

New Directions in California Water Management

March 17, 2006

Conflict over California Water

In California, water and conflict often go together. This conflict began at the beginning of western expansion to the coast and has persisted since. Much of the conflict is about how Californians meet their demands for water.

More than one-hundred years ago, sharp disagreements arose over San Francisco's proposal to erect a dam in Hetch Hetchy Valley in Yosemite National Park. San Francisco eventually prevailed and built the dam and supply system, but the decision has been unpopular. Removal of the dam has been proposed several times, and today the State of California again is studying the feasibility of removing it.

In 1957, the State of California issued a comprehensive master plan for the control, protection, conservation, distribution, and use of the water in California to meet present and future needs. Since this first plan, the California Department of Water Resources (DWR) has prepared seven water plan updates, known as the Bulletin 160 series. The California Water Code now requires the water plan to be updated every five years.

Not surprisingly, there have been disagreements over the policy course charted by the water plan updates. These disagreements reached a climax with the release of a water plan update in 1998. Bulletin 160-98 presented information on water demand management methods such as water conservation. These measures were described as additional means of meeting water needs that could be combined with traditional water supply augmentation measures such as reservoirs. Critics of the bulletin claimed that too much emphasis was given to supply augmentation – reservoirs -- and too little to demand reduction – water conservation. Criticism of the bulletin's content and recommendations reduced its usefulness as a strategic plan for managing and developing the state's water resources.

As the 1998 update of the water plan was being prepared, another large-scale water planning effort was being carried out in California. The CALFED Bay-Delta Program was established in 1995 to address problems in the Sacramento-San Joaquin Bay-Delta estuary. This estuary, the largest on the west coast of North America, is a major source of the state's drinking and irrigation water. The estuary is also important ecologically to fish, migratory birds, and other plants and animals. Finally, it's a low-lying area protected from flooding by century-old dikes and levees.

Dozens of state and federal agencies had responsibility for various aspects of the utilization and protection of the Bay-Delta, but these agencies had seldom worked together on collaborative solutions to address the estuary's multiple problems. Under the CALFED Bay-Delta Program, these agencies agreed to work together to develop integrated solutions that included more reliable water supply, protection of water quality, restoration of the Bay-Delta ecosystem, and prevention of catastrophic breaches of Delta levees.

The CALFED approach – a collaborative effort aimed at integrating several resource management objectives – seemed to be working well. DWR developed a similar collaborative approach for updating the California Water Plan.

California Water Plan Update 2005

For our latest update, DWR changed the way we prepare the *California Water Plan Update* and the information it contains. The Water Plan has become a strategic plan that describes the role of State government and the growing role of California's regions in managing the state's water resources.

In preparing *Update 2005*, DWR sought the participation of California's water communities, responded to new State laws, and, by working with an Advisory Committee, developed a new approach to planning California's water future. DWR significantly expanded the public forum for updating the California Water Plan by establishing the 65-member Advisory Committee and a 350-member Extended Review Forum and gathering input from 2,000 other interested members of the public.

As a strategic planning document, this water plan provides California's water communities with a vision, mission, and goals for meeting challenges of sustainable water use through 2030 in the face of uncertainty (see box below). The plan provides a Framework for Action to stimulate progress to ensure a sustainable and reliable water supply in 2030. This framework will focus and prioritize State government's water planning, oversight, and technical and financial assistance on several foundational actions and initiatives.



The Framework for Action also identifies a number of things the state must do that are essential to accomplishing its water strategy. They include providing effective State leadership, assistance and oversight; clarifying roles and responsibilities; and developing funding strategies to help local agencies and governments meet the water needs of Californians. The support activities also include investing in new water technologies, adapting for the effects of global climate change, improving water data

management and analysis, increasing scientific understanding, and making decisions equitable across all communities.

Vision

California's water resource management preserves and enhances public health and the standard of living for Californians; strengthens economic growth, business vitality, and the agricultural industry; and restores and protects California's unique environmental diversity.

Mission

To develop a strategic plan that guides State, local, and regional entities in planning, developing, and managing adequate, reliable, secure, affordable, and sustainable water of suitable quality for all beneficial uses.

Goals

- State government supports good water planning and management through leadership, oversight, and public funding.
- Regional efforts play a central role in California water planning and management.
- Water planning and urban development protect, preserve, and enhance environmental and agricultural resources.
- Natural resource and land use planners make informed water management decisions.
- Water decisions and access are equitable across all communities.

California needs the cooperation of State, federal, and local agencies and governments, non-governmental organizations, and water users to implement this strategic plan.

California Water Plan Update 2005 has recommendations for decision-makers, resource managers, water suppliers, and water-users (summarized below). And for the first time, the water plan includes a proposal for carrying out its recommendations. For each recommendation, the implementation plan includes specific near-term and comprehensive long-term actions, resources assumptions, implementation challenges, and performance measures. *Update 2005* also includes the actions in the CALFED Bay-Delta Program Record of Decision, and it is consistent with new water legislation and recommendations from State-sponsored water proposals.¹

If Californians make the right choices and investments, California's water resources can protect public health and improve the standard of living for all Californians; strengthen economic growth, business vitality, and the agricultural industry; and protect and restore California's watersheds and ecosystems.

California Water Plan Update 2005 contains water data, information, and studies used to develop the strategic plan. *Update 2005* outlines today's water challenges and evolving water management responses; it presents benefits and costs of 25 resource management strategies (listed below); it reports regional water conditions and activities; it considers multiple baseline scenarios for 2030 and their water demands; and it describes an approach to improve data management and analytical tools for future plan updates.

Update 2005 is presented in five volumes: (1) Strategic Plan, (2) Resource Management Strategies, (3) Regional Reports, (4) Reference Guide, and (5) Technical Guide. In April 2005, DWR distributed the Public Review Draft, and in June held public workshops to receive comments. Governor Schwarzenegger approved the final

¹ The Water Desalination Task Force, the State Recycling Task Force, the Stormwater Quality Task Force, the Floodplain Management Task Force, the Governor's Advisory Drought Planning Panel, and California's Groundwater (DWR Bulletin 118-03).

California Water Plan Update 2005 in January 2006, which is available online at www.waterplan.water.ca.gov.

Recommendations

California Water Plan Update 2005 provides recommendations for the next 25 years directed at decision-makers throughout the state, the executive and legislative branches of State Government, DWR and other State agencies.

1. Diversify Regional Water Portfolios - California must invest in reliable, high quality, sustainable, and affordable water conservation, efficient water management, and development of water supplies to protect public health, and to improve California's economy, environment, and standard of living.

2. Promote and Practice Integrated Regional Water Management - State government must provide incentives and assist regional and local agencies and governments and private utilities to prepare integrated resource and drought contingency plans on a watershed basis; to diversify their regional resource management strategies; and to empower them to implement their plans.

3. Remediate Surface Water and Groundwater Contaminants - State government must lead an effort with local agencies and governments to remediate the causes and effects of contaminants on surface water and groundwater quality.

4. Improve Aging Water Infrastructure - California must maintain, rehabilitate and improve its aging water infrastructure, especially drinking water and sewage treatment facilities, operated by State, federal, and local entities.

5. Implement the CALFED Program - State government must continue to provide leadership for the CALFED Bay-Delta Program to ensure continued and balanced progress on greater water supply reliability, water quality, ecosystem restoration, and levee system integrity.

6. Provide Effective State Government Leadership, Assistance, and Oversight - State government must lead in water planning and management activities that: (a) regions cannot accomplish on their own, (b) the State can do more efficiently, (c) involve inter-regional, inter-state, or international issues, or (d) have broad public benefits.

7. Clarify State, Federal, and Local Roles and Responsibilities - California must define and articulate the respective roles, authorities, and responsibilities of State, federal, and local agencies and governments responsible for water.

8. Develop Funding Strategies and Clarify Role of Public Investments - California must develop broad,

realistic and sustainable funding strategies that define the role of public investments for water and other water-related resource needs over the next quarter century.

9. Invest in New Water Technology - State government must invest in research and development to help local agencies and governments implement promising water technologies more cost effectively.

10. Adapt for Global Climate Change Impacts - State government must help predict and prepare for the effects of global climate change on our water resources and water management systems.

11. Improve Water Data Management and Scientific Understanding - DWR and other State agencies must improve data, analytical tools, and information management and exchange needed to prepare, evaluate, and implement regional integrated resource plans and programs in cooperation with other federal, tribal, local, and research entities.

12. Protect Public Trust Resources - DWR and other State agencies must explicitly consider public trust values in the planning and allocation of water resources and protect public trust uses whenever feasible.

13. Increase Tribal Participation and Access to Funding - DWR and other State agencies must invite, encourage, and assist tribal government representatives to participate in statewide, regional, and local water planning processes and to access State funding for water projects.

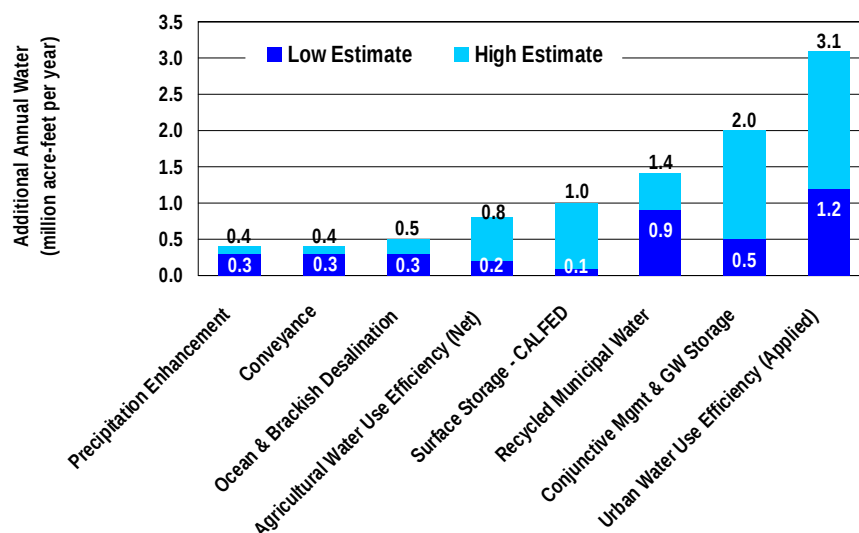
14. Ensure Environmental Justice across All Communities - DWR and other State agencies must encourage and assist representatives from disadvantaged communities and vulnerable populations, and the local agencies and private utilities serving them, to participate in statewide, regional, and local water planning processes and to get equal access to State funding for water projects.

Resource Management Strategies

Reduce Water Demand ➤ Agricultural Water Use Efficiency ➤ Urban Water Use Efficiency	Improve Operational Efficiency & Transfers ➤ Conveyance ➤ System Reoperation ➤ Water Transfers
Improve Water Quality ➤ Drinking Water Treatment & Distribution ➤ Groundwater/Aquifer Remediation ➤ Matching Quality to Use ➤ Pollution Prevention ➤ Urban Runoff Management	Increase Water Supply ➤ Conjunctive Management & Groundwater Storage ➤ Desalination – Brackish & Seawater ➤ Precipitation Enhancement ➤ Recycled Municipal Water ➤ Surface Storage – CALFED ➤ Surface Storage - Regional/Local
Practice Resource Stewardship ➤ Agricultural Lands Stewardship ➤ Economic Incentives (Loans, Grants, and Water Pricing) ➤ Ecosystem Restoration ➤ Floodplain Management ➤ Recharge Areas Protection ➤ Urban Land Use Management ➤ Water-dependent Recreation ➤ Watershed Management	

Range of Additional Water for Eight Resource Management Choices

This graph shows the potential range of more water demand reduction and supply augmentation for eight resource management strategies by 2030. Low estimates are shown in the lower section of each bar. Estimates are from different studies described in Volume 2. The water benefits of these strategies are not always additive.



Implementing Regional Water Management

Integrated regional water management represents a significant change for many local water suppliers. Integration of water supply development with other resource management efforts such as protection of water quality or ecosystem restoration is uncommon. Furthermore, many agencies have not developed the relationships and cooperative programs needed to manage water from a regional perspective.

Funding mechanisms available to California water suppliers sometimes reinforce an insular approach to water management. Over the past decade, a significant source of funds for capital improvements to water systems has been the issuance of general obligation bonds approved by California voters. Most of the funding available to local water suppliers was designated for particular types of projects such as urban conservation or groundwater recharge. Competitive grant programs sometimes did not recognize the value of integrated water management projects designed to achieve multiple benefits.

Earlier this year, Governor Arnold Schwarzenegger proposed a series of general obligation bonds and other funding mechanisms that included specific provisions to recognize and encourage integrated regional water management. These included general obligation bonds that proposed disbursement of funding to regions instead of to specific agencies, and establishment of a fee that would generate an additional source of funding for regional expenditure.

In the past, most general obligation bond measures established funding for particular types of projects and allowed funding of local qualifying projects from throughout the state on a competitive grant basis. This had the effect of pitting water suppliers against one another as they competed for limited project funding. The general obligation bonds proposed by the governor in January took a completely different approach, allocating grant money to regions of California upon completion of integrated regional water management plans that meet minimum state criteria. Funds could then be expended on any of the water management strategies identified in the California Water Plan Update 2005.

Because general obligation bond measures offer an inconsistent and uncertain funding stream for capital improvement projects and long-term regional water management plans, Governor Schwarzenegger proposed a new fee on retail water deliveries. Funds generated by the fee would offer a consistent, dependable, perpetual source of funding for water management measures. This consistent source of funding would facilitate long-range planning. Each retail water supplier in the state would be responsible for paying the fee. The amount of the fee would be calculated according to the number and size of water customers served by the supplier. The funds would be remitted to the state, with half returned to the regions for implementation of measures identified in an approved integrated regional water management plan. Additional funds would be allocated by the state to projects that provided multi-regional benefits, that were implemented in one region but yielded benefits in another region, or that could not be sufficiently funded using regional fund allocations. Remaining funds, about one-third of the total, would be allocated to projects of statewide significance, advancement of science and technology, monitoring, and resource stewardship.

California Regions



Both the regional allocation of bond funds and the fee to establish an additional source of regional funding proved to be quite unpopular with water suppliers. Regional water suppliers that provide water at wholesale to local retail agencies feared that regional plans and regional funding would diminish their influence. Local water suppliers feared the backlash from customers when rates were raised to pay a state fee, and were afraid that they would pay more in fees than they would get back from a regional fund.

By March 2006, the California Legislature had modified the Governor's proposal. The Legislature's proposal contained no new fee to fund water management, and would disburse funds to individual agencies via competitive grants rather than through the establishment of regional funds. Only a single bond measure, rather than a series of measures, was included. The Legislature's version did require that eligible projects must "reflect a consideration of the resource management strategies in the California Water Plan."

As of March 13, 2006, the debate over funding mechanisms for State investment in water resources management continues without resolution. A variety of concerns have blocked agreement on a general obligation bond measure to place before the voters of California in June 2006. Most visably, interests that are both opposed and supportive of funding for new reservoirs have failed to reach compromise. The debate will likely continue, with a new target of placing a bond proposal before voters in November 2006.

While at times progress in improving California water management seems agonizingly slow, the stakes are too great to give up. California's economy, environment, and standard of living for its residents depends on finding compromise and moving forward with new approaches to California Water Management.