



# Vital State Water Project in Fiscal Crisis Is Beset by Environmental Controversy

The California State Water Project is the largest single water conservation and conveyance project on earth. It was conceived to meet California's water needs — providing life-saving flood control to the water-rich North and essential water supplies to the arid South. While there is general support for these goals, debate rages on the means to achieve them.

Environmentalists complain that the dams and canals which conserve and transport northern waters are sully California's last recreation and wilderness areas. Academics assert technological breakthroughs in desalination and water water reclamation will shortly make the projected capital construction obsolete. Industrialists object to the prospect of using a different type of water in their processing plants (thus sometimes requiring drastic technical changes) and to paying a higher price for water.

### State Water Plan

In 1960, Californians approved a \$1.75 billion bond issue to finance a 600 mile water system stretching from the foothills of the Sierra to the Mexican border. Designed to meet California's water needs until 1990, the multi-purpose plan is expected to develop 4.2 million acre-feet of water annually.

By 1990, annual water use in California is estimated to be 31.5 million acre feet, with the State Water Project supplying 13 percent of the State's water. Water will be apportioned in this way:

- Southern California 59%
- San Joaquin Valley 32%
- San Francisco Bay and upper Central Valley 9%

### Financing the State Water Project

The Department of Water Resources (DWR) determines the state's water requirements and financial needs on the basis of engineering, legal and social data. Broadly speaking, the funds obtained from the sale of general obligation bonds must be applied solely to capital costs. The revenues derived from the sale of the water can

be applied to bond service. The federal government has assumed the responsibility for costs allocated to flood control, and the state will pay the non-reimbursable costs for recreation and fish and wildlife enhancement.

Revenue Sources for all Facilities to 1985	
General obligation Bonds (1960)	60%
Tidelands Oil (payments to the state for oil & gas royalties under tidelands leases)	25%
Revenue bonds secured by revenues received from sale of Oroville-Thermalito Power)	7%
Miscellaneous (federal flood control grants and advance payments from water service contractors for excess aqueduct capacity)	5%
Amount needed to complete project	3%

At this point, the project has investment capital problems, not revenue problems. Provided the water is delivered, all costs of operation, maintenance, pumping and power will be repaid with interest. Moreover, project revenues should be sufficient to help finance future SWP construction additions.

Since the late sixties, however, the project has been facing serious funding difficulties. California is receiving less Colorado water than originally planned, construction costs have risen abruptly, and \$600 million of the authorized water bonds are unsold because of the 5 percent California bond interest ceiling. Further cost problems would arise if water agencies default in their payments or if contractors have difficulty fulfilling their contracts.

Today the project is progressing only because of a \$100 million loan from the state's general fund. If Proposition 7 passes in June and lifts the bond interest ceiling, the rest of the bonds might be sold, thus solving the

current dilemma. But even if the bonds are sold, the project will require more money in 1973.

State officials are examining alternative ways of financing the rest of the project, keeping in mind the possible defeat of Proposition 7 and the inevitable 1973 deadline. These include:

- Persuading banks or other sources to buy the bonds at 5 percent (one other source might be the Public Employees Retirement System).
- Having the Legislature enact a temporary sales tax (two cents for six months).
- Appropriating additional tidelands revenues.
- Having the Legislature borrow from funds which are not now available (e.g., ask the people to loan the project money at 5 percent).
- Requiring loans or capital prepayments by water supply contractors.
- Arranging for completion of the project by some agency other than the DWR.
- Obtaining a new general obligation authorization (perhaps one which would include pollution control and recreation development).
- Selling additional power revenue bonds based on power plants in southern California or on the West Branch of the California Aqueduct.

Obviously some of these possibilities are more realistic than others. Critics contend that the project was under-financed from the start and remind the department that supporters of the 1960 bond campaign pledged that the water users would pay for the project. Legislative Analyst A. Alan Post has pointed out, however, that it would cost as much to terminate the project as it would to complete it. terminate the project as it would to complete it.

The final determination of the source of new funding will involve several considerations. The timing of construction and the extent of federal participation in both the Peripheral

Canal and the Dos Rios Project must also be determined. Citizen willingness to further support the State Water Project may well be influenced by the decisions the state makes on these two controversial issues.

#### Peripheral Canal

Proposed as a joint facility of the federal Central Valley Project (CVP) and the State Water Project, the Peripheral Canal is designed to provide water quality control, fish and wildlife preservation and recreation for the Sacramento-San Joaquin Delta, and a source of water for southern California.

The Delta is 740,000 acres of land (some fifty islands) salvaged from marshes. Like a huge net hung from three pegs, it stretches between Sacramento, Tracy and Pittsburg and is fed by a number of rivers which enter its eastern boundary.

Early settlers and, later, the Corps of Engineers built dikes and levees which now protect the Delta's agricultural land. Intensified agricultural use of Delta water contributed to increased salinity there and, in the early thirties, salt water intruded nearly to Sacramento on the Sacramento River. When the Bureau of Reclamation built Shasta Dam in 1945, controlled fresh water flows repelled this intrusion.

Although the land use is 80 percent agricultural, a large industrial complex, including oil refineries and produce canneries, is expanding in the eastern Delta. The Delta is also a major recreation area for fishing, boating, and water skiing and its flows are important to California's sport and commercial fishermen.

The 1960 water bond election authorized a Delta water transfer facility as part of the California Water Project. An Interagency Delta Committee (Department of Water Resources, Corps of Engineers and Bureau of Reclamation) studied various types of facilities: upstream reservoirs to release fresh water into the Delta (hydraulic barrier), a dam at Chipps Island to make the Delta a fresh water reservoir (physical barrier), a series of smaller dams upstream in the Delta for the same purpose (Delta Waterway Control Plan), and the Peripheral Canal.

In 1964 the committee concluded the Canal was by far the best solution. It would be a complex engineering work including a canal, pumps, siphons, release gates, and recreational

facilities. A committee report released in 1965 also recommended facilities to halt sea water intrusion and to provide substitute water supplies to the western Delta region.

#### Delta Water Quality

It is generally agreed that the diversion of Delta water will result in some reduction of in-channel fresh water supplies in the western Delta. If the Project operation does decrease the channel fresh water supply in the western Delta, the state has agreed to provide funds for the purchase of additional water. Federal financial participation in this venture has also been urged.

The cost of construction, operation and maintenance of the facility would be shared equally by the state and the federal government.

Current controversy over the Canal centers on the doubts opponents have concerning the proper operation of the Canal. Critics feel local control over Delta water quality will be lost and the inevitable result will be degradation of water both in the Delta and in the Bay area.

The Contra Costa Water Agency, Congressmen Jerome Wadde and Robert Leggett and State Senator John A. Nejedly have been very vocal in their opposition to the Canal. Congressman John Tunney and Assemblyman Jess Unruh have commented on the Canal, voicing concern that it be operated so that the Delta ecology is protected.

A hefty array of government experts support the Canal as the best way of transporting the water south, while protecting the water quality of the Delta. They point out that water quality problems in the Delta and the Bay are primarily the result of municipal and industrial polluters who prefer calling for increased flows of water instead of cleaning up their own discharges.

The Assembly and Senate Water Committees have approved the Canal, providing that the canal operations are based on meaningful water rights agreements and enforceable water quality objectives. Currently the State Water Resources Control Board is in the process of determining both rights and quality criteria there.

The role of the federal government, as a financial participant and a water conveyor, is also important. Nejedly has cited the Bureau of Reclamation's poor record in providing water for

salinity control during certain dry periods. However, federal controllers previously have not been authorized to release waters solely for water quality considerations. The Assembly committee in its October 14, 1969, report recommended that this authorization be given.

It is likely that pressures on Washington for delay and the financial problems of the project will postpone the Canal's scheduled construction starting date of 1971. Even if it did proceed as planned, by 1986 project planners say the total demand of Delta water will exceed the firm yield of the initial SWP facilities, Oroville and San Luis Dams. The Department of Water Resources looks to the North Coastal area, especially the Eel River, for these future water supplies.

#### The Dos Rios Project

When the State Water Project was authorized, it was understood the Delta would require additional water by the mid-1980's. In 1964 the development of the Upper Eel River was designated by the DWR as the first additional conservation facility of the project.

The Corps of Engineers has done the expensive initial studies on the Eel River; they propose to build a 730 foot high earth and rock fill Dos Rios Dam on the Middle Fork of the Eel River, flooding Round Valley. Storing 7.6 million acre-feet, the dam would equal the combined capacity of Shasta and Oroville dams. The Corps would pay for dam construction for flood control purposes, and the state would finance and construct the conveyance system needed to deliver the water to the Delta.

The proposed Dos Rios Dam and Reservoir is becoming a classic confrontation between water planners who look to construction of the project as the best solution to water supply needs and conservationists who consider any further construction unnecessary and destructive of natural wilderness.

Here are some of the issues at stake:

Will Dos Rios Dam solve the Eel's flood control problems? Proponents say yes; opponents say no.

Are plans for moving Covelo and the Indian community fair? Opponents say this is a "new

colonialism": the possible recreation or construction jobs are minimal and of short duration. Proponents say only twelve Indian families will need to relocate, and many land-owners favor the dam.

- Is Round Valley a major agricultural or scenic resource? Opponents say it is a unique valley with land rare to the North Coast; proponents say the short growing season makes it poor farm land.
- Will the dam protect fish and wild-life which abound there now? Proponents say the plans will enhance fish runs already blighted by flood damage and will include land for wildlife; opponents say wildlife plans are inadequate and the dam will ruin one of the last wild rivers in the state.
- What would be the loss if the 800 archaeological sites in the area are inundated? Opponents say there is not enough time to work these sites and the Corps has budgeted insufficient funds; proponents say there is enough time and state funds should be available to supplement the research.

**Dos Rios Alternatives**

Assembly and Senate committees approved the Dos Rios Project with reservations, although later some of the Senate committee members rejected it. Responding to the criticism of conservationists, Governor Reagan postponed further state action on Dos Rios and requested data on other ways of meeting the project's needs.

Late in 1969 the Department of Water Resources submitted six alternatives, all of which concentrated on other ways of developing the Eel River. Department spokesmen adamantly assert that, aside from desalting (a possible source of large amounts of useable water by the year 2,000) only the North Coast has water in sufficient quantities to meet the needs of the project.

Economists and laymen outside of government are critical of the Department's position. They maintain that the Department purposely ignored the Governor's intent by not examining other likely sources of water, and they call for a thorough investigation of other alternatives. Moreover, critics believe there are several choices which, alone or in combination, could meet the project's 1986 demands:

- Desalting by the year 2000. Too costly for current water supplies, the prospects for use later are excellent.
- Waste water reclamation, combined with ground water management.
- Irrigation conservation through use of plastic pipe and other improved irrigation practices. Important in California where 90 percent of water used is agricultural.
- Better economic reallocation of water. Institutional and legal changes in the areas of water rights and water transfers should make more water available.
- Conventional water development in the upper Central Valley, where undeveloped major reservoir sites have been authorized by the Bureau.

1970 is a year of important water choices about facilities and financing. In June the voters will have their say on the 5 percent bond interest ceiling; state officials will continue searching for additional sources of funds; and pending government decisions in Sacramento and Washington regarding Dos Rios and the Canal will greatly affect California's Water Project in coming decades.

**CALIFORNIA STATE WATER PROJECT CONSTRUCTION SCHEDULE**

Facility	Scheduled completion date
Upper Feather River Facilities	3 completed
5 dams and reservoirs	2 not yet scheduled
Oroville Dam - 3,538,000 acre feet	
Dam and 2 power plants	completed
North Bay Aqueduct - 27.7 miles - serves Solano & Napa Counties	
Phase I -	completed
Phase II -	1980
South Bay Aqueduct - 51.5 miles	
serves Alameda & Santa Clara Counties	
Delta Facilities	
Delta pumping plant, Bethany Reservoir, Clifton Forebay	completed
Peripheral canal 43 miles	
scheduled to begin in 1971	
San Luis Dam - 3,040,500 acre feet	completed
California Aqueduct - main line - 444 miles	
North San Joaquin Division (66.8 miles)	completed
San Luis Division (105.7 miles)	completed
South San Joaquin Division (120.1 miles)	completed
Pumping Plant	1972
Tehachapi Division (10.6 miles)	1976
Mojave Division (105.7 miles)	1975
Santa Ana Division (35.3 miles)	1973
California Aqueduct - branches - 131 miles	
West Branch (31 miles)	1973
Coastal Branch (100 miles)	1980
San Joaquin Drainage Facilities	not yet scheduled
Middle Fork Eel River Development	not yet scheduled

