent with Reclamation on this point.

In conclusion, if one subtracts the Port Hueneme project from the CRS total and adds the two additional Hawaii projects (count the Hawaii authorization as 3 projects instead of 1, for a net difference of 2), one ends up with the 32 projects identified by Reclamation. However, counting the Port Hueneme project and the Hawaii authorization as three projects leads to a total of 33 projects authorized under the Title XVI program. Of these, 32 have been specifically authorized by the Congress (as Reclamation reports) and one (Port Hueneme) has been undertaken pursuant to general Title XVI authorities.

CRS will continue to count the Port Hueneme project as an authorized and active Title XVI project because it is included in program financial and other data provided by Reclamation. CRS will also henceforth count the Hawaii authorization as three projects, as does Reclamation. Thus, with this change, the total number of projects authorized (regardless of how they were authorized) is 33.

Question 2. How did the Title XVI program evolve from the original authorization to the current program?

Answer. The number of Title XVI projects grew substantially with the 1996 amendments to the original authorization. The 1996 amendments (P.L. 104-266) authorized 18 additional projects and limited project funding. It appears nine projects have been authorized since 1996, three of which were authorized in September 2005 (the Hawaii projects). Reclamation developed and published Title XVI guidelines for program implementation; however, no rules or regulations have been promulgated for the program.

The program’s recent evolution appears to be closely tied to the findings and conclusions of the Administration’s PART review process. More information on this process and its effects are included on page 5 (footnote number 13) and pages 7-9 of my written testimony. Please contact me if this information needs clarification, or does not satisfactorily respond to your question.

Question 3a. Is there a readily definable “federal interest” in the Title XVI program?

Answer. Congress articulated the federal interest in water reuse in 1992 when it enacted Title XVI of P.L. 102-575, the Reclamation Wastewater and Groundwater Study and Facilities Act. The program was conceived during the long-term drought of the late 1980s and early 1990s when then-Secretary Lujan (1988-1992 Bush Ad-

ministration) announced the establishment of a Comprehensive Water Reuse Initiative for southern California.¹ The initiative envisioned that a comprehensive water reuse program would help to decrease the area's dependence on imported water supplies from the Colorado River. While the federal interest in developing the Title XVI program was declared via enactment of P.L. 102-575, the federal interest and policy position regarding water reuse more generally were not clearly articulated in the statute itself.² Hence, more than a decade later, the question has arisen whether there is still a federal interest in financing or providing technical assistance for water reuse.

The argument for a federal interest in water reuse is perhaps most easily made where there is an existing federal interest in water supply development or water resources management. For example, the federal government, through the Secretary of the Interior, plays a major role in Colorado River management, which affects water supplies in many western states. As noted above, this involvement appears to be the impetus for establishing the Title XVI program.

Other areas where the federal government is already involved in water resources management include places where implementation of the Endangered Species Act (ESA) has affected water resources management and water supplies in particular—or, looked at another way, when federal water works (dams, pumps, distribution facilities) have contributed to the decline of certain species, thereby necessitating the implementation of the ESA and potential impacts on water supplies. Where federal projects have diverted water and where federal project operations result in a lack of water of sufficient quantities and quality for fish and wildlife or other species, and have contributed to species decline, it is arguable that the federal government under established policies has an interest, or responsibility, in augmenting those water supplies. A similar argument could be made for water quality where existing supplies, particularly groundwater supplies, do not meet new or emerging federal water quality requirements. A federal interest could also be articulated where the federal government is providing drought funding, or where it is funding and investigating new water supply development that in part would directly or indirectly augment potable supplies, as is the case in several areas of California. According to EPA, “perhaps the greatest benefit of urban reuse systems is their contribution to delaying or eliminating the need to expand potable water supply and treatment facilities.”³ However, whether such benefit equates to or implies a specific federal interest, particularly given the relatively limited history of federal involvement in local municipal and water supply development, is subject to debate. For more information on this point, please see pages 7-8 (Broad Policy Issues) of my written testimony.

Question 3b. Do all of the authorized projects have a federal nexus or are some strictly local in scope?

Answer. The five projects and six studies authorized in 1992 arguably address the federal interest articulated in the original Title XVI statute (P.L. 101-575). Other projects in Colorado River Basin states and projects in southern California areas receiving Colorado River water, or those in a position to offset or augment Colorado River supplies, also would appear to address this federal interest. It is not clear how many of the projects might address other potential federal interests described above; however, at least two of the “inactive” projects are, or would be capable of, providing

¹U.S. Dept. of the Interior, Office of the Secretary, “News Release,” dated August 5, 1991. According to materials CRS received on October 25, 1991, the Bureau of Reclamation undertook a number of activities in the fall of 1991, including developing a detailed action plan for promoting the initiative. By October 23, 1991, the Bureau had held its first pre-planning meeting for the Southern California Water Reclamation and Reuse Study.

²There are no findings or policy declarations in Title XVI itself, however, a quick review of the Title's legislative history reveals a brief discussion of the program's potential to address long-term water supply needs of water short areas (U.S. Senate, *Reclamation Projects Authorization and Adjustment Act of 1992*, Report of the Committee on Energy and Natural Resources (S. Rpt. 102-267), 102nd Congress, 2nd Session, March 31, 1992, p. 1392). Other discussions largely focused on site- or regional-specific rationales for the program (e.g., the Title's ability to “afford unique opportunities to resolve long-standing water management disputes” in southern California (U.S. House of Representatives, *Reclamation Projects Authorization and Adjustment Act of 1992*, Conference Report, (H. Rpt. 102-1016), 102nd Congress, 2nd Session, Oct. 5, 1992, p. 183). In another instance, Senator Bradley in a hearing mentioned the purpose of bringing down treatment costs through the desalination and research provisions of the Title. Yet, overall, Title XVI generated relatively little policy discussion compared with other provisions of the Act; it was one of 40 titles in an omnibus bill that proved quite controversial for its early provisions on surplus crops (“double subsidies”), Bureau of Reclamation policy reform, and latter provisions resulting in the Central Valley Project Improvement Act (Title 34 of P.L. 102-575).

³U.S. Environmental Protection Agency and U.S. Agency for International Development, *Guidelines for Water Reuse*, EPA/625/R-04-108 (Sept. 2004), p. 85.

water of improved quality to streams which contain threatened or endangered species under the federal Endangered Species Act. To fully understand whether some of the authorized Title XVI projects are “strictly local in scope” would require further in-depth research. This may be something the Government Accountability Office (GAO) could pursue given its authority to conduct program evaluations and its field resources (offices in California and elsewhere).

Question 4. Have any of the authorized Title XVI projects been abandoned by the local sponsors?

Answer. In interviews CRS conducted with project sponsors of seven “inactive” Title XVI projects, CRS found that one project (San Joaquin Area City of Tracy, CA) has been put on hold indefinitely. Another project (West Jordan, UT) had not been pursued by prospective project managers, but new management indicated the project might now be pursued, perhaps in conjunction with another nearby project.

RESPONSES OF BETSY A. CODY TO QUESTIONS FROM SENATOR JOHNSON

Question 1. Your testimony talks about the primary role played by state and local governments in developing M&I water projects. If you look at programs across the board, including Indian water rights settlements; EPA State & Tribal Assistance Grants; and new Corps of Engineers authorities; hasn’t federal assistance for M&I projects greatly increased over the last 15 years?

Answer. It is important to distinguish the difference between assistance for M&I water supply development projects and assistance for M&I wastewater and drinking water treatment projects. In my testimony, I touch on the historical role of federal water resource agencies (e.g., the Corps and Reclamation) in developing M&I water supply projects. What was not said, is that also historically, there has been a fine line upon which the activities of several federal agencies were drawn. For example, the U.S. Environmental Protection Agency (EPA) has dealt primarily with programs concerning water quality issues, while the Corps and Reclamation more typically engaged in water resource development projects; that is, they construct or assist in constructing navigation, flood control, irrigation, and other facilities. The perceptions of the core missions of these agencies still reflect this division in responsibilities, although there appears to be increasing overlap.

For example, Congress has more frequently authorized the traditional water resource agencies to undertake M&I activities that involve water quality aspects (e.g., Title XVI, and §219 “environmental infrastructure” provisions in various Water Resources Development Acts (WRDAs)), and has also more frequently authorized M&I water supply development projects in the past 15–20 years. These latter projects are often in conjunction with or via Indian water rights settlements, rural water supply authorizations, and isolated Corps authorizations. However, it appears the total amount of federal assistance (funding) for the water supply development projects would be small, compared to federal funding for traditional water resources development projects (irrigation water supply, flood damage reduction, navigation, hydro power, etc.). It may be true that, as a percentage of such funding, the proportion of funding assistance going to M&I water supply projects is growing. This may be a fairly likely scenario if looking at funding for irrigation water supply development versus M&I water supply development; however, it maybe an unlikely scenario if comparing M&I water supply development with other water resources development activities such as those traditionally carried out by the Corps (flood damage reduction, navigation improvements, etc.).

In contrast, funding that Congress appropriates to EPA in that agency’s State and Tribal Assistance Grants (STAG) account is not provided for water resource or supply development. That assistance is provided for constructing or upgrading of local projects to treat ambient water to levels needed for safe and healthy drinking water and projects to treat a community’s wastewater prior to discharge back into streams and lakes.

Question 2. Approximately 9 of 31 authorized projects are deemed to be “inactive” by the Bureau of Reclamation. Does your report indicate that only one is not being pursued? Are the other inactive projects stalled because they are still undergoing planning activity? Has Congress authorized a number of projects that have not undergone in-depth feasibility studies?

Answer. CRS has completed interviews with project sponsors of eight of the nine inactive projects identified by Reclamation in February of 2005. Of the eight for which we have completed interviews, only one project sponsor indicated the project would not be pursued (San Joaquin Area—City of Tracy, CA). Four projects have completed feasibility studies; however, it is not clear whether these studies were completed prior to project authorization. The other three projects are in various

stages of planning and funding efforts, but could generally be categorized as being in pre-feasibility stages.

I hope this information meets your needs. If you have further questions, please contact me at 7-7229 or at [bcody@crs.loc.gov].

ORANGE COUNTY WATER DISTRICT,
Fountain Valley, CA, March 17, 2006.

Hon. LISA MURKOWSKI,
Chairman, Subcommittee on Water and Power, Committee on Energy and Natural Resources, U.S. Senate, Washington, DC.

DEAR CHAIRMAN MURKOWSKI: Enclosed please find responses to the questions submitted by yourself and Senator Johnson as a result of my testimony on the Subcommittee's oversight hearing on the Bureau of Reclamation's Reuse and Recycling Program (Title XVI of P.L. 102-575). If you need any additional information or assistance I will be happy to provide it.

Thank you for the opportunity to be a part of the Title XVI dialogue.

Sincerely,

VIRGINIA GREBBIEN,
General Manager.

[Enclosure.]

RESPONSES TO QUESTIONS FROM SENATOR MURKOWSKI

Question 1. Is it fair to say that you believe Title XVI is a value-added program but that it needs to be restructured in order to make it more effective?

Answer. As I stated in my testimony on February 28 I strongly believe that the Title XVI program adds value. I have personally constructed three

Title XVI Projects, the West Basin Water Recycling Project at West Basin Municipal Water District, the Esteban Torres Recycled Water Project at Central Basin Municipal Water District and currently under construction the Groundwater Replenishment System (GWRS) at Orange County Water District (OCWD). Together the West and Central Basin projects currently deliver about 35,000 AFY of recycled water. The GWRS project will be operational in the summer of 2007 and will serve 72,000 AFY of recycled water. Together these three projects next summer will be providing in excess of 100,000 AF of value every year!

In addition, Title XVI projects significantly leverage federal dollars providing economic value. The total cost of the GWRS project is \$487 million. The federal cost share of \$20 million is just four percent—a significant value to the federal government. Modest improvements to the program may be warranted but quite frankly, I believe the Title XVI program works well as is. The only improvement I would suggest is to increase the funding to the program.

Question 2. What is the most important action that Congress can take to reshape Title XVI?

Answer. The most important action Congress can take with respect to the Title XVI program is to continue to support it. Congress should send a strong signal encouraging the expanded use of recycled water to assist in solving the critical water problems facing the arid western regions of the United States. The Title XVI program creates new water supplies that are critically needed. As Congress considers ways to improve Title XVI, I suggest it ensure that existing projects are incorporated into any formal rewrite of Title XVI by authorizing the projects with a sunset provision of ten years. This would establish a commitment to projects that are already proceeding through the legislative process today and establish a revised program for the future.

Question 3. Over the past several years, the funding level for Title XVI has ranged from a low of a \$10 million Administrative request to a high of \$31 million in Congressional appropriations. What do you think is an adequate level of funding for this program?

Answer. Ideally Congress should be funding this program at sufficient levels to encourage the maximum amount of recycled water development. I estimate this high level of funding would be in the \$100 to \$200 million per year range. However, given the competing interests for federal dollars I would suggest the minimum annual funding for Title XVI should be \$50 million.

Question 4. Currently, there is a limit on the federal cost-share of \$20 million or 25 percent of project costs. One idea that's been discussed is reducing the federal cost-share. What do you believe is the appropriate federal cost-share?

Answer. It is my understanding that the federal cost share on Title XVI projects is the lowest of any water resources program of the Army Corps or the Bureau of Reclamation so I would argue that the cost share does not need to be lowered. I know the Corps of Engineers projects my agency participates in have a maximum federal cost share of 50 percent. Similarly, we just received FEMA funding for 2005 flood damage that had a federal cost share of 75 percent. In contrast, the Title XVI cost share of the GWRS project is four percent.

Question 5. How should Congress address projects that have been authorized but haven't received any federal funding?

Answer. I would suggest a sunset provision on authorizations going forward is reasonable.

Question 6. Do you agree with the Administration's suggestion that such projects should meet any newly imposed eligibility requirements?

Answer. This question concerns me as I am unclear as to what new eligibility criteria are being contemplated by the Administration or whether it is needed. As discussed at February's Oversight Hearing, the USBR in the late 1990's issued a planning guidance document that outlines feasibility criteria. It is my understanding that authorized Title XVI Projects are in conformance with the criteria outlined in the guidance document. Similarly, the State of California has criteria for recycled water projects to be eligible for low interest loans and state bond funds. If these criteria were used they would be acceptable as they are well established, beneficial, and most if not all recycled water projects meet them. If additional criteria were to be developed I would recommend that any such criteria be stakeholder supported. Criteria that would require an extended review and approval process by the USBR would not be beneficial and would only serve to delay the implementation of Title XVI projects.

Question 7. The House has added 10-year sunsets to their Title XVI bills. Do you agree with this approach?

Answer. Yes.

Question 8. I understand that the average monthly water bill for Californians is about \$30. I further understand that more than 90 percent of California communities pay less than two percent of their median household income for their water and wastewater charges, which would fall in the range of "highly affordable." How much could urban water rates increase before rising to a level that is generally considered affordable to invest in new water projects?"

Answer. Orange County has a diverse population that is now over 50 percent in minority status. Many Orange County families are on limited income and fixed budgets. Additionally, water rates can unfortunately be perceived as taxes, which many residents believe should not be increased. These conditions make increasing residential water rates a difficult and delicate issue. Local city councils have been threatened in the past with recall elections due to proposed water rate increases.

OCWD has recognized the need to increase water rates to provide funding to invest in our water future and has more than doubled our water rates over the past six years. This increased cost of groundwater has forced local cities to increase their retail water rates to their residential customers.

Similarly, the Orange County Sanitation District (OCSD) has a \$2 billion capital improvement program to meet existing and future wastewater treatment capacity demands. OCSD has increased its sewer rates 15 percent a year for the last four years. These combined water and sewer rate increases have resulted in the combined average monthly residential water and sewer bill to increase by 15 to 20 percent a year over the last five years.

Public opinion polling generally reveals that the public will support increased water and sewer rates to support clean water and clean beaches. However, polling also shows that public support erodes when water and sewer rates increase too steeply, typically greater than \$10 per month is not supported.

RESPONSES TO QUESTIONS FROM SENATOR JOHNSON

Question 1. I'd like to hear a little bit more about your Groundwater Replenishment System. Does the overall project work basically as a water bank?

Answer. This is a very perceptive observation. Yes, the project does work a bit like a water bank. It also serves as a water purification process and a salt water intrusion barrier. In Orange County we are very fortunate to have a large underground aquifer. We are even more fortunate in that it is "managed" versus adjudicated. What this means is that each year OCWD's Board of Directors determines how much water can be produced or pumped from the basin which is then enforced through economic incentives and disincentives. The net result of the Orange County basin being managed is that in the last twenty-five years we have doubled the sus-

tainable yield of the basin from 150,000 AFY to 320,000 AFY. In contrast, an adjudicated groundwater basins' sustainable yield will remain constant over time.

GWR will operate as a water bank using the groundwater basin as a storage reservoir and the recycled water as the supply source. The recycled water produced by the GWR Advanced Water Purification Facility (i.e. the treatment plant) will be recharged and stored underground in the basin. Some of the water will be used to increase our sustainable annual yield from the basin from 320,000 AFY up to about 380,000 AFY. The rest will remain in storage for use during emergencies, to weather droughts on the Santa Ana River (our main source of surface water in Orange County) or to weather droughts and supply restrictions on Southern California's imported water delivery systems.

Question 2. What used to happen to the water that is now being captured, cleaned, and recharged into the groundwater basin as a result of your project?

Answer. It would be wasted to the ocean.

Question 3. Are there environmental issues associated with capturing water that formerly was released as treated effluent?

Answer. The GWRS project provides an environmental benefit and is strongly supported by the local environmental community including the Orange County Coast Keepers and the Surfrider Foundation. Orange County has been plagued with beach closure issues particularly in the City of Huntington Beach. For a while it was thought that OCSD's discharge of treated effluent (the source water for GWRS) was the cause of high bacteria levels that were closing the beaches. This has since been determined to NOT be the cause of the beach closures. However, the local environmental community were very active in working with the OCSD to implement a policy of providing full secondary treatment to all of their wastewater discharges and to reclaiming as much of their wastewater as possible so that it would not be discharged into the Pacific Ocean.

Question 4. Your testimony mentions that some recycled water projects were built and then not operated due to the lack of community support. Were any of those projects Title XVI projects?

Answer. No. Please let me clarify my testimony. One project was built and then not operated. Another project was planned and under design when it was terminated due to lack of community support.

Question 5. If not, how might have Title XVI helped to avoid that result (i.e. not operated after construction)?

Answer. It is difficult to say if Title XVI would have helped these two projects because fundamentally these were community outreach failures rather than technical or financial failures. If they had been Title XVI projects than one can assume that there would have had to been greater political and community stakeholder support because in order to become a Title XVI authorized project it takes the support of an area's congressional delegation. Further, in order to receive appropriations the level of support from the local community to galvanize the congressional delegation to make the project a funding priority must be even greater. In other words, to become a successful (as defined by actually receiving appropriations) Title XVI project an agency would have to engage in a significant outreach program. If the agencies involved in these two particular projects had engaged in a better outreach campaign they may have been able to adapt and modify their projects so that the community would have supported them and they then could have been effectively implemented.

RESPONSES OF RICHARD ATWATER TO QUESTIONS FROM SENATOR MURKOWSKI

Question 1. Is it fair to say that you believe Title XVI is a value-added program but that it needs to be restructured in order to make it more effective?

Answer. The WateReuse Association strongly believes that the Title XVI program has been very successful in leveraging federal investments with local and state funds to develop innovative technologies and important new water supplies throughout the western U.S. The Association believes that the Title XVI program can be improved through modest changes in the cost-sharing provisions: lowering the federal investment cap from 25% to 20% and streamlining the Bureau of Reclamation's review of local projects feasibility reports to be consistent with adopted State criteria (such as the California Water Resources Control Board) to avoid redundant NEPA and ESA reviews. What is the most important action that Congress can take to reshape Title XVI? The update of the 1996 authorization of the Title XVI legislation with new criteria (see attached) for eligibility would be the most significant action that could be taken by the Congress.

Question 2. Over the past several years, the funding level for Title XVI has ranged from a low of a \$10 million Administrative request to a high of \$31 million

in Congressional appropriations. What do you think is an adequate level of funding for this program?

Answer. The WateReuse Association believes annual appropriations can be sustained at a minimum of \$50 million per year with a targeted goal of \$200 million annually. This level of funding, divided between recycled water projects and desalination (both brackish groundwater and seawater), should be authorized by Congress.

Question 3. Currently, there is a limit on the federal cost-share of \$20 million or 25% of project costs. One idea that's been discussed is reducing the federal cost-share.

What do you believe is the appropriate federal cost-share?

Answer. As indicated in the February 28, WateReuse Association testimony, we believe reducing the cap on percentage cost share to a maximum of 20% from the current 25% would be more cost-effective. The Association also recommends no change in the authorization cap amount of \$20 million. Many projects being built today have an effective cost-share of between 10 and 15%, illustrating the significant federal investment benefits to the nation when compared to any other comparable federal water investment program at the Bureau of Reclamation, Army Corps of Engineers, USEPA and the USDA NRCS water resources programs.

Question 4a. How should Congress address projects that have been authorized but haven't received any federal funding?

Answer. All existing authorizations and all future authorizations should have a 10-year "sunset" authorization provision, effective going forward from 2006.

Question 4b. Do you agree with the Administration's suggestion that such projects should meet any newly imposed eligibility requirements?

Answer. Without knowing the Administration's proposed eligibility requirements, it is difficult to evaluate whether they are appropriate or whether they should be applied retroactively on existing authorized projects.

Question 5. The House has added 10-year sunsets to their Title 16 bills. Do you agree with this approach?

Answer. Yes, we believe that sunset provisions would resolve concerns raised about Title XVI projects which are authorized but not funded within a reasonable period of time.

Question 6. You advocate the expansion of the Title XVI program—which is now limited to the 17 Reclamation states—to a national program with an annual authorization of \$200 million.

Would you support the concept proffered by the NWRA—namely that Congress should evaluate non-Reclamation state participation on a state-by-state basis?

Answer. Yes, based on the continuation of specific Congressional authorization for each Title XVI project.

Question 7a. You note in your testimony that through FY 2004, the Federal investment of \$272.5 million was leveraged by a factor of about 5:1, for a non-Federal investment of about \$1.09 billion.

Please explain how federal participation helps to leverage non-federal funds, particularly since the average annual federal appropriation for a Title XVI project is approximately \$1 million.

Answer. The financing by local governments of new water supplies is typically more expensive; the average cost of their existing water supplies (whether local groundwater or imported supplies) and the federal investment of typically 10-20% of the capital costs achieves two key incentives: 1) federal endorsement with grant funding allows local officials to garner broad public support for the non-federal capital investment of 80-90%; and the federal investment typically lowers the cost of the new recycled water supply so it does not make it prohibitively expensive when compared to the existing local groundwater or imported supplies.

Question 7b. Given that these projects can cost in excess of tens of millions of dollars, how does the federal share provide any benefit to a project?

Answer. As documented in the California Water Recycling Task Force Report (June 2003) recommendations, state and federal grant funding is a critical ingredient to encouraging more water recycling in California to achieve the adopted goals of developing over 1 million acre-feet of new recycled water supplies statewide (California State Water Plan, 2006). The same is true in other states.

Question 8a. You suggest in your testimony that the federal cost-share component could be reduced from 25% to 20%.

Why not 15% or even 10%?

Answer. As indicated above, the reduction of the cost-sharing percentage cap from 25% to 20% is reasonable. Lowering the cap further at this time would limit unnecessarily the federal grant assistance to projects that need the extra financial incentives.

Question 8b. If the federal cost-share is reduced, should the \$20 million cap also be lowered? If not, why not?

Answer. The \$20 million cap with a 20% cap on federal cost-sharing of capital costs would now fund a \$100 million project. Limiting the federal investment cap to less than \$20 million would reduce the size and scope of the water recycling projects that can be considered. From Watereuse Association surveys of projects being planned and currently developed, many projects exceed \$100 million and the cap already will reduce the effective cost share to below 20%.

RESPONSES OF RICHARD ATWATER TO QUESTIONS FROM SENATOR JOHNSON

Question 1a. Have water reuse technologies become more cost-effective over the last decade?

Answer. Yes, in that membranes are becoming more common in treating wastewater and other poor quality water sources (e.g., groundwater) for reuse and recycling of the supply for beneficial water supply projects.

Question 1b. Has Title XVI helped to bring about developing more cost-effective technologies?

Answer. Yes, our publication of 10 case studies in 2004 documents some of the best examples of new technologies being developed to reuse and recycle previously wasted water into "state of the art" new supplies. Recycled water is being used for new and different uses every year (for example, fabric dyeing factory in Chino started using recycled water in 2005; at least 14 high rise buildings in Irvine have dual plumbing systems for urinal flushing; and the Gallo winery in Sonoma County irrigates its grapes exclusively with recycled water).

Question 2. Should Title XVI be amended to ensure that a certain percentage of funding is allocated to demonstration projects that promote promising new technologies?

Answer. Through the Congressional authorizations and the criteria for funding of projects, the Association believes that the Congress and the Bureau of Reclamation have policies already in place that encourage new technologies and demonstration projects. Additional authorization language highlighting the value and need for demonstration projects would be an effective policy tool to the private and public sectors to continue to expand the use of new technologies to increase the reuse and recycling of water throughout the United States.

Question 3. Do you think that Title XVI funding should be limited to less affluent communities that may not be able to afford water reuse projects absent federal grants?

Answer. Most of the Title XVI projects that have been authorized and currently being considered by Congress are of a regional nature and typically have poor and disadvantaged communities served by the recycled project service area. Additional federal incentives for disadvantaged communities (e.g., keeping the cost-sharing percentage cap at 25%) might be an effective tool to ensure the financial feasibility of water recycling projects in disadvantaged communities. Drought and other water supply impairments do not selectively find communities. While some communities may enjoy higher standards of living than others, it is also true that these communities serve as engines for economic activity benefiting all within and across regions. The Association rejects the notion that Title XVI benefits wealthy communities and believes that there is no scientific survey that substantiates this assumption.

SUGGESTED NEW CRITERIA FOR WATER REUSE AND DESALINATION PROJECTS

(a) Project Financing Assistance.—The Secretary shall establish a program of grant assistance to support the construction of water reuse and desalination projects consistent with eligibility criteria in paragraph (ii) of this subsection.

i. Eligible Projects.—For purposes of this section, an eligible project shall be a project that provides water supplies to the general public through alternative water supplies. Projects that demonstrate compliance with subsection (a) (ii) shall receive priority for assistance.

ii. Priority Criteria.—Eligible projects shall be prioritized for financing assistance if they:

1. significantly improve water supply quality or reliability;
2. significantly increase water supply yield; or
3. address multiple benefits.

iii. Guidelines.—The Secretary shall develop appropriate guidelines for purposes of implementing the provisions of this section. Such guidelines shall be

issued not later than 180 days after the date of enactment of this Act. In the event that such guidelines are not published by such date, the Secretary shall proceed with selecting projects for assistance provided that at least five projects in each eligible state shall be selected. Such selection shall ensure a balance within each state between water reuse and desalination projects.

iv. Cost Share.—Projects authorized to receive assistance shall demonstrate an ability to provide up to 50% of a project's costs from nonfederal sources. The Secretary may waive this cost-share requirement if it is determined that the project sponsor is deemed to be an economically disadvantaged community.

v. Authorization of Appropriations.—There is authorized to be appropriated \$250,000,000 for each of fiscal years 2006 through 2010. Such authorized amounts shall remain available until expended.

RESPONSES OF THOMAS F. DONNELLY TO QUESTIONS FROM SENATOR MURKOWSKI

Question 1. Is it fair to say that you believe Title XVI is a value-added program but that it needs to be restructured in order to make it more effective? What is the most important action that Congress can take to reshape Title XVI?

Answer. NWRA believes that Title XVI can be a very valuable program allowing districts facing long-term water supply challenges to develop "new" water through recycling, reuse, desalination and conservation. With a limited amount of federal dollars available, it is important that the highest value projects are funded first. We would recommend that Title XVI be amended to require a report from the Commissioner to the Chairmen of the Senate Energy and Natural Resources Committee and the House Resources Committee recommending or not recommending authorization of the project proposal. We are not suggesting a detailed and costly assessment of the proposal, but simply a letter reporting on whether or not the proposed project meets the goals and objectives of the Act, adds water to systems that are facing critical water supply challenges. The report should also comment on, but not be limited to, the cost sharing arrangements, the technology and other pertinent aspects of the proposal.

Question 2. Over the past several years, the funding level for Title XVI has ranged from a low of a \$10 million Administrative request to a high of \$31 million in Congressional appropriations.

What do you think is an adequate level of funding for this program?

Answer. If the aforementioned procedural changes are made to ensure that quality projects receive priority funding, an annual level of funding in the \$30-50 million dollar level could make a big difference in the West. Creating "new" water can provide water for rapidly growing urban areas in the arid and semi-arid West and water to meet environmental needs.

Question 3. Currently, there is a limit on the federal cost-share of \$20 million or 25% of project costs. One idea that's been discussed is reducing the federal cost-share.

What do you believe is the appropriate federal cost-share?

Answer. The current federal/non-federal cost share is very favorable to the American taxpayer when compared to other federal programs. Urban districts have a rate-payer base that allows them to adequately fund the non-federal share in most cases. At this juncture, we would not urge Congress to change the cost sharing arrangements or the limit per project.

Question 4. How should Congress address projects that have been authorized but haven't received any federal funding? Do you agree with the Administration's suggestion that such projects should meet any newly imposed eligibility requirements?

Answer. Provided the Congress amends Title XVI as suggested in the response to question number 1, we would recommend that those projects that have not received federal funding should be returned to Reclamation for evaluation. In this respect, we do agree with the Administration.

Question 5. The House has added 10-year sunsets to their Title 16 bills. Do you agree with this approach?

Answer. Sunset provisions require Congress to periodically reassess federal programs to determine whether or not they have successfully achieve their objectives, they should be continued or whether changes or amendments should be made to the original authorization. We do agree with this approach as long as it results in a review of the program rather than an automatic termination of the program.

Question 6. In your opinion, could the Title XVI program be effective in creating "new" or "saved" agricultural water for other uses such as environmental enhancement or providing additional water for municipal use?

Answer. There is no question that agricultural water uses provide numerous opportunities to save water through canal lining and other types of conservation improvements. Whether or not saved agricultural water can be used for either environmental enhancement or municipal use depends to a large extent on state water law. In a number of Reclamation States such as Idaho and Montana, appropriation law requires any saved water to go to the next junior appropriator. Conversely, some states have enacted laws that provide for two-party agreements to pay for conservation improvements in return for the use of the saved water. Title XVI should be amended to allow it to be used for projects that save agricultural water provided that the water is used for a purpose that meets the long-term water supply objectives of the state or region.

Question 7. You've suggested increasing the federal cost-share component for projects that satisfy national goals and objectives.

Please elaborate on the national goals and objectives.

How much of an increase on the federal cost-share component do you think is reasonable?

Answer. As an example, Congress has authorized multi-million dollar projects to restore and enhance the Everglades in Florida and California's Bay-Delta. Both of these projects require large quantities of water to be allocated for environmental enhancement. Title XVI projects which provide water to meet such national goals and objectives should be encouraged and given priority for funding. In such cases the current cost sharing arrangements may be inappropriate and prohibitive. It's difficult to simply pick a number for an appropriate federal/non-federal cost share. Rather than doing so, we would recommend that for projects of this nature, cost sharing should be addressed by the authorizing committees on a case-by-case basis.

RESPONSES OF THOMAS F. DONNELLY TO QUESTIONS FROM SENATOR JOHNSON

Question 1. Is here a sense by NWRA's members that the Title XVI program distracts Reclamation from carrying out its traditional mission and serving its traditional constituencies?

Answer. The Bureau of Reclamation's core mission must be the maintenance of its water supply and power generation infrastructure. That is not to say that Reclamation should resist new missions authorized by Congress, such as those authorized under Title XVI of P.L. 102-575. We believe that programs such as Title XVI enhance rather than detract from Reclamation's mission.

Question 2. Do you think Title XVI projects can and should be targeted in such a way as to help Reclamation carry out its core mission?

Answer. There is no question that they should be. Whether they can be depends in large part on the details of the project application and the area that benefits from the project.

DEPARTMENT OF THE INTERIOR,
OFFICE OF CONGRESSIONAL AND LEGISLATIVE AFFAIRS,
Washington, DC, April 18, 2006.

Hon. LISA MURKOWSKI,
Chairman, Subcommittee on Water and Power, Committee on Energy and Natural Resources, U.S. Senate, Washington, DC.

DEAR MADAM CHAIRWOMAN: Enclosed are responses prepared by the Bureau of Reclamation to questions submitted following the February 28, 2006, hearing regarding "Title XVI of P.L. 102-575."

Thank you for the opportunity to provide this material to the Committee.

Sincerely,

JANE M. LYDER,
Legislative Counsel.

[Enclosure.]

I. ORAL QUESTION

RESPONSE TO QUESTION FROM SENATOR FEINSTEIN

Question 1. For pending California water recycling projects from SCCWRRS and BARWRP (those which have submitted feasibility studies but Reclamation has not completed review), why have the reviews not been completed and what will it take to complete them? Also, you can report on the status of projects that have been approved/authorized but have not received funding.

Answer. Reclamation has completed its review of all reports and other documentation submitted by project proponents in response to our request for information for the report directed by P.L. 108-361. (The report is currently under administrative review, and we look forward to submitting it to Congress soon.) Of the submittals for projects that have not been authorized, fourteen (seven each associated with SCCWRRS and BARWRP) were nearly complete, but lacked elements such as NEPA compliance. While these projects have the potential to meet requirements included in Reclamation's 1998 Title XVI feasibility guidelines, we do not know how they would rank in priority if the Title XVI program were reformed as proposed in our testimony. The remainder lacked many required elements. All project proponents have been notified of Reclamation's findings.

Progress on authorized Title XVI projects in California that have not yet received funding from Reclamation is as follows:

1. San Joaquin Area Water Reuse—The sponsor has placed the project on hold due to a change in demand for reclaimed water.
2. Irvine Basin Groundwater and Surface Water Improvement—The sponsor has initiated planning and NEPA compliance is underway. Reclamation has provided technical assistance on a cost-reimbursable basis.
3. Hi-Desert Wastewater Collection and Reuse—The sponsor has indicated its interest in initiating the project in the near future.

II. QUESTIONS SUBMITTED FOR THE RECORD

RESPONSE TO QUESTION FROM SENATOR MURKOWSKI

Question 1. Local Title XVI project sponsors need help with the financing of the capital costs of constructing facilities, although they can also benefit from the receipt of subsidies for actual water delivered as in the case of the MWD program. Do you believe a reformed Title XVI program that rewards projects that have already been implemented with a unit cost subsidy would be more appropriate for Reclamation?

Answer. Title XVI projects are constructed, operated, and maintained by non-Federal entities. Title XVI does not currently authorize Federal funding for operations and maintenance of these non-Federal projects. We do not believe such funding to be an appropriate Federal role and do not believe it would be appropriate in a reformed Title XVI program.

RESPONSES TO QUESTIONS FROM SENATOR JOHNSON

Question 1. During her confirmation process, Deputy Secretary Scarlett was asked what role Interior should play in water recycling and reuse. She responded for the record that the Department "questions the need for more Federal dollars through Reclamation to fund additional projects, given other potential funding sources throughout the West."

Do you know what other potential funding sources she may have been referring to? Do you think that there exists such a source of funds and that it reduces the need for Reclamation to have an active Title XVI program?

Answer. The Title XVI projects are predominantly planned, designed and constructed by the local non-Federal project sponsors. These projects are also owned and operated by the local water agencies. As such, the primary responsibility for funding Title XVI projects resides with state and local government. Although there are no other Federal programs that provide funding for water recycling projects in the manner that the Title XVI does, there are sources of funding at the state level. One such program is the State Revolving Fund which receives Federal financial assistance in the form of block grants from the Environmental Protection Agency to help fund water and wastewater projects, including water recycling projects. In addition; numerous states have state-run financial assistance programs to provide grants and loans to local communities. In the case of California, a program funded from monies received from Proposition 50, passed by voters in 2002, is available to help construct projects in that state. These funding sources are critical to the successful implementation of water recycling projects at the local level.

Question 2a. Your testimony states that according to OMB, one of the 2 main problems with the Title XVI program is that there is insufficient Reclamation involvement early in the project development process, leading to projects with planning deficiencies. This might be a problem of Reclamation's own making. Last year, the Lakehaven Utility District in Washington state asked Reclamation to serve as the NEPA lead agency for the environmental review associated with Lakehaven's authorized water reuse project. Reclamation declined, stating that "the reuse portion

of the program should be phased out and that no new planning starts should be initiated. In the future, the program's focus will be on desalination research."

By taking this position, isn't Reclamation removing itself from the planning process? How can OMB then complain that this is a major problem with the program?

Answer. Reclamation believes that Title XVI has accomplished its authorized mission of demonstrating recycling technology. Reclamation made a conscious decision to redirect its discretionary funding in the Title XVI program to desalination research. Reclamation believes this commitment to focus Federal funding on research to bring down the cost of desalination and recycling will result in substantial future benefits to local communities. By advancing the science of water treatment technologies, we believe the cost of implementing water recycling and desalination projects can be reduced to a level that makes these types of new water supplies more affordable to a greater number of local communities. As Reclamation's testimony stated, we believe there is still a role for Reclamation to assume in the planning of Title XVI projects and that desalination will become an even more important tool in meeting future water needs.

Question 2b. What ideas do you have for ensuring sufficient Reclamation involvement in the project development phase?

Answer. Reclamation has a number of ideas for insuring sufficient involvement in the planning phases of project development, but believes Congressional action is required to bring the program in line with the water supply needs of today. We are working on a legislative proposal. There are many changes to the way Title XVI is administered that could be accomplished under the existing statute. However, we believe it will take legislative action by Congress to place limitations on how and when future projects are authorized for construction. Reclamation does not have the ability to enforce these restrictions under Title XVI as it now exists.

Question 3a. Your testimony suggests the Administration might be receptive to the authorization of new Title XVI projects if the existing authorization for the program is amended to establish explicit criteria ensuring project feasibility, as well as some formula for prioritizing funding.

Is this an accurate assessment?

Answer. Yes, this is an accurate assessment. We believe the Title XVI program has served a useful purpose, but is outdated and in need of reform. Clearly the authority to identify and investigate water reuse opportunities has helped many local water agencies with project planning. However, we believe the program has flaws relative to the specific authority to plan, design, and construct full-scale water reuse projects. Authorizing projects for construction prior to having completed comprehensive feasibility studies has resulted in Federal projects potentially costing billions of dollars that have not been determined to be feasible and worthy of Federal investment. This has placed a tremendous financial burden on Reclamation and further erodes our ability to manage our existing infrastructure. Reclamation would prefer to have projects authorized in stages where construction authorization only occurs after Reclamation has determined that the project would contribute to water supply goals and help meet our mission of delivering water and power in the most efficient and environmentally responsible manner.

Question 3b. If changes along the line you suggest are made, is it realistic to expect that additional resources will be recommended to construct projects, or will the Administration still prefer for Reclamation to focus the program on something else like desalination research?

Answer. Reclamation continues to fund ongoing Title XVI construction projects. We are confident that with Title XVI reform, there should be a greater role for Reclamation to play in decisions about implementation of future projects, within the broader context of addressing the many competing goals and funding needs, even just within Reclamation and the Interior Department. We expect that in the future, Reclamation's focus will be on processes and decisions relating to implementation of Title XVI water reuse programs, and on other efforts to fund research in advanced water treatment technologies, including desalination.

Question 3c. Does Reclamation currently have explicit criteria by which it can measure the merit of Title XVI projects?

Answer. Since 1994, authorized construction projects have generally been initiated as a result of Congressional action. The principle exception to this occurred in FY 2000, when Reclamation evaluated and ranked unfunded authorized projects for the purpose of prioritizing available construction funding for four new starts. As stipulated in "Guidelines for Preparing, Reviewing, and Processing Water Reclamation and Reuse Project Proposals Under Title XVI of Public Law 102-575, as Amended," Reclamation based its prioritization criteria on specific language in the Title XVI statute and the perceived needs of the local communities. Since FY 2000, Reclamation's funding requests have been limited to those projects that have been included

in the President's budget request in prior years. Reclamation believes that the recent years of drought in the West and explosive population growth have changed the fundamental water supply situation, and that new criteria are needed to ensure Federal funding is directed to the greatest areas of need and in the most efficient manner possible.

Question 4. Your testimony indicates that there are some authorized projects that may no longer be being pursued by the project sponsors.

Can you identify these projects for the record?

Answer. Based on currently available information, we believe the following projects are not being pursued by the project sponsors:

San Joaquin Area Water Recycling and Reuse Project—The non-Federal project sponsor has placed the project on hold due to a change in demand for reclaimed water.

Central Valley Water Recycling Project, UT—The non-Federal project sponsor has elected to place this project on hold indefinitely.

City of West Jordan, UT, Water Reuse Project—The non-Federal project sponsor has elected to place this project on hold indefinitely.

Truckee Watershed Reclamation Project—This project has not received Federal funding or involvement. The project sponsor has never requested Reclamation's assistance in developing this project and no progress has occurred to date.

Question 5. What are some of the most significant technical or legal challenges facing water reuse projects? For example, do some projects have difficulty in securing state water use permits because of increased consumptive use?

Answer. There have been instances when water recycling projects have been limited in the amount of water that project sponsors can reuse. For example, when a wastewater treatment plant has been discharging to a stream or river for many years, a portion of those flows may be required to continue due to the history of prior use by downstream communities. Other legal demands for wastewater discharges can often limit reuse, including inter-agency compacts and environmental demands, such as meeting the needs of endangered species. Technical challenges facing water reuse projects are varied and range from issues of water quality, health, safety and public acceptance, to issues of treatment technologies, brine-management and concentrate disposal. Though these challenges may be formidable in certain cases, it has been shown that a well thought-out planning process can significantly reduce the obstacles to project implementation and result in a successful water recycling project.