Western Water Resource Issues

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Summary

For more than a century, the federal government has constructed water resource projects for a variety of purposes, including flood control, navigation, power generation, and irrigation. While most municipal and industrial water supplies have been built by non-federal entities, most of the large, federal water projects in the West, including Hoover and Grand Coulee dams, were constructed by the Bureau of Reclamation (Department of the Interior) to provide water for irrigation.

Growing populations and changing values have increased demands on water supplies and river systems, resulting in water use and management conflicts throughout the country, particularly in the West, where population is expanding rapidly. In many western states, agricultural needs are often in direct conflict with urban needs, as well as with water demand for threatened and endangered species habitat, recreation, and scenic enjoyment.

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, for example, by building new storage or diversion projects, expanding old ones, or funding water reclamation and reuse facilities. Others emphasize the need to manage existing supplies more efficiently—through conservation, revision of policies that encourage inefficient use of water, and establishment of market mechanisms to allocate water.

The 109th Congress is considering a number of bills on western water issues, including title transfer, water recycling (e.g., S. 3639 and H.R. 5768), rural water supply (e.g., S. 895), and drought legislation (e.g., H.R. 5136 and S. 2751). Oversight of CALFED—a joint federal and state program to restore fish and wildlife habitat and address California water supply/quality issues—and Klamath River Basin and San Joaquin River Basin issues are also under consideration.

The 109th Congress may also consider Indian water rights settlement legislation; however, Indian settlement bills are not tracked in this report.

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Most Recent Developments

The House passed numerous western water resource bills under suspension of the rules in July and September, including three bills amending the Bureau of Reclamation's Title XVI recycling authorization (H.R. 122, Eastern Municipal Water District, CA; H.R. 2334, Oxnard, CA; and H.R. 4545, Los Angeles County, CA). In all, at least seven House-passed Title XVI bills are now pending before the Senate Energy and Natural Resources Committee. The committee's Water and Power Subcommittee a held hearing on several pending Title XVI bills on July 27, 2006. On July 12, 2006, Senators Murkowski and Feinstein introduced S. 3639, a bill to amend the Reclamation Wastewater and Groundwater Study and Facilities Act (Title XVI of P.L. 102-575). The bill would replace existing authorization for Bureau of Reclamation's oversight of Title XVI water reuse and recycling projects with new standards and procedures for the review of Title XVI projects. Representative Napolitano introduced an identical bill (H.R. 5768) the same day.

Two western water resource bills became law on October 10: H.R. 2720, a salt cedar eradication bill (P.L. 109-320), and H.R. 3443, a bill transferring title of federal water distribution facilities to the Northern Colorado Water Conservancy District (P.L. 109-321). Another House-passed bill, H.R. 3929, to authorize a desalination demonstration project at Dana Point, CA, has been reported from the Senate Committee on Environment and Public Works. A bill to establish a National Integrated Drought Information System (NIDIS), H.R. 5136, also passed the House in September. A related NIDIS bill, S. 2751, was reported from the Senate Commerce Committee and placed on the Senate Calendar.

Members of the House and Senate also prepared to respond to a mid-September stipulated settlement agreement between parties warring over the future of the San Joaquin River. After nearly a year of negotiation, a settlement was reached among water users, the federal government, and the Natural Resources Defense Council (NRDC) on how to respond to a judges' ruling that operation of the federal Friant Dam on the San Joaquin River (CA) is in violation of California State Fish and Game code. The ruling is part of an 18-year-old lawsuit between Friant and NRDC, and calls for providing water to support salmon habitat in reaches of the river that have been dry and void of salmon since the mid-1940s, when water was diverted from the river for irrigation. Many activities included in the settlement would require congressional authorization. At issue for entities not party to the settlement is how reintroduction of federally threatened or endangered species (salmon) would affect existing irrigation and power project operations, as well as how increases in water flow would affect land use and flood flows.

Background and Analysis

For more than a century, the federal government has been involved in developing water projects for a variety of purposes, including flood control, navigation, power generation, and irrigation. Most major water projects, such as large dams and diversions, were constructed by either the Bureau of Reclamation (Bureau), in the Department of the Interior, or the U.S. Army Corps of Engineers (Corps), in the Department of Defense. Traditionally, the Corps has built and maintained projects designed primarily for flood control, navigation, and power generation, whereas Bureau projects were designed primarily to facilitate settlement of the West by storing and providing reliable supplies of water for irrigation and "reclamation" of arid lands. While both agencies supply water for some municipal and industrial uses, they do so largely as a secondary

responsibility in connection with larger multipurpose projects. Most of the nation's public municipal water systems have been built by local communities under prevailing state water laws.

Today, the Bureau operates nearly 350 storage reservoirs and approximately 250 diversion dams—including some of the largest dams in the world, such as Hoover Dam on the Colorado River and Grand Coulee Dam on the Columbia River. In total, the Bureau's projects provide water to approximately 9 million acres of farmland and nearly 31 million people in 17 western states. The Bureau also operates 58 power plants. Because of the strategic importance of its largest facilities, the Bureau has heightened security at all key facilities to protect projects in the wake of the terrorist attacks on September 11, 2001.

Most Bureau water supply projects were built under authority granted to the Secretary of the Interior in the Reclamation Act of 1902, or through individual project authorizations. The original intent of the Reclamation Act was to encourage families to settle and farm lands in the arid and semi-arid West, where precipitation is typically 30% to 50% of amounts in the East. Construction of reclamation projects expanded greatly during the 1930s and 1940s, and continued rapidly until the late 1960s and early 1970s. By the late 1960s, a combination of changing national priorities and local needs, increasing construction costs, and the prior development of most prime locations for water works contributed to a decline in new construction of major water works nationwide. Water supply for traditional off-stream uses—including municipal, industrial, and agricultural uses—was increasingly in direct competition with a growing interest in allocating water to maintain or enhance in-stream uses, such as recreation, scenic enjoyment, and fish and wildlife habitat.

During the 1970s, construction of new projects slowed to a handful of major works, culminating in the completion of the Tellico Dam project in Tennessee and the Tennessee Tombigbee waterway through Alabama and Mississippi. These projects pitted conservation and environmental groups, as well as some fiscal conservatives, against the traditional water resources development community. New on the scene was the National Environmental Policy Act of 1970 (NEPA), which for the first time required an assessment of the environmental effects of federal projects, and provided for more public scrutiny of such projects. In 1978, President Carter announced that future federal water policy would focus on improving water resources management, constructing only projects that were economically viable, cooperating with state and local entities, and sustaining environmental quality. The Reagan Administration continued to oppose large projects, contending they were fiscally unsound. New construction of federally financed water projects virtually stopped until Congress passed the Water Resources Development Act (WRDA) of 1986, which addressed Corps projects and policies. Federal water research and planning activities were also reduced during the early years of the Reagan Administration, which felt that states should have a greater role in carrying out such activities. Consistent with this outlook, President Reagan abolished the Water Resources Council, an umbrella agency established in 1968 to coordinate federal water policy and to assess the status of the nation's water resource and development needs.

Congress subsequently scaled back several remaining authorized projects, changed repayment and cost-share structures, and passed laws that altered project operations and water delivery programs. For example, in 1982 Congress passed the Reclamation Reform Act, which altered the Bureau's water pricing policies for some users. The act revised acreage limitation requirements and charges for water received to irrigate leased lands. Congress soon increased local entities' share in construction costs for Corps water resource projects with passage of the 1986 WRDA.

Over the last decade, both the Corps and the Bureau have undertaken projects or programs aimed at mitigating or preventing environmental degradation due in part to the construction and operation of large water projects, while at the same time expanding water supply facilities. The agencies have pursued these actions through administrative efforts and congressional mandates, as well as in response to court actions. Currently, the federal government is involved in several restoration initiatives including the Florida Everglades, the California Bay-Delta, and the Columbia and Snake River basins in the Pacific Northwest. These initiatives have been quite controversial. Each involves many stakeholders at the local and regional level (water users, landowners, farmers, commercial and sport fishermen, urban water suppliers and users, navigational interests, hydropower customers and providers, recreationists, and environmentalists) and has been years in the making. At the same time, demand for traditional or new water resource projects continues—particularly for ways to augment local water supplies, maintain or improve navigation, and control or prevent floods and shoreline erosion. In addition, demand continues from some sectors for new or previously authorized large water supply projects (e.g., Auburn and Temperance Flats dams, and Sites Reservoir, all in California). For both the Everglades and CALFED, water supply facilities are included in proposals for restoration.

Legislative and Oversight Issues

The 109th Congress is considering several water resource issues in legislation ranging from re-authorizing the Bureau of Reclamation's water recycling program, to individual project authorizations and agency policy changes (e.g., re-operation of water project facilities in the Central Valley of California and in the Colorado and Columbia River Basins). Oversight of ongoing agency activities, such as water management in the Klamath and San Joaquin River Basins, Salton Sea restoration, allocation of Colorado River water supplies (particularly within California), and CALFED (a program to carry out activities affecting the delta confluence of the San Joaquin and Sacramento Rivers at the San Francisco Bay), may also be discussed. The broader topic of whether to review federal water activities or establish a national water policy commission was discussed during the 108th Congress, and is also being addressed in the 109th. For example, H.R. 135, which would establish a National Water Commission, passed the House and has been referred to the Senate Environment and Public Works Committee. Funding and policy direction through the annual Energy and Water appropriations bill also influences the construction and operation of projects. (See CRS Report RL33346, *Energy and Water Development: FY2007 Appropriations*, coordinated by (name redacted).)

Security of Reclamation Facilities

On June 22, 2006, the House Resources Water and Power Subcommittee held an oversight hearing on security concerns at Bureau of Reclamation facilities. Security remains heightened at Bureau facilities in the wake of terrorist attacks in New York and Washington, D.C., on September 11, 2001. The Bureau initially closed visitor facilities and cancelled tours at all facilities. While most visitor facilities have reopened, facilities may close depending on security alert levels and site-specific concerns at any time. For example, the Bureau heightened security at many facilities during recent code-orange alerts and is expected to do so in the future. Further, in February 2004, the Bureau closed the road over Folsom Dam (CA), largely because of security concerns.

Because Bureau facilities were not directly affected by September 11 events, the Bureau did not receive funding in the first two releases of emergency supplemental appropriations following the attack. However, the agency received $30.3 million for security at Bureau facilities as part of the third cluster of emergency supplemental funding included in Division B, Chapter 5, of the FY2002 Defense Appropriations bill (H.R. 3338, P.L. 107-117). The Bureau received $28.6 million for site security for FY2004; $43.2 million in FY2005; and $40 million for FY2006. The FY2006 appropriation for the Bureau directed the agency to delineate planned reimbursements by project, and report to the House and Senate Appropriations committees by mid-January, 2006. The Bureau submitted its plan for security costs in March, 2006. For FY2007, $39.6 million is requested by the Administration. The House did not recommend a specific amount for site security in H.R. 5427, the FY2007 Energy and Water Development Appropriations Act.[1]

Klamath River Basin

The Klamath River Basin—an area on the California-Oregon border—has become a focal point for local and national discussions on water management and water scarcity. These issues were brought to the forefront in 2001 when severe drought prompted the Bureau to curtail irrigation water deliveries to approximately 200,000 acres of farm and pasture lands within the roughly 235,000-acre Klamath Project service area. The cutback was made to make water available for three fish species under federal Endangered Species Act (ESA) protection (two endangered sucker species, and a threatened coho salmon population). Tensions were again high in 2002 when water temperatures and atypically low flows in the lower Klamath may have contributed to the death of at least 33,000 adult salmon.

The Klamath Project has been part of increasingly complex water management issues involving several tribes, fishermen, farmers, environmentalists, hydropower producers, and recreationists. Upstream farmers are generally pitted against fishermen, Native American interests, and other downstream users, and many sides have policy concerns involving valuable sectors of the local and regional economy. Farmers point to their contractual rights to water deliveries from the federal Klamath Project and to hardships for their families if water is cut off; others assert that the salmon fishery is also economically valuable and that farmers could be provided temporary economic assistance, while salmon extinction would be permanent. Still others assert that there are ways to serve all interests, or that the science underlying the determinations of the relevant agencies is simply wrong.

The key issue is how to operate the Bureau's project facilities to meet irrigation contract obligations without jeopardizing the three ESA-listed fish. To address this issue, the Bureau issued a 10-year operations plan in February 2002 and a biological assessment (necessary under the ESA) for operating its Klamath Project. However, subsequent biological opinions found the Bureau's 10-year operations plan would likely jeopardize the continued existence of the listed suckers and coho salmon, as well as adversely modify proposed critical habitat. Although biological opinions issued on May 31, 2002, by the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS, also popularly referred to as NOAA Fisheries) both included "reasonable and prudent alternatives" (RPAs), the Bureau formally rejected both final biological opinions and opted to operate under a one-year plan that it asserts complies with the opinions. While met with enthusiasm from area farmers, the Bureau's decision drew much

[1] For more information on appropriations, see CRS Report RL33346, *Energy and Water Development: FY2007 Appropriations*, coordinated by (name redacted).

criticism and concern from environmentalists, fishermen, tribes, and others. On April 10, 2003, the Bureau issued its Klamath Project 2003 operations plan and noted that planning for multi-year operations of the project is ongoing; the Bureau issued its 2005 operating plan in April 2005. In 2003, 2004, and 2005, the Bureau stated that its current year plan was consistent with the 2002 biological opinions. The ESA agencies (FWS and NMFS) have not issued a biological opinion on the one-year operations plans and hence the 2002 biological opinions (and RPAs) govern project operations. In the meantime, however, the 2002 NMFS RPAs for coho salmon were found to be "arbitrary and capricious" by the U.S. 9th Circuit Court of Appeals.[2] The Court concluded the Bureau of Reclamation's 10-year operation plan was "arbitrary and capricious" because NMFS failed to analyze in eight of ten years, the effects of project operations on coho salmon, a species that has a three-year life cycle. It is not yet clear what effect the court decision will have on Klamath project operations.

Because of the controversy in 2001, the Secretary of the Interior asked the National Research Council (NRC) to evaluate the federal biological opinions that had been used to prevent the Bureau from delivering water to farmers in 2001. The NRC released an interim report in February 2002 and a final report in October 2003; both concluded there was neither sound scientific basis for maintaining Upper Klamath Lake levels and increased river flows as recommended in the 2001 biological opinions, nor sufficient basis for supporting the lower flows in the Bureau's original operations plan for 2001. Further, the NRC concluded that recovery of endangered suckers and threatened coho salmon in the Klamath Basin might best be achieved by broadly addressing land and water management concerns (including the Klamath dams). NRC also concluded that operation of the Klamath Project (as opposed to operation of other basin projects such as that on the Trinity River) was not the cause of the 2002 lower basin fish kill, and changes in Klamath project operations would not have prevented the fish kill. On October 13, 2004, the Secretary of the Interior announced the signing of a Klamath Watershed Coordination Agreement among four cabinet-level federal agencies. The agreement was initiated to address the fractured resource management specifically noted by the NRC and others.

PacifiCorp, a large regional utility, owns and operates seven hydroelectric dams in the Klamath Basin. Known collectively as the Klamath River Hydroelectric Project (Project), the dams (FERC license number 2082) were built between 1908 and 1962 and produce 151 megawatts of electricity. The Project's FERC license expired on March 1, 2006. Until a new FERC license—valid for 30-50 years—is approved, the Project will operate under annually renewed temporary licenses. As part of the new license application, NMFS and FWS have submitted preliminary prescriptions requiring the construction of fishways to allow upstream and downstream fish passage at four of the dams. The federal agencies state that the fishway prescriptions would restore access to 58 miles of habitat for chinook, steelhead, and lamprey and improve connectivity for resident fish such as trout. This includes 46 miles of habitat for the ESA-listed coho salmon. Fish passage would also create the opportunity for a reintroduction plan to return salmon, steelhead and lamprey to more than 300 miles of historic habitat above the dams.[3]

PacifiCorp estimates that the cost of implementing the NMFS and FWS preliminary license prescriptions could be as much as $200 million, and it has concerns that this expense would not resolve the basin's fisheries issues due, among other things, to poor water quality upstream of the

[2] *Pacific Coast Federation of Fishermen's Associations, et. al. v. U.S. Bureau of Reclamation, National Marine Fisheries Service, et. al.*, 426 F.3d 1082 (9th Cir. Court of Appeals, Oct. 18, 2005).

[3] See http://news.fws.gov/newsreleases/showNews.cfm?newsId=6C01A8E7-91EC-AD92-7D2BC18A63DB61DD.

PacifiCorp dams.[4] Under §241 of the Energy Policy Act of 2005 (P.L. 109-58), FERC license applicants, or other parties to the proceedings, may challenge federal agencies' fishway prescriptions and suggest less costly alternatives.[5] PacifiCorp has requested a hearing on this matter and has proposed alternatives to the federal governments' fishway provisions that include trapping and transporting fish around the dams.[6]

Legislation pertaining to the Klamath Basin has not been proposed in the 109th Congress. However, the 108th Congress passed §132 of P.L. 108-137, the Energy and Water Development Appropriations for 2004. This section provides authority for the Secretary of the Army to provide "environmental assistance" (design and construction assistance to improve water use efficiency) to non-federal interests in the Upper Klamath River Basin. The Bureau received $20.8 million for FY2006 for the Klamath Project; for FY2007, $24.7 million was requested.[7]

Title Transfer

Congress more and more is considering legislation that would transfer the ownership (title) of individual Bureau of Reclamation water supply projects to current water users. These "title transfer" bills vary depending on the circumstances of each project; however, some general issues apply. Transfer issues range from questions regarding a project's worth and valuation to legal and policy questions regarding the transfer's affect on other area water users, fish and wildlife, future project operations, and future management of lands associated with the project.

The Clinton Administration first actively negotiated title transfer on a voluntary basis with interested water/irrigation districts beginning in 1995 when it announced a policy "framework" to establish a process for negotiating title transfers. While some districts pursued the Administration's framework process, others sought direct legislative authority for transfers. In general, Congress must authorize transfer of title to reclamation facilities (32 Stat. 389; 43 U.S.C. 498), regardless of the process used to get to a transfer agreement.

A central issue with title transfer legislation is whether the transfers should be mandated or just authorized. Some argue that the transfers are "minor land transactions" and advocate that Congress direct they take place within a certain time period. Others strongly disagree. Debate mostly centers on the role the National Environmental Policy Act (NEPA) would and should play prior to a project's transfer. Environmentalists generally fear that a directed transfer, with or without specific NEPA language would effectively allow the Bureau and project transfer proponents to avoid assessing and/or mitigating environmental effects of the proposed transfers. Conversely, project proponents have pursued directed transfers to avoid what they see as unnecessary delays and to ensure transfers take place. For example, some title transfer legislation directs the transfer to occur "in accordance with all applicable law," while other legislation directs it to take place pursuant to an agreement already negotiated with project water users. Some laws authorize the transfers (e.g., P.L. 106-220 and P.L. 106-221), whereas others mandate the transfer (e.g., P.L. 106-249, P.L. 106-377, and P.L. 106-512).

[4] See http://www.klamathforestalliance.org/Newsarticles/newsarticle20060408.html.

[5] See CRS Report RL31903, *Relicensing of Nonfederal Hydroelectric Projects: Background and Procedural Reform Issues*, by (name redacted).

[6] Available at http://ferris.ferc.gov/idmws/common/OpenNat.asp?fileID=11016830.

[7] For more information on appropriations, see CRS Report RL33346, *Energy and Water Development: FY2007 Appropriations*, coordinated by (name redacted).

Other discussions center on the role the Endangered Species Act (ESA) might play on project operations after the transfer. One of the main concerns for environmentalists appears to be that, once the project is out of federal ownership, there will no longer be a legal obligation for the district to consult with other federal entities on the impact of project operations on threatened or endangered species, as is now required of the Bureau under Section 7 of the ESA. Additionally, environmentalists and others fear that once out of federal hands there will be little if any public scrutiny or federal oversight of project operations. Conversely, project proponents are likely to favor private operations.

Controversies regarding the application of NEPA and ESA to project title transfers, as well as the question of whether to direct or authorize the transfers, are likely to remain at issue. Other issues involve concerns about the overall costs of the transfers, who should pay for costs associated with the transfer, effects on third parties, liability, the valuation of project facilities and lands (and treatment of mineral or other receipts), and financial compensation for the projects. Related to many of the issues outlined above is the question of how these projects might be operated in the future. Although the House Resources Committee has noted that it contemplates that facilities would be maintained and managed without significant changes, and in some cases bill language states that the projects shall be managed for the purposes for which the project was authorized, transfer bills approved by the committees have been silent on enforcement issues and in describing what might occur if the new owners change operations (other than they must comply with all applicable laws at that time). Little has been said, for example, about what might occur if new project owners decide to partition project lands for new homes and convert irrigation water to domestic use.

To date, two sets of identical bills to transfer irrigation works have been introduced in the 109th Congress. H.R. 3443 and S. 1498 would transfer title to certain Reclamation distribution facilities to the Northern Colorado Water Conservancy District; H.R. 3443 become P.L. 109-321 on October 10, 2006. Another set of title transfer bills (H.R. 1564 and S. 1965) have also been introduced; however, these bills would transfer buildings and lands only to the Yakima-Tieton Irrigation District, and do not involve transfer of irrigation works.

Project Construction

California Bay-Delta/CALFED

The authorization of an annual appropriation of $143 million for implementing portions of an ecosystem protection plan and long-term restoration projects for the San Francisco Bay/San Joaquin and Sacramento Rivers Delta (Bay-Delta, also known as the CALFED program) expired September 30, 2000; however, funding for the program for FY2005 to FY2010 was reauthorized in 2004. The initial authorization for CALFED funding (P.L. 104-208, Division E) came on the heels of a 1994 agreement among state and federal agencies, urban, agricultural, and environmental interests to protect the Bay-Delta while satisfying key needs of various involved interests. A Record of Decision (ROD) for the CALFED Program was issued by a consortium of state and federal agencies in August 2000. The process was initiated to address critical water quality, water supply, and fish and wildlife habitat issues in the 738,000 acre Bay-Delta estuary and has grown into a comprehensive effort to address long-term water supply/quality issues for most of the state.

On October 25, 2004, the President signed into law P.L. 108-361 (H.R. 2828), reauthorizing implementation of the CALFED Bay-Delta Program. Although authorization for federal funding for the CALFED Program expired at the end of FY2000, some activities supporting the program continued to be funded. P.L. 108-361 authorized $389 million for the federal share of costs for activities authorized under the act for FY2005-FY2010.[8]

The Administration's FY2007 request for the Bureau of Reclamation's CALFED program account is $38.6 million; of which $10.9 million is for the Environmental Water Account, $11.3 million for water storage activities, and $1.9 million for ecosystem restoration. The final Energy and Water Development Appropriations Act for FY2006 (P.L. 109-103) included $37 million for CALFED, approximately $11 million of which is for storage project studies and planning, and $0.5 million is to be used to study levee stability and reconstruction.[9]

Recent reports of food chain concerns and fisheries declines in the Bay-Delta, combined with fiscal issues at both the state and federal levels, and governance issues, have raised questions about the implementation and viability of the CALFED Program. In the Bay-Delta, the Delta smelt and striped bass fisheries are at record lows and longfin smelt and threadfin smelt populations are declining. Scientists are investigating potential causes and solutions.

A new governing structure for CALFED has been proposed. The program would be housed under the Secretary of Resources for California and contain three new entities, an executive leadership council, a state public advisory committee, and an independent oversight body. The California Bay-Delta Authority Board would be eliminated. These proposals and others are included in the CALFED 10-year Action Plan (draft).[10]

Oversight issues during the 109th Congress were expected to include project financing, water storage project programs, and implementation of the Operations Criteria and Plan and South Delta Improvements Plan. However, recent news reports of food chain concerns and fisheries declines in the Sacramento and San Joaquin Rivers confluence with San Francisco Bay (Bay-Delta), combined with fiscal issues at both the state and federal levels, have raised questions about the implementation and viability of the CALFED Program.

Another issue receiving heightened attention in the wake of Hurricane Katrina is the vulnerability to natural disasters (i.e., earthquakes and floods) of the Bay-Delta levee system. Approximately 22 million people rely on the Delta for drinking water, and most of the water used to grow crops in the Central Valley south of the Delta flows through the Delta. No specific funds were requested for Delta levee maintenance and repair in the Administration's budget request for FY2007.

Rural Water Supply Projects

Beginning with authorization of the WEB Rural Water Supply Act in 1980 (P.L. 96-355), Congress has authorized the Bureau to fund the construction of several "rural water supply" projects and oversee construction of another, with funding coming from the Department of

[8] For more information on the status of the CALFED Program, see CRS Report RL31975, *CALFED Bay-Delta Program: Overview of Institutional and Water Use Issues*, by (name redacted) and (name redacted).

[9] For more information on CALFED appropriations, see CRS Report RL33346, *Energy and Water Development: FY2007 Appropriations*, coordinated by (name redacted).

[10] Available at http://calwater.ca.gov/; accessed March 1, 2006.

Agriculture. These projects have individual authorizations, but all are generally aimed at providing water for municipal and industrial (M&I) uses in rural areas—a departure from the historical mission of providing water for irrigation, with M&I use as an incidental project purpose. The most recent project to be approved is for Espanola, New Mexico (P.L. 108-354). This legislation also authorizes a feasibility study for a Chimayo water supply system.

These projects have been somewhat controversial, largely due to the relatively large share of federal construction costs proposed. Typically, the Bureau requires that people benefitting from a reclamation project repay 100% of the construction costs (plus interest) attributed to M&I project purposes. For example, if a project's purpose is 50% irrigation, 30% flood control, and 20% M&I, M&I water users would pay (reimburse the federal government) for 100% of their 20% of construction costs of the project, plus interest (the federal cost share would be 0% of the 20% cost allocated to M&I purposes). In contrast, the federal cost share (non-reimbursable component) for the Bureau's "rural water supply" projects typically ranges from 75% to 85%. Some have raised concerns that these projects have the potential to overwhelm the Bureau's budget. For example, the federal contribution to the Lewis and Clark project is estimated at $214 million. For perspective, the Bureau's budget ranges in the neighborhood of approximately $800 million (net current authority) annually. Prior to the recent authorizations, the Bureau had approximately 60 authorized projects in various stages of construction with projected construction costs for completion of $4.9 billion. Outstanding construction authorizations now total approximately $7 billion (excluding "deferred" projects such as Auburn Dam).

Some also fear that these projects are outside the realm of those historically constructed by the Bureau and believe they would be better handled via other existing federal water quality or water supply programs, such as the USDA's Rural Utility Service or the EPA's state revolving loan fund. However, as designed, the projects do not fit EPA or USDA criteria, and thus project proponents have looked to the Bureau for funding. An additional concern with the Lewis and Clark legislation was that it authorized projects outside of the Bureau of Reclamation's historic service area (outside the 17 western states).[11]

On May 11, 2005, the Senate Energy and Natural Resources Committee held a hearing on S. 895, a bill to establish a new rural water supply program to be administered by the Bureau. The bill combines elements of three bills introduced in the 108th Congress: S. 1085 (Bingaman), S. 1732 (Domenici, by request), and S. 2218 (Domenici). S. 895, as amended, passed the Senate by unanimous consent November 16, 2005. The House Resources Water and Power Subcommittee held a hearing on the bill on July 27, 2006.

Title 16 Projects

On July 12, 2006, Senators Murkowski and Feinstein introduced S. 3639, a bill to amend Title 16 of P.L. 102-575, the Reclamation Wastewater and Groundwater Study and Facilities Act. The bill would provide a new review process and standards for Title XVI project proposals. Currently, Title XVI directs the Secretary of the Interior to develop a program to "investigate and identify" opportunities to reclaim and reuse wastewater and naturally impaired ground and surface water; however, in the 15 years since the program was first authorized, the Secretary has initiated few investigations. Instead, Congress has authorized approximately 30 projects, some with and some

[11] For information on other federal water supply programs, see CRS Report RL30478, *Federally Supported Water Supply and Wastewater Treatment Programs*, coordinated by (name redacted).

without Administration support. Controversies over program goals in recent years have brought the program to a standstill. Hence, an attempt is being made to re-authorize the program and clarify program purposes and administrative review processes.

Title XVI originally authorized construction of five reclamation wastewater projects and six wastewater and groundwater recycling/reclamation studies. The act was amended in 1996 (P.L. 104-206) to authorize another 18 construction projects and an additional study, and again in 1998 (P.L. 105-321) and 2000 (P.L. 106-554, Division B, Section 106) to authorize two more construction projects. Since then, several individual project authorizations amending the Reclamation and Wastewater and Groundwater Study and Facilities Act have been passed, including three during the 108th Congress: P.L. 108-233, Irvine, CA; P.L. 108-7, North Las Vegas, NV (originally authorized in P.L. 104-206); and P.L. 108-361, Williamson County, Texas. Nineteen Title 16 bills (including companion bills) have been introduced (see "109th Congress Legislation," below) in the 109th Congress, 17 active bills remain pending after the enactment of P.L. 109-70.

It appears the general purpose of Title 16 projects is to provide supplemental water supplies by recycling/reusing agricultural drainage water, wastewater, brackish surface and groundwater, and other sources of contaminated water; however, the purpose of the program is not clearly articulated in existing law. Hence, there has been some confusion in recent years whether the program is primarily a demonstration program or was intended to finance permanent reclamation and reuse facilities. S. 3639 would address this issue by delineating in the statute two specific program purposes: 1) to assist in the development of permanent local and regional water reclamation and reuse projects; and 2) to further improve water reclamation and reuse technologies through research and demonstration activities.

Water reclaimed via Title 16 projects may be used for M&I water supply (non-potable, or indirect potable purposes only), irrigation supply, groundwater recharge, fish and wildlife enhancement, or outdoor recreation. Projects may be permanent or for demonstration purposes. Project construction costs are shared by a local project sponsor or sponsors and the federal government. The federal share is generally limited to a maximum of 25% of total project costs and in most cases the federal share is non-reimbursable, resulting in a *de facto* grant to the local project sponsor(s). Congress limited the federal share of individual projects to $20 million beginning in 1996 (P.L. 104-266). The federal share of feasibility studies is limited to 50% of the total, except in cases of "financial hardship"; however, the federal share must be reimbursed. The Secretary may also accept in-kind services that are determined to positively contribute to the study. While S. 3639 would keep the 50% split on planning assistance (in lieu of feasibility studies), the proposed new maximum cost share is the lesser of 20% or $20 million for projects authorized after enactment of the new law.

The Bureau's water reclamation and wastewater recycling program is limited to projects and studies in the 17 western states authorized in the Reclamation Act of 1902, as amended (32 Stat. 388), unless specifically authorized by Congress.[12] Authorized recipients of program assistance include "legally organized non-federal entities" (e.g., irrigation districts, water districts, and municipalities). Currently, construction funding is generally limited to projects where (1) an appraisal investigation and feasibility study have been completed and approved by the Secretary;

[12] Section 103(a)(4) of P.L. 106-566 directs the Secretary of the Interior to study recycling, reclamation, and reuse of water and wastewater for agricultural and non-agricultural uses in the State of Hawaii.

(2) the Secretary has determined the project sponsor is capable of funding the non-federal share of project costs; and (3) the local sponsor has entered a cost-share agreement committing to funding its share. S. 3639 would establish new planning and review processes in lieu of the appraisal and feasibility processes in current law.

Total funding for Title 16 projects was $28.4 million for FY2004, $23.0 million for FY2005, and $25.6 million for FY2006. For FY2007, $10.1 million is requested for Title 16 projects.[13] Seven Title XVI bills have passed the House and are pending before the Senate Energy and Natural Resources Committee. Several other Title XVI bills have been introduced in the House and Senate as well. See the "109th Congress Legislation" section, below, for more details.

Salton Sea

The Salton Sea is a large, inland water body in California that is saline-rich and is sustained by agricultural run-off from farmlands in nearby Imperial and Coachella Valleys. It provides permanent and temporary habitat for many plants and animals, including several endangered species.[14] It also serves as an important recreational area for the region. The Salton Sea has been altered by increasing salinity caused by a steadily decreasing water table. High salinity levels have changed habitats and stressed several populations of plants and animals. The scope and costs of efforts to restore the Salton Sea were reported in a study done by the Department of the Interior in 2003.[15]

Federal and state agencies and regional organizations are currently working to determine the best alternative for restoring the Salton Sea. A provision in P.L. 108-361, which reauthorized the CALFED Program, stated that not later than December 2006, the Secretary of the Interior in coordination with the state of California and the Salton Sea Authority shall determine the best alternative for restoring the Salton Sea.

Several proposals have been floated to address the restoration of the Salton Sea. In accordance with state legislation,[16] the California Department of Water Resources must prepare an ecosystem restoration study and programmatic environmental document by the end of 2006. The California State Legislature is also under deadline to approve a plan by year's end. On June 29, 2006, the Salton Sea Authority endorsed a restoration plan for the Salton Sea that called for the division of the Sea into two smaller lakes with an expanded wetlands area.[17] One lake will be a recreational saltwater lake and the other will be a salt sink. The projected cost of this plan is estimated to be $2.2 billion. This proposal is being considered as an alternative in separate Salton Sea restoration project feasibility studies being conducted concurrently by the Resources Agency of the State of California and the federal Bureau of Reclamation. Funding for restoring the Salton Sea is expected, in part, to come from a restoration fund that will receive money from fees collected from water sales in the region. This fund was developed in 2003 and is expected to generate as

[13] For more information on appropriations, see CRS Report RL33346, *Energy and Water Development: FY2007 Appropriations*, coordinated by (name redacted).

[14] The Salton Sea is considered an important stopover for birds on the Pacific flyway, and provides habitat for some endangered species including the brown pelican (*Pelecanus occidentalis*).

[15] U.S. Department of the Interior, Bureau of Reclamation, *Salton Sea Study: Status Report*, January 2003.

[16] California State Legislation SB 277, SB 317, SB 654 and SB 1214.

[17] Salton Sea Authority, *Salton Sea Authority Plan for Multi-purpose Project* (La Quinta, CA: June 29, 2006).

much as $300 million for restoring the Salton Sea. Additional funding is also expected to come from local, state, and federal sources.

Funding for pilot projects aimed at restoring the Salton Sea are included in §3020 of S. 728, the Water Resources Development Act of 2005. This provision would authorize the U.S. Army Corps of Engineers to conduct a study of pilot projects identified in the preferred restoration concept plan approved by the Salton Sea Authority. This study would examine whether the pilot projects are economically justifiable, technically sound, environmentally acceptable, and meet the objectives of restoring the Salton Sea. If a positive determination is made, total cost of $26.0 million would be authorized to implement the projects, of which $16.9 million would be the federal share, and $9.1 million the non-federal share.[18]

As proposals for restoring the Salton Sea and related Colorado River issues continue to be negotiated during the 109th Congress, congressional oversight is expected to continue.

Drought

Although all areas of the country experience drought conditions from time to time, drought can be especially serious in the West where average annual precipitation is generally far less than in other areas of the country. Several proposals have been put forward in recent years to assist states in planning for and managing drought conditions; however, until recently, none had received much congressional attention. Earlier this year, legislation was introduced to establish a National Integrated Drought Information System (NIDIS).

NIDIS is intended to fill gaps in the nation's drought response capability by establishing a national program to forecast and monitor drought, providing a framework to deal with drought conditions that builds on new and existing monitoring, data collection, and interagency coordination efforts. Drought can affect any region in the United States and has an estimated annual economic impact of $6 to $8 billion.[19] In light of this widespread and significant impact, and building on the U.S. Drought Monitor (a multi-agency effort to track and predict drought conditions), the Administration and others have endeavored to establish an NIDIS with the goals of creating an integrated drought early warning system that provides accurate, timely information on drought conditions at appropriate scales. The NIDIS would be used to: enable decisions aimed at minimizing loss; provide information via a user-friendly system including an Internet portal and clear, easy to understand products; establish a framework for working with and educating those affected by drought on how and why droughts occur; and support a research environment that focuses on impact mitigation and improved drought prediction.

Legislation related to NIDIS has been proposed in the 109th Congress. H.R. 1386 and its counterpart S. 802 are broad drought preparedness bills that, in addition to establishing an NIDIS, would: establish a National Drought Council within the USDA; provide for a drought Assistance Fund intended to assist state, local, and tribal entities with drought-related activities; and, expand the technology transfer of drought and water conservation strategies. Neither of these bills, introduced in the spring of 2005, have advanced in committee.

[18] For more information on Salton Sea issues, see CRS Report RL31820, *Overview of Management and Restoration Activities in the Salton Sea*, by (name redacted).

[19] See http://www.magazine.noaa.gov/stories/mag51.htm.

An additional pair of bills (H.R. 5136 and S. 2751), streamlined to be NIDIS specific, were introduced in April and May 2006 respectively. These bills seek to establish NIDIS as a program within the National Oceanic and Atmospheric Administration (NOAA). The bills address the goals of NIDIS stated above and propose a total of $94 million in funding across the period of FY2007 to FY2012. The House Committee on Science passed H.R. 5136 by voice vote with one amendment—a funding reduction proposed by the bill's sponsor—on June 7, 2006. The total authorization level after amendment is $81 million. The bill subsequently passed the House under suspension of the rules on September 26, 2006. S. 2751 was reported by the Senate Commerce Committee September 29, and placed on the Senate Union Calendar.

109th Congress Legislation

Title 16 Projects[20]

P.L. 109-70 (S. 264, Akaka, H.R. 843, Abercrombie). Amends the Reclamation Wastewater and Groundwater Study and Facilities Act to authorize certain projects in the **State of Hawaii** and amends the Hawaii Water Resources Act of 2000 to modify the water resources study. Introduced February 2, 2005; reported without amendment by the Senate Committee on Energy and Natural Resources (S.Rept. 109-33) March 10, 2005. Passed the Senate July 26; referred to Committee on House Resources, July 27. Passed the House under suspension of the rules September 13, 2005. Became P.L. 109-70 September 21, 2005.

H.R. 122 (Issa). To amend the Reclamation Wastewater and Groundwater Study and Facilities Act to authorize the Secretary of the Interior to participate in the **Eastern Municipal Water District** Recycled Water System Pressurization and Expansion Project. Introduced January 4, 2005; referred to House Committee on Resources (Subcommittee on Water and Power); subcommittee hearing held October 6, 2005. Reported (amended) by unanimous consent on April 25, 2006 (H.Rept. 109-423). Passed the House July 10 under suspension of the rules.

H.R. 177 (Miller, Gary). To amend the Reclamation Wastewater and Groundwater Study and Facilities Act to authorize the Secretary of the Interior to participate in the **Prado Basin** Natural Treatment System Project, to authorize the Secretary to carry out a program to assist agencies in projects to construct regional brine lines in California, to authorize the Secretary to participate in the **Lower Chino** Dairy Area desalination demonstration and reclamation project, and for other purposes. Introduced on January 4, 2005; referred to House Committee on Resources (Subcommittee on Water and Power); considered under suspension of the rules and passed, as amended, on October 18, 2005; referred to Senate Committee on Energy and Natural Resources. Senate Energy and Natural Resources Subcommittee on Water and Power held hearing July 27, 2006. See also related bill S. 2106 (Feinstein).

H.R. 540 (Gibbons). To authorize the Secretary of the Interior to convey the Newlands Project Headquarters and Maintenance Yard Facility to the Truckee-Carson Irrigation District (Titles II, III, VII, and VIII of this bill would amend the Reclamation Wastewater and Groundwater Study and Facilities Act for projects in **Inland Empire**, CA and **Rancho Cucamonga**, CA; **Yucaipa**

[20] Listed below are bills that have been the subject of hearings or other legislative action beyond introduction. Other bills introduced are listed in a summary paragraph following the list of legislation.

CA and **Corona**, CA; **Brownsville**, TX; and **El Paso**, TX, respectively). Introduced February 2, 2005; referred to House Committee on Resources; considered and passed (amended) under suspension of the rules on May 16, 2005; referred to Senate Committee on Energy and Natural Resources. See also H.R. 1008 (Calvert), section II. Title I of H.R. 540 became P.L. 109-265 on August 3, 2006 (S. 310).

H.R. 2334 (Capps). To amend the Reclamation Wastewater and Groundwater Study and Facilities Act to authorize the Secretary of the Interior to participate in the design, planning, and construction of permanent facilities for the GREAT project to reclaim, reuse, and treat impaired waters in the area of **Oxnard**, California. Introduced May 12, 2005; referred to the House Committee on Resources (Subcommittee on Water and Power). Subcommittee hearings held December 7, 2005. Reported from House Resources September 6, 2006 (H.Rept. 109-625). Passed House under suspension of the rules September 20, 2006.

H.R. 2341 (Doggett). To amend the Reclamation Wastewater and Groundwater Study and Facilities Act to authorize the Secretary of the Interior to participate in the design, planning, and construction of a project to reclaim and reuse wastewater within and outside of the **City of Austin** Water and Wastewater Utility area, Texas. Introduced May 12, 2005; referred to the House Committee on Resources (Subcommittee on Water and Power). Subcommittee hearings held October 6, 2005. Passed House under suspension of the rules April 25, 2006. Senate Energy and Natural Resources Subcommittee on Water and Power hearing held July 27, 2006.

H.R. 3418 (Edwards, Chet). To amend the Reclamation Wastewater and Groundwater Study and Facilities Act to authorize the Secretary of the Interior to participate in the **Central Texas** Water Recycling and Reuse Project, and for other purposes. Introduced July 25, 2005; referred to the House Committee on Resources (Subcommittee on Water and Power). Subcommittee hearings held October 6, 2005. Reported from House Resources April 27 (H.Rept. 109-422). Passed the House under suspension of the rules May 2, 2006. Senate Energy and Natural Resources Subcommittee on Water and Power held hearing July 27, 2006.

H.R. 5768 (Napolitano) and S. 3639 (Murkowski). To amend the Reclamation Wastewater and Groundwater Study and Facilities Act to authorize the Secretary of the Interior to participate in the development of permanent local and regional water reclamation and reuse projects, including water recycling and desalination activities, in 17 western states and Hawaii. Replaces current appraisal and feasibility provisions with new project planning assistance and review provisions. Introduced July 12; H.R. 5768 referred to the House Committee on Resources (Subcommittee on Water and Power); S. 3639 referred to the Senate Committee on Energy and Natural Resources (Subcommittee on Water and Power). Senate Energy and Natural Resources Subcommittee on Water and Power held hearing July 27, 2006.

H.R. 4545 (Sanchez). To amend the Reclamation Wastewater and Groundwater Study and Facilities Act to authorize the Secretary of the Interior to participate in the **Los Angeles County** Water Supply Augmentation Demonstration project, and for other purposes. Introduced December 14, 2005; referred to House Committee on Resources, Water and Power Subcommittee. Subcommittee hearings held March 8, 2006. Passed House under suspension of the rules on September 28, 2006.

S. 3638 (Feinstein). A bill to amend the Reclamation Wastewater and Groundwater Study and Facilities Act to encourage the design, planning, and construction of projects to treat impaired surface water, reclaim and reuse impaired groundwater, and provide brine disposal in the State of

California (**Inland Empire, Cucamonga Valley, Yucaipa Valley, and City of Corona**). Introduced July 11, 2006; referred to Senate Energy and Natural Resources Committee, Water and Power Subcommittee. Subcommittee hearing held July 27, 2006. See also H.R. 802, H.R. 1008, and S. 746.

The following Title 16 bills have also been introduced: H.R. 123 (Issa); H.R. 497 (Sanchez); H.R. 802 (Dreier) and related bills H.R. 1008 and S. 746 (Feinstein); H.R. 855 (Ortiz); H.R. 863 (Reyes); H.R. 4270 (Grijalva); H.R. 4271 (Grijalva).

Water Supply and Conservation

P.L. 109-48 (H.R. 1046, Cubin; see also S. 99 (Enzi). To authorize the Secretary of the Interior to contract with the city of Cheyenne, Wyoming, for the storage of the city's water in the Kendrick Project, Wyoming. Introduced March 2, 2005; referred to the House Committee on Resources (Subcommittee on Water and Power); considered and passed under suspension of the rules on May 16, 2005; reported without amendment by Senate Committee on Energy and Natural Resources (S Rpt. 109-27) on March 10, 2005; presented to President on July 27, 2005; signed by President on August 2, 2005.

H.R. 125 (Issa). To authorize the Secretary of the Interior to construct facilities to provide water for irrigation, municipal, domestic, military, and other uses from the Santa Margarita River, California, and for other purposes. Introduced January 4, 2005; referred to House Committee on Resources (Subcommittee on Water and Power) and House Armed Services (Subcommittee on Readiness); mark-up session held May 18, 2005; ordered to be reported in the nature of a substitute (amended) by unanimous consent by the House Resources Committee on May 18, 2005; reported (Amended) by the Committee on Resources (H.Rept. 109-297, Part I) on November 16, 2005; considered and passed under suspension of the rules on December 13, 2005; referred to Senate Committee on Environment and Public Works. July 17, discharged by Unanimous Consent and referred to the Committee on Energy and Natural Resources.

H.R. 135 (Linder). To establish the "Twenty-First Century Water Commission" to study and develop recommendations for a comprehensive water strategy to address future water needs. Introduced January 4, 2005; referred to House Committee on Resources (Subcommittee on Water and Power) and House Transportation and Infrastructure (Subcommittee on Water Resources and Environment); considered and passed under suspension of the rules on April 12, 2005; referred to Senate Committee on Environment and Public Works.

H.R. 2563 (Otter). To authorize the Secretary of the Interior to conduct feasibility studies to address certain water shortages within the Snake, Boise, and Payette River systems in Idaho, and for other purposes. Introduced May 24, 2005; referred to House Committee on Resources (Subcommittee on Water and Power); subcommittee hearings held November 3, 2005; reported (amended) on April 25, 2006 (H.Rept. 109-420). Passed the house under suspension of the rules July 10; referred to Senate Energy and Natural Resources Committee. Senate Energy and Natural Resources Subcommittee on Water and Power held hearing September 21, 2006.

H.R. 3897 (Radanovich). To authorize the Secretary of the Interior, acting through the Bureau of Reclamation to enter into a cooperative agreement with the Madera Irrigation District for purposes of supporting the Madera Water Supply and Groundwater Enhancement Project. Introduced September 27, 2005; referred to the House Committee on Resources. Markup session held November16, 2005; reported (amended) on January 31, 2006 (H.Rept. 109-368). Passed the

house under suspension of the rules July 10; referred to Senate Energy and Natural Resources Committee. Senate Energy and Natural Resources Subcommittee on Water and Power held hearing September 21, 2006.

S. 178 (Domenici), H.R. 1711 (Wilson). A bill to provide assistance to the State of New Mexico for the development of comprehensive State water plans, and for other purposes. Introduced January 26, 2005; referred to the Senate Committee on Energy and Natural Resources; mark-up session held February 9, 2005; reported favorably without amendment by Senate Committee on Energy and Natural Resources on March 7, 2005 (S.Rept. 109-16); passed Senate without amendment by unanimous consent on July 26, 2005; referred to House Committee on Resources (Subcommittee on Water and Power) on August 2.

S. 247 (Smith, Gordon). A bill to authorize the Secretary of the Interior to assist in the planning, design, and construction of the Tumalo Irrigation District Water Conservation Project in Deschutes County, Oregon. Introduced February 1, 2005; referred to Senate Committee on Energy and Natural Resources (Subcommittee on Water and Power); hearing held July 12, 2005 (S. Hrg. 109-138).

S. 251 (Smith, Gordon). A bill to authorize the Secretary of the Interior, acting through the Bureau of Reclamation, to conduct a water resource feasibility study for the Little Butte/Bear Creek Sub-basins in Oregon. Introduced February 1, 2005; referred to Senate Committee on Energy and Natural Resources; hearings held April 19, 2005 (S.Hrg. 109-96); reported with amendments (S.Rept. 109-165); passed Senate with amendments by unanimous consent on November 16, 2005; referred to House Committee on Resources (Subcommittee on Water and Power).

S. 519 (Hutchison), H.R. 386 (Hinojosa). To amend the Lower Rio Grande Valley Water Resources Conservation and Improvement Act of 2000 to authorize additional projects and activities under that act, and for other purposes. Introduced March 3, 2005; referred to Senate Committee on Energy and Natural Resources (Subcommittee on Water and Power) and House Committee on Resources (Subcommittee on Water and Power); hearing held by Senate Committee on Energy and Natural Resources (Subcommittee on Water and Power) on April 19, 2005 (S. Hrg. 109-96).

S. 895 (Domenici). To direct the Secretary of the Interior to establish a rural water supply program in the Reclamation States to provide a clean, safe, affordable, and reliable water supply to rural residents. Introduced April 25, 2005; referred to Senate Committee on Energy and Natural Resources; hearings held May 11, 2005 (S.Hrg. 109-105); reported with an amendment in the nature of a substitute (S.Rept. 109-148) on October 19, 2005; passed Senate with an amendment by unanimous consent on November 16, 2005; referred to House Committee on Resources (Subcommittee on Water and Power). House Resources Water and Power Subcommittee held hearing July 27, 2006. See also related bill H.R. 4418 (Pearce).

S. 2561 (Domenici), H.R. 5192 (Wilson). To authorize the Secretary of the Interior to make available cost-shared grants and enter into cooperative agreements to further the goals of the Water 2025 Program by improving water conservation, efficiency, and management in the reclamation states, and for other purposes. Introduced April 6, 2006; referred to the Senate Energy and Natural Resources Committee, Subcommittee on Water and Power. Subcommittee hearings held April 19, 2006 (S.Hrg. 109-477).

The following water supply and conservation bills have also been introduced: H.R. 524 (Berkley); H.R. 1008 (Calvert); H.R. 1326 (Thompson); H.R. 3691 (Nunes); H.R. 5460; S. 353 (Conrad); S. 3638.

Miscellaneous

P.L. 109-138 (H.R. 4195, Walden). To authorize early repayment of obligations to the Bureau of Reclamation within Rogue River Valley Irrigation District or within Medford Irrigation District. Introduced November 1, 2005; referred to House Committee on Resources (Subcommittee on Water and Power); subcommittee hearings held November 9, 2005; mark-up session held November 16, 2005; reported by unanimous consent December 6, 2005 (H.Rept. 109-323); passed House under suspension of the rules; referred to Senate Committee on Energy and Natural Resources; passed Senate without amendment by unanimous consent. Became P.L. 109-137 on December 22, 2005. See also related bills: H.R. 3618, S. 1576, S. 1760.

P.L. 109-183 (S. 1578, Allard). Upper Colorado and San Juan River Basin Endangered Fish Recovery Programs re-authorization Act of 2005. Introduced July 29, 2005; referred to Senate Committee on Energy and Natural Resources (Subcommittee on Water and Power); hearings held October 6, 2005; mark-up session held November 16, 2005; reported without amendment on December 8, 2005 (S.Rept. 109-196); passed by unanimous consent on December 16, 2005; considered under suspension of the rules and passed by House on March 8, 2006. Became P.L. 109-183 on March 20, 2006. See also related bill H.R. 3153 (Cubin).

P.L. 109-320 (H.R. 2720, Pearce). To further the purposes of the Reclamation Projects Authorization and Adjustment Act of 1992 by directing the Secretary of the Interior, acting through the Commissioner of Reclamation, to carry out an assessment and demonstration program to control salt cedar and Russian olive, and for other purposes. Introduced May 25, 2005; referred to the House Committee on Resources (Subcommittee on Water and Power and Subcommittee on Forests and Forest Health; subcommittee hearings held July 14, 2005; reported by unanimous consent on December 13, 2005 (H.Rept. 109-341, Part I); considered under suspension of the rules and passed on May 2, 2006. Passed Senate by unanimous consent September 29, 2006. Became P.L. 109-320 on October 11, 2006. See also related bill S. 177 (Domenici).

P.L. 109-321 (H.R. 3443 (Musgrave), S. 1498 (Allard)). To direct the Secretary of the Interior to convey certain water distribution facilities to the Northern Colorado Water Conservancy District. Introduced July 26, 2005; referred to the House Committee on Resources (Subcommittee on Water and Power); subcommittee hearings held September 27, 2005; reported by unanimous consent (H.Rept. 109-290); passed (amended) under suspension of the rules on December 13, 2005; referred to Senate Committee on Energy and Natural Resources; reported without amendment on April 20, 2006 (S.Rept. 109-248). Passed the Senate by unanimous consent September 29, 2006. Became P.L. 109-321 on October 11, 2006.

H.R. 2925 (Hinojosa). To amend the Reclamation States Emergency Drought Relief Act of 1991 to extend the authority for drought assistance. Introduced June 15, 2005; referred to House Committee on Resources (Subcommittee on Water and Power); subcommittee hearings held September 27, 2005. Reported (amended) July 17 (H.Rept. 109-568); placed on Union Calendar #324. See also S. 648 and Section 2306 of P.L. 109-234.

H.R. 3626 (Bishop), S. 1811 (Hatch). To authorize the Secretary of the Interior to study the feasibility of enlarging the Arthur V. Watkins Dam Weber Basin Project, Utah, to provide additional water for the Weber Basin Project to fulfill the purposes for which that project was authorized. Introduced July 29, 2005; referred to House Committee on Resources. Committees (Subcommittee on Water and Power); reported (amended) by unanimous consent on December 13, 2005 (H.Rept. 109-339). Passed the House under suspension of the rules September 27, 2006.

H.R. 3812 (Pombo). To authorize the Secretary of the Interior to prepare a feasibility study with respect to the Mokelumne River, and for other purposes. Introduced September 15, 2005; referred to House Committee on Resources (Subcommittee on Water and Power); considered and passed (amended) under suspension of the rules; referred to Senate Committee on Energy and Natural Resources (Subcommittee on Water and Power); subcommittee hearings held March 30, 2006.

H.R. 3929 (Calvert). To amend the Water Desalination Act of 1996 to authorize the Secretary of the Interior to assist in research and development, environmental and feasibility studies, and preliminary engineering for the Municipal Water District of Orange County, California, Dana Point Desalination Project located at Dana Point, California. Introduced September 28, 2005; referred to House Committee on Resources (Subcommittee on Water and Power) and House Committee on Science; subcommittee hearings held October 6, 2005; markup session held November 16, 2005; reported (amended) by unanimous consent on December 12, 2005 (H.Rept. 109-335, Part I); considered under suspension of the rules and passed on May 2, 2006; referred to Senate Committee on Environment and Public Works, and reported (amended) September 27, 2006 (S.Rept. 109-353). Placed on Senate Calendar, No. 647.

H.R. 4013 (Cannon). To amend the Reclamation Projects Authorization and Adjustment Act of 1992 to provide for conjunctive use of surface and groundwater in Juab County, Utah. Introduced October 7, 2005; referred to House Committee on Resources (Subcommittee on Water and Power); subcommittee hearing held February 8, 2006; reported by unanimous consent on April 27, 2006 (H.Rept. 109-443); considered under suspension of the rules and passed on June 12, 2006; referred to Senate Committee on Energy and Natural Resources. See also related bill S. 1812 (Hatch).

H.R. 5136 (Hall). To establish a National Integrated Drought Information System within the National Oceanic and Atmospheric Administration to improve drought monitoring and forecasting capabilities. Introduced April 6, 2006; referred to House Committee on Science (Subcommittee on Environment, Technology, and Standards); reported (amended) on June15, 2006 (H.Rept. 109-503). Passed the House under suspension of the rules September 26, 2006. See also related bill S. 2751 (Nelson), which was reported from the Senate Commerce Committee September 29 and placed on the Senate Union Calendar.

S. 166 (Smith, Gordon). A bill to amend the Oregon Resource Conservation Act of 1996 to reauthorize the participation of the Bureau of Reclamation in the Deschutes River Conservancy, and for other purposes. Introduced January 25, 2005; referred to Senate Committee on Energy and Natural Resources; hearings held April 19, 2005 (S. Hrg. 109-96); reported without amendment (S. Rpt.109-164); passed Senate without amendment by unanimous consent November 16, 2005; referred to House Committee on Resources (Subcommittee on Water and Power); subcommittee hearings held April 26, 2006.

S. 231 (Smith, Gordon). A bill to authorize the Bureau of Reclamation to participate in the rehabilitation of the Wallowa Lake Dam in Oregon, and for other purposes. Introduced February

1, 2005. Mark-up session held February 9, 2005; reported favorably without amendment by Senate Committee on Energy and Natural Resources on March 10, 2005 (S. Rpt.109-30); passed Senate without amendment by unanimous consent on July 26, 2005; referred to House Committee on Resources (Subcommittee on Water and Power). See also related bill H.R. 5016 (Walden).

S. 232 (Smith, Gordon). A bill to authorize the Secretary of the Interior, acting through the Bureau of Reclamation, to assist in the implementation of fish passage and screening facilities at non-Federal water projects, and for other purposes. Introduced February 1, 2005. Mark-up session held February 9, 2005; reported by Senate Committee on Energy and Natural Resources on March 10, 2005 (S.Rept. 109-31); passed Senate without amendment by unanimous consent on July 26, 2005; referred to House Committee on Resources (Subcommittee on Water and Power and Subcommittee on Fisheries and Oceans).

S. 648 (Smith, Gordon). A bill to amend the Reclamation States Emergency Drought Relief Act of 1991 to extend the authority for drought assistance. Introduced March 17, 2005; referred to Senate Energy and Natural Resources (Subcommittee on Water and Power); subcommittee hearings held July 12, 2005 (S.Hrg. 109-138); reported without amendment on December 8, 2005 (S.Rept. 109-190); passed by unanimous consent on December 16, 2005; referred to House Committee on Resources (Subcommittee on Water and Power). See related bill: H.R. 2925 and Section 2306 of P.L. No: 109-234.

S. 819 (Johnson, Tim), H.R. 3967 (Herseth).To authorize the Secretary of the Interior to reallocate costs of the Pactola Dam and Reservoir, South Dakota, to reflect increased demands for municipal, industrial, and fish and wildlife purposes. Introduced April 15, 2005; Referred to Senate Committee on Energy and Natural Resources (Subcommittee on Water and Power); hearing held July 12, 2005 (S. Hrg. 109-138); reported without amendment (S.Rept. 109-168); passed Senate by unanimous consent November 16, 2005; referred to House Committee on Resources (Subcommittee on Water and Power). H.R. 3967 passed House on June 12, 2006 and was place on Senate legislative calender no. 468.

S. 1017 (Chafee). To reauthorize grants from the water resources research and technology institutes established under the Water Resources Research Act of 1984. Introduced May 12, 2005; referred to Senate Committee on Environment and Public Works; reported with amendments (S. Rpt 109-90); placed on Senate Legislative Calender (No. 139) on June 27, 2005; passed Senate with amendments by unanimous consent on September 27, 2005; referred to House Committee on Resources (Subcommittee on Water and Power).

S. 1338 (Murkowski). A bill to require the Secretary of the Interior to conduct a study on groundwater resources in the state of Alaska, and for other purposes. Introduced June 29, 2005; referred to Senate Committee on Energy and Natural Resources (Subcommittee on Water and Power). Hearing held July 12, 2005 (S. Hrg. 109-138); reported with an amendment favorably on September27, 2005 (S.Rept. 109-170); passed Senate with an amendment by unanimous consent on November 16, 2005; referred to House Committee on Resources (Subcommittee on Water and Power); subcommittee hearings held March 8, 2006.

The following western water bills have also been introduced: H.R. 487 (Pearce); H.R. 2555 (Musgrave) and related bill S. 1106 (Allard); H.R. 3182 (Pombo); H.R. 3521 (Beauprez) and related bill S. 1202 (Allard); H.R. 5110; H.R. 5180; H.R. 5244, and related bill S. 2667.

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