

# CRS Report for Congress

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## Water Resource Issues in the 108th Congress

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### Summary

Growing population and changing values have increased pressure on existing water supplies, resulting in water use conflicts throughout the country. These conflicts are particularly evident in the West, where population is expected to increase by 30% in the next 20-25 years and where urban needs often conflict with agricultural needs, as well as with increased demand for water for endangered species, recreation, and scenic enjoyment. The 108<sup>th</sup> Congress is likely to consider numerous water resource bills, including: appropriations for the Bureau of Reclamation and U.S. Army Corps of Engineers for FY2003 and FY2004, a Water Resources Development bill for 2003, and various agency policy and program changes — *e.g.* operation of federal projects along the Klamath, Missouri, and Colorado Rivers, and restoration efforts affecting the California Bay-Delta (CALFED) and the Florida Everglades. Also at issue is the broader question of the future role of traditional water resource agencies in an era of changing public demands, declining budgets, and integrated environmental resource management. This product will be updated periodically as warranted by developments.

### Introduction

Water supply and management issues are becoming increasingly important as pressure on existing supplies continues to grow. Increasing populations in many areas, combined with increasing demand for water for recreation, scenic value, and fish and wildlife habitat, have resulted in conflicts throughout the country, especially in the arid West. Major water resource development projects (large dams and diversions) traditionally met much of the consumptive demand for water, especially for the largest categorical use, irrigated agriculture; however, the financial and environmental costs of such projects

have limited development for more than two decades.<sup>1</sup> Additionally, development projects for consumptive use, power generation, and flood control have been criticized for degrading recreational opportunities, scenic values, and fish and wildlife habitat. Consequently, considerable public pressure has been focused on getting water resources agencies to alter project operations or to otherwise mitigate environmental impacts.

In the West, naturally scarce water supplies and increasing urban populations<sup>2</sup> have spawned new debates over water allocation — particularly over water for threatened or endangered species — and have increased federal-state tensions, since states traditionally have had primacy in intrastate water allocation. Water marketing and water trading are becoming increasingly accepted, but some federal and state laws limit this option. Some critics have called for more efficient use of agricultural water and even transfer of water from agricultural to urban uses. Yet, agricultural users argue that stable supplies of low-cost water contribute to producing the nation's food supply, and therefore provide widespread benefits. Further, discussion of water allocation is complicated by the labyrinth of water rights, long-term water contracts, and decades of incremental state and federal law on water use and development. Nonetheless, municipal water demands will likely play a major role in future allocation or re-allocation decisions. For example, conflicts such as the current debate over transferring Colorado River water from the agriculture-based Imperial Irrigation District in southern California to the city of San Diego may become more common.

Nationwide, threatened and endangered species and general concern over the health of the nation's rivers and riparian areas have driven increased attention to river and watershed restoration efforts. The federal government is involved in several restoration initiatives ranging from the Florida Everglades to the San Francisco Bay-San Joaquin/Sacramento Rivers Delta (Bay-Delta).<sup>3</sup> Yet, the demand for traditional or new water supply projects, navigational improvements, flood control projects, and beach and shoreline protection efforts continues. In fact, both the Everglades and Bay-Delta restoration efforts include significant water supply components. Controversy over how much water should be devoted to recovering threatened and endangered species, protecting water quality, and supplying farms, cities, and other uses has been on-going. Further, widespread drought throughout the country over the past several years has

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<sup>1</sup> Municipal supplies of water have traditionally been developed locally or regionally, without federal assistance. Although some municipalities are supplied water from federal facilities, for decades (especially since the 1970s), the bulk of water-related federal assistance has been channeled to municipalities through the states for wastewater treatment and for safe drinking water, not for development of water supplies. For more information on federal water projects and programs, see CRS Report RL30478, *Federally Supported Water Supply and Wastewater Treatment Programs*.

<sup>2</sup> The population in the West is projected to increase by 30% in the next 20-25 years. Western Water Policy Review Advisory Commission, *Water in the West: Challenge for the Next Century* (Denver, CO: June, 1998), p. xiii.

<sup>3</sup> For more information on federal involvement in Everglades restoration, see CRS Report RS20702, *South Florida Ecosystem Restoration and the Comprehensive Everglades Restoration Plan*. For information on Bay-Delta issues, see CRS Issue Brief IB10019, *Western Water Resource Issues*.

spurred new requests for support for developing and ensuring water supplies, and new security issues have placed added pressures on budgetary resources.

These issues will continue to be debated during consideration of individual project authorizations, as well as during debate on water resource development legislation and on the FY2003 and FY2004 appropriations for the Bureau of Reclamation and the U.S. Army Corps of Engineers (Energy and Water Development Appropriations Acts). Specific issues likely to surface during the 108<sup>th</sup> Congress are discussed below. Other general issues that may arise include federal reserved water rights in relation to federal lands, transfer of water across federal lands and through federal facilities, Indian water rights settlements, licensing of non-federal hydro power facilities (*i.e.*, private dams regulated by the Federal Energy Regulatory Commission (FERC)), and whether to establish a national water commission to address federal water policy and coordination.

## Water Resource Projects

Most of the large dams and water diversion structures in the United States were built by, or with the assistance of, the Bureau of Reclamation (Bureau) or the U.S. Army Corps of Engineers (Corps). Traditionally, Bureau projects were designed principally to provide reliable supplies of water for irrigation and some municipal and industrial uses; Corps projects were designed principally for flood control, navigation, and power generation. The Bureau currently manages nearly 350 storage reservoirs and approximately 250 diversion dams in 17 western states,<sup>4</sup> providing water to approximately 9 million acres of farmland and 31 million people. The Corps' operations are much more widespread and diverse, and include several thousand flood control and navigation projects throughout the country, including 25,000 miles of waterways (with 238 locks), 926 harbors, and 383 dam and reservoir projects (plus 75 hydroelectric plants).

Both the Corps and the Bureau have experienced budget declines over the past 30 years, particularly in "real dollar" amounts appropriated for construction. The Corps was appropriated \$4.6 billion for FY2002, including \$1.72 billion for construction. Reflecting its relatively smaller size and narrower scope of activities, the Bureau received a total of \$0.86 billion for FY2002. Both agencies received emergency supplemental funds for security activities for FY2002 — the Bureau received \$30 million and the Corps received \$139 million in emergency funding for activities related to terrorism in P.L. 107-117.

Both agencies have been criticized by some appropriations and authorizing committees for shifting their focus from water resources development to water resources management and environmental mitigation. This is a reversal of sorts from development criticisms during the 1980s and early 1990s, and reflects the different and changing priorities in executive and legislative programs and budgets. At the same time, the Corps has been publicly criticized for what some view as catering to development interests and attempting to "grow" the construction budget for traditional navigation and water infrastructure projects, despite current and past executive branch requests for lower than average historical construction levels. (For more information on funding issues, see CRS Report RL31307, *Appropriations for FY2003: Energy and Water Development*.) Many

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<sup>4</sup> Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming.

non-water user groups still view these agencies as largely water resource development agencies and have been critical of the Corps in particular for alleged bias in justifying new construction projects. (See CRS Report RL30928, *Army Corps of Engineers: Civil Works Reform Issues for the 107<sup>th</sup> Congress*.)

**Corps of Engineers.** In 1986, after nearly two decades of policy confrontations with the Executive Branch over cost-sharing and specific construction authorizations, Congress enacted major water project reform legislation known as the Water Resources Development Act (P.L. 99-662, 33 U.S.C. 2201). This Act, known as WRDA '86, reestablished the tradition of a biennial omnibus authorization bill for Corps projects and programs. It fundamentally changed many of the policies governing Corps operations, especially increased cost-share formulas, which in turn provided broader distribution of funds and planning for additional navigational/harbor projects, as well as more cooperative federal-local initiatives for flood control or flood prevention. Omnibus water project authorizations (WRDA bills) followed in 1988, 1990, 1992, 1996, 1999, and 2000. This traditionally biennial enactment<sup>5</sup> of a Water Resources Development Act provides for policy oversight of Corps programs and a legislative vehicle for authorizing new projects and programs, as well as for adjusting financing and other aspects of water project planning and construction.

The 1996 WRDA (P.L. 104-303) approved projects totaling \$5.4 billion (federal and local share), including funding for 44 future Corps projects and studies, and changed federal and nonfederal cost sharing ratios for both flood control and dredge material disposal. WRDA 1999 (P.L. 106-53) included \$6.3 billion in project and program authorizations. The major new activities authorized for future appropriations included: 45 large flood control, navigation, and shore protection plans, including 9 harbor improvements (\$1.2 billion); several hundred million dollars of increased flood protection for the Sacramento area (doubling flood protection to a 135-year frequency level); a new 5-year \$200 million Corps program aimed at non-structural flood mitigation and flood plain restoration; numerous habitat, watershed, and ecosystem restoration activities in additional river basins; and more than 100 environmental and water quality infrastructure projects, including dozens to address municipal combined sewer overflows and to develop water supply and wastewater infrastructure. WRDA 1999 also increased local cost-sharing for shore protection and beach erosion with the local portion to be increased in phases from 35% to 50%.

**WRDA 2000 (P.L. 106-541).** The final WRDA 2000 bill “costed out” at \$7.3 billion and included authorizations for 24 new construction projects.<sup>6</sup> Federal costs are approximately \$4.5 billion, about two-thirds of total project and program authorizations. Initial authorization of funds for Everglades restoration total approximately \$1.4 billion — nearly \$700 million for the federal share. One of the largest projects authorized under

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<sup>5</sup> Although WRDA bills are traditionally enacted every other year, there was no WRDA bill in 1994, and the WRDA bill for 1998 was not enacted until 1999. Similarly, the 107<sup>th</sup> Congress considered WRDA legislation for 2002, but none was enacted. It is expected that the 108<sup>th</sup> Congress will follow up by considering a WRDA bill for 2003.

<sup>6</sup> With the passage of each WRDA, dozens of new projects are authorized; however, not all projects receive appropriations. The Corps' current “backlog” of authorized but unfunded projects is estimated to be more than \$40 billion.

the Corps' traditional mission is a \$1.8 billion expansion of the New York-New Jersey Harbor, which now will benefit from the user-paid Harbor Maintenance Trust Fund along with a \$700 million federal construction cost-share. At least 28 other large authorizations are made conditional on planning still in progress; they are mainly for flood control and shore protection projects contained in Title I of the bill.

Project issues discussed during WRDA 2000 included the Everglades and other regional restoration projects, notably, a sediment/runoff study for the Upper Mississippi River Basin; aquatic and riparian habitat mitigation and restoration totaling \$100 million for the Illinois River and \$75 million for the upper Missouri River Basin; and sediment clean-up for the Great Lakes estimated at \$100 million.<sup>7</sup> In part in response to publicly expressed environmental concerns, Congress authorized several "restoration" features as offsets or mitigation for environmental effects in connection with several dozen more traditional navigation and flood control projects — with the New England region broadly targeted to receive \$60 million. Conferees on WRDA 2000 dropped a variety of environmental infrastructure provisions, some of which were subsequently included in a consolidated appropriations bill for FY2001 (P.L. 106-554; Appendix D, Section 108 (114 Stat. 2763A-219)). Other WRDA 2000 issues included Corps project planning and management procedures that have come under criticism, including allegations that the Corps consistently uses "unrealistic assumptions" in its economic analyses. WRDA 2000 contains a provision (§216) directing the Corps to contract with the National Academy of Sciences (NAS) to study the feasibility of an independent peer review of the Corps' project feasibility reports. The final report, which recommended an independent peer review process, was released in July 2002. Additional Academy studies on broader Corps' management and organizational issues are due in late 2003.

**WRDA 2002.** Renewed interest in changing the way the Corps operates, as well as late-term scheduling issues, complicated passage of a WRDA bill for 2002. Although the House Transportation and Infrastructure Committee reported a WRDA bill for 2002 (H.R. 5428, H.Rept. 107-717), there was no floor action on the bill. The Senate did not report a WRDA bill for 2002. Chief among the items being debated was whether to change the way the Corps plans for and evaluates projects. H.R. 5428 as reported (as amended) would not have significantly changed Corps operations; however, several individual bills addressed this issue (e.g., H.R. 1320, H.R. 2353, S. 646, and S. 1987.) Such changes have been controversial and whether any agreement on reforms will be made by the 108<sup>th</sup> Congress may depend in part on the Administration's water policy and spending priorities and whether the recommendations of outside entities, such as the NAS, serve to promote legislative consensus or compromise. At the same time, pressure to authorize new projects and to increase funding or modify existing projects is often intense and could "jumpstart" a WRDA bill early in 2003.

**Bureau of Reclamation.** Since the early 1900s, the Bureau has constructed and operated large, multi-purpose water supply projects, primarily for irrigation.

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<sup>7</sup> These large-scale plans involve studies and pilot phases — \$1.4 billion of at least \$4 billion in federal construction for the Everglades over two decades (if current estimates hold); not including matching state funds. (For more information on Everglades restoration, see CRS Report RS20702.) More limited watershed improvements were authorized for Lake Champlain (\$20 million), the lower Columbia area (\$30 million), and Puget Sound (\$40 million).

Construction authorizations slowed during the 1970s and 1980s due to several factors. In 1987, the Bureau announced a new mission: environmentally sensitive water resources management. In the following decade, increased population, prolonged drought, fiscal constraints, and increased water demands for fish and wildlife, recreation, and scenic enjoyment resulted in increased pressure to alter operation of many Bureau projects. Such changes have been controversial, however, as water rights, contractual obligations, and the potential economic effects of altering project operations complicate any change in water allocation or project operations.

In contrast to the Corps, there is no tradition of a regularly scheduled authorization vehicle for Bureau projects. Instead, Bureau projects are generally considered individually.<sup>8</sup> Bureau-related water project and management issues that are likely to be considered during the 108<sup>th</sup> Congress include:

- ! management and allocation of lower Colorado River water;
- ! oversight of the Central Valley [California] Project Improvement Act;
- ! reauthorization of appropriations for CALFED (Bay-Delta restoration);
- ! oversight of the Klamath River Basin Project;
- ! Salton Sea [California] restoration activities;
- ! transfer of ownership title to specific Bureau facilities;
- ! authorization of rural water supply and water recycling projects; and
- ! desalination proposals.

(For information on these and other active legislative proposals affecting the Bureau of Reclamation, see CRS Issue Brief IB10019, *Western Water Resource Issues*.)

A broader issue that often receives attention from Congress is oversight of the Bureau's mission and its future role in western water supply and water resource management generally. As public demands and concerns have changed, so has legislation affecting the Bureau. Further, many in Congress have questioned the Bureau's shift in focus from a water resources development agency to a water resource management agency. Some have also questioned the increasing number of proposals to fund new rural water supply projects with high federal cost-share ratios and grants for reclaiming and reusing water — especially while overall funding for “traditional” reclamation projects is declining. Critical questions Congress may address include: What should be the future federal role in water resources development and management? Should (or to what extent should) the federal government develop or augment new supply systems designed primarily to serve communities/municipalities, or is this a local/regional responsibility? Who should pay, and how much? Should the Bureau be involved in environmental mitigation or is this best handled through new institutional arrangements (*e.g.*, CALFED, Everglades processes) or other existing agencies (*e.g.*, U.S. Fish and Wildlife Service and/or the Environmental Protection Agency)? Should existing projects be revamped or re-operated to accommodate changing demands, and, if so, do new policies and institutions (state-federal roles) need to be addressed, and again, who should pay?

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<sup>8</sup> However, Congress occasionally passes omnibus bills addressing key Bureau policy changes, as well as new or revised project and program authorizations, the latest being the Reclamation Projects Authorization and Adjustment Act of 1992 (P.L. 102-575)).