



Distribution Control Room

Appendix

The Appendix to the FY 2008/09 Budget contains miscellaneous statistical information on the CCWA, the CCWA Investment Policy and a glossary of terms.

Central Coast Water Authority
Miscellaneous Statistical Information
 Fiscal Year 2008/09 Budget

Form of government	Joint Powers Authority
Date of organization	August 1, 1991
Number of full-time equivalent positions	28.25
Polonio Pass Water Treatment Plant design capacity	43 million gallons per day <i>(50 mgd per amended permit from DHS)</i>
Authority pipeline (in miles)	42.5
Coastal Branch pipeline (in miles)	100.6
State water Table A amount	(acre-feet per year)
CCWA contract Table A amount	39,078
CCWA drought buffer	3,908
Goleta Water District additional Table A	<u>2,500</u>
TOTAL	45,486
FY 2006/07 Santa Barbara County estimated deliveries	27,408 acre-feet
San Luis Obispo State water Table A	4,289 acre-feet
FY 2006/07 estimated San Luis Obispo estimated deliveries	4,126 acre-feet
Amount of treated water storage in tanks	23.7 million gallons
Number of turnouts	10
Number of project participants	
Santa Barbara County	13
San Luis Obispo County	<u>11</u>
TOTAL	24
Estimated total population served by State water	
Santa Barbara County	340,000
San Luis Obispo County	<u>41,000</u>
TOTAL	381,000

CENTRAL COAST WATER AUTHORITY
STATEMENT OF INVESTMENT POLICY

I. PURPOSE:

This statement is intended to provide guidelines for the prudent investment of the Authority's cash balances, and outline the policies for maximizing the efficiency of the Authority's cash management system. The ultimate goal is to enhance the economic status of the Authority while protecting its assets.

II. SCOPE

It is intended that this policy cover all funds and investment activities under the direct authority of the Authority Board of Directors.

III. OBJECTIVES

- A. Safety. Safety of principal is the foremost objective of the Authority. Each investment transaction shall seek to first ensure that capital losses are avoided, whether they be from securities defaults or erosion of market value.

- B. Liquidity. An adequate percentage of the portfolio should be maintained in liquid short-term securities which can be converted to cash if necessary to meet cash requirements.

- C. Yield. Yield shall become a consideration only after the basic requirements of safety and liquidity have been met.

- D. Market-Average Rate of Return. The investment portfolio shall be designed to attain a market-average rate of return throughout budgetary and economic cycles, taking into account the Authority's risk constraints, the cash flow characteristics of the portfolio, and State and local laws, ordinances or resolutions that restrict investments.
- E. Diversification. The investment portfolio will be diversified to avoid incurring unreasonable and avoidable risks regarding specific security types or individual financial institutions.
- F. Prudence (Civil Code #2261). The standard of prudence to be used by investment officials shall be the "prudent investor" per Government Code section 53600.3 which states: "care, skill, prudence and diligence under the circumstances then prevailing, that a prudent person acting in a like capacity and familiarity with those matters would use in the conduct of funds of a like character and with like aims, to safeguard the principal and maintain the liquidity needs of the agency". This "Prudent Investor Standard" shall be applied in the context of managing an overall portfolio. Investment officers acting in accordance with written procedures and exercising due diligence shall be relieved of personal responsibility for an individual security's credit risk or market price changes, provided that deviations from expectation are reported in a timely fashion, and appropriate action is taken to control adverse developments.
- G. Public Trust. All participants in the investment process shall act as custodians of the public trust. Investment officials shall recognize that the investment portfolio is subject to public review and evaluation. The overall program shall be designed and managed with a degree of professionalism that is worthy of the public trust. In a diversified portfolio it must be recognized that occasional measured losses are inevitable, and must be considered within the context of the overall portfolio's investment return, provided that adequate diversification has been implemented.

IV. DELEGATION OF AUTHORITY:

- A. Investment Officer. Management responsibility for the investment program is hereby delegated to the Treasurer, who shall establish written procedures for the operation of the investment program, consistent with this policy. Such procedures shall include explicit delegation of authority to persons responsible for investment transactions. No person may engage in an investment transaction except as provided under the terms of this policy and the procedures established by the Treasurer. The Treasurer shall be responsible for all transactions undertaken and shall establish a system of controls to regulate the activities of subordinate officials.

- B. Investment Oversight Committee. The Authority Finance Committee shall serve as the Investment Oversight Committee. The purpose of the Committee is to: (1) review the investment practices used by the Investment Officer for compliance with the investment policy and written procedures, (2) analysis of the quarterly Treasurer's report for adherence to established guidelines, and (3) advise Authority Board of Directors of any deviations from guidelines or any practices which are deemed to be imprudent for a public agency.

V. INTERNAL CONTROLS:

The Investment Officer shall establish a system of internal controls which shall be documented in writing. The internal controls shall be reviewed with the independent auditor. The controls shall be designed to prevent losses of public funds arising from fraud, employee error, misrepresentation by third parties, unanticipated changes in financial markets, or imprudent action by employees and officers of the Authority.

VI. REPORTING:

The Investment Officer shall submit monthly to the Board an investment report that summarizes all securities. For those securities with a maturity of more than 12 months, the type of investment, institution, date of maturity, investment amount, market value, and yield will also be provided. The Investment Officer shall also provide, on a quarterly basis, a statement of compliance of the portfolio with the Statement of Investment Policy and a statement of the Authority's ability to meet the expenditure requirements for the next six months.

VII. APPROVED INSTRUMENTS:

The Authority shall be governed by the California Government Code, Sections 53600 et seq. Where this policy specifies a percentage limitation for a particular category of investment, that percentage is applicable only at the date of purchase. Within the context of these limitations, the following investments are authorized, provided, however, that where there is no limitation on the term of the investment, no investment shall be made in any security which, at the time of the investment, has a term remaining to maturity in excess of 5 years, unless specifically exempted in Section X of this Investment Policy or the Board has granted express authority to make that investment no less than 3 months prior to the investment:

- (a) United States notes, bonds, bills, or certificates of indebtedness, or those for which the full faith and credit of the United States are pledged for the payment of principal and interest.
- (b) Obligations issued by government sponsored corporations such as the Federal Farm Credit Bank System (FFCB), the Federal Home Loan Bank Board (FHLB), and the Federal National Mortgage Association (FNMA).

- (c) Commercial paper of prime quality of the highest ranking or of the highest letter and numerical rating as provided by Moody's Investors Service, Inc. or Standard and Poor's Corporation. Eligible paper is further limited to issuing corporations that are organized and operating within the United States and having total assets in excess of five hundred million dollars and have a rating of A-1+ by Standard & Poor's Corporation and P-1 by Moody's Investors Service and which matures not more than 270 days after the date of purchase. Purchases of commercial paper may not exceed 25 percent of the Authority's surplus money invested.

Commercial paper investments with one company may not exceed one-third (33 1/3%) of total commercial paper investments.

- (d) Time deposits. The Authority may invest in non-negotiable Certificates of Deposit at commercial banks and savings and loan associations that are collateralized in accordance with the California Government Code.
- (e) Local Agency Investment Fund. The Authority may invest in the Local Agency Investment Fund (LAIF) established by the State Treasurer up to the maximum permitted by State law.
- (f) Money market funds rated "AAAm" or AAAM-G" or better by Standard & Poor's Corporation.

VIII. DEPOSITORIES:

The Treasurer will establish selection criteria for pre-approval of institutions to do business with. To qualify for selection, an institution must have an office in California. A written listing of approved institutions will be maintained by the Investment Officer.

IX. BROKER/DEALERS:

To provide for the optimum yield in the investment of the Authority's funds, the Authority's investment procedures shall be designed to encourage competitive bidding on transactions from approved brokers/dealers. In order to be approved by the Authority, the dealer must be a primary dealer reporting to the New York Federal Reserve, unless a comprehensive credit and capitalization analysis reveals that the firm is adequately financed to conduct public business; the dealer must be experienced in institutional trading practices and familiar with the California Government Code as related to investments; and other criteria as may be established in the investment procedures.

X. MATURITY RESTRICTIONS:

In addition to the 5 year limitation on investments specified in this policy, the average maturity of the Authority's combined portfolio shall not exceed 2 years without prior approval of the Board (for a specified period). Reserve Fund investments are exempt from this restriction; however, reserve fund investment maturities shall be limited to or prior to final maturity of the Authority's Bond Financing.

XI. RISK TOLERANCE

The Authority recognizes that investment risks can result from issuer defaults, market price changes or various technical complications leading to temporary illiquidity. Portfolio diversification is employed as a way to control risk. The Investment Officer is expected to display prudence in the selection of securities as a way to minimize default risk. No individual investment transaction shall be undertaken which jeopardizes the total capital position of the overall portfolio. The Investment Officer shall periodically establish guidelines and strategies to control risks of default, market price changes and illiquidity. In addition to these general policy considerations, the following specific policies will be strictly observed.

XII. SAFEKEEPING AND CUSTODY:

To protect against potential fraud and embezzlement, the assets of the Authority shall be secured through third-party custody and safekeeping procedures. The Investment Officer shall be bonded to protect the public against possible embezzlement and malfeasance. Safekeeping procedures shall be reviewed annually by the independent auditor and any irregularities noted should be reported promptly to the Treasurer and the Board.

XIII. PERFORMANCE EVALUATION AND OPERATIONS AUDIT:

The monthly investment reports submitted to the Board shall contain sufficient information to permit an independent organization to evaluate the performance of the investment program.

XIV. ETHICS:

All persons authorized to place or approve investments shall report annually on Form 700 of the Fair Political Practices Commission all required economic interests for that year.

XV. UPDATE OF POLICY:

This investment policy shall be reviewed at least annually to ensure its consistency with the overall objectives of preservation of principal, liquidity, and return, and its relevance to current law and financial and economic trends.

Central Coast Water Authority
Glossary of Terms
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A

Account - A record of a business transaction; a reckoning of money received or paid.

Accounting System - The total structure of records and procedures which discover, record, classify, summarize, and report information on the financial position and results of operations of a government entity.

Accrual - The recognition of a revenue or expense in a budget year even though the actual cash may not be received or paid until the following budget year.

Acre-Foot of Water - The volume of water that would cover one acre to a depth of one foot.

Adoption - Formal action by the Board of Directors which sets the spending limits for the fiscal year.

Advance Refunding - A defeasance of outstanding debt prior to the date the bonds can be called by depositing cash and/or securities in escrow sufficient to pay all principal and interest payments and the call premium, if any, when due. All covenants and restrictions are released.

Amortization - Gradual reduction, redemption, or liquidation of the balance of an account according to a specified schedule of times and amounts.

Aqueduct - A canal for conveying a large amount of water.

Assets - Resources owned or held by a government which have monetary value.

B

Bond Call - Bonds that are redeemable by the issuer prior to the specified maturity date at a specified price at or above par.

Budget - The Authority's financial plan balancing proposed expenditures for a certain period of time to the expected income or revenue for that same period.

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C

Capital Improvements - Expenditures for items or projects which usually have an estimated useful life longer than five (5) years and will benefit the Authority for a long period of time.

Capitalized Interest - Funds provided from the proceeds of an issue to cover interest payments until revenue sources to repay the debt are available.

Carry-Over - The term used to denote amounts which were expected to be expended during one fiscal year on a contract or obligation but were not expended for various reasons. Amounts are "carried over" into the subsequent fiscal year.

Coastal Branch Phase II - A 102-mile long buried pipeline, and ancillary facilities, extending from Devils Den (Kern County) to Tank 5 on Vandenberg Air Force Base (Santa Barbara County).

Coverage - The margin of safety for payment of debt service, reflecting the number of times by which earnings for a period of time exceed debt service payable in such a period.

D

Debt - An obligation resulting from the borrowing of money or from the purchase of goods and services. These include bonds and accounts payable.

Defeasance - To set aside sufficient money to retire outstanding debt when due. A full defeasance results in release from covenants and contractual obligations contained in the bond documents.

Deficiency - A general term indicating the amount by which anything falls short of some requirement of expectation.

Deficit - The excess of expenditures over revenues during an accounting period.

Delta Water Charge - A unit charge applied to each acre-foot of State water entitlement by DWR. The unit charge is applied to result in repayment of all outstanding reimbursable costs of the DWR Project Conservation Facilities, with appropriate interest, by the end of the State water contract repayment period (2035).

Department of Water Resources - The state agency responsible for financing, constructing and operating State Water Project facilities.

Depreciation - An element of cost resulting from the service of long-lived assets in an economic organization and represents the loss in asset value because of wear,

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deterioration, obsolesce or action of the physical elements. In this budget, no specific depreciation schedule or funding of depreciated assets is provided.

Drought Buffer - A portion of the Authority's State water entitlement (3,908 AF) which is being utilized to firm up the reliability of each Santa Barbara County project participant's Water Supply Agreement entitlement allocation.

E

Enterprise Fund - A fund established to account for the financing of self-supporting enterprises, such as a utility fund, which render services primarily to the public.

Entity - The basic unit upon which accounting and/or financial reporting activities focus.

Expenditures - A decrease in net financial resources.

F

Financing Participant - An Authority or San Luis Obispo County project participant that participated in the 1992 CCWA Revenue Bond and 1996 CCWA Refunding Revenue Bond issues.

Financial Reaches - Segments of the CCWA and DWR pipeline from or through which project participants receive water.

Fiscal Year - A twelve-month period of time to which the annual budget applies and, at the end of which a governmental unit determines its financial position and the results of its operations.

Fixed Asset - Assets of a long-term character which are intended to continue to be held or used, such as land, buildings, improvements other than buildings, machinery and equipment.

Fixed O&M Costs - Operating and maintenance expenses charged to the project participants which do not vary with the amount of water delivered to the project participant.

Fixed Project Costs - Capital costs, including Debt Service, reserves for the payment of debt service, and other payments under the bond resolution which do not vary with the amount of water delivered to the project participant.

G

General Fund - The Authority's cash balance net of reserve balances.

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J

Joint Powers Authority - A public authority created by a joint exercise of powers agreement between any two or more governmental agencies. The authority may be given power to perform any function which all parties to the agreement are empowered to perform and which will be of benefit to all parties.

L

Line Item - Expenditure classifications established to account for and budget the appropriations approved.

Water Treatment and Local Facilities Agreements - Agreements, dated as of March 1, 1992, by and between San Luis Obispo County Flood Control and Water Conservation District and various San Luis Obispo County project participants.

M

Maintenance - The upkeep of physical properties in condition for use or occupancy. Examples are the inspection of equipment to detect defects and the making of repairs.

Master Water Treatment Agreement - Agreement, dated as of March 1, 1992, by and between the Authority and San Luis Obispo County Flood Control and Water Conservation District.

Modified Accrual Basis - The accrual basis of accounting adapted to the governmental fund type. Revenues are recognized when they become both “measurable” and “available to finance expenditures of the current period.” Expenditures are recognized when the liability is incurred.

Monterey Agreement - The agreement which formed the basis for the Monterey amendments to the State Water Contract that includes, among other provisions, the addition of Articles 51 through 56.

MOU Trust Fund - A trust fund established under a memorandum of understanding (July 6, 1995 effective date) by and between the Authority, Cachuma Project Authority (i.e., Cachuma Operations and Maintenance Board) and the United States of America, acting through the Bureau of Reclamation. The trust fund is funded by \$43/AF payments to the Cachuma Operations and Maintenance Board for State water wheeled through Cachuma Project facilities.

Municipal - In its broadest sense, an adjective which denotes the state and all subordinate units of government.

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O

Obligations - Amounts which a government may be legally required to meet out of its resources. They include not only actual liabilities, but also encumbrances not yet paid.

Off Aqueduct Charge - Bond debt service, cover and reserves for transmission costs allocated to DWR off-aqueduct power facilities (power cost which includes both fixed and variable cost elements.)

Operating Expenses- All costs associated with doing the day-to-day business of the Authority which are not considered capital improvements or debt repayments.

P

Pass-Through Charges - Charges from DWR and the United States Bureau of Reclamation which are paid by the project participants. The charges are not expenses of the Authority but are charged and paid by the Authority.

Polonio Pass Water Treatment Plant - A 43 million gallon per day treatment plant which treats all State water delivered to San Luis Obispo and Santa Barbara Counties.

Projected - An estimate of revenues and expenditures based on past trends, the present economic situation and future financial forecasts.

Project Participant - Each entity which has executed a Water Supply Agreement with the Authority.

Proprietary Fund - A method of accounting for a government's ongoing organizations and activities that are similar to those often found in the private sector.

R

Rate Management Funds Credit - Reductions in DWR charges commencing in 1997. The credit was implemented as a result of the Monterey amendments to the State Water Contract.

Reach - see "Financial Reach"

Regional Water Treatment Plant Allocation - A formula adopted by the Authority Board of Directors (Resolutions 92-16 and 95-13) which allocates certain Fixed Project, Fixed O&M and Variable O&M treatment plant costs from South Coast project participants to all other Authority project participants. The purpose of the allocation is to subsidize the South Coast project participants' costs of retreating State water to ensure they realize their share of the financial benefit to all project participants associated with the economies of building and operating only one treatment plant for State water.

Reserves - A budgeted amount to be set aside in an account for future use.

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Resolution - A special or temporary order of a legislative body; an order of a legislative body requiring less legal formality than an ordinance or statute.

Revenue - An inflow of assets, not necessarily in cash, in exchange for services rendered.

Revenue Bond - A bond payable solely from net or gross non ad valorem tax revenues derived from general fund revenues, tax increment revenues, or tolls, charges or rents paid by users of the facility constructed with the proceeds of the bond issue.

Right of Way - A legal right of passage over another person's ground.

S

Santa Ynez Exchange Agreement - An agreement, date as of February 1, 1993, by and between Carpinteria County (Valley) Water District, Central Coast Water Authority, Goleta Water District, La Cumbre Mutual Water Company, Montecito Water District, Santa Ynez River Water Conservation District, Improvement District #1 (SYID#1), Summerland Water District and the City of Santa Barbara entitled "Santa Ynez River/State Water Project Exchange Agreement." Among other things, this agreement provides for the exchange of SYID#1's Cachuma Project entitlement for a like amount of State water that would otherwise be delivered to the other South Coast project participants which are signatory to the agreement.

SCADA System - "Supervisory Control and Data Acquisition" System. The computer system which collects data, processes the data and corrects and/or instructs the operators on corrective actions to take.

State Water Project - The largest state-built, multipurpose water project in the nation. It extends for more than 600 miles. Its main purpose is water supply - to store surplus water during wet periods and distribute it to areas of need in northern California, the San Francisco Bay area, the San Joaquin Valley and Southern California. Other functions include flood control, power generation, recreation, and fish and wildlife enhancement.

T

Table A Amount - The maximum amount of State Water Project water to be made available annually by DWR to the Authority at various delivery structures (i.e. turnouts) under the terms of the State Water Contract.

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Table A Reduction - Elections by certain project participants to temporarily decrease their State water entitlement allocation. This election is for a minimum of five years and eliminates the Delta Water Charge associated with the amount of State water entitlement that has been reduced.

Transportation Capital Costs - Capital costs charged by DWR for the use of facilities to transport water to the vicinity of each State water contractor's turnout.

Transportation Charge - Minimum Operation, Maintenance, Power and Replacement (OMP&R) - Operating costs incurred by DWR that do not depend on or vary with quantities of water delivered to the Authority.

Turnback Pool Reduction - Elections by project participants to "turnback" a portion of their State water in a given year.

Turnout - A delivery structure which includes metering and valve facilities through which State water is delivered from the CCWA or DWR pipeline to a project participant's delivery system.

V

Variable O&M Charges - Operations and maintenance expenses which vary directly in proportion to the amount of water delivered to a project participant.

W

Warren Act Charges - Wheeling charges required under a July 25, 1995 contract between the United States and the Central Coast Water Authority. The \$15/AF charge is payable to the Bureau of Reclamation (and recovered into the Reclamation Fund) for State water wheeled through Cachuma Project facilities.

Water Supply Agreement - An agreement between the Authority and each project participant to, among other things, sell State water entitlement allotment and provide for financing of the Authority facilities.

Water System Revenue Bond Surcharge - The surcharge is the difference between the total project charges collected at the project interest rate for a project and the annual financing costs of the water system revenue bonds issued for that project. Project interest rate is the melded financing costs for projects not financed with water system revenue bonds.

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.

This paper 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).

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 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.

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.

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 (EIR), 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.

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.

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. 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.

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.

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, Golden State Water Company (formerly, 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.

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 \$177,120,000 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. In September 2006, CCWA refinanced the 1996 revenue bond issue resulting in debt service savings of approximately \$350,000. The principal amount of the refunding bonds was \$129,190,000)

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. Pages 288 and 289 contain project maps depicting the facilities constructed by the State, CCWA and various project participants. Table 1 contains technical and other data regarding project facilities.

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.

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.

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.)

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 \$595 million, which is comprised of \$481 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.

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 costs 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.
- 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.

- 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 provides 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, and construction and O&M issues.
- 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 was 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.

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. 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 three-way "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.
- 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.
- On-site pipe sections were "capped" at the ends to prevent wildlife from crawling inside. Monitors also 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 are monitored regularly and monitoring will continue for five years.

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 caring for 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.

Certain 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.

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.

Water Supply Reliability

The availability of SWP water supplies varies with hydrologic cycles and overall SWP demand. During wet years the SWP is able to deliver sufficient water to meet most or all SWP delivery requests. During extended dry year conditions, the SWP can deliver only a portion of requested deliveries.

In June 1993 CCWA retained an additional 3,908 acre-foot "drought buffer" entitlement to partially firm up the reliability of the 39,078 acre-feet of SWP entitlement for which CCWA (Santa Barbara County) project participants contracted. During those years that availability of SWP water exceeds project participants' demand, project participants can store drought buffer water (and unused WSA entitlement allocations) either directly into a groundwater basin or on an in-lieu basis (i.e., by taking delivery of the drought buffer and reducing groundwater pumping by an equal amount). During dry years when availability of SWP water is less than CCWA project participants' demand, stored drought buffer water (and stored entitlement water) can be used to augment SWP deliveries. On a long-term average basis, this results in the equivalent of 73% delivery of full annual entitlement (i.e., the 39,078 acre feet) year in and year out.

Other mechanisms that CCWA can use to fill project participant delivery requests during shortages in SWP supplies are:

- Acquiring water from the State "Turnback Pool," which is an internal SWP mechanism that pools unused SWP supplies early in the year for purchase by other SWP contractors at a set price. In addition, CCWA has established its own Turnback Pool Program whereby CCWA project participants can buy and sell excess entitlement

among themselves before submitting it for sale in the State turnback pool program. The turnback pool mechanism is only for one-year sales of water.

- Acquiring water from the State Water Bank during those years the bank is implemented by the State to market water that it purchases on the open market (i.e., non-SWP water). The bank was first implemented in 1991 as the State Drought Water Bank and has since been utilized during certain dry years when additional water is needed by SWP contractors. The water bank also is only for one-year sales of water.
- Term water purchases and sales of SWP entitlement by CCWA project participants in accordance with the CCWA Water Transfer Procedures adopted in March 1996. The procedures typically cover multi-year temporary and permanent sales of SWP entitlement.

Possible future actions that would further enhance SWP entitlement reliability include (1) the State building additional SWP facilities, (2) the State (and federal government) implementing water supply and reliability enhancements resulting from the CALFED process and (3) CCWA instituting a new or participating in an existing groundwater banking program on behalf of its project participants.

The Future

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 the reliability of CCWA's SWP entitlement were previously discussed in the section entitled "Water Supply Reliability."

CCWA staff currently monitor 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.

Environmental protection has been built into every level of CCWA operations. The CCWA 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. CCWA has built both the organization and infrastructure that will support this vision well into the future.

July 1998

Figure 1 – State Water Project Facilities



**Figure 2 – State Water Project Contracting Agencies
(and year of initial water delivery)**

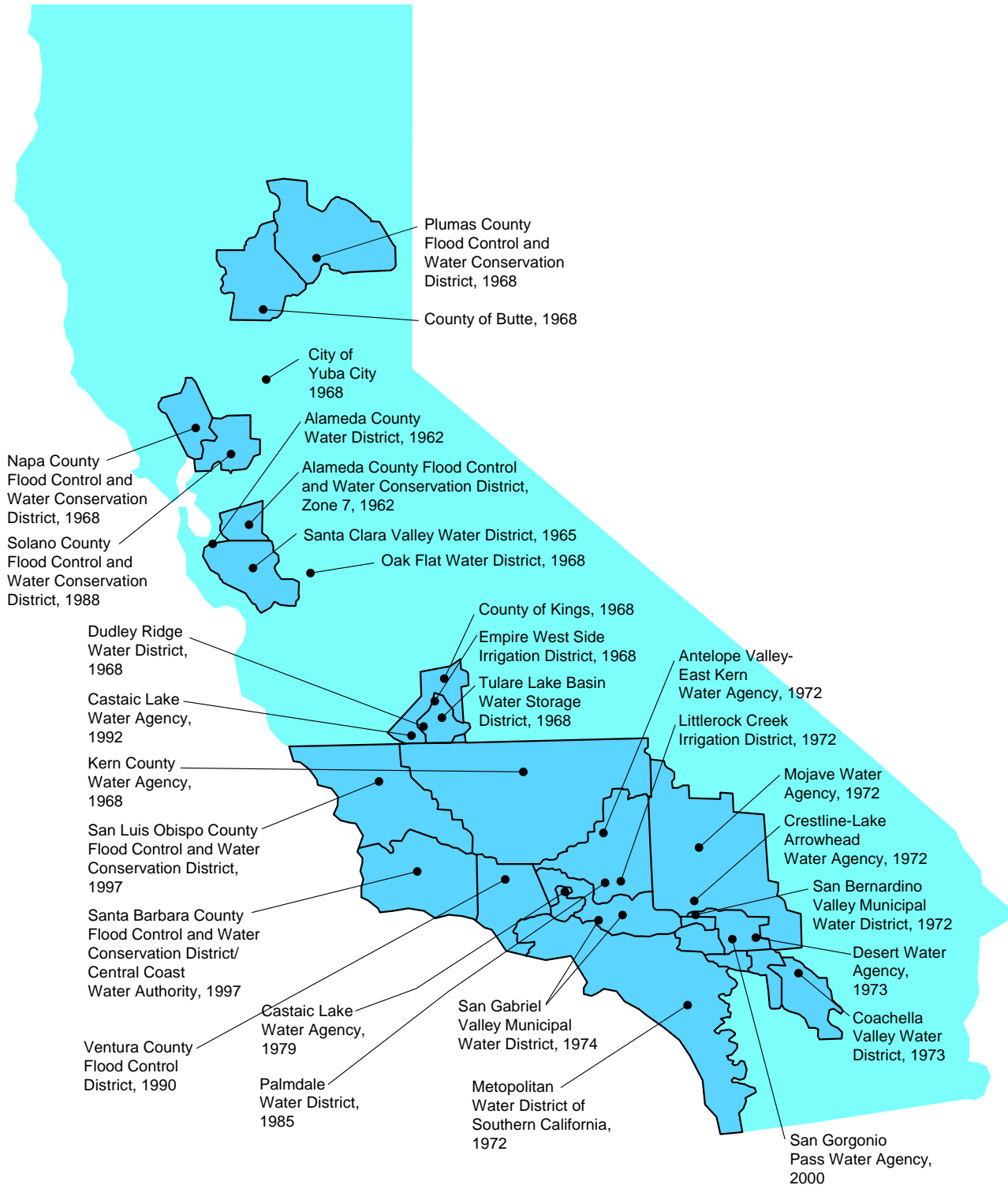


Table 1

COASTAL BRANCH PHASE II PROJECT DATA *

Tank Sites*	1	1	2	5	7
	raw water	treated water	treated water	treated water	treated water
# of tanks	3	2	2	2	1
total capacity (million gallons)	24.2	9.8	6.4	5	2.5

* Tank sites 3, 4 and 6 were eliminated during design of the facilities.

Polonio Pass Water Treatment Plant	49.46 million gallon per day capacity (disinfection process uses combination of chlorine and ammonia - chloramination)
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Pipeline		
<u>Location (from/to)</u>	<u>Pipeline Diameter (inches)</u>	<u>Distance (miles)</u>
Devils Den Pumping Plant/Tank1	57	13.0
Tank1/Salinas River	48	33.0
Salinas River/Cuesta Tunnel	51	7.1
Cuesta Tunnel/Tank 5	42	47.5
Tank 5/Purisima Road	39	13.3
Purisima Road/Santa Ynez Pumping Facility	36	21.2
Santa Ynez P.F./Lake Cachuma	30	8.0
Total Pipeline >>>		143.1

Pump Plants	<u>Flow Rate (cfs)</u>	<u>Horsepower (each pump)</u>	<u># of Pumps</u>	<u>Lift (ft)</u>
Devils Den Pumping Plant (DWR)	100	1760	6	550
Bluestone Pumping Plant (DWR)	100	1760	6	550
Polonio Pass Pumping Plant (DWR)	100	1760	6	550
Santa Ynez Pumping Facility (CCWA)	22	300	5	250

Turnouts	
<u>Location</u>	<u>Agencies Served</u>
Chorro Valley (SLO County)	California Mens Colony, Cuesta College, County of SLO Operations Center, City of Morro Bay
Lopez (SLO County)	Oceano CSD, City of Pismo Beach, San Miguelito Mutual Water Company, Avila Beach CSD, San Luis Coastal Unified School District, Avila Valley Mutual Water Company
Guadalupe	Guadalupe
Santa Maria	Santa Maria
Southern California Water Company (Orcutt)	Golden State Water Company
Vandenberg AFB	VAFB
Buellton	Buellton
Solvang	Solvang
Santa Ynez	Santa Ynez
Lake Cachuma*	Goleta WD, City of Santa Barbara, Montecito WD, Carpinteria Valley WD, Morehart Land Company, Raytheon, La Cumbre Mutual Water Co.

* Water discharged to Lake Cachuma is dechloraminated and then retreated on the South Coast.