

A Look Back at Past California Water Plans

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The California Water Plan (1957)

The California Water Plan was the final of a series of three bulletins setting forth the results of statewide water resources investigations that had begun in 1947. Bulletin No. 3 described a comprehensive master plan for the control, protection, conservation, distribution, and utilization of the waters of California, to meet present and future needs for all beneficial uses and purposes in all areas of the state to the maximum feasible extent. It was an ultimate plan that indicated the general manner in which California's water resources should be developed to satisfy the potential ultimate water requirements of the State. It did not give consideration to time or economics, either in staging of projects or in the growth of demand for water and associated services. It was to be regarded as a broad and flexible pattern into which future definite projects may be integrated in an orderly fashion. Additional data and experience not foreseen in 1957 would substantially alter and improve The California Water Plan. The basic concept of the Plan as a master plan to meet the ultimate requirements for water at some unspecified but distant time in the future, when the land and other resources of California have essentially reached a state of complete development, would remain unchanged. It was to be implemented by a statewide program for the construction of projects needed to control and supply water wherever and whenever the need arises and as projects are found feasible. The job would require the combined efforts of the federal government, State government and local agencies, as well as private entities and individuals, with the State taking a leading role in administration and coordination as well as financing and construction. The base year for Bulletin No. 3 was 1950.

Statewide planning studies to update the California Water Plan have continued since 1961, and have incorporated economic considerations. Results of the studies have been presented in the Bulletin 160 series of reports.

Implementation of the California Water Plan (1966)

The first of the Bulletin 160 series, Bulletin No. 160-66 reported on studies conducted within the framework of The California Water Plan and outlined the manner by which progress should be made from the present (1960) to the stage of development that would meet the state's 2020 demands. It included the best available information on water demand forecasts throughout the state and on economic considerations involved in the staging of water supply and delivery projects. It identified some of the more favorable projects and presented a schedule for the staging of those projects to meet the increasing water demands. Bulletin No. 160-66 was neither an alternative nor a replacement of Bulletin 3, but rather a proposed pattern for implementation of specific parts of The California Water Plan, as set forth by the California Water Code.

Some water policy concerns discussed included flood control and floodplain management, power demands, water-related recreation, the relationship of fish and wildlife to water development, and water quality.

Water for California: The California Water Plan; Outlook in 1970

By 1967 California's population had grown to 19 million, but the rate of growth had slowed from that of the 1950s. In this Bulletin No. 160-70 population projections for 1990 and 2020 were reduced. Irrigated acreage estimates were also reduced, and more accurate information on the consumptive use of crops and the extent of water reuse was available. With projects then under construction or authorized, the report concluded that sufficient water supplies would be available to meet most of the 1990 requirements. The report concluded that the projected slower population growth, together with additional water supplies under development or authorized, would provide a breathing spell that would allow more time " . . . to consider alternative sources of water supply and develop policies for the maximum protection of the environment." The trend toward increasing environmental awareness was noted for both the national and state levels.

The California Water Plan: Outlook in 1974

By 1972, the base year for Bulletin 160-74, the state's population had reached about 21 million, indicating a continuing slowdown in the rate of growth. Population projections were again revised downward for 1990 and 2020 to 27 million and 37 million, respectively. This report concluded that the status of available supplies, compared to the (then) present use, was favorable. This was based on the premise that the Auburn, New Melones, and Warm Springs Reservoirs and the Peripheral Canal would be operational by 1980. But it was less conclusive about the extent to which supplies would satisfy future needs, considering new California legislation for wild and scenic rivers, primarily on the North Coast. Key water policy issues discussed were cooling water for electric energy production, water deficiencies (risk), water exchanges, public interest in agricultural drainage (San Joaquin Drain), water use efficiency (water conservation), economic efficiency (water transfers), and waste water reclamation.

This issue of the Bulletin 160 series departed from the earlier practice of a single forecast of future water use by presenting four different scenarios as to future conditions and events that affect water use.

The California Water Plan: Projected Use and Available Water Supplies to 2010 (1983)

Bulletin 160-83 presented some of the alternative sources of supplies or potential shortages associated with future uses to 2010. More a technical report than previous editions, part of the process included the development of agricultural models applied for the first time. These were used in assessing the general economic effects of increasing water and energy costs. The report quantified the effect of urban and agricultural water conservation measures and the potential for water reclamation as a means of reducing water needs. A number of non-structural options for making more effective use of water supplies were proposed for further consideration.

California Water: Looking to the Future (1987)

Looking back to the previous four reports in the Bulletin 160 series, Bulletin 160-87 described them as technical examinations of the then-current water supplies and water demand for coming decades. The

1987 report took a broad view of water events and issues in California, and examined how California can continue to meet the water needs of a continually growing population. The report also discussed several leading water management concerns including water quality, the Sacramento-San Joaquin Delta, and evolving water policies over a wide range. One of its main conclusions was that in roughly three out of four years, California's natural water resources, including rights to the Colorado River, were sufficient to meet all of its water needs for the foreseeable future.

California Water Plan Update: Bulletin 160-93 (1994)

More than 35 years after the first California water plan was published, this report discussed how population growth, land use, and water allocations for the environment were affecting water resource management. The bulletin discussed the effects of more stringent water quality standards, the Endangered Species Acts, the Central Valley Project Improvement Act of 1992, and efforts to solve problems in the San Francisco Bay-Sacramento-San Joaquin River Delta estuary. It differed from the five previous water plan updates by: (1) estimating environmental water needs separately and accounting for these needs along with urban and agricultural water demands; (2) presenting water demand management methods as additional means of meeting water needs; and (3) presenting separate water balance scenarios for average and drought conditions.

This was the first of the Bulletin 160 series to incorporate an advisory committee of representatives of interested parties. The base year for analysis was 1990, and 2020 was the planning horizon.

The California Water Plan Update: Bulletin 160-98 (1998)

In response to public comments on the previous Bulletin 160, the 1998 issue evaluated water management options that could improve California's water supply reliability. Water management options being planned by local agencies form the building blocks for evaluations performed for each of the state's ten hydrologic regions. Potential local options were integrated with options of a statewide scope, such as the CALFED Bay-Delta Program, to create a statewide evaluation. Bulletin 160-98 estimated a 1.6 million acre-feet water shortage in average years at the 1995 level of development, and a 5.1 maf shortage in drought years.

Previous California Water Plans (before 1957)

In addition to reports mentioned above, there were at least three major California water plans before Bulletin No. 3 in 1957.

1874 – First Water Plan for California, for developing irrigation in the Central Valley

“The Report of the Commissioners on the Irrigation of the San Joaquin, Tulare, and Sacramento Valleys, in the State of California” was published in 1874 as a report to the 43rd Congress. The report was reprinted in 1990 by the Office of History of the U.S. Army Corps of Engineers. The report reviews irrigation methods, laws, and institutions worldwide as part of creating a plan for developing the Central Valley for irrigation. The authors were two employees of the U.S. Army Corps of Engineers and one from the U.S. Coast Survey.

1919 – California’s “Marshall Plan” for Water

Pisani (1984) discusses the work of Robert Bradford Marshall, a USGS employee based at the University of California, who developed a plan for diverting water from northern rivers to southern basins and the San Francisco area. This plan became the precursor of the first State Water Plan in 1930. (D.J. Pisani (1984), *From Family Farm to Agribusiness: The irrigation crusade in California and the west 1850-1931*, University of California Press)

1930 – First State Water Plan

The “State Water Plan 1930” was presented to the California Legislature of 1931 as Bulletin No. 25 of the Division of Water Resources of the California Department of Public Works. This is the direct precursor of the Central Valley Project and the 1957 California Water Plan.

