

THE STATE WATER PROJECT IN SANTA BARBARA COUNTY



Introduction

- The water treatment and conveyance facilities built between 1993 and 1997 to bring State water to Santa Barbara and San Luis Obispo Counties comprise the most ambitious and complex public works project ever constructed on California's Central Coast. The project consists of (1) water conveyance facilities built by the California Department of Water Resources (State) and (2) regional distribution and treatment facilities constructed by a cooperative group of local water agencies and cities operating as the Central Coast Water Authority (CCWA).
- This significant water project was conceived and constructed amidst intense political controversy. It faced and overcame daunting engineering and environmental challenges. It was completed because a remarkable and steadfast collection of water leaders made sure that it was going to be completed, despite the obstacles. By employing an intensive management approach, the project was completed very close to the original schedule and delivers water at the price (as adjusted for inflation) projected in the planning documents.

Introduction



- This is a summary of the essential facts concerning the State Water Project in Santa Barbara County, and was prepared as information for the public. The information presented was derived from CCWA official records, which are available for public review.

History of the State Water Project

- It is common knowledge that California's fundamental water supply challenge is that the major sources of water are found in northern California while the major urban and agricultural demands are located in central and southern California. To address this challenge, the voters and the Legislature authorized construction of extensive water conservation and delivery systems known as the Central Valley Project in 1930 and the State Water Project (SWP) in 1960.
- Since 1963 the State has constructed most of the SWP elements: Oroville Dam, facilities to convey the water from Lake Oroville to the Sacramento Delta, an elaborate system of pumps and other facilities to move water out of the Delta, including 660 miles of canals and pipelines, and a complex of regulating reservoirs ([see Figure 1](#)). The State has designed, engineered and constructed all of these facilities, and operates and maintains them, with funds received from its 29 contractors ([see Figure 2](#)).

Figure 1

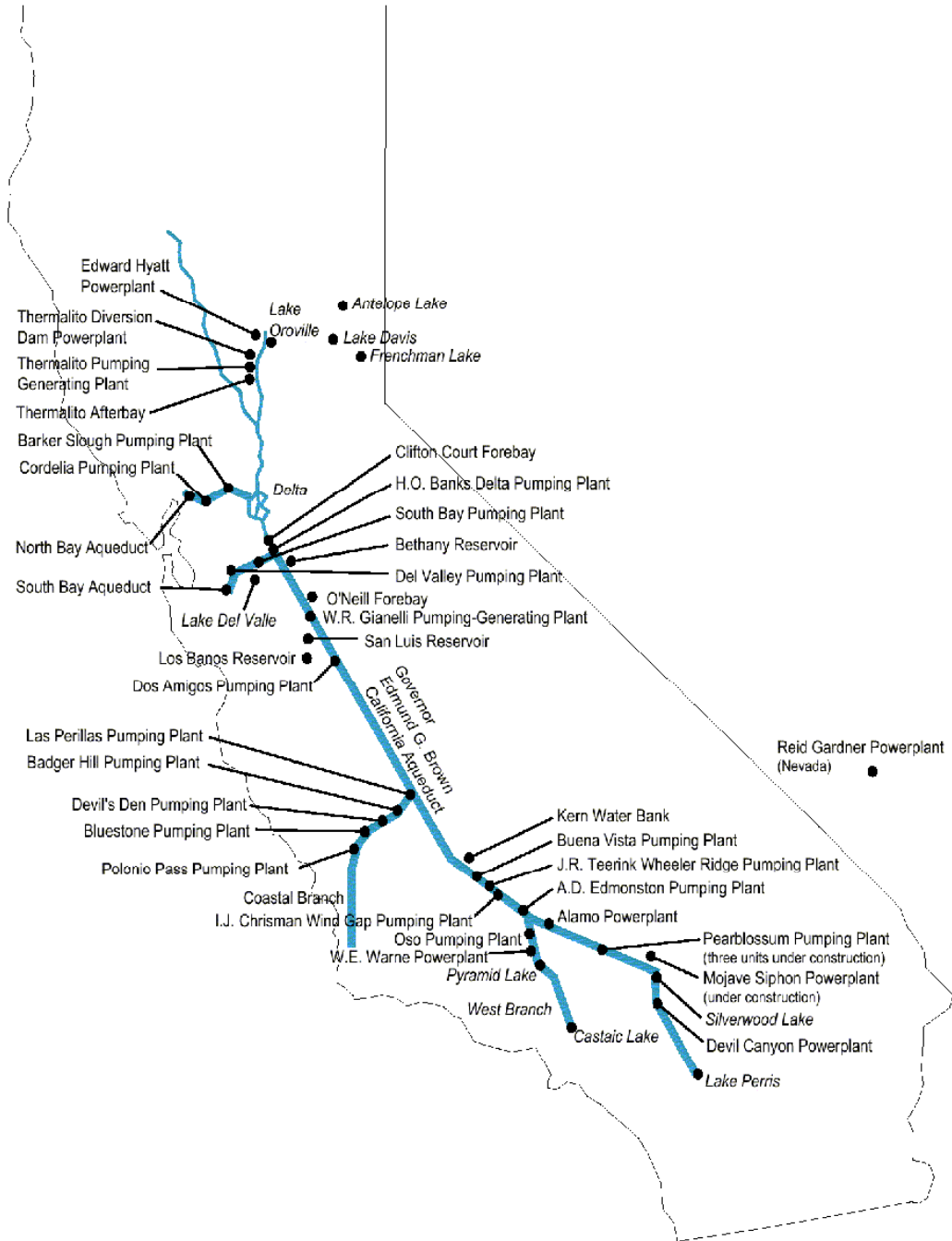
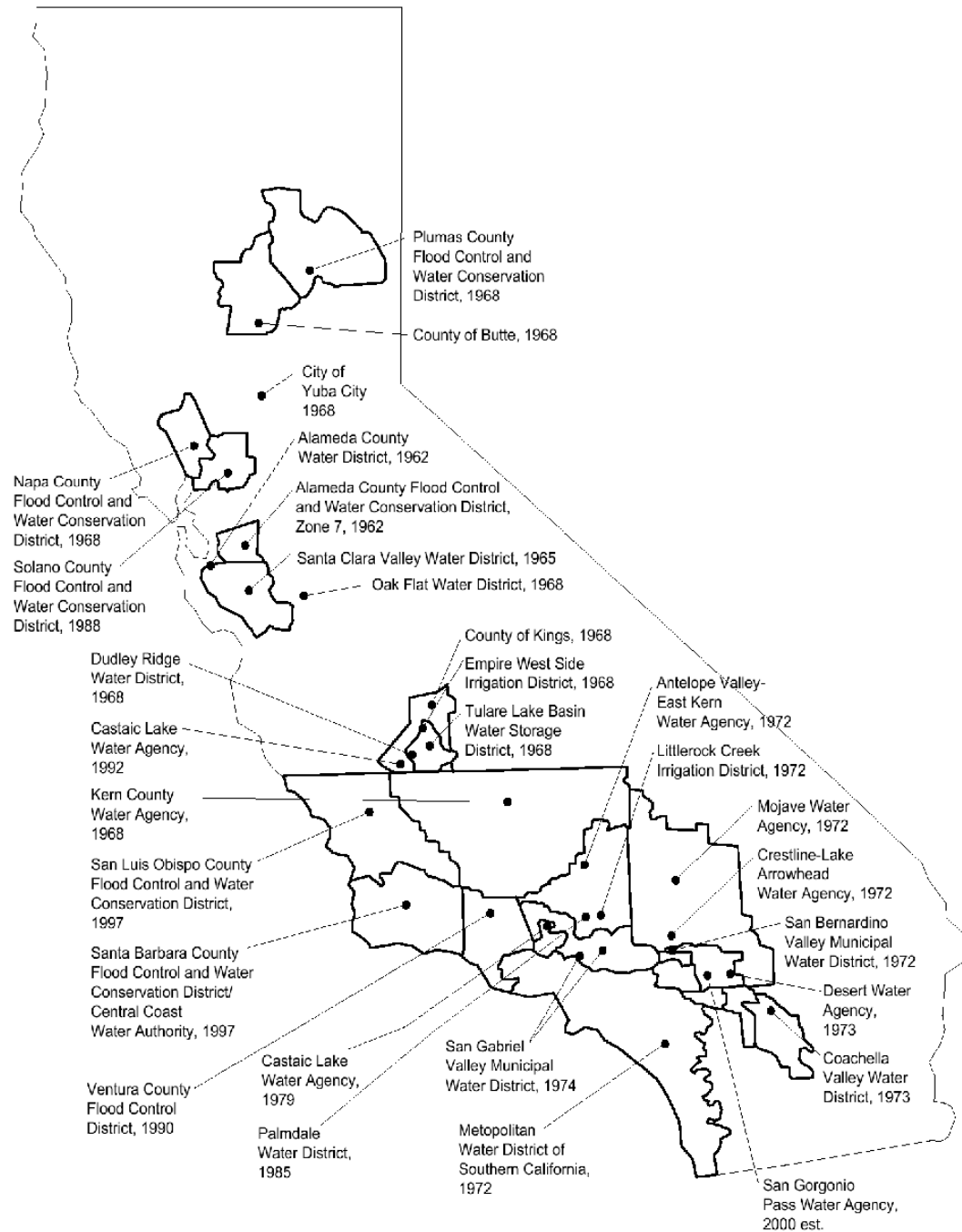


Figure 2



History (cont.)

- Construction of the SWP was financed in large part by \$1.75 billion of general obligation bonds issued pursuant to the Burns-Porter Act and approved by California voters in 1960. The Act directs the State to enter into water contracts for the sale, delivery or use of SWP water, and 29 such contracts now exist. Prior to the 1960 election, the State published Contracting Principles containing rules for implementing the water contracts required under the Act. The Contracting Principles provide that contract rates should be set so as to return to the State ". . . all costs of project operation, maintenance and replacement, all principal and interest on (1) bonds, (2) expenditures from the California Water Fund and (3) other monies used in the construction of the project works."
- Thus, from the very inception of the SWP, it was the intent of the Legislature that 100% of the costs associated with the purchase of SWP water, including construction costs, be passed through to purchasers of water. The State finances, designs, constructs and owns this extensive system; the water contractors purchase water from the State under "take or pay" contracts under which the State recovers all of its costs.



The State Water Project in Santa Barbara County

The Early Years

- In 1963, anticipating a future need for supplemental water supplies, the Santa Barbara County Flood Control and Water Conservation District (Santa Barbara County) entered into a Water Supply Contract (State Contract) with the State. Under the State Contract, water would be delivered to Santa Barbara County through the "Coastal Branch" of the SWP. Phase I of the Coastal Branch, a 15-mile aqueduct branching off the California Aqueduct in northwestern Kern County, was completed in 1968. Construction of the remainder of the Coastal Branch (designated "Phase II") was postponed from 1975 to 1991. This postponement in construction was permitted pursuant to Paragraph 45(e) of the State Contract, which allowed Santa Barbara and San Luis Obispo Counties to delay construction indefinitely.
- In March 1979 Santa Barbara County presented its voters with a ballot measure authorizing the issuance of revenue bonds in an amount not to exceed \$102 million to construct local facilities "to import and distribute" SWP water. Rainfall was heavy for several years preceding the vote and, as a result, Lake Cachuma was at or near capacity. For this and other reasons, Santa Barbara County voters defeated that ballot measure.

The 1980's and 1990's



- Even though construction of the Coastal Branch Phase II project was delayed under Article 45(e) of the State Contract, during the delay period Santa Barbara County was still obligated to make certain payments to the State related to facilities (such as the Oroville Dam and the California Aqueduct) which had already been built and which would be part of the delivery system that eventually would convey SWP water to the Central Coast. Before and after the 1979 election, many in Santa Barbara County questioned whether Santa Barbara County should continue to make payments under the State Contract. A number of water purveyors concluded it would be prudent for the County to continue to retain its entitlement and make payments to the State.

The 1980's and 1990's



- The County was willing to retain the entitlement, but only if the associated costs were shifted from the countywide tax base to the ratepayers in those jurisdictions which wanted to keep the option to join the SWP. Beginning in 1982, Santa Barbara County entered into a series of Water Supply Retention Agreements (WSRAs) with various water purveyors for the purpose of shifting responsibility for such State payments from the County taxpayers to individual purveyors and their ratepayers. The WSRAs included a provision stating that no revenue bond financing for project facilities could be issued unless authorized by a vote of the people within the jurisdiction of each participating purveyor.

The 1980's and 1990's (cont.)

- In 1983, Santa Barbara County, San Luis Obispo County Flood Control and Water Conservation District (SLO County) and the State commenced joint studies which found that additional water was needed for the two counties. The studies concluded that water use in 1980 exceeded dependable water supply by about 65,000 acre-feet per year in Santa Barbara County and by about 70,000 acre-feet per year in San Luis Obispo County. This shortage was being met by long-term overdraft of local groundwater basins.
- The chronic overdraft of the local groundwater basins presented a serious environmental threat. Since many of these groundwater basins are adjacent to the ocean, the risk of saltwater intrusion and permanent damage to groundwater basins weighed on the minds of local water officials. In addition, reports from other areas in California (including some from San Luis Obispo County) indicated that groundwater overdrafting was causing surface soil subsidence. Local water agencies understood the significant environmental benefits that could be derived by reducing groundwater "mining" by diversifying water supplies to include imported water.

The 1980's and 1990's (cont)

- In 1985 the State, in conjunction with Santa Barbara County, completed a major "Alternatives Study" regarding the feasibility and costs of various supplemental sources of water supply for Santa Barbara County. This study determined that supplemental water from an enlarged Lake Cachuma was the preferred alternative for the Santa Ynez Valley and the South Coast, while SWP water was preferred for the cities of Lompoc, Santa Maria and other north County entities.
- In 1986 the City of Santa Maria requested Santa Barbara County to ask the State to begin the planning and environmental studies, including preparation of an environmental impact report, needed to build the Coastal Branch Phase II project. In the same year, Santa Ynez River Water Conservation District, Improvement District No. 1 and the South Coast water purveyors asked the State and the United States Bureau of Reclamation to begin a study for enlarging Lake Cachuma. This alternative involved several environmental concerns that raised doubts about its ultimate feasibility.

The 1980's and 1990's (cont.)



- In June 1990 DWR prepared and circulated a draft environmental impact report (DEIR) on the Coastal Branch Phase II project, pursuant to the California Environmental Quality Act, Public Resources Code Section 21091 (CEQA). Under CEQA, one purpose of a DEIR is to publicly disclose the impact, both environmental and financial, of a proposed project. The Coastal Branch DEIR was the subject of numerous public meetings in Santa Barbara County.
- In May 1991 DWR issued the final Environmental Impact Report (FEIR) for the Coastal Branch Phase II project and the Mission Hills Extension. The FEIR was sent to all of the potential participating water purveyors.

The 1980's and 1990's (cont.)



- On June 4, 1991, during the 1987-1992 drought, the elections required by the WSRAs were held in 14 Santa Barbara County cities, communities and water districts on a State water ballot measure. The measure asked whether voters in each city or district would approve issuance of revenue bonds to finance local facilities needed to treat and distribute SWP water once the State completed construction of the Coastal Branch Phase II project. Voters in eleven cities and districts approved the bond measures.

The Central Coast Water Authority



Early Activities

- In September 1991, following the voter authorization to finance revenue bonds, CCWA was formed to construct, manage and operate Santa Barbara County's "local facilities" for distribution and treatment of State water (CCWA's Mission Statement and Objectives are contained in [Figure 3](#)). Upon its formation, CCWA immediately accepted assignment of the WSRA obligations by executing Water Supply Agreements (WSA) with the contractors. As a result, CCWA became obligated to pay all State costs charged to Santa Barbara County under the State Contract. This obligation was clarified in a single document (instead of eleven) when CCWA and Santa Barbara County entered into a Transfer of Financial Responsibility Agreement on November 12, 1991.

Figure 3

Central Coast Water Authority

Mission:

To provide San Luis Obispo and Santa Barbara Counties with reliable, high quality supplemental water.

Objectives:

- Treat and deliver water through the Coastal Aqueduct to San Luis Obispo and Santa Barbara Counties.
- Minimize environmental impacts and protect the environment during operation of our facilities.
- Cost effectively operate and maintain our facilities.
- Ensure our water supply meets or exceeds health and safety standards.
- Work with the Department of Water Resources and other state, federal and local agencies to achieve our mutual objectives.
- Assist project participants in their efforts to reduce groundwater overdraft.



Early Activities

- During the early months of its existence, CCWA successfully resolved a number of issues of regional significance. For example, the CCWA members agreed on a cost allocation mechanism to equitably apportion the capital and operating costs of the Polonio Pass Water Treatment Plant among those contractors which would take direct deliveries of treated water (such as Santa Maria) and those which would not (such as Santa Barbara, which receives SWP water through Lake Cachuma). They also agreed to save capital costs by acquiring from one of its members an existing water pipeline which had been built in the 1960's to deliver Lake Cachuma water to the Santa Ynez Valley; that acquisition required an exchange of SWP water for Cachuma water to be equitable to all parties. Finally, they agreed on a mechanism to reapportion the costs incurred between 1985 and 1991 by the parties who had paid for environmental and feasibility studies of the Coastal Branch so that they would be equitably shared by all project participants.

Early Activities (cont.)

- At its formation, CCWA was composed of nine member water purveyors. It has identical WSAs with its members and additional WSAs to deliver water to certain other contractors (i.e., Vandenberg Air Force Base, Southern California Water Company, La Cumbre Mutual Water Company and two other private entities). It was originally responsible for construction and operation of the 42 mile buried pipeline from Vandenberg Air Force Base to Lake Cachuma (i.e., the Mission Hills and Santa Ynez Extensions) and the 43 million gallon per day Polonio Pass Water Treatment Plant. The State was originally responsible for construction, management and operation of the 101-mile Coastal Branch Phase II project, which extends from northwest Kern County to Vandenberg Air Force Base, and for delivering SWP water to the local facilities.
- Since SWP water is delivered from sources hundreds of miles away, the largest part of the delivery costs are "fixed" in the form of costs to finance, build and operate the dams, reservoirs, aqueducts and pipelines to conserve and transport the water. As previously noted, the State recoups these costs, whether or not water is actually delivered. Thus, a water purveyor signing up for SWP water must agree to a "take or pay" contract under which certain (i.e., fixed) costs must be paid each year, irrespective of how much water the State can deliver, and how much water the purveyor actually needs in a given year.

Project Financing, Development and Implementation

- In May 1992 CCWA issued "Development Notes" in the principal amount of \$23,760,000 for the purpose of securing funds to initiate design, engineering, planning, and related activities. In connection with the note issue, CCWA published an Official Statement containing information about each of the Santa Barbara County public agencies that would be receiving water through the CCWA constructed facilities.
- During 1992, CCWA worked closely with the State on the design and engineering of the Coastal Branch Phase II project. This coordination included intensive discussions concerning the location of the Coastal Branch terminus. The 1963 State Contract showed the Coastal Branch terminating at the Santa Maria River, which is the boundary line between Santa Barbara and San Luis Obispo Counties. This terminus location, while geographically logical, turned out to pose problems from an engineering perspective. In light of these practical problems, CCWA and the State agreed that the terminus should be shifted 15 miles south to a location on Vandenberg Air Force Base, approximately 3 miles from the town of Casmalia.

Project Financing, Development and Implementation (cont.)

- This decision to move the Coastal Branch Phase II terminus was incorporated into a September 21, 1992 amendment to the State Contract, which was approved at public meetings by the CCWA Board of Directors and Santa Barbara County Board of Supervisors. The effect of this change was to shift from CCWA to the State the obligation to build this 15-mile pipeline reach. CCWA believed this decision was financially advantageous to CCWA project participants, since the State would be able to build this section with State revenue bond funds borrowed at interest rates lower than those available to CCWA and would provide SWP power for a proposed pumping plant in that reach.
- In October 1992, CCWA issued \$177,122,000 in revenue bonds for the purpose of securing funds to design and construct the local facilities. In connection with the bond issue, CCWA published an Official Statement containing information about each of the Santa Barbara and San Luis Obispo County public agencies which would be receiving water through those facilities. (In November 1996, CCWA refinanced the 1992 water revenue bond issue resulting in debt service savings of almost \$400,000 per year. The principal amount of the refunding bonds was \$198,015,000.)

Project Financing, Development and Implementation (cont.)

- On May 27, 1993 CCWA made the necessary determinations and findings to permit final sizing of the facilities. It amended those findings and determinations in 1994, so that the final sizing was based on 42,986 acre-feet of water per year, which consists of 39,078 acre-feet per year of contract allocations and 3,908 acre-feet per year of "drought buffer" (the purpose of drought buffer entitlement is to firm up the reliability of the contract allocations in those years when full SWP deliveries are not available). On March 16, 1993 SLO County made the requisite determinations and findings regarding its participation, and decided to take 4,830 acre-feet of water per year.
- In March 1994, the State commenced construction of the Coastal Branch Phase II facilities. CCWA started construction of its facilities a few months later in July 1994. [Figure 4](#) is a project map depicting the facilities constructed by the State, CCWA and various project participants.
- The Coastal Branch Phase II pipeline is a 101-mile long buried pipeline extending from Devils Den to Tank 5 on Vandenberg Air Force Base in Santa Barbara County. The State pipeline consists of 57-inch diameter pipe at Devils Den, reducing to a 42-inch diameter south of the City of Arroyo Grande. There are three 10,500 horsepower pumping plants - the Devils Den, Bluestone and Polonio Pass Pumping Plants - to lift water 1,500 feet in elevation from Devils Den to Tank 1. The project also includes three water tank sites. There were approximately 30 contracts for procurement of materials and construction of the State's portion of the project.



Figure 4

Figure 4

Project Financing, Development and Implementation (cont.)

- In order to bring water to the residents of the South Coast of Santa Barbara County (including the communities of Carpinteria, Goleta, Montecito and Santa Barbara), it was necessary for CCWA to design and build a 42-mile extension of the Coastal Branch. The 30-39 inch diameter CCWA pipeline starts at Vandenberg Air Force Base, travels past Vandenberg Village and the City of Lompoc, through the cities of Buellton and Solvang and terminates at Lake Cachuma, a reservoir on the Santa Ynez River built in the 1950's by the federal government to provide drinking water to South Coast and Santa Ynez Valley residents.
- CCWA also constructed a 43 million gallon per day water treatment plant at Polonio Pass. The site was chosen because the project planners determined a single water treatment plant near the upstream end of the Coastal Branch would offer economies of scale to the 24 project participants, as compared to building a series of smaller plants serving individual participants.

Project Financing, Development and Implementation (cont.)

- Avoiding delay was a key goal which CCWA pursued throughout the planning and construction of the project, because CCWA estimated that delay would cost \$60,000 to \$100,000 per day. CCWA avoided delays by maintaining cooperation among construction crews, environmental monitors, construction supervisors and regulatory agencies.
- In late 1994, the State determined that a proposed power plant in the vicinity of the city of San Luis Obispo was uneconomical in light of an updated construction cost estimate. This finding led to a cooperative effort between the State and CCWA to redesign a portion of the Coastal Branch Phase II pipeline, which resulted in eliminating the San Luis Obispo Power Plant, Tank 4 and the Casmalia Pumping Plant. (Tank 3 was also eliminated when the State decided to tunnel through a mountain rather than trenching and laying pipe over it.)

Project Financing, Development and Implementation (cont.)

- In early 1995, the State delegated design and construction of a 28-mile stretch of the Coastal Branch Phase II pipeline and Tank 5 to CCWA. Its decision was based on project schedule analyses that indicated the State was falling behind schedule to complete construction of its facilities, which threatened to delay the start of water deliveries.
- Overall project construction was completed in the summer of 1997. Initial deliveries to turnouts along the pipeline commenced on August 11, 1997 and to Lake Cachuma on November 20, 1997. On June 25, 1998 the CCWA Board of Directors took formal action to declare the CCWA project complete. The estimated cost of the overall project is \$575 million, which is comprised of \$461 million for the Coastal Branch Phase II project and \$114 million for the CCWA facilities (\$43 million for the Polonio Pass Water Treatment Plant and \$71 million for the CCWA pipeline). In addition, CCWA provided \$27 million financing for project participants' turnouts and local projects and miscellaneous other project related costs.

Project Financing, Development and Implementation (cont.)

- By working cooperatively with the State and San Luis Obispo County, CCWA's efforts to implement a project that met three principal goals associated with quality, cost and schedule resulted in a number of unique and unprecedented accomplishments. The change in the location of the Coastal Branch Phase II terminus was one such accomplishment. Others were:
 - CCWA's Polonio Pass Water Treatment Plant was sited at the State's Tank 1 site, 90 miles from the downstream terminus of the SWP Coastal Branch. As previously mentioned, by siting the plant at this location, only one treatment plant is necessary to most cost effectively treat all the State water for two State water contractors (San Luis Obispo County and CCWA).
 - As previously mentioned CCWA recommended and the State implemented major design changes which eliminated a power plant, a tank site and a pumping plant from the Coastal Branch Phase II project. Simplifying the overall project design in this manner helped to preserve the project schedule and enhance operational flexibility. There were a number of other benefits as well. Both capital and operating and maintenance (O&M) costs were reduced. Environmental impacts associated with the surface features were eliminated. Property owner issues in San Luis Obispo County were simplified because acquiring fee title for the surface features was no longer necessary.

Project Financing, Development and Implementation (cont.)

- In early 1995 CCWA determined that internal State staff resources were being stretched as a growing number of project components were moving from the permitting and design phases into the bid and construction phases. The State's Design and Construction Division was struggling to meet its deadlines and keep the project on schedule. As a result CCWA proposed to the State that it contract with CCWA to provide engineering services and to construct a 28-mile stretch of pipeline and Tank 5 on Vandenberg Air Force Base. The State agreed and entered into a joint powers agreement with CCWA to construct the facilities financed by the State. CCWA redesigned the facilities using industry standards, which resulted in capital cost savings. CCWA and the State successfully defended a lawsuit seeking to invalidate this agreement brought by a group of State engineers. Under this agreement CCWA provided additional assistance to the State for (1) acquiring Coastal Branch Phase II right of way, (2) reconstructing an 800-foot portion of the partially constructed State pipeline which was damaged by a landslide resulting from heavy rains, (3) constructing a 3,500 foot portion of the State pipeline near the city of San Luis Obispo, (4) constructing the Lopez and Chorro Valley turnouts in San Luis Obispo County and (5) resolving its outstanding construction contract claims.

Project Financing, Development and Implementation (cont.)

- On October 1, 1996 the State entered into an agreement with CCWA to have CCWA operate and maintain all of the Coastal Branch facilities downstream of the Polonio Pass Water Treatment Plant. This action will provide significant O&M cost savings to SLO County and CCWA and avoids State overhead costs. It also provides greater efficiency by having a single agency - CCWA - exercise responsibility for all Coastal Branch facilities involved in the conveyance and treatment of SWP water.
- In the early stages of project development, the State appointed a Coastal Branch Project Manager to oversee the various State departments working on the project. This action resulted in improved coordination and cooperation among the various State divisions and numerous individuals. It also greatly facilitated CCWA input on Coastal Branch Phase II project financing, planning, design, construction and O&M issues.

Project Financing, Development and Implementation (cont.)

- As a result of experience gained on the Coastal Branch Phase II project and its dealings with CCWA, the State has made unprecedented changes in its staffing, organization and approach to implementing projects. The State's Division of Design and Construction was reorganized and staffing is being significantly reduced. The State now seeks State water contractor input on design criteria and project designs. The State has recognized that its existence as a design, construction and O&M organization is dependent on how well it responds to and meets the needs of its customers, the State water contractors. The reorganization of the State's Design and Construction Division (now known as the Engineering Division) was the result of a personnel consultant study authorized by State management, principally due to CCWA's experiences on the Coastal Branch Phase II project. Since then State management has conducted similar studies for its Planning and O&M Divisions.

A Commitment to Environmental Protection

- Throughout the planning and construction of the project, CCWA worked very hard to build the project with a true commitment to environmental protection. CCWA formed a project team of CCWA staff, engineers, environmental consultants and attorneys charged with coordinating their respective skills and objectives to design and build a project that treated environmental protection with the same priority given technical and financial issues. Project plans incorporated environmental mitigation from inception. The project team conducted regular meetings to maintain clear lines of communication and reporting and to create peer pressure so that each team member took personal responsibility for completing tasks properly and timely, resolving little problems before they grew and staying ahead of issues to prevent problems from developing.

A Commitment to Environmental Protection (cont.)

- Before project planning began, the team met with every regulatory agency that might have had jurisdiction over the project to discuss potential resource issues that needed to be addressed and to establish a dialogue that encouraged the resource agencies to call if problems were identified as the project progressed. CCWA and its project participants complied with both CEQA and the National Environmental Protection Act and prepared three EIRs with Supplemental EIRs, an Environmental Assessment and a number of Negative Declarations. CCWA and its consultants coordinated closely with the California Department of Fish & Game, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, U.S. Bureau of Reclamation and local Native American groups to formulate and implement a mitigation and monitoring program to (1) protect sensitive species and their habitats, (2) avoid impact to cultural resources, (3) restore disturbed areas to their prior condition to the extent feasible and (4) provide offsite mitigation for those areas that could not be restored, (e.g., large trees cannot be grown over the pipeline, and above ground valve vaults and similar facilities occupy surface areas which must remain clear in perpetuity). CCWA's approach to the project provides an example of how to build a large project which crosses multiple riparian and other sensitive habitats that, without a sincere environmental commitment, could be adversely affected by construction activity.

A Commitment to Environmental Protection (cont.)

- Project planning and construction included the following measures:
 - The construction right of way and access roads were selected by CCWA staff, engineers, cultural experts and biologists to avoid sensitive resources wherever possible and, where avoidance was infeasible, to minimize environmental damage. Routes were field verified before construction to confirm they were the least environmentally impacting and most feasible routes. Access routes generally followed existing roads and the pipeline corridor to reduce new scarring.
 - The right of way was narrowed where feasible to avoid environmental damage.
 - The construction plans depicted sensitive areas to be avoided and mapped trees or habitat to be removed. Contractors received a pre-agreed bonus for saving vegetation marked for removal. It was a "win-win" - contractors worked hard to earn the bonus; CCWA saved hefty revegetation costs; the natural environment was preserved and protected.
 - The construction specifications required a "double lift" during pipeline trenching, whereby contractors would first remove topsoil, then remove subsoil and keep them separated during construction (topsoil with its valuable native seed bank was protected from wind and rain). The topsoil and subsoil were then restored in the proper order. This enhanced revegetation by using the natural seed bank and nutrients.
 - Native seed and native plants grown from seed gathered from the local area were used for revegetation to preserve local genetic integrity and to avoid importing foreign stock that might carry pests and disease.

A Commitment to Environmental Protection (cont.)

- ❑ CCWA required environmental training for all personnel entering the project site.
- ❑ Independent environmental monitors, with authority to halt construction to protect environmental resources, ensured that ground activities complied with the protective measures integrated into the plans and specifications. Monitors marked exclusion zones with bright tape to protect sensitive resources and scouted for previously unknown cultural sites, directing construction away from discovered sites so CCWA's cultural experts could study the sites, report them to the state and federal agencies and then mitigate.
- ❑ Biological surveys conducted shortly before construction located sensitive resources and identified the "before" condition of the habitat so post-construction restoration could be completed accurately, and the site restored to its pre-project condition.
- ❑ Pipe on-site was "capped" at the ends to prevent wildlife from crawling inside and monitors checked the trench routinely to remove trapped animals.
- ❑ Upon completion of construction in each area, CCWA installed erosion controls such as water bars, straw bales and silt fencing to reduce erosion during the rainy season. Sites were monitored closely and erosion control devices repaired and replaced as needed. Revegetated areas' monitoring continued regularly for five years.

A Commitment to Environmental Protection (cont.)

- CCWA's commitment to environmental protection resulted in a project which was virtually undetectable to the public just one year after completion because revegetation was so successful. In addition, CCWA's project management resulted in saving 323 oak trees (90% of those located in or near the pipeline right of way), rescuing 101 animals, preserving and curating 61 cultural artifacts and replanting from seed or seedling 450 oaks, 240 willows, and 60 acres of other native vegetation. Moreover, far fewer acres of sensitive habitat were impacted by the project, compared to the pre-construction impact estimates, thereby resulting in significantly lower mitigation efforts after completion. As a result, the costs of environmental mitigation were lower than expected, disruptive project delays were avoided and CCWA enjoys a good working relationship with the regulatory agencies.

A Commitment to Environmental Protection (cont.)

- Some of the more state-of-the-art engineering and construction techniques used on the project were necessary more for environmental than technical reasons. CCWA utilized microtunnel technology to cross under San Antonio Creek (Vandenberg Air Force Base) and the Santa Ynez River and the State utilized directional drilling technology to cross San Juan Creek in San Luis Obispo to avoid impacts to certain endangered species and sensitive habitat. In addition CCWA utilized "jack and bore" technology to install the pipeline under existing oak groves adjacent to Vandenberg Village (Santa Barbara County) and the City of San Luis Obispo, as well as for more traditional purposes such as railroad and freeway crossings.

A Commitment to Environmental Protection (cont.)

- When the CCWA Board of Directors approved construction of the 42-mile CCWA pipeline, it included a number of conditions. One condition was to require each of the CCWA project participants to commit that its SWP water entitlement will be used first to offset its proportionate share of groundwater overdraft and then to improve water quality for its consumers. (Any remaining water would be used for future growth consonant with community general plans.) Thus, SWP water is providing the "ultimate" environmental benefit by reducing groundwater overdraft in a number of areas throughout the county.

CCWA Organization Structure

- CCWA is presently composed of eight members, all of which are public agencies: the cities of Buellton, Guadalupe, Santa Barbara and Santa Maria, Carpinteria Valley Water District, Goleta Water District, Montecito Water District and Santa Ynez River Water Conservation District, Improvement District No. 1. (A founding member of CCWA, Summerland Water District, was merged into the Montecito Water District.) In addition, CCWA has an Associate Member, the La Cumbre Mutual Water Company. Each member appoints a representative to the Authority's Board of Directors.
- The member agencies are represented on the CCWA Board of Directors by an individual chosen by each public entity's Board or City Council. Each vote on the CCWA Board of Directors is weighted in proportion to the entity's allocation of State water entitlement contained in its original WSA. (Although certain agencies subsequently amended their entitlement allocations, their voting percentages remained unchanged.)

CCWA Organization Structure (cont.)

- The following table outlines the voting percentage for each member of the CCWA Board of Directors:

Agency	Voting %
City of Guadalupe	1.15%
City of Santa Maria	43.19%
City of Buellton	2.21%
Santa Ynez RWCD, ID#1	7.64%
Goleta Water District	17.20%
City of Santa Barbara	11.47%
Montecito Water District	9.50%
Carpinteria Valley Water District	<u>7.64%</u>
	100.00%

CCWA Organization Structure



- As a public agency, CCWA's Board of Directors holds public meetings, and publicly distributes its agendas and minutes as required by California's Brown Act and Public Records Act.
- There are three standing CCWA committees: Finance Committee, Personnel Committee, and Operating Committee. The Operating Committee is composed of the general managers, city administrators or water supply managers of the various water purveyors and cities served by CCWA. It typically holds a public meeting once a quarter to act on construction, operations and other issues and recommends actions to the CCWA Board of Directors.

CCWA Organization Structure

- Each Santa Barbara County project participant is a water purveyor or user located in Santa Barbara County.

Agency	Entitlement
City of Buellton	578
Carpinteria Valley Water District	2,000
Goleta Water District	4,500
City of Guadalupe	550
La Cumbre Mutual Water Company	1,000
Montecito Water District	3,000
Morehart Land Company	200
City of Santa Barbara	3,000
Raytheon, Inc.	50
City of Santa Maria	16,200
Santa Ynez RWCD, ID#1	2,000
Golden State Water Company	500
Vandenberg Air Force Base	<u>5,500</u> ²
TOTAL	39,078


CCWA Organization Structure


- Each San Luis Obispo County water purchaser is a water purveyor or user located in San Luis Obispo County which obtained contractual rights from SLO County to receive water from the SWP.


Agency	Entitlement
Avila Beach Community Services District	100
Avila Valley Mutual Water Company, Inc.	20
California Men's Colony (State)	400
County of San Luis Obispo C.S.A. No. 16-1	100
County of San Luis Obispo (Operations Center and Regional Park)	425
City of Morro Bay	1,313
Oceano Community Services District	750
City of Pismo Beach	1,240
San Luis Coastal Unified School District	7
San Miguelito Mutual Water Company	275
San Luis Obispo County Community College District (Cuesta College)	<u>200</u>
TOTAL	4,830



The Future

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- The most significant current challenge to CCWA project participants is financial. Consequently, CCWA continues to strive to ensure the cost effectiveness of both its and the State's operations. With time, the affordability of State water will improve due to the fixed nature of the majority of SWP costs.
 - As each project participant's demand for State water approaches its entitlement allocation, supply reliability will become CCWA's most significant challenge. The magnitude of this challenge is increased by the fact that demand by other urban State water contractors is also increasing with time. Methods of enhancing reliability CCWA's SWP entitlement were previously discussed in the section entitled "Water Supply Reliability."

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- CCWA staff currently monitor all required water quality parameters at the Polonio Pass Water Treatment Plant and at each turnout and tank site along the pipeline. As a wholesaler and service provider, CCWA monitors all parameters requested by its project participants, as well as those mandated by state and federal regulators. New water quality analyses currently being conducted by CCWA but not yet regulated include Giardia, Cryptosporidium, total organic carbon (along with its uv-254 surrogate) and haloacetic acids.
 - CCWA will continually strive to secure maximum performance from the Polonio Pass Water Treatment Plant as state and federal regulations are added and permissible contaminant levels change. The plant's ability to utilize enhanced coagulation, the granular activated carbon filter beds and the post-filtration chlorine contactor will play an important role in meeting the next generation of regulations. The treatment plant can also accommodate the addition of a settled water ozone contactor or other new treatment processes should they ever become necessary.

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- Environmental protection has been built into every level of CCWA operations. The O&M manual requires using special balloon-tired vehicles in sensitive areas, utilizing portable dechloramination units whenever potable water is released from the pipeline, having environmental specialists review any earth disturbing activities, restoring and revegetating all disturbed sites, maintaining erosion control along the right of way and conducting aerial surveys when land-based vehicles are inappropriate for use.
 - The future issues noted above illustrate the continued viability of the vision first expressed in 1993 when the CCWA Board of Directors adopted its Mission Statement and Objectives ([Figure 3](#)). CCWA has built both the organization and infrastructure that will support this vision well into the future.