



Water Reuse and the Title XVI Program: Legislative Issues

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Summary

Congress authorized the Department of the Interior (DOI) to undertake a program to provide federal financing for water reuse (i.e., planned beneficial use of treated wastewater and impaired surface and groundwater) with passage of the Reclamation Wastewater and Groundwater Studies Feasibility Act of 1992 (Title XVI of P.L. 102-575). The Department of the Interior's implementation of the program by the Bureau of Reclamation at times has been contentious. Many Members of Congress, particularly from water-scarce western states, have supported the program and specific projects. However, with a funding backlog of more than \$630 million to complete already authorized projects, several pending authorizations, and ongoing concerns about the appropriate federal role in funding Title XVI facilities, it is not clear what action the 111th Congress will take in its remaining days. Similarly, it is not clear what approach the 112th Congress will take toward the Title XVI program.

Approximately \$531 million has been appropriated for Title XVI projects in the West, mostly in California. Of the 53 authorized projects, 42 have received some appropriation. From FY2009 to FY2010, the number of projects that are either complete or have exhausted their authorized federal cost-share rose from 10 to 16. However, the rate of Title XVI project authorizations has outpaced annual appropriations. For example, recent stimulus funding combined with regular appropriations resulted in fewer "unfunded" projects on the books, but the overall funding backlog has grown to approximately \$630 million.

At issue for Congress in the short term is whether to authorize new projects and at what level to fund already authorized projects (e.g., H.R. 2442 and H.R. 2522). At issue for the longer term is whether legislative action and oversight is needed to address Title XVI implementation issues, and if so, how to change the program. The Department of the Interior has taken action in recent years to improve the program's implementation. To what degree these actions are consistent with congressional priorities for the program will significantly shape perspectives on whether the program warrants legislative attention in the 112th Congress. Other issues include the future of new project authorizations, given the backlog of authorized projects awaiting appropriations and competing budget priorities, and whether Congress should appropriate lump sum funding to be allocated to projects by the Administration under new funding criteria.

A challenge for Congress is that stakeholders' perspectives on how to manage and improve the program can be fundamentally different. Title XVI authorizations and appropriations have been pursued by many water utilities seeking access to federal funds, which can be leveraged to obtain additional financing. Project sponsors generally are seeking a more streamlined project development process and expanded program appropriations. The Administration appears to support a smaller, more focused program with long-term objectives tied to federal interests, as indicated by funding criteria released by the Administration in October 2010. Others fear the program will overwhelm Reclamation's budget and compete with the upkeep and new authorizations for traditional Reclamation projects.

Views on the Title XVI program and its future also vary based on perspectives on the proper federal role in water supply development, the appropriate priority for the program in the current federal and state fiscal environments, the history and mission of the program, and the urgency and need for investment and promotion of water reuse technologies. The justification for federal involvement in these projects, which expand municipal water supply, and the long-term goals and planning for the program have come under scrutiny and may be at issue in the 112th Congress.

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Reclamation's Water Reuse (Title XVI) Program

To address growing challenges in western water management, in 1992, Congress directed the Secretary of the Interior to establish a federal water reclamation, recycling, and reuse program to share project costs in the West (Title XVI of P.L. 102-575, as amended (43 U.S.C. §390h)). Commonly referred to as Title XVI, the program is administered by the Department of the Interior's (DOI's) Bureau of Reclamation and provides funding for projects in several western states and Hawaii. As reuse and desalination have become more cost-competitive and technically viable, interest in the program has increased. Program implementation has at times been contentious, with various stakeholders having widely different views of the program and its performance. DOI has taken action in recent years to improve program implementation.

At issue for Congress is the degree to which DOI actions are consistent with congressional priorities, whether legislative attention is needed to improve the program, and if so, how it should be changed. One question is whether to authorize additional Title XVI projects; several bills pending before the 111th Congress (e.g., H.R. 2442, H.R. 2522) would authorize additional Title XVI projects or amend existing project authorities. Another question is how to tackle the set of authorized activities: whether a funding priority system proposed by Reclamation should be used to allocate funding among authorized projects, whether there needs to be a statutorily based priority system, or whether the status quo of decision making during the annual appropriations process should be continued. The 111th Congress has not legislatively responded to Reclamation's funding criteria proposal, nor has legislation to change the overall program been introduced. No programmatic legislation has been enacted since amendments in 1996, although legislation in recent Congresses contemplated programmatic changes. Recent Congresses have also held several oversight hearings on the program, its projects, and their funding.

The rate of Title XVI project authorizations has outpaced annual appropriations. The program has a \$630 million "backlog" of authorized projects awaiting appropriations.¹ The Obama Administration has opposed the authorization of additional Title XVI projects, including projects with agency-approved feasibility studies, citing the outstanding authorized funding and oversubscription of the program.² At the same time, the Obama Administration has demonstrated support for the program. It broke with policies of the G. W. Bush Administration by declaring water reuse as an appropriate part of Reclamation's mission, and was supportive of Title XVI implementation under the American Recovery and Reinvestment Act of 2009 (P.L. 111-5).

The DOI has issued three documents to guide the program's implementation: (1) agency guidelines for preparing, reviewing, and processing Title XVI project proposals,³ (2) internal "Directives and Standards"⁴ to increase the consistency and effectiveness of the program by

¹This figure is based on maximum funding per project; it may overestimate the maximum federal contribution, particularly for small projects. (See source notes for **Table A-1** in the Appendix for more information.)

² Testimony of Kira Finkler, Deputy Commissioner for External and Intergovernmental Affairs, U.S. Bureau of Reclamation, before the Senate Committee on Energy and Natural Resources, Subcommittee on Water and Power, Tuesday, April 27, 2010, pp. 2 and 3. (Hereafter referred to as April 2010 Finkler testimony.)

³ U.S. Dept. of the Interior, Bureau of Reclamation, *Guidelines for Preparing, Reviewing, and Processing Water Reclamation and Reuse Project Proposals Under Title XVI of P.L. 102-575, as Amended* (Washington DC: Bureau of Reclamation, 1998). (Hereafter referred to as Reuse Guidelines.)

⁴ U.S. Dept. of the Interior, Bureau of Reclamation, "Directives and Standards for the Title XVI Program," <http://www.usbr.gov/recman/wtr/wtr11-01.pdf>. (Hereafter referred to as D&S.)

establishing feasibility study requirements for prospective Title XVI projects, and (3) funding criteria to prioritize project funding.⁵ The latter document was developed following legislative consideration of programmatic changes to the program, including streamlining the feasibility process and establishing project evaluation criteria.

This report presents a brief description of the Title XVI program, the current status of the program, and information on program funding and implementation. It also discusses Title XVI legislative and administrative issues. **Table A-1** in the Appendix provides details on the status of individual Title XVI projects, as well as additional program information.

Water Reuse, Reclamation, and Recycling—What Is the Difference?

For this report, “water reuse” is employed as a broad term because that is how it is commonly used in relation to Title XVI. Generally, however, the range of activities and terms are used more specifically.

- *Reuse* connotes planned beneficial use (e.g., landscape watering, agricultural irrigation, and industrial cooling) of treated municipal wastewater.
- *Reclamation* is treatment of wastewater or other impaired surface water (e.g., seawater) or groundwater (e.g., groundwater with high levels of contaminants, such as arsenic, or salts) to make it usable or reusable for non-potable or indirect potable use (e.g., potable use after storage and recovery, such as after groundwater recharge).
- *Recycling* connotes the capture of wastewater and its redirection back into the same water scheme, such as the multiple reuse of water in a manufacturing facility.

Title XVI supports what is generally considered water reuse and reclamation.

Title XVI Status: Accomplishments and Challenges

The Bureau of Reclamation’s water reuse program was first authorized in 1992 in Title XVI of P.L. 102-575, the Reclamation Wastewater and Groundwater Studies and Facilities Act. The act directs the Secretary to “investigate and identify” opportunities for water reclamation and reuse in the West and authorizes financial and technical support for the design and construction of demonstration and permanent facilities to reclaim and reuse wastewater or other impaired waters (including saline groundwater and seawater).⁶ It also authorizes research on technologies for treating these impaired waters. Title XVI assistance, to date, has been limited to projects in the 17 western states and Hawaii. Each permanent Title XVI project requires congressional authorization for construction. However, demonstration projects may be constructed under general authority provided in § 1605 of P.L. 102-575. The initial legislation authorized five individual projects, including one specifically identified demonstration project. Congress has authorized more than 50 permanent projects as of November 2010.

⁵ U.S. Dept. of the Interior, Bureau of Reclamation, *WaterSMART: Final Funding Criteria for the Title XVI Water Reclamation and Reuse Program*, Washington DC, October 2010, p. 1, http://www.usbr.gov/WaterSMART/docs/Title_XVI_Final_Criteria_Oct_2010.pdf. (Hereafter referred to as Funding Criteria.)

⁶ For more information about the evolution of this program from 2000-2006, see archived CRS Report RL33707, *The Title XVI Water Reuse Program: Implementation and Legislative Issues*, by (name redacted) and (name redacted).

Title XVI in a Nutshell

Authority. Title XVI of P.L. 102-575, as amended (43 U.S.C. § 390h).

Projects. Congress has authorized 53 Title XVI projects westwide. Water reclaimed may be used for municipal and industrial (M&I) water supply (non-potable or indirect potable uses), irrigation supply, groundwater recharge, fish and wildlife enhancement, or outdoor recreation.

Project Purposes. The act does not include a purposes section; however, the general purpose of Title XVI projects appears to be to supplement water supplies by reclaiming (including via desalination) of agricultural drainage water, wastewater, brackish surface and groundwater, and other sources of contaminated or low quality water. New funding criteria would focus funding on projects that would reduce, postpone, or eliminate development of new or expanded water supplies, reduce demand on existing federal water supply facilities, and reduce or eliminate the use of existing diversions from natural water courses, or withdrawals from aquifers.

Financing. Federal financing (i.e., de facto federal grants) is generally limited to 25% of total project costs. Federal financing for projects authorized after 1996 is limited to 25% of total project costs or a maximum of \$20 million.

Eligibility Requirements. Generally, construction of each Title XVI project must first be authorized by Congress. Unless specified by Congress, as is the case for Hawaii, Title XVI is limited to projects in the 17 western continental states. Projects may be permanent or for demonstration purposes. Authorized recipients of Title XVI funds include “legally organized non-federal entities” (e.g., municipalities or irrigation districts). Construction funding is generally limited to projects for which (1) an appraisal investigation and feasibility study have been completed and approved by the Secretary; (2) the Secretary has determined that the project sponsor is capable of funding the non-federal share of project costs; and (3) the local sponsor has entered into a cost-share agreement with Reclamation. In addition to water supply enhancement, funding criteria include priority points for projects or project phases closer to completion, as well as for projects providing certain benefits (e.g., environment and water quality, renewable energy, energy efficiency, and economic benefits). Projects serving economically disadvantaged communities and meeting obligations to tribes may also receive priority consideration.

Geographic Distribution of Projects

Figure 1 shows authorized Title XVI projects in the 17 traditional reclamation states.⁷ These projects are overlain on a “hot-spots” illustration, created by DOI to depict where water conflicts are especially prevalent in the western United States.⁸ To date, Title XVI projects have been authorized in eight traditional reclamation states: Arizona, California, Nevada, New Mexico, Oregon, Texas, Utah, and Washington. Three projects have also been authorized in Hawaii. As seen from the overlay, many of the authorized Title XVI projects are located in areas prone to water conflict. However, not all such areas have Title XVI projects. **Figure 2** lists projects depicted in **Figure 1**.

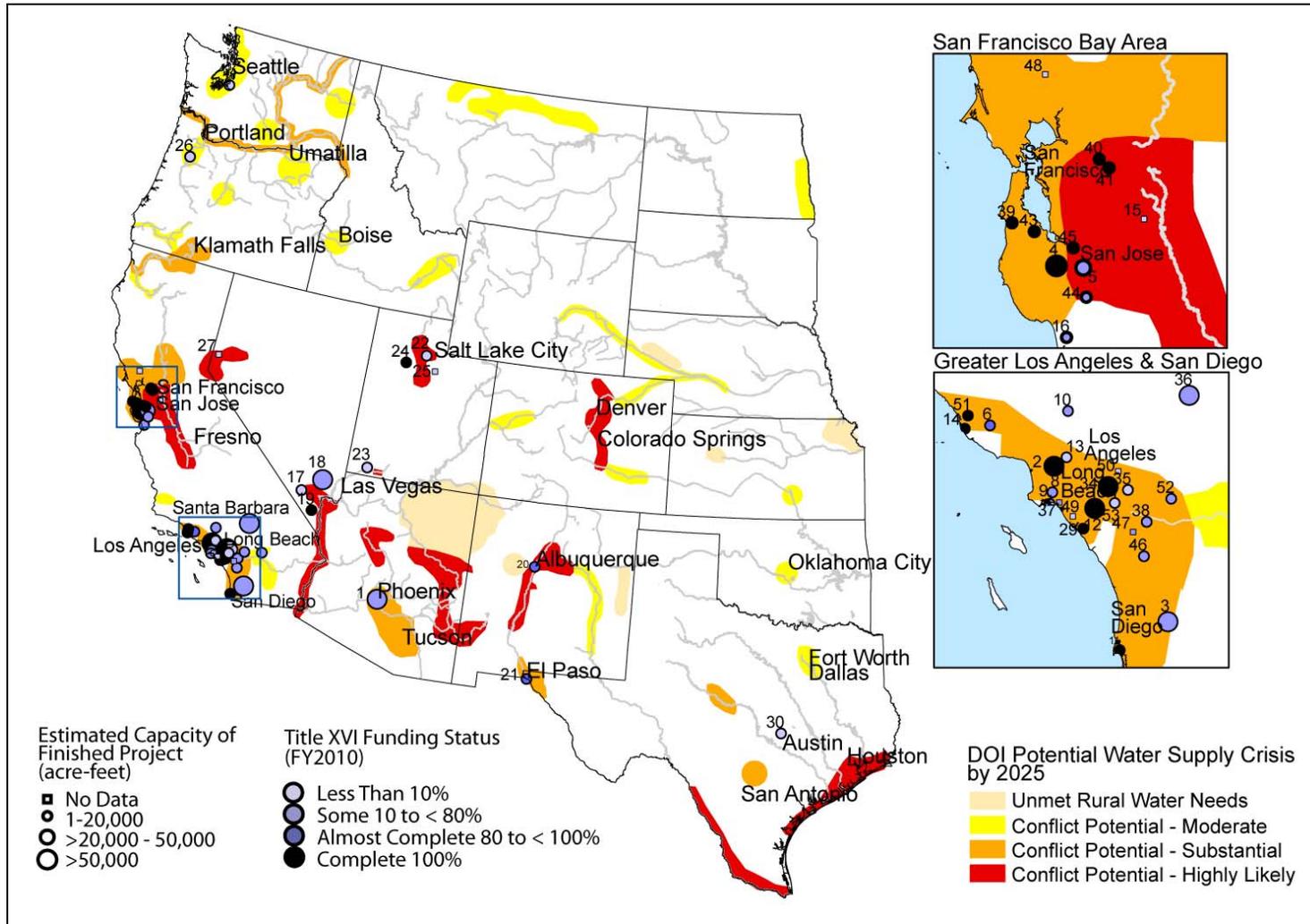
As shown in **Figure 1**, more than two-thirds of the 53 authorized projects are located in California. This concentration reflects the early focus of the program on the Southern California and Colorado River hydrologic region in the original authorization as well as interest in the program in the California. The states with Title XVI projects represent many of the states especially active in applying reuse technologies and practices, but not all; two active reuse states, Florida and Colorado, do not have Title XVI projects.⁹

⁷ Arizona, California, Colorado, Idaho, Kansas, Montana, New Mexico, Nebraska, Nevada, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Washington, Wyoming, and Utah.

⁸ The DOI’s hot spot illustration, titled “Potential Water Supply Crises by 2025,” without the overlay is available at <http://www.doi.gov/water2025/images/supply-hi.jpg>.

⁹ Florida is not eligible for Title XVI support. Florida is not designated as a “reclamation state,” as defined by the Reclamation Act of 1902, as amended (43 U.S.C. §391), nor has Congress authorized specific Title XVI activities in the state, as it has for Hawaii.

Figure I. Title XVI Projects Relative to Areas of Potential Water Conflict



Source: CRS, using data from U.S. Dept. of the Interior, Bureau of Reclamation, "Potential Water Supply Crisis by 2025 Illustration," May 2003 (water crisis illustration), and "Title XVI Water Reclamation and Reuse Program" table May 25, 2010.

Notes: Projects authorized in Hawaii are not shown.

Figure 2. Title XVI Projects Depicted on DOI Hot Spots Illustration

(as of May 25, 2010)

1	Phoenix Metropolitan Water Reuse Project	29	Irvine Ranch Water District (Irvine Basin Project)
2	Los Angeles Area Water Supply	30	Williamson County, TX
3	San Diego Area Water	31	Kalaeloa Sewater Desalination Project
4	San Gabriel Basin Project	32	Lahaina Water Recycling Project #3
5	San Jose Area, CA	33	Kealakehe Water Recycling Project
6	Calleguas Municipal Water District Recycling Plant	34	Inland Empire Regional Water Recycling Project
7	Hi-Desert Water District	35	Cucamonga Valley Water Recycling Project, CA
8	Long Beach Area Water Reclamation Project	36	(Upper Mojave) S. California Desert Region
9	Long Beach Desal. Demo.	37	LA Basin Augmentation Demo
10	Mission Basin Desal.	38	Eastern Municipal Water District
11	N. San Diego County Area, CA	39	Mountain View, Moffett Area
12	Orange County Regional Water Reclamation	40	Pittsburg Recycled Water Project
13	City of Pasadena	41	Antioch Recycled Water Project
14	Port Hueneme Desal., CA [2]	42	North Coast County Water District Recycled Water Project
15	San Joaquin Area Water Recycling and Reuse Project	43	Redwood City Recycled Water Project
16	Watsonville Area Water Recycling	44	South Santa Clara County Recycled Water Project
17	Las Vegas Area Shallow Aquifer Desal., NV	45	South Bay Advanced Recycled Water Treatment Facility
18	North Las Vegas Water Reuse	46	Rancho California Water District Project
19	Southern Nevada	47	Elsinore Valley Municipal Water District Projects
20	Albuquerque Metro. Area Water & Reclamation Reuse	48	North Bay Water Reuse Program
21	El Paso, TX	49	Prado Basin Natural Treatment System Project
22	Central Valley Water Recycling Project, UT	50	Lower Chino Dairy Area Desal Demo & Reclamation
23	St. George Area Water Recycling Project	51	Oxnard Water Reclamation Reuse & Treatment
24	City of Tooele, UT	52	Yucaipa Valley Regional Water Supply Renewal Project
25	City of West Jordan Water Reuse Project, UT	53	City of Corona Water Recycling and Reuse Project
26	Willow Lake Natural Trmt, OR		
27	Truckee Watershed Reclamation Project		
28	Lakehaven Water Reclamation and Reuse Project, WA		

Source: U.S. Dept. of the Interior, Bureau of Reclamation, *Bureau of Reclamation, Title XVI Water Reclamation and Reuse Program*, table dated May 25, 2010.

A Growing Program Backlog

A total of 53 projects have been authorized as of November 5, 2010. Total authorized federal funding for these projects is estimated to be nearly \$1.2 billion.¹⁰ The backlog of authorized projects in 2006 was \$354 million; today it is approximately \$630 million. Even with stimulus spending discussed below, the Title XVI backlog has grown with the authorization of several new projects in the 111th Congress. (See **Table A-1** in the Appendix for a listing of projects and funding status.)

Congress to date has funded 42 of the 53 authorized Title XVI projects. That is double the number that had been funded as of FY2006, and leaves 11 completely unfunded. Reclamation has completed its funding obligations for 16 projects—up from three completed projects at the end of FY2005.¹¹ Title XVI federal funding obligations are nearly complete (80% or more) for three more projects, for a total of 19 projects for which federal funding is complete or nearly complete—up from six projects in FY2006. As shown in **Figure 1**, nearly 80% of the 53 Title XVI projects have received some Title XVI funding. These projects are depicted in **Figure 1** by the darkest blue circles (completed projects) and the grayish blue circles (other projects receiving some Title XVI funding). The light blue circles represent authorized projects that had not received Title XVI funding by the end of FY2010. Title XVI funding via the annual Energy and Water Development Appropriations bill for FY2010 is \$13.6 million. This appropriation is lower than in recent years, presumably due to the large amount of ARRA funding that was to be obligated in FY2010.

Reclamation estimates the amount of water actually produced by operating Title XVI projects in FY2009 was 245,111 acre-feet.¹² Reclamation estimated a total maximum design capacity of 747,558 acre-feet of water annually for all Title XVI authorized projects as of 2006.¹³ Since that time several more projects have been added; however, a revised total capacity estimate was not available for this report.

Because authorizations of projects have consistently outpaced project funding, the Title XVI backlog continues to grow. For example, as of May 25, 2010, total Title XVI funding had reached an estimated \$531 million, including \$135 million in ARRA funding. ARRA funds significantly reduced the number of unfunded projects and contributed to the completion of the federal share of multiple projects; however, outstanding authorizations grew to \$630 million.

¹⁰ U.S. Dept. of the Interior, Bureau of Reclamation, table entitled: *Bureau of Reclamation, Title XVI Water Reclamation and Reuse Program*, dated May 25, 2010. Table provided to CRS July 26, 2010. (Hereafter referred to as “2010 Reclamation Reuse Table.”) Reclamation is in the process of surveying project sponsors to clarify project status, including total expected project costs. Several of the authorized projects are known to be small and are unlikely to qualify for the \$20 million federal funding cap. Thus, the actual backlog in federal funding is likely to be less than \$630 million found in the 2010 Reclamation Reuse Table. It is expected a new estimate will be available early in 2011.

¹¹ The three projects are (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. The demonstration phase of a fourth project, Willow Creek (OR), is also complete; however, it was not included in the chart provided to CRS from Reclamation. (See **Appendix** for details on the 16 projects for which the federal share of funding is complete.)

¹² 2010 Reclamation Reuse Table. An acre-foot is the amount of water that it takes to flood an acre of land to a depth of one foot (385,851 gallons).

¹³ 2006 Reclamation Reuse Chart. CRS estimates a total capacity of nearly 800,000 acre-feet of water annually from projects that have received Title XVI funding *and* those projects for which CRS was able to acquire data that have not received Title XVI funding (see **Table A-1** for more information).

Title XVI Issues for Congress

Congress continues to authorize Title XVI projects and has done so more frequently in recent years. Some Members of Congress continue to voice concern over the program's goals and implementation, including costs. A frequent concern is how much the program costs and its impact on available funding for more traditional Bureau of Reclamation activities and aging infrastructure. Some have also questioned the cost of water produced and whether the program is cost-effective. In general, Title XVI issues fall into two categories: (1) issues specific to the program's implementation and structure (legislatively and administratively), and (2) broad policy issues.

Reclamation has developed more detailed evaluation criteria over the years, such as Reclamation guidelines for project evaluation, Directives and Standards (D&S) for the Title XVI program, and most recently, funding criteria. However, none of these documents have been promulgated as official rules or regulations; nor do they appear to be binding. For example, the evaluation procedures do not include criteria for competitively ranking projects or selecting projects. Both the D&S and guidelines provide more explicit evaluation and feasibility criteria than are provided in statute; however, the criteria are referred to as factors to be "considered" and are not ranking or decision-making criteria. With the Administration's FY2011 budget request for a lump sum of \$20 million to be allocated using proposed funding criteria, the Administration seems to be trying to accomplish administratively what some programs (e.g., EPA water quality programs) have in statute.

Other overarching issues include the scope of the program and the degree to which project assistance should be targeted to certain types of projects or broadened to include more projects in more areas. Different stakeholder views on these overarching issues will ultimately affect specific decisions to address broad policy issues, as well as program criteria, project evaluation, and funding issues discussed below.

Managing Title XVI as a Program

While between \$1 million and \$3 million is devoted to Title XVI program administration annually, there are no programmatic funds to be allocated to each project. Instead, the bulk of Title XVI funding is allocated annually to each project by Congress via a separate line item in Reclamation's Water and Related Resources budget account. This process is consistent with most water resource project funding (e.g., Corps of Engineers and traditional Reclamation project funding); however as discussed below, it is markedly different from other federally supported water treatment programs. In recent years such line item funding has come under fire and become part of the "earmark" debate before Congress.¹⁴ Under the present system, Title XVI projects are listed as "earmarks," which adds an element of controversy to them.

In response to interest in changing the current budgeting practices and to concerns over managing the demand on limited Title XVI funding, Reclamation published criteria for prioritizing projects for funding (see text box below for more details on the proposal). The Administration's FY2011

¹⁴ In 2004, as part of the OMB review process, the Administration specifically identified the Title XVI program as an "earmark-driven" program. Project proponents argued at the time that these projects had been authorized by Congress and that the Administration was thwarting congressional priorities by refusing to request funds for them.

budget request included a lump sum of \$20 million that would be used to restructure Title XVI funding to be more similar to other federal programs. The Administration is proposing that Congress provide it the lump sum for new Title XVI construction activities and that Reclamation would use the criteria to prioritize project funding.

Funding for Title XVI has been somewhat controversial over the years, largely because of differences in congressional and administrative priorities. For example, Reclamation has consistently limited its budget requests to projects that have received prior federal funding, while Congress has typically provided funding for a broader set of projects. At the same time, some Members of Congress have repeatedly questioned program costs.

Administration Proposal to Prioritize Title XVI Funding

For FY2011, the Title XVI budget request is \$29.0 million. Roughly \$9.0 million is requested for six specific projects,¹⁵ while \$20 million is requested for Reclamation's allocation to specific projects "using criteria focused on reducing existing diversions or addressing specific water supply issues in a cost-effective manner" and meeting other priorities spelled out in Reclamation's proposed funding criteria.

Congress typically includes funding for more projects than requested by the Administration. However, it is unclear whether appropriators will grant the lump sum program funding to be allocated by Reclamation or whether the authorizing committees will sanction the proposal.

Issues Raised by the Proposal

These criteria would push Title XVI toward being managed as a program, instead of a set of individually authorized and funded projects. Other federal water assistance programs, such as state revolving loan funds for wastewater and drinking water administered by the U.S. Environmental Protection Agency (EPA) and rural water and wastewater disposal programs

Reclamation's Funding Criteria

Eligible Projects. Projects eligible for the funding must meet the following criteria:

- Authorized by Congress
- Construction can begin in FY2011 and be completed within 24 months or construction activities for authorized projects have been completed previously without federal funding
- All pre-construction requirements have been met

Receipt of Funds. Construction funds would only be allocated to projects that have met all Title XVI pre-construction requirements, including a completed and successful Title XVI feasibility study, compliance with NEPA and other environmental reviews, proof of sponsor's financial capability, and an active cooperative agreement for financial assistance.

Ranking Criteria. Projects would be ranked using points, based on the extent to which each project is expected to perform under the following seven different criteria (shown with their maximum points):

- Water supply - 55 points
- Project completion - 20 points
- Readiness to Proceed - 10 points
- Environment and water quality - 30 points
- Renewable energy and energy efficiency - 25 points
- Economics (economic benefits and cost effectiveness) - 25 points
- Legal and contractual water supply obligations - 10 points
- Benefits to Rural or Economically Disadvantaged Communities - 10 points
- Watershed perspective - 10 points

¹⁵ The six projects in the FY2011 budget request are (1) Calleguas (CA); (2) Long Beach Area (CA); (3) Long Beach Desalinization Project; (4) Phoenix Metropolitan (AZ); (5) San Diego Area (CA); (6) San Jose (CA).

administered by the U.S. Department of Agriculture (USDA), have criteria, regulations, and competitive processes for selecting projects and allocating funding. For many of these programs, the formulae and criteria are set out in statute. Congress appropriates money annually for these programs; however, except for some congressionally designated projects, project funding is not regularly appropriated for each project, as it is for Reclamation and Corps projects. Instead, depending on the program, states or federal agencies select projects based on eligibility and/or selection criteria, and then allocate program funding based on these criteria. (For more information on other federal water programs, see CRS Report RL30478, *Federally Supported Water Supply and Wastewater Treatment Programs*, coordinated by (name redacted).)

The proposed criteria may assist in managing nonfederal project sponsors' expectations for funding, improve transparency of how projects are selected for funding, and bring the Title XVI program more in line with other federal programs. Criteria would potentially reduce the active role of Congress in annually deciding the level of appropriations for each authorized project and potentially minimize concerns over "earmarks." While the approach may be a priority for OMB and the Administration, Congress may not accept leaving prioritization of project funding to the Administration, especially without statutorily directed project evaluation, funding, or ranking criteria.

The Administration's proposal raises several questions:

- *Input and Process*: Is new or revised program guidance needed, via a formal rule-making process, congressional action, or both? Or, will the Administration's new funding criteria, combined with D&S and Reclamation guidelines suffice for project evaluation and funding prioritization?
- *Equity*: How should different phases of projects be funded? Should funding of a new phase of an existing project have priority over funding of a new project? For cost-share purposes, when does one phase end and another begin? Is it fair or desirable that some projects get multiple allocations of federal funding by staging construction in phases? Should projects that have successfully completed projects without Title XVI assistance still be eligible for the authorized federal cost-share (as indicated in the proposal)?

Basis for Title XVI Authorization

Another issue is the basis for congressional authorizations of a Title XVI project. Several authorization bills introduced in the 111th Congress are for projects that do not have completed feasibility studies or completed environmental reviews.¹⁶ The Obama Administration, like its predecessor, has consistently testified in opposition to authorization of new projects that have not met these basic tests. For example, in April 2010 the Administration testified against S. 1138, the Bay Area Regional Water Recycling Program (BARWRP) Expansion Act, stating that the projects would compete for funding with other Reclamation program needs, including existing Title XVI

¹⁶ Sections 1603 and 1604 of Title XVI establish a project evaluation process, which directs the Secretary to undertake appraisal investigations before preparing feasibility studies on potential reuse measures and lists several "considerations" that must be addressed. However, the act does not include clear ranking or decision-making criteria, such as listing criteria that feasible projects must meet for a project to be recommended for construction authorization.

projects and noted that several of the BARWRP projects lacked approved feasibility studies and environmental reviews.¹⁷

A question for Congress, as a policy matter, is whether to move forward project authorizations that do not have completed feasibility studies and environmental reviews. In the past, project sponsors argued that such prior authorization was necessary because the Administration was not acting on pending feasibility studies. It is not clear if that continues to be an issue. For example, the ARRA funding was only available for projects that could be implemented quickly—presumably projects that had feasibility and environmental reviews. Regardless, historically, the House Natural Resources Committee and Senate Energy and Natural Resources Committee rarely authorized traditional water resource projects prior to completed feasibility studies.

These issues also raise several questions:

- *Effect of Administration efforts:* Has Reclamation's implementation of D&S reduced the delay in approval of project feasibility studies? Do the guidelines and D&S provide decision makers with adequate knowledge about the project? Are these measures too cumbersome for project sponsors? What is the appropriate balance between sponsor's desire for a streamlined process and protection of taxpayer interests in ensuring viable and cost-effective projects?
- *Authorization process:* Is authorization prior to feasibility study completion a problem (e.g., has it resulted in authorized projects that are infeasible, not cost-effective, or unproductive)? If so, would new or revised guidance forestall the issue of projects being authorized by Congress prior to undergoing the Title XVI project evaluation process? What is the appropriate balance between easing burdens on congressional committees for project evaluation and delegating project selection solely to the executive branch?

Federal Role in Reuse

A broad policy issue related to Title XVI, but not frequently discussed in recent years, is the question of the appropriate federal role in water supply development, particularly for municipal and industrial (M&I) purposes, and particularly the role of Reclamation in this regard.¹⁸ Because Title XVI projects are largely municipal water development projects and the most recent articulated congressional policy on these types of projects is half a century old (under the Water Supply Act of 1958),¹⁹ debate remains in some circles over whether, and if so how, the federal government should fund these activities.

¹⁷ April 2010 Finkler testimony.

¹⁸ The issue of the federal role and the dominant role of congressional direction in the program was raised in several reports. The Council on Environmental Quality, *Federal Agency Water Reuse Programs, A Report to Congress*, white paper published October 3, 2005, (p. 3) reinforced earlier findings of the Office of Management and Budget (OMB) regarding the scope of reclamation and reuse activities of federal agencies. 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. Hereafter referred to as OMB PART (Program Assessment and Rating Tool) review. 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.

¹⁹ Water Supply Act of 1958, 72 Stat. 320; 43 U.S.C. §390b, note.

Congress has repeatedly continued to authorize and fund these projects, seemingly making the issue moot. Yet, 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 water supply, flood damage reduction, and navigation; or supporting wastewater and drinking water treatment investments through revolving loan programs), the federal role in water supply *development* for M&I largely has been secondary to the primary role of state and local governments. Water supply development for M&I generally has 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 1958.²⁰

While as a general matter, local, regional, or state agencies have been responsible for water supply development and wary of federal involvement in allocating water, Congress occasionally has deviated from this policy. Examples of federal funding via grants and loans for M&I infrastructure often are tied to meeting federal water quality standards or broad social purposes, such as assisting rural or economically distressed areas or protecting public health and safety. In the case of Title XVI, an original rationale for the program was to help Southern California reduce its reliance on Colorado River water.²¹

Moreover, over the last two decades, Congress has increasingly, and incrementally, authorized DOI participation in water supply projects for small and rural communities. Although Congress has increasingly passed bills for site-specific projects and established the Title XVI program, it has not re-articulated long-standing congressional policy regarding the federal role in M&I water supply development since the 1958 Water Supply Act. Related to this policy issue is the question of what *is* a Title XVI project? For example, should the program be used to fund projects for which the primary purpose is to meet local obligations to reduce point- or non-point source pollution under the federal Clean Water Act, for which federal funding already exists?

Increasing demand for already scarce water supplies, including water to support new energy development, in many areas of the West is contributing to water management conflicts. For example, several of the country's fastest-growing states are among the 17 western "reclamation" states — states where the Bureau of Reclamation typically operates, as defined in the 1902 Reclamation Act.

Pressures to reconsider federal support for water supply projects is mounting. The nation is experiencing increased local pressure on and conflicts over existing water supplies. Although the specifics vary by location, most challenges to existing water management practices are shaped by: (1) demand factors, such as growing population, instream species and ecosystem needs, agricultural water demand, energy needs, water pricing, and changed public interest (such as increased interest in water-based recreation and scenic amenities); and (2) supply factors, such as water source contamination, environmental regulation, aging infrastructure, and long-term natural variations or other changes in the hydrologic cycle. These factors, coupled with drought

²⁰ "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).

²¹ U.S. Department of the Interior, *Interior Secretary Lujan Announces Comprehensive Water Reuse Initiative for Southern California*, news release, Office of the Secretary, Aug. 5, 1991.

conditions and climate change concerns in many areas and the current fiscal climates in many states, have fostered interest in new water supply development, supply augmentation, and diversification and security of water supplies.

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, Administration, and traditional Reclamation stakeholder concerns over water reuse as a draw on limited federal water resources funds.

Federal Support for Reuse: Beyond Title XVI

Reclamation's Title XVI program is the only *active* federal program providing localities with financial and technical assistance for the development and construction of water reclamation and reuse facilities. However, other federal agencies employ water reuse, recycling, and reclamation technologies to achieve conservation and other program objectives. For example, both the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency (EPA) have limited authorities to provide assistance to local entities for recycling projects (e.g., specific provisions for the Corps Water Resources Development Acts in 1992, 1999, 2000, and 2007; and general Clean Water Act water treatment and wastewater authorities); however, neither has an established, regularly funded program dedicated to such activities as discussed below.

Army Corps of Engineers

Individually-authorized Corps reuse projects may receive appropriations through annual Energy and Water Development Appropriation Acts; most of these authorizations are classified as "environmental infrastructure" by the Corps. In all, it appears \$150 million in assistance has been authorized for Corps water reuse activities, with at least \$65 million appropriated as of FY2010. For more on Corps environmental infrastructure, which encompasses most Corps municipal water and wastewater including water reuse activities, see CRS Report RL30478, *Federally Supported Water Supply and Wastewater Treatment Programs*.

Environmental Protection Agency

As referenced above, water reuse also falls within larger EPA program areas of water treatment, wastewater management, or water resources management (33 U.S.C. §1376). Funding for water reuse projects may be accomplished via Clean Water Act and Safe Drinking Water Act State Revolving Fund (SRF) programs (33 U.S.C. §1381 and 42 U.S.C. 300f-300j, respectively), but reuse purposes compete with local needs to fund other more traditional types of water treatment projects and EPA does not specifically track state and local funding of reuse and recycling projects with SRF monies. Although funds are not specifically authorized by Congress or targeted by EPA for reuse purposes, Congress periodically directs funding for specific reuse projects. For example, Congress provided \$3.8 million in directed spending for reuse projects in FY2010, but none in FY2009. ARRA required states to use at least 20% of ARRA funds for so-called "green infrastructure projects," which included four categories: energy efficiency, water efficiency, green infrastructure, and environmental innovations. According to EPA, states used a total of \$154 million for water efficiency projects, some of which included dimensions involving reuse (e.g., conveyance upgrades for reuse facilities); however, with currently available data, it is not possible to identify what portion of the \$154 million was used specifically for reuse projects. Congress also had authorized the EPA to undertake a pilot program for water recycling under the 1996 Alternative Water Sources Act (Title VI of P.L. 106-457); however, the program was never funded and its authority expired in 2004.

Next Steps and Remaining Issues

Under the status quo, the prospect for the Title XVI program is a growing list of authorized projects competing for limited appropriations and Administration support. The 111th Congress thus far has not addressed Title XVI program management via legislation. Instead, legislative activity has been limited to individual project authorizations and oversight.

If Congress were to consider programmatic changes, it would face several broad questions in addition to those already raised, including:

- How *urgent* is the problem of water scarcity in West? If urgent, what is the federal interest in the problem? Is funding Title XVI projects an efficient or appropriate response?
- How *important* is the problem and what is the *right approach*? While the problem may be acute in some areas, it may be less so in others—should an adjustment to the program acknowledge such differences and focus federal resources in certain areas? Or is that already happening as a function of which local governments and sponsors are seeking legislation?
- What are other options to address the problem and are they more cost-effective?
- Should it be a federal responsibility to promote water reuse in the West? If so, why, or why not nationwide? How does reuse contribute to national well-being? How does promoting or facilitating reuse in the West facilitate other federal goals, objectives, and legal obligations (e.g., tribal trust obligations or protection of threatened and endangered species)?
- Why are some states already embracing the reuse program, but not others? For example, are there important differences in state water laws that make reclamation and reuse feasible in some areas but not others? Is it access to capital, or other reasons?

Congress also would face numerous questions related to the specifics of the programmatic changes:

- Should Congress continue to subsidize water reuse in the West through this de facto grant process, or are there other priorities for limited federal funding? Is there a more efficient way to encourage reuse? Should Title XVI funding be subject to Reclamation reimbursement policies for the federal cost-share, as is generally the case for more traditional Reclamation projects?²²
- How does, or could, the Title XVI program mesh with other federal activities (e.g., Interior’s Water Smart grant initiative or water reuse and storage activities under CALFED or the California water plan)?
- Should the program be tied to alleviating demand or reducing existing diversions where endangered species or other fish and wildlife or water quality concerns are at issue?
- Should reuse be used to help communities “drought-proof” their supplies, or to slow pressure on agricultural water supplies, by possibly slowing conversion of “agriculture-to-urban” water transfers?
- Will promoting water reclamation and reuse simply encourage more growth in already water scarce areas? Will growth or development come at the expense of

²² Some water users do not repay the full cost of the federal investment if they do not have an “ability to pay,” as determined by Reclamation. Also, although project construction costs are generally reimbursed for water supply projects, irrigation water users do not pay interest on funds provided by the federal government for construction (M&I water users do pay interest), resulting in an inherent, significant subsidy for irrigation projects.

federal investment in other economically depressed areas with plentiful water resources, or in other projects that might produce more water?

These questions are just a few that arise when discussing the future of Title XVI. Reclamation's new funding criteria and other programmatic actions attempt to answer some of these questions; whether Congress agrees with Reclamation's approach and appropriates the lump sum funding for the Administration to allocate has yet to be decided.

Growing demands on water resources in the West and elsewhere make it likely that interest in federal assistance for water reuse projects will continue. Depending on perceptions of problems with the Title XVI program, different solutions to resolving program issues will be sought. Different stakeholders will have different opinions on the magnitude, importance, and scope of the broad policy, program criteria, project evaluation, and funding issues identified in this report. Resolution of Title XVI issues will depend on many factors, including to what degree congressional and Administration priorities for the program can be articulated and balanced.

Appendix. Title XVI Projects

Title XVI has been amended multiple times since 1992, resulting in a total of 53 authorized projects. (See **Table A-1**.)

Active Projects

As noted earlier, Title XVI funding obligations for 16 projects are complete, and nearly complete for 3 additional projects. Title XVI projects were yielding an estimated 245,111 acre-feet of water annually as of FY2009²³ – double the production of 121,678 acre-feet annually as of September 20, 2005.²⁴ Because water yield figures are based on total design capacity, actual water yield at full build out will likely be slightly less than depicted in the last column of **Table A-1**.

Unfunded Projects

Eleven projects have not received funding to date and appear to be inactive; however, to clarify this situation, Reclamation is surveying sponsors of authorized projects to determine the status of each project. Results from the survey and an analysis of new data are expected in early 2011. Projects unfunded by Reclamation are shown in bold in **Table A-1**. The other Title XVI projects are considered active.

The eleven projects that have not received funding from Reclamation include at least one project that has received other federal funding, including funding from EPA and the Bureau of Indian Affairs. It is not clear how many projects may ultimately seek multiple sources of federal funding or already have done so.

Title XVI Federal Contribution

Title XVI projects authorized prior to 1996 ranged in total costs from \$152 million (\$38 million for Reclamation's share), to \$690 million (\$172 million for Reclamation's share), with 25% of the total project costs eligible for Title XVI funding. In 1996, the program's authorization was amended to limit the federal share to no more than \$20 million per project. The three costliest Title XVI projects were authorized in 1992, before federal contributions were capped at \$20 million. Post-1996 projects have been smaller in scale, ranging from \$700,000 for Reclamation's share to the authorized federal cost-share cap of \$20 million.²⁵

²³ 2010 Reclamation Reuse Table.

²⁴ 2006 Reclamation Reuse Chart.

²⁵ 2010 Reclamation Reuse Table.

Table A-I. Title XVI Projects by State: Federal Authorization, Funding, and Quantity of Reclaimed Water

Project Name and Authorization (Public Law Number)	Estimated Authorized Federal Title XVI Contribution ^a (\$ in thousands)	Title XVI Funding FY1994-FY2010, including ARRA (\$ in thousands)	Title XVI Funding as % of Max. Authorized Federal Contribution	Reclaimed Water (acre-feet) (N/A=not available) ²⁶	
				In FY2009	Project Capacity (est. 2006)
Phoenix Metropolitan Water Reclamation and Reuse, AZ	\$20,000	2,221	11.1%	N/A	100,000
<i>Subtotal Arizona</i>	<i>\$20,000</i>	<i>2,221</i>	<i>N/A</i>	<i>N/A</i>	<i>100,000</i>
Bay Area Regional Water Recycling Projects					
Mountain View, Moffett Area	\$5,000	5,000	100%	0	N/A
Pittsburg Recycled Water Project	\$1,750	1,750	100%	0	N/A
Antioch Recycled Water Project	\$2,250	2,250	100%	0	N/A
North Coast County Water District Recycled Water Project	\$2,500	2,500	100%	0	N/A
Redwood City Recycled Water Project	\$1,100	1,100	100%	0	N/A
South Santa Clara County Recycled Water Project	\$7,000	4,227	60%	0	N/A
South Bay Advanced Recycled Water Treatment Facility	\$8,250	8,250	100%	0	N/A
<i>Subtotal Bay Area Regional Water Recycling Projects</i>	<i>\$27,850</i>	<i>25,077</i>	<i>N/A</i>	<i>0</i>	<i>N/A</i>
Calleguas Municipal Water District Recycling, CA	20,000	17,149	86%	8,057	10,000
City of Corona Water Recycling and Reuse Project	20,000	500	3%	0	N/A
City of Pasadena	20,000 ^b	140 ^c	1%	0	2,015
Cucamonga Valley Water Recycling Project, CA	10,000	0	0%	0	N/A
Eastern Municipal Water District	12,000	9,462	79%	0	N/A

²⁶ Data on the amount of water to be reclaimed is based on Reclamation's 2006 reuse chart, and in some cases updated by CRS based on legislation; however, data on water to be reclaimed is not up to date for all projects, especially those recently funded via ARRA.

Project Name and Authorization (Public Law Number)	Estimated Authorized Federal Title XVI Contribution ^a (\$ in thousands)	Title XVI Funding FY1994-FY2010, including ARRA (\$ in thousands)	Title XVI Funding as % of Max. Authorized Federal Contribution	Reclaimed Water (acre-feet) (N/A=not available) ²⁶	
				In FY2009	Project Capacity (est. 2006)
Elsinore Valley Municipal Water District Projects	12,500	2,100	17%	0	N/A
High Desert Wastewater Collection and Reuse (Yucca Valley, CA)	20,000	2,497	12.5%	0	1,100-5,500
Irvine Basin Project, CA	20,000	20,000	100%	2,850	4,000
Inland Empire Regional Water Recycling Project	20,000	20,000	100%	19,644	N/A
LA Basin Augmentation Demo	700	492	70%	0	N/A
Long Beach Area Water Reclamation, CA	20,000	12,041	60%	6,172	18,000
Long Beach Desalination Demo, CA	20,000	11,711	59%	0	8,960
Los Angeles Area Water Reclamation and Reuse, CA	69,970	69,970	100%	35,189	102,000
Lower Chino Dairy Area Desalination Demo & Reclamation	26,000	0	0%	0	N/A
Mission Basin Brackish Groundwater Desalination Demo	20,000	2,553	12.8%	2,364	3,360
North Bay Water Reuse Program	25,000	9,105 ^d	36%	0	N/A
North San Diego County Water Recycling, CA	20,000	20,000	100%	6,858	13,532
Orange County Regional Water Reclamation, CA	20,000	20,000	100%	59,267	72,000
Oxnard Water Reclamation Reuse & Treatment	20,000	20,000	100%	0	N/A
Prado Basin Natural Treatment System Project	10,000	0	0%	N/A	N/A
Port Hueneme Brackish Water, CA	4,000	4,000	100%	4,926	N/A
Rancho California Water District Project	20,000	6,429	32%	0	N/A
San Diego Area Water Reclamation, CA	172,590	95,369	55%	27,000	80,880

Project Name and Authorization (Public Law Number)	Estimated Authorized Federal Title XVI Contribution ^a (\$ in thousands)	Title XVI Funding FY1994-FY2010, including ARRA (\$ in thousands)	Title XVI Funding as % of Max. Authorized Federal Contribution	Reclaimed Water (acre-feet) (N/A=not available) ²⁶	
				In FY2009	Project Capacity (est. 2006)
San Gabriel Basin, CA	38,090	44,590	100%	46,300	75,580
San Joaquin Area Water Reuse and Recycling, City of Tracy, CA²⁷	N/A	0	0%	0	0
San Jose Area Water Reclamation & Reuse, CA	109,959	38,310	35%	10,000	36,000
Watsonville Area Water Recycling, CA	17,975	6,048	34%	0	4,000
(Upper Mojave) S. California Desert Region	20,000	13,623	68%	0	N/A
Yucaipa Valley Regional Water Supply Renewal Project	20,000	2,287	11%	0	N/A
<i>Subtotal South of Bay-Area California</i>	<i>\$835,284</i>	<i>\$441,049</i>	<i>N/A</i>	<i>228,627</i>	<i>433,812</i>
<i>Subtotal ALL California</i>	<i>\$863,134</i>	<i>\$466,127</i>	<i>N/A</i>	<i>228,627</i>	<i>433,812</i>
Kalaeloa Desal, HI	20,000	0	0%	N/A	N/A
Kealakehe Recycling, HI	20,000	0	0%	N/A	N/A
Lahaina Recycling, HI	20,000	12	0.1%	N/A	N/A
<i>Subtotal Hawaii</i>	<i>60,000</i>	<i>12</i>		<i>N/A</i>	<i>N/A</i>
Las Vegas Shallow Aquifer Desalination R&D, NV	20,000	499	3%	0	20,000
North Las Vegas Water Reuse, NV	20,000	10,882	54%	0	72,810
Southern Nevada Water Recycling, NV	20,000	20,000	100%	10,984	113,000
Truckee Watershed Reclamation Project	20,000	0	0%	0	N/A
<i>Subtotal Nevada</i>	<i>\$80,000</i>	<i>31,382</i>		<i>10,984</i>	<i>205,810</i>
Albuquerque Metropolitan WRRP, NM	20,000	18,130	91%	4,000	6,181
<i>Subtotal New Mexico</i>	<i>\$20,000</i>	<i>18,130</i>		<i>4,000</i>	<i>6,181</i>

²⁷ Sponsor indicated to CRS in 2006 that the project was not being pursued.

Project Name and Authorization (Public Law Number)	Estimated Authorized Federal Title XVI Contribution ^a (\$ in thousands)	Title XVI Funding FY1994-FY2010, including ARRA (\$ in thousands)	Title XVI Funding as % of Max. Authorized Federal Contribution	Reclaimed Water (acre-feet) (N/A=not available) ²⁶	
				In FY2009	Project Capacity (est. 2006)
Willow Lake / City of Salem Natural Treatment, OR	8,750 ^e	520	5.9%	N/A	600-1,200
<i>Subtotal Oregon</i>	<i>\$8,750</i>	<i>520</i>	<i>N/A</i>	<i>N/A</i>	<i>600-1,200</i>
El Paso Water Reclamation and Reuse, TX (Northwest Area)	8,889	8,677	99.8%	0%	2,514
Williamson County Water Reclamation and Reuse, TX	20,000	942	5%	N/A	5,000
<i>Subtotal Texas</i>	<i>\$28,889</i>	<i>\$9,619</i>	<i>N/A</i>	<i>N/A</i>	<i>7,514</i>
Central Valley Water Recycling, UT	20,000	0	0%	0	9,000
St. George Area Water Recycling, UT	20,000^f	0²⁸	0%	N/A	3,900-11,700
Toole Water Reclamation and Reuse, UT (P.L. 104-266)	3,409	3,409	100%	1,500	2,537
West Jordan Water Reclamation and Reuse, UT	20,000	0	0%	N/A	N/A
<i>Subtotal Utah</i>	<i>63,409</i>	<i>\$3,409</i>	<i>N/A</i>	<i>1,500</i>	<i>15,437 - 23,237</i>
Lakehaven, WA	20,000²⁹	0	0%	6,717 - 13,435	
<i>Subtotal Washington</i>	<i>\$20,000</i>	<i>0</i>	<i>N/A</i>	<i>6,717 - 13,435</i>	
TOTAL	\$1,164,182	531,419³⁰	46.3%	778,056 - 797,574	

Sources: Data supplied to CRS by Reclamation in January and February 2005; 2006 Reclamation Reuse Chart; 2010 Reclamation Reuse Table, and CRS interviews with project sponsors, November 2005 - January 2006. 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 less. Subtotals and totals for water to be reclaimed often indicate a lower bound estimate of water to be reclaimed, as water quantity information was not available for all projects.

²⁸ The project has not received Title XVI funding via Reclamation; however, it received \$5.5 million from DOI's Bureau of Indian Affairs for the Shivwits Band portion of the project (to provide 200 acre-feet annually to the Tribe), as part of an Indian settlement agreement. EPA provided a grant of \$0.2 million via the State of Utah.

²⁹ The 2006 estimate, based on estimated construction cost of \$38 million, was \$9.5 million.

³⁰ Total shown here is slightly more than sum of the column listings due to rounding.

- a. Where total project cost is specified in a project authorization, the maximum allowed under general Title XVI authorities is assumed (a maximum of \$20 million or 25% of total project costs per project). Thus, the total remaining estimated federal contribution is an upper-bound estimate and likely overstates the “backlog” in federal financing (see for example, notes b, c, and e - g). In a few cases, CRS has estimated the federal contribution based on interviews with project sponsors.
- b. The 2006 estimated federal contribution for this project was \$5,760 million.
- c. The 2006 estimated funding was higher at \$340,000. The most recent estimate is listed in this table to keep consistent with Reclamation data.
- d. The 2010 Reclamation Reuse Chart shows \$7.3 million in ARRA funding for this project, but does not show this amount in project totals; for purposes of this memo, the ARRA funding is assumed to have been allocated and obligated to the project and thus is included in the total funding through FY2010 column.
- e. The 2006 estimated federal contribution for this project was \$0.95 million.
- f. The 2006 estimated federal contribution for this project was \$7.8 million.
- g. The 2006 estimated federal contribution for this project was \$3.0 million.

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