



## **CRS Report for Congress**

# **Water Resource Issues in the 110<sup>th</sup> Congress**

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### **Summary**

Water resources management often involves trade-offs among user groups, environmental interests, and local, regional, and national interests. Water resources development is particularly controversial because of budgetary constraints, conflicting policy objectives, environmental impacts, and demands for local control. Hurricane Katrina brought to the forefront long-simmering policy disputes involving local control, federal financing, environmental and social tradeoffs, and multi-level accountability and responsibility for water infrastructure projects, such as levees. Construction, improvement, and management of other federal water resource projects (e.g., locks, dams, and diversion facilities) face similar challenges.

The 110<sup>th</sup> Congress faces numerous issues and trade-offs as it considers water resource development, technology, water supply, and climate change legislation. These issues are likely to arise as Congress debates authorizations and appropriations for Bureau of Reclamation and Army Corps of Engineers projects, and agency policy and program changes (e.g., water reuse, federal project operations, and oversight of ecosystem restoration programs such as CALFED and Everglades). Oversight issues related to Hurricane Katrina and the federal role in hurricane and flood protection, and levee construction and management, also are ongoing.

### **Introduction**

The federal government has a long history of involvement in water resource development and management to facilitate water-borne transportation, expand irrigated agriculture, reduce flood losses, and, more recently, restore aquatic ecosystems. Increasing pressures on the quality and quantity of available water supplies — due to growing population, environmental regulation, in-stream species and ecosystem needs, water source contamination, agricultural water demand, climate variability, and changing

public interests — have resulted in heightened water use conflicts throughout the country, particularly in the West.

Federal water resource construction waned during the last decades of the 20<sup>th</sup> century in response to fiscal constraints, interest in more local control of water and land resources, and requirements to assess environmental impacts of federal actions and to protect fish and wildlife. This marked the end of expansionist federal policies of the early 20<sup>th</sup> century that had led to widespread federal investment in dams, navigation locks, irrigation diversions, and levees and basin-wide planning and development efforts.

The 110<sup>th</sup> Congress is faced with numerous water resource issues regarding the federal role in the planning, construction, maintenance, inspection, and financing of water resources projects and federal investment in water resources research and data collection. Congress makes these decisions within the context of multiple and often conflicting objectives, competing legal decisions, and entrenched institutional mechanisms (e.g., century-old water rights, contractual obligations, etc.). Although most water resource legislation typically addresses site-specific needs, certain themes and issues appear in many local and regional water resources conflicts. For example, demand for new project services (e.g., improved navigation, new water supply, improved or new flood control facilities), protection of threatened and endangered species, and water quality concerns are common to many conflicts.

Even so, most water resource legislation deals with specific sites. The 110<sup>th</sup> Congress may consider site-specific restoration legislation for coastal Louisiana, the Upper Mississippi River-Illinois Waterway System, the Great Lakes, the San Joaquin River, and possibly the Lower Colorado River basin. However, the more typical site-specific measures, on a smaller scale, are the hundreds of individual water resources projects authorized through Water Resources Development Acts (WRDAs) and stand-alone bills addressing new water supply technologies and augmentation of existing water supplies, rural water supply development, and Indian water rights settlements. Oversight of existing laws and projects (e.g., Central Valley Project Improvement Act (CVPIA), flood protection in New Orleans and Sacramento) and project operations is also expected, especially where court decisions, agency actions, or other circumstances (such as drought) may affect project operations (e.g., Colorado, Columbia, Klamath, Missouri, Rio Grande, and San Joaquin rivers). Latent legislative topics that the 110<sup>th</sup> Congress may choose to address include proposals for national water supply and drought assessments, national water policy coordination and planning, and the effect of climate change on water resources. Financing instruments to address water infrastructure needs such as rehabilitating aging water supply, navigation, and flood control works, and assisting local water entities to comply with federal regulations, also may be considered.

## **Background**

In the West, naturally scarce water supplies and increasing urban populations have spawned new debates over water allocation — particularly over water for threatened or endangered species — and have increased federal-state tensions, since the federal government has generally deferred to state primacy in intrastate water allocation. Observed changes in the timing of snowmelt and runoff and the potential for further climate variability due to climate change has increased concerns about the reliability of developed water supplies and the flexibility of existing management mechanisms.

Western water legislation during the 110<sup>th</sup> Congress may center on project management and program issues, such as San Joaquin River settlement legislation and the Bureau of Reclamation's Title 16 water reclamation and recycling program. Oversight of the Bureau's Central Valley Project (CVPIA, Trinity River, and CALFED and other San Francisco Bay-San Joaquin/Sacramento Rivers Delta (Bay-Delta) management issues), Klamath project, and Colorado River operations also may continue.

Nationally, congressional attention during the 110<sup>th</sup> Congress may focus on the federal role in levee construction, maintenance, and evaluation, and water resources management generally. Hurricane Katrina oversight issues — such as how to better coordinate federal activities and how to respond or rebuild in the wake of catastrophic damages — may be of particular focus, as might the examination of other areas of the country that may also be vulnerable. Also of concern nationwide is the status of threatened and endangered species and the health of the nation's rivers and riparian areas. Federal obligations to protect threatened and endangered species and other environmental quality requirements have resulted in increased attention to river and watershed restoration efforts. The federal government is involved in several significant restoration initiatives ranging from the Florida Everglades to the California Bay-Delta (CALFED).<sup>1</sup>

At the same time, the demand for traditional or new water supply projects, navigational improvements, flood control projects, and beach and shoreline protection continues. In fact, both the Everglades and Bay-Delta restoration efforts include significant water supply components. Controversy over how much water should be divided among recovering (threatened and endangered) species, protecting water quality, and supplying farms, cities, and other uses has been ongoing. Further, widespread drought throughout different parts of the country over the past several years has spurred new requests for developing and ensuring dwindling water supplies, and new security threats to water infrastructure have placed added pressures on budgetary resources. The 109<sup>th</sup> Congress left pending several national water policy proposals ranging from new water study commissions and assessments, to global sanitation and drinking water aid; similar proposals may be introduced in the 110<sup>th</sup> Congress.

Congress may address water resource issues during consideration of individual project authorizations, as well as during debate on WRDA legislation and on FY2008 appropriations for the Bureau and the Corps. Specific issues that are being or may be discussed during the 110<sup>th</sup> Congress are treated 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 nonfederal hydropower 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.

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<sup>1</sup> For more information on federal involvement in Everglades restoration, see CRS Report RS20702, *South Florida Ecosystem Restoration and the Comprehensive Everglades Restoration Plan*, by Pervaze A. Sheikh and Nicole T. Carter. For information on Bay-Delta issues, see CRS Report RL33565, *Western Water Resource Issues*, by Pervaze A. Sheikh and Betsy A. Cody.

## 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 in the Department of the Interior (Bureau) or the U.S. Army Corps of Engineers in the Department of Defense (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 hundreds of storage reservoirs and diversion dams in 17 western states,<sup>2</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 navigation locks), nearly 1,000 harbors, and 400 dam and reservoir projects (with 75 hydroelectric plants).

**Bureau of Reclamation.** Since the early 1900s, the Bureau has constructed and operated many large, multi-purpose water projects. Water supplies from these projects have been primarily for irrigation. 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>3</sup> Bureau-related water project and management issues that may be considered during the 110<sup>th</sup> Congress include:

- San Joaquin River restoration settlement legislation;
- examination of the Bureau's Title 16 (recycling and reuse) program;
- oversight of CVPIA;
- oversight of, and appropriations for, CALFED (and other Bay-Delta issues);
- authorization of individual water recycling and desalination projects;
- response to drought, and effects of climate variability on federal reservoirs; and
- Colorado River water management 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

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<sup>2</sup> Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming.

<sup>3</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).

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. Critical questions Congress may address include: What should be the future federal role in water resources development and management? What do western water managers need from the Bureau and how can the Bureau help with western water 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) or other existing agencies (e.g., 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? Relatedly, the issue of whether there should be a National Water Commission or periodic water resource assessments received some attention in the 109<sup>th</sup> Congress, and may also be considered in the 110<sup>th</sup>.

**Corps of Engineers.** Congress authorizes Corps water resources activities and makes changes to the agency's policies generally in a Water Resources Development Act (WRDA), and at times in the annual Energy and Water Development Appropriations acts. Contents of a WRDA are cumulative and new acts do not supersede or replace previous acts. From the late 1980s until 2002, WRDAs followed a loosely biennial cycle; the last WRDA was enacted in 2000. WRDA bills were introduced in 2002, 2003, 2004, and 2005, but were not enacted. Their enactment was complicated by differences over whether to authorize controversial projects, and whether to reform or change the way the Corps plans and evaluates projects.

Consideration of the WRDA bills in the first session of the previous Congress included debates in committee on changes to state and local roles in projects, potential changes in Corps policies and practices (such as changes to Corps permitting and regulatory practices), and authorization of high-profile projects. Prior to Hurricane Katrina, the project authorizations receiving the most attention were coastal Louisiana wetlands restoration, lock expansion and ecosystem restoration for the Upper Mississippi River-Illinois Waterway, and Everglades-related projects. The 2005 hurricane season added other possible authorizations to the mix, including authorizations for near-term and long-term hurricane protection measures for Louisiana and other Gulf Coast states and flood control activities in other areas of the nation vulnerable to flooding. Hurricane Katrina increased interest in flood control and Louisiana projects in the bill, while also increasing interest in streamlining federal spending, which has some observers concerned about authorizing more Corps projects. Pressure to authorize new priority projects, especially those related to areas affected during the 2005 hurricane season, and to increase funding for or modify existing projects, may result in outstanding issues being addressed or resolved differently by the 110<sup>th</sup> Congress — particularly given the absence of Administration support for the recent omnibus WRDA bills. For more information on current WRDA issues, see CRS Report RL33504, *Water Resources Development Act (WRDA): Corps of Engineers Authorization Issues*, coordinated by Nicole T. Carter.

The 110<sup>th</sup> Congress continues to address issues related to the Administration's adoption of a performance-based budgeting approach for the agency, as well as safety and security of Corps facilities and implementation of Florida Everglades ecosystem restoration. Recent Congresses have expressed dissatisfaction with the Corps' financial management, particularly the reprogramming of funds across projects and the use of multiyear continuing contracts for projects. Corps flood control and hurricane protection projects, in particular, are receiving congressional and public scrutiny following Hurricane Katrina. This scrutiny is added to the attention already on the Corps' river and reservoir management; in many cases, Corps facilities and their operation are central to debates over multi-purpose river management. For example, water resources management by the Corps, particularly on the Mississippi, Missouri, and Columbia and Snake Rivers system, remains controversial and is frequently challenged in the courts. The Corps' projects and role in emergency response also may be the subject of congressional oversight, legislative direction, authorizing legislation, and appropriations.

## **Concluding Remarks**

Water resources debates in the 110<sup>th</sup> Congress likely will be dominated by different opinions of the desirability and need for changing the water resource agencies' policies, practices, and accountability, and for authorizing multi-billion dollar investments in ecosystem restoration, navigation, and flood and storm damage reduction measures. A broad water resource issue significant to the water resources agencies and the nation is the changing federal role in water resources planning, development, and management.

Hurricane Katrina raised questions about this role; in particular, the disaster brought attention to the trade-offs in benefits, costs, and risks of the current division of responsibilities among local, state, and federal entities for flood mitigation, preparedness, response, and recovery. The question of the federal role also is raised by the increasing competition over water supplies, not only in the West but also for urban centers in the East (e.g., Atlanta), which has resulted in a growing number of communities seeking financial and other federal assistance, actions, and permits related to water supply development (e.g., desalination and water reuse projects, reservoir expansions and reoperations). Congress rarely chooses to pursue broad legislation on federal water resources policies for many reasons, including the challenge of enacting changes that affect such a wide breadth of constituencies. Another practical challenge is the fractured nature of congressional committee jurisdictions over water resources and water quality issues and activities. Consequently, Congress traditionally has pursued incremental changes through WRDA bills for the Corps and project-specific legislation for the Bureau, and this pattern seems likely to continue.