STATE OF CALIFORNIA

The Resources Agency

Department of Water Resources

BULLETIN No. 132-74

THE CALIFORNIA STATE WATER PROJECT IN 1974

JUNE 1974

NORMAN B. LIVERMORE, JR.
Secretary for Resources
The Resources Agency

RONALD REAGAN
Governor
State of California

JOHN R. TEERINK
Director
Department of Water Resources

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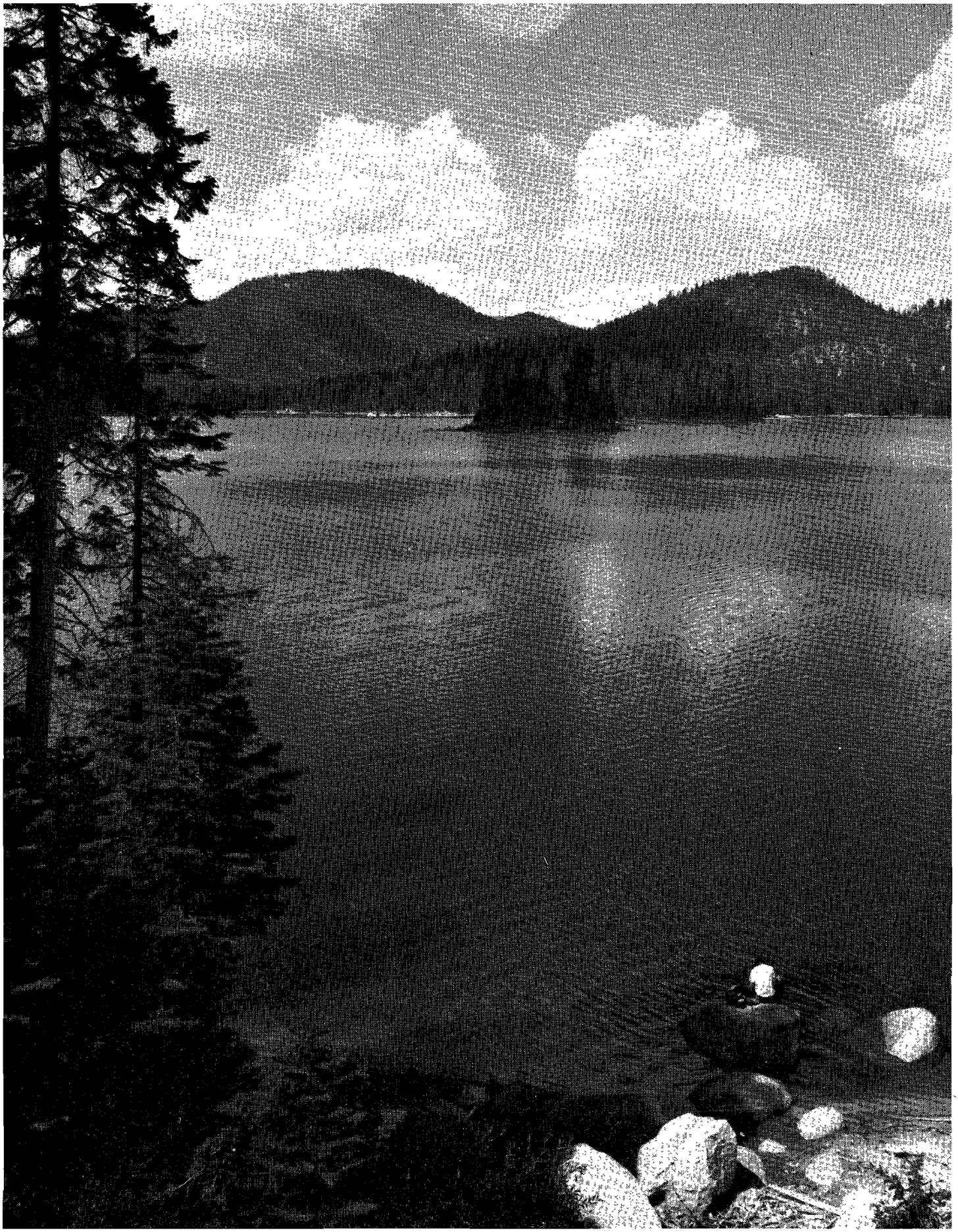

Antelope Lake
DWR 4260-13

FOREWORD

The highlight of 1973 was the completion of the initial State Water Project facilities, formally celebrated on May 18, 1973, at Perris Dam in Riverside County.

The year 1973 also saw a change in the directorship of the Project when William R. Gianelli resigned as Director of Water Resources on September 1, 1973.

Californians indeed have been fortunate to have top managers of the State Water Project who contributed their special abilities during critical periods when especially required by the Project.

A. D. Edmonston, former State Engineer with vast state water development planning experience extending back to the 1920s, spearheaded the conception of the initial facilities of the Project prior to the organization of the Department in 1956.

Harvey O. Banks, Director of Water Resources from 1956 through Californians' approval of the Project by popular vote in 1960, guided the Project during the difficult period of conciliation and negotiation when arrangements for financing and repaying costs were hammered out.

William E. Warne, Director during the tooling-up years from 1961 through 1966, lent his strong administrative abilities in setting goals and organizing the water marketing and construction efforts that brought the Project into physical reality.

William R. Gianelli began as Director in 1967 when prices started their current escalation spiral and maintained project construction and its financing on schedule.

However, the job is by no means complete nor has the Project reached its full maturity. Approximately $700 million will be expended on project construction during the next decade.

The State Water Project in 1974 looks forward to the timely staged completion of future works needed to complement the basic framework of the initial facilities to meet growing contractual obligations. And, in this year of heightened public awareness of impending resource shortages, Californians look forward toward achievement of increased benefits from the resource potential of their State Water Project.

John R. Teerink

John R. Teerink, Director
Department of Water Resources
The Resources Agency
State of California

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State of California
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DEPARTMENT OF WATER RESOURCES

RONALD REAGAN, Governor
NORMAN B. LIVERMORE, JR., Secretary for Resources
JOHN R. TEERINK, Director
ROBERT G. EILAND, Deputy Director
ROBERT B. JANSEN, Deputy Director
DONALD A. SANDISON, Deputy Director

DIVISION OF RESOURCES DEVELOPMENT

Herbert W. Greydanus . . . . . .Division Engineer

This report was prepared under the direction of

John R. Eaton . . . . . .Chief, Water Project Analysis Branch

by

Lawrence W. Smith . . . . . Chief, Systems Analysis Section
Donald R. Long. . . . . Chief, Repayment Analysis Section
Earl G. Bingham, Jr. . . . . .Reports Administration

Assisted by

Donald W. Fisher
Annie L. McKnight
Frances Mercer
Theodore H. Rhody
Charles E. Robbins
Hal O. Smith
James C. Scheler
Kenneth L. Scribner
Lloyd B. Shinn
Donald A. Williams
Harley R. Woodworth

- - - -

DIVISION OF DESIGN AND CONSTRUCTUION

Design and construction cost data were provided
under the direction of

Clifford J. Cortright . . . . . Division Engineer
John W. Keysor. . . . . Chief, Design Branch
H. H. Eastin. . . . . .Chief, Construction Branch

DIVISION OF LAND AND RIGHT OF WAY

Land and relocation cost data were provided
under the direction of

Thomas H. T. Morrow Chief, Division of Land and Right of Way

DISTRICT ENGINEERS

Planning and investigations cost data were provided
under the direction of

Albert J. Dolcini . . . . . Northern District
Robin R. Reynolds . . . . . Central District
Carl L. Stetson . . . . . San Joaquin District
Jack J. Coe . . . . . Southern District

DIVISION OF OPERATIONS AND MAINTENANCE

Operations and maintenance cost data were provided
under the direction of

H. G. Dewey, Jr. . . . . Division Engineer
James J. Doody . . . . . Deputy Division Engineer

As coordinated with the following Field Division Chiefs

Philip F. Johns . . . . . Oroville Field Division
Charles F. Tarbox . . . . . Delta Field Division
Jack E. Arnold . . . . . San Luis Field Division
Merle S. Bashor . . . . . .San Joaquin Field Division
Joseph H. Sherrard . . . . . Southern Field Division

POWER OFFICE

Power cost data were provided
under the direction of

Edward J. Terhaar . . . . . Chief, Power Office

DIVISION OF FISCAL SERVICES

Financial statements and data on incurred costs
were compiled under the direction of

Peter D. Mysing . . . . . Comptroller

and

Chester M. Winn . . . . . Chief, Contractor Accounting Office

Preparation of the financial analysis
was coordinated with

FINANCIAL CONSULTANTS

Dillon, Read & Co., Inc.

State of California
Department of Water Resources
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Samuel B. Nelson . . . . . Northridge

Ernest R. Nichols . . . . . Ventura

Orville L. Abbott,
Executive Officer and Chief Engineer

Tom Y. Fujimoto, Staff Assistant

ABSTRACT

The celebration at Lake Perris on May 18, which marked completion of the initial project facilities, was the 1973 highlight of the State Water Project. The initial facilities, which are necessary for initiating service to all agencies who have contracted for water deliveries prior to 1980, stretch from Plumas County in the north to Riverside County in the south and include 20 dams and lakes, 18 pumping and generating plants, and 527 miles of aqueduct. In addition to conserving and transporting water, the facilities also provide for recreation, fish and wildlife enhancement, electrical power generation, and flood control.

During 1973, project management actions centered on the conservation and provision of electric energy. Construction schedules were established for the remaining power recovery plants on the California Aqueduct in Southern California: Pyramid Powerplant on the West Branch, to operational in 1982, and Cottonwood Powerplant on the East Branch, to operational in 1983. These two plants will produce 1.1 billion kilowatts annually when full water deliveries are being made in about 2020. However, total project generation then will be about half the estimated pumping energy requirements of 13.1 billion kilowatt-hours annually. The availability of supplemental firm power from the Pacific Northwest and applicability of favorable rates for supplemental power from California utilities terminates in 1983. During 1973, the Department continued to evaluate alternative sources of post-1983 supplemental power for the Project and joined with major California utilities in feasibility studies of the San Joaquin Nuclear Project -- a cooperative power development which would be located in northern Kern County.

Operations highlights during 1973 included: initial commercial operation of Castaic Powerplant (which will be the largest capacity hydroelectric plant in California), constructed on the West Branch by the City of Los Angeles Department of Water and Power; delivery of 1,033,387 acre-feet of water to project customers, down 6 percent from prior-year deliveries due to above-average 1973 water supply conditions; support of 2,502,000 recreation days of use at project onshore developments, a record high; generation of 3,298,000,000 kilowatthours of hydroelectric energy in project powerplants; filling of Silverwood Lake and opening of permanent recreation developments at the Lake; and first delivery of water to Lake Perris, the southernmost project facility.

As of the end of 1973, more than $2.2 billion had been expended since 1952 for construction of the State Water Project. By the time additional conservation facilities are completed in 1997, construction costs will total almost $3.4 billion. In addition to additional conservation facilities, this estimate includes the future construction of Pyramid and Cottonwood Powerplants, Delta Facilities, Phase II of the Coastal Branch and North Bay Aqueduct, two additional recreation reservoirs in Plumas County, and supplemental works on the California Aqueduct -- as well as the San Joaquin Drainage Facilities which are expected to be required by about 1990 to maintain agricultural production in the San Joaquin Valley.

CHAPTER I. CONTINUING HISTORY OF THE PROJECT

For the State Water Project, 1973 was a year of celebration marking completion of the initial facilities. This significant construction milepost, highlighted by the May 18, 1973 dedication at Perris Dam, is described in Chapter II.

By no means, however, is the Project complete. Construction must continue, though at considerably reduced levels as compared with the $197 million average annual expenditure during the heavy construction years since 1963. Additional project works are needed to satisfy the Project's growing contractual obligations on schedule and to complement the basic framework of the initial facilities. Furthermore, additional construction by project water contractors for water distribution systems and by state and local entities for onshore recreation developments is essential if Californians are to eventually realize the full potential benefits of the Project.

Year 1973 saw the worldwide energy crunch forcefully brought into public focus by spiraling petroleum prices and widespread fuel shortages. Project management actions during 1973 centered on the conservation and provision of energy. The availability and price of pumping energy is especially vital to future project operations. Even before the 1973 price surge, payments for the costs of pumping power were envisioned to constitute over 40 percent of the total annual charges for project water supply— approximately equal to the annual repayment of project construction costs.

Nationwide, 1973 was a year of prices rising at a rate unexceeded for almost a quarter of a century. The price of food for American families increased almost 20 percent during the year. Economists indicate that increased domestic requirements for food and livestock feed and products, combined with an increased foreign willingness to purchase these same American-produced commodities, has resulted in demand exceeding supply and consequent high prices for American farm products. California, the Nation's leading agricultural state, is heavily dependent on adequate water supply for irrigation. Significant management actions were also taken in 1973 to facilitate the completion of distribution systems by the Project's water supply contractors and thus permit realization of the water supply potential of the Project.

The Department's 1973 management of the Project's significant water and power utility—having the objective of optimizing project water supply benefits to Californians at lowest possible costs—is described in Chapter III.

In addition to electric power and water supply considerations, management actions were taken in 1973 to provide for expanding recreation and fish and wildlife enhancement benefits of the Project. Recreation use continues to grow as permanent recreation developments come on line along the California Aqueduct and as new terminal reservoirs fill in Southern California, close to heavily populated metropolitan areas. Recreation use in 1973, together with project water and power operations for the year, is described in Chapter IV.

Paradoxically, there is a benefit to the Project as a consequence of the energy crunch and attendant increase of oil prices—in regard to the availability of project funds for financing ongoing project construction. A portion of the State's revenues from tideland gas and oil royalties forms an important, continuing source of such funds. Whereas last spring's projections were that the State's annual revenue from this source could decline significantly in the years ahead to dip below the portion alloted by the Legislature to water project construction, this year's projection shows significant annual increases due to higher values of production. These and other current financial considerations are discussed in Chapter V, together with an updated assessment of future construction costs of the State Water Project and how such costs could be funded and repaid.

Finally, 1973 was a year that saw little progress in the backlog of project-related proceedings pending before the courts and federal regulatory agencies. The status of these proceedings, following a summary of individual actions taken during 1973 affecting the future course of the State Water Project, is described toward the end of this chapter.

Actions Concerning Project Power

Historically, the Project has provided almost four times more electric energy than it has consumed in pumping. From the date of initial operation of the California Aqueduct in 1968 through 1973, approximately 6.3 billion kilowatthours have been consumed in project pumping, compared to a total of some 23.6 billion kilowatthours generated in project power plants and imported by the Project from the Pacific Northwest.

For the critical energy years immediately ahead, 1974 through 1976, project generation and imports are estimated at a little more than 13.6 billion kilowatthours while pumping is expected to total over 12.2 billion kilowatthours. While a large portion of the Project generation and imported power is sold to California utilities, and a major portion of the power used in pumping is purchased from those same utilities, the Project will have added almost twice as

much energy to California's supply as the Project will have consumed for the period 1968 through 1976. Of the Project's contribution, about 54 percent will be from Oroville Power Facilities, 37 percent from Pacific Northwest importations, and 9 percent from California Aqueduct recovery plants.

In 1973 alone, the Oroville Power Facilities produced about 3.0 billion kilowatthours—the same amount of generation from fossil fueled plants would have required burning more than 5 million barrels of oil. All project generation and energy imported from the Pacific Northwest comes from hydroelectric sources—no fuel is consumed in its production.

By the mid-1970s, growing annual pumping requirements will begin to outstrip annual generation and importations under present schedules and arrangements. When maximum entitlements are being delivered to the Project's water contractors well after the turn of the century, project pumping requirements will reach 13.1 billion kilowatthours annually. This amount will be less than 3 percent of the estimated total electrical energy then required in California.

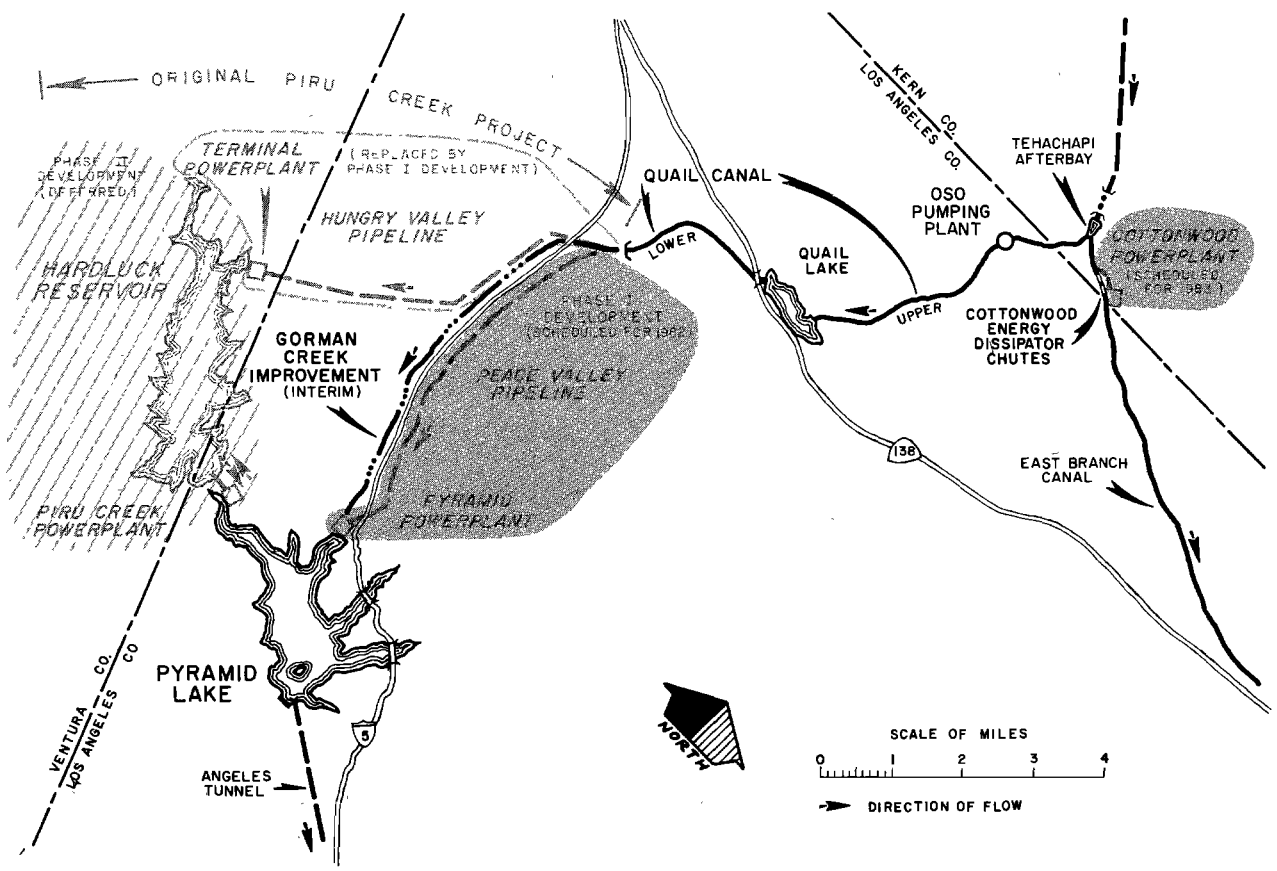
Constructed power plants are expected to produce 5.6 billion kilowatthours annually of project generation under full development: Oroville Power Facilities, 2.9 billion; San Luis Pumping-Generating Plant (Project share), 0.2 billion; and Devil Canyon-Castaic Power Facilities, 2.5 billion. Importations from the Pacific Northwest will decline as local demands grow in that area. (The firm supply therefrom will terminate on March 31, 1983 under present arrangements.)

Future Southern California Recovery Plants

During 1973, the Department took action to establish the construction schedule of remaining power recovery plants on the California Aqueduct in Southern California—Pyramid and Cottonwood Powerplants as shown on Figure 1. These two plants will add over 1.1 billion kilowatthours annually under full development.

Pyramid Powerplant. The 760-foot drop in water surface elevation between Quail Lake and Pyramid Lake on the West Branch of the California Aqueduct

Figure 1: FUTURE SOUTHERN CALIFORNIA RECOVERY PLANTS



is currently undeveloped. In accordance with an April 1968 decision, construction of the State's originally planned Peace Valley Pipeline and Pyramid Powerplant was deferred pending a decision regarding the possible participation of electric utilities in the development (see page 7, Bulletin 132-69). The Gorman Creek Improvement was constructed to permit the conveyance of project water deliveries to Pyramid Lake during the interim.

Discussions by the Department were subsequently initiated with electric utilities and led to a proposed comprehensive development known as the Piru Creek Project (see pages 6-8, Bulletin 132-72). On the basis of a May 27, 1971 agreement, the City of Los Angeles Department of Water and Power, Southern California Edison Company, and the Department began a study on the feasibility of the proposed development.

On April 30, 1973, Department officials met with representatives of the Los Angeles Department of Water and Power to discuss the results indicated by the study. As recorded in Director Gianelli's May 2, 1973 letter to the concerned parties, it was agreed that construction of the Piru Creek Project should be deferred and considered as a second phase of a two-phase development.

The first phase would consist of a power development between Quail and Pyramid Lakes. For the first phase, two alternatives would be considered: (1) the State's originally proposed Peace Valley Pipeline and 157-megawatt recovery plant, and (2) the City's proposal for a joint 400-megawatt pumping-generating plant. The second phase would consist of a large pumping-generating plant, located between and using the downstream storage in Pyramid Lake and upstream storage in a future reservoir to be located immediately above the lake.

On the basis of an August 1973 reconnaissance level report, prepared jointly by the staffs of the City and the Department, studies of cooperative development of the 400-megawatt first-phase alternative were discontinued.

At the November 30, 1973 meeting of the California Water Commission, Director Teerink announced the Department's decision to proceed with construction of the Pyramid Powerplant so that it can go into operation in 1982. The entire development would consist of a two-unit, 157-megawatt Pyramid Powerplant; a 5.6-mile-long, twin-barrel, Peace Valley Pipeline of 3,128 cubic feet per second capacity; and an enlarged Quail Lake and Lower Quail Canal so as to increase the present active storage capacity of 2,000 acre-feet to 5,400 acre-feet.

As indicated in last year's report, construction of a first-phase facility, such as Pyramid Powerplant, would not prevent subsequent development of a power complex similar to the proposed Piru Creek Project (see page 63, Bulletion 132-73). As long as construction of a reservoir upstream from Pyramid Lake were not precluded, the essential elements of the Piru Creek Project could be built at any time in the future.

With regard to the overall availability of energy, the indefinitely deferred second phase—a pump-storage development—would add to the peak power generating capacity but not to the total energy generated.

Cottonwood Powerplant. Cottonwood Powerplant would be located near the head of the East Branch, California Aqueduct. A 1967 study which indicated marginal economic justification led the Department to defer construction of the generation features of the plant and to construct the bypass portion (Cottonwood Energy Dissipator Chutes) for conveyance of water deliveries (see page 26, Bulletin 132-67).

A reanalysis of conditions in late 1973 indicated that the economics of the plant had notably improved. As a result, action was underway at the end of 1973 to reschedule construction of the plant, with initial operation in 1983. (Formal action was completed in 1974.) Changed conditions accounting for improved feasibility include (1) increased value of electric generation and (2) accelerated buildup of projected deliveries to The Metropolitan Water District of Southern California from the East Branch.

Long-Range Power Program

Even with the 1.1-billion-kilowatthour potential generation of Pyramid and Cottonwood Powerplants, total annual production of constructed and scheduled plants (6.7 billion kilowatthours) would be slightly more than one-half the estimated annual pumping requirements under full project development (13.1 billion kilowatthours). Furthermore, it may be economically advantageous to sell a portion of project generation to electric utilities as is now being done in regard to Oroville Power Facilities production. (The Power Sale Contract allows such production to be withdrawn from sale for use in project pumping upon five-years' notice.)

A major management objective of the Department under the Long-Range Power Program is to assure that adequate supplies of electric power are available to meet project pumping requirements as lowest possible cost. About eight years ago, the Department completed the basic power supply contracts with attractive power rates through March 1983 (see pages 99-102, Bulletin 132-66). While the availability of Canadian Entitlement Power also terminates in 1983, the Project's rights extend to 2005 regarding transmission capacity from the Oregon-California border south to major substations. All possibilities for any future availability of power from the Pacific Northwest are being fully explored. Based on studies to date, however, one of the most attractive alternative sources of required supplemental project power after March 1983 is the cooperative develop-

ment of a nuclear power plant with one or more electric utilities.

San Joaquin Nuclear Project (Wasco). During the summer of 1973, the City of Los Angeles Department of Water and Power began discussions with California utilities concerning a proposed nuclear power plant in northern Kern County.

A Feasibility Study Agreement was signed on September 11, 1973, by the City, Southern California Edison Company, Pacific Gas and Electric Company, and San Diego Gas and Electric Company. Subsequently, the Department accepted an invitation to join the study and was added to the Agreement by Amendment No. 1, signed November 8, 1973. Amendment No. 1 also establishes percentages for sharing the study costs—the Department being assigned 10 percent.

The San Joaquin Nuclear Project site is located close to major pumping plants of the California Aqueduct. Plans are that both agricultural waste water and aqueduct water would be used for power plant cooling. The feasibility study, being conducted under the management of the City, will provide sufficient information to allow each party to determine whether or not to proceed with joint construction.

As of the end of 1973, the above parties were negotiating the Participation Agreement, looking to its completion in the second half of 1974. General principles include the provision that the participants shall own a stated percentage of the power plant as tenants-in-common. Expectations are that the Department's share would be 10 percent of the total generating capacity—or approximately 440 megawatts.

Desert Plants (Southern California). During 1973, the Board of Directors of The Metropolitan Water District of Southern California, the Project's major water supply contractor, agreed to provide up to 100,000 acre-feet annually of its Colorado River supply to various electric utilities for power plant cooling purposes. The future plants using the cooling water would be located generally in the Colorado Desert area of Southeastern California.

As of the end of 1973, expectations were that the water would be allocated among utilities with the understanding that the State Water Project could participate in the plants for about 10 percent of the total generating capacity.

Conservation of Energy

During the past year, the Department worked with other agencies to increase the net power generating capabilities of the State Water Project by adjusting operational procedures.

For example, during 1973 storm periods, project operators worked closely with the Federal-State Flood Forecast Center in Sacramento to improve projections of flood inflows to Lake Oroville. The Corps of Engineers closely reviewed the inflow forecasts that were made. As a result of this study and cooperation, the Corps was able to adjust the flood control requirements in order to permit temporary storage, between storms, of additional water in Lake Oroville.

Also during 1973, an agreement was completed between the Department and electric utilities who receive the output of Oroville Power Facilities whereby additional energy will be generated at times when flood control criteria might later require high rates of water release from Lake Oroville. The agreement was used in November 1973 to reduce a potential spill of over 200,000 acre-feet to less than 120,000 acre-feet.

Actions Concerning Project Water Supply

Though the basic framework of the Project's aqueduct system is complete, beneficial use of project water is dependent on the availability of works required to convey it from the state-constructed system to the respective users within each service area. These distribution works are financed and constructed by the water contractors and their retail agencies.

The contractors' investment in project water distribution works will be considerable. Current estimates are that this investment will exceed $2.6 billion —almost the same magnitude as their eventual obligations for the cost of facilities financed and constructed by the State. More than $1.2 billion had been incurred for such distribution works as the end of 1973.

In order to reduce or delay expenditures, some contractors have devised water exchanges, where practical. For instance, Desert Water Agency and Coachella Valley County Water District have entered into an interim arrangement with The Metropolitan Water District of Southern California which permits the delay of constructing a long and expensive conveyance system from the East Branch to Desert and Coachella. Under the arrangement, a portion of Metropolitan's Colorado River supply is delivered to Desert and Coachella from Metropolitan's Colorado River Aqueduct in exchange for Desert's and Coachella's project water entitlements from the California Aqueduct. During 1973, this water exchange was put into operation for the first time.

Financing of Distribution Works

During 1973, there were significant actions to facilitate the contractors' financing of project-related distribution works.

Senate Bill 1002. Enactment of SB 1002 (California Statutes of 1973, Chapter 513) provides that any

agency, other than cities or counties, contracting for water from the State Water Project and proposing to issue general obligation bonds to fund the acquisition and construction of facilities to enable the agency to utilize project water, may satisfy and requirement for voter approval of such bonds if a majority of those voting at statewide primary or general election vote in favor of such proposition.

This new law is expected to be of great assistance to several agencies in view of the two-thirds majority formerly required by their enabling acts. Since the Project's water contracts require each agency to pay most of the charges for state water whether or not it can take delivery, the lack of funding for distribution works can cause great hardships. Although Antelope Valley-East Kern Water Agency has the most urgent problem, other water contractors, including Desert Water Agency, Mojave Water Agency, and Coachella Valley County Water District, also had the two-thirds vote requirement for issuance of general obligation bonds and are faced with the need for extensive facilities to use project water.

Loan Commitment and Construction Loan Program. Under a 1968 enactment, the Legislature made available $8 million to assist in the financing of construction of project water distribution works. As subsequently modified (see page 1, Bulletion 132-72), the law provides two forms of assistance:

(1) Loan commitments to help guarantee payment of service on general obligation bonds sold to provide construction funds.

(2) Construction loans to supplement construction funds.

After several years' effort in modifying the original legislation and in developing administrative procedures, disbursements were first made under the program in 1973.

Last year's bulletin included a reference to Director Gianelli's November 13, 1972 letter to Kern County Water Agency, requesting comments on the eight loan applications which had been submitted to the Department and which were considerably in excess of available funds (see pages 35 and 36, Bulletin 132-73). By letter of April 19, 1973, seven of the eight water districts applying for loans amended their earlier applications. Whereas the original applications requested about three times the amount of funds available, the amended applications total slightly less than $8 million as shown below:

Applicants (All Member Units of Kern County Water Agency)	Original Requests		Amended Requests,
	Loan Commitments	Construction Loans	All Construction Loans
Buena Vista Water Storage District	-	$ 1,925,518	$ 333,000
Cawelo Water District	$3,069,000	2,500,000	1,800,000
Lost Hills Water District	477,900	796,000	500,000
Rosedale-Rio Bravo Water Storage District	-	635,000	550,000
Semitropic Water Storage District:			
Buttonwillow Improvement District	-	2,450,000	2,450,000
Pond-Poso Improvement District	-	960,000	768,000
Wheeler Ridge-Maricopa Water Storage District	-	1,500,000	(a
Berrenda Mesa Water District	4,350,000	2,500,000	1,500,000 (b
TOTAL	$7,896,900	$13,266,518	$7,901,000

a) Not expected to pursue application.
b) May request a loan commitment in lieu of a construction loan.

Processing of applications include the signing of a repayment contract, fulfillment of the requirements of the California Environmental Quality Act, approval of the contract by the State Treasurer, contract validation by a court of competent jurisdiction, and assurance by the State Treasurer that there is reasonable expectation of sufficient funds to complete the respective distribution works. As of the end of 1973, processing had been completed on the application of Buttonwillow Improvement District of Semitropic Water Storage District and funds were disbursed on December 28, 1973. Processing was under way on applications by Pond-Poso Improvement District of Semitropic, Cawelo Water District, and Rosedale-Rio Bravo Water Storage District.

Studies to Expand Project Benefits

Last year's bulletin included reference to two studies being initiated to expand water service, during the period before full project development, for uses not originally contemplated (see pages 8 and 9, Bulletin 132-73).

Cross-Valley Canal. During 1973, the Department continued to study the feasibility of constructing a canal for delivering water from the California Aqueduct to the east side of the southern San Joaquin Valley. The Department started this planned three-year study in July 1972. In March 1973, the Department and the Bureau of Reclamation informally agreed to participate in a joint study of alternative cross-valley canal alignments.

The investigation will include alignments which could serve portions of Fresno, Tulare, Kings, and Kern Counties where ground water reservoirs are currently being overdrawn (including, in response to a request from local agencies, a portion of the Kings River service area). Alternative delivery capabilities being considered range from 300,000 to 500,000 acre-feet annually.

Evaluations will be made regarding the possible use of a cross-valley canal to alleviate an ultimate capacity shortage of about 1,000 cubic feet per second in the San Luis Canal of the California Aqueduct through exchanges or construction of additional facilities. Consideration will also be given to possibilities for exchanges between the Central Valley Project and the State Water Project in order to provide greater flexibility in the operation of the two Projects. The study will include an evaluation of potential ground water recharge areas and the fishery and recreation potential of alternative canals.

Cross-valley canal alignments considered in the joint study are to the north of, and in addition to, Kern County Water Agency's Cross Valley Project which now is scheduled to be under construction in May 1974 and completed in December 1975.

Ground Water Storage of Project Water. In cooperation with local agencies through an ad hoc committee of the Southern California Water Conference, the Department is engaged in a joint study to evaluate the possible recharging of ground water basins. Benefits of such an operation would include possible improvement of ground water quality and delay of construction of additional conservation facilities.

Under a study initiated in July 1973, the Department is examining the availability of water and power during the next 10 years and the capability of the aqueduct system to deliver recharge water over and above current contractual requirements. Other factors being considered include the possible effects on project costs, water charges, and project financing. Possible contractual arrangements and desirable legislation also are being investigated.

Through the coordination of the ad hoc committee, local agencies are analyzing their operating problems and the financial, legal, and institutional ramifications of the proposal.

The Department's initial study will be concluded in June 1974. Present plans are that an overall report will be developed in cooperation with the local agencies.

Actions Concerning Project Recreation and Fish and Wildlife Enhancement

During 1973, actions were taken to expand the scope of the California Aqueduct made available to recreationists. Figure 2 indicates the status of aqueduct recreation developments at the end of 1973.

Fishing Access Site Program

Under legislation enacted in 1968, the Wildlife Conservation Board has the responsibility for planning and developing a fishing access program on aqueducts of the Project (see page 2, Bulletin 132-69). In 1969, the Board and the Department embarked on a program of development at certain sites along the California Aqueduct under which the Department agreed to:

- Permit use of some existing roads.
- Furnish and install necessary safety devices prior to public use.
- Provide necessary land upon which to develop the sites.

Other basic concepts approved by the Board at that time included requirements that a fishery be established prior to development of a site, site operation and maintenance be provided by local government, and site accommodations furnished be adequate but not elaborate.

During 1973, three more fishing access sites were opened to the public, bringing to eleven the total number on the California Aqueduct in the San Joaquin Valley. The three new sites are Fairfax, adjacent to Fairfax Avenue in Fresno County; Avenal Gap Road, adjacent to Avenal Cutoff Road in Kings County; and Kettleman City, adjacent to Milham Avenue also in Kings County.

Considerable use has been made of the sites in the San Joaquin Valley. The Aqueduct is the largest "river" in the semi-arid Valley and substantial numbers of fish have become established. All access sites are open and free to the public and have been well received. Several sites in both Los Angeles and San Bernardino Counties are planned within the next few years.

Expanded Fishing Access Program

On January 30, 1973, a policy change was announced by the Department and the Wildlife Conservation Board which will provide anglers with greater access to designated areas formerly closed to the public on the California Aqueduct. In addition to fishing access sites, fishermen now will be allowed walk-in access to other areas of the Aqueduct, excluding certain posted structures. Automobiles and motorcycles will not be allowed on the aqueduct operating roads but can be parked at identified areas.

On May 1, 1973, a 62-mile stretch of the California Aqueduct was opened to walk-in fishing, extending from Tracy to Los Banos. On July 1, 1973, two additional reaches were opened totaling about 34 miles and roughly paralleling Interstate 5. One reach extends from State Highway 207 (Jansen Road) to Mercy Springs Road in Merced County. The other reach extends from Fairfax Avenue to Clarkson Avenue in Fresno County.

Other reaches along the California Aqueduct will be open to walk-in fishing as soon as the necessary preparation and safety precautions can be completed.

California Aqueduct Bikeway

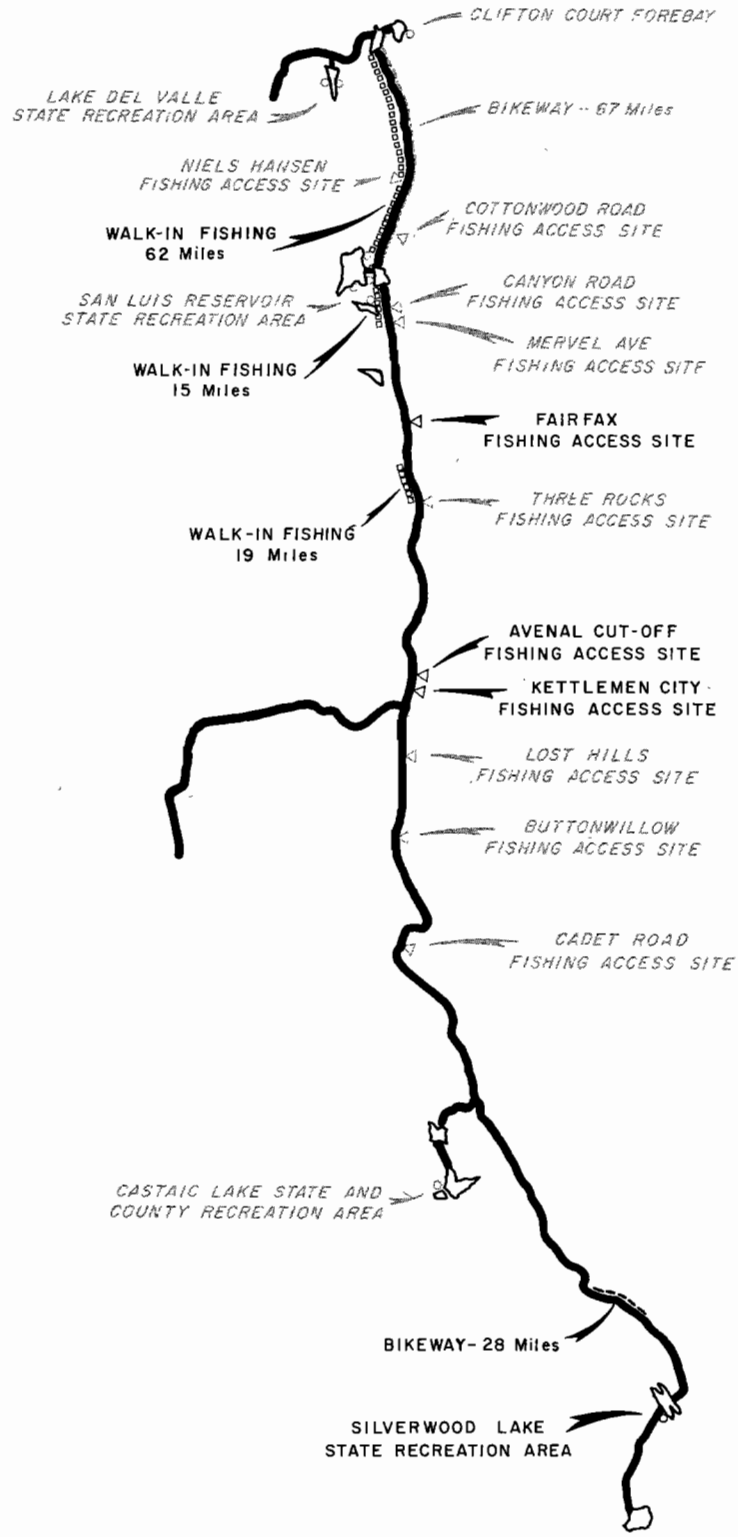
A new concept for expanding recreation use of the Project's aqueducts was introduced in 1972—the California Aqueduct Bikeway (see page 8, Bulletin 132-73).

On June 3, 1973, about 200 Southern California bicyclists enjoyed the Wildflower Bicycle Ride in the Antelope Valley—sponsored by Antelope Valley-East Kern Water Agency in cooperation with many local bicycle and recreation groups. The Ride covered part of what will eventually be the second reach of the California Aqueduct Bikeway, extending 100 miles from the Tehachapi Afterbay to Silverwood Lake. On September 1, 1973, an initial 28-mile section of Bikeway was opened to the public—extending from Pearblossom Pumping Plant south to Interstate 15 near Hesperia. Together with the 67 miles opened in 1972 between Bethany Reservoir and San Luis Forebay, a total 95 miles of Bikeway was in operation as of the end of 1973.

The San Joaquin Valley section of the California Aqueduct Bikeway has been named a National Recreation Trail by the federal government.

The presentation was made by Frank Sylvester, Regional Director of the United States Bureau of Outdoor Recreation which administers the program. "This designation means that the Bikeway is an 'outstanding trail worthy of national recognition'," Sylvester said as he presented the plaque.

Figure 2: CALIFORNIA AQUEDUCT RECREATION DEVELOPMENTS



RECREATION DEVELOPMENTS OPENED IN 1973

DEVELOPMENTS OPENED PRIOR TO 1973

Pending Actions

The following proceedings were pending as of May 1, 1974—when preparation of this bulletin was completed.

Federal Power Commission License for the California Aqueduct

The Department applied for a Federal Power Commission License for the California Aqueduct in 1965 (FPC Project No. 2426). The Presiding Examiner's Decision was issued in January 1972 and the Intervenors appealed the Decision to the Commission in February 1972 (see page 10, Bulletin 132-73).

On February 6, 1974, the Federal Power Commission issued an opinion on the Department's application. The Commission remanded the case to the Presiding Administrative Law Judge for further proceedings. The Commission required its staff to prepare an independent environmental impact statement in accordance with the decision in *Greene County Planning Board v. F.P.C.,* 455 F.2d 412 (1972). However the statement is to be prepared on only the "jurisdictional" portions of the Project. The Commission held that its jurisdiction is limited to Devil Canyon, Castaic, and Pyramid Powerplants. The Commission also required the statement to include consideration of proposed Cottonwood Powerplant and Coastal Branch. Hearings before the Presiding Administrative Law Judge will be held after the statement is completed.

Bowker v. Morton

This lawsuit, initiated in 1970 in the Federal District Court in San Francisco, seeks a determination that federal reclamation laws, including the 160-acre limitation, are applicable to the State Water Project and that the National Environmental Policy Act of 1969 applies to ongoing federal participation in the Project (see pages 3 and 4, Bulletin 132-72).

The United States and the State of California filed motions to dismiss the complaint in July 1971. On August 2, 1973, the District Court entered an order denying the motions to dismiss, except as to one claim that the Interior Department's interpretation of the San Luis Act was incorrect.

The plaintiffs filed an amended complaint in February 1974 only after Judge Carter ordered counsel to show cause why the case should not be dismissed for lack of prosecution.

The amended complaint alleges that the plaintiffs are suing on behalf of themselves and all small farmers who receive irrigation water from the Central Valley Project or other federal facilities subject to the federal reclamation laws, in particular, the 160-acre limitation. They allege that large corporate landowners who are receiving unlimited amounts of federally subsidized water through the State Water Project are unjustly enriched in a manner the federal reclamation laws were designed to prevent; that lands so appreciated in value are unavailable for purchase at reasonable preirrigation prices by small farmers; that, consequently, family farmers are effectively excluded from the State service area; and that there has been an arbitrary and selective application of the reclamation laws which has increased the divergence of power between small and large landowners and an increase in monopolistic marketing practices. The alleged federal subsidies to the State Water Project appear to be the benefits from coordinated operation of the federal Central Valley Project and the State Water Project as well as from the allocated costs and uses of the San Luis joint-use facilities.

The State filed an answer to the amended complaint in April 1974. At the same time, it filed a motion to stay prosecution of the cause of action relating to the National Environmental Policy Act of 1969. This motion was argued on April 26, 1974, when Judge Carter dismissed that cause of action without prejudice.

A pretrial conference is set for June 7, 1974, with trial scheduled for January 1975.

Sierra Club v. Morton

This lawsuit, filed on March 16, 1971 in the Federal District Court in San Francisco, seeks an injunction restraining the construction or operation of Delta Pumping Plant, Peripheral Canal, San Luis Drain, East Side Canal, and Tracy Pumping Plant until certain federal approvals and authorizations have been obtained (see page 4, Bulletin 132-72). The defendants include the State of California, Secretary for Resources, Director of Water Resources, Secretary of the Interior, and Bureau of Reclamation.

The injunction would restrain the defendants from constructing or continuing construction or operation of Delta Pumping Plant, Peripheral Canal, and certain existing or proposed federal Central Valley Project facilities because of an alleged failure to meet environmental requirements. The principal statutes involved are the National Environmental Policy Act of 1969, Rivers and Harbors Act of 1899, and California Environmental Quality Act of 1970. The defendents contend that those laws, to the extent applicable to the State Water Project, have been observed.

During 1973, discovery proceedings were in progress. The case was transferred from Judge Weigel to Judge Renfrew, also of the Federal District Court in San Francisco. In December, 1973, the defendants filed a motion to dismiss.

The trial, set for June 10, will be divided into two parts regarding: (1) whether or not the defendants violated the law and (2) what relief, if any, the plain-

tiffs are entitled to receive. Defendants have requested action by Judge Renfrew on their motions to dismiss. A joint pretrial statement is scheduled to be submitted to a magistrate on May 31, 1974.

Environmental Defense Fund, Inc., v. Morton

This lawsuit, filed in 1971 in the Federal District Court in Washington D.C. and subsequently transferred to the Federal District Court in Sacramento, seeks to prevent the Bureau of Reclamation from entering into the proposed agreement with the State of California for coordinated operation of the federal Central Valley Project and the State Water Project (see page 4, Bulletin 132-72). The principal basis of the action is that the defendants have not filed an environmental impact statement under the National Environmental Policy Act of 1969.

There has been no change in the status of this case. The United States has agreed to prepare an environmental impact statement, and the case is off calendar until it is completed.

San Bernardino Valley Municipal Water District v. Department of Water Resources and The Metropolitan Water District of Southern California

A 1972 action was filed by San Bernardino Valley Municipal Water District in the Superior Court of Sacramento County against the Department and The Metropolitan Water District of Southern California (see pages 11 and 12, Bulletin 132-73). The action seeks declaratory relief and damages for alleged breach of San Bernardino's water supply contract by the Department and unlawful interference with such contract by Metropolitan.

Answers to the complaint in this case were filed in February 1973. Metropolitan furnished answers to plaintiff's interrogatories in April 1974.

On November 2, 1973, Municipal Water District of Orange County filed a complaint in intervention and the Judge signed an ex parte order on the same day granting the District's motion to intervene. The District is a subunit of Metropolitan and its interest in the litigation coincides with that of Metropolitan, since San Bernardino's proposed plan to furnish water within the boundaries of Metropolitan would also be within the Municipal Water District of Orange County's boundaries. A motion was filed by San Bernardino Valley Municipal Water District to strike from the record the motion, complaint, and order allowing the Municipal Water District of Orange County to intervene in the action. The motion was denied. A settlement conference is scheduled for June 11, 1974.

Interstate 5 Litigation

In November 1973, the Friends of the Earth filed suit in the Federal District Court in Washington, D.C. against the Secretary of Transportation to enjoin construction of a reach of Interstate 5 between Sacramento and Stockton *(Friends of the Earth v. Brinegar)*. Although an environmental impact statement was prepared, the plaintiffs claimed that it was inadequate in its discussion of borrow pits.

The Department and the California Department of Transportation (formerly Department of Public Works) have an agreement whereby material taken from the right-of-way of the Peripheral Canal would be used for fill in constructing the Interstate (see pages 34 and 35, Bulletin 132-68).

The Federal District Court in Washington, D.C. dismissed the case without prejudice, and the plaintiffs refiled in the Federal District Court in San Francisco.

The same plaintiffs also filed suit in State Superior Court against the California Department of Transportation *(Friends of the Earth v. Walton)*. The issues in this case are the same. A hearing was held on December 18, 1973, on the plaintiffs' motion for summary judgment and the court took the matter under submission.

In January 1974, the federal courts denied the plaintiffs motion for a preliminary injunction, and, in February, the state court denied a similar motion. In April 1974, the California Department of Transportation intervened in the Federal suit and joined the other defendants in making a motion for summary judgment. On May 1, 1974, the federal courts granted the defendants motions for summary judgment on the basis that the connection between the Peripheral Canal and Interstate 5 is too remote.

On the basis of the federal decision, the defendants have filed alternatively for a summary judgment or an interlocutory judgment on the ground that the federal court, in *Friends of the Earth v. Brinegar,* had already decided the questions raised by this suit. The interlocutory judgment would become final only after the defendants won all appellate decisions. A plaintiff's deposition of the District Transportation Director, the defendant's motion to quash that deposition, and a hearing on the defendant's motions for summary judgment are all scheduled for May 28, 1974.

Suits Concerning D 1379

Two lawsuits were filed in 1971 in the Superior Court of Sacramento County both seeking an order to set aside the State Water Resources Control Board Decision 1379, *Central Valley East Side Project Association v. State Water Resources Control Board,* filed October 12, 1971, and *Kern County Water Agency v. State Water Resources Control Board,* filed October 15, 1971 (see page 4, Bulletin 132-72).

On March 6, 1973, the Board, through the California Attorney General's office, moved to intervene as a cross-complainant against the United States in these actions. In the cross-complaint, the Board asked the court to determine that the United States and the Bureau of Reclamation are subject to the Board's jurisdiction and are bound by terms and conditions in permits that have been issued to appropriate unappropriated water for the federal Central Valley Project. Argument on all of the matters before Judge Wilkins was held on July 18, 1973. All matters were taken under submission and no ruling has been made on any of the motions by the defendants. The first hearing on these cases has been postponed several times and is presently scheduled for June 11, 1974.

Other Suits Involving SWRCB Jurisdiction over Federal Projects

In June 1973, the California Attorney General filed suit seeking a determination that the Bureau of Reclamation must comply with conditions and permits issued by the State Water Resources Control Board *(People ex rel. v. Rogers C. B. Morton and Gilbert Stamm.)*

The complaint asks the court to declare that the Bureau of Reclamation must comply with the provisions of Decision 1379 with regard to the Delta, Decision 1400 with regard to the American River, Decision 1407 with regard to Hidden Reservoir on the Fresno River, and Decision 1422 with regard to New Melones Reservoir on the Stanislaus River. The suit asks for a declaratory judgment that the Bureau must apply to the Board for permits if it wishes to acquire water rights for the federal Central Valley Project; that the Board is authorized to impose reasonable conditions on such permits; and that the Bureau is required to comply with reasonable terms and conditions in permits.

The suit was filed in the Federal District Court in San Francisco, but the Attorney General and the United States Attorney entered into a stipulation to transfer the case to the Federal District Court in Sacramento.

The United States answered with a denial and a claim of sovereign immunity. It also filed a suit in Sacramento against the Board *(United States v. State of California)* on October 15, 1973 seeking to declare that the Bureau of Reclamation's water rights are not subject to the Board's regulations. The suit also seeks to avoid portions of the Board's New Melones Decision 1422. The State filed a motion to stay the suit until the Morton suit is completed, or, in the alternative, to consolidate the two suits.

The issue of the Board's jurisdiction over the Bureau of Reclamation was also involved in *Natural Resources Defense Council v. Stamm,* which sought to enjoin construction of the Auburn Dam-Folsom South Canal project until an adequate environmental impact statement is prepared. The case was filed in December 1972 in the Federal District Court in Sacramento. After negotiations to settle the case broke down, the plaintiffs filed an amended complaint on November 12, 1973, which claimed, among other things, the Bureau must comply with the Board's Decision 1400. On December 14, 1973, the California Attorney General filed an *amicus curiae* brief asking the court not to consider the question of the Board's jurisdiction since it is an issue in the two cases above. On December 26, 1973, the Attorney General also filed a motion to intervene in the suit on behalf of the Resources Agency and the Reclamation Board. The Pacific Legal Foundation also filed a motion to intervene on behalf of a coalition of counties, cities, and other local government agencies supporting the project. On April 15, 1974, Judge MacBride ruled that the environmental impact statement for Auburn Dam did not comply with the National Environmental Policy Act of 1969 and he ordered the Bureau to prepare a satisfactory document within five months or construction of the project would be enjoined at that time. He did not rule on the question of state regulation of federal projects because that issue will be decided for all the above cases, including those concerning D1379 (see the preceeding section above).

Argument on the question of state regulation of federal projects was held in the Federal District Court in Sacramento in January 1974 before Judge Wilkins. On March 4, 1974, Judge Wilkins disqualified himself and the cases were assigned to Judge MacBride. The first hearing before Judge MacBride has been postponed several times and is presently scheduled for June 11, 1974.

CHAPTER II. PROJECT CONSTRUCTION

An estimated 10 thousand people gathered on Friday, May 18, 1973, at the site of Lake Perris, in Riverside County, for a two-fold purpose: (1) to dedicate Perris Dam, southernmost facility of the State Water Project, and (2) to celebrate the completion of the initial project facilities.

Governor Ronald Reagan officiated at the ceremonies; California Water Commission Chairman Ira J. Chrisman was master of ceremonies. The array of special guests included the widow and son of Assemblyman Carley V. Porter and former State Senator Hugh Burns (coauthors of the Burns-Porter Act which provided for most of the construction financing); former Governor Edmund G. Brown; Governor Jack Williams of Arizona; former Directors of Water Resources Harvey O. Banks and William E. Warne; members of the California Congressional Delegation; and state legislators.

The dedication highlight was Governor Williams' pressing of a button which started a 75-foot-high jet of water in newly forming Lake Perris—thus signifying completion of the basic water conservation-water transportation framework of the Project, extending from Plumas County in the north to Riverside County in the south.

The Initial Project Facilities

The initial project facilities of the State Water Project are those required for initiating service to all agencies which have contracted for water deliveries prior to 1980. In addition to conserving and transporting water, the facilities also provide for recreation, fish and wildlife enhancement, electrical power generation, and flood control. They include 20 dams and lakes, 18 pumping and generating plants, and 527 miles of aqueduct. The facilities are described below and their locations are shown on Figure 3. (Statistics are shown in map included at the back of this bulletin.)

Upper Feather Lakes are the first three completed of five reservoirs planned in Plumas County, primarily for recreation and enhancement of fish and wildlife habitat. The three lakes, Frenchman, Antelope, and Davis, provide 68 miles of new shoreline and 6,500 acres of new water surface. Releases from lake storage maintain downstream flows and provide supplemental water supplies to Sierra Valley and the City of Portola—supplies to the latter being conveyed through the six-mile-long Grizzly Valley Pipeline.

Oroville Facilities are the key multiple-purpose features of the Project. Oroville Dam, highest in the

United States (770 feet), forms Lake Oroville (3.5 million acre-foot capacity) for water conservation, power generation, flood control, recreation, and fish and wildlife enhancement. Conserved water is released through power plants to the Feather River and flows to the Sacramento-San Joaquin Delta where, after supplying the Project's share of Delta water requirements, it is lifted into Bethany Reservoir. Two large pumped-storage power plants, Edward Hyatt (largest underground plant in the nation) and Thermalito, generate power during hours when demand is high and pump water back from Thermalito Afterbay into Lake Oroville when demand is low. Migrating salmon and steelhead, blocked by Oroville Dam, are channeled into the Feather Hatchery, where eggs are hatched and young fish returned to the River. Onshore developments support a wide variety of water-oriented recreational activities.

North Bay Aqueduct, Phase I, is a small water transportation facility supplying immediate needs for supplemental water in Napa County. Consisting of an interim pumping plant and five miles of permanent pipeline, Phase I conveys a temporarily excess water supply of Solano County, purchased by Napa County.

South Bay Aqueduct serves a supplemental water supply to Alameda and Santa Clara Counties. The Aqueduct extends 43 miles from Bethany Reservoir through the South Bay Pumping Plant to a terminus east of the City of San Jose. Del Valle Branch of the Aqueduct includes a small pumping plant, about two miles of pipeline, Del Valle Dam and 77,100 acre-foot Lake Del Valle. The Lake provides for flood control, regulation of project water, conservation of flows in Arroyo Del Valle, and recreation.

California Aqueduct, San Joaquin Valley, consists of the northerly 300-mile portion of the Project's major water transportation system. Water is conveyed from the Sacramento-San Joaquin Delta for delivery to primarily agricultural uses in the western San Joaquin Valley (and also for recreation, municipal, and industrial uses) in Stanislaus, Merced, Kings, and Kern Counties, and for transfer to the Coastal Branch and the Tehachapi Crossing. In addition to Buena Vista, Wind Gap, and Wheeler Ridge Pumping Plants in the southern San Joaquin Valley, principal aqueduct features include:

Delta Pumping Plant, which lifts water from Clifton Court Forebay (on the southern boundary of the Delta) through the Delta Fish Protective Facility into Bethany Reservoir. Pumping capacity is currently 6,035 cubic feet per second with seven units of an eventual 11 units operating.

San Luis Joint-Use Facilities, a section over 100 miles long which is used jointly with the federal Central Valley Project and includes O'Neill Forebay, San Luis Pumping-Generating Plant, San Luis Reservoir, and Dos Amigos Pumping Plant. The Reservoir (2.1 million acre-foot capacity) stores water pumped from the Delta during winter and spring months, and releases water to generate power and to help meet peak downstream delivery requirements in summer and fall months. Dos Amigos Pumping Plant lifts up to 13,200 cubic feet per second of state and federal water with its three fixed-flow and three variable- flow pump units. Los Banos and Little Panoche Reservoirs, relatively small detention reservoirs located to the west of the Aqueduct, protect the Aqueduct from flood flows. Recreation developments are in operation at San Luis Reservoir, O'Neill Forebay, Los Banos Reservoir, and along the Aqueduct.

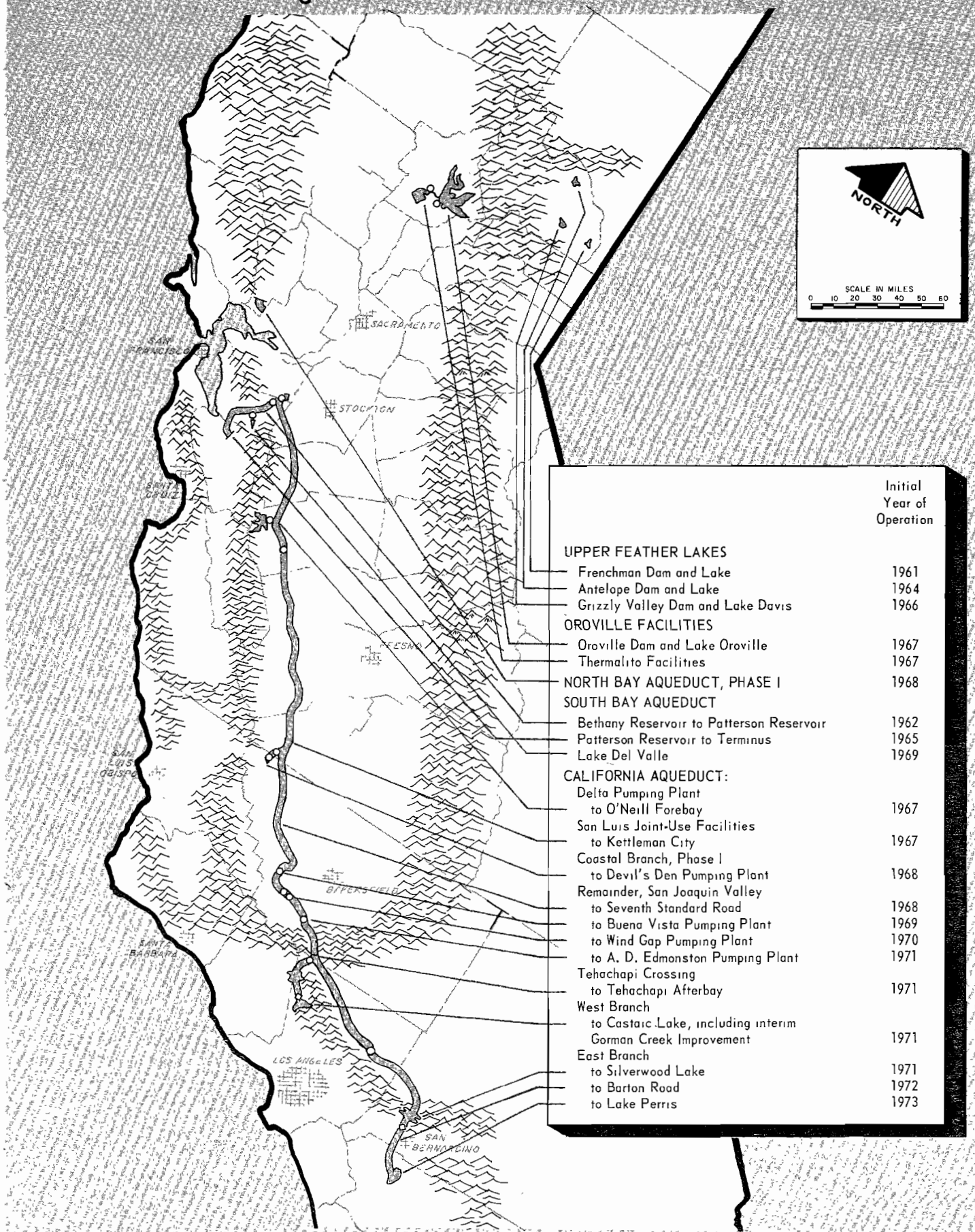
California Aqueduct: Coastal Branch, Phase I, delivers water for agricultural use in western Kern County. Extending 15 miles to the base of the coastal mountains, the Branch includes Las Perillas and Badger Hill Pumping Plants, which have an installed capacity of over 450 cubic feet per second.

California Aqueduct: Tehachapi Crossing, can boost more water higher than any other plant in the world. A. D. Edmonston Pumping Plant, with the 11 units now installed, can pump more than 3,150 cubic feet per second in a single lift nearly 2,000 feet up the Tehachapi Mountains. Water flows through 11 miles of tunnels and pipe to Tehachapi Afterbay in Southern California.

California Aqueduct: East Branch, conveys water from Tehachapi Afterbay 130 miles to Lake Perris. Deliveries are made to municipal and industrial water users in Kern, Los Angeles, San Bernardino, Riverside, and Orange Counties. Principal features include Pearblossom Pumping Plant with 828 cubic feet per second installed capacity, Devil Canyon Powerplant with 60,000 kilowatts installed capacity, Silverwood Lake, and Lake Perris. Recreation developments are available at Silverwood Lake (and opened at Lake Perris on April 6, 1974).

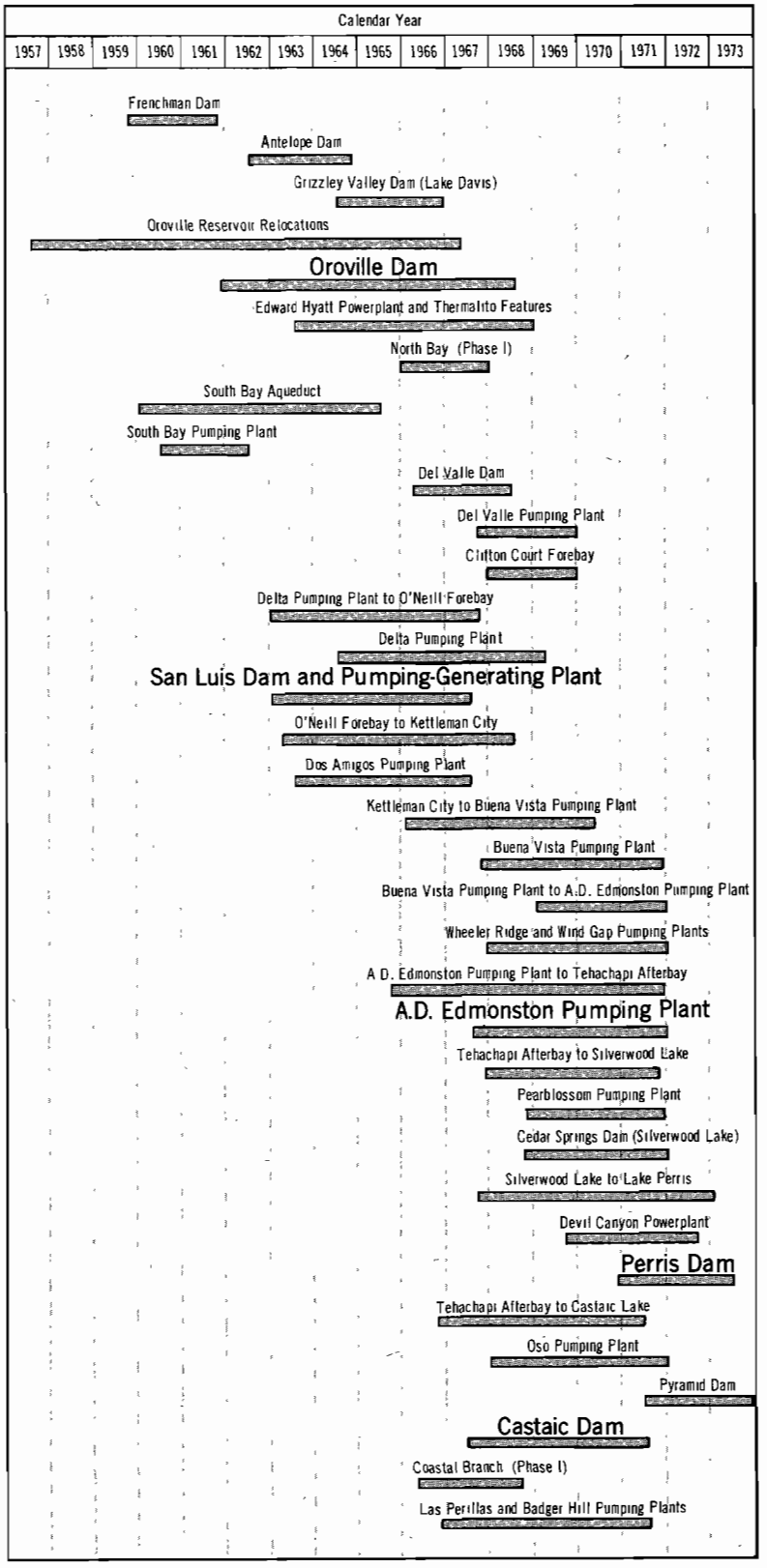
California Aqueduct: West Branch, extends 26 miles from Tehachapi Afterbay through Pyramid Lake to Castaic Lake. Deliveries are made for primarily municipal and industrial water use in Los Angeles, Orange, and Ventura Counties. Over 3,128 cubic feet per second can be pumped into the West Branch at Oso Pumping Plant. Other principal features include Gorman Creek Improvement (a temporary improvement of the creek channel to convey water until Pyramid Powerplant is constructed), the eight-mile-long Angeles Tunnel, and Castaic Powerplant (built by the City of Los Angeles Department of Water and Power under cooperation development). Recreation facilities are available at Castaic Lake and Castaic Lagoon and are expected to be opened at Pyramid Lake in July 1974.

Figure 3: INITIAL PROJECT FACILITIES



	Initial Year of Operation
UPPER FEATHER LAKES	
Frenchman Dam and Lake	1961
Antelope Dam and Lake	1964
Grizzly Valley Dam and Lake Davis	1966
OROVILLE FACILITIES	
Oroville Dam and Lake Oroville	1967
Thermalito Facilities	1967
NORTH BAY AQUEDUCT, PHASE I	1968
SOUTH BAY AQUEDUCT	
Bethany Reservoir to Patterson Reservoir	1962
Patterson Reservoir to Terminus	1965
Lake Del Valle	1969
CALIFORNIA AQUEDUCT:	
Delta Pumping Plant to O'Neill Forebay	1967
San Luis Joint-Use Facilities to Kettleman City	1967
Coastal Branch, Phase I to Devil's Den Pumping Plant	1968
Remainder, San Joaquin Valley	
to Seventh Standard Road	1968
to Buena Vista Pumping Plant	1969
to Wind Gap Pumping Plant	1970
to A. D. Edmonston Pumping Plant	1971
Tehachapi Crossing to Tehachapi Afterbay	1971
West Branch to Castaic Lake, including interim Gorman Creek Improvement	1971
East Branch	
to Silverwood Lake	1971
to Barton Road	1972
to Lake Perris	1973

Figure 4: PROJECT CONSTRUCTION SCHEDULE



Construction Highlights of the Initial Project Facilities

The construction program for the initial project facilities began in 1957 with the start of road locations around what is now Lake Oroville and ended in 1973 with the dedication of Perris Dam. The general construction schedule for each initial facility during the 17-year program is indicated on Figure 4. Annual highlights of the program are summarized in the following paragraphs:

1957—Before work could begin on Oroville Dam, it was necessary to relocate U.S. Highway 40A (now State Highway 70) and the Western Pacific Railroad from within the reservoir area. 1957 marked the Department's first contracts for relocating nearly 23 miles of railroad, including three major bridges and five tunnels. Contracts for rerouting 20 miles of State Highway 70 were administered and supervised by the California Division of Highways.

1958—Relocation of the Western Pacific Railroad continued with start of construction of the North Fork Feather River Bridge, a 1,011-foot-long reinforced concrete arch bridge, and the Feather River Bridge at Oroville, a 1,127-foot-long plate grider bridge.

1959—This year marked the beginning of construction of Frenchman Dam, California Aqueduct, and South Bay Aqueduct. Construction contracts were awarded for Frenchman Dam, Bethany Forebay Dam, and Intake Canal—an unlined canal (now deactivated) two miles long which conveyed an interim water supply for the South Bay Aqueduct from the federal Delta-Mendota Canal and included a temporary pumping plant at Bethany Forebay Dam.

1960—Construction began on the South Bay Pumping Plant and on about eight miles of pipe and canal of the South Bay Aqueduct from the Plant to Patterson Reservoir in the Livermore Valley.

1961—Frenchman Dam was completed—the first facility of the State Water Project. Excavation was started on Diversion Tunnel No. 1, 35 feet in diameter and about 4,400 feet long, for conveying Feather River flows around the construction site of Oroville Dam.

1962—In this landmark year, the largest civil construction contract in the United States up to that time (over $120 million) was awarded for construction of Oroville Dam, Diversion Tunnel No. 2, and Thermalito Diversion Dam. The South Bay Aqueduct was completed to Patterson Reservoir—the first water transportation facility of the Project—and deliveries were initiated in June. Deliveries also began from Frenchman Lake and construction was started on Antelope Dam, the second project reservoir in the Upper Feather River area.

1963—Relocation of the Western Pacific Railroad and State Highway 70 around the site of Lake Oroville was completed. Diversion Tunnel No. 1 was finished, together with the concrete core block of Oroville Dam, just in time to handle winter flows. Construction of Oroville Dam embankment began. Excavation commenced on the underground Edward Hyatt Powerplant machine hall and the first of many millions of dollars worth of mechanical and electrical equipment contracts were awarded. Work on excavating the Delta Pumping Plant site and intake channel and on more than 20 miles of California Aqueduct was underway by year's end. The Bureau of Reclamation started construction on San Luis Dam and various other major features of the joint-use facilities.

1964—All 68 miles of California Aqueduct between the Delta and O'Neill Forebay were under construction. Oroville Dam embankment reached Elevation 605 feet and Diversion Tunnel No. 2 was completed in time to prevent disastrous Feather River floods similar to those that occurred at Yuba City and downstream areas in 1955. Construction began on Thermalito Powerplant, as well as on Grizzly Valley Dam, the third facility in the Upper Feather River area. Antelope Dam was completed.

1965—All major construction on the South Bay Aqueduct was completed, except for Del Valle Branch. The first aqueduct construction contract south of Kettleman City was awarded with a contract for Buena Vista Pumping Plant intake channel and site excavation. Construction of the Tehachapi Crossing was initiated with award of the contract for the five-mile-long Carley V. Porter Tunnel. A contract for construction of Las Perillas and Badger Hill Pumping Plants marked the first work on the Coastal Branch. Construction was initiated south of the Tehachapis with excavation of the foundation trench for Castaic Dam. For the first time, the total value of work in progress south of the Delta exceeded that north of the Delta.

1966—Grizzly Valley Dam was topped out and Lake Davis began to fill in December. Work started on Del Valle Dam. A. D. Edmonston Pumping Plant construction was started with excavation for the Plant and discharge lines. Work began on the remaining three tunnels of the Tehachapi Crossing. In Southern California, this year marked start of construction of Pearblossom Pumping Plant, Castaic Dam Diversion Tunnel, and the 30-foot diameter, eight-mile-long Angeles Tunnel.

1967—Project construction activity reached its zenith; by early fall, nearly $1 billion of construction was in progress. Oroville Dam embankment was topped out and filling of the Lake began in November. Construction contracts were awarded for Buena Vista, Wheeler Ridge, Wind Gap, and A. D. Edmonston Pumping Plants, together with contracts for pumps and motors. The contract for construction of Castaic Dam was also awarded. The first water was pumped into the California Aqueduct from the Delta Pumping Plant in September. In October, San Luis Pumping-Generating Plant started pumping project water into San Luis Reservoir. On the East Branch, construction started on canals in the Antelope Valley and on the four-mile-long San Bernardino Tunnel.

1968—The first power was generated at Thermalito Powerplant in February and at Hyatt Powerplant in March. Water deliveries from Phase I of the North Bay Aqueduct began in April. By June, the California Aqueduct was operational to 7th Standard Road, 210 miles south of the Delta Pumping Plant. In January, Phase I of the Coastal Branch was placed in operation. Construction of Oso and Pearblossom Pumping Plants and Cedar Springs Dam was initiated.

1969—The California Aqueduct was completed and operational from the Delta Pumping Plant to Buena Vista Pumping Plant, a distance of 250 miles. Del Valle Pumping Plant was completed. Tehachapi Tunnels Nos. 1, 2, and 3 were completed and Carly V. Porter Tunnel was holed through in October. The contract for Devil Canyon Powerplant was underway and a short section of the Santa Ana Valley Pipeline near Riverside was completed.

1970—By year's end, three pumps at Buena Vista Pumping Plant and one pump at Wheeler Ridge Pumping Plant were operational, and water was being conveyed to Wind Gap Pumping Plant, 280 miles south of the Delta. Carley V. Porter Tunnel was completed and construction began on Perris Dam.

1971—By the end of summer, the California Aqueduct had been completed to A. D. Edmonston Pumping Plant. On October 7, the Plant became operational and the first project water was pumped over the Tehachapi Mountains. By year's end, Pearblossom Pumping Plant on the East Branch and Oso Pumping Plant on the West Branch were operational. Cedar Springs and Castaic Dams were completed and construction began on Pyramid Dam.

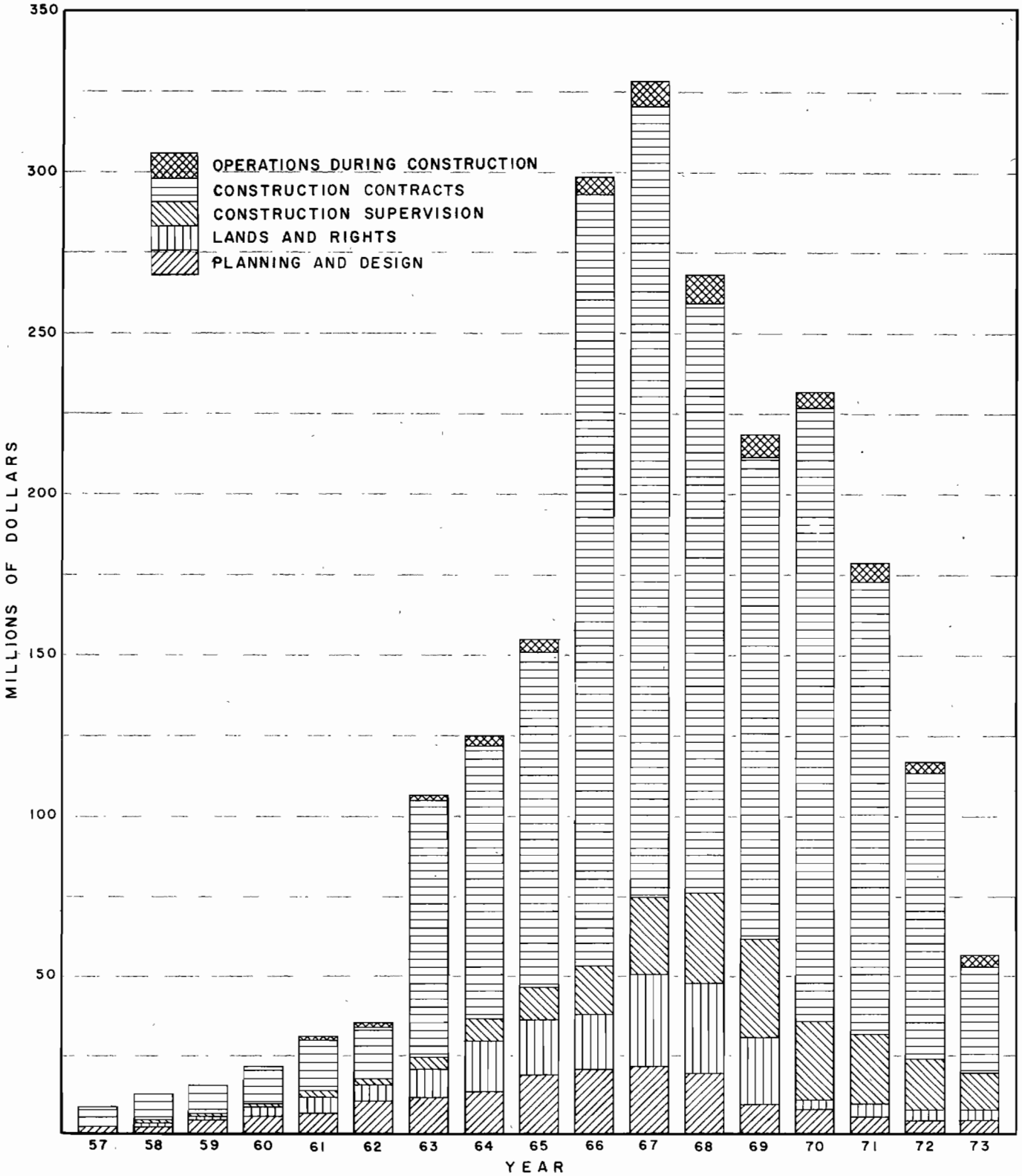
1972—In January, power generation at Castaic Powerplant began with initial project water deliveries to Castaic Lake. The East Branch was operational to and including Silverwood Lake. Santa Ana Valley Pipeline was completed to Sugarloaf Mountain and Devil Canyon Powerplant generated power for the first time in December. Perris Dam embankment was topped out in late fall.

1973—Pyramid Dam embankment was topped out in March. Completion of the Santa Ana Valley Pipeline permitted water deliveries to Lake Perris. The Perris dedication in May signified the end of construction of the initial project facilities.

Construction Costs

A summary of annual costs for constructing the initial project facilities is shown on Figure 5.

Figure 5: COSTS OF CONSTRUCTION



Remaining Work, Initial Project Facilities

Though completion of the initial project facilities was signified by the May 18, 1973 ceremony, several items of work remain as described in the following paragraphs:

Hyatt Powerplant—Rebuilding Power Transformers consists of the correction of design and structural deficiencies and improvement of operational reliability. One transformer was modified under an earlier contract. Of the five transformers covered by the present contract, four have been modified with the last scheduled to be completed by early July 1974.

California Aqueduct Control System—Southern California Area will provide for remote control of all project facilities in the Southern Field Division. This was the last control system contract to be awarded. The entire system is expected to be completed and operational in October 1974.

Pumping Plant Modifications. From the time the first pump was tested at Buena Vista, to and including the units at Pearblossom Pumping Plant, a number of equipment problems have been encountered. These problems include excessive thrust (both up and down, depending on the plant), excessive cavitation, less-than-specified efficiencies, and poor adhesion of protective coatings (see page 16, Bulletin 132-73). Each problem entailed considerable investigation and study before suitable remedial programs could be effected. The modified machinery has required extensive reworking of the plant control systems to incorporate new operational procedures. Much of the work has been accomplished under equipment warranties, particularly where excessive cavitation and low efficiencies were the problem.

Described below is the current status of all affected plants (as of May 1, 1974):

Buena Vista Pumping Plant, all ten units are now modified and operational.

Wheeler Ridge Pumping Plant, Units Nos. 1, 4, 6, 8, and 9 are modified and operational. Units Nos. 2, 3, 5, and 7, are being modified. All work is expected to be complete by early fall of 1974.

- Wind Gap Pumping Plant, Units Nos. 1, 4, 5, 6, 7, 8, and 9 are modified and operational. Units Nos. 2 and 3 are being modified. All units are expected to be operational by late summer of 1974.

A. D. Edmonston Pumping Plant, all seven east wing units are operational. Unit W-2 in the west wing is not operational pending modification of the suction elbow planned to start by mid-May. If the modification remedies cavitation and noise problems, the remaining three west wing units will undergo similar modification on a one-at-a-time basis. This work is expected to continue through 1974.

- Oso Pumping Plant has been almost trouble free, with one exception. A seal ring for the impeller of Unit No. 7 loosened, worked upward, and wore through the head cover. Repairs were made under warranty and all units are operational.
- Pearblossom Pumping Plant modifications are expected to be complete by the end of the 1974.

Phase II, East Branch of California Aqueduct consists of several items of machinery, equipment, and work to increase the capacity and operational safety of completed facilities by January 1, 1976. Contracts were awarded in 1972 for the two remaining Pearblossom Pumping Plant units and the second Devil Canyon Powerplant unit. Contracts for the necessary electrical and mechanical equipment needed to operate the heavy machinery are all presently in progress, along with contracts for Pearblossom Pumping Plant Completion—Phase II and Pearblossom Pumping Plant, Second Discharge Line. All remaining contracts will be awarded by mid-1974. These contracts include Operating Roads and Slope Protection; Radial Gates, Hoists, and Stoplogs; Antelope Siphon, Second Barrel; Devil Canyon Powerplant Completion, Unit No. 2; and Santa Ana Valley Pipeline, Completion.

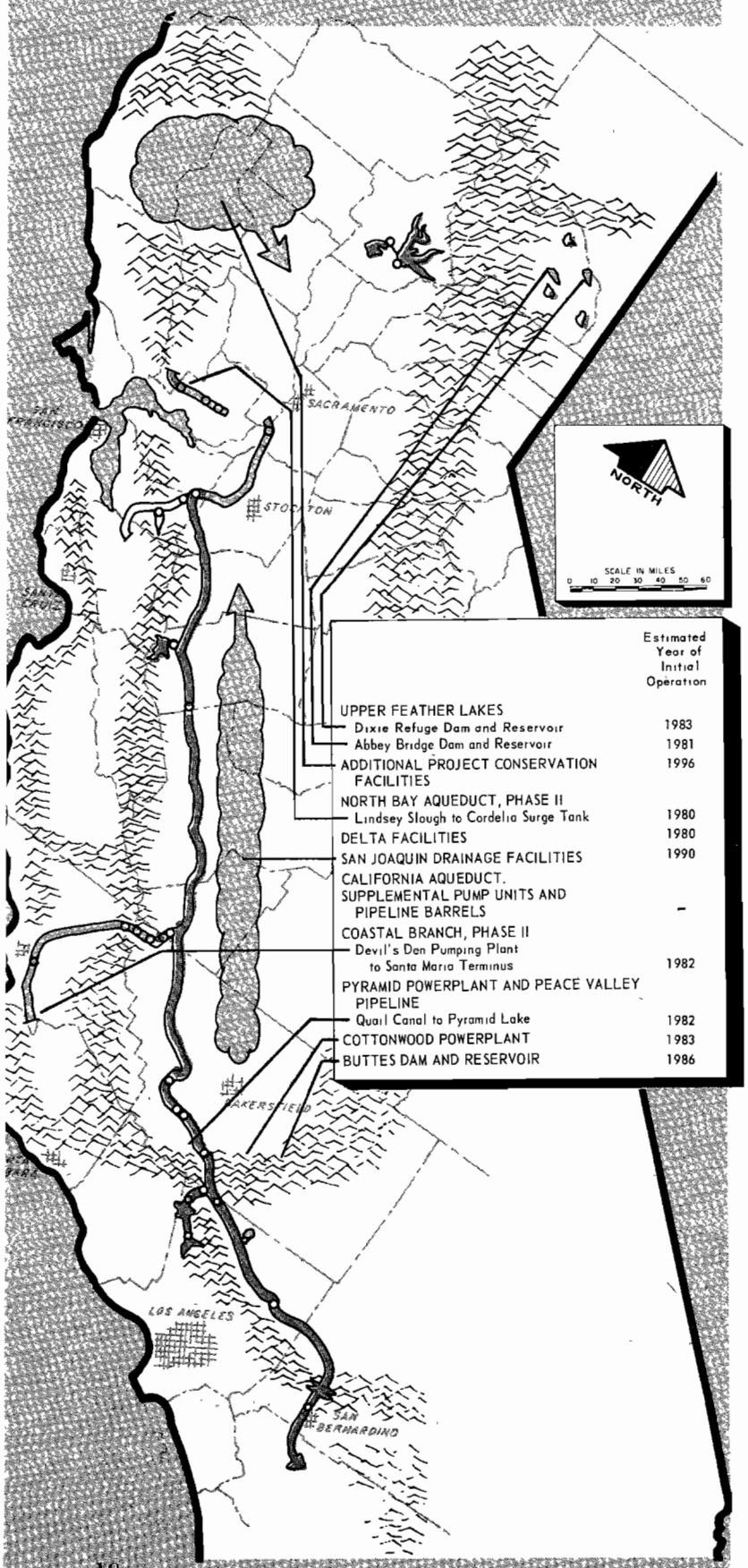
Relocation—Historical Artifacts consists of a contract, expected to be awarded in mid-1974 and completed in mid-1975, to reconstruct the original Bidwell Bar Suspension Bridge and Tollhouse at a new location in Kelly Ridge Recreation Area. The Bridge and Tollhouse were dismantled before Lake Oroville began to fill and are temporarily stored at the Oroville Operations and Maintenance Center. It has been determined that the "Mother Orange Tree" might not survive another relocation and a cutting from the Tree has been established and will be planted adjacent to the relocated Tollhouse.

San Joaquin Operations and Maintenance Center, Completion contract should be awarded by the end of August 1974. The work includes construction of a service station, curbs, gutters, sidewalks, and paving at the Center and access roads at Wheeler Ridge and Wind Gap Pumping Plants. The contract is scheduled to be completed by July 1975.

Pearblossom Operations and Maintenance Subcenter, Completion contract will be advertised in December 1974 with work starting in February 1975. A service station and equipment maintenance building will be constructed at the Subcenter, together with sidewalks, curbs, gutters, and miscellaneous paving. At Pearblossom Pumping Plant, a maintenance building will be erected and the access roads will be paved.

Southern California Operations and Maintenance Center, Completion contract will be awarded in August 1974 and finished about one year later. Included in the contract will be construction of civil and plant maintenance buildings at Oso Pumping Plant.

Figure 6: FUTURE PROJECT FACILITIES



Visitor Facilities—Southern California Dams includes centers which are presently under construction at Perris and Castaic Dams and scheduled for completion in August and September 1974, respectively. Construction of Cedar Springs Dam Visitors Center is under review and is tentatively scheduled for 1975, with the center for Pyramid Dam to follow one year later.

Pyramid Dam Completion contract will provide for paving and draining of existing access roads, the dam crest road, and miscellaneous items of work not accomplished under the original contract. Work is expected to get underway in August and to be completed in November 1974.

Castaic Dam Completion contract is in progress and should be finished by June 1974. Included in the work is grading and paving roadway and parking lot; erecting a monument and plaque, crest road chain barrier, instrument housing, and warning boom; and various other minor items not accomplished under the initial contract.

Perris Dam Completion contract is expected to be awarded in September and finished about December 1974. The contract provides for additional drainage facilities in the spillway and recreation areas, as well as safety fencing around the quarry.

Safety and Security Fencing involves safety fencing where needed on the California Aqueduct to give the public maximum access with minimal risk and to preclude damage to project facilities. Most of this work is completed. One contract in progress in the San Luis and San Joaquin Field Divisions. A contract for security fencing at Silverwood Lake will be awarded in June and completed about October 1974. Other contracts will be issued as experience is gained.

As-Built Drawings provide complete, accurate drawings of facilities as needed for operations and maintenance activities. Present schedules call for completion of this program by June 1976.

Remaining Work, Future Project Facilities

In terms of construction dollars, the initial project facilities represent about two-thirds of the total State Water Project. While the initial facilities will accommodate water delivery obligations until 1980, future facilities are required to satisfy project obligations beyond that date. The general location of these future facilities is indicated on Figure 6. Current assumptions regarding the timing of construction and the estimated magnitude of costs for each future facility are discussed in Chapter V, "Project Financing".

CHAPTER III. PROJECT UTILITY MANAGEMENT

This is a progress report on management of the Project's water and power utility during 1973, covering arrangements for (1) securing water rights and pumping power and (2) marketing developed water supplies and project power generation.

The Department's overall management objectives are to (1) optimize water supply benefits realized from the Project and (2) minimize unit water charges assessed by the Project. Pumping power costs, reduced by power generation credits, constitute a major item of such charges.

Water Rights Management

During 1973, water rights management activities by the Department included the following:

Delta Water Quality Monitoring and Reporting

Decision 1379 of the State Water Resources Control Board sets interim Delta water quality criteria requiring state and federal projects exporting water from the Sacramento-San Joaquin Delta to either reduce the level of exports or increase the releases to the Delta from upstream storage reservoirs. It also orders an extensive Delta water quality monitoring program and declares the Board's intent to reconsider the standards by July 1, 1978, based on experience to be gained from working with the interim criteria.

While the terms and conditions of Decision 1379 have been stayed by court order (see page 17, Bulletin 132-72), the Department is complying with certain portions of the Decision, particularly those pertaining to monitoring and reporting of conditions.

Progress reports on continuing studies by the Department of Delta water conditions (including temperature, velocity, scour, dissolved oxygen, and algal growth) were transmitted to the Board on August 6, 1973.

The Department expanded its activities under the first two phases of a four-phase program (see page 19 Bulletin 132-73) for monitoring Delta water quality as specified in Decision 1379. (The first two phases involve expansion of previous monitoring activities and an increase of equipment and personnel—the final two phases involve a series of petitions to the Board seeking clarification or modification of the Decision, to be filed after current legal action is resolved.)

During 1973, a planning network was established with some expansion of the existing field program. Additional sites and parameters were initiated and sampling frequencies were increased. Work also continued on completing plans for a new sampling craft, evaluating onshore monitoring sites, and development data handling and reporting procedures.

With the addition of the Phase I and II work to the previous monitoring program, some 45 sites throughout the Bay-Delta estuary were providing monthly or biweekly data as of the end of 1973. Data for an average of 25 water quality parameters were being collected at each site.

Since project water rights and operations will be directly affected, previous project reports have dis-

cussed the evolution of supplemental salinity objectives for the Delta and San Francisco Bay and the actions of the federal Environmental Protection Agency in this regard. On April 19, 1973, the State Water Resources Control Board adopted Resolution No. 73-16, "Water Quality Control Plan Supplementing State Water Quality Control Policy for the Sacramento-San Joaquin Delta". This plan includes salinity objectives essentially identical to criteria in Decision 1379 for the protection of striped bass and municipal and industrial uses in the western Delta, but with provisos for conditions of relaxation. On June 20, 1973, the Environmental Protection Agency approved the plan adopted by Resolution 73-16.

Feather River Water Entitlement Negotiations

During 1973, negotiations were completed and agreements executed with 15 riparian water users defining the users' rights to Feather River flows. Negotiations continued with five appropriative water users and 12 riparian water users along the Feather River. (The numbers of negotiations are subject to change as water users initiate or discontinue diversions from the River.)

Delta Water Entitlement Negotiations

Previous reports have referred to the administration of two completed water right agreements with municipal water users in the western Delta—Contra Costa County Water District and City of Antioch. Both agencies had above-average water supplies during the 1973 water year as defined in the contracts. The District had a credit of one day and the City a credit of 36 days. Including the credits accumulated in previous years, the District and the City now have total credits of 35 and 282 days of above-average offshore supply, respectively.

Senate Concurrent Resolution 30 of the 1971 Legislature (see page 18, Bulletin 132-72) directs the Department to file within 60 days, and not later than the fifth calendar day of each regular session of the Legislature thereafter, a written report on the progress of negotiations with the Delta Water Agency relative to water supply and water quality. The Department's third report was transmitted by Director Gianelli on January 10, 1973.

Only one formal meeting was held with the Delta Water Agency during 1973, in January. At the meeting, the Agency's representatives indicated that eight of its 11 districts had agreed among themselves to a water quality criteria that they would like in the Delta for agriculture's benefit. Two of the remaining three districts (District 1 and 9) sought a far more stringent quality criteria. The level of quality to be met in the Delta is the base for any meaningful negotiations as it determines the volume of water required from the federal Central Valley Project and the State Water Project.

The 1968 legislation which authorized the Delta Water Agency (see page 1, Bulletin 132-69) specified that the Agency would terminate on December 31, 1973 if a contract had not been concluded by that date. At the Agency's regular monthly meeting in March 1973, the Directors discussed dividing the Agency rather than extending its life because of their inability to agree among themselves. By Resolution No. 116, passed unanimously at the April 18, 1973 meeting, the Directors urged that the existence of the Agency not be extended.

Three new agencies were created by the 1973 Legislature for the purpose of contracting with the United States and the State to assure a dependable water supply and to protect the water supply against salinity intrusion, each succeeding to a portion of the Delta Water Agency—the North Delta Water Agency, the South Delta Water Agency, and the Central Delta Water Agency (California Statutes of 1973, Chapters 283, 1089, and 1133, respectively). The boundaries of these new agencies are shown in Figure 7.

When it became apparent early in 1973 that the Delta Water Agency was going to terminate, negotiations began with the East Contra Costa Irrigation District. The District, which covers 18 percent of the Contra Costa County's Delta area, is interested in completing an agreement.

The water quality which would be maintained in the western Delta channels under Decision 1379 deemphasizes the need for overland facilities, except possibly on the most westerly portion of Sherman Island. The Department and the Bureau of Reclamation have been working to establish a common position on the need for, and the economics and physical nature of, the overland facilities.

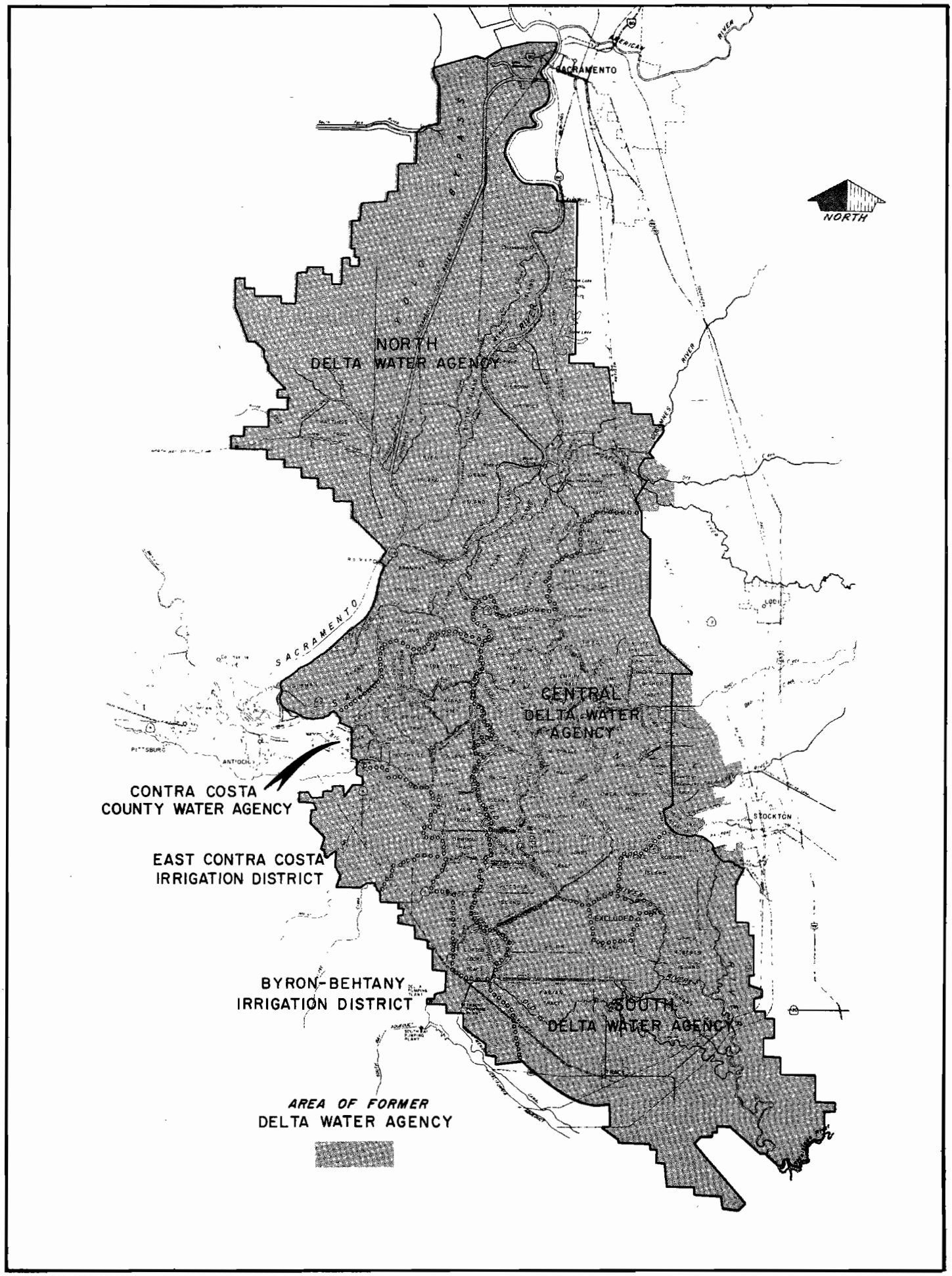
Negotiations with the industrial water users in the Western Delta continue to be delayed pending development of a basis acceptable to the Bureau of Reclamation. The Department is interested in reaching agreement with the industries to provide them with a replacement water supply (via the Contra Costa Canal) to compensate for any possible loss of offshore water of adequate quality due to joint operation of the State Water Project and the federal Central Valley Project. The Bureau may need specific authority to assume responsibility due to federal project operation. This has been the major obstruction to negotiations since the industries desire a total solution to the reduced offshore water supply problem.

Miscellaneous Actions

During 1973, license reports covering Frenchman and Antelope Lakes and permit reports for Antelope Lake and Lake Davis were filed with the State Water Resources Control Board.

Negotiations continue between local downstream interests and the Department regarding the storage of Castaic Creek floodwaters in Castaic Lake.

Figur 7: SACRAMENTO-SAN JOAQUIN DELTA AGENCIES



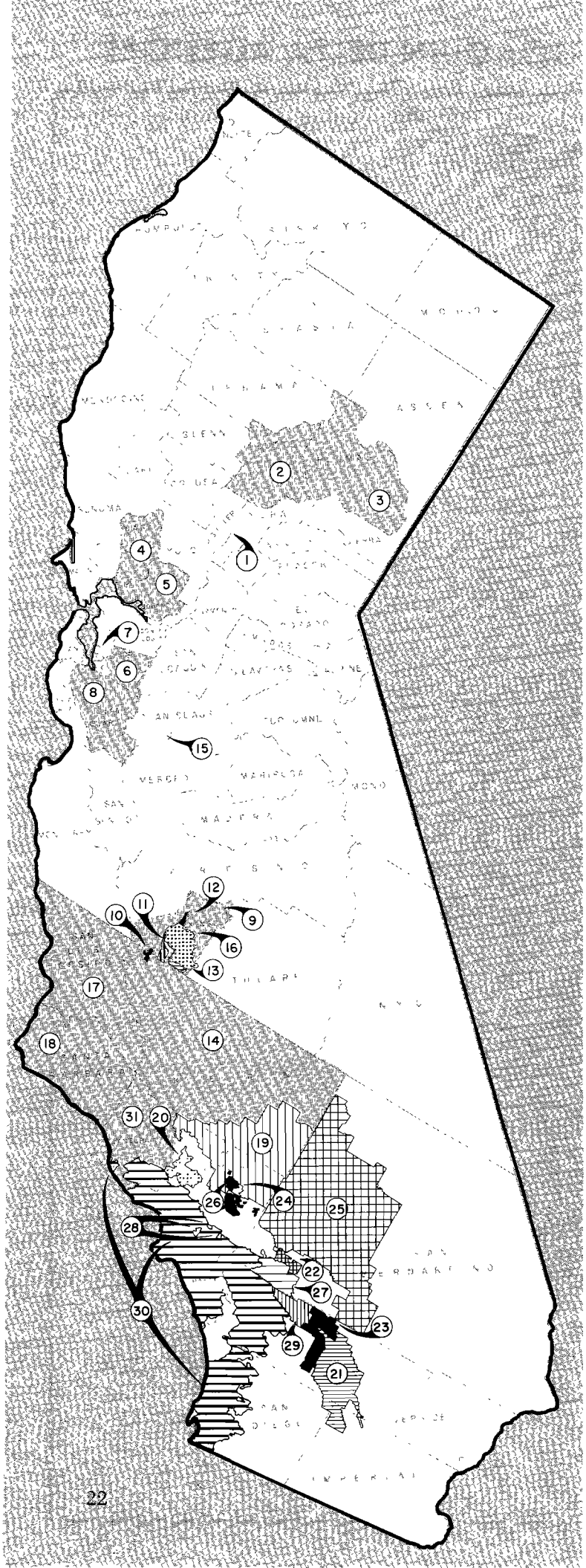


Figure 8: LONG TERM WATER

Location No.	Contracting Agency	Total Deliveries through Dec. 31, 1973 (acre-feet)	Maximum Annual Entitlement (acre-feet)
	UPPER FEATHER AREA		
1	City of Yuba City	0	9,600
2	County of Butte	431	27,500
3	Plumas County Flood Control and Water Conservation District	1,318	2,700
	Subtotal	1,749	39,800
	NORTH BAY AREA		
4	Napa County Flood Control and Water Conservation District	17,479	25,000
5	Solano County Flood Control and Water Conservation District	0	42,000
	Subtotal	17,479	67,000
	SOUTH BAY AREA		
6	Alameda County Flood Control and Water Conservation District, Zone 7	81,443	46,000
7	Alameda County Water District	182,297	42,000
8	Santa Clara Valley Water District	580,286	100,000
	Subtotal	844,026	188,000
	SAN JOAQUIN VALLEY AREA		
9	County of Kings	7,600	4,000
10	Devil's Den Water District	69,008	12,700
11	Dudley Ridge Water District	216,887	57,700
12	Empire West Side Irrigation District	23,575	3,000
13	Hacienda Water District	33,430	8,500
14	Kern County Water Agency	1,829,458	1,153,400
15	Oak Flat Water District	31,616	5,700
16	Tulare Lake Basin Water Storage District	512,101	110,000
	Subtotal	2,723,675	1,355,000
	CENTRAL COASTAL AREA		
17	San Luis Obispo County Flood Control and Water Conservation District	0	25,000
18	Santa Barbara County Flood Control and Water Conservation District	0	57,700
	Subtotal	0	82,700
	SOUTHERN CALIFORNIA AREA		
19	Antelope Valley-East Kern Water Agency	73	138,400
20	Castaic Lake Water Agency	0	41,500
21	Coachella Valley County Water Agency	5,800	23,100
22	Crestline-Lake Arrowhead Water Agency	925	5,800
23	Desert Water Agency	9,000	38,100
24	Littlerock Creek Irrigation District	708	2,300
25	Mojave Water Agency	55	50,800
26	Palmdale Water District	0	17,300
27	San Bernardino Valley Municipal Water District	33,701	102,600
28	San Gabriel Valley Municipal Water District	0	28,800
29	San Gorgonio Pass Water Agency	0	17,300
30	The Metropolitan Water District of Southern California	231,821	2,011,500
31	Ventura County Flood Control District	0	20,000
	Subtotal	282,083	2,497,500
	TOTAL STATE WATER PROJECT	3,869,012[g]	4,230,000
	NET AREA TOTAL, STATE WATER PROJECT	3,869,012[g]	4,230,000
	TOTAL, STATE OF CALIFORNIA		
	PERCENT, STATE WATER OF TOTAL		

a) Total for Plumas County, including Last Chance Creek Water District.
b) Total for Kings County, including Dudley Ridge Water District, Empire West Side Irrigation District, Hacienda Water District, most of Tulare Lake Basin Water Storage District, and about 40% of Devil's Den Water District.
c) Total for Kern County, including about 60% of Devil's Den Water District, and about 50% of Antelope Valley-East Kern Water Agency.
d) Total for Antelope Valley-East Kern Water Agency includes California City which was reannexed in June, 1972.
e) Includes duplicate values for overlapping agency areas.

SUPPLY CONTRACTING AGENCIES

Total Payments through Dec. 31, 1973 (dollars)	Gross Area as of July 1, 1973 (acres)	Assessed Valuation 1973-74 (dollars)	Estimated Population (July 1, 1973)	Location No.
0	2,600	38,000,000	15,400	1
172,000	1,067,600	314,808,600	110,600	2
85,000	1,644,000[a]	127,819,000	13,100	3
257,000	2,714,200	480,627,600	139,100	
1,458,000	508,000	246,814,700	86,200	4
46,000	528,400	432,679,700	181,100	5
1,504,000	1,036,400	679,494,400	267,300	
4,506,000	272,000	326,305,100	94,000	6
6,088,000	61,700	519,765,100	160,000	7
21,808,000	832,300	3,417,884,200	1,163,600	8
32,402,000	1,166,000	4,263,954,400	1,417,600	
130,000	893,000	162,468,400[b]	66,600	9
1,114,000	8,500	1,257,600	50	10
2,112,000	29,900	6,528,100	50	11
214,000	7,500	754,000	50	12
266,000	15,300	129,200	50	13
32,593,000	5,057,200[c]	1,093,415,800[c]	342,000[c]	14
216,000	4,000	275,000	50	15
4,665,000	193,000	9,628,000	50	16
41,310,000	6,208,400	1,274,456,100	409,900	
828,000	2,131,300	396,189,300	117,800	17
1,859,000	1,756,900	796,856,100	275,900	18
2,687,000	3,888,200	1,193,045,400	393,700	
10,472,000	1,524,900	491,882,600[d]	90,600	19
4,535,000	125,000	213,220,900	52,600	20
2,631,000	620,500	262,840,200	67,600	21
741,000	53,700	57,940,300	10,800	22
4,333,000	209,300	216,971,100	40,200	23
213,000	43,300	3,707,600	1,400	24
5,161,000	3,160,400	340,765,100	71,300	25
1,382,000	73,800	28,217,100	23,200	26
15,642,000	208,900	685,443,800	339,400	27
4,025,000	16,200	413,960,700	148,200	28
2,371,000	140,600	59,803,300	28,600	29
280,895,000	3,126,800	32,838,476,400	10,700,000	30
1,992,000	1,179,500[f]	1,353,099,300	423,000	31
334,393,000	10,482,900	36,966,328,400	11,996,900	
412,553,000	25,496,100[e]	44,857,906,300[e]	14,624,500[e]	
412,553,000	24,159,800[h]	43,886,594,000[h]	14,339,250[h]	
	100,314,000	59,619,684,300	20,741,000	
	24.1	73.6	69.1	

f) Total for Ventura County, including about 8,400 acres in Antelope Valley-East Kern Water Agency, 219,200 acres in The Metropolitan Water District of Southern California, and about 8,400 acres in Castaic Lake Water Agency.
g) Excludes 4,256 acre-feet delivered to Mustang Water District and 137,341 acre-feet delivered to Last Chance Water District under one-year contracts. Also excludes 70,449 acre-feet of deliveries for repayment of water that was borrowed for aqueduct preconsolidation.
h) Excludes all overlapping areas.

Water Contracts Management

Thirty-one agencies have entered into long-term contracts for water supplies to be made available by the State Water Project. Compared with the total State, the agencies encompass about one-quarter of the land area, over 69 percent of the population, and about 74 percent of the assessed valuation. The names and locations of each of the agencies are included in the information shown on Figure 8.

Recently, the names of two agencies were changed: Palmdale Water District, formerly Palmdale Irrigation District (California Statutes of 1972, Chapter 143), and Santa Clara Valley Water District, formerly Santa Clara County Flood Control and Water District (California Statutes of 1973, Chapter 56).

The annual amounts of project water each agency is entitled to be supplied are shown in Table A of the respective contracts. Generally, the initial annual amount is relatively small and increases each year until the maximum annual entitlement is reached. The annual entitlements of 24 agencies are scheduled to reach their maximum by 1990—covering 99 percent of all such entitlements. The combined maximum annual entitlement of all agencies is limited to 4,230,000 acre-feet.

Table 1 (Columns 1 through 7) presents a summary of annual entitlements for agencies within major areas served by the Project. Table B-4, Appendix B, presents the annual entitlements for each agency.

Entitlements currently reflect project water needs as estimated during the early 1960s, when the contracts were negotiated. With declining rates of population growth becoming evident during the late 1960s, project water needs for municipal and industrial uses of certain agencies now are not expected to increase as rapidly as their entitlements indicate. These agencies are primarily located in Southern California. The annual entitlements now estimated to be needed for all agencies are summarized in Table 1 (Column 8) and for the respective agencies, in Table B-5, Appendix B.

(Article 7(a) of the Contracts forbids any change of annual entitlements if, in the judgment of the Department, it would impair the financial feasibility of the Project. Based on the analysis described in Chapter V, any reduction of entitlements through 1980 would adversely affect project financing.)

On the other hand, project water needs of other agencies for agricultural uses are expected to exceed their schedules of annual entitlements. These agencies are primarily located in the San Joaquin Valley. In addition to full use of annual entitlements, these agencies contemplate use of "surplus water" to (1) reduce overall water costs during early years of agricultural development and (2) help recharge depleted ground water basins.

Surplus water constitutes the portion of available project water supply which is in excess of the annual entitlements of all agencies. If the 31 agencies do not

TABLE 1: ANNUAL

(in acre-

Calendar Year	Annual Entitlements Under Long-term Water Supply Contracts						
	Feather River Area	North Bay Area	South Bay Area	San Joaquin Valley Area	Central Coastal Area	Southern California Area	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1962	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0
1967	0	0	11,538	0	0	0	11,538
1968	550	0	109,900	81,050	0	0	191,500
1969	620	0	98,700	168,075	0	0	267,395
1970	700	0	114,200	207,700	0	0	322,600
1971	890	0	116,200	258,500	0	0	375,590
1972	970	0	118,300	420,766	0	201,723	741,759
1973	1,100	0	120,400	392,352	0	472,400	986,252
Subtotal for 12 years 1962-1973	4,830	0	689,238	1,528,443	0	674,123	2,896,634
1974	1,230	0	122,400	434,800	0	588,220	1,146,650
1975	1,610	0	124,500	480,900	0	704,250	1,311,260
2 years, 1974-1975	2,840	0	246,900	915,700	0	1,292,470	2,457,910
1976	1,990	0	126,500	535,600	0	824,780	1,488,870
1977	2,420	0	128,600	594,100	0	942,201	1,667,321
1978	2,850	0	130,700	651,600	0	1,060,722	1,845,872
1979	3,280	0	132,700	707,700	0	1,177,873	2,021,553
1980	4,710	19,250	134,800	765,000	2,200	1,304,914	2,230,874
1981	10,390	21,750	137,000	828,500	3,300	1,425,865	2,426,805
1982	12,270	24,400	139,200	889,200	6,600	1,546,806	2,618,476
1983	14,200	27,050	141,400	955,500	9,900	1,668,557	2,816,607
1984	16,130	29,600	143,600	1,017,900	14,900	1,790,398	3,012,528
1985	19,060	32,750	145,800	1,079,100	24,800	1,912,549	3,214,059
10 years, 1976-1985	87,300	154,800	1,360,300	8,024,200	61,700	13,654,665	23,342,965
10 years, 1986-1995	340,420	587,500	1,650,200	13,032,300	688,000	23,869,646	40,168,066
10 years, 1996-2005	386,460	670,000	1,878,000	13,550,000	827,000	24,975,000	42,286,460
10 years, 2006-2015	393,170	670,000	1,880,000	13,550,000	827,000	24,975,000	42,295,170
10 years, 2016-2025	398,000	670,000	1,880,000	13,550,000	827,000	24,975,000	42,300,000
10 years, 2026-2035	398,000	670,000	1,880,000	13,550,000	827,000	24,975,000	42,300,000

a) Amounts shown for 1962 thru 1973 include regulated delivery of local supply (393,395 acre-feet), surplus water (1,343,354 acre-feet), and repayment of preconsolidation water (70,449 acre-feet). Amounts shown for 1974 thru 1985 are based on studies as to the availability and cost of surplus water.

WATER REQUIREMENTS

feet)

Estimated Annual Water Demands							
Deliveries to Contracting Agencies							
Entitlement Water	Surplus and Nonproject Water[a]	Total	Initial Fill	Operational Losses and Storage Changes	Recreation Water	Total	Calendar Year
(8)	(9)	(10)	(11)	(12)	(13)	(14)	
0	18,289	18,289	9	272	0	18,570	1962
0	22,456	22,456	71	185	0	22,712	1963
0	32,507	32,507	171	152	0	32,830	1964
0	44,105	44,105	93	729	0	44,927	1965
0	67,928	67,928	0	1,746	0	69,674	1966
11,538	53,605	65,143	8,328	4,212	0	77,683	1967
171,709	136,311	308,020	498,926	117,906	0	924,852	1968
193,020	91,226	284,246	510,614	72,196	0	867,056	1969
233,993	171,104	405,097	23,947	2,435	0	431,479	1970
357,340	340,138	697,478	7,853	5,812	8	711,151	1971
611,801	490,602	1,102,403	100,274	53,062	6,489	1,262,228	1972
694,460	338,927	1,033,387	204,638	54,955	1,081	1,294,061	1973
2,273,861	1,807,198	4,081,059	1,354,924	313,662	7,578	5,757,223	12 years, 1962-1973
959,335	569,736	1,529,071	264,165	165,330	6,800	1,965,366	1974
1,218,975	651,839	1,870,814	150,865	97,124	7,000	2,125,803	1975
2,178,310	1,221,575	3,399,885	415,030	262,454	13,800	4,091,169	2 years, 1974-1975
1,457,615	716,806	2,174,421	9,492	14,071	7,200	2,205,184	1976
1,692,725	679,556	2,372,281	4,360	209,963	11,400	2,598,004	1977
1,776,735	704,621	2,481,356	4,360	-49,775	11,600	2,447,541	1978
1,864,075	692,841	2,556,916	0	106,751	11,790	2,675,457	1979
1,993,450	672,439	2,665,889	3	511,359	44,305	3,221,556	1980
2,113,770	635,539	2,749,309	0	180,720	44,415	2,974,444	1981
2,242,490	695,539	2,938,029	0	277,255	44,525	3,259,809	1982
2,364,653	551,403	2,916,056	0	36,384	44,645	2,997,085	1983
2,481,206	501,326	2,982,532	0	103,763	44,755	3,131,050	1984
2,597,825	454,739	3,052,564	0	266,890	44,875	3,364,329	1985
20,584,544	6,304,809	26,889,353	18,215	1,657,381	309,510	28,874,459	10 years, 1976-1985
34,541,445	0	34,541,445	0	1,709,692	453,650	36,704,787	10 years, 1986-1995
39,853,735	0	39,853,735	0	1,828,767	455,000	42,137,502	10 years, 1996-2005
41,900,070	0	41,900,070	0	1,820,047	455,000	44,175,117	10 years, 2006-2015
42,227,260	0	42,227,260	0	1,854,142	455,000	44,536,402	10 years, 2016-2025
42,300,000	0	42,300,000	0	1,866,340	455,000	44,621,340	10 years, 2026-2035

request delivery of all such surplus water, the balance is available for annual sale to other customers—referred to as "noncontractors".

Past and projected deliveries of surplus water are also summarized in Table 1 (Column 9) together with miscellaneous other types of water deliveries.

In addition to total water deliveries (Column 10), Table 1 also shows the past and projected water requirements associated with the aqueduct system for initial raising of water surfaces to operational levels (Column 11), replacing evaporation and seepage losses (Column 12), and providing water consumed in project recreation developments (Column 13).

Water Deliveries in 1973

Water deliveries totaling 1,033,387 acre-feet were made from project facilities to 24 project customers in 1973. Due to above-average local water supply conditions in 1973, the total was only 94 percent of deliveries made in 1972. While 1973 entitlement water deliveries exceeded those of 1972, deliveries of surplus water were considerably less.

Monthly deliveries to each project customer during 1973 are shown in Table 2 and include:

694,460 acre-feet of entitlement water to 20 long-term contractors.

- 296,416 acre-feet of surplus water to nine long-term contractors.
- 32,208 acre-feet of local water to three long-term contractors and one noncontractor (Last Chance Creek Water District).
- 10,303 acre-feet of repayment water to the two noncontractors having agreements calling for this form of compensation (Buena Vista Water Storage District and Buena Vista Farms, Inc.—the latter merged into J. G. Boswell Company effective September 28, 1973).

In addition to the above project service, 1973 deliveries from project facilities included 845,774 acre-feet from the joint-use San Luis Facilities to federal customers and 770,000 acre-feet from the Oroville Facilities to canal systems originally connecting with the Feather River.

Entitlement Water Deliveries in 1973. Long-term water supply contracts of 24 of the 31 agencies initially included entitlements for 1973 totalling 984,700 acre-feet. Shown below are the 1973 entitlements and scheduled and delivered quantities of entitlement and surplus water for each of the 24 agencies.

Contracting Agency	Entitlement Water (acre-feet)			Surplus Water (acre-feet)			
				January 1 thru April 30, 1973		May 1 thru December 31, 1973	
	1973 Entitlement as of 1/1/73	Scheduled as of 1/1/73	Delivered	Scheduled as of 1/1/73	Delivered	Scheduled as of 5/1/73	Delivered
County of Butte	600	600	53	0	0	0	0
Plumas County FC&WCD	500	500	679	0	0	0	0
Alameda County FC&WCD, Zone 7	13,600	13,600	2,975	0	0	0	0
Alameda County WD	18,800	18,800	2,521	0	0	0	0
Santa Clara Valley WD	88,000	88,000	88,000	7,000	582	5,000	2,499
Devil's Den WD	8,700	8,700	8,700	1,643	718	3,138	4,104
Dudley Ridge WD	22,000	22,000	22,000	5,650	57	7,943	13,192
Empire West Side ID	3,000	3,000	3,000	850	0	2,650	2,814
Hacienda WD	2,900	2,900	2,900	1,300	0	2,390	5,600
Kern County WA	310,500	310,500	310,500	80,047	30,969	152,231	163,774
County of Kings	1,500	1,500	1,500	0	0	0	0
Oak Flat WD	3,100	3,100	3,100	700	114	1,900	1,013
Tulare Lake Basin WSD	39,100	39,100	40,652	70,900	6,912	63,988	63,988
Antelope Valley-East Kern WA	25,000	45	20	0	0	0	0
Castaic Lake WA	3,700	0	0	0	0	0	0
Coachella Valley CWD	5,800	5,800	5,800	0	0	0	0
Crestline-Lake Arrowhead WA	870	870	461	0	0	0	0
Desert WA	9,000	9,000	9,000	0	0	0	0
Littlerock Creek ID	290	290	290	0	0	165	80
Mojave WA	10,700	540	0	0	0	0	0
Palmdale WD	2,940	0	0	0	0	0	0
San Bernardino Valley MWD	48,000	48,000	32,426	0	0	0	0
San Gabriel Valley MWD	11,500	0	0	0	0	0	0
The Metropolitan Water District of Southern California	354,600	352,600	159,883	0	0	0	0
	984,700	929,445	694,460	168,090	39,352	239,405	257,064

Pursuant to contractors' requests, schedules were established at the beginning of the year for total 1973 entitlement water deliveries of 923,945 acre-feet. Eighteen agencies requested delivery of their full 1973 entitlements. Of the remaining six agencies, all in Southern California, three requested no project water in 1973 and three requested amounts less than their entitlements—due either to local distribution facilities not being available or to demands being lower than originally estimated.

Actual 1973 deliveries of entitlement water were 229,485 acre-feet less than the amounts scheduled.

Eight agencies took less water than scheduled. The Metropolitan Water District of Southern California took far less than the amount scheduled because of demands proving to be less than had been anticipated at the beginning of the year and because of operational problems involving use of blowoff facilities in the Santa Ana Valley Pipeline as a temporary delivery structure. Since such facilities were not designed for making deliveries, the problems encountered were not unexpected by either the District or the Department.

On the other hand, two contractors took deliveries in excess of their respective 1973 entitlements—Tulare Lake Basin Water Storage District (1,552 acre-feet) and Plumas County Flood Control and Water Conservation District (179 acre-feet). Tulare's 1973 entitlement was in the process of being retroactively amended at year's end. The treatment of the excess delivery to Plumas is explained in the following section.

Deferred Delivery Rights. Excluding the 1,731 acre-foot excess delivery to Tulare and Plumas, 291,971 acre-feet of 1973 entitlements were paid for by the contractors but not delivered during the year for a variety of reasons. Under the standard provisions of the contracts, the Project is not required to make up these deliveries in future years unless nondelivery results from causes beyond the State's control[Article 12(d)]or from necessary investigation, inspection, maintenance, repair, or replacement of any project facility required for such deliveries[Article 14(b)]. However, contracts of eight South San Francisco Bay and San Joaquin Valley agencies include special "wet weather" provisions whereby the State also is obligated to make up deliveries if nondelivery was caused by above-normal local water supplies. As pointed out in a following section entitled "Contract Amendments", the Department is working with the contractors to develop a general "deferred delivery" amendment whereby all nondelivery of entitlement water, due to any cause, would be made up or otherwise compensated for in subsequent years. Since the intent of the parties to the negotiation is that the amendment would apply retroactively to all past nondelivery of entitlement water, the 179-acre-foot excess 1973 delivery to Plumas County Flood Control and Water Conservation District is temporarily held in abeyance, pending completion of the amendment. (As shown in Table 2, Plumas did not take delivery of a significant portion of its entitlement water prior to 1973.) Table 2 also shows for each contractor the cumulative entitlement amounts which had not been delivered through 1973.

In 1973, only two agencies increased their existing rights to deferred delivery of entitlement water under the "wet weather" provisions: Alameda County Flood Control and Water Conservation District, Zone 7, and Alameda County Water District. The Department determined that the two agencies had rights to all undelivered 1973 entitlement water and, as shown in Table 2, these amounts have been added to the agencies' "Net Entitlement Credits".

Santa Clara Valley Water District also has accumulated rights under the "wet weather" provisions. In 1973, however, Santa Clara received 3,081 acre-feet in addition to its 1973 entitlement—the excess being delivered as surplus water by mutual agreement. As shown in Table 2, Santa Clara's credits have been reduced by the amount of 1973 surplus water service.

(While not in the same category as deferred delivery of entitlement water, the Project also was obligated, as of December 31, 1973, to deliver an additional 169,151 acre-feet of repayment water prior to 1985 to Buena Vista Water Storage District and J. G. Boswell Company.)

Surplus Water Deliveries in 1973. A major change was instituted for the scheduling of surplus water deliveries in 1973 to test a two-step procedure which had been developed during negotiations of the proposed surplus water amendment (see a following section on "Contract Amendments"):

> (1) Schedules for deliveries during the first four months of 1973 (January through April) were issued on December 1, 1972, based on the agencies' October 1, 1972 requests.
>
> (2) Schedules for deliveries during the last eight months of the year (May through December) were issued on May 1, 1973, based on the agencies' March 15, 1973 requests—the latter requests having the benefit of available snow survey forecasts of local water supply during the peak irrigation months of 1973.

Surplus water service during January through April 1973 was provided under four-month extensions of surplus water contracts originally executed for 1968 (and annually continued through 1972). During the four-month period, new contracts were executed for service during the last eight months of 1973 encompassing the tentative provisions of the surplus water amendment.

As of January 1, 1973, schedules called for delivery of 168,090 acre-feet during January through April, to eight long-term contractors. Because of above-nor-

TABLE 2: WATER

(in acre-

Line No.	Contracting Agency and Type of Service	Month							
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
	FEATHER RIVER SERVICE AREA								
	County of Butte.								
1.	Entitlement Water	0	12	0	1	8	3	8	4
	Last Chance Creek Water District:								
2.	Regulated Delivery of Local Supply	0	0	0	837	4,669	1,777	3,301	2,072
	Plumas County Flood Control & Water Cons. District:								
3.	Entitlement Water	48	43	44	47	63	56	76	86
4.	AREA TOTAL	48	55	44	885	4,740	1,836	3,385	2,162
	NORTH BAY SERVICE AREA								
	Napa County Flood Control & Water Conservation District:								
5.	Regulated Delivery of Local Supply	654	585	656	647	69	4	13	15
	SOUTH BAY SERVICE AREA								
	Alameda County Flood Control & Water Cons. Dist., Zone 7:								
6.	Entitlement Water	165	0	18	217	1,127	396	354	199
7.	Regulated Delivery of Local Supply	282	185	275	436	186	1,657	2,119	1,931
8.	Agency Total	447	185	293	653	1,313	2,053	2,473	2,130
	Alameda County Water District:								
9.	Entitlement Water	0	0	0	0	0	0	90	1,708
10.	Regulated Delivery of Local Supply	0	0	0	0	0	0	1,427	1,637
11.	Agency Total	0	0	0	0	0	0	1,517	3,345
	Santa Clara Valley Water District:								
12.	Entitlement Water	4,500	3,122	2,752	5,067	9,955	10,300	10,600	10,600
13.	Surplus Water	582	0	0	0	105	398	455	490
14.	Agency Total	5,082	3,122	2,752	5,067	10,060	10,698	11,055	11,090
15.	AREA TOTAL	5,529	3,307	3,045	5,720	11,373	12,751	15,045	16,565
	SAN JOAQUIN VALLEY SERVICE AREA								
	J. G. Boswell Company:								
16.	Repayment of Preconsolidation Water	0	254	315	278	464	990	1,091	924
	Buena Vista Water Storage District:								
17.	Repayment of Preconsolidation Water	0	0	199	670	0	1,943	1,989	1,144
	County of Kings:								
18.	Entitlement Water	165	0	0	165	0	165	170	170
	Devil's Den Water District:								
19.	Entitlement Water	783	522	696	429	765	1,236	1,131	1,392
20.	Surplus Water	322	238	158	0	0	443	1,555	1,186
21.	Agency Total	1,105	760	854	429	765	1,679	2,686	2,578
	Dudley Ridge Water District:								
22.	Entitlement Water	800	17	193	2,288	3,100	3,500	3,600	3,773
23.	Surplus Water	57	0	0	0	31	1,578	3,884	2,356
24.	Agency Total	857	17	193	2,288	3,131	5,078	7,484	6,129
	Empire West Side Irrigation District								
25.	Entitlement Water	67	0	0	410	500	540	540	540
26.	Surplus Water	0	0	0	0	161	806	853	494
27	Agency Total	67	0	0	410	661	1,346	1,393	1,034
	Hacienda Water District:								
28.	Entitlement Water	0	0	0	0	120	140	0	220
29.	Surplus Water	0	0	0	0	0	0	0	0
30.	Agency Total	0	0	0	0	120	140	0	220
	Kern County Water Agency:								
31.	Entitlement Water	6,455	12,096	13,146	23,718	35,558	54,870	62,825	62,513
32.	Surplus Water	5,303	8,851	9,703	7,112	20,093	31,623	41,950	28,244
33.	Agency Total	11,758	20,947	22,849	30,830	55,651	86,493	104,775	90,757
	Oak Flat Water District:								
34.	Entitlement Water	0	0	0	550	550	550	550	704
35.	Surplus Water	0	0	0	114	150	113	601	149
36.	Agency Total	0	0	0	664	700	663	1,151	853
	Tulare Lake Basin Water Storage District:								
37.	Entitlement Water	1,600	0	0	200	0	113	7,000	7,000
38.	Surplus Water	3,509	0	0	3,403	141	0	6,863	19,490
39.	Agency Total	5,109	0	0	3,603	141	113	13,863	26,490
40.	AREA TOTAL	19,061	21,978	24,410	39,337	61,633	98,610	134,602	130,299
	SOUTHERN CALIFORNIA SERVICE AREA								
	Antelope Valley-East Kern Water Agency:								
41.	Entitlement Water	0	0	0	0	0	0	0	20
42.	Castaic Lake Water Agency	0	0	0	0	0	0	0	0
	Coachella Valley County Water District:								
43.	Entitlement Water	0	0	0	0	0	0	1,530	724
	Crestline-Lake Arrowhead Water Agency:								
44.	Entitlement Water	43	18	23	0	0	66	67	64
	Desert Water Agency:								
45.	Entitlement Water	0	0	0	0	0	0	2,295	1,086
	Littlerock Creek Irrigation District.								
46.	Entitlement Water	0	0	0	0	0	10	78	105
47.	Surplus Water	0	0	0	0	0	0	0	8
48.	Agency Total	0	0	0	0	0	10	78	113
49.	Mojave Water Agency	0	0	0	0	0	0	0	0
50.	Palmdale Water District	0	0	0	0	0	0	0	0
	San Bernardino Valley Municipal Water District:								
51.	Entitlement Water	2,761	869	677	970	3,338	1,482	4,352	4,873
52.	San Gabriel Valley Municipal Water District	0	0	0	0	0	0	0	0
	The Metropolitan Water District of Southern California:								
53	Entitlement Water	14,035	8,375	9,985	14,281	20,228	19,013	17,722	15,337
54.	AREA TOTAL	16,839	9,262	10,685	15,251	23,566	20,571	26,044	22,217
	ALL AGENCIES:								
55.	Entitlement Water	31,422	25,074	27,534	48,343	75,312	92,440	112,988	111,118
56.	Surplus Water	9,773	9,089	9,861	10,629	20,681	34,961	56,161	52,417
57.	Total-Project Water	41,195	34,163	37,395	58,972	95,993	127,401	169,149	163,535
58.	Regulated Delivery of Local Supply	936	770	931	1,920	4,924	3,438	6,860	5,655
59.	Repayment of Preconsolidation Water	0	254	514	948	464	2,933	3,080	2,068
60	TOTAL WATER	42,131	35,187	38,840	61,840	101,381	133,772	179,089	171,258

a) Repayment of Preconsolidation water.

DELIVERIES IN 1973

feet)

Month					1973 Contract Entitlement	1973 Entitlement Not Delivered	Net Cumulative Entitlement Not Delivered thru		Net Entitlement Credits Under "Wet Weather" Provisions As of January 1, 1974		Line No.
Sep	Oct	Nov	Dec	Total			1972	1973	Deferred Delivery	Future Reductions	
0	2	4	11	53	600	547	1,622	2,169	-	-	1.
312	3	0	0	12,971	-	-	-	-	-	-	2.
74	54	44	44	679	500	0	1,091	912	-	-	3.
386	59	48	55	13,703	1,100	547	2,713	3,081	-	-	4.
123	110	284	632	3,792	-	-	-	-	-	-	5.
37	413	49	0	2,975	13,600	10,625	11,177	21,802	20,506	0	6.
1,680	825	304	186	10,066							7.
1,717	1,238	353	186	13,041							8.
502	52	169	0	2,521	18,800	16,279	42,109	58,388	43,269	0	9.
1,473	842	0	0	5,379							10.
1,975	894	169	0	7,900							11.
10,300	8,100	6,720	5,984	88,000	88,000	0	38,714	38,714	5,389	0	12.
214	837	0	0	3,081							13.
10,514	8,937	6,720	5,984	91,081							14.
14,206	11,069	7,242	6,170	112,022	120,400	26,904	92,000	118,904	69,164	0	15.
42	0	0	0	4,358	-	-	-	-	94,587[a]	-	16.
0	0	0	0	5,945	-	-	-	-	74,564[a]	-	17.
170	165	165	165	1,500	1,500	0	0	0	0	0	18.
522	348	236	640	8,700	8,700	0	0	0	-	-	19.
110	72	0	738	4,822							20.
632	420	236	1,378	13,522							21.
1,400	2,700	577	52	22,000	22,000	0	0	0	-	-	22.
2,974	98	0	2,271	13,249							23.
4,374	2,798	577	2,323	35,249							24.
0	17	188	198	3,000	3,000	0	0	0	0	0	25.
0	0	0	500	2,814							26.
0	17	188	698	5,814							27.
520	520	520	860	2,900	2,900	0	0	0	0	0	28
80	2,099	1,000	2,421	5,600							29.
600	2,619	1,520	3,281	8,500							30.
20,644	11,282	3,953	3,440	310,500	310,500	0	0	0	-	-	31.
6,231	6,642	14,759	14,232	194,743							32.
26,875	17,924	18,712	17,672	505,243							33.
184	12	0	0	3,100	3,100	0	0	0	0	2,466	34.
0	0	0	0	1,127							35.
184	12	0	0	4,227							36.
7,000	7,000	5,687	5,052	40,652	40,652	0	0	0	0	74,852	37.
8,675	9,545	10,841	8,433	70,900							38.
15,675	16,545	16,528	13,485	111,552							39.
48,552	40,500	37,926	39,002	695,910	392,352	0	0	0	0	77,318	40.
0	0	0	0	20	25,000	24,980	19,947	44,927	-	-	41.
0	0	0	0	0	3,700	3,700	1,236	4,936	-	-	42.
710	0	0	2,836	5,800	5,800	0	5,200	5,200	-	-	43.
64	62	13	41	461	870	409	62	471	-	-	44.
1,130	0	0	4,489	9,000	9,000	0	8,000	8,000	-	-	45.
65	32	0	0	290	290	0	0	0	-	-	46.
0	72	0	0	80							47.
65	104	0	0	370							48.
0	0	0	0	0	10,700	10,700	8,345	19,045	-	-	49.
0	0	0	0	0	2,940	2,940	1,620	4,560	-	-	50.
1,148	3,419	4,295	4,242	32,426	48,000	15,574	402	15,976	-	-	51.
0	0	0	0	0	11,500	11,500	122	11,622	-	-	52.
5,197	12,274	11,739	11,697	159,883	354,600	194,717	82,834	277,551	-	-	53.
8,314	15,859	16,047	23,305	207,960	472,400	264,520	127,768	392,288	-	-	54.
49,667	46,452	34,359	39,751	694,460	986,252	291,971	222,481	514,273	69,164	0	55.
18,284	19,365	26,600	28,595	296,416							56.
67,951	65,817	60,959	68,346	990,876							57.
3,588	1,780	588	818	32,208							58.
42	0	0	0	10,303					169,151	-	59.
71,581	67,597	61,547	69,164	1,033,387	986,252	291,971	222,481	514,273	238,315	77,318	60.

mal precipitation, only 39,352 acre-feet of surplus water was delivered during the four-month period, to six long-term contractors. (A noncontractor, Green Valley Water District, also entered into a contract with the State for surplus water but was unable to take delivery of scheduled amounts because of uncompleted distribution facilities.)

In contrast to the great disparity between scheduled and delivered amounts during the first four months of 1973, delivered amounts during the last eight months were within about 7 percent of the 239,405 acre-feet scheduled for that period on May 1, 1973. In view of the project cost economies which can be realized when actual deliveries conform closely with planned amounts, the 1973 experience supports the desirability of continuing the two-step scheduling procedure.

Project Water Delivery Plans

On about October 1, 1973, long-term contractors submitted projections of project water needs during the six-year period 1974 through 1979. Shown below is a comparison of the needs to be satisfied by entitlement water with corresponding estimates submitted in previous years:

Projections: Submitted October 1	For Delivery of Entitlements During: 1974	1975	1976	1977	1978	1979
	(in acre-feet)					
1973	959,335	1,218,975	1,457,615	1,692,725	1,776,735	1,864,075
1972	1,059,575	1,283,915	1,459,955	1,576,936	1,683,017	
1971	1,017,870	1,160,750	1,321,730	1,480,251		
1970	916,950	1,010,630	1,128,815			
1969	992,490	1,112,320				
Contract Amounts	1,146,650	1,311,260	1,488,870	1,667,321	1,845,872	2,021,553

Notices to electric utilities concerning power purchases for pumping 1979 entitlement water were based on the contractors' projections as outlined above. If actual amounts of entitlement water eventually delivered in 1979 are greater than estimated, the Department may be required to purchase additional power at unit costs higher than power scheduled six years in advance. Conversely, if the amounts eventually delivered are less than estimated, the Department may have made a commitment to purchase unneeded power.

Contracts under which surplus water service will be provided in 1974 are similar to those in effect during the last eight months of 1973, except in regard to certain additional limitations placed on the quantity of surplus which can be obtained without increasing the annual entitlement in accordance with the proposed surplus water amendment.

Based on the contractors' October 1, 1973 requests, schedules were issued to 9 agencies for delivery of 145,226 acre-feet of surplus water during the first four months of 1974. In addition, 10 agencies indicated a need for about 408,000 acre-feet of surplus during the last eight months of the year, to be reviewed on or before March 15, 1974.

Under a unique scheduling procedure subsequently described for the proposed surplus water amendment, contractors may obligate themselves for future power costs of pumping requested surplus water deliveries at the time the Department makes a commitment for such power. During 1973, the following contractors obligated themselves for the power costs of pumping the indicated delivery amounts—should the Department continue to obtain rate-advantage by ordering power in advance:

Contracting Agency	Year of Obligation: 1974	1975	1976	1977	1978	1979
Santa Clara Valley Water District	12,000	12,000	12,000	12,000	12,000	12,000
Dudley Ridge Water District						23,100
Tulare Lake Basin Water Storage District						140,000
Kern County Water Agency	322,805	404,152	469,902	438,837	469,087	462,137
TOTALS	334,805	416,152	481,902	450,837	481,087	637,237

The delivery amounts so underwritten constitute the majority of projected total surplus water needs for each year during the 1974 through 1979 period.

Preconsolidation repayment water is scheduled in the same manner as surplus water. Under agreements with Buena Vista Water Storage District and J. G. Boswell Company, a total of 4,325 acre-feet of repayment water was scheduled for delivery during the first four months of 1974.

Contract Amendments

A total of 261 amendments, covering a variety of provisions as indicated in Figure 9, had been executed for long-term contracts as of December 31, 1973. The following 25 amendments were executed during 1973:

An amendment which increases the 1972 entitlement for Oak Flat Water District from 2,900 acre-feet to 5,366 acre-feet (see page 28, Bulletin 132-73).

- Six amendments which permanently delete the surcharge, surcharge credit, and power credit provisions (see pages 33-34, Bulletin 132-73) for Plumas County Flood Control and Water Conservation District (No. 8), Alameda County Flood Control and Water Conservation District, Zone 7 (No. 11), Alameda County Water District (No. 9), San Luis Obispo County Flood Control and Water Conservation District (No. 6), Littlerock Creek Irrigation District (No. 6), and Ventura County Flood Control District (No. 5).
- Thirteen amendments which provide options for amortizing certain adjustments of Transportation Charges (see page 34, Bulletin 132-73) for Plumas County Flood Control and Water Conservation District (No. 9), Alameda County Water District (No. 10), Santa Clara Valley Water District (No. 13), County of Kings (No. 7), Devil's Den Water District (No. 11), Dudley Ridge Water District (No. 12), Empire West Side Irrigation District (No. 10), Hacienda Water District (No. 10), Tulare Lake Basin Water Storage District (No. 11), San Luis Obispo County Flood Control and Water Conservation District (No. 7), Coachella Valley County Water District (No. 7), Mojave Water Agency (No. 8), and Ventura County Flood Control District (No. 6).

Five amendments which reduce 1972 entitlements because project facilities were not ready to initiate delivery of annual entitlements at the beginning of 1972 (see page 29, Bulletin 132-73) for Castaic Lake Water Agency (No. 9), Crestline-Lake Arrowhead Water Agency (No. 10), San Bernardino Valley Municipal Water District (No. 9), San Gabriel Valley Municipal Water District (No. 9), and The Metropolitan Water District of Southern California (No. 15).

In addition to the above, amendments pending as of December 31, 1973 included the following:

An amendment which would increase the 1973 entitlement for Tulare Lake Basin Water Storage District from 39,100 acre-feet to 40,652 acre-feet.

- Two amendments concerning the calculation of the Delta Water Charge and the project interest rate for City of Yuba City and County of Butte.
- An amendment concerning the calculation of the Delta Water Charge for Solano County Flood Control and Water Conservation District.

Surplus Water Amendment. Development of an amendment to all contracts which would realign and simplify the existing surplus water provisions was initiated in 1968 (see pages 75-76, Bulletin 132-68) and substantially completed during 1973. Progress was materially assisted by mutual agreement in the summer of 1973 that other items concerning the calculation of water charges—primarily, the allocation of pumping power costs among contractors—would be handled by separate negotiations. On December 17, 1973, a draft of the amendment was distributed for review and consideration by all 31 agencies (Water Service Contractors Council Memo No. 868). The draft had been developed with representatives of key contractors who had expressed the greatest interest in using surplus water.

The proposed amendment extablishes agricultural and ground water replenishment uses by contractors as the first priority for surplus water, all other uses by contractors as the second priority, and all uses by noncontractors as the third priority. The price for surplus water use for agricultural and ground water replenishment purposes will be the full incremental cost of delivering the water to a contractor plus a charge per acre-foot to cover the Department's administrative costs of the surplus water program. The cost of surplus water to contractors for other uses will be the sum of the incremental cost of delivery, the administrative charge, and one-half the Delta Water Rate. Only a minimum price for noncontractors is established—the same charge for agricultural and ground water replenishment use by contractors, plus the full Delta Water Rate, and plus a share of the capital and minimum operation, maintenance, power and replacement cost of aqueduct reaches required for the delivery of water. The Department's present policy is to charge noncontractors the Delta Water Rate plus the equivalent unit Transportation Charge for facilities used in making deliveries (see the last table in Appendix B).

A contractor who uses entitlement and surplus water for agriculture and ground water replenishment in an amount which exceeds 150 percent of its maximum annual entitlement (i.e., its share of the 4,230,000 acre-foot minimum project yield) will be required to pay one-quarter of the Delta Water Rate for the further surplus water that is in excess of the

150 percent figure. (A 3,000 acre-foot relaxation that is included in present contracts for contractors with very early buildups has also been retained.) Also, any contractor whose surplus water request exceeds its annual entitlement must increase its annual entitlement for that year so that scheduled amounts of entitlement and surplus water are equal—but does not have to increase its annual entitlement to more than 75 percent of its maximum annual entitlement.

The amendment envisages the execution of contracts covering a period of several years with contractors who plan to use surplus water. These contracts will include details of scheduling and payment. One scheduling provision is included in the amendment. The proposed amendment permits a contractor to obligate itself for future power costs at the time the Department makes a commitment for the power and gives such a contractor priority to that amount of power for use in pumping surplus water if surplus water is available in the year for which the power is committed.

Deferred Entitlements Amendment. This proposed amendment also had been considered in conjunction with the proposed surplus water amendment (see page 34, Bulletin 132-73). During 1973, it was also agreed to consider the two amendments individually.

The deferred delivery amendment would provide rights to the subsequent delivery of entitlement water paid for but not received for any reason by the respective contractors. By the end of the year, problem areas associated with the proposal had been identified and various solutions were being studied. Consideration was being given to a monetary, rather than a water, credit to be applied in a manner that would not impair project financing.

Negotiation of Water Charge Settlements

During 1973, the task force consisting of representatives of the State Water Contractors Audit Committee, The Metropolitan Water District of Southern California, and the Department's Water Service Contract Cost Negotiations Committee met to discuss problems concerning the computation of charges. The frequency of meetings of the entire task force decreased since responsibility for most of the work has been assumed by technical subcommittees.

During 1973, a proposed settlement of the protested 1969 and 1970 capital costs was negotiated. At year's end, a letter was being prepared to inform the legislative water committees of the proposed settlement in accordance with Senate Concurrent Resolution No. 157 of the 1969 Legislature (see page 1, Bulletin 132-70). The task force is now concentrating its efforts on two longstanding major issues; the allocation of power costs and rights to take deferred deliveries or credits for undelivered entitlements.

However, a number of issues remain to be resolved. By Water Service Contractors Council Memo No. 847, August 31, 1973, the contractors were notified that they had until December 21, 1974 to file notices of contest and to pursue all remedies available to them on statements of charges submitted prior to such date—excepting charges covered by the six settlement letters (seven, for the South Bay contractors) and the concurrence letter (subject to correction of inaccuracies in the application thereof) referred to in the 1973 extension letter (see pages 34-35, Bulletin 132-73).

1974-75 Budget Review

In order to reduce the magnitude of costs contested by the contractors, a regular procedure was established in 1968 by which the Department's expenditure plans for the Project are formally presented to the contractors through the California Water Commission (see pages 27-28, Bulletin 132-69).

In their review of the proposed 1974-75 budget, the contractors generally found the expenditure plan to be reasonable in all respects and offered limited comments. The Metropolitan Water District of Southern California did not have any specific comments other than to note that some remaining questions would be pursued with the Department through conventional channels. The Water Service Contractors Audit Committee recommended that costs of the Advance Planning-Middle Fork Eel River and Conjunctive Operation of Groundwater Basins with the State Water Project programs be held in suspense and not be passed directly on to the contractors. The Committee also suggested the Department's review of the adequacy of insurance in certain areas.

Implementation of Additional Service

By the end of 1973, Lake Perris of the California Aqueduct was declared ready to deliver project water and that construction was completed in the meaning of Article 29(c) of the Contracts. As such, all future reimbursable minimum operations, maintenance, power, and replacement costs incurred for Lake Perris will be returned annually to the State through contractor payments of the minimum OMP&R component, rather than amortized through payments of the capital cost component.

Construction of all reaches of the project transportation facilities has now been declared completed for purposes of initiating the minimum OMP&R component, exclusive of Buttes Reservoir and Phase II of Coastal Branch and North Bay Aqueduct.

Figure 9: WATER SUPPLY CONTRACT AMENDMENTS AS OF DECEMBER 31, 1973

Contracting Agency	Minimum Project Yield Increased	Delta Water Charge, "Eel" Costs Delayed			Project Interest Rate Modified	Surcharge and Surcharge Credit Provisions						"Wet Weather" Provisions Added	"A & R" Surplus Water Provisions		Turnout Construction by Agency	Peaking Service		Annual Entitlements Revised	Excess Capacity Purchased	Article 28 Revised	Special Conditions
		1970	1971	1972 till construction		Added	Revised	Moratorium Declared: Thru 1969	Moratorium Declared: 1970	Moratorium Declared: 1971	Deleted		Added	Revised		Increased	Decreased				
FEATHER RIVER AREA																					
City of Yuba City	1	2P	2P	2P	2P		1							1				1			
County of Butte	1	3P	3P	3P	3P		1	2		4	5			1							
Plumas County Flood Control and Water Conservation District	1	3	5	6	3		1	2	4	7	8									9	
NORTH BAY AREA																					
Napa County Flood Control and Water Conservation District	1	3	4	5	3		1				6			1							1,2
Solano County Flood Control and Water Conservation District	1	2	3P	3P	2		1							1		1					
SOUTH BAY AREA																					
Alameda County Flood Control and Water Conservation District, Zone 7	2	6	8	9	6	2		5	7	10	11	1		2	3			1,4			1
Alameda County Water District	1	4	5	7	4	1		3		8	9	S	1		2					10	1,6
Santa Clara Valley Water District	2	6	8	10	6	2		5	7	11	12	1	1	2	3			1,4		13	1,9
SAN JOAQUIN VALLEY AREA																					
County of Kings		2	3	4	2			1		5	6	S	S							7	
Devil's Den Water District	1	5	7	8	5			4	6	9	10			1				1,3		11	2
Dudley Ridge Water District	1	6	8	9	6			5	7	10	11			1				1,2 3,4		12	
Empire West Side Irrigation District	1	4	6	7	4			3	5	8	9	S		1				2		10	
Hacienda Water District	1	4	6	7	4			3	5	8	9	S		1				2		10	7
Kern County Water Agency	1	4	6	8	4			3	5	9	10			1				1,2		11	7
Oak Flat Water District		3	5	6	3			2	4	7	9	S	S		1			8		10	
Tulare Lake Basin Water Storage District	2	5	6	7	5			4		8	10	S		2				1,3,9 12P		11	
CENTRAL COASTAL AREA																					
San Luis Obispo County Flood Control and Water Conservation District	2	3	4	5	3	1	2				6		1	2						7	
Santa Barbara County Flood Control and Water Conservation District	2	3	4	5	3	1	2				6		1	2				2			
SOUTHERN CALIFORNIA AREA																					
Antelope Valley-East Kern Water Agency	1	5	6	7	5	1					8		1			3	2	1	4	9	2,3 4
Castaic Lake Water Agency	2	4	5	6	4	1	2				7		1	2		2		2,3 9		8	
Coachella Valley County Water District	2	3	4	5	3	1	2				6		1	2				2		7	
Crestline-Lake Arrowhead Water Agency	2	5	6	7	5	1	2				8		1	2	4	3		2,10		9	
Desert Water Agency	2	3	4	5	3	1	2				6		1	2				2		7	
Littlerock Creek Irrigation District	2	3	4	5	3	1	2				6		1	2				2			
Mojave Water Agency	2	4	5	6	4	1	2				7		1	2			3	2		8	3
Palmdale Water District	2	3	4	5	3	1	2				6		1	2				2		7	
San Bernardino Valley Municipal Water District	2	4	5	6	4	1	2				7		1	2				1,2 3,9		8	
San Gabriel Valley Municipal Water District	2	4	5	6	4	1	2				7		1	2		2		2,9	3	8	
San Gorgonio Pass Water Agency	2	4	5	6	4	1	2				7		1	2		2					2,3
The Metropolitan Water District of Southern California	1	9	10	11	9	1					13		1					1,3 8V,15	2,6 7	14	(a
Ventura County Flood Control District	1	2	3	4	2		1				5			1						6	

P = Pending as of December 31, 1973.
S = Special provisions of basic contract.

V = Amendment voided by subsequent actions.
a) Amendment Numbers 2, 3, 4, 5, 7, 8V, 12.

Actual and projected annual energy requirements by project pumping plants and generation by project recovery plants (which excludes Oroville-Thermalito production) is shown in Table 3. Quantities for the 1974 through 1979 period are based on entitlement water delivery requests submitted by the water contractors on October 1, 1973. Quantities beyond 1979 reflect the buildup in entitlement water deliveries anticipated by water contractors.

Table 3 indicates that the total annual energy requirements will be about 13.1 billion kilowatthours when ultimate project water deliveries are made. Approximately 29 percent of the energy requirements will be met from project recovery generation. The remaining energy requirements must be obtained from other sources.

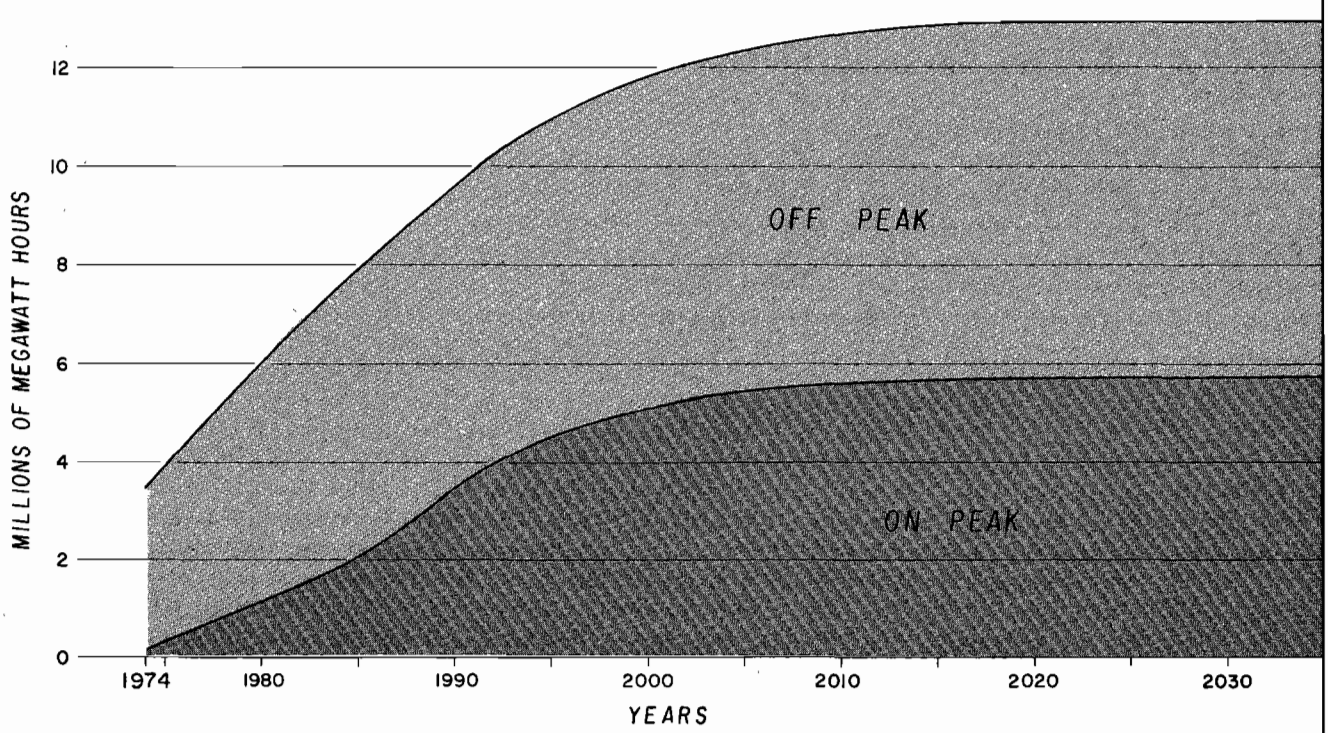
Figure 10 graphically illustrates the future annual amounts of onpeak and offpeak energy estimated to be required by project pumping plants. Onpeak energy is utilized between 7 a.m. and 10 p.m. on weekdays and from 1 p.m. to 10 p.m. on Saturdays, while offpeak energy is used during the remainder of the time. Since onpeak power is more expensive than offpeak power, the Project is operated so as to minimize the amount of power required during onpeak periods. Within physical constraints, this is accomplished by maximizing pumping during offpeak periods while maximizing recovery plant generation during onpeak periods.

In 1973, negotiation of the following agreements was completed:

- An agreement with the California Power Pool Companies to make more water available from Lake Oroville for scheduling of power and to reduce spill (see section on "Conservation of Energy", Chapter I).
- Extension for an indefinite period of the Trust Agreement under which the Bonneville Power Administration may make nonfederal Northwest energy available to California utilities.
- Feasibility Study Agreement with the City of Los Angeles Department of Water and Power, Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas and Electric Company concerning the construction of the San Joaquin Nuclear Project in northern Kern County (see section on "Long-Range Power Program", Chapter I).

Even though present contracts provide for power at very low rates, continuing effort is required to further improve the Project's overall situation. Power costs are expected to increase substantially after March, 1983 when Canadian Entitlement Power will no longer be available and new rates will become effective under the Suppliers' Contract.

Figure 10: PROJECTED PUMPING ENERGY REQUIREMENTS



Pearblossom Pumping Plant
DWR 4424-B

TABLE 3: ANNUAL PROJECT ENERGY

(in millions of

Calendar Year	Energy											
	North Bay Aqueduct Pumping Plants		Periph-eral Canal Pumping Plant	San Joaquin Drain Pumping Plant	South Bay Aque-duct Pumping Plants (b	California Aqueduct						
	Calhoun and Travis	Cor-delia (a				Delta	San Luis	Dos Amigos	Buena Vista	Wheeler Ridge	Wind Gap	A. D. Edmon-ston
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Subtotal, Actual for 12 years, 1962-1973	0	9	0	0	655	1,622	788	473	272	202	415	1,449
1974 (d	0	3	0	0	115	435	25	171	211	223	459	1,657
1975	0	1	0	0	113	447	92	187	211	221	454	1,611
2 years, 1974-1975	0	4	0	0	228	882	117	358	422	444	913	3,268
1976	0	1	0	0	115	460	88	233	271	293	608	2,172
1977	0	1	0	0	117	593	175	251	292	314	651	2,323
1978	0	1	0	0	119	539	143	266	306	329	681	2,422
1979	0	1	0	0	120	611	244	276	313	334	690	2,451
1980	1	1	0	0	122	786	241	298	334	353	727	2,573
1981	1	1	0	0	124	720	135	311	343	360	741	2,620
1982	1	1	0	0	127	783	86	336	375	394	809	2,861
1983	1	1	0	0	129	746	59	351	388	407	833	2,939
1984	1	1	0	0	131	801	95	368	405	425	870	3,052
1985	1	1	64	0	133	886	178	380	415	432	885	3,097
10 years, 1976-1985	6	10	64	0	1,237	6,925	1,444	3,070	3,442	3,641	7,495	26,510
10 years, 1986-1995	29	11	748	5	1,514	11,076	2,294	5,012	5,786	6,132	12,609	44,106
10 years, 1996-2005	40	20	825	8	1,680	12,701	2,411	5,751	6,896	7,396	15,265	53,608
10 years, 2006-2015	40	30	854	8	1,680	13,313	2,584	6,038	7,351	7,918	16,367	57,601
10 years, 2016-2025	67	95	867	8	1,680	13,513	2,923	6,066	7,417	7,959	17,017	58,487
10 years, 2026-2035	80	140	872	8	1,680	13,550	3,130	6,070	7,460	7,970	17,610	59,160

a) During 1968 thru 1979, an interim pumping plant will pump from the federal Solano Project terminal reservoir.

b) Includes South Bay and Del Valle Pumping Plants and, during 1962 thru 1967, an interim pumping plant which pumped a supply provided by the federal Delta-Mendota Canal.

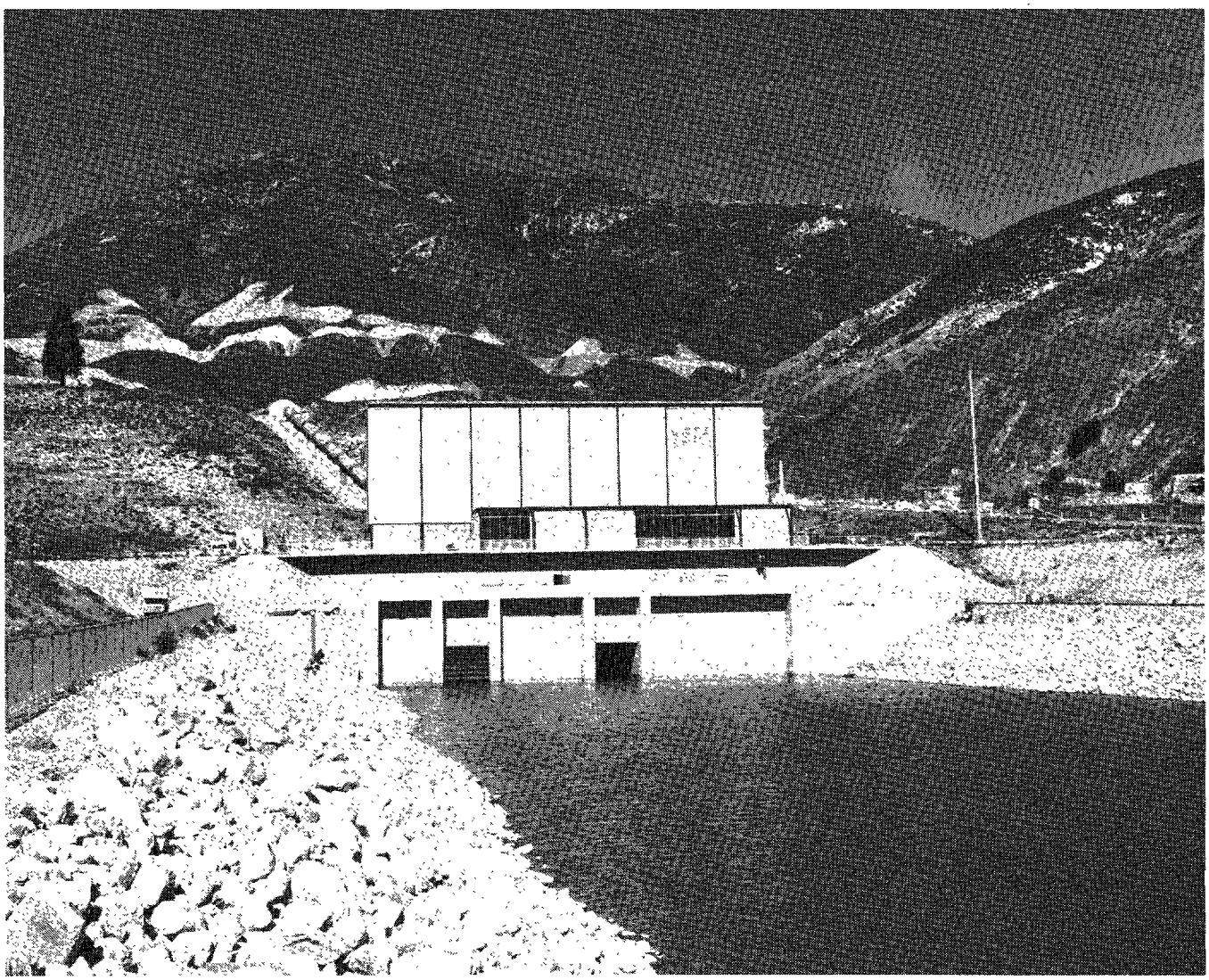
REQUIREMENTS FOR PUMPING

kilowatt-hours)

Requirements					Energy Generation							Net Energy Requirements	Calendar Year
Pumping Plants					California Aqueduct Power Plants								
Pear-blossom	Oso	Las Per-illas and Badger Hill	Devil's Den, Saw-tooth, and Polonio	Total	San Luis	Devil Canyon	Castaic (c	San Luis Obispo	Cotton-wood	Pyramid	Total	Col.(17) minus Col.(24)	
(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	
138	125	158	0	6,306	296	125	230	0	0	0	651	5,655	12 years, 1962-1973
235	118	24	0	3,676	6	329	312	0	0	0	647	3,029	1974
245	108	25	0	3,715	59	351	347	0	0	0	757	2,958	1975
480	226	49	0	7,391	65	680	659	0	0	0	1,404	5,987	2 years, 1974-1975
471	82	27	0	4,821	118	735	263	0	0	0	1,116	3,705	1976
526	78	28	0	5,349	115	826	249	0	0	0	1,190	4,159	1977
542	83	31	0	5,462	146	848	268	0	0	0	1,262	4,200	1978
551	83	32	0	5,706	167	859	265	0	0	0	1,291	4,415	1979
570	89	38	0	6,133	71	884	286	0	0	0	1,241	4,892	1980
573	93	41	0	6,063	84	902	297	0	0	0	1,283	4,780	1981
638	97	42	41	6,591	47	982	309	9	0	144	1,491	5,100	1982
640	105	45	45	6,689	69	996	335	10	105	208	1,723	4,966	1983
646	115	47	49	7,006	79	1,003	370	11	106	230	1,799	5,207	1984
645	120	49	57	7,343	84	995	385	13	107	240	1,824	5,519	1985
5,802	945	380	192	61,163	980	9,030	3,027	43	318	822	14,220	46,943	10 years, 1976-1985
6,289	2,866	567	792	99,836	1,409	9,535	9,366	183	1,077	5,906	27,476	72,360	10 years, 1986-1995
6,445	3,906	642	1,321	118,915	1,431	9,402	12,672	294	1,140	8,082	33,021	85,894	10 years, 1996-2005
6,459	4,404	687	1,697	127,031	1,472	9,051	14,215	365	1,148	9,125	35,376	91,655	10 years, 2006-2015
6,460	4,447	734	1,896	129,636	1,598	9,531	14,445	402	1,146	9,603	36,725	92,911	10 years, 2016-2025
6,470	4,460	760	1,930	131,350	1,700	10,030	14,570	410	1,150	10,010	37,870	93,480	10 years, 2026-2035

c) The City of Los Angeles Department of Water and Power will construct and operate a 1,250,000-kilowatt Castaic Powerplant and will supply the Project with electric power and energy equivalent to the generation from a 213,984-kilowatt powerplant the State originally had planned to construct.

d) 1974 and thereafter -- entitlement deliveries only.



Devil Canyon Powerplant
DWR 4308-2

Efforts during 1973 continued under the Department's Long-Range Power Program to obtain power supplies for the future operation of the State Water Project.

Work continued to determine the future requirements and design considerations for a proposed second Oroville-Thermalito Power Plant. This study considers both the future market for low-capacity factor power and the possibility of using Oroville-Thermalito production as a power source for project pumping.

The Department began negotiations with the City of Los Angeles Department of Water and Power, Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas and Electric Company on a participation agreement for the cooperative development of the San Joaquin Nuclear Project. The Long-Range Power Program will also include possible cooperative developments of nuclear plants in the southeastern part of the State and other power sources, including those in the Pacific Northwest.

The Department continues to negotiate with the California Suppliers for a supplemental power purchase agreement to meet the short-term needs of the Project, including power for pumping surplus water deliveries. In addition, the Department is engaged in discussions with California utilities concerning energy conservation and mutual cooperation to maximize the project power potential.

The Department continues to participate in the Western Systems Coordinating Council. This activity provides information on the coordinated operation of over 40 electric utility systems in western United States and Canada. Information is also obtained concerning the utilities long-range construction programs in order to meet future electrical load growth in their service areas. This participation provides an important source of information in negotiating for future supplies of Northwest power and possible participation in the cooperative development of future generating plants.

CHAPTER IV. PROJECT OPERATIONS

For California as a whole, water conditions during 1973 were above normal. Of course, relative conditions varied for locales within the State. Precipitation in areas near the Oregon border was well below normal. On the other hand, runoff from the Sierras in the lower San Joaquin Valley, from the San Joaquin River to and including the Kern River, was significantly above normal. The favorable water supply situation in the Southern San Joaquin Valley was in distinct contrast to precipitation patterns experienced during the previous three years. Since agricultural areas in the Southern San Joaquin Valley are currently the primary customers of project water, availability of local water supplies had a pronounced effect on 1973 project water deliveries as compared with deliveries during previous years.

For example, project water deliveries in the San Joaquin Valley had grown to total 867,317 acre-feet in 1972—almost 79 percent of all project water delivered in 1972. However, 1973 deliveries in the Valley were 695,910 acre-feet—only two-thirds of all project deliveries in 1973.

The same trend was experienced in the South San Francisco Bay area where abundant local water supplies caused 1973 deliveries to be about 79 percent of the 1972 amount.

Most, but not all, of the slack was taken up by growing deliveries to Southern California. During the initial delivery year of 1972, only 74,123 acre-feet was served south of the Tehachapis. In 1973, Southern California deliveries increased to total 207,960 acre-feet—almost three times the 1972 amount.

As the net effect of weather and growing demands in Southern California, 1973 deliveries totaled 1,033,387 acre-feet—69,016 acre-feet less than the 1,102,403 acre-feet delivered from project facilities in 1972.

On the other hand, also primarily due to the weather, project hydroelectric power generation during 1973 exceeded 3,298 million kilowatthours—a 72 percent increase over 1972 production. While most of the increase was caused by greater flows into Lake Oroville and, in turn, through Edward Hyatt and Thermalito Powerplants, growing project water deliveries in Southern California accounted for increased production at Devil Canyon and Castaic Powerplants.

Other operational highlights during 1973 included the following:

- Project recreation developments received 2,502,000 recreation days of use in 1973, a 27 percent increase over the 1,971,200 recreation days of 1972—a record high. Opening of new recreation developments on California Aqueduct reservoirs and the opening of certain aqueduct reaches to walk-in fishing accounted for the increase (see the section on "Actions Concerning Project Recreation and Fish and Wildlife Enhancement", Chapter I).
- In addition, project facilities were visited by 2,142,000 people in 1973, a 3 percent increase from

the 2,075,000 visitors recorded in 1972. Included in the 1973 total were official delegations from 13 foreign counties: Argentina, Bangladesh, Brazil, Iran, Japan, Jordan, Mexico, People's Republic of China, Rumania, Switzerland, Taiwan, Turkey, and Viet Nam.

In early fall of 1973, project water began filling Lake Perris, the southernmost facility. Filling of Pyramid Lake began in May while filling of Silverwood Lake was completed in September.

- Two additional long-term contractors received project water for the first time (on an exchange basis): Coachella Valley County Water District and Desert Water Agency. Of the Project's 31 long-term contractors, 24 were receiving project water as of the end of 1973.

Summary of 1973 Operations

The quantitative benefits of project operations through 1973 are summarized below:

Year	Water Delivered (acre-feet)[a]			Recreation Supported (recreation days)[b]	Electrical Energy Generated (megawatt-hours)
	Municipal and Industrial Use	Agri-cultural Use	Total		
1962	4,594	13,695	18,289	30,000	--
1963	6,686	15,770	22,456	105,000	--
1964	11,293	21,214	32,507	331,600	--
1965	17,642	26,463	44,105	499,800	--
1966	27,529	40,399	67,928	482,700	--
1967	28,736	36,407	65,143	455,200	--
1968	52,686	255,334	308,020	931,300	628,000
1969	40,123	244,123	284,246	1,554,800	2,614,000
1970	61,915	343,182	405,097	1,804,800	2,679,000
1971	103,550	593,928	697,478	2,085,900	3,302,000
1972	207,702	894,701	1,102,403	1,971,200	1,922,000
1973	309,144	724,243	1,033,387	2,502,000	3,298,000
Total[c]	871,600	3,209,459	4,081,059	12,754,300	14,443,000

a) An acre-foot of water (325,851 gallons) will cover one acre of land to a depth of one foot.

b) A recreation day is the visit of one person to a recreation area for any part of one day.

c) In addition, dams of the State Water Project have prevented millions of dollars worth of flood damage, the most notable to date being an estimated $30,000,000 by operation of partially completed Oroville Dam during the storm of December 1964 and January 1965.

Figure 11 presents a pictorial summary of project water operations during 1973. Also shown on Figure 11 is the areal extent of each of the Project's five field divisions which have the responsibility for operations and maintenance activities. Selective activities during 1973 within each field division are described in the following sections, together with maps of project facilities and water contracting agencies.

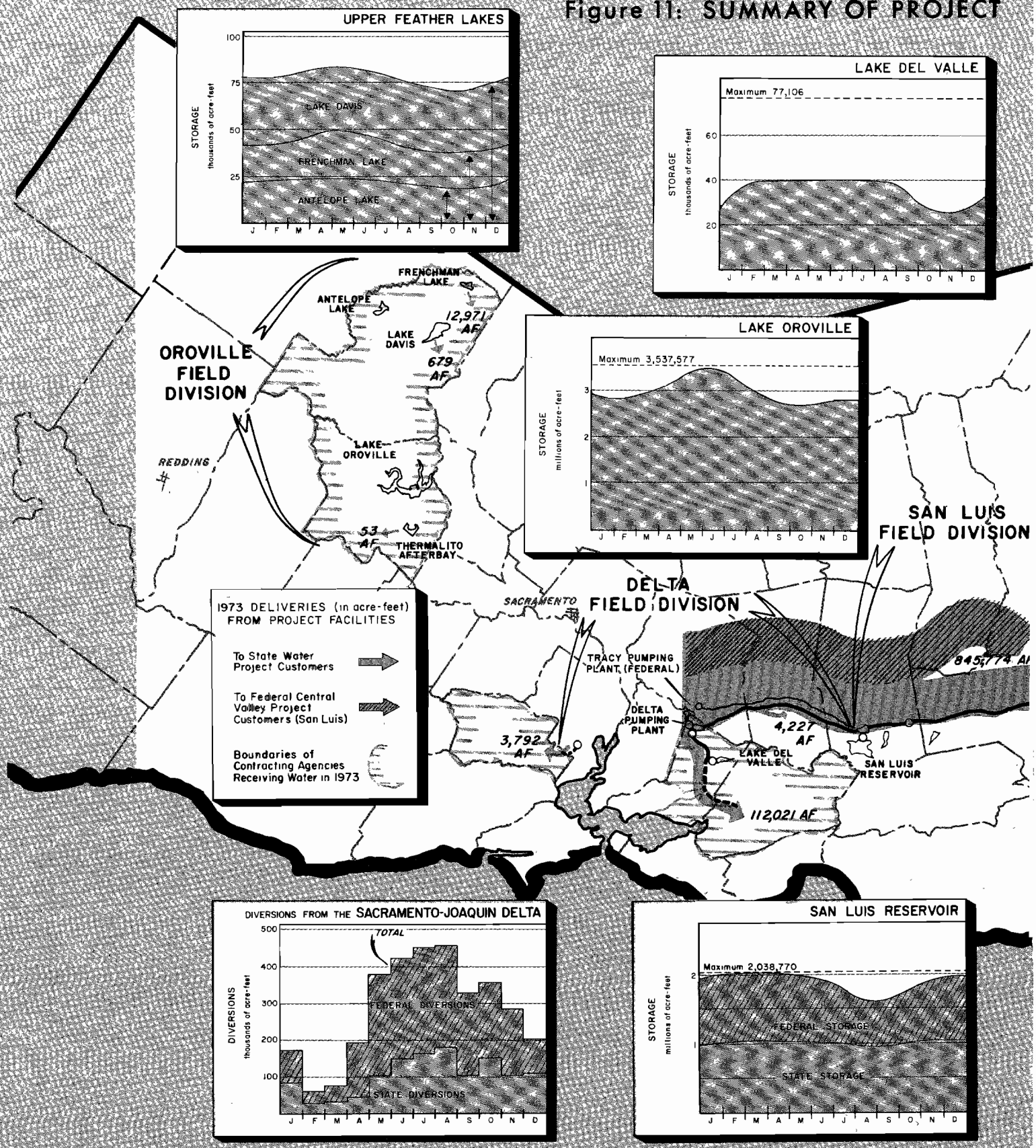
Table 2 (Chapter III) presents the monthly amounts delivered during 1973 to each contracting agency. Table 4 shows summary data on the quality of water delivered during 1973 as measured at selective stations. Also shown at the bottom of Table 4 are the corresponding monthly average objectives for maximum concentrations of constituents as set forth in long-term water supply contracts. (Note that the mineral analyses are based on one measurement each month, while the objectives are stated in terms of average conditions within a month.)

Project power operations, for each pumping and generating plant during each month of 1973, are summarized in Table 5.

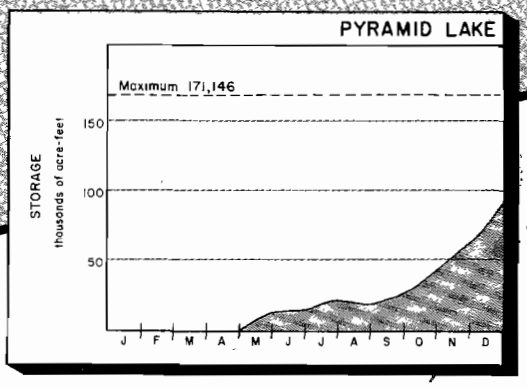
TABLE 4: WATER QUALITY MEASUREMENTS AT SELECTIVE STATIONS

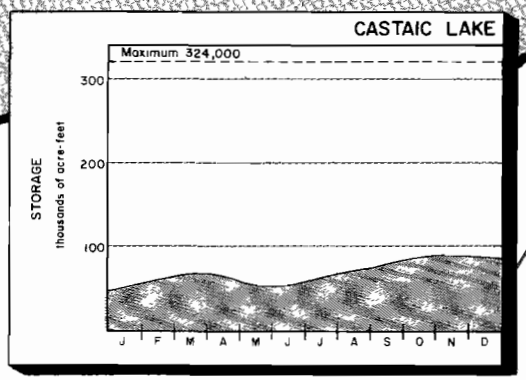
Station	Monthly Samples	Concentrations (in parts per million unless otherwise noted) Total Dissolved Solids	Total Hardness	Chlorides	Sulfates	Sodium (%)	Boron
Thermalito Afterbay, Outlet to Feather River	Minimum	29	30	0	0	15	0.0
	Average	50	33	1	2	18	0.0
	Maximum	76	38	2	5	20	0.1
Sacramento-San Joaquin Delta, Delta Pumping Plant	Minimum	152	70	26	19	40	0.0
	Average	272	106	67	50	50	0.2
	Maximum	428	155	109	104	60	0.5
California Aqueduct:							
Entrance to O'Neill Forebay	Minimum	158	70	30	22	44	0.0
	Average	261	105	64	46	53	0.2
	Maximum	388	148	110	75	61	0.6
Outlet from O'Neill Forebay	Minimum	194	82	42	30	47	0.1
	Average	275	115	68	50	49	0.2
	Maximum	371	153	101	73	50	0.5
Near Kettleman City	Minimum	196	87	45	32	46	0.1
	Average	279	119	69	51	49	0.2
	Maximum	367	156	97	72	50	0.6
Coastal Branch near Devil's Den	Minimum	184	87	44	28	45	0.1
	Average	297	118	75	61	52	0.3
	Maximum	419	154	103	111	57	0.6
Near Buena Vista Pumping Plant	Minimum	170	83	38	25	44	0.1
	Average	297	115	72	55	51	0.3
	Maximum	420	156	98	100	57	0.5
At Tehachapi Afterbay	Minimum	184	88	41	25	45	0.0
	Average	289	120	74	59	50	0.2
	Maximum	399	163	117	125	59	0.5
At Pearblossom Pumping Plant	Minimum	155	85	41	41	44	0.0
	Average	260	111	70	50	50	0.2
	Maximum	412	147	106	105	56	0.5
Entrance to San Bernardino Tunnel	Minimum	144	88	33	25	40	0.1
	Average	220	106	53	39	45	0.2
	Maximum	270	115	67	54	49	0.2
Entrance to Angeles Tunnel	Minimum	232	105	8	41	20	0.0
	Average	371	195	50	129	39	0.4
	Maximum	742	415	84	383	50	1.1
Castaic Lake, at Outlet Works	Minimum	256	129	49	61	37	0.1
	Average	320	160	56	92	41	0.3
	Maximum	435	212	67	140	44	0.4
Monthly Average Quality Objectives		440	180	110	110	50	0.6

Figure 11: SUMMARY OF PROJECT



WATER OPERATIONS, 1973





SOUTHERN FIELD DIVISION

SAN JOAQUIN FIELD DIVISION

SILVERWOOD LAKE

LAKE PERRIS

52,273 AF

370 AF

583,333 AF

BAKERSFIELD

CASTAIC LAKE

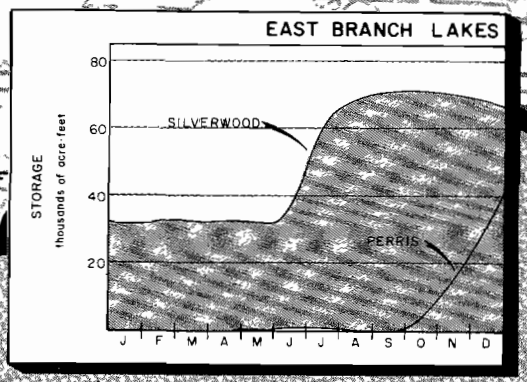
PYRAMID LAKE

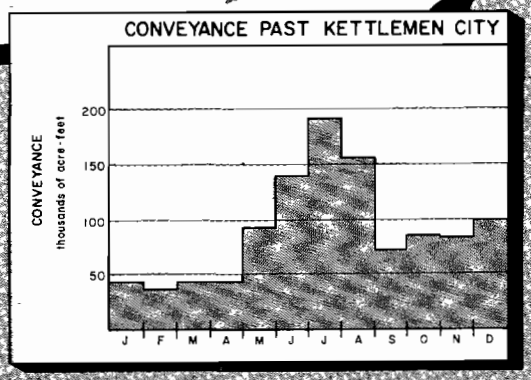
155,317 AF

A.D. EDMONSTON PUMPING PLANT

108,350 AF

ETTLEMAN CITY





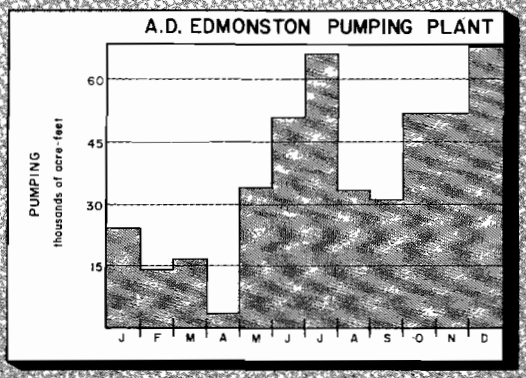


TABLE 5: MONTHLY POWER

(in millions of

Operations	Month						
	January	February	March	April	May	June	July
ENERGY GENERATED BY EDWARD HYATT AND THERMALITO POWERPLANTS[a]							
Gross Generation	345.83	319.02	274.64	114.62	238.48	191.53	220.05
Powerplant Use and Pumpback Requirements	2.03	1.91	4.37	5.70	3.00	4.66	2.86
Delivered to California Power Pool Companies	343.80	317.11	270.27	108.92	235.48	186.87	217.19
ENERGY USED BY PROJECT PUMPING PLANTS							
Interim (Cordelia)	0.33	0.28	0.32	0.33	0.04	0.01	0.00
South Bay	3.01	0.24	0.35	3.88	9.51	10.72	12.84
Del Valle	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Tracy (State Share)	0	0	0	0	0	0	0
Delta	25.23	8.43	11.87	14.47	31.44	45.24	49.90
San Luis (State Share)	19.56	0	5.19	7.85	3.41	0	0
Dos Amigos (State Share)	5.71	4.43	5.67	5.42	13.01	20.06	26.51
Las Perillas	0.26	0.16	0.31	0.55	1.04	1.50	2.02
Badger Hill	0.64	0.38	0.76	1.41	2.71	3.84	5.34
Buena Vista	8.19	6.64	7.59	3.46	12.97	20.28	24.86
Wheeler Ridge	7.29	4.44	5.10	1.75	10.75	16.40	20.62
Wind Gap	15.27	9.18	10.54	2.32	21.54	32.58	42.10
A. D. Edmonston	55.31	32.30	38.14	7.74	76.96	115.67	149.99
Oso	6.54	3.59	4.46	0.21	7.11	8.84	10.23
Pearblossom	1.20	1.63	0.88	2.35	5.66	13.75	19.50
Devil Canyon (Station Service)	0.13	0.07	0.12	0.05	0	0.01	0
EHV Transmission Losses	0.62	0.56	0.62	0.57	0.61	0.60	0.57
Total	149.31	72.35	91.94	52.38	196.78	289.52	364.49
SOURCES OF ENERGY FOR PROJECT PUMPING PLANTS							
San Luis Pumping-Generating Plant (State Share)	0.42	1.13	1.18	4.12	6.91	5.42	12.60
Castaic Generating Plant (State Share)	15.13	11.09	9.69	1.19	4.26	21.22	19.57
Devil Canyon Generating Plant	2.96	0.87	0.70	1.29	8.38	2.96	9.44
Canadian Entitlement Power at Cal-Oregon Border	12.94	11.68	12.94	12.07	12.50	12.09	12.50
Bonneville Power Administration at Cal-Oregon Border	0	0	0	0	0	0	0
California "Suppliers"	118.49	47.31	67.59	33.32	164.60	247.83	310.38
Banked Energy Carred Over[b]	(0.63)	(0.36)	(0.52)	(0.13)	0	0	0
Banked Energy Withdrawn[b]	0	0.63	0.36	0.52	0.13	0	0
Total	149.31	72.35	91.94	52.38	196.78	289.52	364.49

a) Sold under terms of the Oroville-Thermalito Power Sale Contract, November 29, 1967.

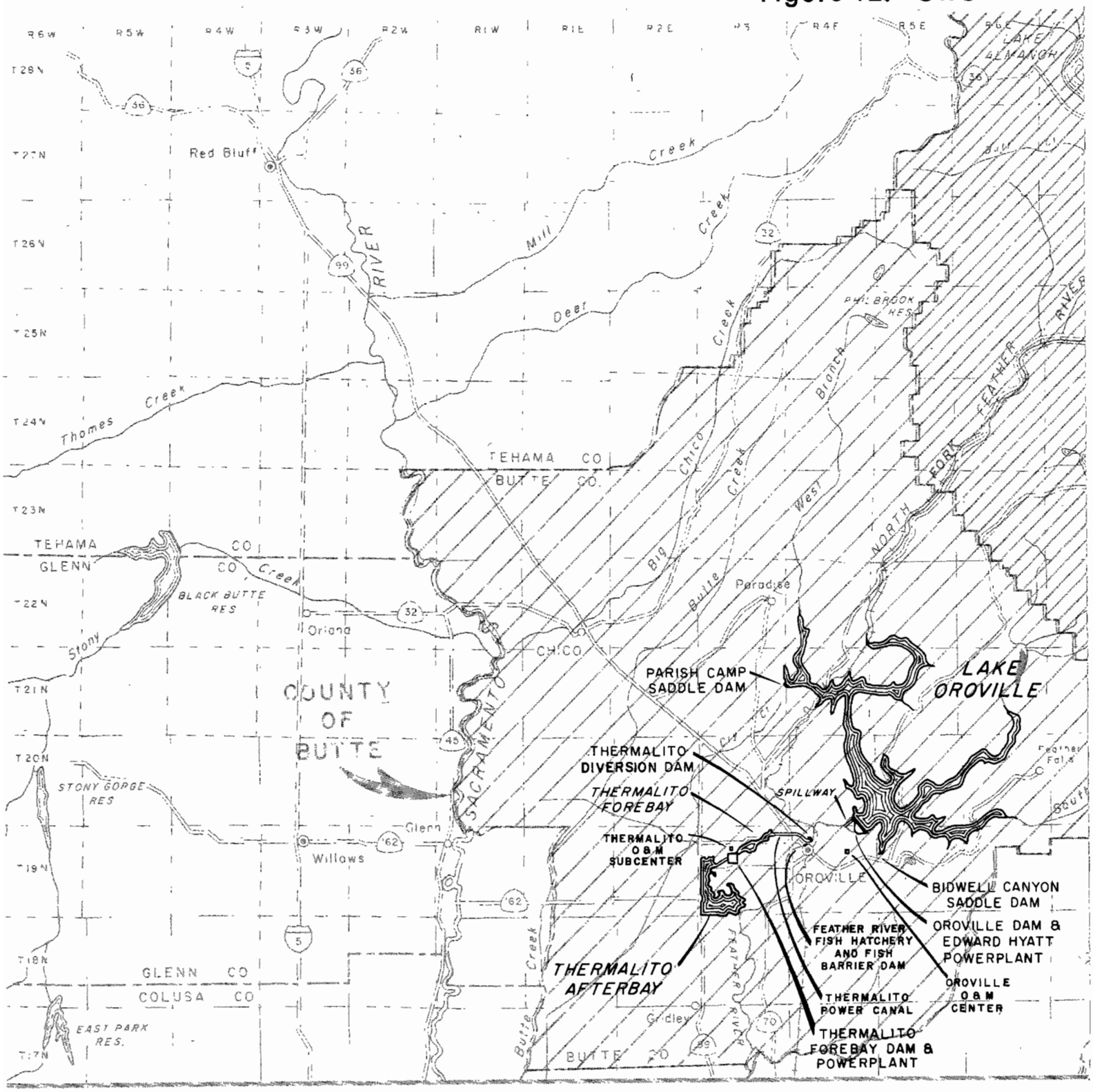
OPERATIONS IN 1973

kilowatthours)

Month						Operations
August	September	October	November	December	Total	
						ENERGY GENERATED BY EDWARD HYATT AND THERMALITO POWERPLANTS[a]
245.36	139.24	106.33	415.83	386.16	2,997.09	Gross Generation
3.54	4.14	4.19	2.22	0.99	39.61	Powerplant Use and Pumpback Requirements
241.82	135.10	102.14	413.61	385.17	2,957.48	Delivered to California Power Pool Companies
						ENERGY USED BY PROJECT PUMPING PLANTS
0.02	0.07	0.06	0.14	0.31	1.91	Interim (Cordelia)
14.52	6.91	3.42	5.66	5.05	76.11	South Bay
0.02	0.02	0.02	0.01	0.01	0.21	Del Valle
0	0	0	0.62	0	0.62	Tracy (State Share)
54.47	31.29	46.41	32.74	33.47	384.96	Delta
1.91	7.96	17.39	7.71	.06	71.04	San Luis (State Share)
21.60	10.71	12.84	11.88	14.27	152.11	Dos Amigos (State Share)
1.78	0.37	0.25	0.12	0.28	8.64	Las Perillas
4.86	0.94	0.58	0.24	0.67	22.37	Badger Hill
14.87	10.52	14.28	13.69	17.14	154.49	Buena Vista
11.87	10.15	15.24	14.95	19.32	137.88	Wheeler Ridge
21.63	20.44	33.19	33.13	43.24	285.16	Wind Gap
76.06	71.55	117.86	117.97	154.70	1,014.25	A. D. Edmonston
5.74	7.24	9.71	8.42	10.25	82.34	Oso
8.92	3.57	11.56	15.42	20.98	105.42	Pearblossom
0	0	0	0	0	0.38	Devil Canyon (Station Service)
0.59	0.57	0.57	0.57	0.58	7.03	EHV Transmission Losses
238.86	182.31	283.38	263.27	320.33	2,504.92	Total
						SOURCES OF ENERGY FOR PROJECT PUMPING PLANTS
2.27	0.26	0.02	0.15	0.01	34.49	San Luis Pumping-Generating Plant (State Share)
15.70	11.63	13.33	10.78	8.74	142.33	Castaic Generating Plant (State Share)
8.13	3.38	20.43	27.15	38.80	124.49	Devil Canyon Generating Plant
12.50	12.09	12.51	12.09	12.50	148.41	Canadian Entitlement Power at Cal-Oregon Border
0	0	0	0	0	0	Bonneville Power Administration at Cal-Oregon Border
200.26	154.95	237.09	213.10	260.28	2,055.20	California "Suppliers"
0	0	0	0	0	(1.64)	Banked Energy Carried Over[b]
0	0	0	0	0	1.64	Banked Energy Withdrawn[b]
238.86	182.31	283.38	263.27	320.33	2,504.92	Total

b) Energy which was excess to project needs which was temporarily banked.

Figure 12: OROVILLE



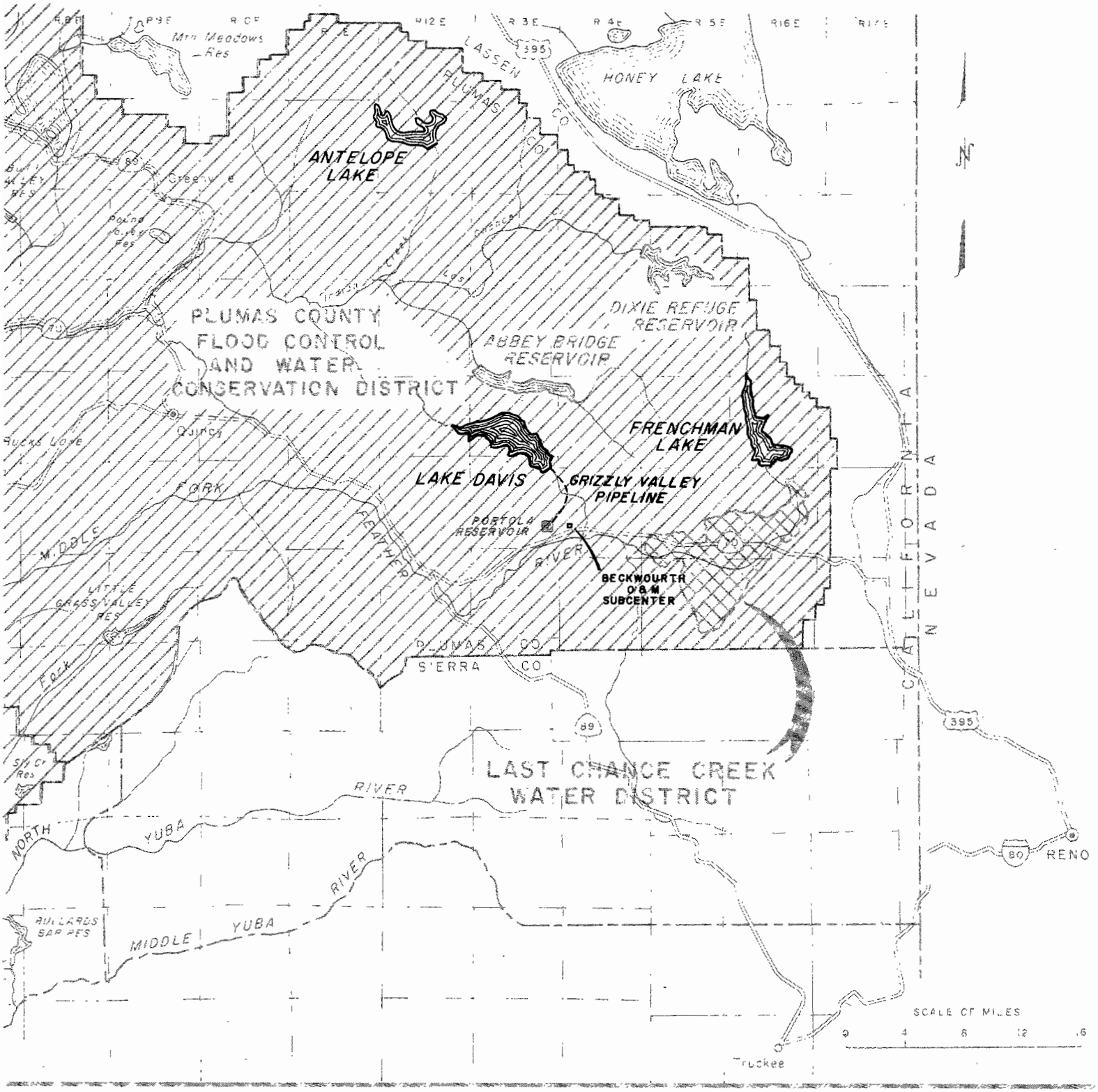
Oroville Field Division

Project facilities within the Oroville Field Division are shown in Figure 12.

On June 5, 1973, Lake Oroville storage reached its maximum capacity of 3,537,000 acre-feet for the second time since impoundment started in 1967. Minimum storage during the year was 2,680,079 acre-feet on November 2. The maximum rate of inflow was 66,000 cubic feet per second on November 11.

Releases under prior rights to Sutter Butte Canal, PG&E Lateral, Western Canal, Richvale Canal, and Palermo Canal totaled 770,000 acre-feet. The peak irrigation release reached 3,050 cubic feet per second on May 4. Releases to the Feather River totaled 4,502,000 acre-feet. The maximum rate of river release was 46,000 cubic feet per second on January 17.

FIELD DIVISION



Water temperatures of releases met requirements of the Feather River Fish Hatchery and downstream irrigation. The surface water warmed to a high of 76 degrees Fahrenheit on July 31.

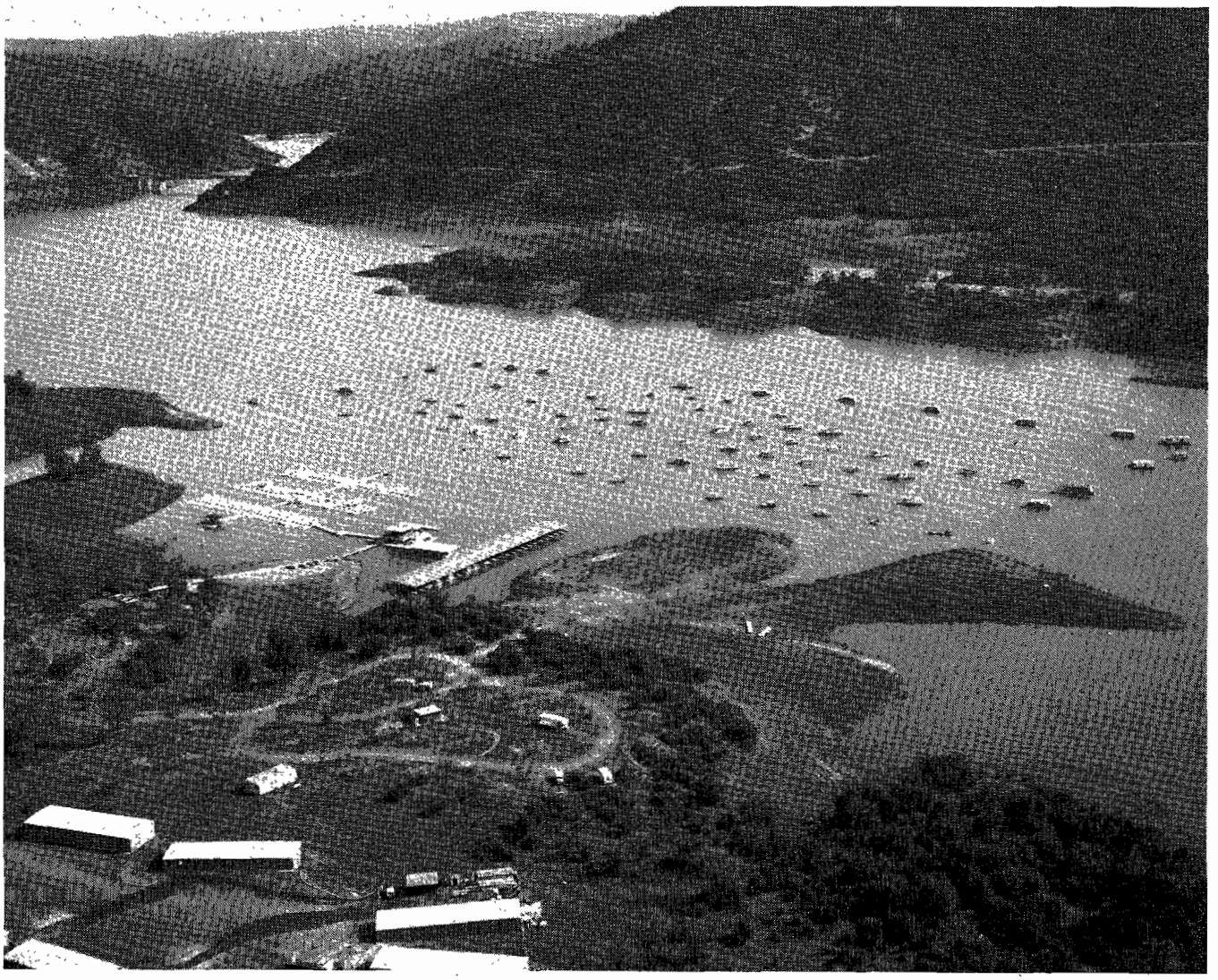
Recreation use during 1973 within the Oroville Field Division totaled 1,128,100 recreation days (up 23 percent over recreation use during 1972): 148,800 recreation days at Frenchman Lake; 295,900 recreation days at Lake Davis; 122,800 recreation days at Antelope Lake; and 560,600 recreation days at Lake Oroville and the Thermalito Facilities—the latter figure including 47,300 recreation days at the Oroville Wildlife Area (located at the site where material for Oroville Dam embankment was excavated).

During 1973, the Department of Fish and Game planted 49,500 fingerling Rainbow trout in Frenchman Lake; 779,000 fingerling Rainbow, 9,000 fingerling Eastern Brook, and 30,000 fingerling Lahontan Cutthroat trout in Lake Davis; and 239,000 fingerling Rainbow and 9,000 fingerling Eastern Brook trout in

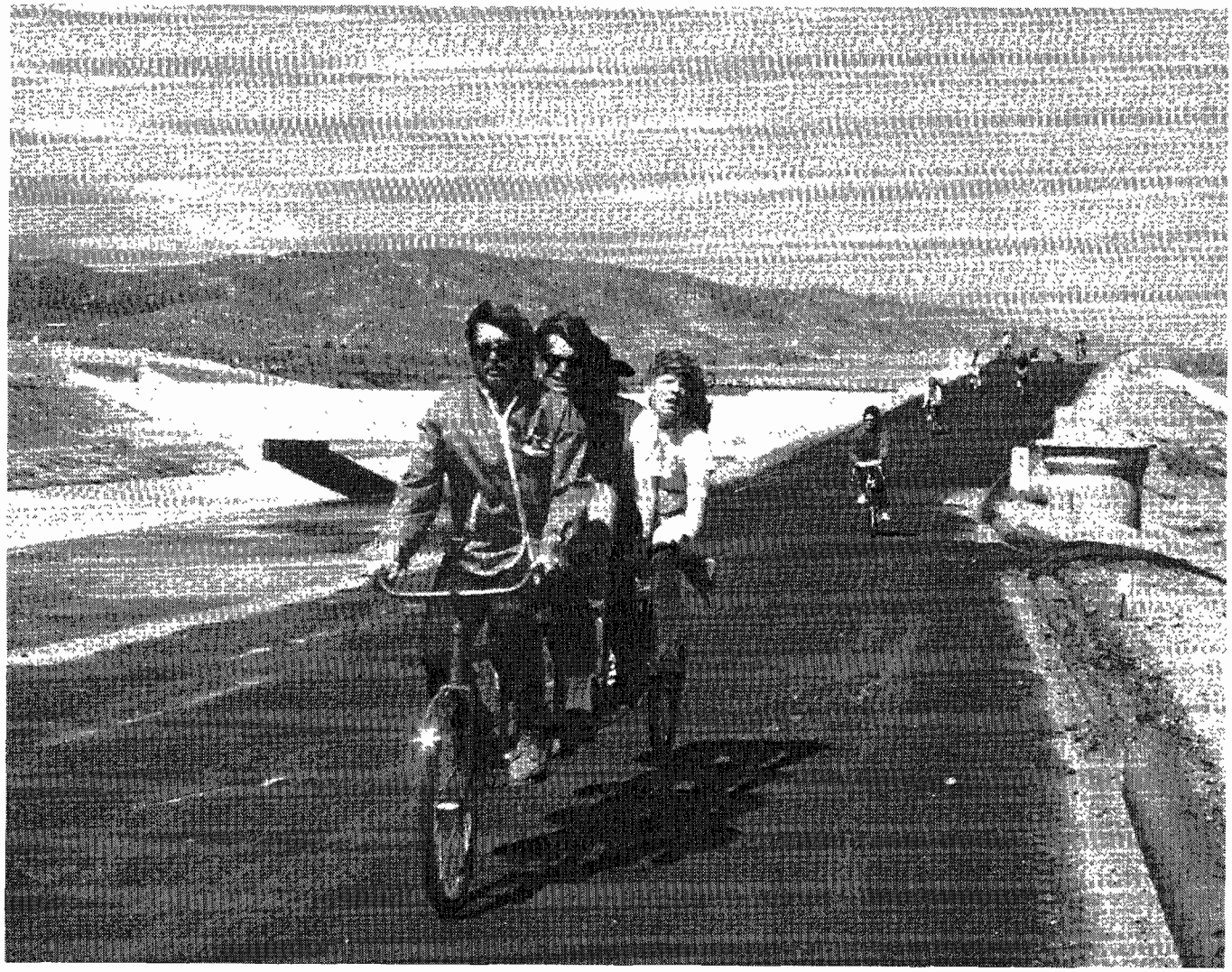
Antelope Lake. Oroville Lake was planted with 31,000 catchable-sized Brown and 54,000 subcatchable-sized Pit River Rainbow trout, 67,000 catchable-sized Silver salmon, 4,000 catchable-sized Eagle Lake trout, and 275,000 fingerling Kokanee salmon.

During the 1973 operational year, the Feather River Fish Hatchery had a total run of 8,682 adult salmon and 1,134 adult steelhead from the Feather River. The return of spring- and fall-run King salmon was the largest number of fish since the Hatchery started operations in 1967. On hand at the end of the year were 320 domestic steelhead broodfish. From these adults, a total of approximately 19,000,000 salmon and 2,000,000 steelhead eggs were taken—exceeding the Hatchery's design capacity of 18,000,000 eggs.

Hatchery production and plantings in 1973 amounted to 5,253,000 fingerling and 900,000 yearling King salmon, weighing a total of 158,000 pounds, and 970,000 fingerling and 211,620 yearlings and larger steelhead, weighing a total of 50,500 pounds. Losses of salmon from Sacramento River Chinook Disease and of steelhead from Ceratomyxa were very low in 1973 due to holding the salmon in warmer water for a period of time and the steelhead in ultraviolet-treated water.



Lake Oroville-Kelly Ridge Marina
DWR 4443-7



California Aqueduct Bikeway in Antelope Valley
DWR 4292-58

Delta Field Division

Project facilities within the Delta Field Division are shown in Figure 13.

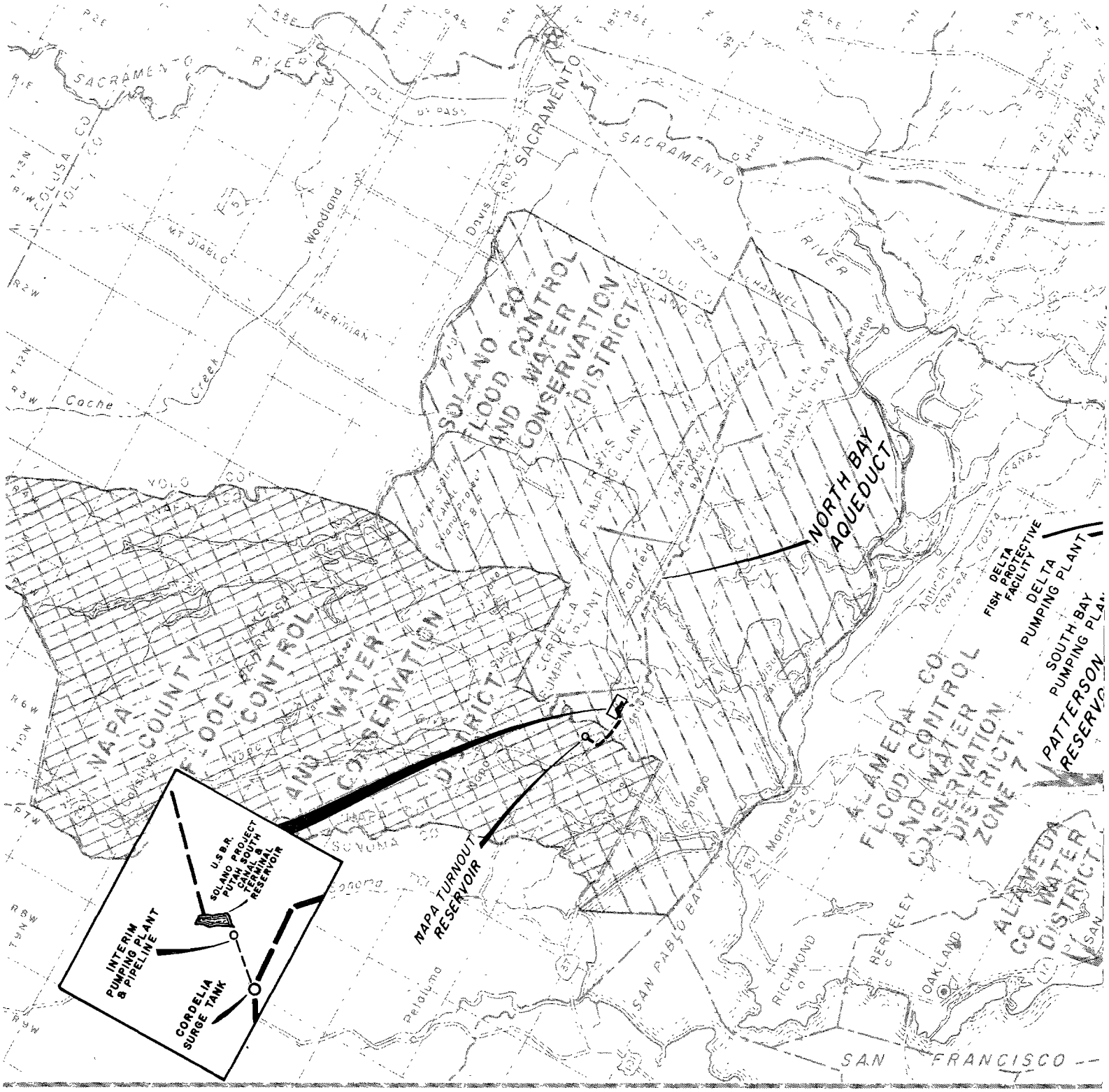
Data from the monitoring programs conducted by the Bureau of Reclamation and the Department during 1973 indicated that the quality of water in the Sacramento-San Joaquin Delta was better than that required under the November 19, 1965 Criteria (see page 62, Bulletin 132-67).

Water storage in Lake Del Valle on January 1, 1973, was 27,713 acre-feet. Local inflow raised the storage level to a maximum of 40,140 acre-feet on May 3 for summer recreation. During the fall, water deliveries from the Lake reduced the storage to a minimum of 25,272 acre-feet on November 4. Local inflow raised the storage level to 32,896 acre-feet by December 31.

During 1973, facilities within the Delta Field Division received a total recreation use of 230,300 recreation days (up 22 percent over recreation use during 1972): 188,400 recreation days at Lake Del Valle; 2,800 recreation days at Clifton Court Forebay; 1,600 recreation days at Cottonwood Road Fishing Access Site; 1,500 recreation days at Niels Hansen Fishing Access Site; 2,500 recreation days on the California Aqueduct Bikeway; and 33,500 recreation days along the walk-in fishing portion of the California Aqueduct.

The 1973 fall migration of salmon up the San Joaquin River was again aided by a temporary rock barrier installed the last week in September at the head of Old River. In accordance with a March 10, 1969 memorandum of understanding (see page 6, Bulletin 132-70), the annual installation of the barrier by the Department is an interim Delta fish protection measure which will be unnecessary after the Peripheral Canal is constructed. The barrier aids salmon by forcing more water to flow down the San Joaquin River

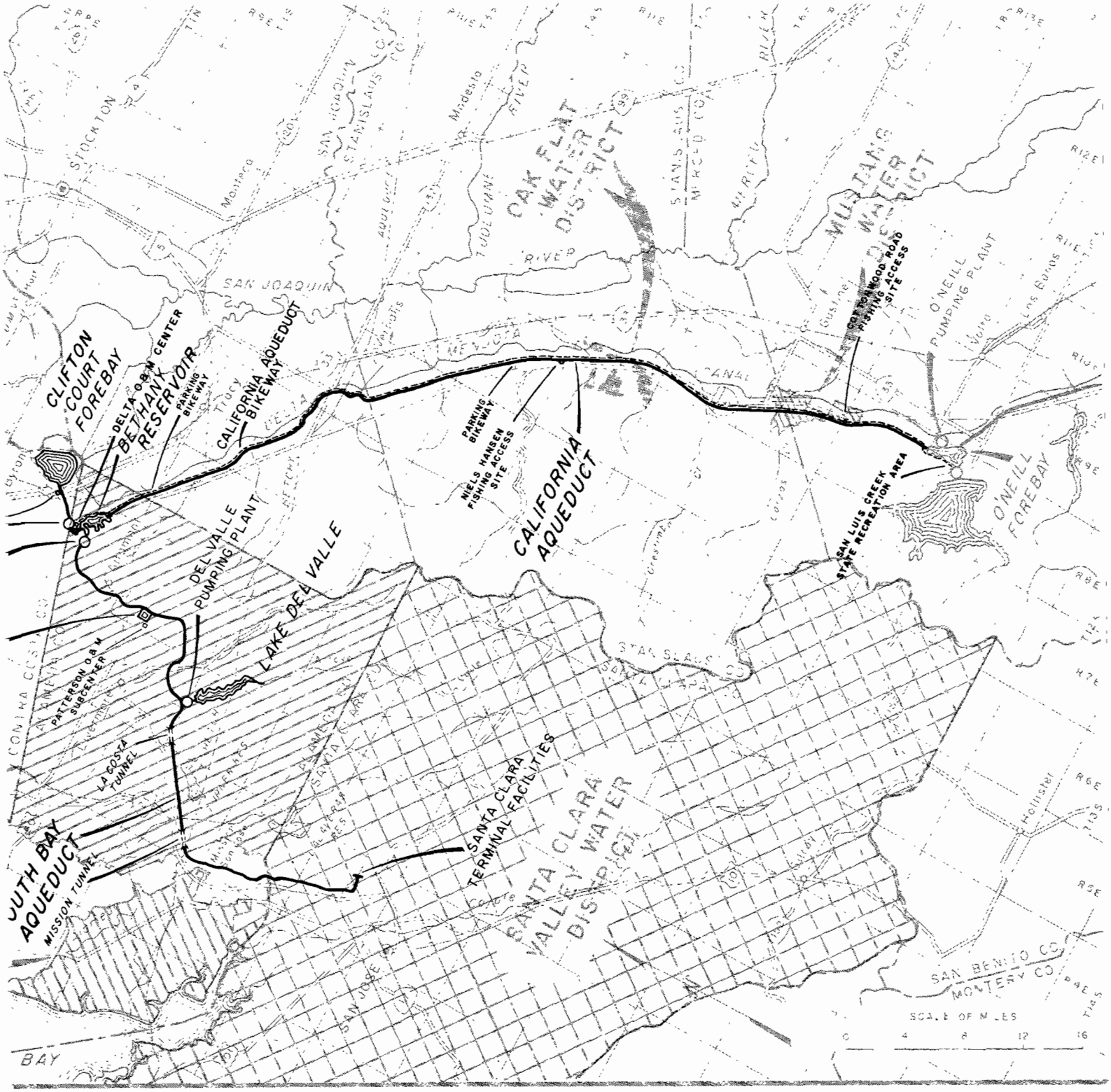
Figure 13: DELTA



to Stockton. (During low flows, a pollution block that forms near Stockton effectively prevents upriver migration.)

During 1973, approximately 14,800,000 fish were captured at the Delta Fish Protective Facility. The most abundant species was Striped bass (10,876,000), followed by White catfish (880,000) and Threadfin shad (586,000).

Project operations during June and July included conducting a fish test in the Delta. The test consisted of controlling the Central Valley Project-State Water Project pumping from the Delta to 7,000 cubic feet per second. [By Order 73-21, the State Water Resources Control Board, at the joint request of the Department and the Department of Fish and Game, suspended Condition 15 of D-1275 (see page 62, Bulletin 132-68) during 1973 for the purpose of permitting the test.] The test, which was carried out in cooperation with the Bureau of Reclamation, the Bureau of Sport Fisheries, and the Department of Fish

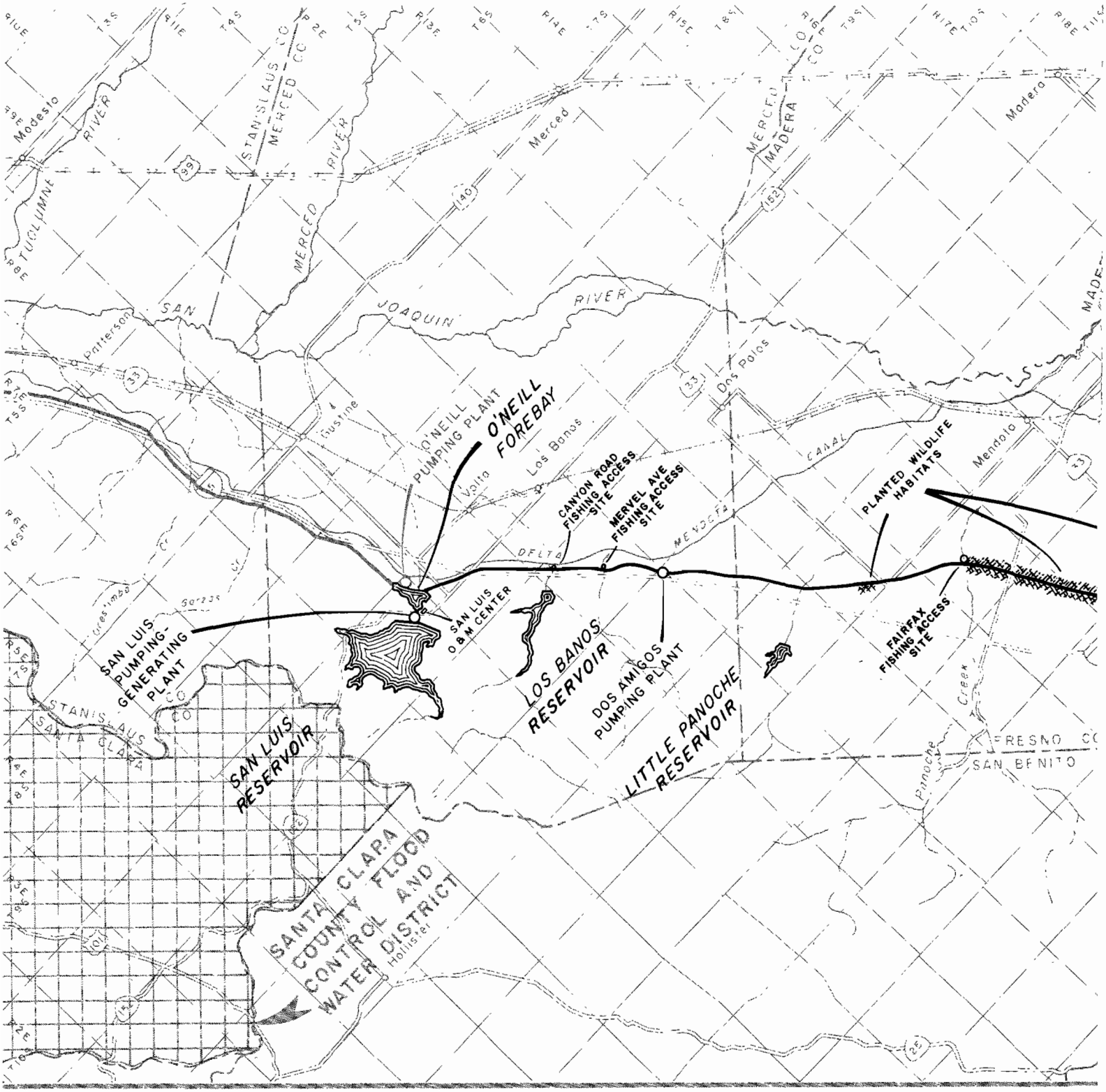


and Game, is an attempt to determine the effects of export pumping and Delta outflow on the survival of Striped bass larvae in the Delta. Plans are that the test will be continued in 1974.

Lake Del Valle was selected by the Department of Fish and Game for a reservoir management research study in 1973. The Department investigated the comparative value of Threadfin shad and Mississippi silversides as forage species for game fish. Extensive fish sampling operations were conducted throughout the year. Both forage species were utilized in the diet of Largemouth bass and Rainbow trout. Lake Del Valle supports the largest crop of Largemouth bass in the San Francisco Bay area.

Lake Del Valle is included in the Department of Fish and Game's catchable trout stocking program under a cooperative agreement with the East Bay Regional Park District. In 1973, the Department of Fish and Game planted 45,700 catchable Rainbow trout in the Lake and the District, 46,300.

Figure 14: SAN LUIS



San Luis Field Division

Project facilities within the San Luis Field Division are shown in Figure 14.

On January 1, 1973, storage in the San Luis Reservoir was 1,932,426 acre-feet. Water pumped into the Reservoir during 1973 totaled 518,565 acre-feet; water released to O'Neill Forebay amounted to 431,942 acre-feet. Evaporation, seepage, and other losses totaled 34,760 acre-feet. On December 31, 1973, storage in the Reservoir was 1,984,287 acre-feet—1,041,941 acre-feet of which was state project water and the remainder, federal project water.

On January 1, 1973, storage in Los Banos and Little Panoche Reservoirs was 18,227 and 331 acre-feet, respectively. On December 31, 1973, storage was 20,750 acre-feet and 291 acre-feet, respectively.

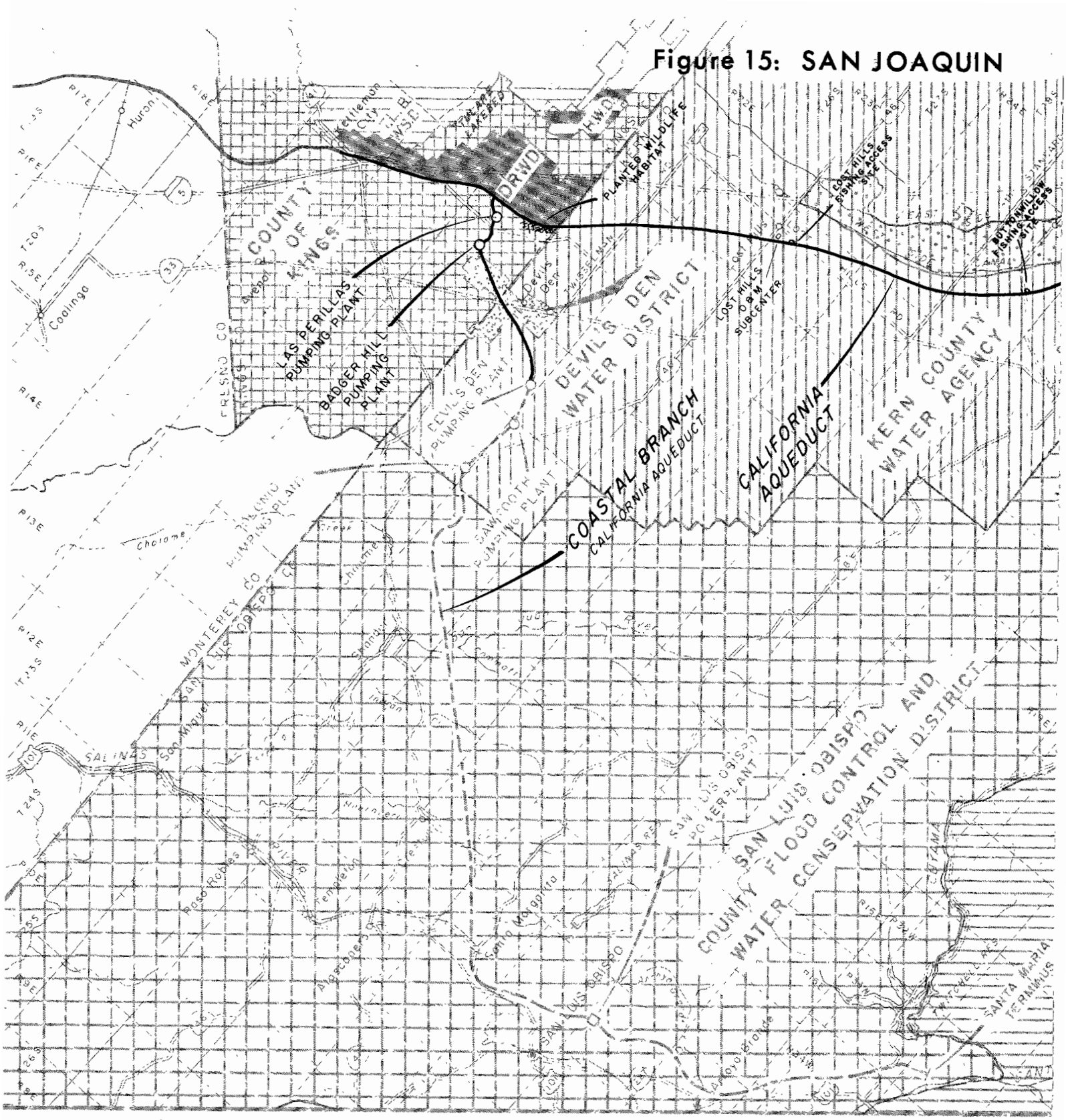
During 1973, 845,774 acre-feet were delivered to customers of the federal Central Valley Project from the San Luis Division. Deliveries to federal custom-

FIELD DIVISION

ers were made from 142 turnouts (29 permanent and 113 temporary).

Facilities in the San Luis Field Division received 366,900 recreation days of use during 1973 (down 34 percent as compared with 1972 use): 361,800 recreation days at San Luis Reservoir, O'Neill Forebay, and Los B nos Reservoir; 700 recreation days at Canyon Road Fishing Access Site; 600 recreation days at Mervel Avenue Fishing Access Site; 1,700 recreation days at Three Rocks Fishing Access Site; 500 recreation days at Fairfax Fishing Access Site; and 1,600 recreation days for "walk-in" fishing along the Aqueduct.

Through cooperative agreement with the Department and the Bureau of Reclamation, the Department of Fish and Game is developing wildlife habitats along the California Aqueduct right-of-way. During 1973, the Department of Fish and Game planted shrub and tree cover along 25 miles of right-of-way and on three surplus parcels. Wildlife counts made during 1973 to evaluate plantings in previous years indicate substantial increases of wildlife populations as compared with unplanted areas.



San Joaquin Field Division

Project facilities within the San Joaquin Field Division are shown in Figure 15.

During 1973, fishing access sites in the San Joaquin Field Division received 40,500 recreation days of use (up 30 percent over 1972 use): 14,600 recreation days at Lost Hills; 17,300 recreation days at Buttonwillow; 8,200 recreation days at Cadet Road; and 400 recreation days at Kettleman City.

FIELD DIVISION

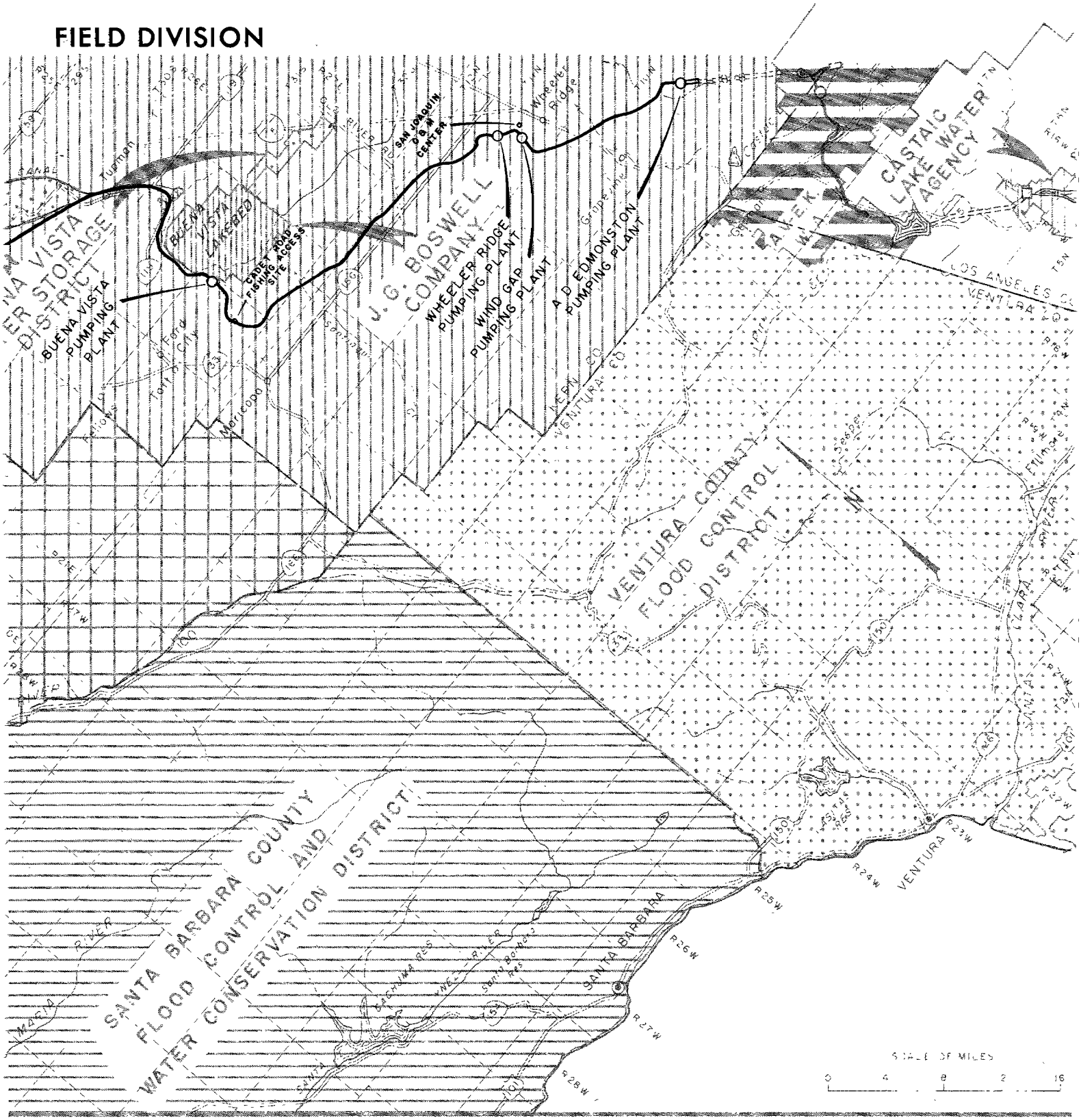
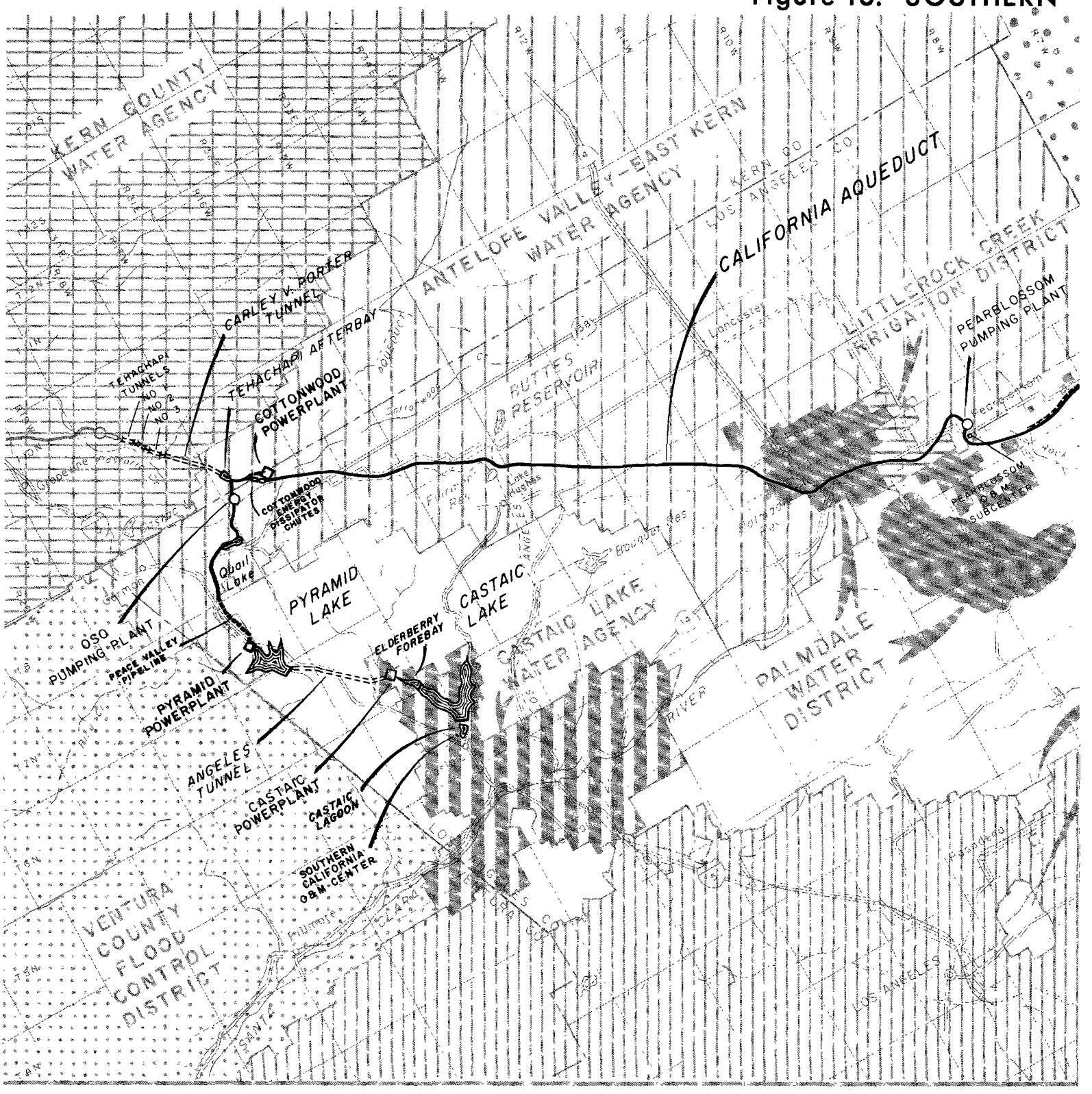


Figure 16: SOUTHERN

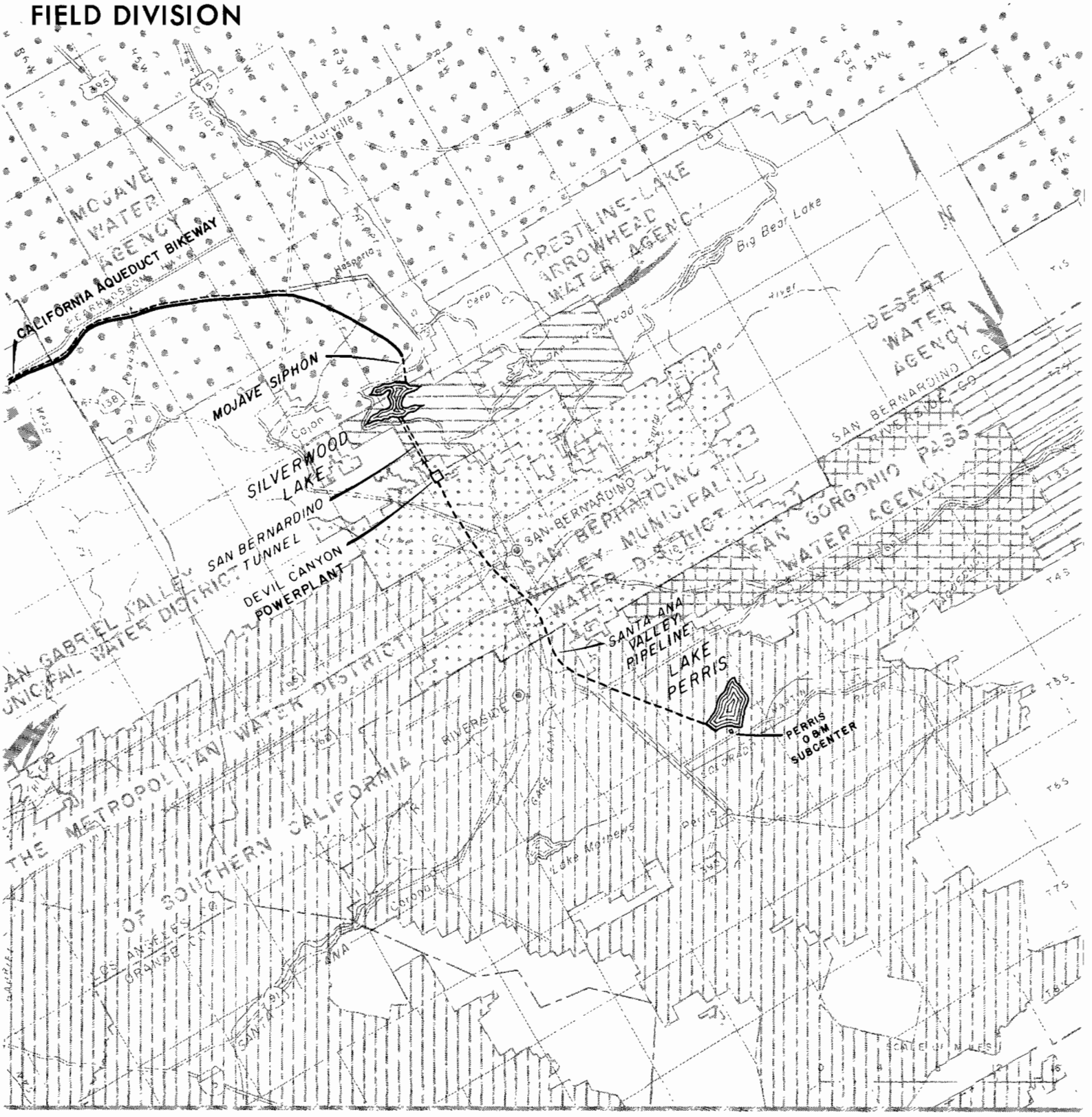


Southern Field Division

Project facilities within the Southern Field Division are shown in Figure 16.

By the end of 1973, all major facilities in the Southern Field Division were operational except Peace Valley Pipeline and Pyramid Powerplant on the West Branch and Cottonwood Powerplant and Buttes Reservoir on the East Branch (all scheduled to be completed in the 1980s).

Operation of the first of six 200-megawatt units of Castaic Powerplant started on October 3,1973 by the City of Los Angeles Department of Water and Power. Built as a cooperative venture of the City and the Department on the West Branch, the City will supply the State Water Project power equivalent in value to what would have been generated in the Department's originally planned power plant (see



page 12, Bulletin 132-67). When the last unit is installed in 1978, six pumping-generating units and a 50-megawatt pump-starting unit will generate 1,250 megawatts of power during peak electrical demand periods—the largest capacity hydroelectric facility in the State. (The pump-starting unit began operation in January 1972 with first delivery of water to Castaic Lake.)

In April 1973, the first project water was delivered to Lake Perris, for fisheries enhancement. At the end of the year, reservoir storage at Pyramid, Castaic, Silverwood, and Perris was 87,765; 89,904; 68,530; and 40,617 acre-feet, respectively.

Recreation activity using newly completed permanent facilities began in 1973 at Silverwood Lake. The Lake filled to its capacity for the first time in 1973. On June 9, the Department of Parks and Recreation opened permanent day-use facilities in the Sawpit Canyon launching ramp, 241 picnic units, a swimming beach, and a major concessionaire develop-

ment. During the first weekend of operation, the development received more than 6,000 visitors—nearly 550 boats were launched.

(More than 50,000 people visited Lake Perris during the first two weeks after the opening to recreation on April 6, 1974. Approximately 6,000 recreationists used the development for the first day.)

Recreation use at facilities within the Southern Field Division totaled 736,200 recreation days during 1973 (up 158 percent over 1972 use): 358,200 recreation days at Castaic Lake, 376,900 recreation days at Silverwood Lake, and 1,100 recreation days along the 28-mile portion of the Bikeway open south of Pearblossom Pumping Plant.

During 1973, Pyramid Lake and Lake Perris received initial plantings of fingerling fish by the Department of Fish and Game. Pyramid was stocked with 25,000 Rainbow trout and 50,000 Channel catfish. Perris received 50,000 Rainbow trout and 40,000 Channel catfish.

Castaic Lake and Lake Silverwood were added to the Department of Fish and Game's regular catching-size trout program. Castaic received 110,360 Rainbow trout while Silverwood was stocked with 142,550 Rainbow trout.

A five-year wildlife enhancement program along the East Branch of the California Aqueduct was initiated during the year. Over 300 acres of wildlife habitat were developed near the bifurcation of the West Branch by planting tree and shrub species that are beneficial as food and cover sources for wildlife.

Several operational problems occurred during 1973 concerning new facilities in the Southern Field Division. The more notable of these problems are described in the following paragraphs:

Beginning about 11:30 p.m. on May 29, and continuing until about 7:30 a.m. on May 30, an overflow of some 690 acre-feet occurred along both sides of Quail Canal between Oso Pumping Plant and Quail Lake Inlet Structure. The overflow was caused by a malfunction in the automatic controller of the radial gate at Quail Lake Inlet Control Structure. The gate opened belatedly and subsequently closed while the water level was still rising. (A control system was being installed in Oso Pumping Plant at the time, including a high-water alarm for Quail Canal.)

Several measures were taken to prevent such an occurrence in the future. As a result of the circumstances causing the overflow, the Department is studying the entire Project to determine what additional safeguards may be required from both functional and operational points of view.

Near the end of August, blue-green algae in the Castaic inlet arm of Castaic Lake died, the decaying algae created an unacceptable odor in water delivered from Castaic Lake. At the request of The Metropolitan Water District of Southern California, deliveries from the Lake were stopped on September 11, 1973.

Decaying algae odor is not an unusual problem at new reservoirs. Contributing factors at Castaic were that (1) deliveries had not been made for some time to the Lake because of repair work on the upstream Aqueduct and (2) storage was being maintained at a low level to accommodate construction of Elderberry Forebay embankment by the City of Los Angeles Department of Water and Power.

Action to correct the situation at Castaic began immediately with a program of spot treatments of copper sulfate. The filling of Castaic Lake was accelerated to increase the depth of water to dilute algae concentrations. The problem was corrected and deliveries resumed to Metropolitan on September 27, 1973.

CHAPTER V. PROJECT FINANCING

As of December 31, 1973, over $2.2 billion had been expended by the Department for constructing the facilities of the State Water Project. These expenditures include costs of planning, design, financing, relocations, land acquisition, and operations during the construction period of each facility.

Estimates are that the Department's construction effort has now reached the two-thirds point for facilities contemplated when Californians approved the comprehensive Project by popular vote in 1960.

While completion of initial project facilities was celebrated during 1973, continuing construction will be required to satisfy growing demands under existing obligations. The Department's current assumptions concerning the costs of future facilities indicate that project construction expenditures eventually will total almost $3.4 billion, culminating in 1997 with completion of additional project conservation facilities. As compared with recent issues of the Bulletin 132 series, this long-range estimate includes allowances for the future costs of:

San Joaquin Drainage Facilities.

Pyramid Powerplant and Peace Valley Pipeline to permanently replace the interim Gorman Creek Improvement on the West Branch of the California Aqueduct.

Cottonwood Powerplant on the East Branch of the California Aqueduct.

Excluded from the above estimate are any potential financial costs to the Department for possible supplemental sources of pumping power now being studied—such as for participating in the proposed San Joaquin Nuclear Project (see Chapter I). Under current expectations, any such obligations in excess of other available funds would be financed by the sale of revenue bonds.

Also excluded from the above estimate are the costs of project-associated works which, though essential for realizing full project benefits, are financed and constructed by local and state public agencies other than the Department. Such associated works include:

- Distribution systems required to convey water from project aqueducts to users, financed and constructed by water contractors and their member units. (The costs of such works are estimated to total $2.6 billion, $1.4 billion of which had been incurred as of the end of 1973.)
- Onshore recreation developments at project facilities, financed and constructed by a variety of state and local agencies. (Almost $0.1 billion had been expended for such developments through 1973, with a like amount expected in the future.)

On the other hand, the Department's capital expenditures for the Project include requirements other than those for construction, such as:

- Disbursements under the Davis-Grunsky Act Program.
- Special capital requirements under revenue bond financing.
- Annual principal and interest payments for additional water conservation storage capacity assumed to be eventually constructed by the United States. (Such additional storage would be required to satisfy water delivery commitments after 1995 under current assumptions.)

This chapter presents a detailed analysis showing a financially viable State Water Project, producing revenues which are sufficient to pay all annual costs of operations and maintenance, to meet all repayment obligations on funds used to finance construction, and, eventually, to produce financing for additions to Project that may be authorized in the future.

The financial analysis is shown in Table 6, in two spreads. Actual and projected capital expenditures and sources of financing are shown in Spread 1 (and, graphically, on Figure 17). Actual and anticipated revenues and the application thereof to pay project operating expenses and to repay capital financing are shown in Spread 2 (and, graphically, on Figure 18).

The financial analysis is based on the major assumption that the Department would sell revenue bonds in connection with the construction of certain future California Aqueduct facilities—with proceeds sufficient to fulfill the currently estimated need for supplemental financing. (Supplemental financing refers to funds in excess of those on hand; anticipated under current agreements, legislative enactments, and authorized bond issues; and assumed to be provided under future agreements with the United States in connection with the Delta facilities and additional project conservation facilities.) The analysis indicates a total need for supplemental construction funds of $37.1 million occurring during the two-year period 1981 through 1982.

The Department now expects that additional funds more than covering the above need for supplemental construction funds would be supplied by future sale of revenue bonds associated with Pyramid Powerplant on the West Branch, California Aqueduct. Preliminary estimates are that the generation from proposed Pyramid Powerplant could support an issue providing additional construction funds of about $122 million. While the need for such additional moneys is still several years in the future, the Department is currently studying several alternative bases for such bonds to determine the optimum approach—not only to provide funds for construction of Pyramid Powerplant but also for participation in the San Joaquin Nuclear Project or other cooperative power development.

Figure 17: FINANCING OF CONSTRUCTION EXPENDITURES 1952-1985

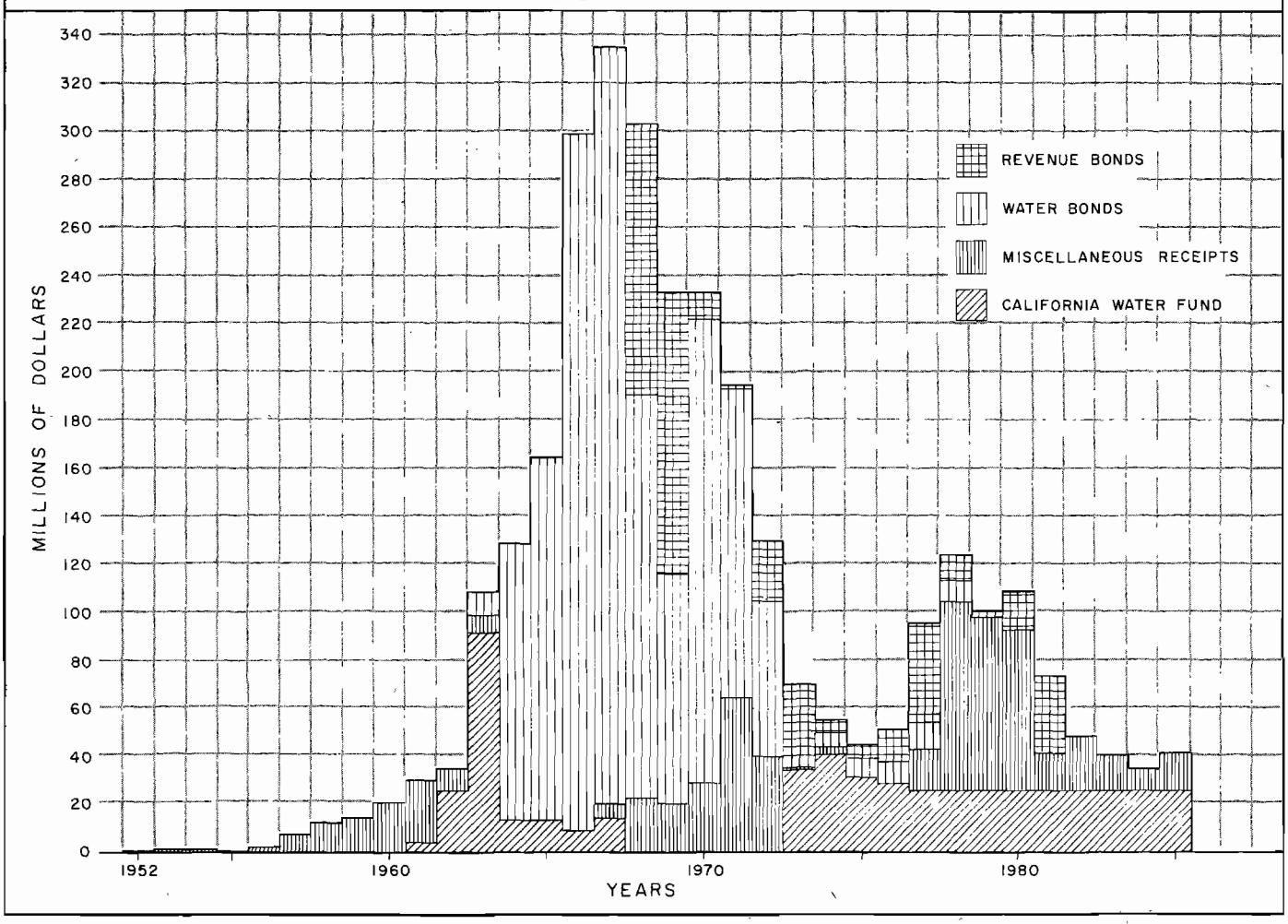
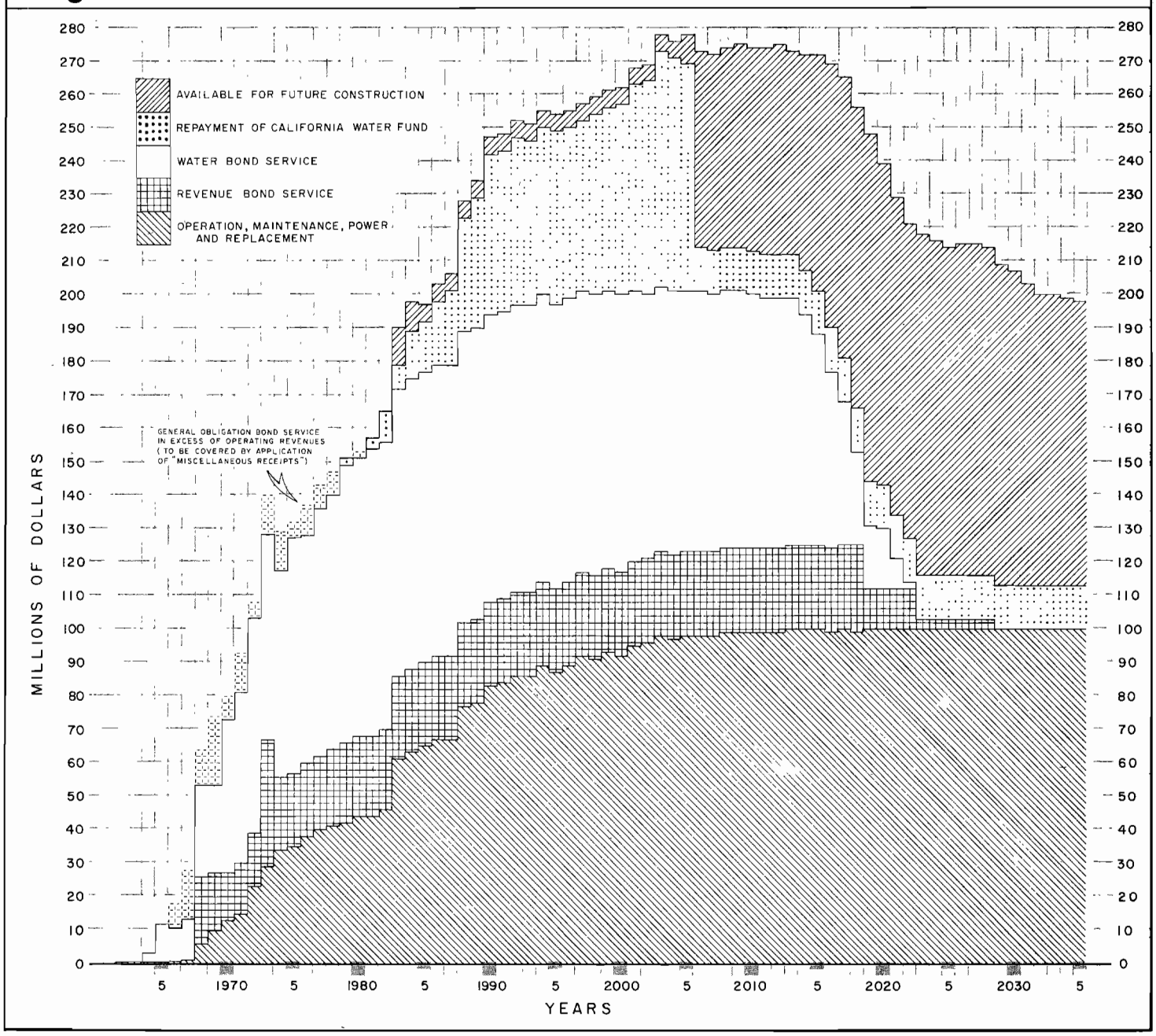


Figure 18: APPLICATION OF PROJECT OPERATING REVENUES



Future conditions undoubtedly will cause changes in the financial analysis set forth in Table 6. For this reason, basic assumptions are comprehensively reviewed and the financial analysis updated periodically. Notable contingencies include:

- A delay beyond the current 1978 target date for active financial participation by the United States in the construction of joint-use Delta Facilities.
- A reduction of the scope of future flood control developments in Northern California by the United States, with less possibilities of the State contracting for conservation storage therein as currently assumed for required additional project conservation facilities.
- Deviation of actual rates of future construction price inflation from those currently assumed for cost estimates.
- Changes in annual state tideland oil and gas revenues to be available to the Project from amounts now provided for by statutes.
- Rescheduling of currently planned construction for future facilities.

TABLE 6: PROJECT FINANCIAL

(in thousands

LINE NO	LINE ITEM	CALENDAR 1952-1973	1974	1975	1976	1977	1978	1979
								CAPITAL
	PROJECT CONSTRUCTION EXPENDITURES							
1.	Initial Project Facilities	2,159,848	0	0	0	0	0	0
2.	Abbey Bridge and Dixie Refuge Dams and Reservoirs	758	0	0	31	188	785	358
3.	Phase II of the North Bay Aqueduct	4,159	294	385	719	1,055	5,695	7,972
4.	Delta Facilities	19,758	4,694	13,699	31,410	69,829	75,028	48,391
	California Aqueduct:							
5.	Final Four Units at Delta Pumping Plant	2	52	271	737	1,409	2,362	2,474
6.	San Luis Canal Modifications	0	100	50	0	0	0	414
7.	Final Three Units at A. D. Edmonston Pumping Plant	0	0	0	0	0	69	748
8.	Staged Units and Pipelines South of A. D. Edmonston	411	6,538	7,896	1,226	12	72	98
9.	Buttes Dam and Reservoir	50	0	0	0	0	0	0
10.	Final Three Units At Las Perillas and Badger Hill	0	0	0	0	749	18	123
11.	Peace Valley Pipeline and Pyramid Powerplant	1,723	25	601	1,446	8,192	20,790	27,457
12.	Cottonwood Powerplant	2,365	0	0	0	115	332	1,823
13.	Phase II of the Coastal Branch	0	0	0	0	1,578	3,600	7,813
14.	General Costs	0	33,150	10,700	3,834	1,369	1,159	2,956
15.	SUBTOTAL, California Aqueduct	4,551	39,865	19,518	7,243	13,424	28,402	43,906
16.	Miscellaneous Project Costs	0	4,306	2,651	833	582	377	262
17.	Additional Conservation Facilities, Conveyance Works	7,751	252	193	199	204	210	216
18.	San Joaquin Drainage Facilities	6,494	113	144	149	153	158	163
19.	TOTAL PROJECT CONSTRUCTION EXPENDITURES	2,203,319	49,524	36,590	40,584	85,435	110,655	101,268
	OTHER CAPITAL REQUIREMENTS							
20.	Davis-Grunsky Act Program	86,751	5,690	8,531	10,284	10,193	8,533	18
21.	Additional Conservation Facilities, Storage Works	0	0	0	0	0	0	0
22.	Special Capital Requirements under Revenue Bond Financing	39,122	0	0	0	0	3,700	0
23.	TOTAL OTHER CAPITAL REQUIREMENTS	125,873	5,690	8,531	10,284	10,193	12,233	18
24.	TOTAL CAPITAL EXPENDITURES	2,329,192	55,214	45,121	50,868	95,628	122,888	101,286
								FINANCING OF
25.	APPLICATION OF CALIFORNIA WATER FUND MONEYS	210,311	42,582	31,417	27,640	25,750	25,750	25,750
	APPLICATION OF PROCEEDS FROM SALE OF BONDS:							
26.	Oroville Revenue Bonds	244,995	0	0	0	0	0	0
27.	Devil Canyon-Castaic Revenue Bonds	52,382	5,044	4,747	12,745	42,464	6,500	4,000
28.	Supplemental Revenue Bonds	0	0	0	0	0	3,700	0
29.	Water Bonds, Davis-Grunsky Program	86,751	5,690	8,531	10,284	10,193	8,533	18
30.	Water Bonds, Additional Facilities	7,261	252	193	199	204	210	216
31.	Water Bonds, Initial Project Facilities	1,443,753	0	0	0	0	0	0
32.	TOTAL, Application of Proceeds from Sale of Bonds	1,835,142	10,986	13,471	23,228	52,861	18,943	4,234
33.	APPLICATION OF MISCELLANEOUS RECEIPTS TO CONSTRUCTION	283,739	1,646	233	0	17,017	78,195	71,302
34.	TOTAL FINANCING OF CAPITAL EXPENDITURES	2,329,192	55,214	45,121	50,868	95,628	122,888	101,286

ANALYSIS, DECEMBER 31, 1973

of dollars)

YEARS											TOTAL	
1980	1981	1982	1983	1984	1985	1986-1995	1996-2005	2006-2015	2016-2025	2026-2035	1952-2035	LINE NO.
EXPENDITURES												
0	0	0	0	0	0	0	0	0	0	0	2,159,848	1.
6,315	4,522	5,796	3,850	0	0	0	0	0	0	0	22,603	2.
639	75	23	19	1	0	0	0	0	0	0	21,036	3.
15,485	12,898	20,571	23,958	12,445	4,421	0	0	0	0	0	352,587	4.
1,133	837	1,600	2,682	2,785	972	0	0	0	0	0	17,316	5.
1,239	2,436	2,065	1,558	6,427	4,513	0	0	0	0	0	18,802	6.
2,806	5,617	7,878	5,001	1,923	0	0	0	0	0	0	24,042	7.
1,342	2,371	1,453	345	0	0	0	0	0	0	0	21,764	8.
0	0	616	1,635	7,217	8,668	0	0	0	0	0	18,186	9.
376	466	87	0	0	254	0	0	0	0	0	2,073	10.
25,218	6,426	2,127	0	0	0	0	0	0	0	0	94,005	11.
3,506	2,461	1,007	0	0	0	0	0	0	0	0	11,609	12.
39,725	33,796	3,613	436	157	0	0	0	0	0	0	90,718	13.
2,988	638	85	94	71	46	0	0	0	0	0	57,090	14.
78,333	55,048	20,531	11,751	18,580	14,453	0	0	0	0	0	355,605	15.
329	280	278	220	161	120	0	0	0	0	0	10,399	16.
225	529	798	799	3,688	3,427	263,372	53,106	0	0	0	334,969	17.
168	170	170	170	170	20,050	80,349	0	0	0	0	108,621	18.
101,494	73,522	48,167	40,767	35,045	42,471	343,721	53,106	0	0	0	3,365,668	19.
0	0	0	0	0	0	0	0	0	0	0	130,000	20.
0	0	0	0	0	0	0	90,554	127,500	127,500	127,500	473,054	21.
6,066	0	0	0	0	0	0	0	0	0	0	48,888	22.
6,066	0	0	0	0	0	0	90,554	127,500	127,500	127,500	651,942	23.
107,560	73,522	48,167	40,767	35,045	42,471	343,721	143,660	127,500	127,500	127,500	4,017,610	24.
CAPITAL EXPENDITURES												
27,660	25,750	28,924	34,489	33,072	40,031	343,721	143,660	127,500	127,500	127,500	1,449,007	25.
0	0	0	0	0	0	0	0	0	0	0	244,995	26.
11,283	0	0	0	0	0	0	0	0	0	0	139,165	27.
0	32,991	4,102	0	0	0	0	0	0	0	0	40,793	28.
0	0	0	0	0	0	0	0	0	0	0	130,000	29.
225	529	0	0	0	0	0	0	0	0	0	9,289	30.
0	0	0	0	0	0	0	0	0	0	0	1,443,753	31.
11,508	33,520	4,102	0	0	0	0	0	0	0	0	2,007,995	32.
68,392	14,252	15,141	6,278	1,973	2,440	0	0	0	0	0	560,608	33.
107,560	73,522	48,167	40,767	35,045	42,471	343,721	143,660	127,500	127,500	127,500	4,017,610	34.

TABLE 6: PROJECT FINANCIAL

(in thousands

LINE NO.	LINE ITEM	1952-1973	1974	1975	1976	1977	1978	1979
								CALENDAR
						MISCELLANEOUS RECEIPTS AND		
	MISCELLANEOUS RECEIPTS							
35.	Federal Payments for Project Capital Expenditures	74,636	622	105	90	0	59,981	46,677
36.	Appropriations Prior to the Burns-Porter Act	98,975	0	0	0	0	0	0
37.	Appropriations for Capital Costs Allocated to Recreation	40,000	5,000	5,000	5,000	5,000	5,000	5,000
38.	Appropriations Under SB 261 (1968)	82,661	0	0	0	0	0	0
39.	City of Los Angeles Payments for Castaic Power Development	33,107	4,321	0	0	0	0	0
40.	Water Contractor Advances for Construction of Requested Works	70,370	1,363	17	13	0	48	12
41.	Investment Earnings on Unexpended Miscellaneous Receipts	41,913	9,000	9,400	8,600	7,500	6,300	4,400
42.	TOTAL MISCELLANEOUS RECEIPTS	441,662	20,306	14,522	13,703	12,500	71,329	56,089
	PROJECT OPERATING REVENUES							
43.	Payments under Oroville Power Sale Contract	73,837	16,150	16,150	18,859	16,228	16,331	16,559
44.	Payments under Devil Canyon-Castaic Contract	8,178	8,311	8,328	8,328	8,328	8,328	8,328
45.	Payments (Assumed) for Supplemental Revenue Bonds	0	0	0	0	0	1,149	2,481
46.	Payments under Long-term Water Supply Contracts	332,897	77,136	97,008	97,460	104,216	107,900	116,379
47.	Federal Payments for Project Operating Costs	7,824	1,926	1,944	1,950	1,945	1,943	1,946
48.	Appropriations for Operating Costs Allocated to Recreation	1,808	4,372	1,635	1,728	1,706	1,704	1,715
49.	Payments under Davis-Grunsky Loan Repayment Contracts	1,119	348	517	702	1,010	1,257	1,474
50.	Payments (Assumed) for San Joaquin Drainage Facilities	0	0	0	0	0	0	0
51.	Miscellaneous Revenues	91,057	2,028	2,029	2,030	2,030	3,179	4,153
52.	TOTAL PROJECT OPERATING REVENUES	516,720	110,271	127,611	131,057	135,463	141,791	153,035
53.	TOTAL MISCELLANEOUS RECEIPTS AND PROJECT OPERATING REVENUES	958,382	130,577	142,133	144,760	147,963	213,120	209,124
					APPLICATION OF MISCELLANEOUS RECEIPTS			
54.	CARRYOVER (+) AND APPLICATION (-) OF RECEIPTS AND REVENUES HELD TEMPORARILY IN RESERVE	54,438	6,241	9,556	4,450	-11,970	-13,709	-15,213
55.	PROJECT OPERATING COSTS	98,690	33,675	35,113	38,095	39,831	41,137	41,920
56.	DEPOSITS TO SPECIAL RESERVES UNDER REVENUE BOND FINANCING	38,883	281	282	2,994	367	1,619	1,853
	PAYMENTS OF BOND SERVICE:							
	Bonds Sold Through December 31, 1973:							
57.	Interest Payments	478,842	84,334	89,967	89,652	89,208	88,629	87,913
58.	Principal Repayments	3,790	4,400	6,475	8,555	11,835	14,425	15,465
	Assumed Future Bond Sales:							
59.	Interest Payments	0	0	507	1,014	1,675	2,824	3,974
60.	Principal Repayments	0	0	0	0	0	0	0
61.	TOTAL BOND INTEREST PAYMENTS	478,842	84,334	90,474	90,666	90,883	91,453	91,887
62.	TOTAL BOND PRINCIPAL REPAYMENTS	3,790	4,400	6,475	8,555	11,835	14,425	15,465
63.	REPAYMENT OF THE CALIFORNIA WATER FUND	0	0	0	0	0	0	1,910
64.	APPLICATION OF MISCELLANEOUS RECEIPTS TO CONSTRUCTION	283,739	1,646	233	0	17,017	78,195	71,302
65.	SUBTOTAL, Repayment of Capital Financing	287,529	6,046	6,708	8,555	28,852	92,620	88,677
66.	RESERVATION FOR FUTURE CONSTRUCTION	0	0	0	0	0	0	0
67.	TOTAL APPLICATION OF MISCELLANEOUS RECEIPTS AND PROJECT OPERATING REVENUES	958,382	130,577	142,133	144,760	147,963	213,120	209,124

ANALYSIS, DECEMBER 31, 1973

of dollars)

YEARS 1980	1981	1982	1983	1984	1985	1986-1995	1996-2005	2006-2015	2016-2025	2026-2035	TOTAL 1952 2035	LINE NO
PROJECT OPERATING REVENUES												
30,265	5,862	9,722	11,979	6,222	2,211	0	0	0	0	0	248,372	35.
0	0	0	0	0	0	0	0	0	0	0	98,975	36.
5,000	5,000	5,000	5,000	5,000	5,000	50,000	50,000	50,000	50,000	50,000	350,000	37.
0	0	0	0	0	0	0	0	0	0	0	82,661	38.
0	0	0	0	0	0	0	0	0	0	0	37,428	39.
18	0	19	13	15	13	0	0	0	0	0	71,901	40.
3,500	1,700	400	400	200	100	0	0	0	0	0	93,413	41.
38,783	12,562	15,141	17,392	11,437	7,324	50,000	50,000	50,000	50,000	50,000	982,750	42.
16,492	16,150	16,150	16,531	29,459	23,076	176,654	164,745	161,500	172,438	185,413	1,152,722	43.
8,328	8,328	8,328	9,228	9,222	9,213	91,632	91,053	92,971	69,295	6,200	461,927	44.
2,481	2,481	2,481	2,481	2,481	2,481	26,569	26,913	26,634	27,243	8,378	134,253	45.
115,614	122,122	130,322	145,014	152,228	156,139	1,917,029	2,191,083	2,265,667	1,911,332	1,675,170	11,714,716	46.
2,480	2,483	2,484	2,484	2,479	2,753	27,482	27,488	27,490	27,490	27,490	172,081	47.
2,016	1,929	2,028	2,309	2,364	2,530	25,848	25,814	25,991	25,737	25,800	157,034	48.
1,559	1,581	1,726	1,908	2,335	2,336	22,830	22,107	18,787	13,042	3,283	97,921	49.
0	0	0	0	0	0	58,195	74,501	74,509	74,513	74,510	356,228	50.
2,030	2,030	2,030	2,030	2,030	2,030	300	300	300	300	300	120,186	51.
151,000	157,104	165,549	181,985	202,598	200,558	2,346,539	2,624,004	2,693,849	2,321,390	2,006,544	14,367,068	52.
189,783	169,666	180,690	199,377	214,035	207,882	2,396,539	2,674,004	2,743,849	2,371,390	2,056,544	15,349,818	53.
AND PROJECT OPERATING REVENUES												
-32,103	-1,690	0	0	0	0	0	0	0	0	0	0	54.
43,829	43,533	46,093	60,934	62,535	65,314	802,145	941,149	993,029	998,153	1,000,180	5,385,355	55.
636	296	299	2,159	13,612	7,571	18,433	7,138	4,949	1,784	0	103,156	56.
87,090	86,124	85,064	83,931	82,671	81,351	730,900	547,016	286,988	32,002	0	3,111,682	57.
17,965	20,070	21,380	23,665	25,105	26,050	329,270	478,660	682,450	244,600	0	1,934,160	58.
3,974	3,974	3,974	3,974	3,974	3,947	34,441	21,920	15,517	8,701	592	114,982	59.
0	0	0	0	420	865	20,646	18,638	9,300	16,725	7,241	73,835	60.
91,064	90,098	89,038	87,905	86,645	85,298	765,341	568,936	302,505	40,703	592	3,226,664	61.
17,965	20,070	21,380	23,665	25,525	26,915	349,916	497,298	691,750	261,325	7,241	2,007,995	62.
0	3,107	8,739	7,322	14,281	15,460	410,704	604,984	127,500	127,500	127,500	1,449,007	63.
68,392	14,252	15,141	6,278	1,973	2,440	0	0	0	0	0	560,608	64.
86,357	37,429	45,260	37,265	41,779	44,815	760,620	1,102,282	819,250	388,825	134,741	4,017,610	65.
0	0	0	11,114	9,464	4,884	50,000	54,499	624,116	941,925	921,031	2,617,033	66.
189,783	169,666	180,690	199,377	214,035	207,882	2,396,539	2,674,004	2,743,849	2,371,390	2,056,544	15,349,818	67.

Possible development of alternative sources of additional water not included in present plants.

- Need to expand the Project to serve areas not now contemplated.

Furthermore, the outcome of certain lawsuits now pending before the courts (see Chapter I) could impose requirements noticeably affecting project capital expenditures or anticipated project revenues.

The first contingency listed above undoubtedly would have the most significant impact on the indicated need for supplemental construction funds of $37.1 million occurring during the 1981 through 1982 period. If active federal participation in financing the Delta Facilities does not commence by the 1978 target date—and should no federal construction funds be forthcoming for the Facilities as assumed in the analysis—the indicated need for supplemental funds would increase to about $234 million, occurring during the 1978 through 1985 period. This need would be $112 million more than the estimated funding capability of Pyramid Revenue Bonds, but would not occur prior to 1981. In that eventuality, the Department anticipates that other contemplated construction schedules would be adjusted if additional funding were not available.

The following sections describe the individual line items of Table 6 and current assumptions related thereto.

Project Construction Expenditures

Actual and projected construction expenditures for each construction division of the Project are shown in Table 7—together with a preliminary allocation of such total expenditures among project purposes.

Estimates of future construction expenditures are based on prices and salaries prevailing on December 31, 1973, with the following percentages applied to allow for inflation:

Year	Percent Increase Per Annum	
	State Salaries	Construction Prices
1974	6	6
1975	4	5
1976	3	4
1977 thru 1980	3	3
After 1980	0	0

Land acquisition costs are assumed to escalate 7.25 percent per annum.

Described in the following sections are the Department's current assumptions concerning the costs of each facility of the future construction program as set forth in Table 6.

Line 1: Initial Project Facilities. Described in Chapter II is the December 31, 1973 status of each facility included in the initial construction program concluded in 1973. Estimated costs of remaining work on the initial project facilities, also described in Chapter II, are included in Lines 14 and 16, "California Aqueduct, General Costs" and "Miscellaneous Project Costs".

Line 2: Abbey Bridge and Dixie Refuge Dams and Reservoirs. For current purposes of cost scheduling, the Department assumes that the remaining recreation reservoirs to be constructed in the Upper Feather Area would be completed in 1981 and 1983, respectively. However, actual construction depends on the future growth of demands for water-oriented recreation in the area. Additional studies concerning the potential impact of Abbey Bridge continued during 1973. The studies were initiated by the Department in 1972 at the request of the Plumas County Board of Supervisors (see page 3, Bulletin 132-73). As of the end of 1973, a draft report on results of the studies was being reviewed by the Plumas County Water Resources Board.

Line 3: Phase II of the North Bay Aqueduct. Special provisions of the water supply contracts with Solano and Napa County Flood Control and Water Conservation Districts include the following:

> "The State shall not commence construction of any portion of the North Bay Aqueduct east of Cordelia (Phase II) until 1975 or such earlier date as may hereafter be agreed upon by the State, the Agency, and all other contractors taking water from the North Bay Aqueduct."

Article 6(a) of these contracts also specifies 1980 as the estimated initial year of water delivery from the Delta. (Under the present arrangements, Napa County purchases Putah South Canal water from Solano County which is transported from Cordelia through Phase I of the North Bay Aqueduct to Napa.)

The current schedule for Phase II is to initiate final design during fiscal year 1975-76, construction during 1978, and deliveries in 1980.

Line 4: Delta Facilities. Under the Department's current schedule, the Peripheral Canal, together with fish protection works, would be operational in 1980 to protect the environment of the Sacramento-San Joaquin Delta (particularly the striped bass and salmon fishery) and to facilitate transfer of water across the Delta. The Canal would be of sufficient capacity to supply local Delta needs and to convey waters of both the federal Central Valley Project and

TABLE 7: PROJECT CONSTRUCTION EXPENDITURES

(in thousands of dollars)

FACILITIES AND CONSTRUCTION DIVISIONS	INCURRED THRU 1973	FUTURE CONSTRUCTION PROGRAM	TOTAL	PRELIMINARY ALLOCATIONS AMONG PROJECT PURPOSES			
				Water Supply and Power Generation	Flood Control	Recreation and Fish and Wildlife Enhancement	Other[a]
Feather River Facilities:							
Upper Feather Division	14,193	21,875	36,068	1,235	0	34,833	0
Oroville Division	503,318	5,664	508,982	428,941	68,424	11,617	0
North Bay Aqueduct	4,159	16,877	21,036	21,037	0	0	-1
Delta Facilities	19,758	332,829	352,587	162,052	0	26,357	164,178
South Bay Aqueduct	67,946	182	68,128	47,932	6,997	13,174	25
California Aqueduct:							
North San Joaquin Division	155,786	20,124	175,910	169,784	0	6,126	0
San Luis Division	177,407	19,597	197,004	189,426	0	7,356	222
South San Joaquin Division	255,981	6,186	262,167	254,276	0	7,891	0
Tehachapi Division	253,643	40,308	293,951	285,141	0	8,810	0
Mojave Division	200,237	44,716	244,953	237,168	0	7,785	0
Santa Ana Division	172,948	12,417	185,365	175,072	0	10,293	0
West Branch	345,123	113,488	458,611	442,226	0	16,187	198
Coastal Branch	14,265	94,218	108,483	108,378	0	0	105
Subtotal	1,575,390	351,054	1,926,444	1,861,471	0	64,448	525
Additional Conservation Facilities	7,751	327,218	334,969	330,810	0	444	3,715
San Joaquin Drainage Facilities	6,494	102,127	108,621	0	0	6,494	102,127
Unassigned	4,310	4,523	8,833	0	0	0	8,833
TOTAL	2,203,319	1,162,349	3,365,668	2,853,478	75,421	157,367	279,402

a) Includes costs currently unassigned to purpose, planning costs of deleted features of project facilities, initial costs of inventoried items, and joint costs assigned to the Federal Government.

the State Water Project. A low-lift pumping plant near the Canal Intake would be installed so as to be operational by 1985. The amounts shown in Line 4 include the estimated total annual expenditures for the entire joint-use facility, exclusive of any federal planning costs.

Of the $332.8 million total future costs shown for the Delta Facilities (1974 and thereafter), $315.9 represents design, right of way, and construction costs of the Peripheral Canal. The remaining $16.9 million includes $13.5 million for the costs of completing Delta planning and environmental studies and $3.4 million for operating and allocated general project costs to be incurred during the construction period of the Canal. (Delta water quality monitoring costs are included in Line 55 as annual operating costs.)

Estimated costs shown for the Delta Facilities in last year's analysis were based on a Peripheral Canal sized for the export needs of the State Water Project only, with provision for future conveyance of water for the Central Valley Project—i.e., based on a full-sized Canal, but excluding the low-lift pumping plant which is now estimated to cost $48.7 million.

Line 5: California Aqueduct, Final Four Units at Delta Pumping Plant. These 1,067-cubic-foot-per-second units would be operational in January and March 1980, and in January and March 1985, respectively.

Line 6: California Aqueduct, San Luis Canal Modifications. These modifications would be required to maintain and, eventually, to augment the present conveyance capacity between Dos Amigos Pumping Plant and Kettleman City. Measures to compensate for subsidence along the Canal would cost about $8 million (state share) during the period 1975 through 1983. Allowance is included for a total expenditure of about $11 million during the period 1984 through 1985 for increasing the State's share of conveyance capacity by about 1,000 cubic feet per second. This increase would be required to accommodate greater projected deliveries than estimated in 1959 when design capacities were established for the Canal.

Line 7: California Aqueduct, Final Three Units at A. D. Edmonston Pumping Plant. These 315-cubic-foot-per-second units would be operational in June 1983, October 1983, and February 1984, respectively.

Line 8: California Aqueduct, Staged Units and Pipelines South of A. D. Edmonston Pumping Plant. Additional capacity would be installed as needed to convey growing project water deliveries through staged features, including the second barrels of Pastoria Creek Siphon (to be completed in 1983) and Antelope Siphon (to be completed in 1975); the final two pumping units and discharge line at Pearblossom Pumping Plant and the final generating unit and penstock at Devil Canyon Powerplant (to be operational by 1976); and Castaic Dam and Outlet Works, Second Stage (to be completed in 1980).

Line 9: California Aqueduct, Buttes Dam and Reservoir. Current assumptions are that this off-aqueduct reservoir would be constructed by 1986 to regulate project water deliveries to Antelope Valley-East Kern Water Agency. Under the Agency's water supply contract, construction of the facility by the State is conditioned on engineering and financial feasibility.

Line 10: California Aqueduct, Final Three Units at Both Las Perillas and Badger Hill Pumping Plants. These 112-cubic-foot-per-second units have already been installed by the Berrenda Mesa Water District, at the District's expense, under special agreements with the Department. Current assumptions are that the Department would replace Units No. 4 by December 1981 and would purchase, at depreciated values, Units No. 5 (together with the second discharge line at Badger Hill Pumping Plant, also constructed by the District) in January 1977, and Units No. 6 in January 1985.

Line 11: California Aqueduct, Peace Valley Pipeline and Pyramid Powerplant. Included in a preceding section ("Actions Concerning Project Power", Chapter I) is a description of the permanent facilities which the Department has now designated for conveying water deliveries through the West Branch when project flows grow to exceed the capacity of the Gorman Creek Improvement in the early 1980s. The costs of the permanent facilities, scheduled for initial operation in 1982, have not been included in previous financial analyses since Bulletin 132-67, because: (1) the physical plan and scope of facilities have been under discussion with electric utilities, looking to possible cooperative development, and (2) expectations are that construction of the facilities would not cause a drain on currently available construction funds and would be financed with revenue bonds.

The costs shown in Line 11 for the Powerplant and the Peace Valley Pipeline are not representative of either (1) the total project costs which could be allocated to the purpose of power generation at Pyramid or (2) the magnitude of revenue bonds which could be supported by such generation.

Line 12: California Aqueduct, Cottonwood Powerplant. This proposed power recovery plant on the East Branch, now scheduled for operation in 1983, was also discussed in the above referred-to section. Since Cottonwood Energy Dissipator Chutes are already constructed and the Powerplant is not essential for conveying water deliveries, the construction schedule is flexible and will be periodically reviewed to insure that the timing of construction costs will coincide with the availability of project funds.

Line 13: California Aqueduct, Phase II of the Coastal Branch. Phase II construction of the Coastal Branch would extend from and including proposed Devil's Den Pumping Plant to a terminus on the Santa Maria River for water service to San Luis Obispo and Santa Barbara County Flood Control and Water Conservation Districts. The water supply contracts of the two districts provide that unless both agree to a deferral, the Department shall schedule Phase II construction to permit initial water deliveries in 1980.

By December 10, 1973 letter, Santa Barbara County Flood Control and Water Conservation District transmitted a resolution of its Board which requested a two-year delay of initial project water deliveries and which indicated the possibility of subsequent requests for additional deferrals. A similar request was received from San Luis Obispo County Flood Control and Water Conservation District by letter dated May 3, 1974. By Director Teerink's letter dated May 28, 1974, the two districts were officially notified that the construction schedule for Phase II construction had been delayed two years, with the initial year of project water deliveries now estimated to be 1982.

(While actual deliveries will be delayed, the water supply contracts provide that annual water entitlements will still commence in 1980, with payments of the Delta Water Charge by the two districts beginning in that year.)

Line 14: California Aqueduct, General Costs. These expenditures cover such items as general design and construction costs, the completion of aqueduct monitor and control systems and operation and maintenance facilities, and other costs associated with aqueduct operations as a whole. Portions of these costs would be allocated to the aqueduct units described in the preceding paragraphs.

Line 15: Subtotal, California Aqueduct. The total of Lines 5 through 14.

Line 16: Miscellaneous Project Costs. These expenditures cover such items as the completion of monitor and control systems and other completion activities for initial project facilities other than the California Aqueduct.

Line 17: Additional Conservation Facilities, Conveyance Works. The water supply provided by Oro-

ville, San Luis, and the Delta Facilities eventually would have to be supplemented in order to satisfy growing water delivery obligations under executed contracts. Contracts provide (in Article 16) that the Department shall periodically report on the need for such additional supply and the plans for additional conservation facilities. Based upon the studies reported in the Department's Bulletin 160-70, "Water for California—The California Water Plan—Outlook in 1970", December 1970, the need for additional supply would begin in 1996 and would build up to a maximum of 700,000 acre-feet annually at the Sacramento-San Joaquin Delta. Additional Delta outflow requirements, should Decision 1379 become effective, would advance this date and require a greater amount of additional conservation yield. Possible effects of the Decision and other events which have occurred during the past four years on required additional project yield will be reported in the Department's Bulletin 160-74, scheduled for release in late 1974.

Some form of an Eel River Development has always been the Department's basis for estimating costs of additional conservation facilities shown in the Bulletin 132 series. The Upper Eel River Development was officially designated by the Department in 1964. Beginning with Bulletin 132-68, the cost basis has been a Corps-constructed Middle Fork Eel River Development (with the State repaying conservation storage costs under a federal Water Supply Act of 1958 contract) in conjunction with a state-constructed Dos Rios-Grindstone Tunnel. Even with the prohibition imposed on Eel construction by the California Wild and Scenic Rivers Act (California Statutes of 1972, Chapter 1259), this basis has been retained as being representative of the eventual costs of the required additional conservation facility. Shown in Line 17 are the estimated costs of state construction of a Dos Rios-Grindstone Tunnel. Companion payments for storage in a Corps-constructed reservoir are shown in Line 21. (See pages 6-7, Bulletin 132-73, for a more complete description of previous actions concerning Eel River development.)

While work on engineering aspects of Eel River development has been suspended by the Department, studies are continuing so as to provide additional information on environmental effects and enhancement possibilities as required and authorized by the California Wild and Scenic Rivers Act for a 1985 report to the Legislature. Studies of these factors will continue at least through 1984.

During 1973, a report on Eel River development was published (Northern District Report, "Alternative Eel River Projects and Conveyance Routes", December 1972). This report documents the state of knowledge as of December 1972, prior to passage of the California Wild and Scenic Rivers Act. The report and its five appendices present reconnaissance-level information on costs, benefits, and environmental effects for 12 Eel River alternatives.

The Department is considering a wide array of possible project water sources to meet future needs as alternatives to Eel River development. The recommendation as to the course of action is expected to be required by about 1978. By 1978, comparable information will be developed on possible sources of supply, including more effective use of water and facilities, waste water reclamation, saline water conversion, ground water resources, and weather modification. Planning programs are under way within the Department on each of these possible sources. In addition, continuing assessments are being made of future water demands. Bulletin 160-74 will include a discussion of each possible source and outline the course for detailed comparison studies to be made in the 1974 through 1978 period.

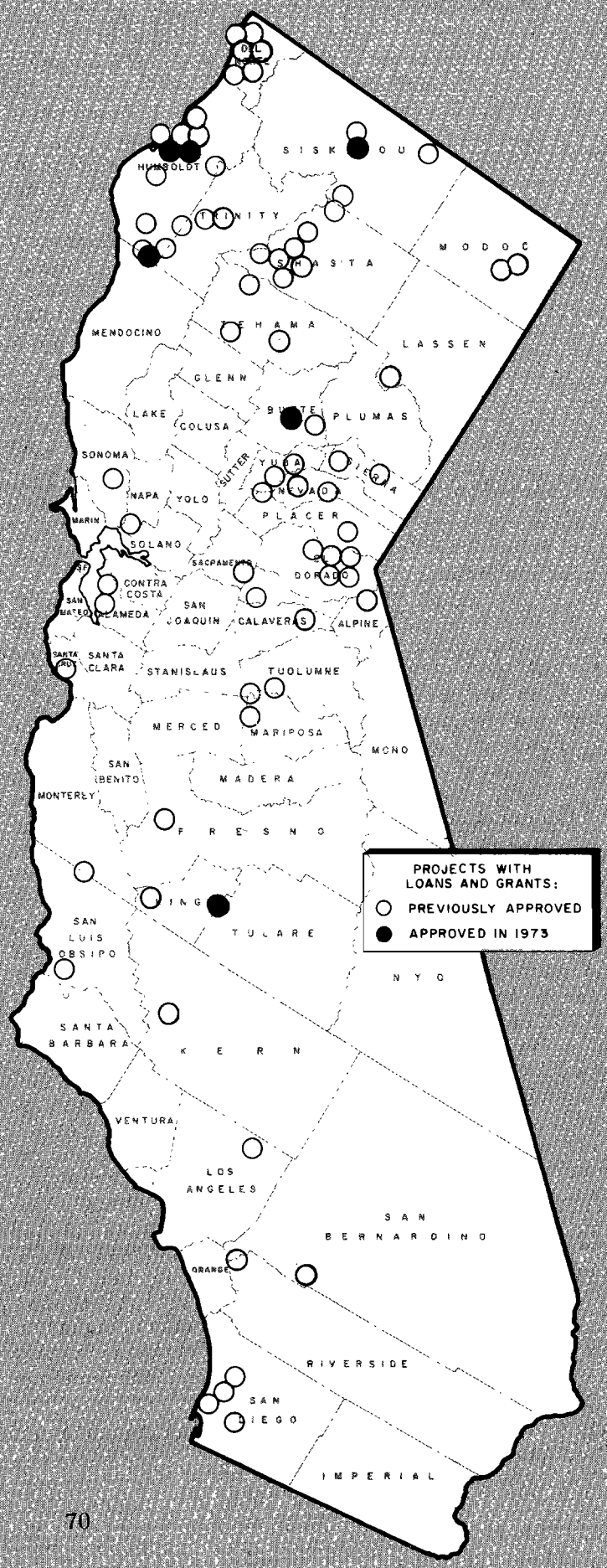
Line 18: San Joaquin Drainage Facilities. Since Bulletin 132-68, the future costs included in the financial analysis for the San Joaquin Drainage Facilities have been those of (1) monitoring the quality of subsurface agricultural waste waters in the San Joaquin Valley and (2) completing joint studies at Firebaugh concerning the feasibility of agricultural waste water treatment.

Beginning with this financial analysis, an allowance is again included to approximate the eventual financial demands of constructing the Facilities. This allowance is based on a possible plan presented in the San Joaquin Valley Drainage Advisory Group's January 1969 report (see page 9, Bulletin 132-70). Under that plan, the primary facility would be a system of lined canals, located near the trough of the Valley, and discharging into western Delta receiving waters near Big Break. Current assumptions are that construction would be scheduled in the 1985 to 1990 period, with operation commencing in 1990. This schedule assumes interim use of the federal San Luis Drain during the 1980s.

During 1973, operation of desalting units at the Interagency Agricultural Waste Water Treatment Center at Firebaugh continued into the third year. The Federal Office of Saline Water provided two reverse osmosis units, which began operation in May 1973, and expanded the testing program that had been in operation using a reverse osmosis unit provided by the University of California (Los Angeles Campus). Operation of the three units, which are of different types, will be continued to determine the technical feasibility of desalting agricultural waste water. Water softening equipment has been installed to remove a substantial quantity of calcium from the incoming water to prevent the units from being clogged. Also a biological study is being conducted by the University of California (Berkeley Campus) to determine the best type of feed water pretreatment to prevent biological deterioration of the reverse osmosis membranes.

Line 19: Total Project Construction Expenditures. The total of Lines 1 through 18.

Figure 19: LOCAL PROJECTS UNDER THE DAVIS-GRUNSKY ACT PROGRAM



Other Capital Requirements

In addition to construction expenditures, capital requirements of the Project include the items discussed in the following paragraphs:

Line 20: Davis-Grunsky Act Program. This state financial assistance program, for water developments constructed by local public agencies, is associated with the State Water Project to the extent of $130 million in capital expenditures. Such expenditures include disbursements under approved loans and grants and the Department's administrative costs incurred while the respective developments are under construction. (Administrative costs following construction are funded by project revenues.)

As of December 31, 1973, the Department and the California Water Commission had approved more than $96.6 million in grants and loans for 70 local agencies located throughout the State—indicated on Figure 19. Loan applications were approved during 1973 for the following agencies:

- $447,500 construction loan to Jacoby Creek County Water District, Humboldt County.
- $670,000 construction loan to City of Blue Lake, Humboldt County.
- $200,000 construction loan to City of Montague, Siskiyou County.
- $6,000 feasibility report loan to Lime Saddle Community Services District, Butte County.
- $1,540,000 construction loan to City of Corcoran, Kings County.
- $430,000 construction loan to Redway Community Services District, Humboldt County.

Of the total approved applications, about $32.0 million (33 percent) were for loans and the remaining $64.6 million (67 percent) were for grants.

The Department estimates that funds presently authorized for the Program would be dispersed by about 1978.

On October 30, 1973, the Assembly Committee on Water held a hearing concerning whether continuance of the Program is necessary and desirable. The Department's statement was presented by Director Teerink. Regarding the Committee's query as to possible alternative means of funding an expanded program, the Department recommended that consideration be given to (1) general obligation bonds as a separate issue or incorporated with another related bond issue or (2) annual appropriations by the Legislature—but indicated that (1) would be more desirable. The Director's statement ended with the following conclusion.

> "The Davis-Grunsky program has accomplished a great deal to alleviate public health hardships in communities which could not afford to remedy their own problems. Several million visitor days in recrea-

tion are being enjoyed at reservoirs from one end of the State to the other. The program has filled a gap in providing financial assistance where such assistance was not available under other state programs or programs of the Federal Government."

Line 21: Additional Conservation Facilities, Storage Works. As indicated for Line 17, the Department's illustrative cost basis assumes construction of reservoir storage by the Corps of Engineers, with the costs thereof allocated to water conservation repaid by the State under a federal Water Supply Act of 1958 contract. Shown in Line 21 is an estimate of such annual repayments.

Line 22: Special Capital Requirements Under Revenue Bond Financing. In addition to construction expenditures, the authority under which revenue bonds have been sold requires that the proceeds shall also fund interest and operation of the financed facilities through one year following completion of construction. The application of proceeds to these requirements are shown below for actual and assumed revenue bond sales:

Application of Revenue Bond Proceeds	Oroville (actual)	Devil Canyon-Castaic (actual)	Supplemental (assumed)
		(in millions)	
Construction expenditures	$218.0	$127.1	$37.1
Plus, Other capital requirements:			
Reimbursement of General Fund	$ 2.6	$ 0.0	$ 0.0
Bond interest through one year following completion of construction	19.9	10.0	3.3
Operating costs for one year following completion of construction	1.5	0.7	0.1
Bond discount	3.0	1.4	0.3
Subtotal	$ 27.0	$ 12.1	$ 3.7
Total, Principal amount of bonds	$245.0	$139.2	$40.8

The $6.1 million shown for 1980 in Line 22 is the portion of Devil Canyon-Castaic Revenue Bond proceeds reserved for future construction (see the description of Line 27).

Line 23: Total, Other Capital Requirements. The total of Lines 20 through 22.

Line 24: Total Capital Expenditures. The total of Lines 19 and 23.

Financing of Capital Expenditures

Three general types of financing have been used for the Project:

Burns-Porter financing, derived from the sale of *California Water Resources Development Bonds* (Water Bonds) and a portion of the State's tideland oil and gas revenues that are deposited in the *California Water Fund* as authorized by the Burns-Porter Act (California Water Code Sections 12930-12944), approved by the Electorate in 1960.

Revenue Bond financing, derived from the sale of revenue bonds as authorized by the Central Valley Project Act (California Water Code Sections 11100-11925). The Department's authority to issue revenue bonds was confirmed by a decision of the Supreme Court of California in 1963 (*Warne v. Harkness,* 60 Cal. 2nd 579).

- Miscellaneous Receipts, derived from payments and appropriations (including certain additional tideland oil and gas revenues) as authorized by a variety of special contracts, cost-sharing agreements, and legislative actions concerning the State Water Project.

To date, Water Bonds have financed most of the construction costs of the Project. The Burns-Porter Act authorized an issue of $1.75 billion of general obligation bonds of the State, which are made self-supporting by revenues under the water supply contracts. This authorization includes a reservation of $130 million specifically for the Davis-Grunsky Act Program. Proceeds from the sale of Water Bonds are deposited in the *California Water Resources Development Bond Fund-Bond Proceeds Account,* from which moneys may be expended only for the con-

struction of project facilities and for the Davis-Grunsky Act Program.

Moneys deposited in the *California Water Fund* are appropriated for purposes of the Burns-Porter Act. Such deposits are derived from a portion of the State's tideland oil and gas revenues under a continuing authorization. In the past, the Legislature has acted both to decrease and increase the level of deposits. Money may be expended from the Fund only for the construction of project facilities and for the Davis-Grunsky Act Program.

Almost $384.2 million of revenue bonds had been sold by the Department as of December 31, 1973—no additional bonds were sold during 1973. Future issues of revenue bonds are planned, to supplement project financing. Proceeds from the sale of revenue bonds are deposited in the *Central Valley Water Project Construction Fund* from which money is expended only for purposes specified in the resolution authorizing such sale. These purposes include the payment of (1) bond interest during the construction period, and for one year following completion of construction, and (2) operating costs during a period of one year after completion of construction.

Miscellaneous receipts are deposited in the *Central Valley Water Project Construction Fund* and may be expended for (1) Water Bond service and (2) construction of project facilities. Under the Department's financial management, miscellaneous receipts are first used during the early years of the Project to the extent needed for coverage of any Water Bond service which exceeds available revenues.

Described below is the application of funds to capital expenditures under the financial analysis.

Line 25: Application of California Water Fund Moneys. The Burns-Porter Act provides that any available money in the California Water Fund shall be used in lieu of proceeds from the sale of Water Bonds. When the Act became effective in late 1960, approximately $97 million had been accumulated in the Fund. This balance and continuing annual appropriations to the Fund through June 28, 1968 financed a total of $176 million of project construction costs. On June 28, 1968, SB 261 became effective (California Statutes of 1968, Chapter 411) which transferred the remaining balance to the Central Valley Water Project Construction Fund and deferred accruals to the California Water Fund until July 1, 1972. Since the latter date, appropriations again are being deposited in the California Water Fund in annual amounts of $25 million.

The projected use of appropriations to the California Water Fund is shown in the financial analysis only to the extent required under current estimates of future construction expenditures. However, the Department expects that appropriations to the Fund would continue indefinitely in the full annual amounts now provided for by law. The Department also expects that repayments to the California Water Fund, to be derived from project revenues in excess of operating costs and Water Bond service, would be available for financing future capital expenditures—particularly, the long-range costs of San Joaquin Drainage Facilities and additional conservation facilities.

Under present California Law, the State's annual tideland revenues are allocated in the following manner: a minor amount to the General Fund; $25 million to the California Water Fund; $5 million to the Central Valley Water Project Construction Fund; and the remainder to capital outlay for higher education.

The recent rise in the cost of crude oil has greatly enhanced the availability of State tideland oil and gas revenues. For example, the posted price of 18 gravity nonexempt oil was $2.86 per barrel in May, 1973; $3.21 in August, 1973; and is $4.21 at the present ceiling price established by the Federal Energy Office. The State Lands Commission's estimate of State tidelands revenues for the 1973-74 fiscal year has increased from $92 million to at least $115 million due to the increased cost of crude oil. For the 1974-75 fiscal year, the estimated revenues are expected to increase from $81 million to $127 million. The tideland revenues could be substantially higher if the Commission is able to overturn the Federal Energy Office's February 1974 decision to roll back the price of exempt oil from over $9 per barrel to $4.21 per barrel.

The financial analysis indicates that full annual appropriations of tideland revenues to the California Water Fund (and short-term interest earnings thereon, amounting to an estimated $0.75 million annually) would be required for financing construction expenditures through 1987. While the Department expects that full annual appropriations would continue to be available to the Fund, the financial analysis indicates that required expenditures from the Fund would be less than $25 million annually after 1987. Commencing in 1979, annual project repayments to the Fund (see Line 63, Spread 2) would supplement annual appropriations. After about 1990, all future financing could be provided by such repayments.

Finally, it is emphasized that the projected use of the California Water Fund is based on current estimates and assumptions as to the timing and magnitude of future capital costs. Such costs could change significantly with future events especially in regard to the nature and timing of San Joaquin Drainage Facilities and additional conservation facilities.

Line 26: Application of Proceeds from Sale of Oroville Revenue Bonds. All proceeds from sale of Oroville Revenue Bonds, in April 1968 (Series A) and in April 1969 (Series B), had been applied as of December 31, 1973.

Line 27: Application of Proceeds from Sale of Devil Canyon-Castaic Revenue Bonds. Construction funds provided by the sale of Devil Canyon-Castaic Revenue Bonds, in August 1972, include (1) $98.9 million

which reimbursed other project funds used to finance construction of the Devil Canyon and Castaic Facilities prior to the delivery of the bonds; and (2) $28.2 million which was reserved to complete construction of the Facilities. Shown in Line 27 is the projected use of funds so reimbursed for construction of works other than the Facilities and of funds reserved for future completion of the Facilities. Current estimates of future completion costs of the Facilities are less than funds reserved by about $6.1 million. Such costs include the installation of the second and last generating unit in the Devil Canyon Powerplant.

Line 28: Application of Proceeds from Sale of Supplemental Revenue Bonds. As previously indicated, a future revenue bond issue is assumed to provide $37.1 million for application to the construction expenditures shown in this analysis. This amount is, in effect, a balancing item to complete the State Water Project as now contemplated. Future developments could reduce or increase this amount.

Line 29: Application of Proceeds from Sale of Water Bonds, Davis-Grunsky Act Program. For simplification, the $130 million of capital expenditures authorized for the Davis-Grunsky Act Program under the Burns-Porter Act are shown to be funded solely by proceeds from the sale of Water Bonds. Actually, $28.0 million of the California Water Fund was used for the Program in lieu of bond proceeds prior to 1969. This simplification does not in any way affect the validity of the analysis.

The only sale of bonds during 1973 was Series T Water Bonds, in March. All of the $10 million proceeds from the sale are being used for the Davis-Grunsky Act Program.

Line 30: Application of Proceeds from Sale of Water Bonds, Additional Conservation Facilities. The Burns-Porter Act provides that to the extent California Water Fund moneys are expended, an equal amount of proceeds from the sale of Water Bonds is reserved ("offset") for financing the construction of certain additional conservation facilities to be located in either or both the North Coastal area and the Sacramento Valley. In mid-1972, the maximum reservation of "offset" bonds was effectively limited to $176 million—the total amount of California Water Fund moneys which had been expended up to that time. By mid-1972, all remaining Water Bond proceeds from the Burns-Porter authorization had either been "offset" or reserved for the Davis-Grunsky Act Program.

Under the analysis, $167 million of the $176-million reservation would not be required for financing additional conservation facilities. If associated storage would, in fact, be constructed by the United States and capital provided by the Congress, the remaining costs of the facilities could be financed by available funds other than "offset" bonds. However, the timing required for such construction, or use of some alternative development in lieu of the one assumed for this analysis, would have a significant bearing on the projected use of "offset" bonds.

Line 31: Application of Proceeds from Sale of Water Bonds, Initial Project Facilities. This application, completed in mid-1972, was limited to $1.444 billion —i.e., the total $1.75 billion Burns-Porter authorization less $130 million reserved for the Davis-Grunsky Act Program and $176 million "offset" for additional conservation facilities.

Line 32: Total Application of Proceeds from Sale of Bonds. The total of Lines 26 through 31. (See Table 8 for a summary of actual and projected bond sales, together with information concerning interest costs and principal maturities.)

Line 33: Application of Miscellaneous Receipts to Construction. Since the first call on miscellaneous receipts is to insure coverage of Water Bond service, the estimated portion of receipts remaining for application to capital expenditures depends on an analysis, shown on Spread 2 of Table 6, of total available receipts and revenues in relation to operating costs and bond service requirements.

Line 34: Total Financing of Capital Expenditures. This line—the total of Lines 25, 32, and 33—matches Line 24 and confirms that all capital expenditures would be funded under the analysis.

Miscellaneous Receipts

Sources of miscellaneous receipts are described in the following paragraphs:

Line 35: Federal Payments for Project Capital Expenditures. The federal share of the State's capital expenditures include payments for (1) "open-space" grants at certain project reservoirs, (2) costs of Lakes Oroville and Del Valle allocated to flood control under existing agreements, and, under current expectations, (3) a share of the State's construction costs of the Delta Facilities under a future agreement. In the analysis, only the State's share of costs is included for works constructed by the United States, such as the San Luis joint-use facilities.

About $1.5 million in federal payments had been received in previous years for the acquisition costs of project and recreation lands reserved for "open space" at Lakes Perris and Del Valle and Castaic Lake.

Federal payments received through December 31, 1973 for project costs allocated to flood control totaled $73.1 million—$68.2 million for Lake Oroville and $4.9 million for Lake Del Valle. Line 35 includes

TABLE 8: BONDS SALES AND PROJECT INTEREST RATES

Bond Sales	Date of Sale	Dollar-years (a	Interest Cost (b	Percent Interest Cost (c	Project Interest Rate (d
	(1)	(2)	(3)	(4)	(5)
Actual Issues					
$50,000,000 Bond Anticipation Notes	11/21/63	26,944	531	1.970	1.970
$100,000,000 Series "A" Water Bonds	2/18/64	3,402,000	119,750	3.520	3.508
$50,000,000 Series "B" Water Bonds	5/ 5/64	1,726,000	60,986	3.533	3.516
$100,000,000 Series "C" Water Bonds	10/ 7/64	3,452,000	123,764	3.585	3.544
$100,000,000 Series "D" Water Bonds	2/16/65	3,497,900	122,403	3.499	3.531
$100,000,000 Series "E" Water Bonds	11/23/65	3,497,900	130,029	3.717	3.573
$100,000,000 Series "F" Water Bonds	6/ 8/66	3,497,900	137,359	3.927	3.638
$100,000,000 Series "G" Water Bonds	11/22/66	3,497,900	143,788	4.111	3.711
$100,000,000 Series "H" Water Bonds	3/21/67	3,497,900	129,261	3.695	3.709
$100,000,000 Series "J" Water Bonds	7/18/67	3,497,900	143,199	4.094	3.754
$100,000,000 Series "K" Water Bonds	11/14/67	3,497,900	163,887	4.685	3.853
$150,000,000 Revenue Bonds, Oroville Division, Series "A"	4/ 3/68	5,228,700	270,289	5.197	-
$100,000,000 Series "L" Water Bonds	7/11/68	3,497,900	166,918	4.772	3.941
$100,000,000 Series "M" Water Bonds	10/22/68	3,497,900	169,989	4.860	4.021
$94,995,000 Revenue Bonds, Oroville Division, Series "B"	4/ 1/69	3,423,460	195,902	5.767	-
$46,761,000 Cumulative 1970 General Fund Borrowing; repaid 7/10/70	-	4,938	346	7.007	4.021
$200,000,000 Series "N" and "P" Bond Anticipation Notes	6/16/70	200,000	11,660	5.830	4.030
$100,000,000 Series "N" Water Bonds	2/ 2/71	3,447,900	190,292	5.519	4.148
$100,000,000 Series "Q" Bond Anticipation Notes	3/10/71	100,000	2,349	2.350	4.143
$100,000,000 Series "P" Water Bonds	4/21/71	3,397,900	193,377	5.691	4.255
$150,000,000 Series "Q" and "R" Water Bonds	11/ 9/71	5,171,850	265,734	5.138	4.342
$40,000,000 Series "S" Water Bonds	3/28/72	1,399,160	76,509	5.468	4.371
$139,165,000 Devil Canyon-Castaic Revenue Bonds (e	8/ 8/72	4,776,204	258,839	5.419	4.457
$10,000,000 Series "T" Water Bonds	3/20/73	185,265	9,491	5.122	4.459
Projected Issues					
$10,000,000 Series "U" Water Bonds	11/ 1/74	185,265	9,263	5.0	4.460
$10,000,000 Series "V" Water Bonds	11/ 1/75	185,265	9,263	5.0	4.462
$13,042,000 Series "W" Water Bonds	11/ 1/76	240,844	12,041	5.0	4.464
$40,793,000 Supplemental Revenue Bonds (f	3/ 1/78	1,389,227	76,426	5.5	4.488

a) A unit equivalent to one dollar of principal amount outstanding for one year, in thousands.
b) In thousands of dollars.
c) The total interest cost (without regard to premiums received) divided by the total dollar-years, expressed as a percent.
d) Determined by dividing cumulative interest costs by cumulative dollar-years, expressed as a percent. Excluding Central Valley Project Revenue Bonds, Oroville Division, which do not affect the calculation of the "project interest rate".
e) Bonds sold at a net interest cost of 5.446 percent. Net proceeds for financing construction costs plus bond discount amounting to $126,893,000 are used for purposes of the project interest rate.
f) Net proceeds for financing construction costs plus bond discount amounting to $36,949,000 are used for purposes of the project interest rate.

an allowance for an additional $0.8 million of payments for Lake Oroville. This additional amount is subject to revision after the Corps completes its final audit of the Department's records of joint costs.

Payments for Lake Del Valle are complete under the present agreement. While not included in Line 35, there is a possibility of an additional payment under a supplemental agreement (see page 5, Bulletin 132-72). The South Pacific Division, Corps of Engineers, released a public notice on February 9, 1973, on its review of the Del Valle flood control payment. The District Engineer found that modification of the Del Valle cost allocation was justified because of a substantial increase of costs and because economic patterns of development in the flood plain had changed from the original projection shown in Senate Document No. 128. As a result, the District Engineer recommended that the federal payment be increased by $0.57 million. At the end of 1973, the District's report was under review by the Board of Engineers for Rivers and Harbors.

The amounts shown in Line 35 for 1978 and thereafter are for assumed federal financial participation in the Delta Facilities. In accordance with the Bureau of Reclamation's feasibility report on the Peripheral Canal as an addition to the federal Central Valley Project (favorably commented on by the State and approved by the Secretary of the Interior), construction costs of the joint-use Delta Facilities would be shared with the State on a 50-50 basis. The amounts shown in Line 35 are based on the assumption that Congressional Authorization for federal participation would be secured so that payments to the State would commence in 1978, based on a concurrent 50 percent share of the State's annual construction expenditures. "Catch-up" payments for joint costs incurred prior to 1978, together with accrued interest at the State's project interest rate, are assumed to be equally distributed during the three-year period 1978 through 1980. Such "catch-up" payments to the State would total about $69 million.

In the event that Congressional Authorization is delayed, the Department expects that the Bureau of Reclamation would pay an interim "wheeling charge", or other form of temporary compensation, for the conveyance of federal Central Valley Project water through the Canal.

Line 36: Appropriations Prior to the Burns-Porter Act. Year-to-year appropriations by the Legislature financed all capital expenditures prior to the effective date of the Burns-Porter Act; November 8, 1960. Expenditures so financed substantially ended in 1963 and totaled about $11 million from the General Fund and $88 million from the Investment Fund (succeeded by the California Water Fund in 1959). (These amounts exclude $1.3 million from the Local Projects Assistance Fund which financed the Davis-Grunsky Act Program prior to $130 million authorization of the Burns-Porter Act.) While these special appropriations do not fit the general definition of "miscellaneous receipts" in that they were not deposited in the Central Valley Water Project Construction Fund, they are so classified herein for simplifying the presentation of the financial analysis.

Line 37: Appropriations for Capital Costs Allocated to Recreation and Fish and Wildlife Enhancement. By enactment of AB 12 (California Statutes of 1966, First Extraordinary Session, Chapter 27), $5 million of the State's tideland oil and gas revenues is deposited annually in the Central Valley Water Project Construction Fund for repayment of (1) costs of constructing multiple-purpose project facilities that are allocated to recreation and fish and wildlife enhancement and (2) costs of acquiring land for recreation developments associated with project facilities. As indicated in Table 7, such costs are now estimated to eventually total about $157 million. The $5 million annual appropriation would extend through about 2040 in order to reimburse the Project with interest —assuming that 60 percent of such costs would be financed by Water Bonds bearing an average interest cost of 4.4 percent.

Release of the $5 million annual appropriation to the Department for expenditure is dependent on legislative enactment approving the costs reported annually by the Department. In 1973, the Department reported costs totaling over $56.9 million, including $7.6 million of accrued interest (Appendix D, "Costs of Recreation and Fish and Wildlife Enhancement", Bulletin 132-73, April 1973). This was an increase of about $16.7 million over the previous report (see pages 2-3, Bulletin 132-73). Most of the increase was due to reporting, for the first time, the multiple-purpose costs of Lake Del Valle allocated to recreation. By enactment of SB 405 (California Statutes of 1973, Chapter 584), the Legislature approved the total increased amount, which will cover annual releases through the fiscal year 1976-77 appropriation.

Recreation and fish and wildlife costs which have not as yet been reported to the Legislature include those for the Southern California reservoirs of the California Aqueduct, Delta Facilities, Abbey Bridge and Dixie Refuge Reservoirs, San Joaquin Drainage Facilities, and additional conservation facilities.

(By Appendix D to Bulletin 132-74, April 1974, the Department reported an additional $6.2 million—raising the total costs reported to the Legislature to over $63.1 million. Most of this increase was due to the reclassification of certain land originally purchased for the potential enlargement of Lake Perris as recreation land—see page 6, Bulletin 132-72.)

Line 38: Appropriations Under SB 261 (1968). By enactment of SB 261, the June 28, 1968 balance in the California Water Fund was transferred to the Central Valley Water Project Construction Fund, together with appropriations of tideland oil and gas revenues in the annual amounts of $11 million through June 30, 1970 and $25 million thereafter until June 30, 1972.

Line 39: City of Los Angeles Payments for Castaic Power Development. Under a 70-year contract executed September 2, 1966 (see page 12, Bulletin 132-67), the State constructed the Angeles Tunnel with a 30-foot diameter instead of with a 17-foot diameter as originally planned. In return, the City is constructing and will operate and maintain a 1,250-megawatt Castaic Powerplant and will supply the State without charge, power equivalent in the value to that which the State would have produced in its originally planned 214 megawatt plant. The value of this substitute production is accounted for in a subsequent section as a credit to project operating costs in the same manner as other aqueduct power credits. In addition, the City has made certain payments, shown in Line 39, to ensure that the benefits of joint development are equally realized by both the State and the City. Neither the estimated capital expenditures for the Project nor the payments shown in Line 39 include amounts for the Castaic Surge Chamber—which was constructed by the State but directly financed by the City.

Line 40: Water Contractor Advances for Construction of Requested Works. In addition to the costs of local systems necessary for the distribution and use of project water, water supply contractors are required to finance, in advance, the construction costs of delivery structures (turnouts) and of any excess capacity the Department is requested to construct in project facilities. Advance payments for State construction requested by the contractors are summarized below:

	(in millions)
Requested Excess Capacity:	
° The Metropolitan Water District of Southern California:	
(a) for 188 cubic foot per second excess capacity in reaches from Kettleman City to Junction of the West Branch	$19.4
(b) for enlargement of Lake Perris above a basic capacity of 100,000 acre-feet	$13.9
(c) for 787 cubic foot per second excess capacity in the San Bernardino Tunnel	$12.0
° San Gabriel Valley Municipal Water District, for 21 cubic foot per second of excess capacity in the San Bernardino Tunnel	$ 0.3
° Antelope Valley-East Kern Water Agency, for 19 cubic foot per second excess capacity in the reaches of the West Branch from the Junction through Quail Facilities	$ 0.3
Subtotal	$45.9
Required advance payment of water charges by The Metropolitan Water District of Southern California for originally requested excess capacity in the West Branch, now classified as basic project capacity	$16.3
Requested delivery structures constructed or to be constructed by the State	$ 9.7
Total water supply contractor advances for state construction of requested works	$71.9

Excess capacity may be requested for the purpose of increasing the instantaneous rates of water delivery over the "peaking" rates normally provided for by the contracts.

Advance payments for requested excess capacity are determined by contract formula so as to assure more than sufficient funds to cover the additional construction costs involved. A complete determination of the additional construction costs by the Department was pending as of December 31, 1973. For purposes of the financial analysis, the Department expects that such advance payments would exceed the additional construction costs involved, with interest, by about $36 million. Credits for the assumed overpayments have been applied to reduce estimated project revenues which otherwise would be derived from water charges, described in a subsequent section.

The costs of requested excess capacity do not include expenditures incurred for strengthening the tunnel linings and siphons of the Tehachapi Crossing so as to accommodate a possible future 1,260-cubic-foot-per-second increase in capacity—or of constructing East Branch canals so as to accommodate a possible future 700-cubic-foot-per-second increase in capacity. By agreement with the contractors, these particular costs are classified as basic project costs (see pages 22-23, Bulletin 132-67).

Line 41: Investment Earnings on Unexpended Miscellaneous Receipts. Normally, unexpended project funds are invested in the Surplus Money Investment Fund of the State Treasurer. Interest earnings of the Fund are computed and credited in six-month increments. Interest earnings during the last half of 1973 were at a rate of 8.9 percent per annum—a record high. For the financial analysis, the Department estimates that future interest earnings of the Fund will average 7.0 percent per annum.

However, Line 41 also includes the interest earnings on unexpended proceeds from the sale of Devil Canyon-Castaic Revenue Bonds. In 1973, the Department obtained approval of the Department of Finance for the investment of these unexpended proceeds in a special fund. The proceeds will be held for a predictable number of years, generally longer than the normal investments covered by the Surplus Money Investment Fund, and can realize a greater rate of return than possible in the Fund. The special fund, managed by the State Treasurer, is expected to yield a return of about 7.1 percent per annum and is so reflected in the amounts shown in Line 41.

Line 42: Total Miscellaneous Receipts. The total of Lines 35 through 41.

Project Operating Revenues

Project operating revenues are deposited in two primary accounts: the *Central Valley Water Project Revenue Fund,* in which are placed all revenues pledged to revenue bonds, and the *California Water Resources Development Bond Fund-Revenue Account,* in which are placed all other project operating revenues, including interest earnings on any unexpended proceeds from the sale of Water Bonds.

Line 43: Power Pool Companies' Payments Under Oroville-Thermalito Power Sale Contract. The Oroville-Thermalito Power Sale Contract will terminate on November 29, 2017, or when Oroville Revenue Bonds are retired—whichever date is later. The Companies are obligated to pay $8.075 million semiannually to the Department until contract termination. These firm payments are for the entire power capacity and for an average annual net energy generation of 2.1 billion kilowatthours. The Contract established the Pacific (PG&E) and Edison-San Diego energy adjustment accounts, which earn interest at 6 percent per annum.

Each year, theoretical net energy generation is computed based on actual inflow to Lake Oroville. Theoretical net energy in excess of 2.1 billion kilowatthours either is entered as a positive value in the accounts or the Department may accept payment for the Pacific share (56.3 percent) of such excess at a rate of $0.00259 per kilowatthour. If the theoretical net energy is less than 2.1 billion kilowatthours, the difference is entered as a negative value in the accounts. The Department may pay for negative entries or balances.

For the financial analysis, the Department assumes that revenues from the sale or other disposal of Oroville-Thermalito power would continue to be available to the Project after termination of the present contract—under payment terms similar to the present contract. Project revenues shown in Line 43 include the fixed semiannual payments, revenues received for power used for project pumping prior to the "full operation date", and estimated future net receipts under the operation of the energy adjustment accounts.

Line 44: Water Contractor Payments under Devil Canyon-Castaic Contract. These payments by the six water contractors located below the Devil Canyon and Castaic Facilities are equal to (1) the annual service of Devil Canyon-Castaic Revenue Bonds and (2) the annual operating costs of the Facilities allocated to power generation (see page 2, Bulletin 132-73).

Line 45: Contractor Payments (assumed) for Supplemental Revenue Bonds. For this analysis, it is assumed that these payments would cover annual service on a future issue of revenue bonds which would provide construction funds for certain of the remaining aqueduct facilities, together with operating costs associated with such currently unspecified facilities.

Line 46: Water Contractor Payments under Long-term Water Supply Contracts. Water supply contracts provide for payments of two general charges: (1) a Delta Water Charge and (2) a Transportation Charge.

The Delta Water Charge is assessed for each acre-feet of water the contractors are entitled to receive. The Charge is computed so as to return to the State during the contract term all appropriate costs of project conservation facilities, together with interest thereon. Project conservation facilities are defined as those facilities which conserve water, including Lake Oroville, Delta Facilities, additional conservation facilities, and San Luis Reservoir, together with a portion of the California Aqueduct leading to the Reservoir from the Delta. Costs allocated to flood control, recreation, and fish and wildlife enhancement are not paid under the water supply contracts. Both charges for power costs and credits for power revenues are included in the determination of the Delta Water Charge.

The Transportation Charge is computed so as to return to the State during the contract term the costs of the aqueducts necessary to deliver water to the respective contractors, together with interest thereon. Such costs also exclude those allocated to flood control, recreation, and fish and wildlife enhancement. In addition, costs of the Devil Canyon and Castaic Facilities allocable to power are excluded from the Transportation Charge and are paid under the Devil Canyon-Castaic Contract. (Similarly, under the assumptions of this analysis, costs of certain aqueduct facilities to be financed by supplemental revenue bonds would not be paid under the water supply contracts but would be paid under agreements yet to be negotiated.)

Each year's costs of each aqueduct reach are allocated among contractors whose deliveries are or will be conveyed through that reach. For contractors with predominantly municipal and industrial water use, the allocated amounts of each year's construction expenditures are required to be repaid, together with interest, in 50 equal annual installments. For contractors with predominantly agricultural water use, allocated construction costs are repaid by a uniform charge per acre-foot of water entitlement, computed so as to return to the State during the contract term such costs with interest.

Operating costs are paid currently under the Transportation Charge. Construction costs under the Transportation Charge and all construction and annual operating costs under the Delta Water Charge are to be repaid with interest at the "project interest rate".

The project interest rate is determined as the weighted average of the rates paid on securities issued and loans obtained to finance project facilities, excluding Oroville Revenue Bonds. Under original contract provisions, the basis for determining the project interest rate was the weighted average of rates paid on Water Bond sales only. Under contract amendments executed in 1969, after issuance of Oroville Revenue Bonds, the basis was expanded to include rates on all other securities sold and loans obtained thereafter for financing project facilities, including revenue bonds (see page 28, Bulletin 132-70). However, not all proceeds from the sale of revenue bonds are melded in the calculation of the project interest rate—only those proceeds applied to construction costs (the only application of general obligation bonds permitted by law) and those consumed in the bond discount (a component of the total interest cost of a revenue bond issue). Shown below is the percent of total proceeds from revenue bond issues which affect the actual and projected calculation of the project interest rate:

Revenue Bond Proceeds	Devil Canyon-Castaic (actual)	Supplemental (assumed)
	(in millions)	
Applied to construction costs	$127.1	$37.1
Less, portion of such proceeds derived from interest earnings prior to delivery of bonds	$ 1.6	$ 0.5
Plus, bond discount	$ 1.4	$ 0.3
Subtotal, proceeds included in calculating the Project Interest Rate	$126.9	$36.9
Principal amount of bonds	$139.2	$40.8
Percent total principal amount included in calculating the Project Interest Rate	91.0%	91.0%

Table 8 presents information basic to the calculation of actual and projected project interest rates.

A detailed development of water charges for each contractor is presented in Appendix B which is based on presently known conditions and supports the Department's determination of 1975 water charges—to be billed by July 1, 1974. However, there are the following significant differences between the projec-

tion of charges shown in Line 46 and the substantiation of 1975 charges shown in Appendix B:

Future capital costs shown in Appendix B are based on prices prevailing on December 31, 1973. Those shown in the financial analyses include allowances for future price escalation.

The project interest rate basic to charges shown in Appendix B include actual bond sales at the time this report was prepared (4.459 percent). The project interest rate basic to the charges shown in Line 46 also reflect the projected bond sales shown in Table 8.

- Pre-1975 charges shown in Appendix B represent what such charges should have been under presently known conditions. Pre-1975 charges shown in Line 46 are those actually paid under previously determined bills.

- Charges for 1975 and thereafter shown in Appendix B are unadjusted. Such charges shown in Line 46 include adjustments for any apparent overpayments or underpayments of pre-1975 charges and credits due to prepayments of the capital cost component which will result under various contract amendments involving excess aqueduct capacity.

The charges shown in Appendix B are those which would apply in the absence of the Devil Canyon-Castaic contract or of any assumed arrangement permitting sale of supplemental revenue bonds. The charges shown in Line 46 exclude the costs covered by such actual and assumed agreements.

The charges shown in Appendix B represent billed amounts for the respective years. The amounts shown in Line 46 represent the payment of such charges, which lag billed amounts by one or more months. (For instance, certain payments for operating costs incurred during a particular year will actually accrue to the State during the early months of the following year.)

Line 47: Federal Payments for Project Operating Costs. Under the December 31, 1961 Agreement between the State and the United States, the Department operates and maintains the San Luis joint-use facilities. Under the January 12, 1972 Supplement to the Agreement, the United States pays 45 percent of the costs incurred by the Department for these activities (excluding power costs); the percent being subject to review in 1975. The amounts shown in Line 47 are based on the assumption that the current percent federal share would be extended indefinitely.

Line 47 also includes an assumed 50 percent federal share of the joint operating costs of the Delta Facilities (also excluding power costs) as proposed in the Bureau's feasibility report on the Peripheral Canal.

Line 48: Appropriations for Operating Costs Allocated to Recreation. Under the Davis-Dolwig Act, the Legislature declared its intent that, except for funds provided pursuant to AB 12 (1966), the Department's budget shall include appropriations from the General Fund of moneys necessary for enhancement of fish and wildlife and for recreation in connection with state water projects. The $5 million annual AB 12 appropriation is for repayment of construction expenditures—annual operating costs allocated to recreation and fish and wildlife enhancement are paid by General Fund appropriations.

Line 49: Local Agency Payments Under Davis-Grunsky Loan Repayment Contracts. As pointed out in the description of Line 20, $32.0 million in loan applications had been approved as of December 31, 1973. The amounts shown in Line 49 are based on the assumption that $24.9 million in future contracts would be approved—bringing estimated total loans under the $130 million authorization (which excludes an initial loan of about $1.3 million) to $55.6 million (43 percent). All future loans are assumed to be repaid in 50 years at 2.5 percent interest, with an initial five-year deferment of principal repayment.

Line 50: Contractor Payments (Assumed) for San Joaquin Drainage Facilities. For the financial analysis, assumptions are that contracts for Drainage Facilities would require repayment of the State's construction expenditures in 50 equal annual payments of principal and interest (at the project interest rate), together with concurrent payments of annual operating costs. Repayments are assumed to commence in 1986. Of course, payment terms are subject to future negotiations.

Line 51: Miscellaneous Revenues. Miscellaneous revenues include annual payments by the City of Los Angeles for a share of the maintenance costs of the Angeles Tunnel, interest earnings on unexpended proceeds from sale of Water Bonds, and other short-term investment earnings on project revenues. Based on experience to date, an allowance of $2 million annually through 1985 is included in Line 51 to approximate the latter earnings—ignored in previous analyses.

Line 52: Total Project Operating Revenues. The total of Lines 43 through 51.

Line 53: Total Miscellaneous Receipts and Project Operating Revenues. The total of Lines 42 and 52.

Application of Revenues and Miscellaneous Receipts

Revenues pledged to revenue bonds, deposited in the *Central Valley Water Project Revenue Fund,* are disbursed in accordance with resolutions authorizing the issuance of such bonds. All other operating revenues, deposited in the *California Water Resources Development Bond Fund-Revenue Account,* are disbursed in accordance with the following priorities of use as specified in the Burns-Porter Act:

(1) Project operating costs.

(2) Water Bond service.

(3) Repayment of project expenditures from the California Water Fund.

(4) Deposits to a reserve for future construction of the State Water Resources Development System —a system of facilities which may be added to under certain authorizations of the Legislature and designations by the Department as specified in the Burns-Porter Act, and which includes the State Water Project.

Line 54: Carryover (+) and Application (-) of Miscellaneous Receipts and Revenues Held Temporarily in Reserve. The only carryover of receipts and revenues from year-to-year concerns a temporary reserve to insure that future annual service on Water Bonds will be met. Portions of annual miscellaneous receipts accuring after 1982 and all such receipts accruing after 1985—not needed for either bond service or construction expenditures under this analysis —are included in Line 66 as being available for financing future construction of the State Water Resources Development System.

Line 55: Project Operating Costs. Actual and estimated project operating costs are presented in Table 9 under three bases: (1) by project facilities; (2) by type of component cost; and (3) by project purpose. Allowances for future long-term price escalation are not included in these estimates since operating costs do not substantially affect the overall results of the financial analysis. (For the most part, changes of operating costs cause direct, offsetting changes of operating revenues.)

Power costs are the largest single item of operating expense for the Project. Under ultimate water delivery conditions, power costs are presently estimated at $93 million annually, including costs of transmission service.

Project pumping energy requirements will continue to increase over the next 20 years at an average rate of about 380 million kilowatthours annually, ultimately reaching 13.1 billion kilowatthours by the year 2020. Presently, the Project has three sources of purchased power: Canadian Entitlement, Bonneville Power Administration, and California Suppliers. The unit rates for Canadian Entitlement and California Suppliers power sources are fixed until March 31, 1983. Bonneville Power Administration rates are subject to change in 1974 and every five years thereafter.

The long-term outlook in the electric power industry continues to reflect a rising trend in electric power costs. Higher power costs can be expected due to (1) environmental factors resulting in power plant siting problems and construction delays, (2) more stringent licensing and safety requirements, (3) escalation of labor and materials costs, and (4) rising fuel costs. The combined effect of these factors will have a major impact on project power costs after March 31, 1983 when new rates become effective under the Suppliers' Contract.

In previous Bulletins 132, projected power costs were clearly understated in view of current price levels. As reported in Bulletin 132-72, projections were to be updated in stages to reflect more realistic future power costs. The estimated annual power costs shown in Table 9 represent the third stage of updating.

In addition to recovery plant generation, the Department continues to assume that project power sources, after March 31, 1983, would include power from one or more nuclear power plants cooperatively developed and financed by the State with one or more of the California utilities—with only supplemental offpeak energy purchased from others. The Department also assumes that the State's share of such a power plant or plants would be financed with revenue bonds. Substantial increases in cost could be expected after March 31, 1983 if power were not available from a cooperatively developed nuclear power plants and had to be purchased from others.

Line 56: Deposits to Special Reserves under Revenue Bond Financing. Only those deposits derived from project operating revenues and miscellaneous receipts are shown in this line.

In regard to Oroville Revenue Bonds, such deposits include the following:

- Payments to the Department for energy and generating capability prior to April 1, 1969, under terms of interim letter agreements, and all other power revenues for a period of one year following completion of construction.
- Payments to the Department from the energy adjustment account for net annual energy generation in excess of 2.1 billion kilowatthours.
- Federal flood control contributions in the amount of $2.4 million for allocated operations and maintenance costs.

In regard to Devil Canyon-Castaic Revenue Bonds, such deposits consist of about $9.2 million to provide a reserve approximating maximum annual bond service. For this analysis, a proportionately

similar reserve is assumed for supplemental Revenue Bonds.

The ultimate effect of these reserves, together with interest earnings thereon, is to accelerate the last year that operating revenues are applied to revenue bond service. For simplicity, the operation of these reserves is ignored in the financial analysis.

Lines 57-58: Payment of Service on Bonds Sold as of December 31, 1973. Tables 12 and 13 of Bulletin 132-72 show annual interest and principal payments on individual series sold prior to 1972—Oroville Revenue Bonds (Series A and B) and Water Bonds (Series A through R). Annual service on series sold during 1972 is shown in Table 10 of Bulletin 132-73—Devil Canyon-Castaic Revenue Bonds and Series S Water Bonds. Table 10 of this bulletin provides a summary of annual service on these previous sales, together with service on bonds sold during 1973—Series T Water Bonds. As shown, principal repayments on Water Bonds commenced in 1973.

It should be noted that Line 57 also includes over $0.3 million in interest payments to the General Fund for the temporary loan of $46.8 million in 1970—repaid by proceeds from the sale of Series N Water Bonds.

Line 59-60: Assumed Payment of Service on Future Bond Sales. Table 11 shows the projected annual service on future Supplemental Revenue Bonds and Water Bonds (Series U through W) under the assumptions of this analysis.

Assumptions concerning the service on future Supplemental Revenue Bonds are as follows:

- The net interest cost would average 5.5 percent.

  The service pattern would provide for no maturities during the first ten years after issuance, with a final maturity 50 years after issuance.

Assumptions concerning the service on future Water Bonds are as follows:

- The net interest cost would average 5.0 percent.

  The service pattern would provide for no maturities during the first nine years after issuance, with a final maturity 25 years after issuance.

Lines 61-62: Total Payments of Bond Service. The total of interest payments shown on Lines 57 and 59 and the total of principal payments shown on Lines 58 and 60, respectively.

Line 63: Repayment of the California Water Fund. The Burns-Porter Act requires the repayment of expenditures from the California Water Fund. Under the financial analysis, expenditures from the California Water Fund would be substantially repaid by 2007. Continuing annual repayments shown thereafter represent the replacement, with operating revenues, of expenditures from the Fund for annual principal and interest payments to the United States for additional conservation storage costs under the assumptions of this analysis.

Line 64: Application of Miscellaneous Receipts to Construction Expenditures. This line matches Line 33. All projected annual accruals of miscellaneous receipts would be totally applied to Water Bond service and construction expenditures through 1982 under the financial analysis. After 1985, all financing for future construction costs would be provided from the California Water Fund under current estimates and assumptions—which could change significantly with future events. After 1982, the portions of annual receipts not applied to Water Bond service would be reserved for financing future construction—shown in Line 66.

Line 65: Subtotal, Repayment of Capital Financing. This line is the subtotal of Lines 62, 63 and 64. Under the assumptions of this analysis, Line 65 demonstrates the schedule by which the Project would eventually repay, with project income, all funds required to finance capital expenditures as shown in Line 34.

Line 66: Reservation for Future Construction. In accordance with the Burns-Proter Act, all project revenues in excess of project operating costs, Water Bond service, and California Water Fund repayment shall be deposited in a reserve account for financing future construction of the State Water Resources Development System. Also included in the amounts shown in Line 66 are those miscellaneous receipts (primarily reimbursements of capital costs allocated to recreation and fish and wildlife enhancement) which accrue too late to be applied to construction expenditures under this analysis.

Within the constraints of timing, accruals to the reserve could be available for financing additional project costs in the event contingencies occur, such as referred to at the beginning of this chapter. However, if additional costs were to be incurred in annual amounts preceding or exceeding the annual amounts shown in Line 66, the required use of full appropriations to the California Water Fund could extend well beyond 1987 (the last year of such full use as indicated in the analysis) and the eventual need for supplemental construction funds could exceed the amount projected in this analysis.

Line 67: Total Application of Miscellaneous Receipts and Project Operating Revenues. This summary of the application of revenues and receipts matches the total accrual of such moneys as shown in Line 53.

TABLE 9: PROJECT

(in thousands

FEATURE	Calendar						
	1962-1973	1974	1975	1976	1977	1978	1979
BY PROJECT FACILITY:							
Feather River Facilities	19,251	5,439	5,215	5,198	5,152	5,133	5,143
North Bay Aqueduct	364	62	55	57	59	64	64
Delta Facilities	0	0	0	0	0	0	0
South Bay Aqueduct	8,797	1,449	1,307	1,376	1,421	1,471	1,492
California Aqueduct:							
Main Line - Delta to A. D. Edmonston	51,236	14,541	16,001	17,062	18,507	19,042	20,319
Main Line - A. D. Edmonston to Lake Perris	10,756	9,944	10,427	12,729	13,333	14,130	14,054
West Branch	3,850	876	895	483	151	57	-407
Coastal Branch	3,857	715	729	726	747	771	782
Additional Conservation Facilities:							
Trans-Basin Diversion Works	0	0	0	0	0	0	0
Payments to Corps for Operating Costs	0	0	0	0	0	0	0
San Joaquin Drainage Facilities	0	0	0	0	0	0	0
Water Quality Monitoring Program-Sacramento-San Joaquin Delta	338	584	411	383	373	373	373
Davis-Grunsky Act Program (continuing administrative costs)	241	65	73	81	88	96	100
TOTAL OPERATING COSTS	98,690	33,675	35,113	38,095	39,831	41,137	41,920
BY COMPOSITION:							
Salaries and Expenses of Headquarters Personnel	62,817	10,711	9,824	9,020	8,305	8,302	8,311
Salaries and Expenses of Field Personnel	66,699	17,253	17,847	17,865	17,865	17,865	17,865
Pumping Power:							
Used by Pumping Plants	24,612	13,003	13,141	17,519	20,686	22,418	24,347
Produced by Recovery Plants	-4,052	-3,361	-3,879	-6,348	-7,492	-7,839	-9,081
Deposits to Replacement Reserves	2,902	862	864	900	900	900	900
Other Costs[a]	1,326	330	330	330	330	330	330
Less, Portion of Costs Incurred During Construction	-55,614	-5,123	-3,014	-1,191	- 763	-839	-752
TOTAL OPERATING COSTS	98,690	33,675	35,113	38,095	39,831	41,137	41,920
BY PROJECT PURPOSE:							
Water Supply and Power Generation	85,723	29,931	31,277	34,152	35,906	37,209	37,976
Recreationand Fish and Wildlife Enhancement	4,488	1,692	1,635	1,728	1,706	1,704	1,715
Flood Control	148	26	25	26	26	26	26
Miscellaneous Purposes:							
Federal Share, San Luis and Delta Facilities	8,051	1,898	1,944	1,950	1,945	1,943	1,946
Other (Davis-Grunsky, Drainage, City of Los Angeles)	280	128	232	239	248	255	257
TOTAL OPERATING COSTS	98,690	33,675	35,113	38,095	39,831	41,137	41,920

a) Includes other costs such as annual Oroville-Thermalito insurance premiums and payments to Corps for operating costs, Additional Conservation Facilities.

OPERATING COSTS

of dollars)

Year											
1980	1981	1982	1983	1984	1985	1986-1995	1996-2005	2006-2015	2016-2025	2026-2035	Total 1962-2035
5,149	5,163	5,215	5,223	5,244	5,253	52,385	52,302	52,310	52,310	52,310	343,395
244	241	244	269	268	267	2,759	2,827	2,996	3,567	3,840	18,247
1,217	1,216	1,209	2,023	2,004	3,158	31,347	23,513	23,646	23,676	23,730	136,739
1,439	1,535	1,543	2,240	2,246	2,230	20,756	20,125	20,381	20,575	20,530	130,913
21,290	20,043	20,247	24,642	25,955	28,093	372,586	446,906	474,218	468,476	471,163	2,530,327
13,889	14,558	16,471	25,941	26,736	26,899	360,040	427,677	458,633	464,939	463,280	2,384,436
-634	-506	-546	-1,573	-2,107	-2,814	-69,575	-97,342	-114,608	-112,207	-111,540	-507,547
762	810	1,237	1,696	1,716	1,755	17,757	20,446	23,207	24,567	24,620	126,900
0	0	0	0	0	0	0	14,064	17,407	17,407	17,407	66,285
0	0	0	0	0	0	0	10,300	14,500	14,500	14,500	53,800
0	0	0	0	0	0	9,360	15,601	15,609	15,613	15,610	71,793
373	373	373	373	373	373	3,730	3,730	3,730	3,730	3,730	23,723
100	100	100	100	100	100	1,000	1,000	1,000	1,000	1,000	6,344
43,829	43,533	46,093	60,934	62,535	65,314	802,145	941,149	993,029	998,153	1,000,180	5,385,355
8,295	8,300	8,343	9,203	9,218	9,218	90,795	81,865	85,971	84,914	84,927	598,339
18,700	18,711	19,433	19,633	19,633	20,179	210,936	229,760	229,760	229,760	229,760	1,419,524
24,289	24,171	27,725	45,339	47,348	49,639	703,706	858,671	914,874	921,122	922,220	4,674,830
-8,475	-8,661	-10,591	-14,405	-14,785	-14,876	-214,760	-252,476	-265,309	-265,376	-264,460	-1,376,226
935	935	935	935	980	993	9,933	9,933	9,933	9,933	9,933	63,606
330	330	330	330	330	330	3,300	13,600	17,800	17,800	17,800	75,586
-245	-253	-82	-101	-189	-169	-1,765	-204	0	0	0	-70,304
43,829	43,533	46,093	60,934	62,535	65,314	802,145	941,149	993,029	998,153	1,000,180	5,385,355
39,047	38,836	41,295	55,853	57,403	59,743	736,577	869,382	921,076	926,447	928,410	4,966,243
2,016	1,929	2,028	2,309	2,364	2,530	25,848	25,814	25,991	25,737	25,800	157,034
26	26	26	30	30	30	286	270	273	270	270	1,840
2,480	2,483	2,484	2,484	2,479	2,753	27,482	27,488	27,490	27,490	27,490	172,280
260	259	260	258	259	258	11,952	18,195	18,199	18,209	18,210	87,958
43,829	43,533	46,093	60,934	62,535	65,314	802,145	941,149	993,029	998,153	1,000,180	5,385,355

TABLE 10: ANNUAL SERVICE ON BONDS SOLD AS OF DECEMBER 31, 1973

(in thousands of dollars)

Calendar Year	Bonds Sold as of December 31, 1972						Series T Water Bonds Sold During 1973		Total Bonds Sold as of December 31, 1973	
	Series A through S Water Bonds (a		Oroville Revenue Bonds		Devil Canyon-Castaic Revenue Bonds					
	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest
1964	0	3,333	0	0	0	0	0	0	0	3,333
1965	0	11,114	0	0	0	0	0	0	0	11,114
1966	0	16,742	0	0	0	0	0	0	0	16,742
1967	0	26,912	0	0	0	0	0	0	0	26,912
1968	0	37,760	0	3,876	0	0	0	0	0	41,636
1969	0	47,461	0	10,448	0	0	0	0	0	57,909
1970	0	53,291	0	13,145	0	0	0	0	0	66,436
1971	0	63,035	0	13,145	0	0	0	0	0	76,180
1972	0	69,148	1,260	13,112	0	0	0	0	1,260	82,260
1973	1,200	69,089	1,330	13,042	0	7,708	0	259	2,530	90,098
1974	3,000	69,014	1,400	12,969	0	7,708	0	519	4,400	90,210
1975	5,000	68,848	1,475	12,893	0	7,708	0	518	6,475	89,967
1976	7,000	68,614	1,555	12,811	0	7,708	0	519	8,555	89,652
1977	10,200	68,255	1,635	12,727	0	7,708	0	518	11,835	89,208
1978	12,700	67,765	1,725	12,637	0	7,708	0	519	14,425	88,629
1979	13,650	67,147	1,815	12,540	0	7,708	0	518	15,465	87,913
1980	16,050	66,422	1,915	12,441	0	7,708	0	519	17,965	87,090
1981	18,050	65,564	2,020	12,334	0	7,708	0	518	20,070	86,124
1982	19,250	64,616	2,130	12,221	0	7,708	0	519	21,380	85,064
1983	20,100	63,617	2,245	12,101	900	7,708	420	505	23,665	83,931
1984	21,340	62,564	2,365	11,982	955	7,647	445	478	25,105	82,671
1985	22,090	61,457	2,485	11,862	1,010	7,583	465	449	26,050	81,351
1986	22,830	60,305	2,605	11,737	1,070	7,515	490	423	26,995	79,980
1987	23,880	59,113	2,735	11,602	1,135	7,442	515	398	28,265	78,555
1988	24,970	57,868	2,870	11,464	1,205	7,366	540	372	29,585	77,070
1989	26,160	56,623	3,015	11,314	1,275	7,284	565	345	31,015	75,566
1990	27,210	55,376	3,175	11,152	1,355	7,198	595	316	32,335	74,042
1991	28,000	54,088	3,335	10,983	1,435	7,107	625	285	33,395	72,463
1992	28,740	52,781	3,510	10,806	1,520	7,010	655	253	34,425	70,850
1993	30,190	51,459	3,695	10,618	1,610	6,907	690	219	36,185	69,203
1994	31,580	50,079	3,885	10,421	1,705	6,799	725	183	37,895	67,482
1995	32,520	48,645	4,085	10,215	1,810	6,684	760	145	39,175	65,689
1996	33,570	47,173	4,300	9,996	1,920	6,561	800	106	40,590	63,836
1997	34,460	45,690	4,525	9,767	2,035	6,432	835	65	41,855	61,954
1998	35,800	44,204	4,760	9,524	2,155	6,295	875	22	43,590	60,045
1999	37,600	42,655	5,005	9,265	2,285	6,160	0	0	44,890	58,080
2000	38,890	41,033	5,280	8,987	2,420	6,040	0	0	46,590	56,060
2001	39,980	39,351	5,565	8,693	2,565	5,912	0	0	48,110	53,956
2002	41,120	37,620	5,865	8,384	2,720	5,773	0	0	49,705	51,777
2003	42,970	35,835	6,180	8,057	2,885	5,626	0	0	52,035	49,518
2004	45,160	33,957	6,520	7,714	3,055	5,470	0	0	54,735	47,141
2005	46,450	31,995	6,870	7,349	3,240	5,305	0	0	56,560	44,649
2006	47,740	29,971	7,245	6,968	3,435	5,130	0	0	58,420	42,069
2007	49,230	27,883	7,635	6,564	3,640	4,945	0	0	60,505	39,392
2008	51,220	25,727	8,050	6,138	3,860	4,749	0	0	63,130	36,614
2009	53,560	23,478	8,490	5,690	4,090	4,540	0	0	66,140	33,708
2010	55,250	21,134	8,950	5,216	4,335	4,319	0	0	68,535	30,669
2011	56,740	18,717	9,435	4,717	4,595	4,085	0	0	70,770	27,519
2012	58,530	16,216	9,945	4,192	4,875	3,837	0	0	73,350	24,245
2013	60,370	13,676	10,485	3,636	5,165	3,574	0	0	76,020	20,886
2014	57,900	11,244	11,055	3,051	5,475	3,303	0	0	74,430	17,598
2015	53,690	8,838	11,655	2,435	5,805	3,015	0	0	71,150	14,288
2016	46,130	6,626	12,290	1,782	6,150	2,710	0	0	64,570	11,118
2017	38,060	4,614	12,960	1,097	6,520	2,388	0	0	57,540	8,099
2018	25,350	2,980	13,665	371	6,910	2,045	0	0	45,925	5,396
2019	16,890	1,778	0	0	7,325	1,682	0	0	24,215	3,460
2020	17,320	934	0	0	7,765	1,298	0	0	25,085	2,232
2021	8,510	301	0	0	8,230	890	0	0	16,740	1,191
2022	1,800	48	0	0	8,725	458	0	0	10,525	506
2023	0	0	0	0	0	0	0	0	0	0
2024	0	0	0	0	0	0	0	0	0	0
2025	0	0	0	0	0	0	0	0	0	0
TOTAL	1,540,000	2,351,783	244,995	466,191	139,165	283,872	10,000	9,490	1,934,160	3,111,336

a) Series F interest payments due January 1 are shown dispersed on that date rather than December 31 as was shown in Bulletin 132-72, Table 13.

TABLE 11: ANNUAL SERVICE ON ASSUMED FUTURE BOND SALES

(in thousands of dollars)

Calendar Year	Series U through W Water Bonds		Supplemental Revenue Bonds		Total Future Bond Sales	
	Principal	Interest	Principal	Interest	Principal	Interest
1974	0	0	0	0	0	0
1975	0	507	0	0	0	507
1976	0	1,014	0	0	0	1,014
1977	0	1,675	0	0	0	1,675
1978	0	1,675	0	1,149	0	2,824
1979	0	1,675	0	2,299	0	3,974
1980	0	1,675	0	2,299	0	3,974
1981	0	1,675	0	2,299	0	3,974
1982	0	1,675	0	2,299	0	3,974
1983	0	1,675	0	2,299	0	3,974
1984	420	1,675	0	2,299	420	3,974
1985	865	1,648	0	2,299	865	3,947
1986	1,458	1,594	0	2,299	1,458	3,893
1987	1,535	1,504	0	2,299	1,535	3,803
1988	1,612	1,416	0	2,299	1,612	3,715
1989	1,694	1,331	265	2,290	1,959	3,621
1990	1,777	1,249	286	2,271	2,063	3,520
1991	1,864	1,164	306	2,251	2,170	3,415
1992	1,957	1,073	326	2,230	2,283	3,303
1993	2,056	977	326	2,207	2,382	3,184
1994	2,160	876	367	2,184	2,527	3,060
1995	2,269	769	388	2,158	2,657	2,927
1996	2,385	655	408	2,131	2,793	2,786
1997	2,506	535	428	2,103	2,934	2,638
1998	2,626	411	449	2,073	3,075	2,484
1999	2,753	282	469	2,042	3,222	2,324
2000	1,964	149	510	2,008	2,474	2,157
2001	1,141	55	531	1,973	1,672	2,028
2002	0	0	571	1,936	571	1,936
2003	0	0	592	1,896	592	1,896
2004	0	0	632	1,856	632	1,856
2005	0	0	673	1,815	673	1,815
2006	0	0	714	1,772	714	1,772
2007	0	0	734	1,727	734	1,727
2008	0	0	796	1,679	796	1,679
2009	0	0	836	1,633	836	1,633
2010	0	0	897	1,586	897	1,586
2011	0	0	938	1,536	938	1,536
2012	0	0	999	1,484	999	1,484
2013	0	0	1,061	1,429	1,061	1,429
2014	0	0	1,122	1,364	1,122	1,364
2015	0	0	1,203	1,307	1,203	1,307
2016	0	0	1,265	1,240	1,265	1,240
2017	0	0	1,346	1,170	1,346	1,170
2018	0	0	1,428	1,095	1,428	1,095
2019	0	0	1,509	1,016	1,509	1,016
2020	0	0	1,611	934	1,611	934
2021	0	0	1,693	846	1,693	846
2022	0	0	1,795	753	1,795	753
2023	0	0	1,917	655	1,917	655
2024	0	0	2,019	551	2,019	551
2025	0	0	2,142	441	2,142	441
2026	0	0	2,264	324	2,264	324
2027	0	0	2,407	200	2,407	200
2028	0	0	2,570	68	2,570	68
2029	0	0	0	0	0	0
2030	0	0	0	0	0	0
TOTALS	33,042	30,609	40,793	84,373	73,835	114,982

Castaic Lake
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APPENDIX B

DATA AND COMPUTATIONS USED IN DETERMINING WATER CHARGES FOR 1975

APPENDIX B - DATA AND COMPUTATIONS USED IN DETERMINING WATER CHARGES FOR 1975

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APPENDIX B
DATA AND COMPUTATIONS USED IN DETERMINING WATER CHARGES FOR 1975

Those statements of charges to be furnished by the State on or before July 1 of each year are described in Article 29(e) of the "Standard Provisions for Water Supply Contract", which provides that:

> "...All such statements shall be accompanied by the latest revised copies of the document amendatory to Article 22 and of Tables B C D E F and G of this contract, together with such other data and computations used by the State in determining the amounts of the above charges as the State deems appropriate."

Compliance with Article 29(e) requires a comprehensive annual redetermination of all water supply aspects of the State Water Project. This annual redetermination is specifically provided for in Article 22(f), concerning the Delta Water Charge per acre-foot of future entitlements, and in Article 28, with regard to annual Transportation Charges for the entire project repayment period.

This appendix documents such a redetermination for the substantiation of water charges to be paid by contractors during calendar year 1975 based on all aspects of the State Water Project as known on January 1, 1974.

The redetermined Transportation Charges derived herein are those calculated prior to the application of certain credits derived from contractor payments under supplemental arrangements, including the following:

1. Payments for state construction of requested delivery structures which exceed the actual construction costs of such structures.
2. Payments for state construction of requested excess capacity in project transportation facilities which exceed the actual construction costs of such excess capacity.
3. Payments under the Devil Canyon-Castaic Contract.

The redetermined Transportation Charges that are derived herein for prior years, through 1973, do not equal those amounts actually paid by contractors under statements previously furnished by the State. The indicated overpayments or underpayments (the differences between the redetermined amounts and those under statements previously furnished) are accumulated, with appropriate interest credits or debits, and are deducted from or added to the redetermined amounts of the Transportation Charge to be paid by the respective contractors during 1975 (except for the capital cost component associated with agricultural use of Kern County Water Agency). These adjustment computations are shown in the attachments accompanying the statement of charges furnished to each contractor and are reflected in the revised copies of Tables C through G of the contract, also furnished with the statement of charges.

Under the formula for computing the Delta Water Rate, Article 22(f) provides that all adjustments for prior overpayments or underpayments of the Charge are accounted for in the redetermination of the Rate. Since the redetermined Rate applies to all future entitlements, such adjustments are effectively amortized during the remainder of the project repayment period. This appendix includes a determination of the Delta Water Rate for 1975. However, projected annual Delta Water Charges are not shown herein since such a projection is not required by the contracts.

This redetermination generally excludes those charges associated with project water service other than the Delta Water Charge and the Transportation Charge. These other charges (and the manner by which such charges are treated herein) are:

- Advances of funds pursuant to Article 24(d) of the Standard Provisions, for excess capacity constructed by the State at the request of contractors. (Information on required advances is included herein because these charges are covered in the July 1 statements. However, any advances which are projected to exceed the additional capital costs for such excess capacity in completed aqueduct reaches have not been credited to future capital cost components of the Transportation Charges. The application of these credits are shown in the copies of revised Tables D and G which are furnished with the statements of charges.)
- Advances of funds pursuant to Article 10(d) of the Standard Provisions, for delivery structures (turnouts) constructed by the State at the request of contractors. (Partial information is included herein concerning the actual and projected capital costs of such delivery structures. Statements concerning these costs, and data in support of such statements, are furnished to the appropriate contractors at various times and are not part of the July 1 statements.)

Payments for the sale and service of surplus project water to contractors pursuant to Article 21 of the Standard Provisions and the so-called "Agricultural and Ground Water Replenishment" provisions.

- Payments for the sale and service of surplus project water to entities other than contractors pursuant to Article 21 of the Standard Provisions. (Payments of such water are based on prices greater than the unit variable OMP&R costs involved. Net revenues resulting from "noncontractor" service are applied in the manner described on page 24, Bulletin 132-71. Such prices are generally based on the unit rates shown in the last table of this appendix.)

Payments under the Devil Canyon-Castaic Contract for the costs of the Devil Canyon and Castaic Facilities allocable to power generation. (Charges under the Contract are billed separately from those under the Water Supply Contract. The treatment of such charges in relation to redetermined Transportation Charges as derived herein are shown in special attachments to the bills of the affected six contractors.)

The computational procedure and relationships among tabulations of this redetermination are outlined on Figure B-1. All tables indicated thereon are found at the end of this appendix—all figures indicated thereon are interspersed among related narrative sections of this appendix.

Bases for Allocating Reimbursable Costs Among Contractors

This section concerns how reimbursable costs of aqueduct reaches of the project transportation facilities are allocated among contractors for determining the Transportation Charge. Reimbursable costs of the project conservation facilities are not allocated directly among contractors since, conceptually, the Delta Water Charge is a unit commodity charge rather than a use-of-facilities charge.

Allocation of reimbursable costs of aqueduct reaches among contractors is based on two specific applications of the Proportionate Use of Facilities Method:

Allocations of reimbursable capital costs and minimum OMP&R costs of each reach are based on the proportionate maximum use of that reach by the respective contractors under planned conditions of full project development.

- Allocations of reimbursable variable OMP&R costs of each reach are based on the proportionate actual annual use of that reach by the respective contractors.

Aqueduct Reaches

The reaches by which the reimbursable costs of project transportation facilities are allocated among contractors are shown on the chart at the end of this appendix.

During 1973, there was one change of the definition of reaches. On the South Bay Aqueduct, South Livermore Turnout was shifted approximately 1,200 feet down-aqueduct at the request of Alameda County Flood Control and Water Conservation District, Zone 7. The change increases the reimbursable costs assigned to Reach 6 and decreases the reimbursable costs assigned to Reach 7 by like amounts.

Proportionate Maximum Use of Facilities

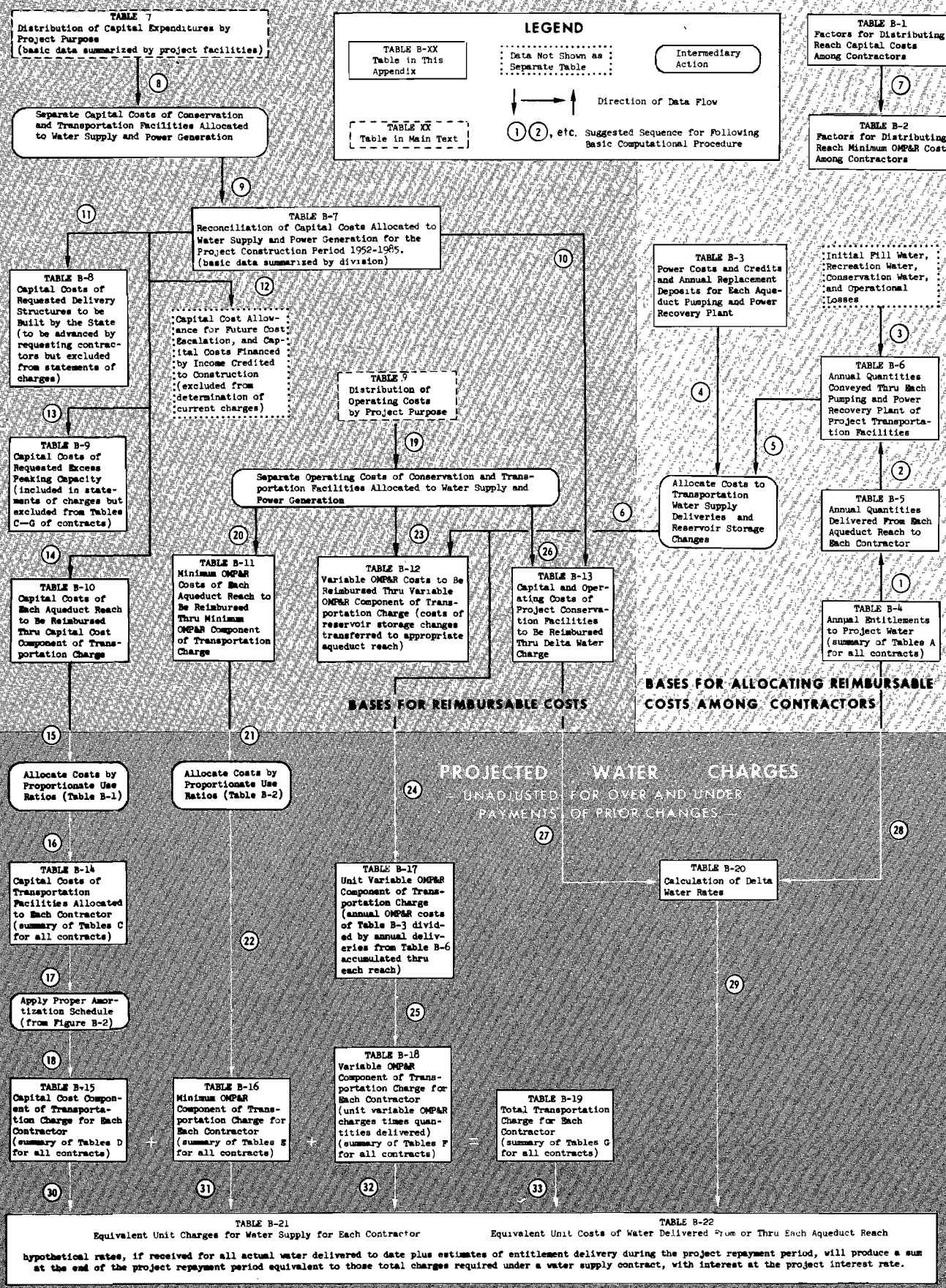
The derivation of ratios that represent the proportionate maximum use of each aqueduct reach by the respective contractors was last described in Bulletin 132-70. (See pages 103-106 for a description of the computational procedure; pages 116-117 for a summary of aqueduct reaches, reach delivery quantities, and reach capacities; and pages 118-173 for a detailed derivation of factors for each contractor and for each aqueduct reach.) Such factors are still valid—except for the first reach of the California Aqueduct and for reaches of the South Bay Aqueduct. Revised ratios for these reaches are described in Bulletin 132-72 (see pages 106-111) and account for certain contract amendments executed early in 1972 regarding South Bay Aqueduct use (see pages 33-34, Bulletin 132-73).

Table B-1 presents a summary of all reach ratios currently applicable to reimbursable capital costs. Table B-2 presents a corresponding summary applicable to reimbursable minimum OMP&R costs. Requested excess capacity is ignored in the former (since the associated capital costs are paid for on an incremental-cost basis and not a proportionate-use basis) but is accounted for in the latter

Proportionate Annual Use of Facilities

Article 26(a) of the Contract provides that the variable OMP&R component of the Transportation Charge shall return to the State those costs which are incurred in an amount which depends upon and varies with the amount of project water delivered to the contractor. (The minimum OMP&R component returns those operating costs which are incurred in an amount which does not vary with deliveries.) The Article goes on to explain that all such costs for a reach for a given year shall be allocated among contractors in proportion to the respective delivery

FIGURE B-1. RELATIONSHIPS OF DATA USED TO SUBSTANTIATE STATEMENTS OF CHARGES



quantities conveyed through the reach during the year.

Under the State's procedure, variable OMP&R costs orginate with certain operating costs of project pumping and power recovery plants. However, these costs are incurred in amounts which generally vary with the total conveyance through the plants—not with the portion thereof enroute directly to contractor turnouts. In addition to direct deliveries, conveyance may include the following:

a. Water applied in down-aqueduct onshore recreation developments;

b. Water stored in the initial fill of down-aqueduct reservoirs;

c. Water lost through evaporation and seepage from down-aqueduct reaches and reservoirs; and

d. Water stored during a year in excess of storage withdrawals, subsequent to initial fill, in down-aqueduct reservoirs.

Under the State's procedure, certain operating costs for a plant for a given year are allocated among direct deliveries and (a) through (d) above in proportion to the respective quantities conveyed through the plant during the year. Plant costs that are allocated to direct deliveries are designated as variable OMP&R costs to be repaid by contractors for the reach in which the plant is located. The remaining plant costs that are allocated to the quantities of (a) through (d) above are designated as follows:

a. A portion of the joint OMP&R costs of the reach containing the plant allocated to recreation.

b. A portion of the joint capital costs of the respective down-aqueduct reservoirs.

c. and (d) A portion of the joint minimum OMP&R costs of the respective down-aqueduct reaches and reservoirs.

Concerning (d) above, in years when storage in down-aqueduct reservoirs is decreased for the purpose of making deliveries, associated variable OMP&R costs are established for the respective reservoirs with an offsetting credit applied to the minimum OMP&R costs of each. Such variable OMP&R costs are calculated so as to be equivalent to the original plant costs of conveying the water placed in storage. Under current procedures, the unit cost of conveying water placed in storage is assumed to be equivalent to the unit cost of conveying water to the storage site during years when such storage is released.

Special Treatment of Certain Plant Costs. As indicated in the preceding section, the State's procedure requires an initial apportionment of certain plant costs among capital cost minimum OMP&R, and variable OMP&R components. This apportionment is based on annual quantities conveyed through the respective plants for various down-aqueduct functions. The plant costs which are to be so apportioned are summarized in Table B-3 and include the following items:

- Costs of power and energy used, exclusive of associated power transmission and station service charges. (Transmission and station service costs are classified as minimum OMP&R costs.)
- Credits for power and energy produced (treated as negative costs).
- Annual payments to sinking fund reserves to finance periodic replacement of plant machinery components having economic lives shorter than the project repayment period.

Excluded from the above are costs for salaries of plant operations and maintenance personnel—classified as minimum OMP&R costs.

Also excluded from B-3 are $527,000 of plant power and energy costs associated with surplus water service during the eight-month period May 1, 1973, through December 31, 1973. Prior to May 1, 1973, surplus water service was charged the same unit variable OMP&R component as entitlement water service. Until that date, surplus water deliveries are included in the "Deliveries—Water Supply" described in the following section. Beginning May 1, 1973, the rate structure for surplus water service was significantly changed (see "Contract Amendments, Water Contracts Management", Chapter III). Power and energy costs of pumping plants assigned directly to surplus water service for the last eight months of 1973 are as follows: Delta, $217,800; South Bay, $11,-500; Dos Amigos, $175,600; Las Perillas and Badger Hill $55,900; Buena Vista, $51,400; Wheeler Ridge, $12,600; Wind Gap, $1,700; and Tehachapi, $500.

Water Conveyance. Table B-4 summarized the schedules of annual entitlements as set forth in Table A of each contract. Table B-5 presents a summary of the actual and projected water quantities delivered and to be delivered from each aqueduct reach to each contractor. These water delivery quantities do not necessarily correspond with annual entitlements. (For a comparison of actual and projected delivery quantities v. annual entitlements, see Table 1, Chapter III.)

Table B-6 summarized the quantities conveyed or to be conveyed through each aqueduct pumping plant or powerplant for each year of the project repayment period and for each of the following functions:

- Made available to contractors at down-aqueduct delivery structures ("Deliveries, Water Supply").

  Required to initially fill down-aqueduct reaches and reservoirs to operational levels ("Initial Fill Water").

- Consumed in down-aqueduct project-associated recreation developments ("Deliveries, Recreation").
- Lost through evaporation and seepage from all down-aqueduct reaches ("Operational Losses").

  Placed in down-aqueduct reservoir storage subsequent to the initial fill of such storage ("Reservoir Storage Changes").

In addition, Table B-6 summarizes the net annual water amounts stored and to be stored in San Luis Reservoir (a project conservation facility with costs reimbursed through the Delta Water Charge) and lost and to be lost through evaporation and seepage from the Reservoir and from the water conservation portion of the Aqueduct (all such quantities included under the heading "Conservation Water").

The Delta Pumping Plant is a joint project transportation-conservation facility. Under the State's procedure, power and replacement costs of the Delta Pumping Plant which are apportioned to the conveyance of annual "conservation water" quantities are transferred to the capital costs of San Luis Reservoir (during initial fill) or to the minimum OMP&R costs of San Luis Reservoir (subsequent to initial fill).

In those years when releases from San Luis Reservoir cause a net annual storage depletion in order to make deliveries to contractors down-aqueduct therefrom, a portion of the minimum OMP&R costs of the Reservoir is transferred to the transportation variable OMP&R costs of the Delta Pumping Plant. This transfer is in an amount equal to the variable OMP&R cost per acre-foot of delivery through the Delta Pumping Plant for that year, multiplied by the acre-feet of deliveries derived from San Luis Reservoir storage for that year.

Bases for Reimbursable Costs

Tables 7 and 9 (Chapter V) summarize the capital and OMP&R costs of all project facilities, respectively, and the allocation of these costs among the various project purposes. Allocation percentages are shown for each project facility in the tabulation below. For the most part, these percentages are preliminary and subject to future revision and are applicable to the State's costs of the respective facilities. This redetermination is concerned only with the costs of project facilities that are allocated to water supply and power generation.

Project Facilities	Water Supply and Power Generation		All Other Purposes (Nonreimbursable)	
	Capital Costs	Minimum OMP&R Costs	Capital Costs	Minimum OMP&R Costs
	(in percent)			
Conservation Facilities				
Frenchman Dam and Lake	21.5	0	78.5	100.0
Antelope Dam and Lake	0	0	100.0	100.0
Grizzly Valley Dam and Lake Davis	5.1	8.8	94.9	91.2
Abbey Bridge Dam and Reservoir	0	0	100.0	100.0
Dixie Refuge Dam and Reservoir	0	0	100.0	100.0
Oroville Division[a]	97.1	99.0	2.9	1.0
California Aqueduct	96.5	94.1	3.5	5.9
Delta Facilities	86.0	86.0	14.0	14.0
Additional Conservation Facilities	72.5	72.5	27.5	27.5
Transportation Facilities				
California Aqueduct, excluding Coastal Branch	97.0	92.9	3.0	7.1
South Bay Aqueduct:				
Del Valley Dam and Lake Del Valle	25.2	22.0	74.8	78.0
North Bay Aqueduct	100.0	100.0	0	0

a) Percentages shown are applicable to the total costs of the Division excluding specific power costs of Edward Hyatt and Thermalito Powerplants and Switchyards. Federal reimbursements for flood control are treated as negative costs.

Capital Costs

Table B-7 presents a reconciliation of the estimated total capital costs of each project conservation facility and each aqueduct reach as estimated for (a) the current financial analysis and (b) the current redetermination of water charges.

Cost of Delivery Structures. Costs of delivery structures constructed by the State are paid directly by each contractor requesting such structures (see pages 88 and 89, Bulletin 132-71, for a description of the method of payment for the capital costs of a delivery structure constructed by the State). Capital costs of all delivery structures constructed and to be constructed by the State are shown for each contractor in Table B-8. However, these costs are not to be construed as preliminary estimates or final invoices to be furnished by the State. The following tabulation indicates the general location and construction status of delivery structures requested as of the end of 1973:

Project Facility	Number of Delivery Structures					
	Requested by Agencies	Under Construction		Completed		Stub Only[a]
		by State	by Agencies	by State	by Agencies	
Oroville Area	6	0	0	0	5	1
North Bay Aqueduct (Phase I)	2	0	0	1	0	1
South Bay Aqueduct	18	0	0	8	5	5
California Aqueduct:						
North San Joaquin Division	4	0	0	0	4	0
San Luis Division (served by the federal Central Valley Project)						
South San Joaquin Division	40	1	5	8	16	10
Tehachapi Division	1	0	0	0	0	1
Mojave Division	14	0	0	0	1	13
Santa Ana Division	10	1	1	3	2	3
West Branch	5	0	0	1	1	3
Coastal Branch (Phase I)	2	0	0	1	1	0
Total	102	2	6	22	35	37

a) Will be completed at a later date. Temporary facilities for delivery of water have been installed at several of the stubs.

Costs of Requested Excess Capacity. Amendments have been added to the contracts of the following three agencies which provide for excess capacity in the project transportation facilities: The Metropolitan Water District of Southern California, San Gabriel Valley Municipal Water District, and Antelope Valley-East Kern Water Agency. Listed in Table B-9 are estimates of the annual amounts for:

Additional costs incurred by the State for requested excess capacity.

The required annual advances, by water contractors, of funds for such costs.

Any credits for those total advances which are estimated to be in excess of additional costs and which will be applied to the respective contractors' accounts (generally, to the contractors' next installment of the capital cost component of the Transportation Charge).

Under Amendment 2 of Metropolitan's contract, 809 cubic feet per second of excess capacity originally was constructed in reaches of the West Branch at the District's request. Under Amendment 7, such capacity was reclassified as basic capacity of the project transportation facilities. This aspect of Amendment 7 required a $16.3 million prepayment of the District's capital cost component of the Transportation Charge in lieu of advances of funds for the originally requested capacity.

The application of estimated credits for any contractor advances that are estimated to be in excess of actual costs and (concerning Metropolitan's Amendment 7) for prepayments of the capital cost component is shown in the attachments to the respective statements of charges.

Amendment 5 of Metropolitan's contract includes a provision whereby the additional costs to be in-

curred because of modifications to the Santa Ana Valley Pipeline, required for enlargement of Lake Perris, at the request of Metropolitan are to be allocated to the District and returned to the State through payments of the Transportation Charge. The estimated additional costs to be repaid through the District's capital cost component for the aqueduct reach from Devil Canyon Powerplant to Barton Road total $6.7 million, as shown on page 98, Bulletin 132-72.

Annual Operating Costs

The estimated operating costs that Table 9 shows as allocable to water supply and power generation will be returned to the State through payments of the minimum and variable OMP&R components of Delta Water and Transportation Charges and through a portion of the revenues from electric power sales.

All reimbursable operating costs of conservation facilities are returned to the State through payments of the minimum OMP&R component of the Delta Water Charge.

The composition of those operating costs that are to be reimbursed through payments of the variable OMP&R component of the Transportation Charge was previously described in the section entitled "Special Treatment of Certain Plant Costs". Therefore, the remainder of this section centers on those costs to be reimbursed through payments of the minimum OMP&R component of the Transportation Charge.

Minimum Operating Costs. The following types of operating costs are considered to be incurred in annual amounts that do not vary with the water quantities delivered to the contractors and are therefore classified as minimum OMP&R costs:

- All direct labor charges for field operations and maintenance personnel, including associated indirect costs.

  Electric power transmission and station service costs.

- All costs for equipment, materials, and supplies and for replacement of works other than rotating machinery of pumping and power recovery plants.

  Portions of the power and replacement costs of all up-aqueduct pumping plants and powerplants that are allocable to the annual conveyance of water subsequently (a) lost to evaporation and seepage from respective aqueduct reaches or (b) placed into storage in respective reservoirs of the project transportation facilities (after initial fill).

  Credits, which offset those costs referred to in (b) above, for deliveries derived from reservoir storage.

  A distributed share of general and direct operating costs which cannot be identified solely with one facility or aqueduct reach.

Concerning the allocation of general operating costs among facilities and reaches, this redetermination follows the procedures described on pages 111-113, Bulletin 132-70.

Costs to be Returned to the State Through Payments Under the Transportation Charge and the Devil Canyon-Castaic Contract

Table B-10 presents the actual and projected annual capital costs of each aqueduct reach that will eventually be returned to the State, with interest, through contractor payments of the capital cost component under the Transportation Charge and of debt service under the Devil Canyon-Castaic Contract. The actual and projected costs to be reimbursed through payments of the minimum OMP&R component under the Transportation Charge and of allocated operating costs under the Devil Canyon-Castaic Contract are shown in Tables B-11. Variable OMP&R costs, shown in Table B-12, constitute the portion of those costs shown in Table B-3 which are allocable to the water supply delivery quantities shown in Table B-6 and are reimbursed through payments of the variable OMP&R component of the Transportation Charge.

Costs to Be Returned Through Payments Under the Delta Water Charge and the Oroville Power Sale Contract

Summarized in Table B-13 are the actual and projected capital and operating costs of project conservation facilities that are to be reimbursed through payments under (a) the Delta Water Charge and (b) Oroville power sales. Not included in Table B-13 are the credits to be applied to the reimbursable capital costs of the project conservation facilities pursuant to negotiated settlements concerning the magnitude of incurred planning costs for the period 1952 through 1970 (see section entitled "Negotiation of Water Charge Settlements", Chapter III). These credits are as shown below:

Year	Credit	Year	Credit
Thru 1960	$4,850,000	1966	$748,649
1961...	431,527	1967...	806,910
1962...	479,280	1968...	427,688
1963...	478,743	1969...	294,210
1964...	751,330	1970...	230,790
1965...	763,541	Total...	$10,262,668

This section summarizes the redetermination of past and projected components of the Transportation Charge for the annual revision of Tables C through G that are included in each water contract. This section also includes a derivation of future unit Delta Water Charges. Equivalent unit charges for each acre-foot of entitlement water service are also summarized herein for (a) each contractor and (b) each aqueduct reach.

Transportation Charges

The accumulation of allocated costs of each aqueduct reach to each contractor forms the basis for the annual components of the Transportation Charge.

Allocated Capital Costs. Table B-14 summarizes each contractor's share of the capital costs of aqueduct reaches presented in Table B-10, as determined by application of proportionate-use ratios set forth in Table B-1. The resulting allocated costs are to be set forth in Table C of the respective contracts.

Prepayments of the capital cost component, such as required under Metropolitan's Amendment 7, are shown as negative capital costs in Metropolitan's Table C but are ignored in Table B-14. Furthermore, both Table B-14 and Tables C of the six contractors located below the Devil Canyon and Castaic Facilities include the capital costs that are reimbursable under the Devil Canyon Castaic Contract.

Capital Cost Components. Criteria as to the types of amortization schedules applicable to the allocated capital costs for the respective contractors are summarized in Figure B-2. The accounting of interest charges included in the capital cost components of the Transportation Charge follows the procedure established in Settlement Letter No. 2.

Table B-15 summarizes the capital cost components of the Transportation Charge for each contractor for each year of the project repayment period. These estimated components, subsequently adjusted for prior overpayments or underpayments, are to be set forth in Table D of the respective contracts. Credits for the portion of advance payment for excess capacity that exceed the actual additional costs of such capacity are applied to reduce the payment amounts set forth in Table D, but are ignored in Table B-15. Both Table B-15 and Tables D of the six Devil Canyon-Castaic contractors include the debt service payments due under the Devil Canyon-Castaic Contract.

Minimum OMP&R Components. Table B-16 summarizes the minimum OMP&R components of the Transportation Charge for the contractor for each year of the project repayment period. These estimated components, subsequently adjusted for prior overpayments or underpayments, are to be set forth in Tables E of the respective contracts. These components represent the accumulated share of the reach costs presented in Table B-11, as determined by application of the proportionate-use ratios shown for each reach and for each contractor in Table B-2. However, under operating agreements with Kern County Water Agency concerning the early installation of units by Berrenda Mesa Water District in Las Perillas and Badger Hill Pumping Plants (see page 7, Bulletin 132-71), the Agency is to be billed any additional operating costs caused by early installation of the units which would otherwise increase the charges to downstream contractors. Under this requirement, the following minimum OMP&R costs of Reach 31A are assigned directly to the Agency with the remaining reach costs allocated by application of the proportionate-use ratios:

Year	Direct Charge	Year	Direct Charge
1969....	$45,300	1978....	$45,100
1970....	46,300	1979....	45,300
1971....	142,400	1980....	45,300
1972....	88,100	1981....	45,600
1973....	72,900	1982....	45,400
1974....	89,800	1983....	45,600
1975....	89,800	1984....	45,400
1976....	89,800	1985....	45,400
1977....	45,100	Total	$1,072,600

Both Table B-16 and Tables E of the six Devil Canyon-Castaic contractors include the portion of operating costs payable under the Devil Canyon-Castaic Contract.

Variable OMP&R Components. Article 26(a) of the Standard Provisions specifies the following procedure for calculating the variable OMP&R component of the Transportation Charge:

- An annual charge per acre-foot of projected water deliveries to all contractors served from or through each reach is determined so as to return to the State the projected variable OMP&R costs to be incurred for each reach.
- The total annual variable OMP&R component for any contractor for a given reach is obtained by multiplying the unit charge associated with that reach by the quantity of water actually delivered from or through the reach to the contractor.

Table B-17 presents a summary of the actual and projected total variable OMP&R costs for each acre-foot of conveyance through each aqueduct pumping plant and powerplant for each year of the project repayment period. The data summarized in Table B-17 have been derived by dividing the power costs

FIGURE B-2: CRITERIA FOR AMORTIZATION SCHEDULES

Contractor	Amortization of Allocated Capital Costs in 50 Equal Annual Installments, With Initial Payment Due in:								
	1963	1964	1965	1966	1968	1970	1973	a	b
Alameda County FC&WCD, Zone 7	● c								
Alameda County WD	●								
Antelope Valley-East Kern WA	●								
Castaic Lake WA		●							
County of Butte									
County of Kings					●				
City of Yuba City									
Coachella Valley County WD		●							
Crestline-Lake Arrowhead WA		●							
Desert WA	● d								
Devil's Den WD								●	
Dudley Ridge WD								●	
Empire West Side ID								●	
Hacienda WD								●	
Kern County WA: Ag use								●	
M&I use			●						
Littlerock Creek ID		●							
Mojave WA		●							
Napa County FC&WCD				●					
Oak Flat WD								●	
Palmdale WD		●							
Plumas County FC&WCD						●			
San Bernardino Valley MWD	●								
San Gabriel Valley MWD	● d								
San Gorgonio Pass WA	● d								
San Luis Obispo County FC&WCD		● e							
Santa Barbara County FC&WCD		● e							
Santa Clara Valley WD	●								
Solano County FC&WCD							●		
The Metropolitan WD-SC	●								
Tulare Lake Basin WSD								●	
Ventura County FCD		●							

a Amortization of allocated capital costs on basis of equivalent unit rate applied to annual entitlements (Table B-4) within project repayment period.

b Payments on Delta Water Charge only.

c Principal payments on each annual capital cost prior to 1971 delayed until calendar year 1972, except payments for 1963.

d Deferred and added to 1964 payment with accrued interest.

e Exception: all principal and interest payments for costs of "Coastal Stub" are assumed deferred until 1976.

(and credits) and replacement costs shown in Table B-12 by the delivery quantities shown in Table B-6.

However, certain costs included in Table B-12 "extra peaking service," which would otherwise constitute variable OMP&R costs, are assigned directly to contractors requesting this type of service (see page 21, Bulletin 132-71, and Water Service Contractors Council Memo No. 593, July 10, 1970). These costs are not allocated in accordance with annual delivery quantities and are excluded from the unit charges shown in Table B-17. Charges for extra peaking, for additional power capacity in 1972, are assigned as follows: Kern County Water Agency, $9,553, and Hacienda Water District, $10, both for Dos Amigos Pumping Plant, and Kern County Water Agency, $24,700, for Las Perillas and Badger Hill Pumping Plants. These assigned charges are included in B-18. A determination of extra peaking costs involved in 1973 service was not available when this bulletin was prepared and will be reflected in next year's Appendix B.

Table B-18 summarizes the variable OMP&R components of the Transportation Charge for each contractor and for each year of the project repayment period. Table B-18 is developed from the costs per acre-foot as shown in Table B-17 and the delivery quantities for each contractor from each reach as shown in Table B-5. These estimated components, subsequently adjusted for prior overpayments or underpayments, are to be set forth in Table F of the respective contracts.

Total Annual Charges. Annual Transportation Charges for each contractor are summarized in Table B-19. (The amounts shown in Table B-19 represent the sums of the corresponding amounts shown in Tables B-15, B-16, and B-18.) These estimated payments, subsequently adjusted for prior overpayments or underpayments, are to be set forth in Tables G of the respective contracts. Both Table B-19 and Tables G of the six Devil Canyon-Castaic contractors include debt service and operating cost payments due under the Devil Canyon-Castaic Contract.

Delta Water Charges per Acre-foot of Entitlement

The calculation of future Delta Water Charges applicable after December 31, 1974 are shown in Table B-20 in accordance with the amended Articles 22(e) and 22(g) of 28 contracts. Under the amended articles, future construction and operating costs of each additional and supplemental conservation facility will be included in the calculation of the Charge in years when the State first incurs major construction costs. The calculation of the Charge due under the three contracts which have not as yet been amended (Butte County, Yuba City, and Solano County Flood Control and Water Conservation District) are shown in a special attachment to the respective bills. (Of the three, only Butte County is obligated to pay the Delta Water Charge in 1975.)

Equivalent Total Water Charges

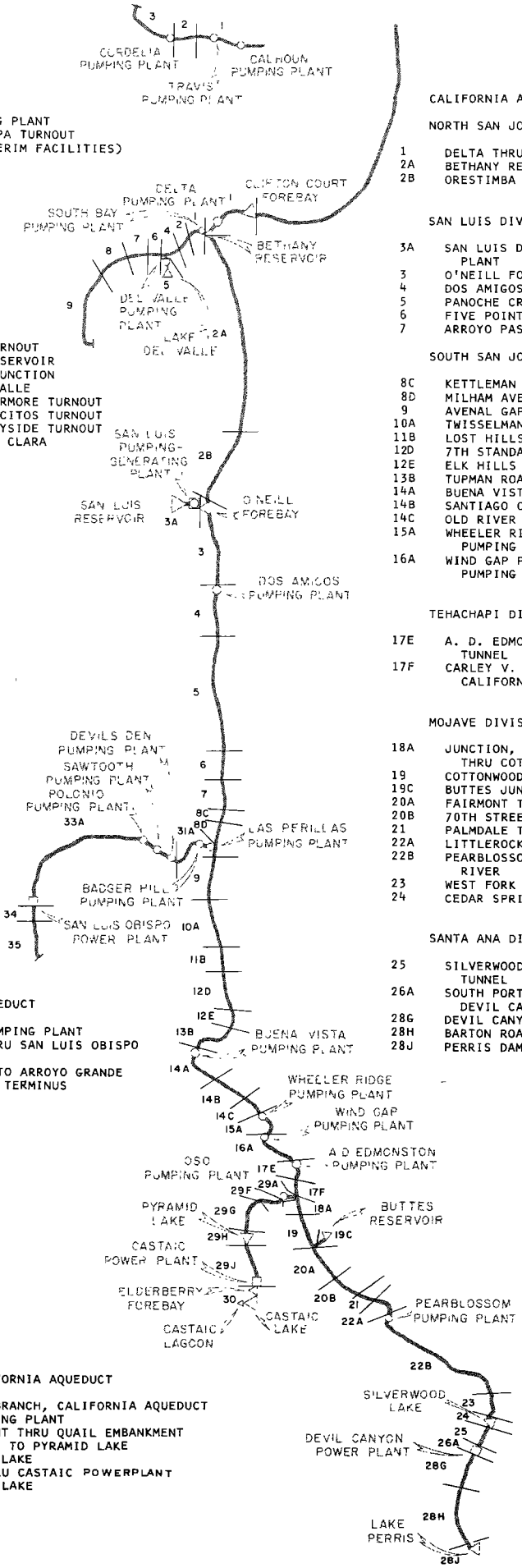
A summary of total charges is shown in Table B-21 in terms of the equivalent charge for each acre-foot of project water now estimated to be delivered as entitlement water to the respective contractors. These equivalent charges would provide the same total sum at the end of the project repayment period as annual payments to be made under the Delta Water Charge and Transportation Charge, including interest at the project interest rate. These equivalent unit charges do not reflect the future service of surplus water. The potential charges for surplus water service will be considerably less than the charges for entitlement water. Furthermore, the Table B-21 values account for the fact that current estimates of future entitlement water service are noticeably less than the amounts shown in Tables A for certain Southern California contractors.

Equivalent Water Cost, by Reach

Table B-22 presents a summary of the equivalent unit costs of conveying entitlement water through respective aqueduct reaches of the project transportation facilities. These unit costs provide the basis of charges to be assessed (a) for certain "extra service" (such as for delivery of entitlements down-aqueduct from a contractor's turnout) and, together with the Delta Water Charge per acre-foot, (b) for surplus water service to entities other than long-term water supply contractors. It should be noted that the cumulative unit conveyance costs shown for reaches in Table B-22 do not necessarily equal the equivalent unit Transportation Charges to contractors served from such reaches. This is because the unit charges of Table B-21 account for the rates of water demand buildup and cost allocation factors of the respective contractors, whereas the unit costs of Table B-22 meld together the effect of the respective buildups and allocation criteria of all contractors whose entitlements are conveyed through a given reach.

REPAYMENT REACHES AND DESCRIPTIONS

PROJECT TRANSPORTATION FACILITIES



NORTH BAY AQUEDUCT

1 LINDSEY SLOUGH TO SUISUN CITY
2 SUISUN CITY TO CORDELIA PUMPING PLANT
3 CORDELIA PUMPING PLANT THRU NAPA TURNOUT RESERVOIR (INCLUDING THE INTERIM FACILITIES)

SOUTH BAY AQUEDUCT

1 BETHANY RESERVOIR THRU ALTAMONT TURNOUT
2 ALTAMONT TURNOUT THRU PATTERSON RESERVOIR
4 PATTERSON RESERVOIR TO DEL VALLE JUNCTION
5 DEL VALLE JUNCTION THRU LAKE DEL VALLE
6 DEL VALLE JUNCTION THRU SOUTH LIVERMORE TURNOUT
7 SOUTH LIVERMORE TURNOUT THRU VALLECITOS TURNOUT
8 VALLECITOS TURNOUT THRU ALAMEDA-BAYSIDE TURNOUT
9 ALAMEDA-BAYSIDE TURNOUT THRU SANTA CLARA TERMINAL FACILITIES

COASTAL BRANCH, CALIFORNIA AQUEDUCT

31A AVENAL GAP TO DEVIL'S DEN PUMPING PLANT
33A DEVIL'S DEN PUMPING PLANT THRU SAN LUIS OBISPO POWERPLANT
34 SAN LUIS OBISPO POWERPLANT TO ARROYO GRANDE
35 ARROYO GRANDE THRU SAN MARIA TERMINUS

WEST BRANCH, CALIFORNIA AQUEDUCT

29A JUNCTION, WEST BRANCH, CALIFORNIA AQUEDUCT THRU OSO PUMPING PLANT
29F OSO PUMPING PLANT THRU QUAIL EMBANKMENT
29G QUAIL EMBANKMENT TO PYRAMID LAKE
29H PYRAMID DAM AND LAKE
29J PYRAMID LAKE THRU CASTAIC POWERPLANT
30 CASTAIC DAM AND LAKE

CALIFORNIA AQUEDUCT

NORTH SAN JOAQUIN DIVISION

1 DELTA THRU BETHANY RESERVOIR
2A BETHANY RESERVOIR TO ORESTIMBA CREEK
2B ORESTIMBA CREEK TO O'NEILL FOREBAY

SAN LUIS DIVISION

3A SAN LUIS DAM, RESERVOIR AND PUMPING-GENERATING PLANT
3 O'NEILL FOREBAY TO DOS AMIGOS PUMPING PLANT
4 DOS AMIGOS PUMPING PLANT TO PANOCHE CREEK
5 PANOCHE CREEK TO FIVE POINTS
6 FIVE POINTS TO ARROYO PASAJERO
7 ARROYO PASAJERO TO KETTLEMAN CITY

SOUTH SAN JOAQUIN DIVISION

8C KETTLEMAN CITY THRU MILHAM AVENUE
8D MILHAM AVENUE THRU AVENAL GAP
9 AVENAL GAP THRU TWISSELMAN ROAD
10A TWISSELMAN ROAD THRU LOST HILLS
11B LOST HILLS TO 7TH STANDARD ROAD
12D 7TH STANDARD ROAD THRU ELK HILLS ROAD
12E ELK HILLS ROAD THRU TUPMAN ROAD
13B TUPMAN ROAD TO BUENA VISTA PUMPING PLANT
14A BUENA VISTA PUMPING PLANT THRU SANTIAGO CREEK
14B SANTIAGO CREEK THRU OLD RIVER ROAD
14C OLD RIVER ROAD TO WHEELER RIDGE PUMPING PLANT
15A WHEELER RIDGE PUMPING PLANT TO WIND GAP PUMPING PLANT
16A WIND GAP PUMPING PLANT TO A. D. EDMONSTON PUMPING PLANT

TEHACHAPI DIVISION

17E A. D. EDMONSTON PUMPING PLANT TO CARLEY V. PORTER TUNNEL
17F CARLEY V. PORTER TUNNEL TO JUNCTION, WEST BRANCH, CALIFORNIA AQUEDUCT

MOJAVE DIVISION

18A JUNCTION, WEST BRANCH, CALIFORNIA AQUEDUCT THRU COTTONWOOD CHUTES
19 COTTONWOOD CHUTES TO FAIRMONT
19C BUTTES JUNCTION THRU BUTTES RESERVOIR
20A FAIRMONT THRU 70TH STREET WEST
20B 70TH STREET WEST TO PALMDALE
21 PALMDALE TO LITTLEROCK CREEK
22A LITTLEROCK CREEK TO PEARBLOSSOM PUMPING PLANT
22B PEARBLOSSOM PUMPING PLANT TO WEST FORK MOJAVE RIVER
23 WEST FORK MOJAVE RIVER TO SILVERWOOD LAKE
24 CEDAR SPRINGS DAM AND SILVERWOOD LAKE

SANTA ANA DIVISION

25 SILVERWOOD LAKE TO SOUTH PORTAL, SAN BERNARDINO TUNNEL
26A SOUTH PORTAL, SAN BERNARDINO TUNNEL THRU DEVIL CANYON POWERPLANT
28G DEVIL CANYON POWERPLANT TO BARTON ROAD
28H BARTON ROAD TO LAKE PERRIS
28J PERRIS DAM AND LAKE PERRIS

TABLE B-I: FACTORS FOR DISTRIBUTING

Reach No	Reach Description	NORTH BAY AREA		SOUTH BAY AREA				TOTAL
		Napa County FC&WCD	Solano County FC&WCD	Alameda County FC&WCD Zone 7	Alameda County Water District	Santa Clara Valley Water District	Future Contractor	
North Bay Aqueduct								
1	Lindsey Slough to Suisun City	39808876	60191124					1 00000000
2	Suisun City to Cordelia Pumping Plant	39808861	60191139					1 00000000
3	Cordelia Pumping Plant thru Napa Turnout Reservoir (Including the interim facilities)	1 00000000						1 00000000
South Bay Aqueduct								
1	Bethany Reservoir thru Altamont Turnout			22599621	20663014	49237700	07499665	1 00000000
2	Altamont Turnout thru Patterson Reservoir			22599657	20663057	49237791	07499495	1 00000000
4	Patterson Reservoir to Del Valle Junction			19504791	21450021	51113252	07931936	1 00000000
5	Del Valle Junction thru Lake Del Valle			14436367	12972254	33715573	38875806	1.00000000
6	Del Valle Junction thru South Livermore Turnout			14599918	21144710	50574745	13680627	1 00000000
7	South Livermore Turnout thru Vallecitos Turnout				25176680	60218448	14604872	1 00000000
8	Vallecitos Turnout thru Alameda-Bayside Turnout				06294980	72065355	21639665	1 00000000
9	Alameda-Bayside Turnout thru Santa Clara Terminal Facilities					1 00000000		1 00000000
California Aqueduct								
1	Delta Thru Bethany Reservoir			00954802	00872976	02080260	00342519	— — —

Reach No	Reach Description	CENTRAL COASTAL AREA		SOUTHERN				
		San Luis Obispo County FC&WCD	Santa Barbara County FC&WCD	Antelope Valley-East Kern Water Agency	Castaic Lake Water Agency	Coachella Valley County Water District	Crestline Lake Arrowhead Water Agency	Desert Water Agency
California Aqueduct								
1	Delta Thru Bethany Reservoir	00531147	.01240007	.02939503	00890866	00528393	00133630	.00871425
2A	Bethany Reservoir to Orestimba Creek	00555266	.01296315	03072975	00931319	.00552151	00139640	00910607
2B	Orestimba Creek to O'Neill Forebay	00555876	01297741	.03076360	00932344	00552915	00139833	.00911867
3	O'Neill Forebay to Dos Amigos Pumping Plant	.00555769	01297494	.03075777	00932168	.00552856	.00139818	00911771
4	Dos Amigos Pumping Plant to Panoche Creek	00555659	.01297235	03075165	00931982	00552794	00139801	.00911670
5	Panoche Creek to Five Points	00555520	01296912	03074401	.00931751	00552717	00139780	.00911543
6	Five Points to Arroyo Pasajero	.00555311	.01296424	03073244	.00931400	.00552602	00139750	.00911351
7	Arroyo Pasajero to Kettleman City	.00555243	01296267	03072873	00931287	.00552565	.00139740	00911289
8C	Kettleman City thru Milham Avenue	00555159	.01296069	.03072405	.00931145	00552517	00139729	00911211
8D	Milham Avenue thru Avenal Gap	.00566628	01322842	.03135878	.00950380	00564073	00142650	00930269
9	Avenal Gap thru Twisselman Road			03437577	01041812	.00618845	.00156502	01020599
10A	Twisselman Road thru Lost Hills			.03492681	01058510	00628966	.00159061	.01037292
11B	Lost Hills to 7th Standard Road			.03848657	.01166387	.00694140	.00175542	.01144773
12D	7th Standard Road thru Elk Hills Road			04046660	01226391	.00730484	00184732	.01204709
12E	Elk Hills Road thru Tupman Road			.04052108	.01228042	00731580	.00185010	.01206514
13B	Tupman Road to Buena Vista Pumping Plant			.04397523	01332721	00794772	00200991	01310729
14A	Buena Vista Pumping Plant thru Santiago Creek			.04618687	01399742	00835456	.00211281	01377821
14B	Santiago Creek thru Old River Road			.04702647	.01425185	00851020	.00215218	01403490
14C	Old River Road to Wheeler Ridge Pumping Plant			.04846557	.01468794	.00877627	00221947	.01447369
15A	Wheeler Ridge Pumping Plant to Wind Gap Pumping Plant			04927653	01493368	.00892667	00225752	.01472172
16A	Wind Gap Pumping Plant to A.D. Edmonston Pumping Plant			.05113510	01549688	00927016	00234437	01528820
17E	A.D. Edmonston Pumping Plant to Carley V. Porter Tunnel			.05355379	01622984	00971819	00245767	01602709
17F	Carley V. Porter Tunnel to Junction West Branch, Calif. Aqueduct			.05366827	01626453	.00973908	00246295	01606154
18A	Junction, West Branch, Calif. Aqueduct thru Cottonwood Chutes			.13238112		02399390	00606794	03957043
19	Cottonwood Chutes to Fairmont			.13237766		.02399451	00606810	.03957141
19C	Buttes Junction thru Buttes Reservoir			1.00000000				
20A	Fairmont thru 70th Street West			.06847931		.02576424	00651572	04249001
20B	70th Street West to Palmdale			02276024		02702916	00683554	.04457607
21	Palmdale to Littlerock Creek			.02318953		.02754716	00696650	04543034
22A	Littlerock Creek to Pearblossom Pumping Plant			.01181870		.02794143	.00706620	.04608043
22B	Pearblossom Pumping Plant to West Fork Mojave River					.02827552	00715073	04663153
23	West Fork Mojave River to Silverwood Lake					00324449	00818121	.00535117
24	Cedar Springs Dam and Silverwood Lake					.01024605	.01251569	.01690478
25	Silverwood Lake to South Portal, San Bernardino Tunnel							
26A	South Portal, San Bernardino Tunnel thru Devil Canyon Pwp							
28C	Devil Canyon Powerplant to Barton Road							
28H	Barton Road to Lake Perris							
28J	Perris Dam and Lake Perris							
29A	Junction, West Branch, Calif. Aqueduct thru Oso Pumping Plant				.02736564			
29F	Oso Pumping Plant thru Quail Embankment				02736563			
29G	Quail Embankment to Pyramid Lake				.02736564			
29H	Pyramid Dam and Lake				02646380			
29J	Pyramid Lake thru Castaic Powerplant				.02736563			
30	Castaic Dam and Lake				.02637131			
31A	Avenal Gap to Devil's Den Pumping Plant	.10522767	.24566277					
33A	Devil's Den Pumping Plant thru San Luis Obispo Powerplant	29988697	.70011303					
34	San Luis Obispo Powerplant to Arroyo Grande	20553239	.79446761					
35	Arroyo Grande thru Santa Maria Terminal	.14771038	85228962					

REACH CAPITAL COSTS AMONG CONTRACTORS

Reach No	SAN JOAQUIN VALLEY AREA								
	Devil's Den Water District	Dudley Ridge Water District	Empire West Side Irrigation District	Hacienda Water District	Kern County Water Agency		County of Kings	Oak Flat Water District	Tulare Lake Basin Water Storage District
					Municipal and Industrial	Agricultural			
California Aqueduct									
1	.00377824	01707931	00088687	00251598	02742075	30633444	00090702	00167139	03253706
2A	00394038	01781205	00092491	00262393	02864590	31948963	00094755	00174305	03393294
2B	.00395099	01786013	00092740	00263102	02869073	32034362	00094904		03402458
3	00395208	01786513	00092766	00263176	02868919	32043064	00094900		03403409
4	00395323	01787039	00092794	00263254	02868758	32052214	00094893		03404410
5	00395466	01787693	.00092828	00263352	02868559	32063639	00094886		03405659
6	00395684	01788685	00092879	.00263498	02868255	32080926	00094875		03407550
7	00395753	.01789003	00092896	.00263544	02868158	32086471	00094872		03408157
8G	.00395842	.01789405	00092918	00263603	02868035	32093468	00094867		03408923
8D	00404591	01828966		00269431	02928494	32802221			01551611
9					03214521	32838224			
10A					03267760	31755652			
11B					03609912	24768443			
12D					03801001	20879251			
12E					03807068	20769413			
13B					01464596	16664965			
14A					00622935	13374077			
14B					00634719	11790931			
14C					00654829	09078926			
15A					00666217	07549599			
16A					00692172	04047416			
17E					00213551				
81A	07364766					57546190			

Reach No.	CALIFORNIA AREA								
	Littlerock Creek Irrigation District	Mojave Water Agency	Palmdale Water District	San Bernardino Valley Municipal Water District	San Gabriel Valley Municipal Water District	San Gorgonio Pass Water Agency	The Metropolitan Water District of Southern California	Ventura County Flood Control District	TOTAL
1	00049187	01101303	00369180	02363192	00650450	00398446	43940274	00429334	1 00000000
2A	.00051421	01151300	00385943	02469456	00679800	00416362	45932582	00448829	1 00000000
2B	00051477	01152575	00386368	02472869	00680672	00416938	45985090	00449324	1 00000000
3	00051469	01152359	00386296	02472604	00680580	00416893	45976953	00449238	1 00000000
4	00051459	01152131	00386218	02472327	00680482	00416846	45968397	00449149	1 00000000
5	00051448	01151846	00386122	02471980	00680361	00416788	45957712	00449037	1 00000000
6	00051428	01151416	00385978	02471455	00680178	00416698	45941544	00448869	1 00000000
7	00051421	01151278	00385931	02471286	00680118	00416671	.45936361	00448816	1 00000000
8C	00051414	01151103	00385874	02471072	00680044	00416634	45929816	00448747	1 00000000
8D	00052475	01174889	00393847	02522753	00694206	00425349	.46880430	00458017	1 00000000
9	00057523	01287942	00431739	02767698	.00761389	00466647	51396901	00502081	1 00000000
10A	00058444	01308595	.00438661	.02812957	00773752	00474279	52223261	00510129	1 00000000
11B	.00064401	01442004	00483371	03104405	00853455	00523416	57558975	00562119	1 00000000
12D	00067713	01516215	00508241	03266922	00897860	.00550817	60527969	00591035	1 00000000
12E	00067804	01518261	00508926	03271816	00899157	00551643	60610827	00591831	1 00000000
13B	00073586	01647710	00552311	03554404	00976456	00599288	65787670	00642278	1 00000000
14A	00077287	01730602	00580090	03736328	01026125	00629961	69105032	00674576	1 00000000
14B	.00078692	01762074	00590636	03805925	01045073	00641694	70365858	00686838	1 00000000
14C	00081102	01816015	00608712	03924903	01077498	00661754	72526114	00707853	1 00000000
15A	.00082461	01846415	00618901	03992156	01095807	00673092	73744044	00719696	1 00000000
16A	00085571	01916080	00642247	04145755	01137676	00698987	76533787	00746838	1 00000000
17E	00089617	02006742	00672629	04346097	01192239	00732766	80165539	00782162	1 00000000
17F	.00089809	02011032	00674067	04355438	01194797	00734341	80337045	00783834	1 00000000
18A	.00221525	04960424	01662681	10730447	02944861	01809192	57469531		1 00000000
19	00221522	04960300	01662640	10730706	02944877	01809230	57469557		1 00000000
19C									1 00000000
20A	00237800	05324853	01784830	11522151	03161800	01942666	61700972		1 00000000
20B	.00249470	05586076	01872390	12087842	03316988	02038045	.64729088		1 00000000
21	.00254199	05692052		12319478	03380326	02077093	65963499		1 00000000
22A		05773081		12495765	03428607	02106816	66905055		1 00000000
22B		05842136		12645206	03469615	02132008	67705257		1 00000000
23				14467449	03969012	02439238	.77446614		1 00000000
24				22243002	04339444	02843498	66607404		1 00000000
25				14947726	03997502	02520426	.78534346		1 00000000
26A				14947726	03997502	02520426	78534346		1 00000000
28G				05126137			94873863		1 00000000
28H							1.00000000		1 00000000
28J							1 00000000		1 00000000
29A							95944607	01318829	1 00000000
29F							95944608	01318829	1 00000000
29G							95944609	01318827	1 00000000
29H							96446829	00906791	1 00000000
29J							.95944608	01318829	1 00000000
30							96499830	00863039	1 00000000
31A									1 00000000
33A									1.00000000
34									1.00000000
35									1.00000000

TABLE B-2: FACTORS FOR DISTRIBUTING REACH

Reach No	Reach Description	NORTH BAY AREA		SOUTH BAY AREA				TOTAL
		Napa County FC&WCD	Solano County FC&WCD	Alameda County FC&WCD Zone 7	Alameda County Water District	Santa Clara Valley Water District	Future Contracts	
North Bay Aqueduct								
1	Lindsey Slough to Suisun City	39808876	60191124					1 00000000
2	Suisun City to Cordelia Pumping Plant	39808861	60191139					1 00000000
3	Cordelia Pumping Plant thru Napa Turnout Reservoir (Including the interim facilities)	1 00000000						1 00000000
South Bay Aqueduct								
1	Bethany Reservoir thru Altamont Turnout			.22599621	20663014	49237700	07499665	1 00000000
2	Altamont Turnout thru Patterson Reservoir			22599657	20663057	49237791	07499495	1 00000000
4	Patterson Reservoir to Del Valle Junction			19504791	21450021	51113252	07931936	1 00000000
5	Del Valle Junction thru Lake Del Valle			14436367	12972254	33715573	38875806	1 00000000
6	Del Valle Junction thru South Livermore Turnout			14599918	21144710	50574745	13680627	1 00000000
7	South Livermore Turnout thru Vallecitos Turnout				25176680	60218448	14604872	1 00000000
8	Vallecitos Turnout thru Alameda-Bayside Turnout				06294980	72065355	21639665	1 00000000
9	Alameda-Bayside Turnout thru Santa Clara Terminal Facilities					1 00000000		1 00000000
California Aqueduct								
1	Delta Thru Bethany Reservoir			00954802	00872976	02080260	00342519	

Reach No	Reach Description	CENTRAL COASTAL AREA		SOUTHERN				
		San Luis Obispo County FC&WCD	Santa Barbara County FC&WCD	Antelope Valley-East Kern Water Agency	Castaic Lake Water Agency	Coachella Valley County Water District	Crestline Lake Arrowhead Water Agency	Desert Water Agency
California Aqueduct								
1	Delta Thru Bethany Reservoir	00531147	01240007	02939503	00890866	00528393	00133630	00871425
2A	Bethany Reservoir to Orestimba Creek	00555266	01296315	03072975	00931319	00552151	00139640	00910607
2B	Orestimba Creek to O'Neill Forebay	00555876	01297741	03076360	00932344	00552915	00139833	00911867
3	O'Neill Forebay to Dos Amigos Pumping Plant	00555769	01297494	.03075777	00932168	00552856	00139818	00911771
4	Dos Amigos Pumping Plant to Panoche Creek	00555659	01297235	03075165	00931982	00552794	00139801	00911670
5	Panoche Creek to Five Points	.00555520	01296912	03074401	00931751	00552717	00139780	.00911543
6	Five Points to Arroyo Pasajero	00555311	01296424	03073244	00931400	00552602	00139750	00911351
7	Arroyo Pasajero to Kettleman City	00555243	01296267	03072873	00931287	00552565	00139740	00911289
8C	Kettleman City thru Milham Avenue	00549671	01283255	03042012	00921937	00546665	00138249	00901561
8D	Milham Avenue thru Avenal Gap	00560860	01309375	03103938	00940703	00557923	00141095	00920128
9	Avenal Gap thru Twisselman Road			03398205	01029883	00611262	00154585	01008094
10A	Twisselman Road thru Lost Hills			03451663	01046082	00621064	00157063	01024262
11B	Lost Hills to 7th Standard Road			03796305	01150525	00684053	00172991	01128139
12D	7th Standard Road thru Elk Hills Road			03987187	01208371	00719023	00181834	01185809
12E	Elk Hills Road thru Tupman Road			03992309	01209924	00720053	00182095	01187505
13B	Tupman Road to Buena Vista Pumping Plant			04324825	01310695	.00780756	00197447	01287616
14A	Buena Vista Pumping Plant thru Santiago Creek			04536499	01374841	00819606	00207273	01351685
14B	Santiago Creek thru Old River Road			04616419	01399059	00834387	00211013	01376063
14C	Old River Road to Wheeler Ridge Pumping Plant			04753265	01440528	00859629	00217396	01417689
15A	Wheeler Ridge Pumping Plant to Wind Gap Pumping Plant			04830162	01463830	00873855	00220995	01441151
16A	Wind Gap Pumping Plant to A.D. Edmonston Pumping Plant			05006206	01517177	00906311	00229201	01494676
17E	A.D. Edmonston Pumping Plant to Carley V. Porter Tunnel			05234459	01586347	00948480	00239865	01564222
17F	Carley V. Porter Tunnel to Junction, West Branch Calif. Aqueduct			05245356	01589650	00950462	00240367	01567491
18A	Junction, West Branch, Calif. Aqueduct thru Cottonwood Chutes			13238112		02399390	00606794	03957043
19	Cottonwood Chutes to Fairmont			13237766		02399451	00606810	03957141
19C	Buttes Junction thru Buttes Reservoir			1 00000000				
20A	Fairmont thru 70th Street West			06847931		.02576424	00651572	04249001
20B	70th Street West to Palmdale			02276024		02702916	00683554	04457607
21	Palmdale to Littlerock Creek			02318953		02754716	00696650	04543034
22A	Littlerock Creek to Pearblossom Pumping Plant			0118187C		02794143	00706620	04608043
22B	Pearblossom Pumping Plant to West Fork Mojave River					02827552	00715073	04663153
23	West Fork Mojave River to Silverwood Lake					00324449	00818121	00535117
24	Cedar Springs Dam and Silverwood Lake					01024605	01251569	01690478
25	Silverwood Lake to South Portal San Bernardino Tunnel							
26A	South Portal, San Bernardino Tunnel thru Devil Canyon Pwp							
28G	Devil Canyon Powerplant to Barton Road							
28H	Barton Road to Lake Perris							
28I	Perris Dam and Lake Perris							
29A	Junction, West Branch, Calif. Aqueduct thru Oso Pumping Plant			00304299	02728237			
29F	Oso Pumping Plant thru Quail Embankment			.00304379	02728234			
29G	Quail Embankment to Pyramid Lake				.02736564			
29H	Pyramid Dam and Lake				02646380			
29J	Pyramid Lake thru Castaic Powerplant				02736563			
30	Castaic Dam and Lake				02637131			
31A	Avenal Gap to Devil's Den Pumping Plant	.10522767	.24566277					
33A	Devil's Den Pumping Plant thru San Luis Obispo Powerplant	.29988697	.70011303					
34	San Luis Obispo Powerplant to Arroyo Grande	20553239	.79446761					
35	Arroyo Grande thru Santa Maria Terminal	14771038	.85228962					

MINIMUM OMP&R COSTS AMONG CONTRACTORS

Reach No	SAN JOAQUIN VALLEY AREA								
	Devil's Den Water District	Dudley Ridge Water District	Empire West Side Irrigation District	Hacienda Water District	Kern County Water Agency		County of Kings	Oak Flat Water District	Tulare Lake Basin Water Storage District
					Municipal and Industrial	Agricultural			
California Aqueduct									
1	00377824	01707931	00088687	00251598	02742075	30633444	00090702	00167139	03253706
2A	00394038	01781205	00092491	00262393	02864590	31948963	00094755	00174305	03393294
2B	00395099	01786013	00092740	00263102	02869073	32034362	00094904		03402458
3	00395208	01786513	00092766	00263176	02868919	32043064	00094900		03403409
4	00395323	01787039	00092794	00263254	02868758	32052214	00094893		03404410
5	00395466	01787693	00092828	00263352	02868559	32063639	00094886		03405659
6	00395684	01788685	00092879	00263498	02868255	32080926	00094875		03407550
7	00395753	01789003	00092896	00263544	02868158	32086471	00094872		03408157
8C	00390372	01764649	00091632	00259956	02836376	31651560	00093819		03361753
8D	00398843	01802948		00265599	02895222	32337797			01529539
9					03173493	32315570			
10A					03225002	31237849			
11B					03555316	24304304			
12D					03738966	20458362			
12E					03744664	20348854			
13B					01437747	16288986			
14A					00610657	13050491			
14B					00621833	11497394			
14C					00640883	08842321			
15A					00651639	07347673			
16A					00676126	03933051			
17E					00208231				
18A	07364766					57546190			

Reach No.	CALIFORNIA AREA								
	Littlerock Creek Irrigation District	Mojave Water Agency	Palmdale Water District	San Bernardino Valley Municipal Water District	San Gabriel Valley Municipal Water District	San Gorgonio Pass Water Agency	The Metropolitan Water District of Southern California	Ventura County Flood Control District	TOTAL
1	00049187	01101303	00369180	02363192	00650450	00398446	43940274	00429334	1 00000000
2A	00051421	01151300	00385943	02469456	00679800	00416362	45932582	00448829	1 00000000
2B	00051477	01152575	00386368	02472869	00680672	00416938	45985090	00449324	1 00000000
3	00051469	01152359	00386296	02472604	00680580	00416893	45976953	00449238	1 00000000
4	00051459	01152131	00386218	02472327	00680482	00416846	45968397	00449149	1 00000000
5	00051448	01151846	00386122	02471980	00680361	00416788	45957712	00449037	1 00000000
6	00051428	01151416	00385978	02471455	00680178	00416698	45941544	00448869	1 00000000
7	00051421	01151278	00385931	02471286	00680118	00416671	45936361	00448816	1 00000000
8C	00050905	01139703	00382056	02444913	00673013	00412224	46619410	00444309	1 00000000
8D	00051940	01162908	00389834	02495260	00686817	00420714	47575203	00453354	1 00000000
9	00056864	01273174	00426793	02733801	00752279	00460932	52108733	00496332	1 00000000
10A	00057757	01293209	00433508	02777635	00764260	00468324	52938182	00504140	1 00000000
11B	00063524	01422367	00476795	03059311	00841338	00515814	58274744	00554474	1 00000000
12D	00066717	01493906	00500769	03215687	00884093	00542180	61234745	00582351	1 00000000
12E	00066803	01495830	00501413	03220286	00885312	00542956	61318897	00583099	1 00000000
13B	00072369	01620441	00543178	03491750	00959625	00588725	66464178	00631662	1 00000000
14A	00075911	01699773	00569765	03665478	01007092	00618017	69750337	00662575	1 00000000
14B	00077249	01729729	00579803	03731574	01025102	00629159	70996969	00674247	1 00000000
14C	00079540	01781020	00596992	03844447	01055888	00648190	73127981	00694231	1 00000000
15A	00080829	01809845	00606653	03908064	01073222	00658915	74327706	00705461	1 00000000
16A	00083775	01875830	00628766	04053195	01112817	00683383	77068316	00731170	1 00000000
17E	00087593	01961383	00657438	04241764	01164221	00715176	80626315	00764506	1 00000000
17F	00087775	01965466	00658807	04250630	01166651	00716671	80794577	00766097	1 00000000
18A	00221525	04960424	01662681	10730447	02944861	01809192	57469531		1.00000000
19	00221522	04960300	01662640	10730706	02944877	01809230	57469557		1 00000000
19C									1 00000000
20A	00237800	05324853	01784830	11522151	03161800	01942666	61700972		1 00000000
20B	00249470	05586076	01872390	12087842	03316988	02038045	64729088		1 00000000
21	00254199	05692052		12319478	03380326	02077093	65963499		1 00000000
22A		05773081		12495765	03428607	02106816	66905055		1.00000000
22B		05842136		12645206	03469615	02132008	67705257		1 00000000
23				14467449	03969012	02439238	77446614		1 00000000
24				22243002	04339444	02843498	66607404		1 00000000
25				11825184	03722720	01993915	82458181		1 00000000
26A				14947726	03997502	02520426	78534346		1 00000000
28G				05126137			94873863		1 00000000
28H							1 00000000		1 00000000
28J							1 00000000		1 00000000
29A							95652648	01314816	1 00000000
29F							95652573	01314814	1 00000000
29G							95944609	01318827	1 00000000
29H							96446829	00906791	1 00000000
29J							95944608	01318829	1 00000000
30							96499830	00863039	1 00000000
31A									1 00000000
33A									1.00000000
34									1.00000000
35									1 00000000

TABLE B-3: POWER COSTS AND CREDITS AND ANNUAL REPLACEMENT

(in

Calendar Year	NORTH BAY AQUEDUCT		SOUTH BAY AQUEDUCT	CALIFORNIA					
	Reach 1 Calhoun and Travis Pumping Plants	Reach 3 Cordelia Pumping Plant	Reach 1 South Bay and Del Valle Pumping Plants(b	Reach 1 Delta Pumping Plant	Reach 4 Dos Amigos Pumping Plant	Reach 14A Buena Vista Pumping Plant	Reach 15 A Wheeler Ridge Pumping Plant	Reach 16A Wind Gap Pumping Plant	Reach 17E A.D. Edmonston Pumping Plant
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1962	0	0	38,130	0	0	0	0	0	0
1963	0	0	58,871	0	0	0	0	0	0
1964	0	0	75,239	0	0	0	0	0	0
1965	0	0	146,297	0	0	0	0	0	0
1966	0	0	198,643	0	0	0	0	0	0
1967	0	0	229,511	28,945	0	0	0	0	0
1968	0	7,128	342,761	1,324,777	239,505	0	0	0	0
1969	0	8,557	279,751	855,304	143,488	0	0	0	0
1970	0	13,666	448,383	368,508	217,820	2,940	0	0	0
1971	0	10,626	422,106	597,974	229,312	156,563	23,028	18,590	29,102
1972	0	14,430	623,554	1,110,761	575,622	348,686	187,788	385,850	1,262,791
1973	0	14,099	439,100	1,013,500	555,200	505,500	436,900	887,500	3,101,600
1974	0	17,000	593,400	1,309,000	648,100	728,800	770,300	1,402,400	5,053,600
1975	0	10,000	549,400	1,435,000	697,100	722,800	763,300	1,397,400	4,950,600
1976	0	10,000	520,400	1,858,000	826,100	943,800	965,300	1,964,400	7,076,600
1977	0	8,000	569,400	2,506,000	970,100	1,084,800	1,111,300	2,256,400	8,210,600
1978	0	8,000	622,400	2,704,000	1,119,100	1,189,800	1,206,300	2,447,400	8,912,600
1979	0	8,000	638,400	3,812,000	1,178,100	1,223,800	1,234,300	2,555,400	9,101,600
1980	2,000	10,200	586,400	3,855,200	1,143,100	1,240,800	1,249,300	2,574,400	9,134,600
1981	3,000	12,200	680,400	2,330,200	1,310,100	1,343,800	1,336,300	2,761,400	9,796,600
1982	5,000	12,200	685,400	2,928,200	1,501,100	1,617,800	1,544,300	3,116,400	11,390,600
1983	11,000	30,200	1,372,400	3,557,200	2,736,100	2,820,800	2,494,300	5,012,400	18,832,600
1984	11,000	30,200	1,379,400	3,801,200	2,936,100	2,893,800	2,907,300	5,356,400	19,393,400
1985	11,000	29,200	1,362,400	4,948,400	3,061,100	2,906,800	2,917,300	5,394,400	19,477,400
1986	11,000	28,200	1,327,400	5,912,400	3,228,100	3,173,800	2,966,300	6,089,400	19,878,400
1987	11,000	26,200	1,268,400	5,569,400	3,318,100	3,335,800	3,181,300	5,989,400	21,752,400
1988	18,000	26,200	1,180,400	6,441,400	3,667,100	4,407,800	4,235,300	8,283,400	30,250,400
1989	19,000	26,200	1,161,400	7,026,400	3,617,100	4,101,800	3,908,300	8,147,400	29,682,400
1990	29,000	26,200	1,151,400	9,146,400	3,771,100	4,356,800	4,470,300	8,882,400	32,068,400
1991	29,000	25,200	1,158,400	9,649,400	3,741,100	4,312,800	4,449,300	8,840,400	31,905,400
1992	30,000	26,200	1,177,400	10,357,400	3,875,100	4,655,800	4,568,300	9,593,400	32,672,400
1993	30,000	27,200	1,213,400	8,467,400	3,932,100	4,719,800	4,601,300	9,704,400	33,021,400
1994	29,000	27,200	1,225,400	10,121,400	3,922,100	4,861,800	4,808,300	10,106,400	34,827,400
1995	29,000	27,200	1,225,400	9,174,400	3,910,100	4,847,800	4,804,300	10,063,400	34,662,400
1996	28,000	25,200	1,118,400	10,835,400	3,766,100	4,577,800	4,812,300	9,514,400	32,791,400
1997	27,000	25,200	1,076,400	10,929,400	3,724,100	4,675,800	4,692,300	9,906,400	34,001,400
1998	28,000	26,200	1,116,400	10,016,400	3,797,100	4,608,800	4,846,300	10,274,400	35,248,400
1999	28,000	26,200	1,127,400	10,613,400	3,883,100	4,914,800	4,913,300	10,413,400	35,740,400
2000	30,000	27,200	1,168,400	9,525,400	4,032,100	5,101,800	5,095,300	10,806,400	37,074,400
2001	29,000	27,200	1,148,400	10,541,400	4,101,100	5,070,800	5,358,300	10,759,400	39,264,400
2002	30,000	28,200	1,175,400	8,957,400	4,202,100	5,192,800	5,488,300	11,022,400	40,224,400
2003	30,000	28,200	1,170,400	10,162,400	4,233,100	5,455,800	5,492,300	11,194,400	40,267,400
2004	30,000	29,200	1,183,400	9,048,400	4,277,100	5,510,800	5,545,300	11,300,400	40,655,400
2005	45,000	30,200	1,204,400	7,998,400	4,400,100	5,643,800	5,681,300	11,581,400	41,669,400
2006	43,000	28,200	1,157,400	9,623,400	4,225,100	5,407,800	5,448,300	11,107,400	39,950,400
2007	43,000	29,200	1,159,400	9,968,400	4,211,100	5,418,800	5,463,300	11,137,400	40,055,400
2008	44,000	29,200	1,175,400	10,572,400	4,318,100	5,513,800	5,559,300	11,747,400	40,771,400
2009	44,000	30,200	1,193,400	9,957,400	4,391,100	5,605,800	5,651,300	11,522,400	41,448,400
2010	44,000	30,200	1,184,400	10,214,400	4,356,100	5,558,800	5,603,300	11,425,400	41,097,400
2011	44,000	30,200	1,181,400	10,629,400	4,347,100	5,547,800	5,594,300	11,408,400	41,031,400
2012	44,000	30,200	1,178,400	10,532,400	4,301,100	5,535,800	5,584,300	11,387,400	40,954,400
2013	43,000	30,200	1,148,400	11,393,400	4,191,100	5,389,800	5,442,300	11,099,400	39,904,400
2014	44,000	31,200	1,182,400	11,052,400	4,357,100	5,556,800	5,604,300	11,429,400	41,106,400
2015	45,000	31,200	1,179,400	11,007,400	4,341,100	5,532,800	5,580,300	11,378,400	40,921,400
2016	45,000	32,200	1,199,400	9,229,400	4,419,100	5,632,800	5,679,300	12,003,400	41,657,400
2017	46,000	33,200	1,205,400	9,309,400	4,444,100	5,665,800	5,712,300	11,648,400	41,900,400
2018	46,000	57,200	1,208,400	8,470,400	4,431,100	5,679,800	5,725,300	11,674,400	41,994,400
2019	44,000	56,200	1,190,400	10,397,400	4,346,100	5,582,800	5,631,300	11,482,400	41,293,400
2020 (C	69,000	89,200	1,189,400	10,389,400	4,343,100	5,578,800	5,626,300	11,474,400	41,263,400

a). Includes the costs of electric capacity and energy used by pumping plants, exclusive of associated power transmission and station service charges; the value of electric capacity and energy produced by power recovery plants (treated as negative costs); and the payments to sinking fund reserves that will finance periodic replacement of electro-mechanical equipment.

DEPOSITS FOR EACH AQUEDUCT PUMPING AND POWER RECOVERY PLANT (a

dollars)

AQUEDUCT									
Reach 18A Cottonwood Powerplant	Reach 22B Pear-blossom Pumping Plant	Reach 26A Devil Canyon Powerplant	Reach 29A Oso Pumping Plant	Reach 29G Pyramid Powerplant	Reach 29J Castaic Powerplant	Reach 31A Las Perillas and Badger Hill Pumping Plants	Reach 33A Devil's Den Sawtooth and Polonio PP's and San Luis Obispo Pwp.	GRAND TOTAL	Calendar Year
(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	
0	0	0	0	0	0	0	0	38,130	1962
0	0	0	0	0	0	0	0	58,871	1963
0	0	0	0	0	0	0	0	75,239	1964
0	0	0	0	0	0	0	0	146,297	1965
0	0	0	0	0	0	0	0	198,643	1966
0	0	0	0	0	0	0	0	258,456	1967
0	0	0	0	0	0	120,278	0	2,034,449	1968
0	0	0	0	0	0	79,620	0	1,366,720	1969
0	0	0	0	0	0	137,449	0	1,188,766	1970
0	64,886	0	1,698	0	0	171,394	0	1,725,279	1971
0	103,551	-3,112	179,973	0	-385,695	240,649	0	4,644,848	1972
0	321,500	-468,500	316,900	0	-1,218,707	133,800	0	6,038,392	1973
0	1,164,100	-1,483,500	379,800	0	-1,924,000	142,700	0	8,801,700	1974
0	1,127,100	-1,206,500	352,800	0	-2,332,000	146,700	0	8,613,700	1975
0	1,981,900	-3,324,100	274,800	0	-2,435,000	142,700	0	10,804,900	1976
0	2,320,900	-3,855,100	262,800	0	-2,479,000	166,700	0	13,132,900	1977
0	2,589,900	-4,009,100	280,800	0	-2,750,000	189,700	0	14,510,900	1978
0	2,655,900	-4,455,100	280,800	0	-3,081,000	197,700	0	15,349,900	1979
0	2,598,900	-4,515,100	300,800	0	-3,344,000	179,500	0	15,016,100	1980
0	2,948,900	-4,671,100	312,800	0	-3,197,000	223,500	0	15,191,100	1981
0	3,141,900	-4,931,100	323,800	-814,000	-3,107,000	229,500	198,800	17,842,900	1982
-406,000	5,918,900	-5,253,100	420,800	-2,339,000	-3,285,000	464,500	439,800	32,827,900	1983
-411,000	5,942,900	-5,178,100	466,800	-2,586,000	-3,498,000	480,500	448,800	34,374,700	1984
-417,000	5,847,900	-5,334,100	492,800	-2,685,000	-3,564,000	506,500	461,800	35,416,900	1985
-422,000	5,662,900	-5,379,100	591,800	-3,131,000	-3,948,000	502,500	452,800	36,944,900	1986
-379,000	4,771,900	-4,881,100	900,800	-3,963,000	-4,502,000	483,500	440,800	37,323,900	1987
-479,000	4,782,900	-5,331,100	2,000,800	-6,709,000	-6,165,000	484,500	433,800	47,527,900	1988
-539,000	4,750,900	-5,481,100	1,784,800	-6,413,000	-6,146,000	475,500	424,800	46,546,900	1989
-527,000	4,691,900	-5,506,100	2,098,800	-6,745,000	-6,331,000	476,500	540,800	52,600,900	1990
-541,000	4,683,900	-5,546,100	2,076,800	-6,866,000	-6,493,000	476,500	543,800	52,445,900	1991
-539,000	4,713,900	-5,538,100	2,463,800	-7,379,000	-7,290,000	483,500	545,800	54,416,900	1992
-534,000	4,820,900	-5,513,100	2,468,800	-7,001,000	-6,432,000	495,500	580,800	54,602,900	1993
-509,000	4,663,900	-5,439,100	2,590,800	-7,019,000	-7,316,000	482,500	563,800	57,946,900	1994
-556,000	4,650,900	-5,509,100	2,600,800	-7,136,000	-7,520,000	483,500	558,800	56,316,900	1995
-553,000	4,379,900	-5,496,100	2,582,800	-7,108,000	-7,667,000	455,500	645,800	54,708,900	1996
-623,000	4,226,900	-5,891,100	2,804,800	-7,479,000	-8,087,000	443,500	609,800	55,062,900	1997
-542,000	4,379,900	-5,598,100	2,762,800	-7,190,000	-7,941,000	498,500	652,800	56,984,900	1998
-570,000	4,421,900	-5,826,100	2,803,800	-7,350,000	-8,479,000	505,500	653,800	57,819,900	1999
-582,000	4,581,900	-5,892,100	2,910,800	-7,402,000	-8,438,000	526,500	733,800	59,299,900	2000
-561,000	4,497,900	-5,838,100	3,079,800	-7,524,000	-8,871,000	519,500	722,800	62,325,900	2001
-610,000	4,616,900	-5,645,100	3,151,800	-7,721,000	-9,178,000	532,500	867,800	62,335,900	2002
-612,000	4,592,900	-6,089,100	3,300,800	-7,891,000	-9,922,000	533,500	859,800	62,806,900	2003
-647,000	4,639,900	-5,901,100	3,333,800	-7,767,000	-9,708,000	540,500	886,800	62,957,900	2004
-620,000	4,730,900	-5,950,100	3,426,800	-7,961,000	-9,872,000	552,500	897,800	63,458,900	2005
-611,000	4,538,900	-5,927,100	3,281,800	-7,974,000	-9,929,000	529,500	857,800	61,757,900	2006
-608,000	4,545,900	-5,980,100	3,290,800	-7,922,000	-10,014,000	530,500	864,800	62,193,900	2007
-628,000	4,627,900	-6,224,100	3,349,800	-7,948,000	-9,990,000	538,500	882,800	64,339,900	2008
-613,000	4,688,900	-5,970,100	3,413,800	-8,081,000	-10,368,000	547,500	1,068,800	64,530,900	2009
-643,000	4,646,900	-6,039,100	3,384,800	-8,016,000	-10,335,000	544,500	1,059,800	64,116,900	2010
-645,000	4,631,900	-6,116,100	3,381,800	-8,130,000	-10,369,000	542,500	1,054,800	64,164,900	2011
-635,000	4,623,900	-5,913,100	3,374,800	-8,018,000	-10,441,000	541,500	1,062,800	64,143,900	2012
-612,000	4,508,900	-5,041,100	3,283,800	-8,081,000	-10,248,000	527,500	1,022,800	64,002,900	2013
-617,000	4,641,900	-5,949,100	3,386,800	-8,048,000	-10,373,000	544,500	1,067,800	65,017,900	2014
-634,000	4,630,900	-6,030,100	3,367,800	-8,011,000	-10,178,000	544,500	1,061,800	64,768,900	2015
-641,000	4,701,900	-6,123,100	3,433,800	-7,988,000	-10,187,000	553,500	1,086,800	64,734,900	2016
-628,000	4,725,900	-6,139,100	3,455,800	-8,031,000	-10,321,000	569,500	1,097,800	64,694,900	2017
-633,000	4,739,900	-6,184,100	3,462,800	-8,020,000	-10,175,000	599,500	1,096,800	64,173,900	2018
-645,000	4,673,900	-5,979,100	3,396,800	-8,106,000	-9,976,000	590,500	1,080,800	65,059,900	2019
-645,000	4,670,900	-5,979,100	3,393,800	-8,106,000	-9,976,000	591,500	1,089,800	65,062,900	2020 (c

b) The estimated costs of Del Valle Pumping Plant are combined with those of South Bay Pumping Plant to simplify the cost allocations.

c) And each year thereafter for the remainder of the project repayment period.

TABLE B-4: ANNUAL ENTITLE-

(in acre-feet)

Calendar Year	NORTH BAY AREA			SOUTH BAY AREA (b				CENTRAL COASTAL AREA		
	Napa County FC & WCD(c	Solano County FC & WCD	Total	Alameda County FC & WCD Zone 7	Alameda County Water District	Santa Clara Valley Water District	Total	San Luis Obispo County FC & WCD	Santa Barbara County FC & WCD	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1962	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0	0
1967	0	0	0	507	5,248	5,783	11,538	0	0	0
1968	0	0	0	6,900	15,000	88,000	109,900	0	0	0
1969	0	0	0	8,200	15,500	75,000	98,700	0	0	0
1970	0	0	0	10,000	16,200	88,000	114,200	0	0	0
1971	0	0	0	11,200	17,000	88,000	116,200	0	0	0
1972	0	0	0	12,400	17,900	88,000	118,300	0	0	0
1973	0	0	0	13,600	18,800	88,000	120,400	0	0	0
1974	0	0	0	14,800	19,600	88,000	122,400	0	0	0
1975	0	0	0	16,000	20,500	88,000	124,500	0	0	0
1976	0	0	0	17,200	21,300	88,000	126,500	0	0	0
1977	0	0	0	18,400	22,200	88,000	128,600	0	0	0
1978	0	0	0	19,600	23,100	88,000	130,700	0	0	0
1979	0	0	0	20,800	23,900	88,000	132,700	0	0	0
1980	12,500	6,750	19,250	22,000	24,800	88,000	134,800	1,000	1,200	2,200
1981	13,750	8,000	21,750	23,000	26,000	88,000	137,000	1,000	2,300	3,300
1982	15,000	9,400	24,400	24,000	27,200	88,000	139,200	2,000	4,600	6,600
1983	16,250	10,800	27,050	25,000	28,400	88,000	141,400	3,000	6,900	9,900
1984	17,500	12,100	29,600	26,000	29,600	88,000	143,600	4,500	10,400	14,900
1985	18,750	14,000	32,750	27,000	30,800	88,000	145,800	7,500	17,300	24,800
1986	20,000	16,500	36,500	28,000	32,100	88,000	148,100	10,000	23,100	33,100
1987	21,250	20,000	41,250	29,000	33,300	88,000	150,300	12,500	28,800	41,300
1988	22,500	27,000	49,500	30,000	34,500	88,000	152,500	15,500	35,800	51,300
1989	23,750	34,500	58,250	31,000	35,700	90,000	156,700	20,000	46,100	66,100
1990	25,000	42,000	67,000	32,000	36,900	92,000	160,900	25,000	57,700	82,700
1991	25,000	42,000	67,000	34,000	38,400	94,000	166,400	25,000	57,700	82,700
1992	25,000	42,000	67,000	36,000	39,900	96,000	171,900	25,000	57,700	82,700
1993	25,000	42,000	67,000	38,000	41,400	98,000	177,400	25,000	57,700	82,700
1994	25,000	42,000	67,000	40,000	42,000	100,000	182,000	25,000	57,700	82,700
1995	25,000	42,000	67,000	42,000	42,000	100,000	184,000	25,000	57,700	82,700
1996	25,000	42,000	67,000	44,000	42,000	100,000	186,000	25,000	57,700	82,700
1997	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
1998	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
1999	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2000	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2001	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2002	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2003	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2004	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2005	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2006	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2007	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2008	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2009	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2010	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2011	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2012	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2013	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2014	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2015	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2016	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2017	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2018	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2019	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2020	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2021	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2022	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2023	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2024	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2025	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2026	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2027	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2028	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2029	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2030	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2031	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2032	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2033	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2034	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
2035	25,000	42,000	67,000	46,000	42,000	100,000	188,000	25,000	57,700	82,700
TOTAL	1,331,250	2,091,050	3,422,300	2,494,607	2,459,248	6,510,783	11,464,638	1,227,000	2,830,700	4,057,700

a) From Tables A and Articles 6(a) of water supply contracts as of December 31, 1972.

b) Entitlements for the South Bay Area have been supplied by nonproject water for the period June 1962 through November 1967. Actual delivery quantities of project water are shown for 1967.

c) District's Table A quantities exclude those during the period 1968 through 1979 which are assumed to be supplied by nonproject water.

MENTS TO PROJECT WATER[a]

(in acre-feet)

Calendar Year	SAN JOAQUIN VALLEY AREA								
	Devil's Den Water District	Dudley Ridge Water District	Empire West Side Irrigation District	Hacienda Water District	Kern County Water Agency	County of Kings	Oak Flat Water District	Tulare Lake Basin Water Storage District	Total
	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
1962	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0
1968	3,700	14,300	1,000	0	46,600	900	2,300	12,250	81,050
1969	5,000	14,325	3,000	2,400	95,700	1,200	2,500	43,950	168,075
1970	5,700	15,700	3,000	2,500	145,100	1,300	2,600	31,800	207,700
1971	6,700	17,900	3,000	2,300	190,300	1,300	2,800	34,200	258,500
1972	7,700	20,000	3,000	2,600	270,700	1,400	5,366	110,000	420,766
1973	8,700	22,000	3,000	2,900	310,500	1,500	3,100	40,652	392,352
1974	9,700	24,100	3,000	3,300	347,000	1,500	3,200	43,000	434,800
1975	10,700	26,200	3,000	3,600	385,500	1,600	3,400	46,900	480,900
1976	11,700	28,300	3,000	3,900	432,800	1,600	3,500	50,800	535,600
1977	12,700	30,400	3,000	4,200	483,600	1,700	3,700	54,800	594,100
1978	12,700	32,500	3,000	4,600	534,300	1,900	3,900	58,700	651,600
1979	12,700	34,600	3,000	4,900	583,900	2,000	4,000	62,600	707,700
1980	12,700	36,700	3,000	5,200	634,500	2,200	4,200	66,500	765,000
1981	12,700	38,800	3,000	5,600	691,400	2,300	4,300	70,400	828,500
1982	12,700	41,000	3,000	5,900	745,300	2,500	4,500	74,300	889,200
1983	12,700	42,900	3,000	6,200	805,100	2,800	4,600	78,200	955,500
1984	12,700	45,100	3,000	6,500	860,600	3,100	4,800	82,100	1,017,900
1985	12,700	47,200	3,000	6,900	915,000	3,400	4,900	86,000	1,079,100
1986	12,700	49,300	3,000	7,200	968,200	3,700	5,100	90,000	1,139,200
1987	12,700	51,400	3,000	7,500	1,023,500	4,000	5,200	93,900	1,201,200
1988	12,700	53,500	3,000	7,800	1,074,600	4,000	5,400	97,800	1,258,800
1989	12,700	55,600	3,000	8,200	1,112,300	4,000	5,600	101,700	1,303,100
1990	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
1991	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
1992	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
1993	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
1994	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
1995	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
1996	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
1997	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
1998	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
1999	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2000	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2001	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2002	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2003	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2004	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2005	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2006	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2007	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2008	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2009	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2010	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2011	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2012	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2013	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2014	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2015	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2016	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2017	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2018	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2019	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2020	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2021	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2022	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2023	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2024	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2025	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2026	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2027	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2028	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2029	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2030	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2031	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2032	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2033	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2034	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
2035	12,700	57,700	3,000	8,500	1,153,400	4,000	5,700	110,000	1,355,000
TOTAL	818,900	3,396,025	202,000	495,200	65,712,900	233,900	351,166	6,490,552	77,700,643

TABLE B-4: ANNUAL ENTITLE-

(in acre-feet)

Calendar Year	SOUTHERN CALIFORNIA AREA									
	Antelope Valley-East Kern Water Agency	Castaic Lake Water Agency	Coachella Valley County Water District	Crestline Lake Arrowhead Water Agency	Desert Water Agency	Littlerock Creek Irrigation District	Mojave Water Agency	Palmdale Water District	San Bernardino Valley Municipal Water District	San Gabriel Valley Municipal Water District
	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)
1962	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0	0
1968	0	0	0	0	0	0	0	0	0	0
1969	0	0	0	0	0	0	0	0	0	0
1970	0	0	0	0	0	0	0	0	0	0
1971	0	0	0	0	0	0	0	0	0	0
1972	20,000	1,236	5,200	526	8,000	170	8,400	1,620	1,677	122
1973	25,000	3,700	5,800	870	9,000	290	10,700	2,940	48,000	11,500
1974	30,000	5,700	6,400	1,160	10,000	400	13,100	4,260	50,000	12,300
1975	35,000	7,500	7,000	1,450	11,000	520	15,400	5,580	52,500	13,100
1976	44,000	9,500	7,600	1,740	12,000	640	17,800	6,900	55,000	14,000
1977	50,000	11,400	8,421	2,030	13,000	730	20,200	8,220	57,500	14,800
1978	57,000	13,400	9,242	2,320	14,000	920	22,500	9,340	60,000	15,700
1979	63,000	15,300	10,063	2,610	15,000	1,040	24,900	10,260	62,500	16,600
1980	69,200	17,700	10,884	2,900	17,000	1,150	27,200	11,180	65,500	17,400
1981	75,000	20,100	12,105	3,190	19,000	1,270	29,600	11,700	68,500	18,300
1982	81,300	22,100	13,326	3,480	21,000	1,380	31,900	12,320	71,500	19,100
1983	87,700	24,600	14,547	3,770	23,000	1,500	34,300	12,940	74,500	19,900
1984	94,000	26,900	15,768	4,060	25,000	1,610	36,700	13,560	78,000	20,700
1985	100,400	29,100	16,989	4,350	27,000	1,730	39,000	14,180	81,500	21,800
1986	106,700	30,900	18,210	4,640	29,000	1,840	41,400	14,800	85,000	23,200
1987	113,000	32,900	19,431	4,930	31,500	1,960	43,700	15,420	89,000	24,600
1988	119,400	35,300	20,652	5,220	34,000	2,070	46,000	16,040	93,000	26,000
1989	125,700	37,400	21,873	5,510	36,500	2,190	48,500	16,660	97,000	27,400
1990	132,100	39,300	23,100	5,800	38,100	2,300	50,800	17,300	101,500	28,800
1991	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
1992	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
1993	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
1994	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
1995	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
1996	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
1997	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
1998	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
1999	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2000	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2001	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2002	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2003	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2004	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2005	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2006	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2007	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2008	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2009	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2010	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2011	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2012	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2013	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2014	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2015	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2016	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2017	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2018	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2019	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2020	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2021	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2022	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2023	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2024	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2025	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2026	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2027	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2028	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2029	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2030	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2031	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2032	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2033	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2034	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
2035	138,400	41,500	23,100	5,800	38,100	2,300	50,800	17,300	102,600	28,800
TOTAL	7,656,500	2,251,536	1,286,111	321,556	2,107,600	127,210	2,848,100	983,720	5,909,177	1,641,322

MENTS TO PROJECT WATER[a]

(in acre-feet)

Calendar Year	SOUTHERN CALIFORNIA AREA (continued)				FEATHER RIVER AREA				TOTAL STATE WATER PROJECT
	San Gorgonio Pass Water Agency	The Metropolitan Water District of Southern California	Ventura County Flood Control District	Total	City of Yuba City	County of Butte	Plumas County FC & WCD	Total	
	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)
1962	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	11,538
1968	0	0	0	0	0	300	250	550	191,500
1969	0	0	0	0	0	350	270	620	267,395
1970	0	0	0	0	0	400	300	700	322,600
1971	0	0	0	0	0	450	440	890	375,590
1972	0	154,772	0	201,723	0	500	470	970	741,759
1973	0	354,600	0	472,400	0	600	500	1,100	986,252
1974	0	454,900	0	588,220	0	700	530	1,230	1,146,650
1975	0	555,200	0	704,250	0	1,050	560	1,610	1,311,260
1976	0	655,600	0	824,780	0	1,400	590	1,990	1,488,870
1977	0	755,900	0	942,201	0	1,800	620	2,420	1,667,321
1978	0	856,300	0	1,060,722	0	2,200	650	2,850	1,845,872
1979	0	956,600	0	1,177,873	0	2,600	680	3,280	2,021,553
1980	6,800	1,057,000	1,000	1,304,914	0	4,000	710	4,710	2,230,874
1981	7,800	1,157,300	2,000	1,425,865	4,200	5,450	740	10,390	2,426,805
1982	8,800	1,257,600	3,000	1,546,806	4,600	6,900	770	12,270	2,618,476
1983	9,800	1,358,000	4,000	1,668,557	5,050	8,350	800	14,200	2,816,607
1984	10,800	1,458,300	5,000	1,790,398	5,500	9,800	830	16,130	3,012,528
1985	11,800	1,558,700	6,000	1,912,549	5,950	12,250	860	19,060	3,214,059
1986	12,900	1,659,300	8,000	2,035,890	6,600	14,700	890	22,190	3,414,980
1987	14,000	1,759,800	10,000	2,160,241	7,300	17,150	920	25,370	3,619,661
1988	15,100	1,860,400	13,000	2,286,182	8,000	20,600	960	29,560	3,827,842
1989	16,200	1,961,000	16,000	2,411,933	8,800	24,050	1,000	33,850	4,029,933
1990	17,300	2,011,500	20,000	2,487,900	9,600	27,500	1,040	38,140	4,191,640
1991	17,300	2,011,500	20,000	2,497,500	9,600	27,500	1,080	38,180	4,206,780
1992	17,300	2,011,500	20,000	2,497,500	9,600	27,500	1,120	38,220	4,212,320
1993	17,300	2,011,500	20,000	2,497,500	9,600	27,500	1,160	38,260	4,217,860
1994	17,300	2,011,500	20,000	2,497,500	9,600	27,500	1,200	38,300	4,222,500
1995	17,300	2,011,500	20,000	2,497,500	9,600	27,500	1,250	38,350	4,224,550
1996	17,300	2,011,500	20,000	2,497,500	9,600	27,500	1,300	38,400	4,226,600
1997	17,300	2,011,500	20,000	2,497,500	9,600	27,500	1,350	38,450	4,228,650
1998	17,300	2,011,500	20,000	2,497,500	9,600	27,500	1,400	38,500	4,228,700
1999	17,300	2,011,500	20,000	2,497,500	9,600	27,500	1,450	38,550	4,228,750
2000	17,300	2,011,500	20,000	2,497,500	9,600	27,500	1,510	38,610	4,228,810
2001	17,300	2,011,500	20,000	2,497,500	9,600	27,500	1,570	38,670	4,228,870
2002	17,300	2,011,500	20,000	2,497,500	9,600	27,500	1,630	38,730	4,228,930
2003	17,300	2,011,500	20,000	2,497,500	9,600	27,500	1,690	38,790	4,228,990
2004	17,300	2,011,500	20,000	2,497,500	9,600	27,500	1,750	38,850	4,229,050
2005	17,300	2,011,500	20,000	2,497,500	9,600	27,500	1,810	38,910	4,229,110
2006	17,300	2,011,500	20,000	2,497,500	9,600	27,500	1,880	38,980	4,229,180
2007	17,300	2,011,500	20,000	2,497,500	9,600	27,500	1,950	39,050	4,229,250
2008	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,020	39,120	4,229,320
2009	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,090	39,190	4,229,390
2010	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,160	39,260	4,229,460
2011	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,240	39,340	4,229,540
2012	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,320	39,420	4,229,620
2013	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,410	39,510	4,229,710
2014	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,500	39,600	4,229,800
2015	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,600	39,700	4,229,900
2016	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,700	39,800	4,230,000
2017	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,700	39,800	4,230,000
2018	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,700	39,800	4,230,000
2019	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,700	39,800	4,230,000
2020	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,700	39,800	4,230,000
2021	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,700	39,800	4,230,000
2022	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,700	39,800	4,230,000
2023	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,700	39,800	4,230,000
2024	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,700	39,800	4,230,000
2025	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,700	39,800	4,230,000
2026	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,700	39,800	4,230,000
2027	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,700	39,800	4,230,000
2028	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,700	39,800	4,230,000
2029	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,700	39,800	4,230,000
2030	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,700	39,800	4,230,000
2031	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,700	39,800	4,230,000
2032	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,700	39,800	4,230,000
2033	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,700	39,800	4,230,000
2034	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,700	39,800	4,230,000
2035	17,300	2,011,500	20,000	2,497,500	9,600	27,500	2,700	39,800	4,230,000
TOTAL	909,800	112,360,272	988,000	139,390,904	497,600	1,400,600	112,820	2,011,020	238,047,205

TABLE B-5: ANNUAL QUANTITIES DELIVERED

(in acre-feet)

Calendar Year	Grizzly Valley Pipeline PC FC&WCD	NORTH BAY AQUEDUCT Reach 2 SC FC&WCD	NORTH BAY AQUEDUCT Reach 3 NC FC&WCD(a	TOTAL NORTH BAY AQUEDUCT (a	SOUTH BAY AQUEDUCT Reach 1 ACWD	SOUTH BAY AQUEDUCT Reach 1 AC FC&WCD	SOUTH BAY AQUEDUCT Reach 2 AC FC&WCD	SOUTH BAY AQUEDUCT Reach 4 AC FC&WCD	SOUTH BAY AQUEDUCT Reach 5 ACWD	SOUTH BAY AQUEDUCT Reach 5 AC FC&WCD	SOUTH BAY AQUEDUCT Reach 6 AC FC&WCD
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1962	0	0	0	0	8,412	141	353	0	0	0	0
1963	0	0	0	0	10,914	814	917	0	0	0	0
1964	0	0	0	0	19,238	248	1,425	0	0	0	0
1965	0	0	0	0	15,280	637	1,830	138	0	0	0
1966	0	0	0	0	0	2,475	2,537	499	0	0	0
1967	0	0	0	0	0	1,527	2,391	862	0	0	0
1968	0	0	1,214	1,214	0	1,608	3,799	721	0	5	0
1969	0	0	2,687	2,687	0	1,165	3,459	1,851	0	160	0
1970	70	0	3,618	3,618	0	1,345	4,558	3,182	0	164	0
1971	64	0	2,521	2,521	0	546	1,908	2,403	0	160	0
1972	505	0	3,647	3,647	0	1,066	4,605	2,041	1,489	2,777	0
1973	679	0	3,792	3,792	0	430	1,123	1,193	0	229	0
1974	530	0	3,866	3,866	0	1,315	6,332	4,486	0	2,547	120
1975	560	0	1,645	1,645	0	1,315	4,101	2,221	0	159	8,204
1976	590	0	1,665	1,665	0	1,315	4,386	2,566	0	159	8,774
1977	620	0	1,680	1,680	0	1,315	4,759	2,648	0	159	9,519
1978	650	0	1,695	1,695	0	1,315	5,251	2,371	0	159	10,504
1979	680	0	1,765	1,765	0	1,315	5,762	2,048	0	159	11,516
1980	710	6,750	2,700	9,450	0	0	6,566	2,100	0	200	13,134
1981	740	8,000	2,780	10,780	0	0	7,200	1,600	0	200	14,400
1982	770	9,400	2,860	12,260	0	0	7,933	800	0	200	15,867
1983	800	10,330	2,940	13,270	0	0	8,733	0	0	0	17,467
1984	830	11,160	3,020	14,180	0	0	9,200	0	0	0	18,400
1985	860	12,870	3,100	15,970	0	0	9,660	0	0	0	19,340
1986	890	15,240	3,200	18,440	0	0	10,200	0	0	0	20,400
1987	920	18,320	3,300	21,620	0	0	10,733	0	0	0	21,467
1988	960	24,900	3,400	28,300	0	0	11,266	0	0	0	22,534
1989	1,000	31,350	3,500	34,850	0	0	11,800	0	0	0	23,600
1990	1,040	37,800 (b	3,600	41,400	0	0	12,333	0	0	0	24,667
1991	1,080	37,800	3,720	41,520	0	0	12,833	0	0	0	25,667
1992	1,120	37,800	3,840	41,640	0	0	13,333	0	0	0	26,667
1993	1,160	37,800	3,980	41,780	0	0	13,533	0	0	0	27,967
1994	1,200	37,800	4,100	41,900	0	0	14,333	0	0	0	28,667
1995	1,250	37,800	4,200	42,000	0	0	15,500	0	0	0	29,000
1996	1,300	37,800	4,360	42,160	0	0	17,000	0	0	0	29,000
1997	1,350	37,800	4,520	42,320	0	0	17,000	0	0	0	29,000
1998	1,400	37,800	4,680	42,480	0	0	17,000	0	0	0	29,000
1999	1,450	37,800	4,840	42,640	0	0	17,000	0	0	0	29,000
2000	1,510	37,800	5,000	42,800	0	0	17,000	0	0	0	29,000
2001	1,570	37,800	5,300	43,100	0	0	17,000	0	0	0	29,000
2002	1,630	37,800	5,600	43,400	0	0	17,000	0	0	0	29,000
2003	1,690	37,800	5,900	43,700	0	0	17,000	0	0	0	29,000
2004	1,750	37,800	6,200	44,000	0	0	17,000	0	0	0	29,000
2005	1,810	37,800	6,500	44,300	0	0	17,000	0	0	0	29,000
2006	1,880	37,800	6,800	44,600	0	0	17,000	0	0	0	29,000
2007	1,950	37,800	7,100	44,900	0	0	17,000	0	0	0	29,000
2008	2,020	37,800	7,400	45,200	0	0	17,000	0	0	0	29,000
2009	2,090	37,800	7,700	45,500	0	0	17,000	0	0	0	29,000
2010	2,160	37,800	8,000	45,800	0	0	17,000	0	0	0	29,000
2011	2,240	37,800	8,400	46,200	0	0	17,000	0	0	0	29,000
2012	2,320	37,800	8,800	46,600	0	0	17,000	0	0	0	29,000
2013	2,410	37,800	9,200	47,000	0	0	17,000	0	0	0	29,000
2014	2,500	37,800	9,600	47,400	0	0	17,000	0	0	0	29,000
2015	2,600	37,800	10,000	47,800	0	0	17,000	0	0	0	29,000
2016	2,700	37,800	10,400	48,200	0	0	17,000	0	0	0	29,000
2017	2,700	37,800	10,800	48,600	0	0	17,000	0	0	0	29,000
2018	2,700	37,800	11,200	49,000	0	0	17,000	0	0	0	29,000
2019	2,700	37,800	11,600	49,400	0	0	17,000	0	0	0	29,000
2020 (c	2,700	37,800	25,000	62,800	0	0	17,000	0	0	0	29,000

a) Between 1968-1979, inclusive, annual quantities delivered are nonproject water pumped thru an interim facility.

b) Solano County Flood Control and Water Conservation District (SCFC&WCD) has contracted for 42,000 acre-feet maximum annually, of which 4,200 acre-feet will be delivered from the Delta thru the District's facilities.

c) And thereafter for the remainder of the project repayment period.

FROM EACH AQUEDUCT REACH TO EACH CONTRACTOR

(in acre-feet)

Calendar Year	SOUTH BAY AQUEDUCT (continued)			TOTAL SOUTH BAY AQUEDUCT	CALIFORNIA AQUEDUCT						
					NORTH SAN JOAQUIN DIVISION	SOUTH SAN JOAQUIN DIVISION					
	Reach 7	Reach 8	Reach 9		Reach 2A	Reach 8C				Reach 8D	
	ACWD	ACWD	SCVWD		OFWD	HWD	TLBWSD	EWSID	CK	KCWA (Ag.)	DRWD
	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
1962	0	0	0	8,906	0	0	0	0	0	0	0
1963	0	0	0	12,645	0	0	0	0	0	0	0
1964	0	0	0	20,911	0	0	0	0	0	0	0
1965	1,127	0	15,014	34,026	0	0	0	0	0	0	0
1966	11,864	0	34,538	54,913	0	0	0	0	0	0	0
1967	12,882	0	39,101	56,763	0	0	0	0	0	0	0
1968	24,817	0	70,105	101,055	3,084	0	25,100	1,978	900	0	26,360
1969	813	0	62,264	69,712	3,016	0	7,081	56	100	0	31,375
1970	0	0	80,311	89,560	5,911	0	0	3,942	0	0	40,407
1971	5,961	0	87,606	98,584	7,212	0	80,906	5,990	3,700	0	41,053
1972	26,182	0	100,266	138,426	8,166	0	144,843	5,795	1,400	0	42,443
1973	2,521	0	88,582	94,078	3,214	140	26,177	3,000	1,500	1,500	22,057
1974	19,600	0	88,000	122,400	3,200	0	15,500	3,000	1,500	0	24,100
1975	16,823	3,677	88,000	124,500	3,400	0	16,900	3,000	1,600	0	26,200
1976	12,526	8,774	88,000	126,500	3,500	0	18,300	3,000	1,600	0	28,300
1977	13,426	8,774	88,000	128,600	3,700	0	19,800	3,000	1,700	0	30,400
1978	14,326	8,774	88,000	130,700	3,900	0	21,200	3,000	1,900	0	32,500
1979	15,126	8,774	88,000	132,700	4,000	0	22,600	3,000	2,000	0	34,600
1980	16,026	8,774	88,000	134,800	4,200	0	24,900	3,000	2,200	0	36,700
1981	17,226	8,774	88,000	137,400	4,300	0	27,200	3,000	2,300	0	38,800
1982	18,426	8,774	88,000	140,000	4,500	0	29,500	3,000	2,500	0	41,000
1983	19,626	8,774	88,000	142,600	4,600	0	31,800	3,000	2,800	0	42,900
1984	20,826	8,774	88,000	145,200	4,800	0	34,100	3,000	3,100	0	45,100
1985	22,026	8,774	88,000	147,800	4,900	0	36,000	3,000	3,400	0	47,200
1986	23,326	8,774	88,000	150,700	5,100	0	40,000	3,000	3,700	0	49,300
1987	24,526	8,774	88,000	153,500	5,200	0	43,900	3,000	4,000	0	51,400
1988	25,726	8,774	88,000	156,300	5,400	0	47,800	3,000	4,000	0	53,500
1989	26,926	8,774	90,000	161,100	5,600	0	51,700	3,000	4,000	0	55,600
1990	28,126	8,774	92,000	165,900	5,700	0	60,000	3,000	4,000	0	57,700
1991	29,626	8,774	94,000	170,900	5,700	0	60,000	3,000	4,000	0	57,700
1992	31,126	8,774	96,000	175,900	5,700	0	60,000	3,000	4,000	0	57,700
1993	32,626	8,774	98,000	180,900	5,700	0	60,000	3,000	4,000	0	57,700
1994	33,226	8,774	100,000	185,000	5,700	0	60,000	3,000	4,000	0	57,700
1995	33,226	8,774	100,000	186,500	5,700	0	60,000	3,000	4,000	0	57,700
1996 (C	33,226	8,774	100,000	188,000	5,700	0	60,000	3,000	4,000	0	57,700

Calendar Year	CALIFORNIA AQUEDUCT (continued)											
	SOUTH SAN JOAQUIN DIVISION (continued)											
	Reach 8D (continued)		Reach 9		Reach 10 A		Reach 11B	Reach 12D	Reach 12E		Reach 13B	
	HWD	TLBWSD	KCWA (Ag.)	HWD	KCWA (Ag.)	HWD	KCWA (Ag.)	KCWA (Ag.)	KCWA (M&I)	KCWA (Ag.)	KCWA (M&I)	KCWA (Ag.)
	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)
1968	0	0	30,951	0	0	0	24,776	0	0	0	0	0
1969	0	0	24,489	0	0	2,842	64,682	0	0	0	0	0
1970	3,408	0	46,114	1,855	158	4,315	72,279	0	0	9,279	0	4,891
1971	6,659	34,920	58,356	0	9,973	0	63,773	0	0	28,056	0	0
1972	5,851	107,699	75,464	0	5,876	0	72,358	0	0	62,342	0	17,388
1973	2,760	21,387	54,583	0	22,948	0	67,544	0	0	13,082	0	9,297
1974	3,300	27,500	58,900	0	38,424	0	91,794	0	0	6,800	1,700	918
1975	3,600	30,000	67,747	0	33,187	0	88,792	0	0	13,975	0	19,232
1976	3,900	32,500	67,308	0	46,627	0	90,647	0	25,000	30,133	0	21,385
1977	4,200	35,000	71,866	0	55,531	0	97,228	0	25,000	38,645	0	23,830
1978	4,600	37,500	76,993	0	64,376	0	104,528	0	25,000	45,700	0	26,303
1979	4,900	40,000	82,100	0	73,079	0	111,528	0	25,000	52,883	0	28,810
1980	5,200	41,600	85,900	0	80,800	0	118,000	2,400	47,700	34,000	3,600	17,700
1981	5,600	43,200	94,500	0	88,800	0	124,700	2,400	50,200	35,000	3,600	24,400
1982	5,900	44,800	94,500	0	104,400	0	130,800	2,400	53,600	35,000	3,600	31,900
1983	6,200	46,400	94,500	0	121,500	0	135,600	2,400	56,000	35,000	3,600	41,700
1984	6,500	48,000	94,500	0	137,700	0	141,300	2,400	59,400	35,000	3,600	49,500
1985	6,900	50,000	94,000	0	154,000	0	145,400	2,400	62,900	35,500	3,600	57,900
1986	7,200	50,000	94,000	0	169,600	0	150,000	2,400	65,300	38,600	3,600	63,100
1987	7,500	50,000	94,000	0	185,700	0	153,300	2,400	70,364	42,200	3,600	68,500
1988	7,800	50,000	94,000	0	200,500	0	155,800	2,400	77,936	45,800	3,600	73,900
1989	8,200	50,000	94,000	0	211,200	0	157,200	2,400	84,100	48,300	3,600	78,100
1990 (C	8,500	50,000	93,600	0	224,600	0	157,800	2,400	91,100	51,200	3,600	82,200

TABLE B-5: ANNUAL QUANTITIES DELIVERED

(in acre-feet)

Calendar Year	CALIFORNIA AQUEDUCT (continued)										
	SOUTH SAN JOAQUIN DIVISION (continued)							TEHACHAPI DIVISION	MOJAVE DIVISION		
	Reach 14A		Reach 14B	Reach 14C	Reach 15A	Reach 16A		Reach 17E	Reach 18A	Reach 19	Reach 19C
	KCWA (M&I)	KCWA (Ag.)	KCWA (Ag.)	KCWA (Ag.)	KCWA (Ag.)	KCWA (M&I)	KCWA (Ag.)	KCWA (M&I)	AVEKWA	AVEKWA	AVEKWA
	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)
1970	0	0	3	0	0	0	0	0	0	0	0
1971	0	23,844	49,929	24,187	3,552	0	0	0	0	0	0
1972	0	26,621	77,034	35,016	6,064	0	4,768	0	0	0	0
1973	0	15,328	47,040	19,043	19,916	0	1,961	0	0	0	0
1974	0	8,349	31,128	12,674	18,589	3,000	1,619	600	0	0	0
1975	0	12,989	30,808	11,902	18,703	3,200	7,668	700	0	0	0
1976	0	11,070	26,253	10,142	15,937	3,500	6,198	800	0	0	0
1977	0	13,060	30,982	11,969	18,810	3,800	7,279	800	0	0	0
1978	0	14,512	34,417	13,296	20,893	4,100	11,482	900	0	0	0
1979	0	16,386	38,865	15,014	23,594	4,400	13,041	1,000	0	0	0
1980	13,900	18,000	39,200	18,400	26,700	4,800	17,800	1,100	0	500	0
1981	14,600	23,200	42,500	20,300	29,800	5,200	19,600	1,200	0	1,000	0
1982	15,400	24,100	46,900	21,100	35,700	5,700	21,700	1,300	0	1,500	0
1983	16,200	26,600	54,100	23,200	39,300	6,300	24,100	1,400	500	2,000	0
1984	16,900	27,900	56,700	24,300	41,100	7,200	32,200	1,500	1,500	2,500	0
1985	17,600	31,900	60,600	25,900	43,900	8,200	35,000	1,600	2,000	3,000	500
1986	18,400	33,200	65,700	26,800	45,700	9,400	41,100	1,700	2,500	3,000	4,500
1987	17,636	35,400	71,100	28,700	48,700	10,700	44,900	1,800	3,000	3,000	8,400
1988	13,164	37,200	78,600	30,100	51,200	12,300	47,400	1,900	3,500	3,000	12,300
1989	10,000	38,500	81,500	31,200	52,800	13,600	52,200	1,900	4,000	3,000	16,100
1990	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	5,000	3,000	19,500
1991	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	6,000	3,000	23,340
1992	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	7,000	3,000	27,180
1993	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	8,000	3,000	31,020
1994	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	9,000	3,000	34,860
1995	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	10,000	3,000	38,700
1996	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	11,000	3,000	42,540
1997	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	12,000	3,000	46,380
1998	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	13,000	3,000	50,220
1999	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	14,000	3,000	54,060
2000	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	15,000	3,000	57,900
2001	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	15,000	3,000	57,900
2002	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	15,000	3,000	57,900
2003	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	15,000	3,000	57,900
2004	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	15,000	3,000	57,900
2005	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	15,000	3,000	57,900
2006	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	15,000	3,000	57,900
2007	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	15,000	3,000	57,900
2008	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	15,000	3,000	57,900
2009	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	15,000	3,000	57,900
2010	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	15,000	3,000	57,900
2011	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	15,000	3,000	57,900
2012	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	15,000	3,000	57,900
2013	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	15,000	3,000	57,900
2014	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	15,000	3,000	57,900
2015	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	15,000	3,000	57,900
2016	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	15,000	3,000	57,900
2017	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	15,000	3,000	57,900
2018	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	15,000	3,000	57,900
2019	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	15,000	3,000	57,900
2020 (C	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	15,000	3,000	57,900

FROM EACH AQUEDUCT REACH TO EACH CONTRACTOR

(in acre-feet)

Calendar Year	CALIFORNIA AQUEDUCT (continued)									
	MOJAVE DIVISION (continued)									
	Reach 20A	Reach 20B	Reach 21		Reach 22A	Reach 22B				Reach 24
	AVEKWA	PWD	LCID	AVEKWA	AVEKWA	MWD-SC(d	CVCWD(d	DWA(d	MWA	CLAWA
	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)
1972	0	0	338	0	0	0	0	0	55	464
1973	0	0	290	0	0	14,800-	5,800	9,000	0	461
1974	0	0	400	0	0	16,400-	6,400	10,000	0	1,160
1975	0	0	520	0	0	18,000-	7,000	11,000	0	1,450
1976	22,000	100	640	500	3,500	19,600-	7,600	12,000	20,300	1,740
1977	24,000	300	730	700	4,300	21,421-	8,421	13,000	21,000	2,030
1978	26,000	600	920	900	5,100	23,242-	9,242	14,000	24,000	2,320
1979	28,000	1,000	1,040	1,100	5,900	25,063-	10,063	15,000	27,000	2,610
1980	30,000	1,740	1,150	1,300	6,000	27,884-	10,884	17,000	27,200	2,900
1981	32,000	3,500	1,270	1,500	6,100	31,105-	12,105	19,000	29,600	3,190
1982	34,000	5,260	1,380	1,700	6,200	34,326-	13,326	21,000	31,900	3,480
1983	36,000	7,020	1,500	1,900	6,300	37,547-	14,547	23,000	34,300	3,770
1984	38,000	8,780	1,610	2,100	6,400	40,768-	15,768	25,000	36,700	4,060
1985	40,000	10,540	1,730	2,300	6,500	43,989-	16,989	27,000	39,000	4,350
1986	40,000	11,890	1,840	2,500	6,600	47,210-	18,210	29,000	41,400	4,640
1987	40,000	13,240	1,960	2,700	6,700	50,931-	19,431	31,500	43,700	4,930
1988	40,000	14,600	2,070	2,900	6,800	60,652-	26,652	34,000	46,000	5,220
1989	40,000	15,950	2,190	3,200	6,900	58,373-	21,873	36,500	48,500	5,510
1990	40,000	17,300	2,300	3,500	7,000	61,200-	23,100	38,100	50,800	5,800
1991	40,000	17,300	2,300	3,800	7,000	61,200-	23,100	38,100	50,800	5,800
1992	40,000	17,300	2,300	4,100	7,000	61,200-	23,100	38,100	50,800	5,800
1993	40,000	17,300	2,300	4,400	7,000	61,200-	23,100	38,100	50,800	5,800
1994	40,000	17,300	2,300	4,700	7,000	61,200-	23,100	38,100	50,800	5,800
1995	40,000	17,300	2,300	5,000	7,000	61,200-	23,100	38,100	50,800	5,800
1996	40,000	17,300	2,300	5,300	7,000	61,200-	23,100	38,100	50,800	5,800
1997	40,000	17,300	2,300	5,600	7,000	61,200-	23,100	38,100	50,800	5,800
1998	40,000	17,300	2,300	5,900	7,000	61,200-	23,100	38,100	50,800	5,800
1999	40,000	17,300	2,300	6,200	7,000	61,200-	23,100	38,100	50,800	5,800
2000	40,000	17,300	2,300	6,500	7,000	61,200-	23,100	38,100	50,800	5,800
2001	40,000	17,300	2,300	6,500	7,000	0	23,100	38,100	50,800	5,800
2002	40,000	17,300	2,300	6,500	7,000	0	23,100	38,100	50,800	5,800
2003	40,000	17,300	2,300	6,500	7,000	0	23,100	38,100	50,800	5,800
2004	40,000	17,300	2,300	6,500	7,000	0	23,100	38,100	50,800	5,800
2005	40,000	17,300	2,300	6,500	7,000	0	23,100	38,100	50,800	5,800
2006	40,000	17,300	2,300	6,500	7,000	0	23,100	38,100	50,800	5,800
2007	40,000	17,300	2,300	6,500	7,000	0	23,100	38,100	50,800	5,800
2008	40,000	17,300	2,300	6,500	7,000	0	23,100	38,100	50,800	5,800
2009	40,000	17,300	2,300	6,500	7,000	0	23,100	38,100	50,800	5,800
2010	40,000	17,300	2,300	6,500	7,000	0	23,100	38,100	50,800	5,800
2011	40,000	17,300	2,300	6,500	7,000	0	23,100	38,100	50,800	5,800
2012	40,000	17,300	2,300	6,500	7,000	0	23,100	38,100	50,800	5,800
2013	40,000	17,300	2,300	6,500	7,000	0	23,100	38,100	50,800	5,800
2014	40,000	17,300	2,300	6,500	7,000	0	23,100	38,100	50,800	5,800
2015	40,000	17,300	2,300	6,500	7,000	0	23,100	38,100	50,800	5,800
2016	40,000	17,300	2,300	6,500	7,000	0	23,100	38,100	50,800	5,800
2017	40,000	17,300	2,300	6,500	7,000	0	23,100	38,100	50,800	5,800
2018	40,000	17,300	2,300	6,500	7,000	0	23,100	38,100	50,800	5,800
2019	40,000	17,300	2,300	6,500	7,000	0	23,100	38,100	50,800	5,800
2020 (C	40,000	17,300	2,300	6,500	7,000	0	23,100	38,100	50,800	5,800

d) In accordance with the Exchange Agreement between the noted agencies, Metropolitan Water District assumed responsibility for repayment of variable OMP&R costs on the exchange water in reaches beyond Reach 22B, and Desert Water Agency and Coachella Valley County Water District for such costs from the Delta through Reach 22B. The adjustment in deliveries shown in Column 51 provides for compliance with the repayment of the Agreement.

Calendar Year	CALIFORNIA AQUEDUCT (continued)							
	SANTA ANA DIVISION							
	Reach 26A				Reach 28G		Reach 28H	Reach 28J
	MWD-SC	SBVMWD	SGVMWD	SGPWA	MWD-SC	SBVMWD	MWD-SC	MWD-SC
	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
1972	0	1,275	0	0	0	0	0	0
1973	444	32,426	0	0	18,942	0	0	0
1974	126,000	50,000	12,300	0	10,000	0	0	0
1975	233,400	52,500	13,100	0	10,000	0	0	82,250
1976	304,400	55,000	14,000	0	10,000	0	11,850	115,850
1977	313,500	57,500	14,800	0	10,000	0	153,000	121,300
1978	314,800	60,000	15,700	0	10,000	0	152,950	125,050
1979	317,200	62,500	16,600	0	10,000	0	155,150	130,450
1980	332,000	65,000	16,500	6,800	10,000	500	145,000	150,000
1981	353,000	67,500	16,840	7,800	10,000	1,000	145,000	154,000
1982	373,000	70,000	17,180	8,800	10,000	1,500	145,000	158,000
1983	390,600	72,500	17,520	9,800	10,000	2,000	143,000	162,000
1984	408,800	75,000	17,860	10,800	10,000	3,000	113,000	166,000
1985	416,000	77,500	18,200	11,800	10,000	4,000	94,000	170,000
1986	415,000	80,000	18,540	12,900	10,000	5,000	67,000	190,000
1987	160,000	82,500	18,880	14,000	10,000	6,500	160,000	190,000
1988	210,359	85,000	19,220	15,100	10,000	8,000	68,000	322,641
1989	245,488	87,500	19,560	16,200	10,000	9,500	65,000	324,512
1990	257,249	90,000	19,900	17,300	10,000	11,500	25,000	357,751
1991	257,374	90,000	20,240	17,300	10,000	12,600	21,000	359,626
1992	258,458	90,000	20,580	17,300	10,000	12,600	14,000	365,542
1993	258,771	90,000	20,920	17,300	10,000	12,600	12,000	367,229
1994	258,713	90,000	21,260	17,300	10,000	12,600	6,000	372,287
1995	258,241	90,000	21,600	17,300	10,000	12,600	9,000	369,759
1996	258,555	90,000	21,940	17,300	10,000	12,600	7,000	371,445
1997	257,715	90,000	22,280	17,300	10,000	12,600	6,000	372,285
1998	258,513	90,000	22,620	17,300	10,000	12,600	1,000	376,487
1999	257,673	90,000	22,960	17,300	10,000	12,600	0	377,327
2000	257,671	90,000	23,300	17,300	10,000	12,600	0	377,329
2001	196,671	90,000	23,580	17,300	10,000	12,600	0	377,329
2002	195,672	90,000	23,850	17,300	10,000	12,600	0	377,328
2003	195,671	90,000	24,130	17,300	10,000	12,600	0	377,329
2004	195,672	90,000	24,400	17,300	10,000	12,600	0	377,328
2005	195,672	90,000	24,680	17,300	10,000	12,600	0	377,328
2006	194,672	90,000	24,950	17,300	10,000	12,600	0	377,328
2007	194,672	90,000	25,230	17,300	10,000	12,600	0	377,328
2008	211,672	90,000	25,500	17,300	10,000	12,600	0	377,328
2009	193,672	90,000	25,780	17,300	10,000	12,600	0	377,328
2010	193,172	90,000	26,050	17,300	10,000	12,600	0	378,328
2011	193,172	90,000	26,330	17,300	10,000	12,600	0	378,328
2012	193,172	90,000	26,600	17,300	10,000	12,600	0	378,328
2013	192,172	90,000	26,880	17,300	10,000	12,600	0	378,328
2014	192,172	90,000	27,150	17,300	10,000	12,600	0	378,328
2015	191,172	90,000	27,430	17,300	10,000	12,600	0	378,328
2016	191,172	90,000	27,700	17,300	10,000	12,600	0	378,328
2017	191,172	90,000	27,980	17,300	10,000	12,600	0	378,328
2018	190,172	90,000	28,250	17,300	10,000	12,600	0	378,328
2019	190,172	90,000	28,530	17,300	10,000	12,600	0	378,328
2020 (C	190,172	90,000	28,800	17,300	10,000	12,600	0	378,328

FROM EACH AQUEDUCT REACH TO EACH CONTRACTOR

(in acre-feet)

Calendar Year	CALIFORNIA AQUEDUCT (continued)										Total California Aqueduct
	WEST BRANCH, CALIFORNIA AQUEDUCT				COASTAL BRANCH, CALIFORNIA AQUEDUCT						
	Reach 29F	Reach 30			Reach 31A		Reach 33A	Reach 34	Reach 35		
	AVEKWA	MWD-SC	VCFCD	CLWA	KCWA (Ag.)	DDWD	SLOC FC&WCD	SLOC FC&WCD	SLOC FC&WCD	SBC FC&WCD	
	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)
1968	0	0	0	0	71,657	7,382	0	0	0	0	192,188
1969	0	0	0	0	52,094	9,970	0	0	0	0	195,705
1970	0	0	0	0	71,910	11,739	0	0	0	0	276,211
1971	0	0	0	0	98,481	12,490	0	0	0	0	553,081
1972	53	71,938	0	0	107,850	13,905	0	0	0	0	895,006
1973	20	155,297	0	0	69,227	9,418	0	0	0	0	639,002
1974	45	201,000	0	0	72,505	9,700	0	0	0	0	835,705
1975	45	218,950	0	0	76,597	10,700	0	0	0	0	1,093,115
1976	45	232,500	0	1,600	77,800	11,700	0	0	0	0	1,329,625
1977	45	241,450	0	3,700	84,800	12,700	0	0	0	0	1,562,455
1978	15	248,500	0	5,700	91,800	12,700	0	0	0	0	1,644,185
1979	45	255,550	0	7,500	98,200	12,700	0	0	0	0	1,729,345
1980	2,200	262,000	1,000	17,700	104,500	12,700	0	0	0	0	1,844,490
1981	3,400	268,000	2,000	20,000	111,400	12,700	0	0	0	0	1,955,200
1982	4,600	274,000	3,000	22,300	117,200	12,700	0	0	0	15,960	2,077,960
1983	5,300	286,400	4,000	24,600	123,600	12,700	0	0	0	17,603	2,194,113
1984	5,500	324,200	5,000	26,900	129,400	12,700	0	0	0	19,146	2,304,756
1985	5,700	360,000	6,000	29,100	134,600	12,700	0	0	0	22,545	2,413,865
1986	5,900	403,000	8,000	31,100	139,600	12,700	0	0	0	23,608	2,528,118
1987	6,200	600,000	10,000	33,100	144,500	12,700	0	0	0	25,371	2,645,381
1988	6,500	885,000	13,000	35,100	148,800	12,700	0	0	0	27,224	3,100,334
1989	6,800	900,000	16,000	37,200	151,700	12,700	0	0	0	29,017	3,215,227
1990	7,000	950,000	20,000	39,300	155,100	12,700	0	0	0	31,135	3,345,335
1991	7,200	982,000	20,000	41,500	155,100	12,700	550	280	0	32,780	3,386,790
1992	7,400	1,012,000	20,000	41,500	155,100	12,700	1,000	500	0	34,275	3,424,635
1993	7,600	1,037,000	20,000	41,500	155,100	12,700	1,400	700	0	35,760	3,457,400
1994	7,800	1,071,000	20,000	41,500	155,100	12,700	1,800	900	0	37,295	3,498,215
1995	8,000	1,091,000	20,000	41,500	155,100	12,700	2,200	1,100	0	38,850	3,526,050
1996	8,200	1,113,000	20,000	41,500	155,100	12,700	2,600	1,300	0	40,465	3,555,945
1997	8,400	1,134,000	20,000	41,500	155,100	12,700	3,000	1,500	50	42,190	3,584,000
1998	8,600	1,159,000	20,000	41,500	155,100	12,700	3,340	1,660	250	43,805	3,616,995
1999	8,800	1,180,000	20,000	41,500	155,100	12,700	3,800	1,900	400	45,630	3,645,350
2000	9,000	1,200,000	20,000	41,500	155,100	12,700	4,200	2,100	550	47,665	3,673,815
2001	9,000	1,281,000	20,000	41,500	155,100	12,700	4,480	2,240	650	49,700	3,757,850
2002	9,000	1,307,000	20,000	41,500	155,100	12,700	4,940	2,460	850	51,735	3,786,035
2003	9,000	1,325,000	20,000	41,500	155,100	12,700	5,340	2,660	1,000	53,770	3,807,100
2004	9,000	1,347,000	20,000	41,500	155,100	12,700	5,740	2,860	1,150	55,805	3,832,155
2005	9,000	1,367,000	20,000	41,500	155,100	12,700	6,140	3,060	1,350	57,700	3,855,130
2006	9,000	1,383,000	20,000	41,500	155,100	12,700	6,540	3,260	1,500	57,700	3,871,150
2007	9,000	1,398,000	20,000	41,500	155,100	12,700	6,940	3,460	1,650	57,700	3,887,180
2008	9,000	1,396,000	20,000	41,500	155,100	12,700	7,270	3,630	1,850	57,700	3,903,150
2009	9,000	1,424,000	20,000	41,500	155,100	12,700	7,670	3,830	2,050	57,700	3,914,230
2010	9,000	1,430,000	20,000	41,500	155,100	12,700	8,070	4,030	2,250	57,700	3,921,800
2011	9,000	1,430,000	20,000	41,500	155,100	12,700	8,340	4,160	2,500	57,700	3,922,730
2012	9,000	1,430,000	20,000	41,500	155,100	12,700	8,610	4,290	3,100	57,700	3,924,000
2013	9,000	1,431,000	20,000	41,500	155,100	12,700	8,880	4,420	3,700	57,700	3,925,280
2014	9,000	1,431,000	20,000	41,500	155,100	12,700	9,150	4,550	4,300	57,700	3,926,550
2015	9,000	1,432,000	20,000	41,500	155,100	12,700	9,420	4,680	4,900	57,700	3,927,830
2016	9,000	1,432,000	20,000	41,500	155,100	12,700	9,690	4,810	5,500	57,700	3,929,100
2017	9,000	1,432,000	20,000	41,500	155,100	12,700	9,960	4,940	6,100	57,700	3,930,380
2018	9,000	1,433,000	20,000	41,500	155,100	12,700	10,000	5,000	7,000	57,700	3,931,650
2019	9,000	1,433,000	20,000	41,500	155,100	12,700	10,000	5,000	8,000	57,700	3,932,930
2020 (C	9,000	1,433,000	20,000	41,500	155,100	12,700	10,000	5,000	10,000	57,700	3,935,200

TABLE B-6: ANNUAL QUANTITIES CONVEYED THRU EACH PUMPING

(in acre-feet)

Calendar Year	NORTH BAY AQUEDUCT							SOUTH BAY AQUEDUCT					
	CALHOUN AND TRAVIS PUMPING PLANTS			CORDELIA PUMPING PLANT				SOUTH BAY PUMPING PLANT					
											Deliveries		
	Operational Losses	Water Supply Delivery	Total	Initial Fill Water	Operational Losses	Water Supply Delivery (a	Total	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Water Supply	Recreation	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1962	0	0	0	0	0	0	0	9	272	0	8,906	0	9,187
1963	0	0	0	0	0	0	0	71	185	0	12,645	0	12,901
1964	0	0	0	0	0	0	0	171	152	0	20,911	0	21,234
1965	0	0	0	0	0	0	0	93	729	0	34,026	0	34,848
1966	0	0	0	0	0	0	0	0	1,746	0	54,913	0	56,659
1967	0	0	0	0	0	0	0	0	1,677	0	56,763	0	58,440
1968	0	0	0	24	-10	1,214	1,228	0	1,847	0	101,055	0	102,902
1969	0	0	0	0	2	2,687	2,689	3,449	2,668	-15,953	69,712	0	59,876
1970	0	0	0	0	18	3,618	3,636	16,279	1,086	-5,355	89,560	0	101,570
1971	0	0	0	0	4	2,521	2,525	0	1,815	8,854	98,584	0	109,253
1972	0	0	0	0	-10	3,647	3,637	0	3,557	2,273	138,426	0	144,256
1973	0	0	0	0	1	3,792	3,793	0	-33	-1,510	94,078	0	92,535
1974	0	0	0	0	0	3,866	3,866	0	4,129	0	122,400	120	126,649
1975	0	0	0	0	0	1,645	1,645	0	4,126	0	124,500	150	128,776
1976	0	0	0	0	0	1,665	1,665	0	4,128	0	126,500	180	130,808
1977	0	0	0	0	0	1,680	1,680	0	4,131	0	128,600	210	132,941
1978	0	0	0	0	0	1,695	1,695	0	4,134	0	130,700	240	135,074
1979	0	0	0	0	0	1,765	1,765	0	4,136	0	132,700	260	137,096
1980	1,400	9,450	10,850	0	0	2,700	2,700	0	4,132	0	134,800	280	139,212
1981	1,400	10,780	12,180	0	0	2,780	2,780	0	4,135	0	137,400	290	141,825
1982	1,400	12,260	13,660	0	0	2,860	2,860	0	4,137	0	140,000	300	144,437
1983	1,400	13,270	14,670	0	0	2,940	2,940	0	4,140	0	142,600	320	147,060
1984	1,400	14,180	15,580	0	0	3,020	3,020	0	4,144	0	145,200	330	149,674
1985	1,400	15,970	17,370	0	0	3,100	3,100	0	4,148	0	147,800	350	152,298
1986	1,400	18,440	19,840	0	0	3,200	3,200	0	4,153	0	150,700	360	155,213
1987	1,400	21,620	23,020	0	0	3,300	3,300	0	4,157	0	153,500	380	158,037
1988	1,400	28,300	29,700	0	0	3,400	3,400	0	4,161	0	156,300	400	160,861
1989	1,400	34,850	36,250	0	0	3,500	3,500	0	4,169	0	161,100	410	165,679
1990	1,400	41,400	42,800	0	0	3,600	3,600	0	4,142	0	165,900	425	170,467
1991	1,400	41,520	42,920	0	0	3,720	3,720	0	4,031	0	170,900	425	175,356
1992	1,400	41,640	43,040	0	0	3,840	3,840	0	3,967	0	175,900	425	180,292
1993	1,400	41,780	43,180	0	0	3,980	3,980	0	3,903	0	180,900	425	185,228
1994	1,400	41,900	43,300	0	0	4,100	4,100	0	3,846	0	185,000	425	189,271
1995	1,400	42,000	43,400	0	0	4,200	4,200	0	3,872	0	186,500	425	190,797
1996	1,400	42,160	43,560	0	0	4,360	4,360	0	3,845	0	188,000	425	192,270
1997	1,400	42,320	43,720	0	0	4,520	4,520	0	3,849	0	188,000	425	192,274
1998	1,400	42,480	43,880	0	0	4,680	4,680	0	3,849	0	188,000	425	192,274
1999	1,400	42,640	44,040	0	0	4,840	4,840	0	3,849	0	188,000	425	192,274
2000	1,400	42,800	44,200	0	0	5,000	5,000	0	3,849	0	188,000	425	192,274
2001	1,400	43,100	44,500	0	0	5,300	5,300	0	3,849	0	188,000	425	192,274
2002	1,400	43,400	44,800	0	0	5,600	5,600	0	3,849	0	188,000	425	192,274
2003	1,400	43,700	45,100	0	0	5,900	5,900	0	3,849	0	188,000	425	192,274
2004	1,400	44,000	45,400	0	0	6,200	6,200	0	3,849	0	188,000	425	192,274
2005	1,400	44,300	45,700	0	0	6,500	6,500	0	3,849	0	188,000	425	192,274
2006	1,400	44,600	46,000	0	0	6,800	6,800	0	3,849	0	188,000	425	192,274
2007	1,400	44,900	46,300	0	0	7,100	7,100	0	3,849	0	188,000	425	192,274
2008	1,400	45,200	46,600	0	0	7,400	7,400	0	3,849	0	188,000	425	192,274
2009	1,400	45,500	46,900	0	0	7,700	7,700	0	3,849	0	188,000	425	192,274
2010	1,400	45,800	47,200	0	0	8,000	8,000	0	3,849	0	188,000	425	192,274
2011	1,400	46,200	47,600	0	0	8,400	8,400	0	3,849	0	188,000	425	192,274
2012	1,400	46,600	48,000	0	0	8,800	8,800	0	3,849	0	188,000	425	192,274
2013	1,400	47,000	48,400	0	0	9,200	9,200	0	3,849	0	188,000	425	192,274
2014	1,400	47,400	48,800	0	0	9,600	9,600	0	3,849	0	188,000	425	192,274
2015	1,400	47,800	49,200	0	0	10,000	10,000	0	3,849	0	188,000	425	192,274
2016	1,400	48,200	49,600	0	0	10,400	10,400	0	3,849	0	188,000	425	192,274
2017	1,400	48,600	50,000	0	0	10,800	10,800	0	3,849	0	188,000	425	192,274
2018	1,400	49,000	50,400	0	0	11,200	11,200	0	3,849	0	188,000	425	192,274
2019	1,400	49,400	50,800	0	0	11,600	11,600	0	3,849	0	188,000	425	192,274
2020 (b	1,400	62,800	64,200	0	0	25,000	25,000	0	3,849	0	188,000	425	192,274

Note: "Reservoir Storage Changes" include projected net annual storage accretions (positive values) and withdrawals (negative values) for all down-aqueduct reservoirs of the project transportation facilities. Those variable OMP&R costs (Table B-12) that are allocable to storage accretions are assigned to the minimum OMP&R costs of the respective reservoirs.
"Water Supply Delivery" or "Deliveries, Water Supply", include certain hypothetical quantities to facilitate cost allocations for those years when deliveries are made from net annual storage withdrawals. The net annual amounts of storage withdrawals are hypothetically added to the actual amounts conveyed from the Delta to the reservoirs -- since deliveries made from storage withdrawals bear the same variable OMP&R costs per acre-foot as if the deliveries were actually conveyed, that year, from the Delta. The hypothetical increases in the amounts conveyed are compensated for by proportionate hypothetical increases in the actual variable OMP&R costs (Table B-3) of the up-aqueduct plants. The hypothetical increases in variable OMP&R costs for deliveries made from reservoir storage withdrawals are offset by equal credits to the minimum OMP&R costs of the respective reservoirs. Thus, the variable OMP&R components per acre-foot (Table B-17) may be applied to the total annual quantities delivered either from aqeuduct reservoir storage or from the Delta.
"Conservation Water" includes initial fill water, operational losses, and net annual storage changes associated with San Luis Reservoir (and the portion of the aqueduct that is allocated to conservation). The same allocation procedure outlined above for transportation facilities applies also to conservation facilities -- except that the hypothetical cost increases are added to the variable OMP&R costs to be reimbursed through the Transportation Charge, and deducted from the minimum OMP&R costs to be reimbursed through the Delta Water Charge.

a) Between 1968 and 1979, inclusive, annual quantities delivered are from nonproject water pumped through an interim facility.
b) And each year thereafter for the remainder of the project repayment period.

AND POWER RECOVERY PLANT OF PROJECT TRANSPORTATION FACILITIES

(in acre-feet)

Calendar Year	CALIFORNIA AQUEDUCT													
	NORTH SAN JOAQUIN DIVISION								SAN LUIS DIVISION					
	DELTA PUMPING PLANT								DOS AMIGOS PUMPING PLANT					
	Transportation Water													
				Deliveries								Deliveries		
	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Water Supply	Recreation	Total	Conservation Water	Total	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Water Supply	Recreation	Total
	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
1967	5,746	1,183	0	11,538	0	18,467	2,957	21,424	0	0	0	0	0	0
1968	11,079	74,464	0	293,243	0	378,786	531,275	910,061	11,079	25,126	0	189,104	0	225,309
1969	7,336	44,287	-174,300	265,417	0	142,740	531,185	673,925	3,887	9,922	-100,513	192,689	0	105,985
1970	23,947	20,767	-5,355	365,771	0	405,130	-12,995	392,135	7,668	1,901	0	270,300	0	279,869
1971	23,207	-10,754	8,854	651,665	8	672,980	7,708	680,688	23,207	-12,030	0	545,869	0	557,046
1972	145,066	9,076	-4,356	1,033,432	6,541	1,189,759	48,300	1,238,059	145,066	-6,616	-6,629	886,840	6,533	1,025,194
1973	214,941	-4,951	2,902	733,080	1,081	947,053	55,848	1,002,901	214,941	-6,778	1,329	635,788	1,075	846,355
1974	264,165	137,225	-20,015	958,105	6,800	1,346,280	48,120	1,394,400	264,165	116,282	-20,015	832,505	6,000	1,198,937
1975	150,865	141,511	-90,581	1,217,615	7,000	1,426,410	46,194	1,472,604	150,865	120,571	-90,581	1,089,715	6,000	1,276,570
1976	9,492	140,487	91,543	1,456,125	7,200	1,704,847	-217,959	1,486,888	9,492	119,545	91,543	1,326,125	6,000	1,552,705
1977	4,360	142,630	-15,977	1,691,055	11,400	1,833,468	83,310	1,916,778	4,360	121,685	-15,977	1,558,755	10,000	1,678,823
1978	4,360	143,244	3,585	1,774,885	11,600	1,937,674	-196,604	1,741,070	4,360	122,296	3,585	1,640,285	10,000	1,780,526
1979	0	142,403	-7,831	1,862,045	11,790	2,008,407	-27,821	1,980,586	0	121,453	-7,831	1,725,345	10,000	1,848,967
1980	3	142,069	-21,202	1,979,290	44,305	2,144,465	389,092	2,533,557	3	121,123	-21,202	1,840,290	42,325	1,982,539
1981	0	141,824	-46,783	2,092,600	44,415	2,232,056	84,279	2,316,335	0	120,875	-46,783	1,950,900	42,325	2,067,317
1982	0	143,821	13,928	2,217,960	44,525	2,420,234	118,106	2,538,340	0	122,870	13,928	2,073,460	42,325	2,252,583
1983	0	143,800	577	2,336,713	44,645	2,525,735	-109,193	2,416,542	0	122,846	577	2,189,513	42,325	2,355,261
1984	0	143,729	4,372	2,449,956	44,755	2,642,812	-45,738	2,597,074	0	122,771	4,372	2,299,956	42,325	2,469,424
1985	0	143,569	-19,771	2,561,665	44,875	2,730,338	141,692	2,872,030	0	122,607	-19,771	2,408,965	42,325	2,554,126
1986	0	143,855	21,340	2,678,818	44,985	2,888,998	-45,580	2,843,418	0	122,888	21,340	2,523,018	42,325	2,709,571
1987	0	144,404	3,784	2,798,881	45,105	2,992,174	-1,307	2,990,867	0	123,433	3,784	2,640,181	42,325	2,809,723
1988	0	144,284	15,374	3,256,634	45,225	3,461,517	-29,776	3,431,741	0	123,309	15,374	3,094,934	42,325	3,275,942
1989	0	143,838	-43,849	3,376,327	45,335	3,521,651	-109,029	3,412,622	0	122,855	-43,849	3,209,627	42,325	3,330,958
1990	0	143,781	19,332	3,511,235	45,500	3,719,848	-30,080	3,689,768	0	122,825	19,332	3,339,635	42,325	3,524,117
1991	0	143,448	-36,940	3,557,690	45,500	3,709,698	250,488	3,960,186	0	122,603	-36,940	3,381,090	42,325	3,509,078
1992	0	143,567	48,134	3,600,535	45,500	3,837,736	-30,297	3,807,439	0	122,786	48,134	3,418,935	42,325	3,632,180
1993	0	143,470	-38,906	3,638,300	45,500	3,788,364	114,588	3,902,952	0	122,753	-38,906	3,451,700	42,325	3,577,872
1994	0	143,615	32,059	3,683,215	45,500	3,904,389	248,218	4,152,607	0	122,955	32,059	3,492,515	42,325	3,689,854
1995	0	143,564	-6,905	3,712,550	45,500	3,894,709	-122,782	3,771,927	0	122,878	-6,905	3,520,350	42,325	3,678,648
1996	0	143,580	-9,688	3,743,945	45,500	3,923,337	118,270	4,041,607	0	122,921	-9,688	3,550,245	42,325	3,705,803
1997	0	143,858	32,149	3,772,000	45,500	3,993,507	297,685	4,291,192	0	123,195	32,149	3,578,300	42,325	3,775,969
1998	0	143,501	-3,933	3,804,995	45,500	3,990,063	-213,651	3,776,412	0	122,838	-3,933	3,611,295	42,325	3,772,525
1999	0	143,807	4,107	3,833,350	45,500	4,026,764	46,505	4,073,269	0	123,144	4,107	3,639,650	42,325	3,809,226
2000	0	143,694	-16,971	3,861,815	45,500	4,034,038	-62,208	3,971,830	0	123,031	-16,971	3,668,115	42,325	3,816,500
2001	0	143,509	5,318	3,945,850	45,500	4,140,177	-8,843	4,131,334	0	122,846	5,318	3,752,150	42,325	3,922,639
2002	0	143,484	-7,064	3,974,035	45,500	4,155,955	31,057	4,187,012	0	122,821	-7,064	3,780,335	42,325	3,938,417
2003	0	143,597	13,122	3,995,100	45,500	4,197,319	193,473	4,390,792	0	122,934	13,122	3,801,400	42,325	3,979,781
2004	0	143,479	-16,445	4,020,155	45,500	4,192,689	52,547	4,245,236	0	122,816	-16,445	3,826,455	42,325	3,975,151
2005	0	143,493	21,624	4,043,130	45,500	4,253,747	-98,329	4,155,418	0	122,830	21,624	3,849,430	42,325	4,036,209
2006	0	143,417	-9,733	4,059,150	45,500	4,238,334	33,098	4,271,432	0	122,754	-9,733	3,865,450	42,325	4,020,796
2007	0	143,300	-11,525	4,075,180	45,500	4,252,455	12,020	4,264,475	0	122,637	-11,525	3,881,480	42,325	4,034,917
2008	0	143,147	-340	4,091,150	45,500	4,279,457	44,151	4,323,608	0	122,484	-340	3,897,450	42,325	4,061,919
2009	0	143,066	4,238	4,102,230	45,500	4,295,034	26,523	4,321,557	0	122,403	4,238	3,908,530	42,325	4,077,496
2010	0	143,084	-9,100	4,109,800	45,500	4,289,284	8,155	4,297,439	0	122,421	-9,100	3,916,100	42,325	4,071,746
2011	0	143,060	-1,414	4,110,730	45,500	4,297,876	41,424	4,339,300	0	122,397	-1,414	3,917,030	42,325	4,080,338
2012	0	143,083	-535	4,112,000	45,500	4,300,048	-75,385	4,224,663	0	122,420	-535	3,918,300	42,325	4,082,510
2013	0	143,100	-960	4,113,280	45,500	4,300,920	63,460	4,364,380	0	122,437	-960	3,919,580	42,325	4,083,382
2014	0	143,086	5,249	4,114,550	45,500	4,308,385	131,149	4,439,534	0	122,423	5,249	3,920,850	42,325	4,090,847
2015	0	143,119	-10,804	4,115,830	45,500	4,293,645	124,914	4,418,559	0	122,456	-10,804	3,922,130	42,325	4,076,107
2016	0	143,090	121	4,117,100	45,500	4,305,811	31,162	4,336,973	0	122,427	121	3,923,400	42,325	4,088,273
2017	0	143,053	1,286	4,118,380	45,500	4,308,219	72,373	4,380,592	0	122,390	1,286	3,924,680	42,325	4,090,681
2018	0	143,120	1,184	4,119,650	45,500	4,309,454	-146,764	4,162,690	0	122,457	1,184	3,925,950	42,325	4,091,916
2019	0	143,110	-16,532	4,120,930	45,500	4,293,008	213,535	4,506,543	0	122,447	-16,532	3,927,230	42,325	4,075,470
2020(b	0	142,956	0	4,123,200	45,500	4,311,656	42,278	4,353,934	0	122,293	0	3,929,500	42,325	4,094,118

TABLE B-6: ANNUAL QUANTITIES CONVEYED THRU EACH PUMPING

(in acre-feet)

Calendar Year	CALIFORNIA AQUEDUCT (Continued)											
	SOUTH SAN JOAQUIN DIVISION											
	BUENA VISTA PUMPING PLANT						WHEELER RIDGE PUMPING PLANT					
	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries: Water Supply	Deliveries: Recreation	Total	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries: Water Supply	Deliveries: Recreation	Total
	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	39)
1970	4,779	1,012	0	3	0	5,794	198	2	0	0	0	200
1971	7,853	8,399	0	101,512	0	117,764	7,533	-112	0	3,552	0	10,973
1972	100,274	20,063	-6,629	223,626	6,533	343,867	100,274	12,784	-6,629	84,955	6,533	197,917
1973	204,638	35,695	1,329	311,168	1,075	553,905	204,638	21,543	1,329	229,757	1,075	458,342
1974	264,165	78,123	-20,015	476,864	6,000	805,137	264,165	66,323	-20,015	424,713	6,000	741,186
1975	150,865	82,412	-90,581	698,185	6,000	846,881	150,865	70,612	-90,581	642,486	6,000	779,382
1976	9,492	81,386	91,543	867,925	6,000	1,056,346	9,492	69,586	91,543	820,460	6,000	997,081
1977	4,360	83,526	-15,977	1,055,055	10,000	1,136,964	4,360	71,726	-15,977	999,044	10,000	1,069,153
1978	4,360	84,137	3,585	1,092,185	10,000	1,194,267	4,360	72,337	3,585	1,029,960	10,000	1,120,242
1979	0	83,294	-7,831	1,133,945	10,000	1,219,408	0	71,494	-7,831	1,063,680	10,000	1,137,343
1980	3	82,964	-21,202	1,219,390	20,000	1,301,155	3	71,164	-21,202	1,129,890	20,000	1,199,855
1981	0	82,716	-46,783	1,283,100	20,000	1,339,033	0	70,916	-46,783	1,182,500	20,000	1,226,633
1982	0	82,511	13,928	1,344,700	20,000	1,461,139	0	70,711	13,928	1,237,200	20,000	1,341,839
1983	0	82,487	577	1,412,210	20,000	1,515,274	0	70,687	577	1,292,110	20,000	1,383,374
1984	0	82,412	4,372	1,475,510	20,000	1,582,294	0	70,612	4,372	1,349,710	20,000	1,444,694
1985	0	82,248	-19,771	1,536,920	20,000	1,619,397	0	70,448	-19,771	1,400,920	20,000	1,471,597
1986	0	82,529	21,340	1,607,310	20,000	1,731,179	0	70,729	21,340	1,463,210	20,000	1,575,279
1987	0	83,074	3,784	1,677,746	20,000	1,784,604	0	71,274	3,784	1,524,910	20,000	1,619,968
1988	0	82,950	15,374	2,086,174	20,000	2,204,498	0	71,150	15,374	1,927,110	20,000	2,033,634
1989	0	82,496	-43,849	2,164,810	20,000	2,223,457	0	70,696	-43,849	2,003,610	20,000	2,050,457
1990	0	82,466	19,332	2,251,000	20,000	2,372,798	0	70,666	19,332	2,086,400	20,000	2,196,398
1991	0	82,244	-36,940	2,289,980	20,000	2,355,284	0	70,444	-36,940	2,125,380	20,000	2,178,884
1992	0	82,427	48,134	2,325,660	20,000	2,476,221	0	70,627	48,134	2,161,060	20,000	2,299,821
1993	0	82,394	-38,906	2,356,340	20,000	2,419,828	0	70,594	-38,906	2,191,740	20,000	2,243,428
1994	0	82,596	32,059	2,395,020	20,000	2,529,675	0	70,796	32,059	2,230,420	20,000	2,353,275
1995	0	82,519	-6,905	2,420,700	20,000	2,516,314	0	70,719	-6,905	2,256,100	20,000	2,339,914
1996	0	82,562	-9,688	2,448,380	20,000	2,541,254	0	70,762	-9,688	2,283,780	20,000	2,364,854
1997	0	82,836	32,149	2,474,060	20,000	2,609,045	0	71,036	32,149	2,309,460	20,000	2,432,645
1998	0	82,479	-3,933	2,504,740	20,000	2,603,286	0	70,679	-3,933	2,340,140	20,000	2,426,886
1999	0	82,785	4,107	2,530,420	20,000	2,637,312	0	70,985	4,107	2,365,820	20,000	2,460,912
2000	0	82,672	-16,971	2,556,100	20,000	2,641,801	0	70,872	-16,971	2,391,500	20,000	2,465,401
2001	0	82,487	5,318	2,637,580	20,000	2,745,385	0	70,687	5,318	2,472,980	20,000	2,568,985
2002	0	82,462	-7,064	2,662,850	20,000	2,758,248	0	70,662	-7,064	2,498,250	20,000	2,581,848
2003	0	82,575	13,122	2,681,130	20,000	2,796,827	0	70,775	13,122	2,516,530	20,000	2,620,427
2004	0	82,457	-16,445	2,703,400	20,000	2,789,412	0	70,657	-16,445	2,538,800	20,000	2,613,012
2005	0	82,471	21,624	2,723,680	20,000	2,847,775	0	70,671	21,624	2,559,080	20,000	2,671,375
2006	0	82,395	-9,733	2,738,950	20,000	2,831,612	0	70,595	-9,733	2,574,350	20,000	2,655,212
2007	0	82,278	-11,525	2,754,230	20,000	2,844,983	0	70,478	-11,525	2,589,630	20,000	2,668,583
2008	0	82,125	-340	2,769,500	20,000	2,871,285	0	70,325	-340	2,604,900	20,000	2,694,885
2009	0	82,044	4,238	2,779,780	20,000	2,886,062	0	70,244	4,238	2,615,180	20,000	2,709,662
2010	0	82,062	-9,100	2,786,550	20,000	2,879,512	0	70,262	-9,100	2,621,950	20,000	2,703,112
2011	0	82,038	-1,414	2,786,830	20,000	2,887,454	0	70,238	-1,414	2,622,230	20,000	2,711,054
2012	0	82,061	-535	2,787,100	20,000	2,888,626	0	70,261	-535	2,622,500	20,000	2,712,226
2013	0	82,078	-960	2,787,380	20,000	2,888,498	0	70,278	-960	2,622,780	20,000	2,712,098
2014	0	82,064	5,249	2,787,650	20,000	2,894,963	0	70,264	5,249	2,623,050	20,000	2,718,563
2015	0	82,097	-10,804	2,787,930	20,000	2,879,223	0	70,297	-10,804	2,623,330	20,000	2,702,823
2016	0	82,068	121	2,788,200	20,000	2,890,389	0	70,268	121	2,623,600	20,000	2,713,989
2017	0	82,031	1,286	2,788,480	20,000	2,891,797	0	70,231	1,286	2,623,880	20,000	2,715,397
2018	0	82,098	1,184	2,788,750	20,000	2,892,032	0	70,298	1,184	2,624,150	20,000	2,715,632
2019	0	82,088	-16,532	2,789,030	20,000	2,874,586	0	70,288	-16,532	2,624,430	20,000	2,698,186
2020(b	0	81,934	0	2,789,300	20,000	2,891,234	0	70,134	0	2,624,700	20,000	2,714,834

(in acre-feet)

Calendar Year	CALIFORNIA AQUEDUCT (Continued)											
	SOUTH SAN JOAQUIN DIVISION (Continued)						TEHACHAPI DIVISION					
	WIND GAP PUMPING PLANT						A. D. EDMONSTON PUMPING PLANT					
	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries: Water Supply	Deliveries: Recreation	Total	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries: Water Supply	Deliveries: Recreation	Total
	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)
1971	7,366	-159	0	0	0	7,207	5,446	8	0	0	0	5,454
1972	100,274	13,179	-6,629	78,891	6,533	192,248	100,274	16,086	-6,629	74,123	6,533	190,387
1973	204,638	32,414	1,329	209,841	1,075	449,297	204,638	34,051	1,329	207,880	1,075	448,973
1974	264,165	65,523	-20,015	406,124	6,000	721,797	264,165	62,923	-20,015	401,505	6,000	714,578
1975	150,865	69,812	-90,581	623,783	6,000	759,879	150,865	67,212	-90,581	612,915	6,000	746,411
1976	9,492	68,786	91,543	804,523	6,000	980,344	9,492	66,186	91,543	794,825	6,000	968,046
1977	4,360	70,926	-15,977	980,234	10,000	1,049,543	4,360	68,326	-15,977	969,155	10,000	1,035,864
1978	4,360	71,537	3,585	1,009,067	10,000	1,098,549	4,360	68,937	3,585	993,485	10,000	1,080,367
1979	0	70,694	-7,831	1,040,086	10,000	1,112,949	0	68,094	-7,831	1,022,645	10,000	1,092,908
1980	3	70,364	-21,202	1,103,190	20,000	1,172,355	3	67,764	-21,202	1,080,590	20,000	1,147,155
1981	0	70,116	-46,783	1,152,700	20,000	1,196,033	0	67,516	-46,783	1,127,900	20,000	1,168,633
1982	0	69,911	13,928	1,201,500	20,000	1,305,339	0	67,311	13,928	1,174,100	20,000	1,275,339
1983	0	69,887	577	1,252,810	20,000	1,343,274	0	67,287	577	1,222,410	20,000	1,310,274
1984	0	69,812	4,372	1,308,610	20,000	1,402,794	0	67,212	4,372	1,269,210	20,000	1,360,794
1985	0	69,648	-19,771	1,357,020	20,000	1,426,897	0	67,048	-19,771	1,313,820	20,000	1,381,097
1986	0	69,929	21,340	1,417,510	20,000	1,528,779	0	67,329	21,340	1,367,010	20,000	1,475,679
1987	0	70,474	3,784	1,476,210	20,000	1,570,468	0	67,874	3,784	1,420,610	20,000	1,512,268
1988	0	70,350	15,374	1,875,910	20,000	1,981,634	0	67,750	15,374	1,816,210	20,000	1,919,334
1989	0	69,896	-43,849	1,950,810	20,000	1,996,857	0	67,296	-43,849	1,885,010	20,000	1,928,457
1990	0	69,866	19,332	2,031,400	20,000	2,140,598	0	67,266	19,332	1,961,200	20,000	2,067,798
1991	0	69,644	-36,940	2,070,380	20,000	2,123,084	0	67,044	-36,940	2,000,180	20,000	2,050,284
1992	0	69,827	48,134	2,106,060	20,000	2,244,021	0	67,227	48,134	2,035,860	20,000	2,171,221
1993	0	69,794	-38,906	2,136,740	20,000	2,187,628	0	67,194	-38,906	2,066,540	20,000	2,114,828
1994	0	69,996	32,059	2,175,420	20,000	2,297,475	0	67,396	32,059	2,105,220	20,000	2,224,675
1995	0	69,919	-6,905	2,201,100	20,000	2,284,114	0	67,319	-6,905	2,130,900	20,000	2,211,314
1996	0	69,962	-9,688	2,228,780	20,000	2,309,054	0	67,362	-9,688	2,158,580	20,000	2,236,254
1997	0	70,236	32,149	2,254,460	20,000	2,376,845	0	67,636	32,149	2,184,260	20,000	2,304,045
1998	0	69,879	-3,933	2,285,140	20,000	2,371,086	0	67,279	-3,933	2,214,940	20,000	2,298,286
1999	0	70,185	4,107	2,310,820	20,000	2,405,112	0	67,585	4,107	2,240,620	20,000	2,332,312
2000	0	70,072	-16,971	2,336,500	20,000	2,409,601	0	67,472	-16,971	2,266,300	20,000	2,336,801
2001	0	69,887	5,318	2,417,980	20,000	2,513,185	0	67,287	5,318	2,347,780	20,000	2,440,385
2002	0	69,862	-7,064	2,443,250	20,000	2,526,048	0	67,262	-7,064	2,373,050	20,000	2,453,248
2003	0	69,975	13,122	2,461,530	20,000	2,564,627	0	67,375	13,122	2,391,330	20,000	2,491,827
2004	0	69,857	-16,445	2,483,800	20,000	2,557,212	0	67,257	-16,445	2,413,600	20,000	2,484,412
2005	0	69,871	21,624	2,504,080	20,000	2,615,575	0	67,271	21,624	2,433,880	20,000	2,542,775
2006	0	69,795	-9,733	2,519,350	20,000	2,599,412	0	67,195	-9,733	2,449,150	20,000	2,526,612
2007	0	69,678	-11,525	2,534,630	20,000	2,612,783	0	67,078	-11,525	2,464,430	20,000	2,539,983
2008	0	69,525	-340	2,549,900	20,000	2,639,085	0	66,925	-340	2,479,700	20,000	2,566,285
2009	0	69,444	4,238	2,560,180	20,000	2,653,862	0	66,844	4,238	2,489,980	20,000	2,581,062
2010	0	69,462	-9,100	2,566,950	20,000	2,647,312	0	66,862	-9,100	2,496,750	20,000	2,574,512
2011	0	69,438	-1,414	2,567,230	20,000	2,655,254	0	66,838	-1,414	2,497,030	20,000	2,582,454
2012	0	69,461	-535	2,567,500	20,000	2,656,426	0	66,861	-535	2,497,300	20,000	2,583,626
2013	0	69,478	-960	2,567,780	20,000	2,656,298	0	66,878	-960	2,497,580	20,000	2,583,498
2014	0	69,464	5,249	2,568,050	20,000	2,662,763	0	66,864	5,249	2,497,850	20,000	2,589,963
2015	0	69,497	-10,804	2,568,330	20,000	2,647,023	0	66,897	-10,804	2,498,130	20,000	2,574,223
2016	0	69,468	121	2,568,600	20,000	2,658,189	0	66,868	121	2,498,400	20,000	2,585,389
2017	0	69,431	1,286	2,568,880	20,000	2,659,597	0	66,831	1,286	2,498,680	20,000	2,586,797
2018	0	69,498	1,184	2,569,150	20,000	2,659,832	0	66,898	1,184	2,498,950	20,000	2,587,032
2019	0	69,488	-16,532	2,569,430	20,000	2,642,386	0	66,888	-16,532	2,499,230	20,000	2,569,586
2020(b	0	69,334	0	2,569,700	20,000	2,659,034	0	66,734	0	2,499,500	20,000	2,586,234

TABLE B-6: ANNUAL QUANTITIES CONVEYED THRU EACH PUMPING

(in acre-feet)

Calendar Year	CALIFORNIA AQUEDUCT (Continued)											
	MOJAVE DIVISION											
	COTTONWOOD POWERPLANT						PEARBLOSSOM PUMPING PLANT					
	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries: Water Supply	Deliveries: Recreation	Total	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries: Water Supply	Deliveries: Recreation	Total
	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
1971	0	0	0	0	0	0	21	0	0	0	0	21
1972	0	0	0	0	0	0	35,243	5,282	-153	1,794	0	42,166
1973	0	0	0	0	0	0	80,177	21,522	-2,700	52,273	0	151,272
1974	0	0	0	0	0	0	91,706	29,272	-7,622	199,460	6,000	318,816
1975	0	0	0	0	0	0	10,000	28,817	-74,765	392,700	6,000	362,752
1976	0	0	0	0	0	0	4,168	27,087	75,729	533,140	6,000	646,124
1977	0	0	0	0	0	0	0	29,095	-7,017	693,130	6,000	721,208
1978	0	0	0	0	0	0	0	29,696	2,637	704,820	6,000	743,153
1979	0	0	0	0	0	0	0	28,905	-1,130	721,510	6,000	755,285
1980	0	0	0	0	0	0	3	28,911	-13,763	755,900	11,000	782,051
1981	0	0	0	0	0	0	0	28,327	-41,553	787,930	11,000	785,704
1982	0	0	0	0	0	0	0	28,187	17,213	818,860	11,000	875,260
1983	0	42,080	-7,419	900,710	15,000	950,371	0	28,180	-7,419	845,490	11,000	877,251
1984	0	42,043	1,222	906,110	15,000	964,375	0	28,143	1,222	845,220	11,000	885,585
1985	0	42,131	251	911,420	15,000	968,802	0	28,231	251	844,850	11,000	884,332
1986	0	42,098	-2,187	917,310	15,000	972,221	0	28,198	-2,187	844,480	11,000	881,491
1987	0	42,948	31,629	769,510	15,000	859,087	0	29,048	31,629	690,510	11,000	762,187
1988	0	42,693	-8,847	874,710	15,000	923,556	0	28,793	-8,847	789,540	11,000	820,486
1989	0	42,381	-8,974	923,110	15,000	971,517	0	28,481	-8,974	831,770	11,000	862,277
1990	0	42,289	-5,669	942,900	15,000	994,520	0	28,389	-5,669	845,300	11,000	879,020
1991	0	42,250	-2,940	947,480	15,000	1,001,790	0	28,350	-2,940	844,740	11,000	881,150
1992	0	42,288	-1,626	952,960	15,000	1,008,622	0	28,388	-1,626	845,080	11,000	882,842
1993	0	42,232	2,644	958,440	15,000	1,018,316	0	28,332	2,644	845,420	11,000	887,396
1994	0	42,266	534	962,920	15,000	1,020,720	0	28,366	534	844,760	11,000	884,660
1995	0	42,244	-1,170	968,400	15,000	1,024,474	0	28,344	-1,170	845,100	11,000	883,274
1996	0	42,284	-2,798	973,880	15,000	1,028,366	0	28,384	-2,798	845,440	11,000	882,026
1997	0	42,261	3,134	978,360	15,000	1,038,755	0	28,361	3,134	844,780	11,000	887,275
1998	0	42,271	57	983,840	15,000	1,041,168	0	28,371	57	845,120	11,000	884,548
1999	0	42,311	1,132	988,320	15,000	1,046,763	0	28,411	1,132	844,460	11,000	885,003
2000	0	42,285	-871	993,800	15,000	1,050,214	0	28,385	-871	844,800	11,000	883,314
2001	0	42,140	-7,173	994,280	15,000	1,044,247	0	28,240	-7,173	845,280	11,000	877,347
2002	0	42,154	3,801	993,550	15,000	1,054,505	0	28,254	3,801	844,550	11,000	887,605
2003	0	42,234	-1,128	993,830	15,000	1,049,936	0	28,334	-1,128	844,830	11,000	883,036
2004	0	42,189	-1,810	994,100	15,000	1,049,479	0	28,289	-1,810	845,100	11,000	882,579
2005	0	42,215	2,249	994,380	15,000	1,053,844	0	28,315	2,249	845,380	11,000	886,944
2006	0	42,191	-1,493	993,650	15,000	1,049,348	0	28,291	-1,493	844,650	11,000	882,448
2007	0	42,216	-150	993,930	15,000	1,050,996	0	28,316	-150	844,930	11,000	884,096
2008	0	42,053	-7,340	1,011,200	15,000	1,060,913	0	28,153	-7,340	862,200	11,000	894,013
2009	0	42,033	5,142	993,480	15,000	1,055,655	0	28,133	5,142	844,480	11,000	888,755
2010	0	42,113	726	994,250	15,000	1,052,089	0	28,213	726	845,250	11,000	885,189
2011	0	42,088	-2,211	994,530	15,000	1,049,407	0	28,188	-2,211	845,530	11,000	882,507
2012	0	42,177	-1,442	994,800	15,000	1,050,535	0	28,277	-1,442	845,800	11,000	883,635
2013	0	42,185	1,903	994,080	15,000	1,053,168	0	28,285	1,903	845,080	11,000	886,268
2014	0	42,196	2,100	994,350	15,000	1,053,646	0	28,296	2,100	845,350	11,000	886,746
2015	0	42,212	3,463	993,630	15,000	1,054,305	0	28,312	3,463	844,630	11,000	887,405
2016	0	42,164	-629	993,900	15,000	1,050,435	0	28,264	-629	844,900	11,000	883,535
2017	0	42,117	-2,589	994,180	15,000	1,048,708	0	28,217	-2,589	845,180	11,000	881,808
2018	0	42,214	235	993,450	15,000	1,050,899	0	28,314	235	844,450	11,000	883,999
2019	0	42,224	2,777	993,730	15,000	1,053,731	0	28,324	2,777	844,730	11,000	886,831
2020(b)	0	42,044	0	994,000	15,000	1,051,044	0	28,144	0	845,000	11,000	884,144

(in acre-feet)

Calendar Year	CALIFORNIA AQUEDUCT (Continued)											
	SANTA ANA DIVISION						WEST BRANCH, CALIFORNIA AQUEDUCT					
	DEVIL CANYON POWERPLANT						OSO PUMPING PLANT					
	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries: Water Supply	Deliveries: Recreation	Total	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries: Water Supply	Deliveries: Recreation	Total
	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)
1971	0	0	0	0	0	0	2,444	133	0	0	0	2,577
1972	37	0	0	1,275	0	1,312	63,883	6,576	-6,476	71,991	6,533	142,507
1973	40,848	14,745	0	51,812	0	107,405	124,461	16,995	4,029	155,317	1,075	301,877
1974	89,380	13,306	-8,383	198,300	6,000	298,603	172,459	19,595	-12,393	201,045	0	380,706
1975	10,000	12,923	-75,733	391,250	6,000	344,440	140,865	24,339	-15,816	218,995	0	368,383
1976	4,168	11,020	75,728	511,100	6,000	608,016	5,324	25,044	15,814	234,145	0	280,327
1977	0	13,217	-5,994	670,100	6,000	683,323	4,360	25,176	-8,960	245,195	0	265,771
1978	0	13,730	3,163	678,500	6,000	701,393	4,360	25,186	948	254,245	0	284,739
1979	0	13,054	-583	691,900	6,000	710,371	0	25,134	-6,701	263,095	0	281,528
1980	3	12,975	-14,116	725,800	6,000	730,662	0	24,798	-7,439	282,900	5,000	305,259
1981	0	12,498	-27,786	755,140	6,000	745,852	0	25,134	-5,230	293,400	5,000	318,304
1982	0	12,354	8,946	783,480	6,000	810,780	0	25,069	-3,285	303,900	5,000	330,684
1983	0	12,334	-3,230	807,420	6,000	822,524	0	25,052	7,996	320,300	5,000	358,348
1984	0	12,402	5,800	804,460	6,000	828,662	0	25,014	3,150	361,600	5,000	394,764
1985	0	12,497	1,709	801,500	6,000	821,706	0	24,762	-20,022	400,800	5,000	410,540
1986	0	12,429	3,521	798,440	6,000	820,390	0	25,076	23,527	448,000	5,000	501,603
1987	0	13,065	12,476	641,880	6,000	673,421	0	24,771	-27,845	649,300	5,000	651,226
1988	0	12,765	-12,873	738,320	6,000	744,212	0	24,902	24,221	939,600	5,000	993,723
1989	0	12,679	-458	777,760	6,000	795,981	0	24,760	-34,875	960,000	5,000	954,885
1990	0	12,674	-1,003	788,700	6,000	806,371	0	24,822	25,001	1,016,300	5,000	1,071,123
1991	0	12,655	152	788,140	6,000	806,947	0	24,639	-34,000	1,050,700	5,000	1,046,339
1992	0	12,676	177	788,480	6,000	807,333	0	24,784	49,760	1,080,900	5,000	1,160,444
1993	0	12,664	-278	788,820	6,000	807,206	0	24,807	-41,550	1,106,100	5,000	1,094,357
1994	0	12,669	140	788,160	6,000	806,969	0	24,975	31,525	1,140,300	5,000	1,201,800
1995	0	12,659	-72	788,500	6,000	807,087	0	24,920	-5,735	1,160,500	5,000	1,184,685
1996	0	12,671	-70	788,840	6,000	807,441	0	24,923	-6,890	1,182,700	5,000	1,205,733
1997	0	12,674	138	788,180	6,000	806,992	0	25,220	29,015	1,203,900	5,000	1,263,135
1998	0	12,665	-68	788,520	6,000	807,117	0	24,853	-3,990	1,229,100	5,000	1,254,963
1999	0	12,678	140	787,860	6,000	806,678	0	25,119	2,975	1,250,300	5,000	1,283,394
2000	0	12,671	-196	788,200	6,000	806,675	0	25,032	-16,100	1,270,500	5,000	1,284,432
2001	0	12,657	-32	727,480	6,000	746,105	0	24,992	12,491	1,351,500	5,000	1,393,983
2002	0	12,692	1,390	726,750	6,000	746,832	0	24,953	-10,865	1,377,500	5,000	1,396,588
2003	0	12,742	90	727,030	6,000	745,862	0	24,986	14,250	1,395,500	5,000	1,439,736
2004	0	12,683	-1,268	727,300	6,000	744,715	0	24,913	-14,635	1,417,500	5,000	1,432,778
2005	0	12,734	369	727,580	6,000	746,683	0	24,901	19,375	1,437,500	5,000	1,486,776
2006	0	12,685	142	726,850	6,000	745,677	0	24,849	-8,240	1,453,500	5,000	1,475,109
2007	0	12,741	143	727,130	6,000	746,014	0	24,707	-11,375	1,468,500	5,000	1,486,832
2008	0	12,725	-1,326	744,400	6,000	761,799	0	24,717	7,000	1,466,500	5,000	1,503,217
2009	0	12,665	965	726,680	6,000	746,310	0	24,656	-904	1,494,500	5,000	1,523,252
2010	0	12,674	-125	727,450	6,000	745,999	0	24,594	-9,826	1,500,500	5,000	1,520,268
2011	0	12,663	89	727,730	6,000	746,482	0	24,595	797	1,500,500	5,000	1,530,892
2012	0	12,715	-147	728,000	6,000	746,568	0	24,529	907	1,500,500	5,000	1,530,936
2013	0	12,724	1,027	727,280	6,000	747,031	0	24,538	-2,863	1,501,500	5,000	1,528,175
2014	0	12,708	-679	727,550	6,000	745,579	0	24,513	3,149	1,501,500	5,000	1,534,162
2015	0	12,712	-18	726,830	6,000	745,524	0	24,530	-14,267	1,502,500	5,000	1,517,763
2016	0	12,687	-60	727,100	6,000	745,727	0	24,549	750	1,502,500	5,000	1,532,799
2017	0	12,634	-262	727,380	6,000	745,752	0	24,559	3,875	1,502,500	5,000	1,535,934
2018	0	12,721	0	726,650	6,000	745,371	0	24,529	949	1,503,500	5,000	1,533,978
2019	0	12,724	844	726,930	6,000	746,498	0	24,509	-19,309	1,503,500	5,000	1,513,700
2020 (b	0	12,552	0	727,200	6,000	745,752	0	24,535	0	1,503,500	5,000	1,533,035

TABLE B-6: ANNUAL QUANTITIES CONVEYED THRU EACH PUMPING

(in acre-feet)

Calendar Year	CALIFORNIA AQUEDUCT (Continued)											
	WEST BRANCH, CALIFORNIA AQUEDUCT (Continued)											
	PYRAMID POWERPLANT						CASTAIC POWERPLANT					
	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries: Water Supply	Deliveries: Recreation	Total	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries: Water Supply	Deliveries: Recreation	Total
	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)
1972	0	0	0	0	0	0	57,364	1,807	-6,233	71,938	6,533	131,409
1973	0	0	0	0	0	0	37,198	6,430	4,542	155,297	1,075	204,542
1974	0	0	0	0	0	0	88,718	8,107	-158	201,000	0	297,667
1975	0	0	0	0	0	0	137,973	13,133	-15,816	218,950	0	354,240
1976	0	0	0	0	0	0	4,360	12,882	15,814	234,100	0	267,156
1977	0	0	0	0	0	0	4,360	13,014	-8,960	245,150	0	253,564
1978	0	0	0	0	0	0	4,360	13,024	948	254,200	0	272,532
1979	0	0	0	0	0	0	0	12,972	-6,701	263,050	0	269,321
1980	0	0	0	0	0	0	0	12,636	-7,439	280,700	5,000	290,897
1981	0	0	0	0	0	0	0	12,972	-5,230	290,000	5,000	302,742
1982	0	22,069	-3,285	299,300	5,000	323,084	0	12,907	-3,285	299,300	5,000	313,922
1983	0	22,052	7,996	315,000	5,000	350,048	0	12,890	7,996	315,000	5,000	340,886
1984	0	22,014	3,150	356,100	5,000	386,264	0	12,852	3,150	356,100	5,000	377,102
1985	0	21,762	-20,022	395,100	5,000	401,840	0	12,600	-20,022	395,100	5,000	392,678
1986	0	22,076	23,527	442,100	5,000	492,703	0	12,914	23,527	442,100	5,000	483,541
1987	0	21,771	-27,845	643,100	5,000	642,026	0	12,609	-27,845	643,100	5,000	632,864
1988	0	21,902	24,221	933,100	5,000	984,223	0	12,740	24,221	933,100	5,000	975,061
1989	0	21,760	-34,875	953,200	5,000	945,085	0	12,598	-34,875	953,200	5,000	935,923
1990	0	21,822	25,001	1,009,300	5,000	1,061,123	0	12,660	25,001	1,009,300	5,000	1,051,961
1991	0	21,639	-34,000	1,043,500	5,000	1,036,139	0	12,477	-34,000	1,043,500	5,000	1,026,977
1992	0	21,784	49,760	1,073,500	5,000	1,150,044	0	12,622	49,760	1,073,500	5,000	1,140,882
1993	0	21,807	-41,550	1,098,500	5,000	1,083,757	0	12,645	-41,550	1,098,500	5,000	1,074,595
1994	0	21,975	31,525	1,132,500	5,000	1,191,000	0	12,813	31,525	1,132,500	5,000	1,181,838
1995	0	21,920	-5,735	1,152,500	5,000	1,173,685	0	12,758	-5,735	1,152,500	5,000	1,164,523
1996	0	21,923	-6,890	1,174,500	5,000	1,194,533	0	12,761	-6,890	1,174,500	5,000	1,185,371
1997	0	22,220	29,015	1,195,500	5,000	1,251,735	0	13,058	29,015	1,195,500	5,000	1,242,573
1998	0	21,853	-3,990	1,220,500	5,000	1,243,363	0	12,691	-3,990	1,220,500	5,000	1,234,201
1999	0	22,119	2,975	1,241,500	5,000	1,271,594	0	12,957	2,975	1,241,500	5,000	1,262,432
2000	0	22,032	-16,100	1,261,500	5,000	1,272,432	0	12,870	-16,100	1,261,500	5,000	1,263,270
2001	0	21,992	12,491	1,342,500	5,000	1,381,983	0	12,830	12,491	1,342,500	5,000	1,372,821
2002	0	21,953	-10,865	1,368,500	5,000	1,384,588	0	12,791	-10,865	1,368,500	5,000	1,375,426
2003	0	21,986	14,250	1,386,500	5,000	1,427,736	0	12,824	14,250	1,386,500	5,000	1,418,574
2004	0	21,913	-14,635	1,408,500	5,000	1,420,778	0	12,751	-14,635	1,408,500	5,000	1,411,616
2005	0	21,901	19,375	1,428,500	5,000	1,474,776	0	12,739	19,375	1,428,500	5,000	1,465,614
2006	0	21,849	-8,240	1,444,500	5,000	1,463,109	0	12,687	-8,240	1,444,500	5,000	1,453,947
2007	0	21,707	-11,375	1,459,500	5,000	1,474,832	0	12,545	-11,375	1,459,500	5,000	1,465,670
2008	0	21,717	7,000	1,457,500	5,000	1,491,217	0	12,555	7,000	1,457,500	5,000	1,482,055
2009	0	21,656	-904	1,485,500	5,000	1,511,252	0	12,494	-904	1,485,500	5,000	1,502,090
2010	0	21,594	-9,826	1,491,500	5,000	1,508,268	0	12,432	-9,826	1,491,500	5,000	1,499,106
2011	0	21,595	797	1,491,500	5,000	1,518,892	0	12,433	797	1,491,500	5,000	1,509,730
2012	0	21,529	907	1,491,500	5,000	1,518,936	0	12,367	907	1,491,500	5,000	1,509,774
2013	0	21,538	-2,863	1,492,500	5,000	1,516,175	0	12,376	-2,863	1,492,500	5,000	1,507,013
2014	0	21,513	3,149	1,492,500	5,000	1,522,162	0	12,351	3,149	1,492,500	5,000	1,513,000
2015	0	21,530	-14,267	1,493,500	5,000	1,505,763	0	12,368	-14,267	1,493,500	5,000	1,496,601
2016	0	21,549	750	1,493,500	5,000	1,520,799	0	12,387	750	1,493,500	5,000	1,511,637
2017	0	21,559	3,875	1,493,500	5,000	1,523,934	0	12,397	3,875	1,493,500	5,000	1,514,772
2018	0	21,529	949	1,494,500	5,000	1,521,978	0	12,367	949	1,494,500	5,000	1,512,816
2019	0	21,509	-19,309	1,494,500	5,000	1,501,700	0	12,347	-19,309	1,494,500	5,000	1,492,538
2020(b	0	21,535	0	1,494,500	5,000	1,521,035	0	12,373	0	1,494,500	5,000	1,511,873

(in acre-feet)

Calendar Year	CALIFORNIA AQUEDUCT (Continued)						
	COASTAL BRANCH, CALIFORNIA AQUEDUCT						
	LAS PERILLAS AND BADGER HILL PUMPING PLANTS				DEVIL'S DEN, SAWTOOTH AND POLONIO PUMPING PLANTS AND SAN LUIS OBISPO POWERPLANT		
	Initial Fill Water	Operational Losses	Water Supply Delivery	Total	Operational Losses	Water Supply Delivery	Total
	(88)	(89)	(90)	(91)	(92)	(93)	(94)
1968	210	873	79,039	80,122	0	0	0
1969	0	1,042	62,064	63,106	0	0	0
1970	0	638	83,649	84,287	0	0	0
1971	0	3,455	110,971	114,426	0	0	0
1972	0	1,745	121,755	123,500	0	0	0
1973	0	5,479	78,645	84,124	0	0	0
1974	0	1,500	82,205	83,705	0	0	0
1975	0	1,500	87,297	88,797	0	0	0
1976	0	1,500	89,500	91,000	0	0	0
1977	0	1,500	97,500	99,000	0	0	0
1978	0	1,500	104,500	106,000	0	0	0
1979	0	1,500	110,900	112,400	0	0	0
1980	0	1,500	117,200	118,700	0	0	0
1981	0	1,500	124,100	125,600	0	0	0
1982	0	3,700	145,860	149,560	2,200	15,960	18,160
1983	0	3,700	153,903	157,603	2,200	17,603	19,803
1984	0	3,700	161,246	164,946	2,200	19,146	21,346
1985	0	3,700	169,845	173,545	2,200	22,545	24,745
1986	0	3,700	175,908	179,608	2,200	23,608	25,808
1987	0	3,700	182,571	186,271	2,200	25,371	27,571
1988	0	3,700	188,724	192,424	2,200	27,224	29,424
1989	0	3,700	193,417	197,117	2,200	29,017	31,217
1990	0	3,700	198,935	202,635	2,200	31,135	33,335
1991	0	3,700	201,410	205,110	2,200	33,610	35,810
1992	0	3,700	203,575	207,275	2,200	35,775	37,975
1993	0	3,700	205,660	209,360	2,200	37,860	40,060
1994	0	3,700	207,795	211,495	2,200	39,995	42,195
1995	0	3,700	209,950	213,650	2,200	42,150	44,350
1996	0	3,700	212,165	215,865	2,200	44,365	46,565
1997	0	3,700	214,540	218,240	2,200	46,740	48,940
1998	0	3,700	216,855	220,555	2,200	49,055	51,255
1999	0	3,700	219,530	223,230	2,200	51,730	53,930
2000	0	3,700	222,315	226,015	2,200	54,515	56,715
2001	0	3,700	224,870	228,570	2,200	57,070	59,270
2002	0	3,700	227,785	231,485	2,200	59,985	62,185
2003	0	3,700	230,570	234,270	2,200	62,770	64,970
2004	0	3,700	233,355	237,055	2,200	65,555	67,755
2005	0	3,700	236,050	239,750	2,200	68,250	70,450
2006	0	3,700	236,800	240,500	2,200	69,000	71,200
2007	0	3,700	237,550	241,250	2,200	69,750	71,950
2008	0	3,700	238,250	241,950	2,200	70,450	72,650
2009	0	3,700	239,050	242,750	2,200	71,250	73,450
2010	0	3,700	239,850	243,550	2,200	72,050	74,250
2011	0	3,700	240,500	244,200	2,200	72,700	74,900
2012	0	3,700	241,500	245,200	2,200	73,700	75,900
2013	0	3,700	242,500	246,200	2,200	74,700	76,900
2014	0	3,700	243,500	247,200	2,200	75,700	77,900
2015	0	3,700	244,500	248,200	2,200	76,700	78,900
2016	0	3,700	245,500	249,200	2,200	77,700	79,900
2017	0	3,700	246,500	250,200	2,200	78,700	80,900
2018	0	3,700	247,500	251,200	2,200	79,700	81,900
2019	0	3,700	248,500	252,200	2,200	80,700	82,900
2020(b	0	3,700	250,500	254,200	2,200	82,700	84,900

TABLE B-7: RECONCILIATION OF CAPITAL COSTS ALLOCATED TO WATER SUPPLY AND POWER GENERATION FOR THE PROJECT CONSTRUCTION PERIOD, 1952-1985

(in thousands of dollars)

Project Facility	Project Costs Allocated to Water Supply and Power Generation							Project Costs Allocated to Other Purposes	Total, State Water Project
	Misc. Income Credited to Construction (a	Allowances for Future Price Escalation (b	Costs of Construction of Water Delivery Structures (c	Additional Costs of Requested Excess Capacity and Future Enlargement (d	Capital Cost Component of Delta Water Charge (e	Capital Cost Component of Transportation Water Charge (f	Water Supply and Power Total		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
CONSERVATION FACILITIES									
Upper Feather Division									
Frenchman Dam and Lake	172	0	0	0	486	0	658	2,633	3,291
Grizzly Valley Dam and Lake Davis	29	0	0	0	207	0	236	4,601	4,837
Antelope Dam and Lake	0	0	0	0	0	0	0	4,996	4,996
Abbey Bridge Dam and Res.	0	0	0	0	0	0	0	11,988	11,988
Dixie Refuge Dam and Res.	0	0	0	0	0	0	0	10,615	10,615
Total, Upper Feather Division	201	0	0	0	693	0	894	34,833	35,727
Oroville Division									
Multipurpose Facilities	3,182	165	150	0	317,502	0	320,999	80,041	401,040
Specific Power Facilities	0	61	0	0	107,881	0	107,942	0	107,942
Total, Oroville Division	3,182	226	150	0	425,383	0	428,941	80,041	508,982
California Aqueduct									
North San Joaquin Division	169	1,003	0	0	51,274	0	52,446	2,086	54,532
San Luis Division	423	6	0	0	83,066	0	83,495	3,666	87,161
Total, California Aqueduct	592	1,009	0	0	134,340	0	135,941	5,752	141,693
Delta Facilities	9	22,824	0	0	141,974	0	164,807	187,780	352,587
Additional Conservation Fac.	0	74,733	0	0	256,077	0	330,810	4,159	334,969
TOTAL, CONSERVATION FACILITIES	3,984	98,792	150	0	958,467	0	1,061,393	312,565	1,373,958
TRANSPORTATION FACILITIES									
Upper Feather Division									
Grizzly Valley Pipeline	0	0	0	0	0	341	341	0	341
North Bay Aqueduct	18	2,451	35	0	0	18,533	21,037	-1	21,036
South Bay Aqueduct	1,591	2	292	0	0	46,047	47,932	20,196	68,128
California Aqueduct									
North San Joaquin Division	379	2,246	13	0	0	114,699	117,337	4,041	121,378
San Luis Division	48	2,597	0	0	0	103,286	105,931	3,912	109,843
South San Joaquin Division	299	122	2,747	3,244	0	247,864	254,276	7,891	262,167
Tehachapi Division	23	6,002	9	6,991	0	272,116	285,141	8,810	293,951
Mojave Divison	511	5,642	358	0	0	230,656	237,167	7,786	244,953
Santa Ana Division	155	209	2,805	11,132	0	160,771	175,072	10,293	185,365
West Branch	36,854	14,705	3,127	106	0	387,434	442,226	16,385	458,611
Coastal Branch	9	17,302	86	0	0	90,981	108,378	105	108,483
Total, California Aqueduct	38,278	48,825	9,145	21,473	0	1,607,807	1,725,528	59,223	1,784,751
TOTAL TRANSPORTATION FACILITIES	39,887	51,278	9,472	21,473	0	1,672,728	1,794,838	79,418	1,874,256
SAN JOAQUIN DRAINAGE FACILITIES	0	0	0	0	0	0	0	108,621	108,621
UNASSIGNED AND DAVIS-GRUNSKY	0	0	0	0	0	0	0	138,833	138,833
TOTAL, 1952-1985	43,871	150,070	9,622	21,473	158,467	1,672,728	2,856,231	639,437	3,495,668

a) Miscellaneous project receipts, including those from sale of Airpoint Reservoir land, that are applied for accounting purposes to reduce the capital costs of the particular facilities from which such income was realized.

b) These allowances are included for planning the future financial program, but not for determining current water charges. The costs shown on this appendix are based on prices prevailing on December 31, 1973.

c) See Table B-8

d) From Table B-9, less a portion allocated to recreation and fish and wildlife enhancement.

e) See Table B-13. A portion of these costs will be offset by power generation sales and credits.

f) See Table B-10.

TABLE B-8: CAPITAL COSTS OF REQUESTED DELIVERY STRUCTURES TO BE BUILT BY THE STATE[a]

(in dollars)

Project Area and Water Supply Contractor	Calendar Year																Total
	1958-70	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
FEATHER RIVER AREA																	
County of Butte	104,924	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	104,924
Thermalito Irrigation District[b]	43,942	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43,942
Subtotal	148,866	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148,866
NORTH BAY AREA																	
Napa County Flood Control and Water Conservation District	2,878	0	0	0	1,000	0	0	0	0	0	0	0	0	0	0	0	3,878
Solano County Flood Control and Water Conservation District	0	0	0	0	0	0	0	0	30,000	0	0	0	0	0	1,000	0	31,000
Subtotal	2,878	0	0	0	1,000	0	0	0	30,000	0	0	0	0	0	1,000	0	34,878
SOUTH BAY AREA																	
Alameda County Flood Control and Water Conservation District, Zone 7	123,754	1,587	532	634	12,000	0	0	0	0	0	0	0	0	0	0	0	138,507
Alameda County Water District	139,486	0	0	0	1,000	0	0	0	0	0	0	0	0	0	0	0	140,486
Santa Clara Valley Water District	12,788	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12,788
Subtotal	276,028	1,587	532	634	13,000	0	0	0	0	0	0	0	0	0	0	0	291,781
SAN JOAQUIN VALLEY																	
Devil's Den Water District	76,344	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	76,344
Dudley Ridge Water District	284,624	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	284,624
Empire West Side Irrigation District	6,357	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,357
Green Valley Water District[c]	0	0	1,341	1,893	0	0	0	0	0	0	0	0	0	0	0	0	3,234
Hacienda Water District	20,650	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20,650
Kern County Water Agency	1,679,658	35,574	25,429	29,831	407,000	5,000	0	0	6,000	0	0	0	6,000	0	0	0	2,194,492
Oak Flat Water District	13,330	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13,330
Tulare Lake Basin Water Storage District	249,200	0	0	6,648	0	0	0	0	0	0	0	0	0	0	0	0	255,848
Subtotal	2,330,163	35,574	26,770	38,372	407,000	5,000	0	0	6,000	0	0	0	6,000	0	0	0	2,854,879
SOUTHERN CALIFORNIA AREA																	
Antelope Valley-East Kern Water Agency	134,020	56,964	2,018	0	0	10,000	0	0	4,000	0	5,000	0	8,000	13,000	0	0	233,002
Castaic Lake Water Agency	70,472	255,876	34,806	2,275	0	0	10,000	0	0	0	0	0	0	0	0	0	373,429
Coachella Valley County Water District	3,502	11,844	43	0	0	0	0	0	0	0	0	0	0	0	0	4,000	19,389
Crestline-Lake Arrowhead Water Agency	8,303	697	852	1,615	0	0	0	0	0	0	0	0	5,000	0	0	0	16,467
Desert Water Agency	5,771	19,637	35	0	0	0	0	0	0	0	0	0	0	0	0	4,000	29,443
Littlerock Creek Irrigation District	16,618	1,234	2,376	1,475	3,000	0	0	0	0	0	0	0	0	0	0	0	24,703
Mojave Water Agency	11,500	51,893	179	277	0	0	0	0	3,000	0	7,000	0	0	0	4,000	0	77,849
Palmdale Water District	22,199	1,284	747	0	0	0	3,000	0	0	0	0	0	0	0	0	0	27,230
San Bernardino Valley Municipal Water District	242,528	244,051	80,737	36,649	0	0	0	0	0	0	6,000	0	0	0	0	5,000	614,965
San Gabriel Valley Municipal Water District	41,566	14,975	19,331	55,958	0	0	0	0	0	0	0	0	0	0	0	0	131,830
San Gorgonio Pass Water Agency	36,841	17,974	6,590	5,917	0	0	0	0	0	0	0	0	0	0	0	0	67,322
The Metropolitan Water District of Southern California	1,537,707	1,903,471	1,052,719	45,159	0	2,000	0	0	0	10,000	0	0	0	0	10,000	0	4,561,056
Ventura County Flood Control District	33,648	58,279	13,169	1,466	0	0	0	0	5,000	2,000	0	0	0	0	0	0	113,562
Subtotal	2,164,675	2,638,179	1,213,602	150,791	3,000	12,000	13,000	0	12,000	12,000	18,000	0	13,000	13,000	14,000	13,000	6,290,247
TOTAL	4,922,610	2,675,340	1,240,904	189,797	424,000	17,000	13,000	0	48,000	12,000	18,000	0	19,000	13,000	15,000	13,000	9,620,651

a) Approximate only; not to be construed as invoice amounts.
b) Not a project water supply contractor. A delivery structure was constructed on the Thermalito Power Canal at the District's expense as a part of a water exchange agreement.
c) Not a project water supply contractor. District has contracted for surplus water.

TABLE B-9: CAPITAL COSTS OF

(in dollars unless otherwise indicated)

Reach Number	Year Reach Becomes Operational	Excess Capacity (cfs)	Total Reach Capacity (cfs)	Ratio of Excess Capacity to Total Capacity (cfs/cfs) (a	Total Reach Cost (b	Total Advance Payments for Excess Capacity (c	Total Incremental Costs for Excess Capacity (d	Reconciliation of Advance Payments (e	Interest Credit (f	Reconciliation of Advance Payments and Interest Credit
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
				TOTAL REQUIRED ADVANCE OF FUNDS						
				THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA						
8C	1968	188.00000	8,257.54768	0.02276705	597,582	13,605	2,000	11,605	1,667	13,272
8D	1968	188.00000	8,058.99281	0.02332798	13,942,413	325,248	113,000	212,248	30,109	242,357
9	1968	188.00000	7,268.54004	0.02586489	9,162,227	236,980	71,000	165,980	32,640	198,620
10A	1968	188.00000	7,117.74784	0.02641285	9,710,336	256,478	92,000	164,478	32,106	196,584
11B	1968	188.00000	6,313.19561	0.02977890	13,692,127	407,736	108,000	299,736	60,463	360,199
12D	1969	188.00000	5,929.95263	0.03170346	11,888,004	376,891	156,000	220,891	46,967	267,858
12E	1969	188.00000	5,907.22734	0.03182542	7,484,322	238,192	118,000	120,192	24,967	145,159
13B	1969	188.00000	5,341.25081	0.03519775	16,313,712	574,206	139,000	435,206	75,150	510,356
14A	1970	188.00000	5,008.96939	0.03753267	55,742,657	2,092,171	559,000	1,533,171	381,330	1,914,501
14B	1970	188.00000	4,888.19779	0.03845998	10,081,251	387,725	175,000	212,725	55,369	268,094
14C	1970	188.00000	4,700.84105	0.03999284	9,083,502	363,275	223,000	140,275	36,501	176,776
15A	1970	188.00000	4,597.94994	0.04088779	38,646,108	1,580,154	593,000	987,154	200,521	1,187,675
16A	1971	188.00000	4,387.78387	0.04284623	62,627,071	2,683,334	995,000	1,688,334	448,974	2,137,308
17E	1971	188.00000	4,136.09906	0.04545346	224,099,973	10,186,119	5,811,000	4,375,119	1,264,021	5,639,140
17F	1971	188.00000	4,126.98262	0.04555386	58,567,574	2,667,979	1,396,000	1,271,979	444,423	1,716,402
25	1971	787.00000	2,019.63064	0.38967521	30,989,289	12,075,758	6,823,844	5,251,914	1,368,192	6,620,106
28J	1973	-	-	-	-	4,378,641	4,378,641	0	0	0
				SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT						
25	1971	21.00000	2,019.63064	0.01039794	31,022,106	322,566	182,156	140,410	36,579	176,989
				ANTELOPE VALLEY-EAST KERN WATER AGENCY						
29A	1971	19.00000	3,128.83908	0.00607254	29,976,119	182,032	85,000	97,032	22,045	119,077
29F	1971	19.00000	3,128.01611	0.00607414	13,582,587	82,503	24,000	58,503	15,039	73,542

a) Column 1 divided by Column 2.

b) Reach costs are compounded at the project interest rate of 4.342 percent per annum as follows:

Reaches	*Period*	*Year costs compounded to*
8C thru 17F	*1952 - 1965*	*1965*
25 (for MWD)	*1952 - 1966*	*1966*
25 (for SGVMWD)	*1952 - 1967*	*1967*
29A and 29F	*1952 - 1967*	*1967*

c) Column 3 multiplied by Column 4.

d) As shown in Table B-7, except, prior Incremental Costs for Reach 28J have been brought forward with interest at 4.457% to 1966 for purposes of repayment.

e) Column 5 less Column 6.

f) Interest on Advance Payments in excess of Incremental Costs is at 5.5 percent per annum, approximate average rate of interest earnings during the period.

g) Actual payments are shown for 1966 through 1973 with 1974 adjusted to reflect overpayments and underpayments without interest for prior years.

h) Interest for overpayments and underpayments under the provisions of Amendment 2 of the contract.

i) Interest for overpayments and underpayments under the provisions of Amendment 5 of the contract.

j) Reach totals include Reconciliation of Advance Payments and Interest Credit (Column 9)

k) Advance payments in excess of incremental costs under the provisions of the contract reduce the capital cost component of the Transportation Charge.

REQUESTED EXCESS PEAKING CAPACITY

(in dollars)

ANNUAL REQUIRED ADVANCE OF FUNDS

Reach Number	Item	Estimated Costs and Advance Payments by Calendar Year										Reach Totals (j
		1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	
		(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
		THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA										
8C	1. Incremental Costs		1,000	1,000								2,000
	2. Advance Payments		6,803	6,802		-13,272						333
8D	1. Incremental Costs	4,000	45,000	64,000								113,000
	2. Advance Payments	11,513	129,524	184,211		-242,357						82,891
9	1. Incremental Costs	4,000	24,000	35,000	8,000							71,000
	2. Advance Payments	13,351	80,106	116,821	26,702		-198,620					38,360
10A	1. Incremental Costs	5,000	30,000	46,000	11,000							92,000
	2. Advance Payments	13,939	83,634	128,239	30,666		-196,584					59,894
11B	1. Incremental Costs	7,000	42,000	48,000	11,000							108,000
	2. Advance Payments	26,427	158,564	181,216	41,529		-360,199					47,537
12D	1. Incremental Costs	16,000	20,000	18,000	84,000	18,000						156,000
	2. Advance Payments	38,655	48,319	43,487	202,941	43,489		-267,858				109,033
12E	1. Incremental Costs	10,000	14,000	14,000	66,000	14,000						118,000
	2. Advance Payments	20,186	28,260	28,260	133,226	28,260		-145,159				93,033
13B	1. Incremental Costs	1,000	2,000	14,000	96,000	26,000						139,000
	2. Advance Payments	4,131	8,262	57,834	396,574	107,405		-510,356				63,850
14A	1. Incremental Costs	51,000	65,000	39,000	194,000	150,000	60,000					559,000
	2. Advance Payments	190,878	243,276	145,965	726,084	561,405	224,563		-1,914,501			177,670
14B	1. Incremental Costs	31,000	14,000	10,000	45,000	63,000	12,000					175,000
	2. Advance Payments	68,683	31,018	22,156	99,701	139,581	26,586		-268,094			119,631
14C	1. Incremental Costs	39,000	18,000	13,000	58,000	80,000	15,000					223,000
	2. Advance Payments	63,532	29,323	21,177	94,484	130,323	24,436		-176,776			186,499
15A	1. Incremental Costs	4,000	10,000	46,000	243,000	162,000	128,000					593,000
	2. Advance Payments	10,659	26,647	122,575	647,517	431,678	341,078		-1,187,675			392,479
16A	1. Incremental Costs	14,000	12,000	56,000	387,000	357,000	119,000	50,000				995,000
	2. Advance Payments	37,755	32,362	151,022	1,043,669	962,764	320,921	134,841		-2,137,308		546,026
17E	1. Incremental Costs	30,000	259,000	1,159,000	1,971,000	1,565,000	551,000	276,000				5,811,000
	2. Advance Payments	52,587	454,002	2,031,615	3,454,972	2,743,293	965,850	483,800		-5,639,140		4,546,979
17F	1. Incremental Costs	78,000	203,000	468,000	349,000	276,000	15,000	7,000				1,396,000
	2. Advance Payments	149,070	387,965	894,423	666,995	527,480	28,667	13,379		-1,716,402		951,577
25	1. Incremental Costs			932,118	2,289,874	1,910,988	1,211,656	479,208				6,823,844
	2. Advance Payments			1,649,515	4,052,256	3,381,764	2,144,197	848,026		-6,620,106		5,455,652
28J	1. Incremental Costs		304,612	13,706	296,668	65,966	230,169	1,209,586	2,017,134	235,900	4,900	4,378,641
	2. Advance Payments		304,612	13,706	296,668	65,966	230,169	1,209,586	2,017,134	235,900	4,900	4,378,641
Totals Unadjusted for past payments	1. Incremental Costs	294,000	1,063,612	2,976,824	6,109,542	4,687,954	2,341,825	2,021,794	2,017,134	235,900	4,900	21,753,485
	2. Advance Payments	701,366	2,052,677	5,799,024	11,913,984	8,867,779	3,551,064	1,766,259	-1,529,912	-15,877,056	4,900	17,250,085
Current Adjustments	1. Advance Payments and Adjustments - Amendment 2 (g	0	8,056,000	9,094,963	1,523,252	8,310,651	3,426,736	1,086,045	-4,244,807	-14,381,396 (k		12,871,444
	2. Interest Credits- Amendment 2 (h									-1,532,433 (k		-1,532,433
	3. Advance Payments and Adjustments- Amendment 5 (g	0	1,240,000	1,483,180	2,469,325	-927,035	1,729,160	3,215,258	2,967,475	1,690,000	-9,488,722	4,378,641
	4. Interest Credits- Amendment 5 (i										-2,721,803	-2,721,803
	5. Net Required Advance of Funds	0	9,296,000	10,578,143	3,992,577	7,383,616	5,155,896	4,301,303	-1,277,332	-14,223,829	-12,210,525 (k	12,995,849
		SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT										
25	1. Incremental Costs	0	0	24,882	61,126	51,012	32,344	12,792				182,156
	2. Advance Payments	0	0	44,062	108,243	90,333	57,275	22,653		-176,989		145,577
Totals Unadjusted for past payments	1. Incremental Costs	0	0	24,882	61,126	51,012	32,344	12,792				182,156
	2. Advance Payments	0	0	44,062	108,243	90,333	57,275	22,653		-176,989		145,577
Current Adjustments	1. Advance Payments and Adjustments (g	0	0	0	184,422	49,052	44,911	61,588	-20,263	-174,133		145,577
	2. Interest Credit									-6,332		-6,332
	3. Net Required Advance of Funds	0	0	0	184,422	49,052	44,911	61,588	-20,263 (k	-180,465 (k		139,245
		ANTELOPE VALLEY-EAST KERN WATER AGENCY										
29A	1. Incremental Costs	0	0	8,000	14,000	26,000	26,000	11,000				85,000
	2. Advance Payments	0	0	17,132	29,982	55,680	55,680	23,558		-119,077		62,955
29F	1. Incremental Costs	0	0	3,000	4,000	14,000	2,000	1,000				24,000
	2. Advance Payments	0	0	10,313	13,751	48,127	6,875	3,437		-73,542		8,961
Totals Unadjusted for past payments	1. Incremental Costs	0	0	11,000	18,000	40,000	28,000	12,000				109,000
	2. Advance Payments	0	0	27,445	43,733	103,807	62,555	26,995		-192,619		71,916
Current Adjustments	1. Advance Payments and Adjustments (g				85,495	52,625	101,648	34,062	-12,794	-189,120		71,916
	2. Interest Credit	0	0	0						-16,234		-16,234
	3. Net Required Advance of Funds	0	0	0	85,495	52,625	101,648	34,062	-12,794	-205,354 (k		55,682

TABLE B-10: CAPITAL COSTS OF EACH AQUEDUCT REACH TO BE REIM-

(in dollars)

Calendar Year	UPPER FEATHER DIVISION	NORTH BAY AQUEDUCT				SOUTH BAY AQUEDUCT			
		Reach 1	Reach 2	Reach 3	Total	Reach 1	Reach 2	Reach 4	Reach 5
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1952	0	0	0	0	0	97	34	30	57
1953	0	0	0	0	0	477	166	144	297
1954	0	0	0	0	0	1,466	508	437	959
1955	0	0	0	0	0	1,944	674	560	1,266
1956	0	0	0	0	0	18,789	6,515	5,090	12,545
1957	0	13,290	3,391	9,953	26,634	45,090	15,639	12,285	33,218
1958	2	19,183	5,022	25,799	50,004	195,998	80,965	7,719	21,943
1959	14	7,241	2,308	17,656	27,205	496,557	148,682	25,243	17,243
1960	29	8,423	4,599	5,170	18,192	1,130,837	68,580	72,189	68,844
1961	10	2,159	10,439	3,589	16,187	3,224,282	229,504	307,031	75,897
1962	271	540	1,393-	1,337	484	1,513,883	238,944	695,335	36,000
1963	56	4,032	316-	3,051	6,767	478,758	68,324	2,284,835	209,694
1964	7,793	36,941	18,067	28,678	83,686	2,510,998	13,442	176,752	261,964
1965	3,142	72,338	25,778	191,789	289,905	738,953	144,727	77,189	455,230
1966	-46	69,621	19,187	467,506	556,314	745,095	140,434	122,738	1,689,942
1967	50	60,174	21,464	1,573,865	1,655,503	309,576	12,839	247,174	3,456,090
1968	51,574	73,280	25,082	854,038	952,400	821,668	2,935-	66,482	2,941,125
1969	234,242	67,182	28,152	54,396	149,730	433,047	6,715	1,172	904,532
1970	16,234	65,858	44,940	14,564	125,362	63,399	4,653	12,816	162,450
1971	27,206	22,492	29,952	12,002	64,446	29,479	5,333	6,521	25,728
1972	9	14,263	12,132	11,619	38,014	29,324	1,163	3,719	28,472
1973	36	9,921	27,701	41,166	78,788	24,101	4,029	6,327	14,139
1974	0	73,575	183,795	33,000	290,370	45,000	3,000	5,000	13,000
1975	0	256,050	95,731	19,000	370,781	23,000	2,000	6,000	14,000
1976	0	451,162	182,509	45,000	678,671	3,000	0	1,000	1,000
1977	0	581,576	287,315	110,000	978,891	1,000	0	0	1,000
1978	0	3,080,223	930,698	805,000	4,815,921	1,000	0	0	0
1979	0	4,455,967	906,702	1,262,000	6,624,669	0	0	0	0
1980	0	385,000	15,000	130,000	530,000	0	0	0	0
1981	0	47,000	15,000	1,000	63,000	0	0	0	0
1982	0	21,000	1,000	0	22,000	0	0	0	0
1983	0	19,000	0	0	19,000	0	0	0	0
1984	0	0	0	0	0	0	0	0	0
1985	0	0	0	0	0	0	0	0	0
TOTAL	340,622	9,917,491	2,894,255	5,721,178	18,532,924	12,886,818	1,193,935	4,143,788	10,446,635

Calendar Year	SOUTH BAY AQUEDUCT (continued)					CALIFORNIA AQUEDUCT NORTH SAN JOAQUIN DIVISION			
	Reach 6	Reach 7	Reach 8	Reach 9	Total	Reach 1	Reach 2A	Reach 2B	Subtotal
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1952	8	66	72	132	496	3,973	3,303	1,505	8,781
1953	38	327	336	641	2,426	10,459	8,653	3,980	23,092
1954	123	1,005	1,003	1,954	7,455	13,690	11,243	5,199	30,132
1955	160	1,293	1,149	2,454	9,500	7,326	5,990	2,771	16,087
1956	1,559	11,959	11,043	28,372	95,872	9,241	5,177	2,403	16,821
1957	3,659	28,676	27,385	563,114	729,066	11,212	5,637	2,615	19,464
1958	2,246	17,877	17,390	560,914	905,052	18,533	15,669	7,284	41,486
1959	393	3,374	3,741	150,121	845,354	122,671	99,292	45,034	266,997
1960	1,083	3,774	4,398	360,148	1,709,853	193,969	104,796	50,343	349,108
1961	8,423	16,074	21,633	1,387-	3,881,457	163,344	196,138	44,548	404,030
1962	23,265	156,992	177,110	208,886	3,050,415	622,659	496,726	170,701	1,290,086
1963	271,325	1,245,083	940,672	129,439	5,628,130	2,014,818	1,540,908	688,759	4,244,485
1964	90,238	1,726,453	2,328,139	2,938,436	10,046,422	4,726,452	2,399,540	709,469	7,835,461
1965	46,462	364,616	599,148	1,913,674	4,339,999	5,985,917	6,970,114	3,006,518	15,962,549
1966	16,894	34,007	181,530	761,299	3,691,939	8,714,515	14,257,696	5,723,339	28,695,550
1967	42,497-	131,195	143,166	346,132	4,603,675	9,846,653	10,795,515	6,703,522	27,345,690
1968	83,861	862-	66,095	236,467	4,211,901	6,484,161	896,204	1,316,246	8,696,611
1969	4,185	11,638	162,933	29,515	1,553,737	3,607,073	793,115	449,006	4,849,194
1970	2,564	7,511	20,940	14,304-	260,029	2,279,721	156,024	115,847	2,551,592
1971	4,230	7,405	18,278	39,844	136,818	127,260	217,957	74,407	419,624
1972	1,060	468	5,138	32,731	102,075	170,720	54,036	8,734	233,490
1973	327	1,340	7,880	10,289	68,432	118,589	31,736	24,920	175,245
1974	1,000	12,000	7,000	9,000	95,000	278,295	86,742	108,560	473,597
1975	0	3,000	5,000	9,000	62,000	288,467	76,969	35,474	400,910
1976	0	0	1,000	1,000	7,000	491,936	88,347	8,031	588,314
1977	0	0	0	0	2,000	880,130	2,008	669	882,807
1978	0	0	0	0	1,000	1,707,384	669	669	1,708,722
1979	0	0	0	0	0	1,872,032	0	0	1,872,032
1980	0	0	0	0	0	682,686	0	0	682,686
1981	0	0	0	0	0	447,762	0	0	447,762
1982	0	0	0	0	0	838,633	0	0	838,633
1983	0	0	0	0	0	1,394,821	0	0	1,394,821
1984	0	0	0	0	0	1,434,310	0	0	1,434,310
1985	0	0	0	0	0	499,298	0	0	499,298
TOTAL	520,606	3,785,271	4,752,179	8,317,871	46,047,103	56,068,710	39,320,204	19,310,553	114,699,467

BURSED THRU CAPITAL COST COMPONENT OF TRANSPORTATION CHARGE

(in dollars)

Calendar Year	CALIFORNIA AQUEDUCT (continued)								
	SAN LUIS DIVISION						SOUTH SAN JOAQUIN DIVISION		
	Reach 3	Reach 4	Reach 5	Reach 6	Reach 7	Subtotal	Reach 8C	Reach 8D	Reach 9
	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
1952	2,556	3,641	4,131	1,050	1,296	12,674	11	720	1,165
1953	7,164	10,410	11,380	2,944	3,631	35,529	39	2,679	4,370
1954	8,895	12,875	14,176	3,655	4,508	44,109	43	2,717	4,215
1955	4,362	6,215	7,048	1,793	2,210	21,628	18	876	1,166
1956	3,959	5,640	6,400	1,627	2,007	19,633	70	3,628	4,809
1957	4,317	6,149	6,978	1,773	2,187	21,404	204	10,523	13,947
1958	14,827	24,705	28,223	7,064	9,111	83,930	351	17,966	23,618
1959	27,915	46,954	47,695	12,637	17,093	152,294	385	19,261	24,441
1960	787,364	49,693	43,745	14,326	30,188	925,316	1,108	45,802	26,903
1961	172,946	300,817	178,444	40,775	71,289	764,271	1,845	78,362	34,964
1962	487,509	565,013	262,850	24,422	27,058	1,366,852	4,149	163,962	65,418
1963	2,520,134	2,101,784	2,577,427	69,941	30,593	7,299,879	4,221	168,606	85,356
1964	4,341,991	5,089,590	1,095,147	169,957	260,595	10,957,280	2,304	99,152	125,929
1965	3,799,129	5,873,629	2,978,374	1,113,179	690,618	14,454,929	10,178	537,396	596,799
1966	2,348,403	8,825,235	5,987,890	4,374,353	7,944,502	29,480,383	129,970	5,422,410	2,636,565
1967	19,856-	2,191,448	7,220,739	261,175	6,917,063	16,570,569	133,800	5,153,167	3,535,191
1968	124,682	453,148	1,031,038	192,914	487,887	2,289,669	47,841	643,302	1,016,078
1969	3,225	176,601	126,265	117,878	175,107	599,076	57,659	131,208	101,294
1970	27,993	7,403-	122,417	877,473-	1,293,776	559,310	13,747	127,519	121,082
1971	127,078	298,021	407,125	31,490	224,809	1,088,523	5,614	40,462	34,188
1972	19,608	103,203	17,495	13,798	390,761	544,865	10,189	16,729	20,691
1973	9,650	84,587	12,969	4,737	185,745	297,688	3,900	16,018	20,950
1974	23,720	64,408	64,505	9,894	159,274	321,801	2,910	67,318	52,768
1975	14,161	33,950	41,710	9,700	33,950	133,471	1,940	83,420	58,200
1976	2,832	7,760	4,850	2,910	2,910	21,262	970	11,640	8,730
1977	1,416	3,880	1,940	970	970	9,176	0	7,760	4,850
1978	708	1,940	970	0	0	3,618	0	161,020	0
1979	2,124	52,380	193,030	4,850	130,950	383,334	0	0	0
1980	5,665	158,110	579,090	13,580	391,880	1,148,325	0	0	0
1981	11,329	311,370	1,138,780	27,160	771,150	2,259,789	0	0	0
1982	9,205	263,840	965,150	23,280	653,780	1,915,255	0	0	0
1983	4,249	242,500	624,680	80,510	385,090	1,337,029	0	0	0
1984	0	1,232,870	1,935,150	691,610	937,020	4,796,650	0	0	0
1985	0	865,240	1,358,000	485,970	657,660	3,366,870	0	0	0
TOTAL	14,899,260	29,460,203	29,095,811	6,934,449	22,896,668	103,286,391	433,466	13,033,623	8,623,687

Calendar Year	CALIFORNIA AQUEDUCT (continued)								
	SOUTH SAN JOAQUIN DIVISION (continued)								
	Reach 10A	Reach 11B	Reach 12D	Reach 12E	Reach 13B	Reach 14A	Reach 14B	Reach 14C	Reach 15A
	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)
1952	735	1,350	2,148	1,065	1,761	514	174	183	1,872
1953	2,696	5,019	7,983	3,962	6,548	1,885	640	671	6,972
1954	2,962	5,098	8,108	4,025	6,650	2,071	702	737	6,998
1955	1,158	1,650	2,624	1,303	2,151	808	273	288	2,191
1956	4,809	6,831	10,867	5,393	8,914	3,492	1,138	1,197	9,068
1957	13,947	19,811	31,512	15,641	25,845	11,743	3,305	3,471	26,291
1958	23,620	44,342	72,602	36,103	56,676	35,682	13,175	12,680	55,000
1959	24,455	64,065	103,393	51,486	82,396	64,749	23,083	22,897	76,248
1960	49,009	69,089	82,072	41,551	65,952	81,595	24,684	23,690	72,151
1961	73,325	49,081	95,423	53,948	28,421	231,133	101,840	74,180	145,271
1962	59,283	57,984	73,301	45,315	50,299	193,218	73,329	57,469	132,533
1963	54,915	94,278	182,122	88,394	68,990	403,143	119,137	93,600	97,036
1964	128,325	34u,765	305,590	181,311	88,528	1,090,000	716,621	512,104	573,774
1965	649,983	1,088,140	1,561,084	1,068,306	194,217	3,388,360	1,676,922	1,456,279	466,024
1966	2,877,002	3,810,586	688,806	460,360	404,338	4,915,985	991,224	763,097	1,745,312
1967	3,676,655	4,828,944	2,047,745	1,231,557	1,216,961	2,714,168	575,258	505,690	1,632,432
1968	1,065,136	1,390,228	5,029,547	3,022,733	8,336,534	9,778,669	1,649,590	1,853,863	7,436,876
1969	166,448	246,323	815,040	526,843	3,754,095	14,445,325	1,750,552	1,626,147	9,571,829
1970	122,701	101,923	122,682	93,420	311,637	10,852,553	1,299,668	1,013,663	8,844,990
1971	29,484	49,264	61,464	49,372	345,393	3,010,811	206,563	51,958	3,360,153
1972	25,677	34,247	51,651	27,134	77,506	1,418,106	107,788	29,676	1,028,394
1973	22,887	22,214	19,753	20,925	26,992	689,161	19,812	15,669	818,081
1974	56,648	35,211	68,288	65,281	64,408	798,407	41,031	36,084	977,760
1975	63,050	39,770	59,170	43,650	56,260	289,254	44,620	38,800	302,349
1976	8,730	9,700	10,670	6,790	12,610	65,863	11,640	8,730	127,458
1977	4,850	5,820	5,820	2,910	8,730	25,220	5,820	4,850	16,490
1978	0	0	0	0	0	970	0	0	970
1979	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	0	0	0	0
1981	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0
1985	0	0	0	0	0	0	0	0	0
TOTAL	9,208,490	12,427,733	11,519,465	7,148,778	15,302,812	54,512,885	9,458,589	8,207,673	37,534,523

TABLE B-10: CAPITAL COSTS OF EACH AQUEDUCT REACH TO BE REIM-

(in dollars)

Calendar Year	CALIFORNIA AQUEDUCT (continued)								
	SOUTH SAN JOAQUIN DIVISION (continued)		TEHACHAPI DIVISION			MOJAVE DIVISION			
	Reach 16A	Subtotal	Reach 17E	Reach 17F	Subtotal	Reach 18A	Reach 19	Reach 19C	Reach 20A
	(37)	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)
1952	4,547	16,245	9,352	4,202	13,554	4,208	1,563	0	2,634
1953	16,933	60,397	30,601	13,702	44,303	12,971	4,819	0	7,453
1954	17,016	61,342	45,716	20,622	66,338	17,118	6,360	0	9,779
1955	5,346	19,852	25,776	11,706	37,482	5,773	2,145	0	2,602
1956	22,125	82,341	41,107	18,284	59,391	6,210	2,307	0	2,511
1957	64,157	240,397	114,072	50,736	164,808	22,988	8,542	0	9,293
1958	147,334	539,149	167,712	74,241	241,953	38,944	14,588	89	15,864
1959	222,891	779,750	150,628	60,023	210,651	39,235	24,226	809	24,496
1960	211,181	794,787	205,178	47,730	252,908	20,520	27,570	4,250	43,347
1961	198,784	1,166,577	392,903	87,085	479,988	36,535	37,355	2,027	36,151
1962	170,907	1,147,167	361,289	84,645	445,934	70,035	274,134	1,327	11,149
1963	481,932	1,941,730	1,210,904	127,990	1,338,894	27,460	425,294	2,916	23,234
1964	1,812,680	5,983,083	1,906,274	798,027	2,704,301	96,963	729,699	6,027	51,289
1965	1,239,379	13,933,067	2,583,347	2,378,522	4,961,869	127,519	741,924	6,533	125,456
1966	2,976,900	27,822,555	5,412,085	9,642,583	15,054,668	388,717	1,730,702	10,700	172,641
1967	3,442,880	30,694,448	26,203,322	12,554,582	38,757,904	1,351,780	927,891	19,962	677,017
1968	7,506,893	48,777,290	32,821,956	7,541,752	40,363,708	148,561	7,323,988	69,012	2,087,232
1969	13,306,851	46,499,614	40,721,756	7,065,152	47,786,908	220,522	2,545,787	5,308	6,217,534
1970	14,234,307	37,259,892	37,071,432	7,183,355	44,254,787	2,171,655	1,180,680	4,739	3,864,183
1971	8,166,066	15,410,792	21,035,106	7,036,934	28,072,040	1,574,805	335,601	5,463	1,246,593
1972	3,116,882	5,964,670	10,437,539	44,507	10,482,046	128,022	401,878	2,835	461,212
1973	1,500,738	3,197,100	3,178,084	51,789	3,229,873	28,462	85,384	3,004	114,378
1974	1,139,750	3,405,864	7,499,652	163,057	7,662,709	29,197	273,734	6,185	217,668
1975	337,560	1,418,043	1,233,937	251,230	1,485,167	35,890	149,380	5,191	76,630
1976	78,376	361,907	730,216	11,640	741,856	7,760	45,590	3,097	24,250
1977	29,100	122,220	42,680	0	42,680	99,910	23,280	1,000	14,550
1978	970	163,930	140,650	0	140,650	271,600	970	0	0
1979	0	0	712,950	0	712,950	1,432,690	0	0	0
1980	0	0	3,281,510	0	3,281,510	2,745,100	0	0	0
1981	0	0	6,181,810	0	6,181,810	1,920,600	0	0	0
1982	0	0	7,232,320	0	7,232,320	783,760	0	576,938	0
1983	0	0	4,131,230	0	4,131,230	0	0	1,562,228	0
1984	0	0	1,479,250	0	1,479,250	0	0	5,759,772	0
1985	0	0	0	0	0	0	0	6,759,970	0
TOTAL	60,452,485	247,864,209	216,792,344	55,324,096	272,116,440	13,865,510	17,325,391	14,819,382	15,539,146

Calendar Year	CALIFORNIA AQUEDUCT (continued)								
	MOJAVE DIVISION (continued)							SANTA ANA DIVISION	
	Reach 20B	Reach 21	Reach 22A	Reach 22B	Reach 23	Reach 24	Subtotal	Reach 25	Reach 26A
	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)
1952	917	5,954	36	2,071	2,133	2,481	21,997	3,429	5,759
1953	3,498	18,356	73	5,917	7,083	7,651	67,821	10,570	17,758
1954	4,678	24,232	380	8,805	8,073	10,100	89,525	13,953	23,442
1955	2,275	8,174	185	2,833	2,803	3,408	30,198	4,708	7,908
1956	2,731	8,785	221	2,989	3,047	3,662	32,463	5,059	8,500
1957	10,109	32,521	822	11,064	11,274	13,556	120,169	18,726	31,461
1958	17,254	55,127	1,443	19,381	19,124	23,330	205,144	31,915	53,566
1959	19,261	58,509	1,939	27,010	21,063	52,179	268,727	40,609	60,183
1960	37,143	46,833	10,945	141,905	18,893	113,420	464,826	64,844	96,394
1961	36,338	23,627	14,211	215,337	10,467	356,998	769,046	27,073	58,525
1962	10,972	9,619	4,286	165,439	4,575	276,241	827,777	11,126	38,203
1963	23,827	21,126	9,781	178,552	7,611	269,798	989,599	32,541	119,526
1964	74,114	40,373	24,669	276,244	7,778	248,039	1,555,195	75,270	224,463
1965	352,657	106,011	68,923	854,670	11,509	626,049	3,021,251	301,571	238,575
1966	1,356,801	183,463	191,791	1,794,474	29,995	1,045,870	6,905,154	448,598	422,576
1967	1,908,438	533,611	393,168	3,212,015	61,852	2,401,760	11,487,494	3,319,227	710,334
1968	2,293,952	1,190,526	1,468,957	4,407,832	108,769	2,769,410	21,868,239	7,873,254	1,346,316
1969	5,496,810	2,636,714	1,677,628	7,802,062	267,523	11,111,123	37,981,011	6,533,271	1,863,281
1970	5,121,979	3,600,934	2,118,403	23,881,254	1,270,267	17,238,712	60,452,806	1,713,655	7,491,879
1971	1,136,829	945,583	448,159	17,427,736	1,983,398	5,692,750	30,796,917	946,954	10,153,391
1972	612,936	517,448	315,839	4,363,638	41,191	820,886	7,665,885	1,411,883	5,670,546
1973	85,057	62,503	24,231	2,000,009	26,215	4,432,629	6,813,410	145,498	1,873,476
1974	125,518	98,358	59,267	6,217,797	218,347	956,156	8,202,227	31,137	3,665,824
1975	168,780	44,620	33,950	5,179,994	94,090	266,750	6,055,275	14,550	3,380,062
1976	23,280	14,550	10,670	962,919	5,820	566,480	1,664,416	3,880	516,913
1977	13,580	7,760	4,850	164,900	1,940	22,310	354,080	0	18,430
1978	0	0	0	2,910	0	2,910	278,390	0	970
1979	0	0	0	0	126,100	0	1,558,790	0	0
1980	0	0	0	0	0	0	2,745,100	0	0
1981	0	0	0	0	0	0	1,920,600	0	0
1982	0	0	0	0	0	0	1,360,698	0	0
1983	0	0	0	0	0	0	1,562,228	0	0
1984	0	0	0	0	0	0	5,759,772	0	0
1985	0	0	0	0	0	0	6,759,970	0	0
TOTAL	18,939,734	10,295,317	6,836,365	79,329,757	4,370,940	49,334,658	230,656,200	23,083,301	38,098,261

BURSED THRU CAPITAL COST COMPONENT OF TRANSPORTATION CHARGE

(in dollars)

Calendar Year	CALIFORNIA AQUEDUCT (continued)								
	SANTA ANA DIVISION (continued)				WEST BRANCH				
	Reach 28G[a]	Reach 28H	Reach 28J	Subtotal	Reach 29A	Reach 29F	Reach 29G	Reach 29H	Reach 29J
	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
1952	4,922	4,170	3,106	21,386	3,007	139	180	472	569
1953	16,026	11,842	9,748	65,944	9,352	353	244	1,803	1,731
1954	18,531	18,618	12,507	87,051	7,601	1,234	2,293	2,418	4,282
1955	6,226	6,255	4,269	29,366	1,047	601	1,117	1,178	2,086
1956	6,683	6,713	4,609	31,564	502	718	1,332	1,405	2,488
1957	24,732	24,848	17,062	116,829	1,860	2,656	4,931	5,202	9,209
1958	42,088	42,289	29,404	199,262	3,372	4,627	8,430	9,115	16,383
1959	47,608	47,844	46,409	242,653	8,305	9,218	15,667	18,541	37,055
1960	67,260	67,562	125,577	421,637	22,386	13,575	16,065	29,568	73,552
1961	34,526	37,625	721,346	879,095	20,849	8,163	6,500	19,116	41,410
1962	21,844	21,908	60,245	153,326	45,415	25,734	21,314	62,107	136,310
1963	43,086	41,797	1,870,326	2,107,276	92,618	52,710	37,427	113,508	257,263
1964	95,391	51,717	108,901	555,742	160,028	59,515	76,189	150,569	336,023
1965	101,645	83,653	155,915	881,359	369,501	61,071	325,398	128,383	608,080
1966	174,174	320,291	610,081	1,975,720	492,405	239,918	1,172,780	349,877	3,278,897
1967	229,063	299,147	1,231,422	5,789,193	1,621,976	974,724	1,051,892	913,221	31,744,422
1968	808,688	360,151	848,406	11,236,815	3,987,948	394,726	335,860	1,132,614	36,755,167
1969	1,099,898	1,529,189	1,113,187	12,138,826	6,725,099	334,104	657,280	1,200,278	8,638,093
1970	1,842,761	1,063,499	3,940,879	16,052,673	8,084,198	6,196,009	2,664,704	3,051,491	8,041,721
1971	16,516,374	6,605,025	12,416,186	46,637,930	4,350,260	3,850,768	1,339,144	8,448,707	5,714,857
1972	1,440,543	12,383,085	22,099,127	43,005,184	1,918,846	272,772	1,359,550	19,315,955	23,724,070-
1973	213,019	285,284	3,816,534	6,333,811	800,280	177,056	426,991	9,775,839	1,837,561
1974	386,351	197,007	2,447,197	6,727,516	770,083	427,188	936,147	3,691,706	3,370,617-
1975	167,422	44,620	631,367	4,238,021	193,612	301,282	1,349,270	538,802	283,240
1976	67,124	6,790	225,041	819,748	74,205	44,620	1,500,590	191,514	38,800
1977	0	0	2,910	21,340	3,880	194,000	6,915,130	250,260	11,640
1978	0	0	970	1,940	970	223,100	17,024,470	1,940	9,700
1979	0	0	0	0	0	2,871,200	19,713,310	0	9,700
1980	0	0	35	35	0	3,375,600	17,205,860	0	4,850
1981	0	0	0	0	0	567,450	4,587,130	0	0
1982	0	0	0	0	0	0	1,722,720	0	0
1983	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0
1985	0	0	0	0	0	0	0	0	0
TOTAL	23,475,985	23,560,929	52,552,766	160,771,242	29,769,605	20,684,831	80,479,915	49,405,589	70,800,402

Calendar Year	CALIFORNIA AQUEDUCT (continued)								GRAND TOTAL
	WEST BRANCH (continued)		COASTAL BRANCH					TOTAL	
	Reach 30	Subtotal	Reach 31A	Reach 33A	Reach 34	Reach 35	Subtotal		
	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)
1952	1,448	5,815	0	0	0	0	0	100,452	100,948
1953	4,470	17,953	0	0	0	0	0	315,039	317,465
1954	5,909	23,737	0	0	0	0	0	402,234	409,689
1955	1,999	8,028	0	0	0	0	0	162,641	172,141
1956	2,136	8,581	0	0	0	0	0	250,794	346,666
1957	7,907	31,765	0	0	0	0	0	714,836	1,470,536
1958	14,341	56,268	0	0	0	0	0	1,367,192	2,322,250
1959	45,611	134,397	28,116	48,527	7,417	7,909	91,969	2,147,438	3,020,011
1960	86,296	241,442	33,569	68,512	8,464	13,199	123,744	3,573,768	5,301,842
1961	116,662	212,700	10,305	18,115	1,625	4,060	34,105	4,709,812	8,607,466
1962	370,254	661,134	6,726	7,948	642	1,625	16,941	5,909,217	8,960,387
1963	464,842	1,018,368	16,369	14,962	1,072	2,702	35,105	18,975,336	24,610,289
1964	1,436,206	2,218,530	310,162	27,579	1,995	5,016	344,752	32,154,344	42,292,245
1965	3,479,408	4,971,841	734,412	39,194	2,828	7,128	783,562	58,970,427	63,603,473
1966	9,621,267	15,155,144	2,240,971	44,686	2,968	7,514	2,296,139	127,385,313	131,633,520
1967	18,254,710	54,560,945	6,275,123	49,160	3,349	8,465	6,336,097	191,542,340	197,801,568
1968	16,867,607	59,473,922	2,661,445	39,711	2,570	6,536	2,710,262	195,416,516	200,632,391
1969	17,837,238	35,392,092	408,315	35,634	2,071	5,277	451,297	185,698,018	187,635,727
1970	23,131,138	51,169,261	239,719	31,141	1,755	4,474	277,089	212,577,410	212,979,035
1971	17,452,924	41,156,660	151,130	38,868	2,188	5,553	197,739	163,780,225	164,008,695
1972	3,910,188	3,053,241	123,528	26,757	1,403	3,674	155,362	71,104,743	71,244,841
1973	13,695,681	26,713,408	178,802	26,055	1,706	4,388	210,951	46,971,486	47,118,742
1974	3,866,441	6,320,948	108,700	42,171	4,185	10,463	165,519	33,280,181	33,665,551
1975	1,653,232	4,319,438	77,000	42,073	4,191	10,432	133,696	18,184,021	18,616,802
1976	68,898	1,918,627	24,000	85,430	1,048	2,096	112,574	6,228,704	6,914,375
1977	83,933	7,458,843	777,000	987,865	152,971	327,171	2,245,007	11,136,153	12,117,044
1978	73,271	17,333,451	122,000	2,143,242	269,283	797,614	3,332,139	22,962,840	27,779,761
1979	1,387,100	23,981,310	154,000	5,214,990	481,714	953,959	6,804,663	35,313,079	41,937,748
1980	2,046,700	22,633,010	323,000	22,882,463	2,453,580	6,892,186	32,551,229	63,041,895	63,571,895
1981	305,550	5,460,130	390,000	20,911,886	904,644	5,578,548	27,785,078	44,055,169	44,118,169
1982	0	1,722,720	79,000	1,700,000	323,000	938,000	3,040,000	16,109,626	16,131,626
1983	0	0	15,000	278,000	20,000	51,000	364,000	8,789,308	8,808,308
1984	0	0	7,000	90,000	9,000	22,000	128,000	13,597,982	13,597,982
1985	0	0	254,000	0	0	0	254,000	10,880,138	10,880,138
TOTAL	136,293,367	387,433,709	15,749,392	54,894,969	4,665,669	15,670,989	90,981,019	1,607,808,677	1,672,729,326

a) Includes excess capacity costs in the following years allocated to the Metropolitan Water District and repaid under Article 24(c) of their contract; 1970, $362,000; 1971, $6,198,000; 1972, $139,000.

TABLE B-11: MINIMUM OMP&R COSTS OF EACH AQUEDUCT REACH TO BE

(in dollars)

Calendar Year	UPPER FEATHER DIVISION	NORTH BAY AQUEDUCT				SOUTH BAY AQUEDUCT			
		Reach 1	Reach 2	Reach 3	Total	Reach 1	Reach 2	Reach 4	Reach 5
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1960	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	36,865	5,425	0	0
1963	0	0	0	0	0	145,910	20,366	0	0
1964	0	0	0	0	0	146,587	15,102	19,240	0
1965	0	0	0	0	0	255,288	45,014	46,355	0
1966	0	0	0	0	0	259,685	22,142	63,213	0
1967	0	0	0	0	0	412,231	28,786	107,669	0
1968	0	0	0	0	0	349,602	35,255	61,678	0
1969	0	0	0	89,906	89,906	433,237	40,207	70,032	0
1970	0	0	0	96,281	96,281	359,008	40,540	60,807	37,593
1971	101	0	0	39,692	39,692	329,865	22,272	48,428	24,500
1972	55	0	0	38,548	38,548	325,772	26,569	54,995	109,097
1973	11	0	0	30,992	30,992	361,081	32,934	57,431	10,522
1974	192	0	0	44,540	44,540	437,049	52,431	70,169	175,180
1975	194	0	0	45,095	45,095	336,792	52,797	70,017	175,263
1976	193	0	0	47,022	47,022	434,891	53,021	69,778	174,953
1977	188	0	0	50,775	50,775	432,367	52,851	69,697	174,482
1978	185	0	0	56,344	56,344	431,045	52,812	69,938	174,462
1979	188	0	0	56,217	56,217	431,940	53,027	70,423	175,255
1980	189	128,607	26,935	76,641	232,183	432,364	52,899	69,834	174,632
1981	192	125,364	26,718	74,023	226,105	433,729	53,093	70,117	176,275
1982	196	125,800	26,792	74,271	226,863	435,512	53,343	70,478	177,098
1983	198	127,331	26,949	74,407	228,687	441,189	54,625	74,585	185,419
1984	196	126,859	26,860	74,232	227,951	440,129	54,458	74,311	184,871
1985	198	127,031	26,884	74,366	228,281	439,916	54,561	74,434	185,207
1986	198	127,078	26,882	74,432	228,392	440,316	54,605	74,471	185,360
1987	199	127,056	26,863	74,461	228,380	440,357	54,450	73,898	183,689
1988	196	125,729	26,814	74,214	226,757	438,772	54,093	73,107	182,395
1989	196	125,647	26,782	74,214	226,643	437,746	54,058	72,989	182,271
1990	193	125,466	26,769	74,031	226,266	436,692	53,954	72,942	181,897
1991	191	125,128	26,695	73,848	225,671	435,575	53,765	72,606	180,896
1992	193	125,550	26,792	74,067	226,409	436,908	53,988	72,990	181,439
1993	195	125,697	26,822	74,149	226,668	438,289	53,924	72,640	180,938
1994	195	125,672	26,812	74,149	226,633	437,323	53,970	72,795	180,940
1995	195	125,670	26,811	74,149	226,630	437,313	53,956	72,749	180,969
1996	192	125,356	26,738	73,991	226,085	436,318	53,746	72,305	179,168
1997	192	125,331	26,728	73,991	226,050	436,254	53,662	72,019	178,856
1998	193	125,463	26,762	74,051	226,276	436,671	53,785	72,333	179,295
1999	193	125,461	26,761	74,051	226,273	436,673	53,787	72,343	179,305
2000	193	125,504	26,778	74,051	226,333	436,675	53,789	72,347	179,310
2001	193	125,476	26,768	74,051	226,295	436,683	53,800	72,387	179,354
2002	193	125,495	26,775	74,051	226,321	436,634	53,735	72,167	179,107
2003	193	125,490	26,773	74,051	226,314	436,662	53,771	72,287	179,243
2004	193	125,486	26,771	74,051	226,308	436,641	53,744	72,193	179,137
2005	193	125,810	26,901	74,051	226,762	436,623	53,720	72,115	179,048
2006	193	125,760	26,881	74,051	226,692	436,639	53,741	72,183	179,123
2007	193	125,754	26,878	74,051	226,683	436,655	53,763	72,259	179,212
2008	193	125,769	26,885	74,051	226,705	436,689	53,809	72,415	179,386
2009	193	125,763	26,882	74,051	226,696	436,681	53,798	72,376	179,342
2010	193	125,757	26,880	74,051	226,688	436,686	53,803	72,397	179,365
2011	193	125,749	26,877	74,051	226,677	436,696	53,818	72,443	179,418
2012	193	125,741	26,874	74,051	226,666	436,701	53,824	72,465	179,444
2013	193	125,714	26,862	74,051	226,627	436,694	53,815	72,435	179,408
2014	193	125,726	26,868	74,051	226,645	436,704	53,828	72,480	179,460
2015	193	125,739	26,873	74,051	226,663	436,701	53,825	72,469	179,446
2016	193	125,732	26,870	74,051	226,653	436,655	53,763	72,259	179,210
2017	193	125,745	26,875	74,051	226,671	436,660	53,770	72,281	179,235
2018	193	125,738	26,872	74,051	226,661	436,646	53,751	72,221	179,167
2019	193	125,691	26,854	74,051	226,596	436,678	53,795	72,366	179,330
2020(a	193	125,900	26,937	74,051	226,888	436,692	53,813	72,426	179,399

a) And each year thereafter for the remainder of the project repayment period.

REIMBURSED THRU MINIMUM OMP&R COMPONENT OF TRANSPORTATION CHARGE

(in dollars)

Calendar Year	SOUTH BAY AQUEDUCT (continued)					CALIFORNIA AQUEDUCT			
						NORTH SAN JOAQUIN DIVISION			
	Reach 6	Reach 7	Reach 8	Reach 9	Total	Reach 1	Reach 2A	Reach 2B	Subtotal
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1960	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	42,290	0	0	0	0
1963	0	0	0	0	166,276	0	0	0	0
1964	0	0	0	0	180,929	0	0	0	0
1965	2,111	7,137	5,060	12,566	373,531	0	0	0	0
1966	3,824	11,461	10,188	24,250	394,763	0	0	0	0
1967	1,801	9,635	14,024	31,069	605,215	0	0	0	0
1968	1,343	9,812	13,993	32,562	504,245	1,005,031	276,414	116,147	1,397,592
1969	1,592	6,817	10,804	31,487	594,176	940,209	328,630	193,100	1,461,939
1970	1,528	1,478	8,316	25,086	531,400	981,596	309,789	148,573	1,439,958
1971	1,127	5,052	10,821	28,226	421,291	1,098,361	273,011	119,844	1,491,216
1972	3,150	11,923	13,831	41,640	586,977	1,110,887	266,639	124,844	1,502,370
1973	2,265	9,133	7,166	41,094	521,626	1,149,540	259,584	111,697	1,520,821
1974	6,638	12,169	13,084	43,095	809,815	1,308,319	363,322	139,498	1,811,139
1975	6,602	11,775	13,019	43,701	709,966	1,279,419	364,420	139,306	1,783,145
1976	6,603	11,634	12,829	43,534	807,243	1,312,144	365,630	139,781	1,817,555
1977	6,571	11,575	12,718	43,270	803,531	1,295,949	363,488	139,135	1,798,572
1978	6,548	11,535	12,676	43,123	802,139	1,293,710	363,963	139,573	1,797,246
1979	6,562	11,563	12,703	43,218	804,691	1,295,499	367,346	141,197	1,804,042
1980	6,572	11,579	12,722	43,283	803,885	1,293,438	365,025	139,928	1,798,391
1981	6,595	11,620	12,767	43,432	807,628	1,306,239	362,612	138,514	1,807,365
1982	6,622	11,671	12,821	43,621	811,166	1,307,497	365,202	139,638	1,812,337
1983	6,637	11,694	12,848	43,709	830,706	1,327,292	368,174	141,074	1,836,540
1984	6,620	11,662	12,814	43,595	828,460	1,322,648	367,171	140,687	1,830,506
1985	6,633	11,687	12,839	43,682	828,959	1,317,532	369,722	141,903	1,829,157
1986	6,639	11,699	12,853	43,726	829,669	1,315,459	372,608	143,341	1,831,408
1987	6,643	11,704	12,857	43,748	827,346	1,313,882	371,232	142,609	1,827,723
1988	6,618	11,660	12,811	43,584	823,040	1,308,176	370,004	142,157	1,820,337
1989	6,618	11,660	12,811	43,584	821,737	1,307,627	371,289	142,820	1,821,736
1990	6,599	11,628	12,775	43,464	819,951	1,303,926	373,270	143,978	1,821,174
1991	6,581	11,595	12,740	43,344	817,102	1,300,630	371,984	143,450	1,816,064
1992	6,603	11,634	12,782	43,488	819,832	1,304,690	375,169	144,930	1,824,789
1993	6,612	11,648	12,798	43,540	820,389	1,306,497	371,713	143,089	1,821,299
1994	6,612	11,648	12,798	43,540	819,626	1,305,992	373,604	144,066	1,823,662
1995	6,612	11,648	12,798	43,540	819,585	1,305,990	373,569	144,046	1,823,605
1996	6,596	11,621	12,767	43,436	815,957	1,302,019	374,475	144,632	1,821,126
1997	6,596	11,621	12,767	43,436	815,211	1,301,309	373,529	144,143	1,818,981
1998	6,602	11,632	12,779	43,477	816,574	1,303,095	374,603	144,650	1,822,348
1999	6,602	11,632	12,779	43,477	816,598	1,303,071	374,273	144,481	1,821,825
2000	6,602	11,632	12,779	43,477	816,611	1,302,965	372,808	143,726	1,819,499
2001	6,602	11,632	12,779	43,477	816,714	1,303,043	373,891	144,285	1,821,219
2002	6,602	11,632	12,779	43,477	816,133	1,302,832	370,979	142,782	1,816,593
2003	6,602	11,632	12,779	43,477	816,453	1,302,923	372,216	143,420	1,818,559
2004	6,602	11,632	12,779	43,477	816,205	1,302,829	370,923	142,754	1,816,506
2005	6,602	11,632	12,779	43,477	815,996	1,302,724	369,464	142,000	1,814,188
2006	6,602	11,632	12,779	43,477	816,176	1,302,891	371,782	143,196	1,817,869
2007	6,602	11,632	12,779	43,477	816,379	1,302,934	372,380	143,504	1,818,818
2008	6,602	11,632	12,779	43,477	816,789	1,302,989	373,141	143,897	1,820,027
2009	6,602	11,632	12,779	43,477	816,687	1,302,917	372,143	143,382	1,818,442
2010	6,602	11,632	12,779	43,477	816,741	1,302,954	372,657	143,648	1,819,259
2011	6,602	11,632	12,779	43,477	816,865	1,302,991	373,171	143,913	1,820,075
2012	6,602	11,632	12,779	43,477	816,924	1,303,014	373,477	144,071	1,820,562
2013	6,602	11,632	12,779	43,477	816,842	1,303,074	374,308	144,499	1,821,881
2014	6,602	11,632	12,779	43,477	816,962	1,303,011	373,453	144,059	1,820,523
2015	6,602	11,632	12,779	43,477	816,931	1,303,013	373,465	144,063	1,820,541
2016	6,602	11,632	12,779	43,477	816,377	1,302,828	370,900	142,741	1,816,469
2017	6,602	11,632	12,779	43,477	816,436	1,302,826	370,878	142,732	1,816,436
2018	6,602	11,632	12,779	43,477	816,275	1,302,780	370,240	142,401	1,815,421
2019	6,602	11,632	12,779	43,477	816,659	1,302,919	372,165	143,394	1,818,478
2020(a	6,602	11,632	12,779	43,477	816,820	1,302,959	372,723	143,681	1,819,363

TABLE B-11: MINIMUM OMP&R COSTS OF EACH AQUEDUCT REACH TO BE

(in dollars)

Calendar Year	CALIFORNIA AQUEDUCT (continued)								
	SAN LUIS DIVISION						SOUTH SAN JOAQUIN DIVISION		
	Reach 3	Reach 4	Reach 5	Reach 6	Reach 7	Subtotal	Reach 8C	Reach 8D	Reach 9
	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
1960	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0
1968	127,270	406,091	152,892	58,211	106,456	850,920	0	0	0
1969	94,778	441,627	192,154	39,993	239,255	1,007,807	10,664	130,853	105,335
1970	90,507	457,751	225,430	69,229	185,582	1,028,499	12,087	156,114	154,621
1971	101,294	527,018	180,577	67,939	154,563	1,031,391	25,911	180,584	120,156
1972	120,091	603,839	190,278	83,478	157,308	1,154,994	23,732	174,770	139,163
1973	125,036	585,526	172,866	68,347	151,252	1,103,027	37,847	211,659	141,329
1974	154,172	724,760	191,895	66,030	123,917	1,260,774	49,790	210,200	135,870
1975	158,768	745,635	192,991	66,457	123,947	1,287,798	56,156	238,902	153,252
1976	159,923	747,381	194,450	66,936	124,391	1,293,081	52,393	233,575	150,567
1977	158,761	741,608	193,699	66,623	123,740	1,284,431	52,100	232,491	149,929
1978	158,891	741,881	194,596	66,865	123,860	1,286,093	51,950	232,939	150,286
1979	161,108	746,320	197,468	67,808	125,167	1,297,871	52,099	234,270	151,743
1980	159,739	743,019	195,000	67,028	124,269	1,289,055	52,134	233,148	150,568
1981	158,415	748,093	193,073	66,437	123,720	1,289,738	52,273	232,493	149,696
1982	160,253	753,207	195,312	67,182	124,906	1,300,860	52,516	234,052	150,866
1983	162,212	793,259	208,830	71,809	131,138	1,367,248	52,699	237,073	153,599
1984	161,449	791,972	210,010	72,244	131,581	1,367,256	52,561	236,528	153,271
1985	163,142	791,102	209,089	71,854	131,072	1,366,259	52,691	237,834	154,370
1986	164,995	787,433	204,879	70,255	128,917	1,356,479	52,778	239,170	155,566
1987	164,162	784,131	203,594	69,847	128,428	1,350,162	52,781	238,552	154,950
1988	163,200	777,642	202,332	69,419	127,675	1,340,268	52,581	237,554	154,265
1989	164,001	777,320	203,246	69,711	128,042	1,342,320	52,594	238,021	154,710
1990	165,098	774,783	204,827	70,193	128,452	1,343,353	52,486	238,659	155,519
1991	164,163	771,333	203,638	69,790	127,745	1,336,669	52,338	237,883	154,978
1992	166,318	775,493	206,222	70,638	128,996	1,347,667	52,538	239,532	156,312
1993	164,227	776,339	203,337	69,723	127,911	1,341,537	52,553	238,181	154,934
1994	165,406	775,428	204,765	70,177	128,486	1,344,262	52,574	238,909	155,629
1995	165,385	775,407	204,733	70,168	128,473	1,344,166	52,573	238,893	155,614
1996	165,826	771,288	205,376	70,358	128,583	1,341,431	52,468	238,987	155,873
1997	165,236	768,761	204,366	70,036	128,176	1,336,575	52,453	238,471	155,383
1998	165,955	771,968	205,373	70,364	128,638	1,342,298	52,513	239,075	155,894
1999	165,747	771,830	205,165	70,297	128,555	1,341,594	52,510	238,969	155,792
2000	164,835	771,134	204,116	69,961	128,134	1,338,180	52,494	238,433	155,281
2001	165,509	771,715	204,993	70,241	128,486	1,340,944	52,508	238,881	155,709
2002	163,697	770,119	202,586	69,473	127,518	1,333,393	52,471	237,653	154,537
2003	164,468	770,821	203,644	69,811	127,944	1,336,688	52,486	238,192	155,051
2004	163,661	770,122	202,593	69,475	127,520	1,333,371	52,471	237,655	154,541
2005	162,751	769,336	201,409	69,097	127,042	1,329,635	52,452	237,049	153,964
2006	164,196	770,517	203,187	69,665	127,759	1,335,324	52,480	237,958	154,829
2007	164,568	770,833	203,663	69,816	127,950	1,336,830	52,487	238,202	155,062
2008	165,042	771,353	204,446	70,067	128,266	1,339,174	52,499	238,601	155,442
2009	164,420	770,832	203,663	69,817	127,950	1,336,682	52,487	238,200	155,060
2010	164,741	771,100	204,067	69,946	128,112	1,337,966	52,493	238,408	155,257
2011	165,060	771,380	204,487	70,080	128,281	1,339,288	52,500	238,622	155,462
2012	165,254	771,510	204,682	70,142	128,361	1,339,949	52,502	238,722	155,557
2013	165,769	771,877	205,238	70,320	128,584	1,341,788	52,511	239,006	155,827
2014	165,237	771,541	204,731	70,159	128,380	1,340,048	52,503	238,747	155,581
2015	165,244	771,548	204,741	70,161	128,383	1,340,077	52,503	238,752	155,586
2016	163,646	770,129	202,603	69,477	127,524	1,333,379	52,471	237,661	154,545
2017	163,632	770,140	202,619	69,483	127,530	1,333,404	52,472	237,668	154,553
2018	163,235	769,756	202,040	69,299	127,298	1,331,628	52,462	237,374	154,271
2019	164,434	770,802	203,616	69,803	127,932	1,336,587	52,487	238,178	155,039
2020 (a	164,782	771,103	204,069	69,946	128,113	1,338,013	52,493	238,409	155,259

REIMBURSED THRU MINIMUM OMP&R COMPONENT OF TRANSPORTATION CHARGE

(in dollars)

Calendar Year	CALIFORNIA AQUEDUCT (continued)								
	SOUTH SAN JOAQUIN DIVISION (continued)								
	Reach 10A	Reach 11B	Reach 12D	Reach 12E	Reach 13B	Reach 14A	Reach 14B	Reach 14C	Reach 15A
	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)
1960	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0
1968	0	0	0	0	0	0	0	0	0
1969	109,855	68,379	0	0	0	0	0	0	0
1970	153,809	98,820	136,505	135,910	144,186	0	0	0	0
1971	134,101	79,113	103,161	90,264	154,861	627,456	147,862	109,782	480,707
1972	133,900	87,703	120,131	116,473	133,732	795,085	126,642	104,749	552,040
1973	138,167	95,953	101,994	116,989	207,199	900,667	127,027	105,275	644,906
1974	121,768	94,463	108,911	123,672	224,108	821,257	130,308	96,900	727,262
1975	133,931	104,783	116,878	137,911	251,811	899,225	143,651	106,607	796,661
1976	132,516	101,996	115,436	135,110	246,597	879,728	141,324	104,860	866,059
1977	131,987	101,418	114,984	134,386	245,362	873,638	140,934	104,501	769,451
1978	132,466	101,568	115,728	134,383	245,290	873,161	141,643	104,987	767,942
1979	133,959	102,461	117,443	135,248	246,877	876,655	143,301	106,140	769,578
1980	132,667	101,784	115,802	134,745	245,947	874,218	141,681	105,044	769,160
1981	131,642	101,310	114,395	134,512	245,507	876,519	140,695	104,397	771,985
1982	132,767	102,059	115,566	135,358	247,057	881,401	142,268	105,509	775,293
1983	135,621	103,703	118,946	136,853	249,809	902,814	148,074	109,495	787,508
1984	135,345	103,476	118,733	136,529	249,221	900,828	147,675	109,202	785,990
1985	136,459	104,151	119,995	137,201	250,456	902,537	148,770	109,969	787,408
1986	137,704	104,874	121,465	137,865	251,675	904,301	150,275	111,007	787,343
1987	137,036	104,513	120,629	137,580	251,152	902,733	149,657	110,588	786,611
1988	136,411	104,061	120,041	137,014	250,115	899,515	149,459	110,422	783,484
1989	136,884	104,326	120,617	137,237	250,527	898,556	149,434	110,406	783,348
1990	137,823	104,770	121,886	137,480	250,983	898,539	150,466	111,089	781,072
1991	137,325	104,414	121,407	137,043	250,185	896,280	149,921	110,693	779,304
1992	138,654	105,244	122,871	137,909	251,776	900,347	151,536	111,825	781,586
1993	137,153	104,445	120,989	137,291	250,629	898,981	150,114	110,860	782,997
1994	137,893	104,855	121,890	137,641	251,273	899,999	150,829	111,352	782,215
1995	137,877	104,847	121,870	137,632	251,259	899,996	150,829	111,351	782,221
1996	138,218	104,971	122,394	137,620	251,245	897,732	150,788	111,302	779,841
1997	137,695	104,681	121,758	137,374	250,789	895,935	150,175	110,884	779,633
1998	138,213	104,993	122,346	137,687	251,360	898,052	150,662	111,225	781,268
1999	138,105	104,934	122,215	137,635	251,267	898,350	150,873	111,369	781,312
2000	137,561	104,632	121,553	137,379	250,794	897,835	150,511	111,121	781,288
2001	138,016	104,884	122,107	137,594	251,188	898,128	150,717	111,261	781,346
2002	136,769	104,190	120,588	137,005	250,104	896,345	149,461	110,403	781,111
2003	137,318	104,496	121,256	137,264	250,580	897,549	150,310	110,984	781,269
2004	136,772	104,192	120,593	137,007	250,107	896,817	149,794	110,631	781,178
2005	136,159	103,850	119,846	136,718	249,572	895,883	149,137	110,182	781,042
2006	137,081	104,363	120,966	137,152	250,374	896,970	149,901	110,704	781,149
2007	137,326	104,500	121,268	137,269	250,589	897,334	150,157	110,879	781,200
2008	137,734	104,725	121,761	137,460	250,942	898,050	150,661	111,225	781,316
2009	137,326	104,501	121,266	137,269	250,588	897,521	150,289	110,970	781,256
2010	137,535	104,617	121,522	137,368	250,771	897,792	150,479	111,100	781,284
2011	137,754	104,739	121,787	137,469	250,960	898,088	150,688	111,242	781,324
2012	137,855	104,794	121,910	137,518	251,048	898,222	150,782	111,308	781,338
2013	138,143	104,954	122,260	137,654	251,300	898,422	150,924	111,404	781,330
2014	137,881	104,808	121,941	137,530	251,071	898,277	150,821	111,334	781,351
2015	137,884	104,811	121,948	137,532	251,075	898,296	150,835	111,342	781,355
2016	136,777	104,195	120,598	137,009	250,111	896,692	149,705	110,569	781,137
2017	136,786	104,200	120,609	137,014	250,117	896,756	149,751	110,601	781,155
2018	136,487	104,033	120,245	136,871	249,857	896,309	149,436	110,386	781,092
2019	137,302	104,487	121,238	137,258	250,568	897,482	150,262	110,952	781,251
2020 (a	137,537	104,617	121,523	137,369	250,772	897,788	150,477	111,099	781,285

TABLE B-11: MINIMUM OMP&R COSTS OF EACH AQUEDUCT REACH TO BE

(in dollars)

Calendar Year	CALIFORNIA AQUEDUCT (continued)								
	SOUTH SAN JOAQUIN DIVISION (continued)		TEHACHAPI DIVISION			MOJAVE DIVISION			
	Reach 16A	Subtotal	Reach 17E	Reach 17F	Subtotal	Reach 18A	Reach 19	Reach 19C	Reach 20A
	(37)	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)
1960	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0
1968	0	0	0	0	0	0	0	0	0
1969	0	425,086	0	0	0	0	0	0	0
1970	0	992,052	0	0	0	0	0	0	0
1971	0	2,253,958	0	0	0	0	0	0	0
1972	993,908	3,502,028	1,338,429	21,833	1,360,262	72,303	178,030	0	177,193
1973	1,138,639	3,967,651	1,699,646	44,742	1,744,388	44,488	151,886	0	172,199
1974	971,145	3,815,654	1,942,941	217,993	2,160,934	70,760	275,063	0	270,300
1975	1,035,439	4,175,207	1,896,086	217,430	2,113,516	77,667	272,264	0	267,136
1976	1,015,578	4,175,739	1,879,284	216,125	2,095,409	80,838	274,952	0	269,937
1977	1,005,204	4,056,385	1,842,039	215,028	2,057,067	79,144	276,405	0	271,733
1978	1,003,655	4,055,998	1,840,657	214,414	2,055,071	78,352	278,052	0	273,447
1979	1,007,180	4,076,954	1,852,612	214,963	2,067,575	78,842	280,435	0	275,758
1980	1,005,676	4,062,574	1,868,314	215,130	2,083,444	79,787	277,163	0	272,672
1981	1,008,381	4,063,805	1,880,451	215,898	2,096,349	77,886	278,560	0	274,032
1982	1,013,110	4,087,822	1,890,705	216,968	2,107,673	79,731	282,984	0	278,269
1983	1,035,191	4,171,385	1,917,473	218,700	2,136,173	286,345	313,736	0	307,419
1984	1,034,053	4,163,412	1,893,619	218,156	2,111,775	285,810	313,701	0	307,361
1985	1,034,915	4,176,756	1,884,548	218,590	2,103,138	286,318	314,211	0	307,866
1986	1,035,885	4,189,908	1,883,995	218,791	2,102,786	286,471	313,938	7,321	307,614
1987	1,034,585	4,181,367	1,881,767	218,980	2,100,747	287,045	316,246	5,167	309,809
1988	1,032,453	4,167,375	1,874,269	218,458	2,092,727	287,506	321,987	5,147	315,210
1989	1,030,840	4,167,500	1,873,340	218,362	2,091,702	286,994	319,556	5,147	312,907
1990	1,030,373	4,171,145	1,868,929	217,872	2,086,801	286,853	321,520	5,133	314,740
1991	1,028,398	4,160,169	1,865,447	217,281	2,082,728	286,177	320,935	5,118	314,157
1992	1,031,616	4,181,746	1,869,612	217,972	2,087,584	286,908	321,270	5,136	314,509
1993	1,032,845	4,171,972	1,873,006	218,285	2,091,291	287,474	322,800	5,142	315,966
1994	1,032,299	4,177,358	1,871,148	218,316	2,089,464	287,643	323,591	5,142	316,721
1995	1,032,339	4,177,301	1,871,148	218,320	2,089,468	287,638	323,565	5,142	316,693
1996	1,029,224	4,170,663	1,865,366	217,632	2,082,998	286,130	318,669	5,129	312,031
1997	1,027,736	4,162,967	1,863,508	217,611	2,081,119	285,980	317,962	5,129	311,361
1998	1,030,113	4,173,401	1,866,527	217,940	2,084,467	286,952	321,685	5,135	314,901
1999	1,030,248	4,173,579	1,866,527	217,944	2,084,471	286,965	321,754	5,135	314,963
2000	1,030,544	4,169,426	1,866,527	218,041	2,084,568	287,451	324,064	5,135	317,152
2001	1,030,239	4,172,578	1,866,527	218,055	2,084,582	287,538	324,469	5,135	317,536
2002	1,029,677	4,160,314	1,866,527	218,065	2,084,592	287,561	324,582	5,135	317,646
2003	1,030,188	4,166,943	1,866,527	218,064	2,084,591	287,541	324,480	5,135	317,545
2004	1,030,029	4,161,787	1,866,527	218,082	2,084,609	287,617	324,850	5,135	317,898
2005	1,029,612	4,155,466	1,866,527	218,061	2,084,588	287,525	324,423	5,135	317,490
2006	1,029,580	4,163,507	1,866,527	217,975	2,084,502	287,093	322,365	5,135	315,545
2007	1,029,719	4,165,992	1,866,527	217,976	2,084,503	287,109	322,435	5,135	315,608
2008	1,030,558	4,170,974	1,866,527	218,046	2,084,573	287,443	324,027	5,135	317,115
2009	1,030,094	4,166,827	1,866,527	218,042	2,084,569	287,436	323,992	5,135	317,084
2010	1,030,130	4,168,756	1,866,527	218,030	2,084,557	287,353	323,602	5,135	316,714
2011	1,030,203	4,170,838	1,866,527	218,025	2,084,552	287,320	323,432	5,135	316,556
2012	1,030,235	4,171,791	1,866,527	218,020	2,084,547	287,306	323,381	5,135	316,505
2013	1,029,943	4,173,678	1,866,527	217,945	2,084,472	286,935	321,608	5,135	314,825
2014	1,030,280	4,172,125	1,866,527	218,027	2,084,554	287,353	323,587	5,135	316,699
2015	1,030,311	4,172,230	1,866,527	218,032	2,084,559	287,368	323,667	5,135	316,776
2016	1,030,130	4,161,600	1,866,527	218,053	2,084,580	287,466	324,133	5,135	317,217
2017	1,029,861	4,161,543	1,866,527	218,049	2,084,576	287,454	324,079	5,135	317,166
2018	1,029,680	4,158,503	1,866,527	218,042	2,084,569	287,421	323,924	5,135	317,020
2019	1,030,088	4,166,592	1,866,527	218,044	2,084,571	287,419	323,913	5,135	317,009
2020 (a)	1,030,126	4,168,754	1,866,527	218,029	2,084,556	287,345	323,558	5,135	316,673

REIMBURSED THRU MINIMUM OMP&R COMPONENT OF TRANSPORTATION CHARGE

(in dollars)

Calendar Year	CALIFORNIA AQUEDUCT (continued)								
	MOJAVE DIVISION (continued)							SANTA ANA DIVISION	
	Reach 20B	Reach 21	Reach 22A	Reach 22B	Reach 23	Reach 24	Subtotal	Reach 25	Reach 26A
	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)
1960	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0
1968	0	0	0	0	0	0	0	0	0
1969	0	0	0	0	0	0	0	0	0
1970	0	0	0	0	0	0	0	0	0
1971	0	0	0	0	0	0	0	0	0
1972	153,996	123,041	94,263	1,073,731	36,062	274,670	2,183,289	0	0
1973	153,544	72,820	67,726	1,307,363	55,659	345,673	2,371,358	27,707	664,474
1974	257,443	120,822	96,057	1,595,116	60,208	431,212	3,176,981	23,403	925,550
1975	255,834	119,024	95,433	1,572,403	58,695	457,674	3,176,130	22,889	921,465
1976	258,068	120,355	95,783	1,552,668	57,770	453,273	3,163,644	22,626	903,441
1977	259,572	121,255	95,773	1,537,283	57,349	433,494	3,132,008	22,380	883,228
1978	261,020	122,143	95,985	1,542,753	57,154	446,335	3,155,241	22,304	880,255
1979	263,115	123,266	96,530	1,551,807	57,667	447,391	3,174,811	22,353	881,004
1980	260,398	121,703	95,993	1,541,087	57,367	458,357	3,164,527	22,386	883,084
1981	261,667	122,332	96,405	1,552,094	57,566	222,711	2,943,253	22,464	885,778
1982	265,515	124,385	97,419	1,565,522	57,817	606,817	3,358,459	22,562	889,541
1983	291,463	138,933	103,174	1,692,437	57,934	402,873	3,594,314	22,608	892,986
1984	291,364	138,941	103,049	1,690,329	57,781	387,908	3,576,244	22,549	890,916
1985	291,849	139,164	103,232	1,691,120	57,898	477,548	3,669,206	22,594	893,420
1986	291,644	139,023	103,231	1,688,292	57,958	357,530	3,553,022	22,618	894,229
1987	293,604	140,115	103,675	1,692,346	57,985	1,077,244	4,283,236	22,628	893,647
1988	298,333	142,868	104,566	1,700,484	57,767	656,048	3,889,916	22,543	890,724
1989	296,288	141,717	104,116	1,689,914	57,767	275,386	3,489,792	22,543	890,724
1990	297,867	142,675	104,354	1,691,850	57,607	384,274	3,606,873	22,480	888,565
1991	297,298	142,425	104,121	1,688,305	57,448	429,279	3,645,263	22,419	886,404
1992	297,672	142,551	104,332	1,691,531	57,639	468,839	3,690,387	22,492	889,918
1993	298,991	143,263	104,668	1,698,258	57,708	610,929	3,845,199	22,520	889,942
1994	299,660	143,637	104,814	1,697,946	57,708	536,456	3,773,318	22,520	889,942
1995	299,637	143,625	104,810	1,697,810	57,708	491,280	3,727,908	22,520	889,942
1996	295,447	141,328	103,800	1,679,237	57,571	438,550	3,637,892	22,466	888,084
1997	294,851	140,992	103,671	1,674,459	57,571	598,170	3,790,146	22,466	889,013
1998	298,015	142,750	104,400	1,687,866	57,625	524,193	3,743,522	22,487	888,804
1999	298,070	142,782	104,410	1,688,476	57,625	550,756	3,770,936	22,487	888,804
2000	300,016	143,875	104,836	1,696,562	57,625	504,996	3,741,712	22,487	888,804
2001	300,355	144,067	104,910	1,697,078	57,625	306,113	3,544,826	22,487	888,804
2002	300,454	144,123	104,931	1,698,110	57,625	594,558	3,834,725	22,487	888,804
2003	300,367	144,073	104,912	1,697,823	57,625	485,455	3,724,956	22,487	888,804
2004	300,681	144,250	104,981	1,699,366	57,625	507,047	3,749,450	22,487	888,804
2005	300,321	144,045	104,902	1,698,940	57,625	579,632	3,820,038	22,487	888,804
2006	298,588	143,070	104,523	1,691,546	57,625	471,026	3,696,516	22,487	888,804
2007	298,645	143,105	104,535	1,691,714	57,625	509,973	3,735,884	22,487	888,804
2008	299,984	143,859	104,828	1,696,361	57,625	335,515	3,571,892	22,487	888,804
2009	299,959	143,841	104,822	1,697,219	57,625	644,382	3,881,495	22,487	888,804
2010	299,626	143,656	104,751	1,695,909	57,625	545,318	3,779,689	22,487	888,804
2011	299,485	143,576	104,720	1,695,443	57,625	450,019	3,683,311	22,487	888,804
2012	299,446	143,552	104,710	1,695,154	57,625	481,190	3,714,004	22,487	888,804
2013	297,948	142,712	104,381	1,688,951	57,625	542,587	3,762,707	22,487	888,804
2014	299,616	143,651	104,750	1,695,725	57,625	604,621	3,838,762	22,487	888,804
2015	299,682	143,687	104,763	1,695,786	57,625	626,132	3,860,621	22,487	888,804
2016	300,074	143,911	104,849	1,698,039	57,625	504,738	3,743,187	22,487	888,804
2017	300,030	143,884	104,838	1,698,254	57,625	451,754	3,690,219	22,487	888,804
2018	299,901	143,810	104,809	1,697,857	57,625	529,465	3,766,967	22,487	888,804
2019	299,892	143,805	104,807	1,696,952	57,625	580,422	3,816,979	22,487	888,804
2020(a	299,593	143,633	104,744	1,696,109	57,625	521,425	3,755,840	22,487	888,804

TABLE B-11: MINIMUM OMP&R COSTS OF EACH AQUEDUCT REACH TO BE

(in dollars)

Calendar Year	CALIFORNIA AQUEDUCT (continued)								
	SANTA ANA DIVISION (continued)				WEST BRANCH				
	Reach 28G	Reach 28H	Reach 28J	Subtotal	Reach 29A	Reach 29F	Reach 29G	Reach 29H	Reach 29J
	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
1960	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0
1968	0	0	0	0	0	0	0	0	0
1969	0	0	0	0	0	0	0	0	0
1970	0	0	0	0	0	0	0	0	0
1971	0	0	0	0	0	0	0	0	0
1972	0	0	0	0	691,364	63,656	213,804	213,127	55,174
1973	124,399	0	0	816,580	764,175	288,872	183,205	275,752	297,995
1974	138,362	42,477	308,490	1,438,282	798,645	204,906	208,702	68,206	132,056
1975	136,835	39,149	424,838-	695,500	819,342	205,143	232,189	223,651	116,778
1976	133,020	38,041	1,089,290	2,186,418	831,321	203,860	265,607	262,381	106,433
1977	129,327	37,585	312,702	1,385,222	823,868	211,400	303,527	266,592	98,761
1978	128,887	37,458	430,630	1,499,534	822,193	213,061	310,010	270,001	98,684
1979	129,173	37,542	379,972	1,450,044	824,052	220,238	305,044	274,318	96,954
1980	129,366	37,596	223,198	1,295,630	823,745	219,407	282,148	266,989	97,770
1981	129,815	37,727	66,872	1,142,656	827,330	206,670	232,399	268,771	97,738
1982	130,381	37,892	492,479	1,572,855	831,245	208,136	801,107	258,124	98,451
1983	130,646	37,969	443,433	1,527,642	842,614	229,853	855,443	295,248	99,479
1984	130,301	37,869	652,946	1,734,581	840,709	229,791	853,756	295,971	100,279
1985	130,564	37,944	557,801	1,642,323	842,233	230,216	856,171	296,648	101,306
1986	130,700	37,985	591,458	1,676,990	842,937	230,020	858,034	298,018	103,215
1987	130,757	38,001	798,846	1,883,879	842,727	232,034	857,721	305,526	108,811
1988	130,269	37,859	234,392	1,315,787	840,197	237,384	856,471	319,048	116,989
1989	130,269	37,859	514,364	1,595,759	839,826	235,535	856,478	313,457	116,989
1990	129,908	37,755	507,951	1,586,659	838,130	236,924	856,006	322,011	118,712
1991	129,548	37,650	533,088	1,609,109	836,086	236,571	853,779	319,959	119,506
1992	129,979	37,775	533,977	1,614,141	838,564	237,162	858,250	322,114	120,596
1993	130,138	37,820	528,929	1,609,349	839,700	238,478	858,710	325,464	121,585
1994	130,138	37,820	540,750	1,621,170	839,743	238,703	859,513	330,326	126,230
1995	130,138	37,820	534,304	1,614,724	839,781	238,882	859,379	329,520	126,230
1996	129,828	37,732	516,351	1,594,461	836,472	235,478	855,362	320,658	126,114
1997	129,828	37,732	510,387	1,589,426	836,444	235,340	857,118	320,041	126,114
1998	129,947	37,766	524,119	1,603,123	837,550	237,582	858,157	328,150	126,158
1999	129,947	37,766	526,517	1,605,521	837,562	237,641	858,191	328,357	126,158
2000	129,947	37,766	527,591	1,606,595	837,910	239,374	859,049	333,531	126,158
2001	129,947	37,766	525,623	1,604,627	837,930	239,468	859,547	336,553	126,158
2002	129,947	37,766	563,904	1,642,908	837,984	239,750	859,535	336,474	126,158
2003	129,947	37,766	527,254	1,606,258	837,989	239,775	859,606	336,913	126,158
2004	129,947	37,766	499,388	1,578,392	838,070	240,178	859,889	338,617	126,158
2005	129,947	37,766	537,193	1,616,197	837,990	239,778	859,761	337,868	126,158
2006	129,947	37,766	521,883	1,600,887	837,679	238,227	858,896	332,606	126,158
2007	129,947	37,766	522,552	1,601,556	837,681	238,236	858,993	333,209	126,158
2008	129,947	37,766	493,078	1,572,082	837,905	239,348	859,624	337,015	126,158
2009	129,947	37,766	546,627	1,625,631	837,900	239,330	859,592	336,830	126,158
2010	129,947	37,766	519,304	1,598,308	837,855	239,110	859,520	336,372	126,158
2011	129,947	37,766	522,146	1,601,150	837,829	238,966	859,397	335,645	126,158
2012	129,947	37,766	520,851	1,599,855	837,814	238,899	859,452	335,972	126,158
2013	129,947	37,766	554,329	1,633,333	837,544	237,548	858,686	331,348	126,158
2014	129,947	37,766	508,657	1,587,661	837,837	238,998	859,492	336,218	126,158
2015	129,947	37,766	522,498	1,601,502	837,857	239,112	859,513	336,340	126,158
2016	129,947	37,766	522,317	1,601,321	837,931	239,489	859,787	338,019	126,158
2017	129,947	37,766	516,552	1,595,556	837,925	239,450	859,748	337,770	126,158
2018	129,947	37,766	523,214	1,602,218	837,909	239,375	859,709	337,534	126,158
2019	129,947	37,766	544,729	1,623,733	837,907	239,359	859,545	336,546	126,158
2020 (a	129,947	37,766	520,522	1,599,526	837,845	239,057	859,473	336,101	126,158

REIMBURSED THRU MINIMUM OMP&R COMPONENT OF TRANSPORTATION CHARGE

(in dollars)

Calendar Year	CALIFORNIA AQUEDUCT (continued)								GRAND TOTAL
	WEST BRANCH (continued)		COASTAL BRANCH					TOTAL	
	Reach 30	Subtotal	Reach 31A[b]	Reach 33A	Reach 34	Reach 35	Subtotal		
	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)
1960	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	42,290
1963	0	0	0	0	0	0	0	0	166,276
1964	0	0	0	0	0	0	0	0	180,929
1965	0	0	0	0	0	0	0	0	373,531
1966	0	0	0	0	0	0	0	0	394,763
1967	0	0	0	0	0	0	0	0	605,215
1968	0	0	0	0	0	0	0	2,248,512	2,752,757
1969	0	0	469,277	0	0	0	469,277	3,364,109	4,048,191
1970	0	0	565,702	0	0	0	565,702	4,026,211	4,653,892
1971	0	0	681,572	0	0	0	681,572	5,458,137	5,919,221
1972	296,837	1,533,962	633,863	0	0	0	633,863	11,870,768	12,496,348
1973	501,929	2,311,928	586,129	0	0	0	586,129	14,421,882	14,974,511
1974	422,347	1,834,862	574,905	0	0	0	574,905	16,073,531	16,928,078
1975	378,742	1,975,845	585,054	0	0	0	585,054	15,792,195	16,547,450
1976	547,739	2,217,341	585,565	0	0	0	585,565	17,534,752	18,389,210
1977	436,964	2,141,112	583,041	0	0	0	583,041	16,437,838	17,292,332
1978	488,459	2,202,408	584,179	0	0	0	584,179	16,635,770	17,494,438
1979	453,433	2,174,039	586,626	0	0	0	586,626	16,631,962	17,493,058
1980	441,564	2,131,623	585,445	0	0	0	585,445	16,410,689	17,446,946
1981	452,032	2,084,940	588,788	0	0	0	588,788	16,016,894	17,050,819
1982	453,712	2,650,775	587,629	216,921	10,920	22,554	838,024	17,728,805	18,767,030
1983	598,815	2,921,452	598,796	207,715	14,952	29,800	851,263	18,406,017	19,465,608
1984	563,389	2,883,895	596,172	204,881	14,186	28,265	843,504	18,511,173	19,567,780
1985	349,790	2,676,364	597,070	202,766	13,092	25,976	838,904	18,302,107	19,359,545
1986	795,157	3,127,381	597,924	202,278	12,651	25,087	837,940	18,675,914	19,734,173
1987	233,106	2,579,925	596,499	200,942	11,657	23,102	832,200	19,039,239	20,095,164
1988	963,703	3,333,792	594,469	195,503	10,971	21,727	822,670	18,782,872	19,832,865
1989	109,931	2,472,216	593,532	195,739	10,423	20,635	820,329	17,801,354	18,849,930
1990	999,804	3,371,587	592,684	197,453	11,901	23,590	825,628	18,813,220	19,859,630
1991	93,002	2,458,903	591,211	196,319	11,342	22,474	821,346	17,930,251	18,973,215
1992	1,361,314	3,738,000	593,281	196,381	11,083	21,961	822,706	19,307,020	20,353,454
1993	42,458-	2,341,479	593,156	196,287	10,907	21,602	821,952	18,044,078	19,091,330
1994	1,142,141	3,536,656	593,375	195,593	10,412	20,612	819,992	19,185,882	20,232,336
1995	529,855	2,923,647	593,339	195,044	10,018	19,828	818,229	18,519,048	19,565,458
1996	504,048	2,878,132	592,241	195,660	10,674	21,142	819,717	18,346,420	19,388,654
1997	1,038,672	3,413,729	590,878	194,505	9,849	19,491	814,723	19,007,666	20,049,119
1998	555,010	2,942,607	592,865	195,065	10,165	20,124	818,219	18,529,985	19,573,028
1999	665,992	3,053,901	592,820	194,615	9,845	19,480	816,760	18,668,587	19,711,651
2000	364,209	2,760,231	592,662	195,113	10,199	20,188	818,162	18,338,373	19,381,510
2001	845,146	3,244,802	592,790	194,652	9,871	19,531	816,844	18,630,422	19,673,624
2002	449,110	2,849,011	592,245	195,630	10,569	20,928	819,372	18,540,908	19,583,555
2003	862,648	3,263,089	592,469	195,229	10,283	20,355	818,336	18,819,420	19,862,380
2004	385,311	2,788,223	592,217	195,009	10,126	20,042	817,394	18,329,732	19,372,438
2005	957,223	3,358,778	591,965	194,650	9,869	19,530	816,014	18,994,904	20,037,855
2006	488,396	2,881,962	592,243	194,293	9,614	19,021	815,171	18,395,738	19,438,799
2007	435,823	2,830,100	592,355	194,326	9,638	19,068	815,387	18,389,070	19,432,325
2008	743,722	3,143,772	592,588	194,526	9,782	19,351	816,247	18,518,741	19,562,428
2009	608,607	3,008,417	592,440	196,138	10,932	21,654	821,164	18,743,227	19,786,803
2010	459,902	2,858,917	592,510	195,975	10,816	21,422	820,723	18,468,175	19,511,797
2011	634,154	3,032,149	592,590	195,880	10,748	21,287	820,505	18,551,868	19,595,603
2012	634,838	3,033,133	592,619	195,836	10,717	21,225	820,397	18,584,238	19,628,021
2013	568,528	2,959,812	592,656	195,361	10,377	20,547	818,941	18,596,612	19,640,274
2014	672,728	3,071,431	592,622	195,632	10,571	20,932	819,757	18,734,861	19,778,661
2015	385,473	2,784,453	592,612	195,452	10,443	20,674	819,181	18,483,164	19,526,951
2016	638,169	3,039,553	592,131	195,329	10,354	20,498	818,312	18,598,401	19,641,624
2017	689,320	3,090,371	592,218	195,346	10,367	20,525	818,456	18,590,561	19,633,861
2018	640,521	3,041,206	592,242	195,233	10,285	20,363	818,123	18,618,635	19,661,764
2019	300,646	2,700,161	592,559	195,132	10,215	20,218	818,124	18,365,225	19,408,673
2020(a	623,902	3,022,536	592,647	195,033	10,143	20,077	817,900	18,606,488	19,650,389

b) Refer to Appendix B text "Project Water Charges, Minimum OMP&R Components".

TABLE B-12: VARIABLE OMP&R COSTS TO BE REIMBURSED

(in dollars)

Calendar Year	NORTH BAY AQUEDUCT			SOUTH BAY AQUEDUCT	CALIFORNIA AQUEDUCT							
	Reach 1 Calhoun and Travis Pumping Plants	Reach 3 Cordelia Pumping Plant	Total	Reach 1 South Bay and Del Valle Pumping Plants (a	Reach 1 Delta Pumping Plant	Reach 4 Dos Amigos Pumping Plant (b	Reach 14A Buena Vista Pumping Plant	Reach 15A Wheeler Ridge Pumping Plant	Reach 16A Wind Gap Pumping Plant	Reach 17E A.D. Edmonston Pumping Plant	Reach 18A Cottonwood Powerplant	Reach 22B Pear-blossom Pumping Plant
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1961	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	36,964	0	0	0	0	0	0	0	0
1963	0	0	0	57,703	0	0	0	0	0	0	0	0
1964	0	0	0	74,094	0	0	0	0	0	0	0	0
1965	0	0	0	142,540	0	0	0	0	0	0	0	0
1966	0	0	0	192,522	0	0	0	0	0	0	0	0
1967	0	0	0	223,040	13,881	0	0	0	0	0	0	0
1968	0	6,989	6,989	336,608	426,875	201,019	0	0	0	0	0	0
1969	0	8,550	8,550	257,184	267,632	133,893	0	0	0	0	0	0
1970	0	13,598	13,598	395,365	343,660	210,373	1	0	0	0	0	0
1971	0	10,609	10,609	380,842	572,394	224,705	134,937	7,453	0	0	0	0
1972	0	14,434	14,434	598,364	921,129	494,147	220,096	74,399	145,208	448,246	0	4,031
1973	0	14,096	14,096	468,138	662,960	365,985	230,356	177,555	334,197	1,158,362	0	83,896
1974	0	17,000	17,000	573,492	879,922	438,791	412,845	419,803	748,702	2,692,571	0	697,683
1975	0	10,000	10,000	531,157	1,097,311	545,071	517,755	539,569	978,766	3,457,981	0	984,842
1976	0	10,000	10,000	503,261	1,819,560	705,550	775,453	794,309	1,612,092	5,810,323	0	1,635,336
1977	0	8,000	8,000	550,808	2,190,002	891,488	991,405	1,021,820	2,073,044	7,555,204	0	2,207,962
1978	0	8,000	8,000	602,245	2,755,700	1,030,625	1,087,576	1,108,516	2,246,876	8,191,519	0	2,454,476
1979	0	8,000	8,000	617,929	3,568,773	1,094,342	1,130,170	1,145,859	2,370,121	8,451,243	0	2,533,159
1980	1,742	10,200	11,942	567,816	2,978,997	1,048,652	1,142,272	1,154,008	2,375,186	8,432,915	0	2,465,085
1981	2,655	12,200	14,855	659,171	2,058,062	1,206,677	1,240,719	1,237,256	2,553,340	9,062,957	0	2,801,298
1982	4,488	12,200	16,688	664,345	2,554,824	1,379,545	1,485,240	1,420,092	2,860,649	10,457,051	0	2,939,443
1983	9,950	30,200	40,150	1,330,779	3,428,769	2,534,932	2,615,127	2,316,369	4,647,151	17,463,095	-381,615	5,654,549
1984	10,012	30,200	40,212	1,338,168	3,579,170	2,729,163	2,690,135	2,706,942	4,979,288	18,022,944	-384,217	5,641,301
1985	10,113	29,200	39,313	1,322,163	4,376,643	2,861,382	2,720,198	2,734,608	5,049,024	18,225,673	-391,674	5,577,172
1986	10,224	28,200	38,424	1,288,804	5,558,274	2,999,046	2,936,245	2,744,522	5,623,459	18,337,664	-395,688	5,388,463
1987	10,331	26,200	36,531	1,231,986	5,160,045	3,085,000	3,084,012	2,939,943	5,523,728	20,033,474	-339,482	4,323,144
1988	17,152	26,200	43,352	1,146,932	6,088,559	3,450,069	4,145,477	3,986,640	7,787,654	28,422,185	-446,989	4,527,464
1989	18,266	26,200	44,466	1,129,302	6,861,389	3,437,730	3,912,717	3,735,428	7,780,614	28,338,758	-507,165	4,533,371
1990	28,051	26,200	54,251	1,120,552	8,689,790	3,567,623	4,122,753	4,234,884	8,405,759	30,327,310	-496,642	4,481,655
1991	28,054	25,200	53,254	1,128,963	8,578,300	3,565,104	4,125,302	4,264,303	8,466,494	30,548,504	-510,001	4,473,921
1992	29,024	26,200	55,224	1,148,718	9,789,654	3,645,669	4,369,324	4,289,088	8,995,895	30,608,365	-508,291	4,502,644
1993	29,027	27,200	56,227	1,185,048	7,802,496	3,747,468	4,514,385	4,409,498	9,293,108	31,614,309	-502,456	4,591,350
1994	28,062	27,200	55,262	1,197,748	8,977,322	3,712,340	4,603,006	4,557,278	9,569,490	32,957,326	-480,177	4,453,548
1995	28,065	27,200	55,265	1,197,802	9,013,183	3,734,503	4,650,292	4,618,036	9,667,233	33,293,673	-524,932	4,443,733
1996	27,100	25,200	52,300	1,093,562	10,011,406	3,598,165	4,393,045	4,627,607	9,143,713	31,510,364	-522,196	4,184,330
1997	26,135	25,200	51,335	1,052,473	9,607,051	3,529,146	4,433,887	4,454,690	9,396,314	32,233,701	-586,778	4,024,458
1998	27,107	26,200	53,307	1,091,584	10,081,449	3,630,735	4,427,152	4,664,972	9,884,394	33,907,901	-512,121	4,184,333
1999	27,110	26,200	53,310	1,102,339	9,988,261	3,710,235	4,715,600	4,723,444	10,005,144	34,335,311	-538,176	4,219,327
2000	29,050	27,200	56,250	1,142,428	9,220,857	3,857,403	4,903,521	4,907,493	10,402,451	35,686,617	-550,254	4,377,603
2001	28,088	27,200	55,288	1,122,873	10,049,820	3,915,355	4,858,432	5,143,096	10,321,101	37,659,029	-530,303	4,296,728
2002	29,062	28,200	57,262	1,149,272	8,478,527	4,021,842	4,992,744	5,287,497	10,613,702	38,731,295	-574,739	4,392,948
2003	29,069	28,200	57,269	1,144,384	9,243,761	4,042,069	5,227,732	5,271,984	10,739,073	38,623,707	-578,587	4,387,845
2004	29,075	29,200	58,275	1,157,094	8,533,605	4,099,415	5,308,385	5,352,909	10,903,319	39,227,509	-611,744	4,433,350
2005	43,621	30,200	73,821	1,177,628	7,782,267	4,196,482	5,397,865	5,442,479	11,087,716	39,884,898	-585,016	4,509,201
2006	41,691	28,200	69,891	1,131,673	9,122,888	4,051,484	5,211,975	5,262,114	10,723,095	38,569,441	-577,617	4,336,075
2007	41,700	29,200	70,900	1,133,628	9,498,641	4,038,786	5,223,720	5,277,775	10,754,524	38,679,929	-574,818	4,343,008
2008	42,678	29,200	71,878	1,149,272	9,986,028	4,135,456	5,304,245	5,358,528	11,317,737	39,279,184	-594,228	4,425,223
2009	42,687	30,200	72,887	1,166,872	9,449,960	4,208,166	5,397,606	5,452,361	11,111,732	39,971,228	-576,896	4,455,314
2010	42,695	30,200	72,895	1,158,072	9,744,757	4,178,939	5,360,130	5,414,431	11,035,622	39,697,221	-607,575	4,436,580
2011	42,706	30,200	72,906	1,155,139	10,063,869	4,170,665	5,350,048	5,406,264	11,020,320	39,637,594	-609,857	4,425,752
2012	42,717	30,200	72,917	1,152,205	10,247,928	4,126,578	5,338,471	5,396,591	11,000,016	39,563,145	-600,439	4,418,371
2013	41,756	30,200	71,956	1,122,873	10,730,418	4,020,038	5,195,776	5,257,322	10,717,564	38,533,098	-577,663	4,299,355
2014	42,738	31,200	73,938	1,156,116	10,241,649	4,175,315	5,349,513	5,406,000	11,019,949	39,633,659	-581,880	4,421,648
2015	43,720	31,200	74,920	1,153,183	10,217,663	4,161,899	5,329,918	5,386,684	10,978,729	39,484,697	-597,503	4,407,586
2016	43,730	32,200	75,930	1,172,739	8,760,156	4,240,205	5,432,428	5,488,836	11,596,008	40,245,645	-606,118	4,492,949
2017	44,712	33,200	77,912	1,178,606	8,746,658	4,260,944	5,458,302	5,514,332	11,239,742	40,431,163	-593,797	4,515,723
2018	44,722	57,200	101,922	1,181,539	8,382,821	4,251,377	5,476,959	5,532,430	11,276,384	40,564,595	-598,396	4,527,843
2019	42,787	56,200	98,987	1,163,939	9,463,173	4,167,425	5,379,140	5,437,068	11,081,465	39,852,479	-608,272	4,452,013
2020 (e	67,495	89,200	156,695	1,162,961	9,838,820	4,168,471	5,382,113	5,439,503	11,088,901	39,879,558	-609,994	4,464,103

a) The relatively minor estimated costs of Del Valle Pumping Plant have been combined with those of South Bay Pumping Plant to simplify the allocation procedure.

b) Refer to Appendix B text "Project Water Charges, Variable OMP&R Components".

THRU VARIABLE OMP&R COMPONENT OF TRANSPORTATION CHARGE

(in dollars)

Calendar Year	CALIFORNIA AQUEDUCT (continued)											GRAND TOTAL
	Reach 24 Silverwood Lake (c	Reach 26A Devil Canyon Powerplant	Reach 28J Lake Perris (c	Reach 29A Oso Pumping Plant	Reach 29G Pyramid Powerplant	Reach 29H Pyramid Lake (c	Reach 29J Castaic Powerplant	Reach 30 Castaic Lake (c	Reach 31A Las Perillas and Badger Hill Pumping Plants (d	Reach 33A Devil's Den Sawtooth and Polonio PP's and San Luis Obispo Pwp	Total	
	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
1961	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	36,964
1963	0	0	0	0	0	0	0	0	0	0	0	57,703
1964	0	0	0	0	0	0	0	0	0	0	0	74,094
1965	0	0	0	0	0	0	0	0	0	0	0	142,540
1966	0	0	0	0	0	0	0	0	0	0	0	192,522
1967	0	0	0	0	0	0	0	0	0	0	13,881	236,921
1968	0	0	0	0	0	0	0	0	118,652	0	746,546	1,090,143
1969	0	0	0	0	0	0	0	0	78,304	0	479,829	745,563
1970	0	0	0	0	0	0	0	0	136,409	0	690,443	1,099,406
1971	0	0	0	0	0	0	0	0	166,213	0	1,105,702	1,497,153
1972	2,221	-3,024	0	82,843	0	3,238	-193,058	64,033	237,251	0	2,500,760	3,113,558
1973	32,327	-172,262	0	135,437	0	5,723	-743,079	0	124,474	0	2,395,931	2,878,165
1974	0	-943,533	93,237	188,204	0	164,397	-1,298,163	1,101	140,143	0	4,635,703	5,226,195
1975	0	-1,105,188	865,567	194,584	0	0	-1,337,253	98,052	144,222	0	6,981,279	7,522,436
1976	0	-2,794,247	0	229,529	0	0	-2,133,711	0	140,348	0	8,594,542	9,107,803
1977	17,567	-3,746,684	69,119	233,594	0	0	-2,309,141	46,297	164,174	0	11,405,851	11,964,659
1978	9,582	-3,878,247	0	250,727	0	0	-2,565,020	0	187,016	0	12,879,346	13,489,591
1979	10,279	-4,335,603	7,299	255,731	0	0	-2,932,602	32,380	195,062	0	13,526,213	14,152,142
1980	0	-4,397,825	160,860	271,437	0	0	-3,141,266	27,834	177,232	0	12,695,387	13,275,145
1981	250,250	-4,555,251	331,066	283,187	0	0	-3,007,213	25,350	220,831	0	13,708,529	14,382,555
1982	0	-4,765,063	0	294,357	-745,801	0	-2,929,768	13,008	223,822	174,716	15,362,115	16,043,148
1983	128,697	-5,136,009	78,606	376,121	-2,104,811	0	-3,035,546	0	453,595	390,941	29,429,971	30,800,900
1984	141,226	-5,026,868	0	427,584	-2,384,054	0	-3,303,186	0	469,722	402,545	30,691,695	32,070,075
1985	44,853	-5,202,933	0	457,074	-2,506,182	0	-3,404,260	200,714	495,701	420,743	31,658,736	33,020,212
1986	173,700	-5,235,179	0	528,558	-2,809,431	0	-3,609,644	0	492,148	414,201	33,146,338	34,473,566
1987	0	-4,652,484	0	859,620	-3,797,752	0	-4,376,735	366,737	473,896	405,627	33,088,773	34,357,290
1988	0	-5,196,679	323,971	1,891,827	-6,360,517	0	-5,899,694	0	475,184	401,365	43,596,516	44,786,800
1989	266,742	-5,352,477	11,191	1,729,174	-6,231,417	0	-6,030,438	519,092	466,575	394,862	43,866,146	45,039,914
1990	148,780	-5,378,590	25,133	1,991,378	-6,415,589	0	-6,074,255	0	467,799	505,109	48,602,897	49,777,700
1991	98,563	-5,416,840	0	2,017,972	-6,689,476	0	-6,382,503	548,660	467,904	510,391	48,666,598	49,848,815
1992	57,302	-5,408,774	0	2,294,916	-6,887,873	0	-6,859,443	0	474,869	514,180	49,877,525	51,081,467
1993	0	-5,385,628	7,060	2,401,557	-6,827,828	0	-6,326,385	711,782	486,743	548,904	51,086,363	52,327,638
1994	0	-5,312,324	0	2,458,220	-6,674,238	0	-7,010,580	0	474,059	534,404	52,819,674	54,072,684
1995	35,442	-5,381,736	1,834	2,535,115	-6,972,326	0	-7,405,326	98,719	475,127	531,080	52,813,650	54,066,717
1996	83,874	-5,369,010	1,675	2,518,702	-6,947,796	0	-7,552,122	110,524	447,693	615,289	50,855,263	52,001,125
1997	0	-5,753,772	0	2,673,268	-7,143,001	0	-7,780,637	0	435,981	582,388	50,106,696	51,210,504
1998	0	-5,468,641	1,672	2,697,079	-7,034,717	0	-7,827,174	68,153	490,137	624,780	53,820,104	54,964,995
1999	0	-5,690,190	0	2,731,501	-7,176,052	0	-8,338,413	0	497,121	627,129	53,810,242	54,965,891
2000	21,894	-5,755,724	4,926	2,842,741	-7,244,749	0	-8,318,638	282,915	517,881	705,336	55,862,273	57,060,951
2001	232,012	-5,692,113	790	2,985,940	-7,309,041	0	-8,675,070	0	511,091	695,971	58,462,838	59,640,999
2002	0	-5,493,306	0	3,084,202	-7,570,700	0	-9,059,284	195,376	523,989	837,099	58,461,192	59,667,726
2003	39,668	-5,935,358	0	3,199,383	-7,663,091	0	-9,697,663	0	525,074	830,686	58,256,283	59,457,936
2004	17,738	-5,753,056	31,452	3,264,198	-7,619,874	0	-9,585,923	264,474	532,064	858,006	59,255,827	60,471,196
2005	0	-5,797,874	0	3,313,226	-7,711,197	0	-9,622,009	0	543,973	869,764	59,311,775	60,563,224
2006	52,176	-5,777,451	0	3,215,392	-7,827,672	0	-9,808,216	142,521	521,354	831,295	58,048,854	59,250,418
2007	9,356	-5,828,725	0	3,225,050	-7,778,545	0	-9,894,126	197,645	522,364	838,357	58,532,941	59,737,469
2008	194,942	-6,071,111	32,147	3,267,979	-7,768,293	0	-9,824,484	0	530,265	856,067	60,429,685	61,650,835
2009	0	-5,813,069	0	3,347,337	-7,938,465	0	-10,247,250	16,092	539,155	1,036,787	60,410,058	61,649,817
2010	0	-5,887,928	3,033	3,318,911	-7,874,660	0	-10,214,821	174,379	536,228	1,028,399	60,343,646	61,574,613
2011	74,333	-5,962,461	0	3,314,663	-7,983,382	0	-10,243,794	0	534,280	1,023,818	60,222,112	61,450,157
2012	41,813	-5,764,870	3,582	3,307,707	-7,873,174	0	-10,314,625	0	533,329	1,031,994	60,456,417	61,681,539
2013	0	-4,907,817	0	3,220,328	-7,939,556	0	-10,129,840	49,109	519,573	993,539	59,981,244	61,176,073
2014	0	-5,799,826	16,545	3,314,695	-7,891,171	0	-10,232,454	0	536,350	1,037,644	60,647,636	61,877,690
2015	0	-5,878,750	436	3,302,275	-7,869,855	0	-10,059,884	254,461	536,383	1,032,193	60,686,932	61,915,035
2016	18,544	-5,969,663	1,463	3,365,924	-7,844,612	0	-10,064,774	0	545,282	1,056,876	60,759,149	62,007,818
2017	75,889	-5,985,703	6,387	3,380,574	-7,870,615	0	-10,176,061	0	561,078	1,067,946	60,632,562	61,889,080
2018	0	-6,028,778	0	3,393,999	-7,875,206	0	-10,051,809	0	590,670	1,067,338	60,510,227	61,793,688
2019	0	-5,822,370	0	3,330,581	-7,962,908	0	-9,860,054	347,185	581,837	1,052,118	60,890,880	62,153,806
2020(e	0	-5,830,359	0	3,328,416	-7,964,588	0	-9,861,366	0	582,890	1,061,560	60,968,028	62,287,684

c) *These values represent a proportionate allocation of the total variable OMP&R costs of pumping and power recovery plants (Table B-3) associated with net annual withdrawals from reservoir storage for the project transportation facilities. The allocation is determined annually by applying the following ratio, calculated from the data shown in Table B-6: "Reservoir Storage Changes" (withdrawals, as a positive value) conveyed thru each plant, in acre-feet ÷ "Total" annual quantity conveyed thru each plant, in acre-feet. The costs so determined are accumulated for all upstream plants for each year, for each respective reservoir.*

d) *Refer to Appendix B text "Project Water Charges, Variable OMP&R Components".*

e) *And each year thereafter for the remainder of the project repayment period.*

TABLE B-13: CAPITAL AND OPERATING COSTS OF PROJECT CONSERVATION FACILITIES TO BE REIMBURSED THRU DELTA WATER CHARGE

(in dollars)

Calendar Year	INITIAL PROJECT CONSERVATION FACILITIES (Portions of Upper Feather Lakes, Oroville-Thermalito Facilities, Delta Facilities and California Aqueduct)			ADDITIONAL PROJECT CONSERVATION FACILITIES (Upper Eel River Development							Total [e]
					Trans-Basin Diversion Works		Eel River Storage				
							Initial Storage		Reserved Storage		
	Capital Costs [a]	Operating Costs [b]	Project Power Revenues	Planning and Preoperating Costs [a & c]	Capital Costs [a]	Operating Costs [d]	Capital Costs [a]	Operating Costs [d]	Capital Costs [a]	Operating Costs [d]	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1952	171,317	0	0	0	0	0	0	0	0	0	171,317
1953	312,174	0	0	0	0	0	0	0	0	0	312,174
1954	308,605	0	0	0	0	0	0	0	0	0	308,605
1955	194,635	0	0	0	0	0	0	0	0	0	194,635
1956	1,362,880	0	0	0	0	0	0	0	0	0	1,362,880
1957	6,224,285	0	0	0	0	0	0	0	0	0	6,224,285
1958	9,511,696	0	0	0	0	0	0	0	0	0	9,511,696
1959	11,357,900	0	0	0	0	0	0	0	0	0	11,357,900
1960	13,895,436	0	0	0	0	0	0	0	0	0	13,895,436
1961	18,714,319	0	0	0	0	0	0	0	0	0	18,714,319
1962	9,026,806	0	0	0	0	0	0	0	0	0	9,026,806
1963	73,207,890	-14,000	0	0	0	0	0	0	0	0	73,193,890
1964	62,504,396	-14,000	0	107,520	0	0	0	0	0	0	62,597,916
1965	70,910,318	-14,000	0	549,720	0	0	0	0	0	0	71,446,038
1966	130,795,213	-14,000	0	1,066,507	0	0	0	0	0	0	131,847,720
1967	94,337,837	-11,336	0	1,128,852	0	0	0	0	0	0	95,455,353
1968	39,691,063	1,230,941	951,000	763,124	0	0	0	0	0	0	40,734,128
1969	5,087,857	3,177,495	10,978,000	595,500	0	0	0	0	0	0	-2,117,148
1970	3,956,391	4,876,018	16,150,000	514,023	0	0	0	0	0	0	-6,803,568
1971	3,605,846	5,842,744	16,150,000	402,799	0	0	0	0	0	0	-6,298,611
1972	4,399,776	5,378,279	16,150,000	285,292	0	0	0	0	0	0	-6,086,653
1973	3,959,629	5,509,631	16,150,000	215,713	0	0	0	0	0	0	-6,465,027
1974	6,128,977	7,776,866	16,150,000	177,467	0	0	0	0	0	0	-2,066,690
1975	8,070,748	7,207,714	16,150,000	129,915	0	0	0	0	0	0	-741,623
1976	13,397,735	6,655,251	18,859,000	129,935	0	0	0	0	0	0	1,323,921
1977	27,722,311	6,649,298	16,228,000	129,287	0	0	0	0	0	0	18,272,896
1978	29,736,438	6,224,900	16,331,000	128,846	0	0	0	0	0	0	19,759,184
1979	19,385,335	6,330,742	16,559,000	129,133	0	0	0	0	0	0	9,286,210
1980	6,380,733	8,325,269	16,492,000	130,083	0	0	0	0	0	0	-1,655,915
1981	5,038,555	7,403,306	16,150,000	303,570	0	0	0	0	0	0	-3,404,569
1982	7,734,312	6,485,191	16,150,000	457,343	0	0	0	0	0	0	-1,473,154
1983	8,676,406	5,586,278	16,531,000	458,274	0	0	0	0	0	0	-1,810,042
1984	4,825,858	5,765,341	29,459,000	537,030	2,175,000	0	0	0	0	0	-16,155,771
1985	1,732,776	7,362,564	23,076,000	388,641	2,175,000	0	0	0	0	0	-11,417,019
Subtotal, 1952-1985	702,366,453	107,720,492	294,664,000	8,728,574	4,350,000	0	0	0	0	0	528,501,519
1986	0	6,736,862	19,289,000	266,206	5,800,000	0	0	0	0	0	-6,485,932
1987	0	7,374,528	17,772,000	114,373	5,800,000	0	0	0	0	0	-4,483,099
1988	0	6,859,429	16,150,000	185,643	26,100,000	0	0	0	0	0	16,995,072
1989	0	8,222,309	20,879,000	185,643	26,100,000	0	0	0	0	0	13,628,952
1990	0	6,191,134	16,590,000	174,923	26,100,000	0	0	0	0	0	15,876,057
1991	0	7,865,395	21,374,000	164,203	26,100,000	0	0	0	0	0	12,755,598
1992	0	7,061,076	16,150,000	101,157	23,925,000	0	0	0	0	0	14,937,233
1993	0	6,964,726	16,150,000	77,895	20,300,000	0	0	0	0	0	11,192,621
1994	0	6,975,639	16,150,000	77,895	20,300,000	0	0	0	0	0	11,203,534
1995	0	5,905,763	16,150,000	77,895	20,300,000	0	0	0	0	0	10,133,658
1996	0	9,088,052	16,419,000	73,943	20,300,000	0	5,834,000 [f]	917,994	0	0	19,794,989
1997	0	11,962,860	16,150,000	73,943	20,300,000	0	5,834,000	917,994	0	0	22,938,797
1998	0	6,626,251	18,261,000	0	0	1,671,342	5,834,000	919,403	0	0	-3,210,004
1999	0	8,446,015	16,150,000	0	0	1,671,342	5,834,000	919,403	0	0	720,760
2000	0	6,388,070	16,595,000	0	0	1,671,342	5,834,000	919,403	0	0	-1,782,185
2001	0	6,195,937	16,570,000	0	0	1,671,342	5,834,000	919,403	0	0	-1,949,318
2002	0	6,912,587	16,150,000	0	0	1,671,342	5,834,000	919,403	0	0	-812,668
2003	0	8,349,224	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000 [f]	600,000	5,344,969
2004	0	7,268,994	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	4,264,739
2005	0	7,142,520	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	4,138,265
2006	0	9,245,367	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	6,241,112
2007	0	8,919,631	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	5,915,376
2008	0	7,497,216	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	4,492,961
2009	0	7,626,522	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	4,622,267
2010	0	7,707,859	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	4,703,604
2011	0	7,960,636	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	4,956,381
2012	0	7,224,791	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	4,220,536
2013	0	9,296,555	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	6,292,300
2014	0	7,924,176	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	4,919,921
2015	0	7,901,538	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	4,897,283
2016	0	7,473,970	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	4,469,715
2017	0	7,800,769	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	4,796,514
2018	0	7,090,248	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	4,085,993
2019	0	8,080,406	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	5,076,151
2020	0	7,711,741	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	4,707,486
2021	0	7,711,741	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	4,707,486
2022	0	7,711,741	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	4,707,486
2023	0	7,711,741	17,023,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	3,834,486
2024	0	7,711,741	23,076,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	-2,218,514
2025	0	7,711,741	19,289,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	1,568,486
2026	0	7,711,741	17,722,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	3,135,486
2027	0	7,711,741	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	4,707,486
2028	0	7,711,741	20,879,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	-21,514
2029	0	7,711,741	16,590,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	4,267,486
2030	0	7,711,741	21,374,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	-516,514
2031	0	7,711,741	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	4,707,486
2032	0	7,711,741	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	4,707,486
2033	0	7,711,741	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	4,707,486
2034	0	7,711,741	16,150,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	4,707,486
2035	0	7,711,741	28,098,000	0	0	1,671,342	5,834,000	919,403	4,121,000	600,000	-7,240,514
Subtotal, 1986-2035	0	383,674,911	860,750,000	1,573,719	241,425,000	63,510,996	233,360,000	36,773,302	135,993,000	19,800,000	255,360,928
TOTAL 1952-2035	702,366,453	491,395,403	1,155,414,000	10,302,293	245,775,000	63,510,996	233,360,000	36,773,302	135,993,000	19,800,000	783,862,447

a) Reimbursed thru payments of the capital cost component of the Delta Water Charge, except for a portion of the costs of the Initial Project Conservation Facilities that will be reimbursed thru project power revenues.
b) Reimbursed thru payments of the minimum OMP&R component of the Delta Water Charge, except for $1,500,000 annually from 1970 thru 2035 that will be reimbursed thru project power revenues.
c) Under the proposed long-term amendments of Articles 22(e) and 22(g), those planning and preoperating costs of Additional Project Conservation Facilities which are incurred thru the current year will be included in current calculations of the Delta Water Charge.
d) Reimbursed thru minimum OMP&R component of the Delta Water Charge.
e) Total of all columns, treating the values shown in Column 3 as negative costs.
f) Initial repayments of capital costs at 3-1/2 percent interest under a federal Water Supply Act of 1958 contract.

TABLE B-14: CAPITAL COSTS OF TRANSPORTATION FACILITIES ALLOCATED TO EACH CONTRACTOR

(in dollars)

Calendar Year	NORTH BAY AREA			SOUTH BAY AREA				CENTRAL COASTAL AREA		
	Napa County FC & WCD	Solano County FC & WCD	Total	Alameda County FC & WCD Zone 7	Alameda County Water District	Santa Clara Valley Water District	Total	San Luis Obispo County FC & WCD	Santa Barbara County FC & WCD	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1952	0	0	0	83	99	409	591	121	287	408
1953	0	0	0	323	405	1,807	2,535	338	791	1,129
1954	0	0	0	818	1,088	5,148	7,054	424	991	1,415
1955	0	0	0	976	1,321	6,296	8,593	212	498	710
1956	0	0	0	8,838	12,064	63,802	84,704	221	516	737
1957	16,594	10,040	26,634	21,556	29,308	649,582	700,446	286	665	951
1958	35,435	14,569	50,004	67,772	67,965	733,445	869,182	795	1,859	2,654
1959	21,458	5,747	27,205	154,463	143,216	494,017	791,696	22,614	59,143	81,757
1960	10,354	7,838	18,192	297,093	275,401	1,020,846	1,593,340	35,069	91,227	126,296
1961	8,604	7,583	16,187	854,176	797,977	1,914,625	3,566,778	14,355	36,086	50,441
1962	997	-513	484	546,296	577,036	1,686,375	2,809,707	19,025	45,441	64,466
1963	4,530	2,237	6,767	658,413	1,077,990	3,244,166	4,980,569	71,454	168,528	239,982
1964	50,576	33,110	83,686	701,110	1,235,084	7,221,462	9,157,656	145,894	343,771	489,665
1965	230,848	59,057	289,905	344,421	449,800	3,341,079	4,135,300	261,293	614,518	875,811
1966	502,859	53,455	556,314	553,706	528,165	2,170,949	3,252,820	603,406	1,413,449	2,016,855
1967	1,606,365	49,138	1,655,503	707,821	686,989	2,161,979	3,556,789	948,483	2,219,664	3,168,147
1968	893,195	59,205	952,400	696,745	643,246	1,889,602	3,229,593	356,823	837,159	1,193,982
1969	92,347	57,383	149,730	265,247	254,019	753,187	1,272,453	85,306	202,487	287,793
1970	58,671	66,691	125,362	63,473	61,535	148,859	273,867	53,110	126,809	179,919
1971	32,880	31,566	64,446	14,686	16,950	91,410	123,046	37,436	90,904	128,340
1972	22,127	15,887	38,014	13,510	12,945	67,316	93,771	26,288	63,672	89,960
1973	56,142	22,646	78,788	10,813	10,941	41,258	63,012	30,339	73,588	103,927
1974	135,456	154,914	290,370	16,503	18,779	58,137	93,419	31,237	79,558	110,795
1975	159,040	211,741	370,781	11,595	11,856	40,508	63,959	26,505	68,488	94,993
1976	297,258	381,413	678,671	5,714	5,322	14,280	25,316	32,007	76,119	108,126
1977	455,896	522,995	978,891	8,773	8,020	19,138	35,931	462,562	1,294,043	1,756,605
1978	2,401,702	2,414,219	4,815,921	16,528	15,112	36,010	67,650	838,739	2,447,585	3,286,324
1979	3,396,818	3,227,851	6,624,669	17,874	16,342	38,943	73,159	1,832,103	4,912,852	6,744,955
1980	289,235	240,765	530,000	6,518	5,960	14,202	26,680	8,428,482	23,946,445	32,374,927
1981	25,681	37,319	63,000	4,275	3,909	9,315	17,499	7,337,114	20,244,596	27,581,710
1982	8,758	13,242	22,000	8,007	7,321	17,446	32,774	738,152	2,300,895	3,039,047
1983	7,564	11,436	19,000	13,318	12,176	29,016	54,510	111,426	292,307	403,733
1984	0	0	0	13,695	12,521	29,837	56,053	67,090	170,618	237,708
1985	0	0	0	4,767	4,359	10,387	19,513	48,083	112,250	160,333
TOTAL	10,821,390	7,711,534	18,532,924	6,109,906	7,005,221	28,024,838	41,139,965	22,666,792	62,337,809	85,004,601

Calendar Year	SAN JOAQUIN VALLEY AREA									
	Devil's Den Water District	Dudley Ridge Water District	Empire West Side Irrigation District	Hacienda Water District	Kern County Water Agency		County of Kings	Oak Flat Water District	Tulare Lake Basin Water Storage District	Total
					Municipal and Industrial	Agricultural				
	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1952	86	394	19	59	958	9,402	19	13	735	11,685
1953	241	1,089	55	160	2,954	28,241	55	32	2,022	34,849
1954	302	1,366	67	201	3,451	33,366	68	43	2,550	41,414
1955	153	684	36	100	1,532	15,157	37	22	1,286	19,007
1956	156	711	34	104	2,789	24,725	34	24	1,285	29,862
1957	203	917	37	135	6,242	51,362	38	29	1,544	60,507
1958	568	2,561	115	377	14,339	121,862	119	58	4,533	144,532
1959	3,786	7,750	385	1,142	26,511	261,085	392	378	14,391	315,820
1960	7,663	23,469	1,175	3,457	51,514	548,491	1,203	507	43,825	681,304
1961	5,670	22,206	1,078	3,271	52,794	555,663	1,103	615	40,789	683,189
1962	11,562	50,031	2,441	7,369	96,597	1,045,615	2,499	1,907	92,140	1,310,161
1963	47,170	207,777	10,629	30,607	363,309	3,976,096	10,872	6,054	392,566	5,045,080
1964	96,683	333,794	17,239	49,173	611,712	6,843,101	17,634	12,083	633,980	8,615,399
1965	175,412	548,441	27,968	80,792	1,121,804	12,380,070	28,613	22,154	1,034,425	15,419,679
1966	415,814	1,133,597	53,714	166,993	2,271,416	25,747,641	54,942	39,417	2,054,770	31,938,304
1967	655,302	873,144	40,447	128,626	2,066,820	24,421,714	41,371	35,275	1,563,796	29,826,495
1968	241,086	203,774	9,970	30,018	1,128,254	11,805,817	10,196	12,400	375,771	13,817,286
1969	51,726	97,896	4,959	14,421	635,377	6,590,374	5,074	7,411	183,963	7,591,201
1970	30,125	56,369	2,806	8,305	433,951	4,290,488	2,869	4,082	104,923	4,933,918
1971	17,255	27,684	1,400	4,078	201,792	1,712,888	1,431	593	51,959	2,019,080
1972	12,254	14,267	724	2,103	90,189	788,603	742	379	26,857	936,118
1973	15,096	8,722	437	1,284	45,309	510,380	447	253	16,307	598,235
1974	11,385	15,274	730	2,251	71,247	653,945	745	616	27,798	783,991
1975	8,077	10,880	487	1,602	36,886	403,155	497	616	19,112	481,312
1976	4,143	10,730	547	1,581	22,484	243,803	560	976	20,214	305,038
1977	60,628	15,385	793	2,267	26,314	737,862	810	1,475	29,160	874,694
1978	16,108	32,195	1,520	4,744	51,994	647,885	1,555	2,855	58,220	817,076
1979	19,930	38,828	2,017	5,720	63,852	785,024	2,062	3,129	73,967	994,529
1980	30,909	32,192	1,672	4,743	58,669	763,271	1,708	1,141	61,330	955,635
1981	39,353	48,053	2,495	7,080	90,300	1,086,308	2,551	748	91,545	1,368,433
1982	16,562	48,568	2,523	7,155	93,379	916,586	2,578	1,402	92,527	1,181,280
1983	11,664	47,729	2,479	7,030	85,421	864,688	2,533	2,331	90,925	1,114,800
1984	24,907	110,258	5,724	16,242	180,080	1,981,580	5,852	2,397	210,047	2,537,087
1985	33,909	68,725	3,569	10,124	110,270	1,378,796	3,648	835	130,925	1,740,801
TOTAL	2,065,888	4,095,460	200,291	603,314	10,120,510	112,225,044	204,857	162,250	7,550,187	137,227,801

TABLE B-14: CAPITAL COSTS OF TRANSPORTATION FACILITIES ALLOCATED TO EACH CONTRACTOR

(in dollars)

Calendar Year	SOUTHERN CALIFORNIA AREA									
	Antelope Valley-East Kern Water Agency	Castaic Lake Water Agency	Coachella Valley County Water District	Crestline-Lake Arrowhead Water Agency	Desert Water Agency	Littlerock Creek Irrigation District	Mojave Water Agency	Palmdale Water District	San Bernardino Valley Municipal Water District	San Gabriel Valley Municipal Water District
	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
1952	3,199	790	866	257	1,430	70	1,725	424	6,214	1,582
1953	10,187	2,552	2,721	818	4,489	228	5,422	1,350	19,502	4,965
1954	12,962	3,221	3,535	1,055	5,835	294	7,050	1,721	25,194	6,436
1955	5,498	1,438	1,400	411	2,312	120	2,808	728	9,439	2,429
1956	9,473	2,626	2,152	603	3,550	187	4,362	1,227	13,041	3,407
1957	26,429	7,106	6,410	1,839	10,573	547	12,895	3,470	41,301	10,694
1958	50,685	13,859	11,937	3,391	19,687	1,022	24,081	6,610	74,935	19,477
1959	71,728	21,504	16,376	4,817	27,009	1,383	32,666	9,266	102,696	26,500
1960	103,227	33,037	25,911	7,817	42,731	1,887	51,171	13,267	165,917	42,447
1961	129,087	40,013	34,974	12,467	57,685	2,298	64,801	16,780	235,390	57,750
1962	202,178	64,342	44,522	14,034	73,430	3,418	86,442	25,469	256,994	65,351
1963	575,617	181,874	112,693	31,235	185,856	9,706	228,316	72,447	577,580	153,219
1964	1,117,035	360,743	214,806	56,843	354,261	18,891	440,596	141,034	1,055,194	283,939
1965	1,944,172	678,800	394,193	105,988	650,110	33,537	804,862	249,704	1,960,963	525,816
1966	4,049,467	1,528,903	832,959	221,251	1,373,717	71,020	1,706,135	529,553	4,052,984	1,091,852
1967	5,063,592	2,878,818	1,102,706	303,161	1,818,587	90,341	2,233,153	667,862	5,977,840	1,591,736
1968	5,999,129	3,034,371	1,373,469	375,628	2,265,122	108,930	2,781,427	794,858	8,065,202	2,143,788
1969	5,950,478	2,448,976	1,726,495	548,865	2,847,386	124,115	3,331,812	881,235	11,029,755	2,806,561
1970	5,216,108	2,670,964	2,108,307	713,612	3,477,114	110,132	3,983,556	757,899	14,090,432	3,531,933
1971	2,706,855	1,801,377	1,123,671	355,268	1,853,184	51,092	2,188,085	365,434	8,476,960	2,068,901
1972	1,011,727	328,174	355,266	98,294	585,911	19,798	716,498	138,732	2,864,530	745,857
1973	372,766	812,772	173,382	88,030	285,967	6,648	264,298	48,699	1,874,344	431,035
1974	664,099	346,750	315,192	90,807	519,817	11,740	629,629	86,260	2,179,287	571,839
1975	200,390	164,610	191,666	51,811	316,089	3,806	389,828	27,723	1,432,505	382,484
1976	87,555	74,913	49,807	18,262	82,144	1,517	90,944	11,144	404,838	99,623
1977	52,889	214,122	15,076	4,047	24,856	931	30,751	6,837	74,357	20,011
1978	99,150	493,379	18,003	4,582	29,688	1,658	37,319	12,453	81,171	22,261
1979	294,654	686,704	53,726	14,515	88,601	4,930	110,405	37,007	256,678	70,480
1980	594,503	687,370	107,709	27,239	177,634	9,949	222,763	74,667	481,697	132,215
1981	667,937	274,490	121,014	30,604	199,574	11,178	250,280	83,892	541,193	148,547
1982	1,151,538	189,837	104,107	26,330	171,692	9,615	215,306	72,169	465,585	127,792
1983	1,865,572	91,931	54,908	13,886	90,554	5,075	113,662	38,099	245,558	67,423
1984	6,028,608	81,475	48,466	12,258	79,929	4,499	100,726	33,764	216,752	59,597
1985	6,878,149	35,816	21,246	5,373	35,040	1,978	44,277	14,843	95,024	26,153
TOTAL	53,216,643	20,257,657	10,769,671	3,245,398	17,761,564	722,540	21,208,051	5,226,627	67,451,052	17,344,100

Calendar Year	SOUTHERN CALIFORNIA AREA (Continued)				FEATHER RIVER AREA				FUTURE CONTRACTOR	GRAND TOTAL
	San Gorgonio Pass Water Agency	The Metropolitan Water District of Southern California(a	Ventura County Flood Control District	Total	City of Yuba City	County of Butte	Plumas County FC & WCD	Total	South Bay	
	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)
1952	982	70,277	373	88,189	0	0	0	0	75	100,948
1953	3,079	222,101	1,202	278,616	0	0	0	0	336	317,465
1954	3,999	286,002	1,518	358,822	0	0	0	0	984	409,689
1955	1,505	113,842	683	142,613	0	0	0	0	1,218	172,141
1956	2,109	175,813	1,252	219,802	0	0	0	0	11,561	346,666
1957	6,627	521,638	3,373	652,902	0	0	0	0	29,096	1,470,536
1958	12,057	974,887	6,590	1,219,218	0	0	2	2	36,658	2,322,250
1959	16,434	1,404,156	10,112	1,744,647	0	0	14	14	58,872	3,020,011
1960	26,365	2,228,688	15,459	2,757,924	0	0	29	29	124,757	5,301,842
1961	36,154	3,263,103	18,737	3,969,239	0	0	10	10	321,622	8,607,466
1962	40,636	3,602,041	29,266	4,508,123	0	0	271	271	267,175	8,960,387
1963	94,563	11,296,192	85,335	13,604,633	0	0	56	56	733,202	24,610,289
1964	174,838	18,462,761	167,439	22,848,380	0	0	7,793	7,793	1,089,666	42,292,245
1965	324,073	34,435,813	312,470	42,420,501	0	0	3,142	3,142	459,135	63,603,473
1966	672,363	76,233,243	696,291	93,059,738	0	0	-46	-46	809,535	131,633,520
1967	984,133	134,107,666	1,309,565	158,129,160	0	0	50	50	1,465,424	197,801,568
1968	1,327,737	150,470,596	1,389,379	180,129,636	0	0	51,574	51,574	1,257,920	200,632,391
1969	1,749,410	143,117,562	1,103,054	177,665,704	0	0	234,242	234,242	434,604	187,635,727
1970	2,206,595	167,318,394	1,181,627	207,366,673	0	0	16,234	16,234	83,062	212,979,035
1971	1,288,464	138,582,298	765,807	161,627,396	0	0	27,206	27,206	19,181	164,008,695
1972	464,290	46,250,264	71,013	53,650,354	0	0	9	9	15,560	54,823,786
1973	273,989	41,332,548	299,806	46,264,284	0	0	36	36	10,460	47,118,742
1974	355,431	26,464,985	137,731	32,373,567	0	0	0	0	13,409	33,665,551
1975	237,666	14,126,279	70,598	17,595,455	0	0	0	0	10,302	18,616,802
1976	62,541	4,776,225	35,117	5,794,630	0	0	0	0	2,594	6,914,375
1977	12,334	7,909,307	101,926	8,467,444	0	0	0	0	3,479	12,117,044
1978	13,661	17,736,076	237,466	18,786,867	0	0	0	0	5,923	27,779,761
1979	43,277	25,507,763	325,284	27,494,024	0	0	0	0	6,412	41,937,748
1980	81,217	26,762,437	322,915	29,682,315	0	0	0	0	2,338	63,571,895
1981	91,246	12,535,000	131,038	15,085,993	0	0	0	0	1,534	44,118,169
1982	78,499	9,149,696	91,487	11,853,653	0	0	0	0	2,872	16,131,626
1983	41,403	4,539,113	44,303	7,211,487	0	0	0	0	4,778	8,808,308
1984	36,544	4,020,339	39,264	10,762,221	0	0	0	0	4,913	13,597,982
1985	16,021	1,766,600	17,261	8,957,781	0	0	0	0	1,710	10,880,138
TOTAL	10,780,242	1,129,763,705	9,024,741	1,366,771,991	0	0	340,622	340,622	7,290,367	1,656,308,271

a) Costs from Table B-10, allocated to MWD, are reduced herein by $16,421,055 in 1972 under provisions of Contract Amendment No. 7.

TABLE B-15: CAPITAL COST COMPONENT OF TRANSPORTATION CHARGE FOR EACH CONTRACTOR[a]

(in dollars)

Calendar Year	NORTH BAY AREA			SOUTH BAY AREA				CENTRAL COASTAL AREA		
	Napa County FC & WCD	Solano County FC & WCD	Total	Alameda County FC & WCD, Zone 7	Alameda County Water District	Santa Clara Valley Water District	Total	San Luis Obispo County FC & WCD	Santa Barbara County FC & WCD	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1963	0	0	0	102,460	100,005	356,343	558,808	0	0	0
1964	0	0	0	119,415	153,599	517,633	790,647	8,253	20,452	28,705
1965	0	0	0	150,336	215,004	876,661	1,242,001	13,884	33,756	47,640
1966	20,502	0	20,502	165,527	237,366	1,042,770	1,445,663	23,033	55,338	78,371
1967	45,502	0	45,502	189,947	263,625	1,150,702	1,604,274	41,308	98,240	139,548
1968	125,366	0	125,366	221,165	297,780	1,258,189	1,777,134	55,635	131,953	187,588
1969	169,773	0	169,773	251,894	329,760	1,352,135	1,933,789	59,451	141,068	200,519
1970	174,364	0	174,364	263,592	342,389	1,389,581	1,995,562	61,556	146,148	207,704
1971	177,281	0	177,281	266,392	345,449	1,396,982	2,008,823	62,943	149,525	212,468
1972	178,916	0	178,916	314,400	346,291	1,401,526	2,062,217	64,013	152,198	216,211
1973	180,016	29,804	209,820	315,071	346,935	1,404,873	2,066,879	64,674	153,855	218,529
1974	182,807	30,929	213,736	315,609	347,479	1,406,924	2,070,012	65,247	155,330	220,577
1975	189,541	38,631	228,172	316,429	348,412	1,409,815	2,074,656	66,231	157,958	224,189
1976	197,448	49,158	246,606	317,006	349,002	1,411,828	2,077,836	167,479	394,657	562,136
1977	212,227	68,121	280,348	317,290	349,266	1,412,538	2,079,094	169,070	398,441	567,511
1978	234,893	94,123	329,016	317,726	349,665	1,413,490	2,080,881	192,067	462,777	654,844
1979	354,298	214,150	568,448	318,548	350,417	1,415,280	2,084,245	233,767	584,463	818,230
1980	523,178	374,629	897,807	319,437	351,229	1,417,216	2,087,882	324,853	828,715	1,153,568
1981	537,557	386,599	924,156	319,761	351,525	1,417,922	2,089,208	743,891	2,019,259	2,763,150
1982	538,834	388,455	927,289	319,973	351,720	1,418,386	2,090,079	1,108,670	3,025,758	4,134,428
1983	539,270	389,113	928,383	320,371	352,084	1,419,253	2,091,708	1,145,369	3,140,151	4,285,520
1984	539,646	389,681	929,327	321,033	352,689	1,420,696	2,094,418	1,150,909	3,154,684	4,305,593
1985	539,646	389,681	929,327	321,714	353,311	1,422,179	2,097,204	1,154,244	3,163,166	4,317,410
1986	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
1987	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
1988	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
1989	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
1990	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
1991	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
1992	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
1993	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
1994	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
1995	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
1996	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
1997	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
1998	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
1999	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
2000	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
2001	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
2002	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
2003	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
2004	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
2005	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
2006	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
2007	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
2008	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
2009	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
2010	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
2011	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
2012	539,646	389,681	929,327	321,951	353,528	1,422,695	2,098,174	1,156,635	3,168,747	4,325,382
2013	539,646	389,681	929,327	213,431	253,524	1,066,353	1,533,308	1,156,635	3,168,747	4,325,382
2014	539,646	389,681	929,327	178,859	199,929	905,063	1,283,851	1,148,381	3,148,295	4,296,676
2015	539,646	389,681	929,327	142,342	138,525	546,034	826,901	1,142,751	3,134,992	4,277,743
2016	519,144	389,681	908,825	124,541	116,162	379,926	620,629	1,133,602	3,113,410	4,247,012
2017	494,143	389,681	883,824	96,131	89,903	271,993	458,027	1,115,326	3,070,507	4,185,833
2018	414,280	389,681	803,961	60,065	55,748	164,506	280,319	1,101,000	3,036,794	4,137,794
2019	369,873	389,681	759,554	24,797	23,768	70,561	119,126	1,097,183	3,027,679	4,124,862
2020	365,282	389,681	754,963	11,455	11,139	33,115	55,709	1,095,078	3,022,599	4,117,677
2021	362,365	389,681	752,046	8,282	8,080	25,714	42,076	1,093,692	3,019,223	4,112,915
2022	360,730	389,681	750,411	7,552	7,237	21,169	35,958	1,092,621	3,016,549	4,109,170
2023	359,630	359,878	719,508	6,880	6,593	17,822	31,295	1,091,961	3,014,892	4,106,853
2024	356,839	358,752	715,591	6,342	6,049	15,771	28,162	1,091,388	3,013,417	4,104,805
2025	350,104	351,050	701,154	5,522	5,116	12,881	23,519	1,090,403	3,010,790	4,101,193
2026	342,197	340,523	682,720	4,945	4,526	10,867	20,338	989,156	2,774,090	3,763,246
2027	327,418	321,560	648,978	4,661	4,262	10,157	19,080	987,565	2,770,306	3,757,871
2028	304,753	295,559	600,312	4,225	3,863	9,205	17,293	964,567	2,705,970	3,670,537
2029	185,347	175,531	360,878	3,403	3,112	7,415	13,930	922,868	2,584,284	3,507,152
2030	16,468	15,052	31,520	2,515	2,299	5,479	10,293	831,781	2,340,032	3,171,813
2031	2,088	3,082	5,170	2,191	2,003	4,773	8,967	412,743	1,149,488	1,562,231
2032	811	1,227	2,038	1,978	1,809	4,310	8,097	47,964	142,989	190,953
2033	376	569	945	1,580	1,445	3,442	6,467	11,266	28,596	39,862
2034	0	0	0	918	839	2,000	3,757	5,726	14,063	19,789
2035	0	0	0	237	217	516	970	2,391	5,581	7,972
TOTAL	26,982,293	19,484,054	46,466,347	15,790,625	17,676,406	71,134,759	104,601,790	57,831,740	158,437,354	216,269,094

a) Unadjusted for prior overpayments or underpayments of charges.

TABLE B-15: CAPITAL COST COMPONENT OF

(in dollars)

Calendar Year	SAN JOAQUIN VALLEY AREA									
	Devil's Den Water District	Dudley Ridge Water District	Empire West Side Irrigation District	Hacienda Water District	Kern County Water Agency		County of Kings	Oak Flat Water District	Tulare Lake Basin Water Storage District	Total
					Municipal and Industrial	Agricultural				
	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1963	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	64,441	0	0	0	0	64,441
1966	0	0	0	0	120,214	0	0	0	0	120,214
1967	0	0	0	0	233,142	0	0	0	0	233,142
1968	31,354	67,875	3,169	0	335,897	372,279	8,470	3,833	55,190	878,067
1969	42,370	67,994	9,506	11,756	391,991	764,531	8,977	4,167	198,008	1,499,300
1970	48,302	74,521	9,506	12,246	423,580	929,899	9,229	4,333	143,269	1,654,885
1971	56,776	84,963	9,506	11,266	445,154	1,235,073	9,372	4,667	154,081	2,010,858
1972	65,250	94,931	9,506	12,735	455,187	1,849,413	9,443	8,943	495,583	3,000,991
1973	73,724	104,424	9,506	14,205	459,671	2,133,017	9,480	5,167	183,150	2,992,344
1974	82,198	114,391	9,506	16,164	461,924	2,388,659	9,502	5,333	193,728	3,281,405
1975	90,672	124,359	9,506	17,634	465,466	2,658,681	9,539	5,667	211,299	3,592,823
1976	99,146	134,327	9,506	19,103	467,300	3,009,391	9,564	5,833	228,869	3,983,039
1977	107,620	144,294	9,506	20,573	468,417	3,379,274	9,592	6,167	246,891	4,392,334
1978	107,620	154,262	9,506	22,532	469,726	3,756,346	9,632	6,500	264,461	4,800,585
1979	107,620	164,230	9,506	24,002	472,311	4,124,631	9,710	6,667	282,032	5,200,709
1980	107,620	174,198	9,506	25,471	475,485	4,500,905	9,812	7,000	299,603	5,609,600
1981	107,620	184,165	9,506	27,430	478,402	4,925,910	9,897	7,167	317,173	6,067,270
1982	107,620	194,608	9,506	28,900	482,891	5,318,162	10,024	7,500	334,744	6,493,955
1983	107,620	203,626	9,506	30,369	487,534	5,764,737	10,152	7,667	352,315	6,973,526
1984	107,620	214,068	9,506	31,839	491,781	6,167,374	10,278	8,000	369,885	7,410,351
1985	107,620	224,036	9,506	33,798	500,734	6,559,625	10,569	8,167	387,456	7,841,511
1986	107,620	234,004	9,506	35,268	506,216	6,948,681	10,750	8,500	405,477	8,266,022
1987	107,620	243,972	9,506	36,737	506,216	7,344,927	10,750	8,667	423,048	8,691,443
1988	107,620	253,939	9,506	38,206	506,216	7,714,810	10,750	9,000	440,619	9,090,666
1989	107,620	263,907	9,506	40,166	506,216	7,981,636	10,750	9,333	458,189	9,387,323
1990	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
1991	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
1992	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
1993	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
1994	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
1995	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
1996	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
1997	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
1998	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
1999	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
2000	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
2001	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
2002	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
2003	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
2004	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
2005	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
2006	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
2007	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
2008	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
2009	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
2010	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
2011	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
2012	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
2013	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
2014	107,620	273,875	9,506	41,635	506,216	8,258,849	10,750	9,500	495,583	9,713,534
2015	107,620	273,875	9,506	41,635	441,775	8,258,849	10,750	9,500	495,583	9,649,093
2016	107,620	273,875	9,506	41,635	386,002	8,258,849	10,750	9,500	495,583	9,593,320
2017	107,620	273,875	9,506	41,635	273,075	8,258,849	10,750	9,500	495,583	9,480,393
2018	107,620	273,875	9,506	41,635	170,319	8,258,849	2,280	9,500	495,583	9,369,167
2019	107,620	273,875	9,506	41,635	114,225	8,258,849	1,773	9,500	495,583	9,312,566
2020	107,620	273,875	9,506	41,635	82,636	8,258,849	1,521	9,500	495,583	9,280,725
2021	107,620	273,875	9,506	41,635	61,062	8,258,849	1,378	9,500	495,583	9,259,008
2022	107,620	273,875	9,506	41,635	51,029	8,258,849	1,307	9,500	495,583	9,248,904
2023	107,620	273,875	9,506	41,635	46,545	8,258,849	1,270	9,500	495,583	9,244,383
2024	107,620	273,875	9,506	41,635	44,293	8,258,849	1,248	9,500	495,583	9,242,109
2025	107,620	273,875	9,506	41,635	40,750	8,258,849	1,211	9,500	495,583	9,238,529
2026	107,620	273,875	9,506	41,635	38,917	8,258,849	1,186	9,500	495,583	9,236,671
2027	107,620	273,875	9,506	41,635	37,799	8,258,849	1,158	9,500	495,583	9,235,525
2028	107,620	273,875	9,506	41,635	36,490	8,258,849	1,118	9,500	495,583	9,234,176
2029	107,620	273,875	9,506	41,635	33,905	8,258,849	1,041	9,500	495,583	9,231,514
2030	107,620	273,875	9,506	41,635	30,731	8,258,849	938	9,500	495,583	9,228,237
2031	107,620	273,875	9,506	41,635	27,814	8,258,849	853	9,500	495,583	9,225,235
2032	107,620	273,875	9,506	41,635	23,325	8,258,849	726	9,500	495,583	9,220,619
2033	107,620	273,875	9,506	41,635	18,682	8,258,849	598	9,500	495,583	9,215,848
2034	107,620	273,875	9,506	41,635	14,435	8,258,849	472	9,500	495,583	9,211,475
2035	107,620	273,875	9,506	41,635	5,482	8,258,849	181	9,500	495,583	9,202,231
TOTAL	6,939,372	16,119,344	640,071	2,425,610	25,310,803	469,735,015	537,501	585,278	29,241,888	551,534,882

a) Unadjusted for prior overpayments or underpayments of charges.

TRANSPORTATION CHARGE FOR EACH CONTRACTOR[a]

(in dollars)

Calendar Year	SOUTHERN CALIFORNIA AREA									
	Antelope Valley East Kern Water Agency	Castaic Lake Water Agency	Coachella Valley County Water District	Crestline Lake Arrowhead Water Agency	Desert Water Agency	Littlerock Creek Irrigation District	Mojave Water Agency	Palmdale Water District	San Bernardino Valley Municipal Water District	San Gabriel Valley Municipal Water District
	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
1963	33,947	0	0	0	0	0	0	0	51,980	0
1964	62,565	19,791	14,185	4,246	36,947	1,138	28,078	8,167	80,696	34,589
1965	118,101	37,726	24,865	7,072	40,404	2,077	49,983	15,179	133,157	34,926
1966	214,759	71,474	44,463	12,341	72,726	3,745	89,998	27,593	230,650	61,068
1967	416,086	147,486	85,875	23,341	141,023	7,275	174,822	53,921	432,152	115,351
1968	667,832	290,612	140,698	38,413	231,437	11,767	285,848	87,125	729,352	194,487
1969	966,090	441,472	208,983	57,088	344,052	17,183	424,132	126,643	1,130,329	301,070
1970	1,261,930	563,227	294,819	84,376	485,616	23,353	589,779	170,455	1,678,694	440,604
1971	1,521,259	696,019	399,637	119,855	658,487	28,829	787,829	208,135	2,379,227	616,200
1972	1,655,835	785,578	455,503	137,518	750,622	31,369	896,614	226,304	2,800,675	719,060
1973	1,706,135	801,894	473,165	142,404	779,751	32,353	932,236	233,201	2,943,091	756,141
1974	1,724,668	842,303	481,785	146,781	793,969	32,684	945,376	235,622	3,036,278	777,571
1975	1,757,685	859,542	497,456	151,296	819,812	33,267	976,679	239,911	3,144,625	806,001
1976	1,767,648	867,726	506,985	153,871	835,527	33,456	996,061	241,289	3,215,845	825,017
1977	1,772,001	871,450	509,461	154,779	839,611	33,532	1,000,582	241,843	3,235,972	829,970
1978	1,774,630	882,096	510,211	154,981	840,847	33,578	1,002,111	242,183	3,239,669	830,965
1979	1,779,560	906,625	511,106	155,208	842,323	33,661	1,003,966	242,802	3,243,705	832,072
1980	1,794,209	940,766	513,777	155,930	846,728	33,906	1,009,455	244,642	3,256,466	835,576
1981	1,823,766	974,940	519,132	157,284	855,559	34,400	1,020,530	248,354	3,280,414	842,149
1982	1,856,973	988,587	525,148	158,806	865,482	34,956	1,032,973	252,525	3,307,321	849,534
1983	1,914,224	998,025	530,324	160,115	874,018	35,434	1,043,678	256,113	3,330,468	855,888
1984	2,006,975	1,002,595	533,054	160,805	878,520	35,686	1,049,329	258,007	3,342,677	859,240
1985	2,306,699	1,006,646	535,464	161,415	882,493	35,910	1,054,337	259,686	3,353,453	862,203
1986	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
1987	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
1988	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
1989	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
1990	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
1991	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
1992	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
1993	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
1994	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
1995	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
1996	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
1997	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
1998	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
1999	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
2000	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
2001	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
2002	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
2003	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
2004	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
2005	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
2006	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
2007	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
2008	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
2009	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
2010	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
2011	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
2012	2,648,659	1,008,427	536,520	161,682	884,236	36,008	1,056,538	260,424	3,358,177	863,503
2013	2,614,712	1,008,427	536,520	161,682	870,684	36,008	1,056,538	260,424	3,306,197	850,312
2014	2,586,094	988,636	522,335	157,436	861,444	34,870	1,028,460	252,257	3,277,481	842,694
2015	2,530,558	970,701	511,655	154,610	843,831	33,931	1,006,555	245,245	3,225,020	828,577
2016	2,433,900	936,953	492,057	149,341	811,510	32,264	966,539	232,831	3,127,527	802,436
2017	2,232,573	860,940	450,645	138,341	743,213	28,733	881,716	206,503	2,926,025	748,152
2018	1,980,827	717,814	395,822	123,269	652,798	24,242	770,690	173,299	2,628,825	669,016
2019	1,682,569	566,955	327,537	104,594	540,183	18,826	632,406	133,781	2,227,848	562,433
2020	1,386,729	445,199	241,701	77,306	398,620	12,655	466,759	89,969	1,679,483	422,900
2021	1,127,400	312,407	136,883	41,827	225,749	7,180	268,709	52,288	978,950	247,303
2022	992,824	222,848	81,017	24,164	133,614	4,640	159,924	34,120	557,502	144,443
2023	942,524	206,532	63,354	19,277	104,484	3,655	124,302	27,223	415,086	107,362
2024	923,991	166,124	54,734	14,901	90,267	3,325	111,162	24,802	321,899	85,932
2025	890,974	148,885	39,064	10,386	64,423	2,741	79,858	20,513	213,552	57,502
2026	881,011	140,701	29,535	7,810	48,708	2,552	60,477	19,135	142,332	38,486
2027	876,658	136,976	27,059	6,902	44,624	2,477	55,956	18,581	122,205	33,533
2028	874,029	126,331	26,309	6,701	43,389	2,430	54,427	18,241	118,508	32,538
2029	869,100	101,802	25,414	6,473	41,913	2,348	52,572	17,622	114,473	31,431
2030	854,450	67,661	22,743	5,752	37,508	2,103	47,083	15,782	101,711	27,927
2031	824,893	33,487	17,388	4,398	28,676	1,608	36,008	12,070	77,763	21,354
2032	791,686	19,840	11,372	2,876	18,754	1,052	23,564	7,899	50,856	13,969
2033	734,435	10,402	6,196	1,567	10,218	574	12,860	4,311	27,709	7,615
2034	641,684	5,831	3,466	877	5,716	322	7,209	2,417	15,501	4,263
2035	341,960	1,781	1,056	267	1,742	98	2,201	738	4,724	1,300
TOTAL	132,432,951	50,421,342	26,825,998	8,084,096	44,212,394	1,800,409	52,826,897	13,021,199	167,908,852	43,175,741

TABLE B-15: CAPITAL COST COMPONENT OF TRANSPORTATION CHARGE FOR EACH CONTRACTOR[a]

(in dollars)

Calendar Year	SOUTHERN CALIFORNIA AREA (continued)				FEATHER RIVER AREA				FUTURE CONTRACTOR	GRAND TOTAL
	San Gorgonio Pass Water Agency	The Metropolitan Water District of Southern California	Ventura County Flood Control District	Total	City of Yuba City	County of Butte	Plumas County FC & WCD	Total	South Bay	
	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)
1963	0	699,940	0	785,867	0	0	0	0	45,146	1,389,821
1964	21,477	1,261,552	9,246	1,582,677	0	0	0	0	81,599	2,483,628
1965	21,599	2,179,464	17,570	2,682,123	0	0	408	408	135,773	4,172,386
1966	37,711	3,891,507	33,105	4,791,140	0	0	565	565	158,600	6,615,055
1967	71,138	7,681,589	67,723	9,417,782	0	0	562	562	198,848	11,639,658
1968	120,066	14,349,009	132,830	17,279,476	0	0	565	565	271,704	20,519,900
1969	186,077	21,829,944	201,906	26,234,969	0	0	3,129	3,129	334,244	30,375,723
1970	273,053	28,945,309	256,746	35,067,961	0	0	14,775	14,775	355,851	39,471,102
1971	382,758	37,263,864	315,493	45,377,592	0	0	15,582	15,582	359,981	50,162,585
1972	446,816	44,153,750	353,567	53,413,211	0	0	16,934	16,934	360,934	59,249,414
1973	469,899	46,453,171	357,097	56,080,538	0	0	16,935	16,935	361,708	61,946,753
1974	483,521	48,508,098	372,003	58,380,659	0	0	16,937	16,937	362,228	64,545,554
1975	501,192	49,823,855	378,850	59,990,171	0	0	16,937	16,937	362,895	66,489,843
1976	513,008	50,526,170	382,360	60,864,963	0	0	16,937	16,937	363,407	68,114,924
1977	516,118	50,763,630	384,106	61,153,055	0	0	16,937	16,937	363,536	68,852,815
1978	516,731	51,156,856	389,174	61,574,032	0	0	16,937	16,937	363,709	69,820,004
1979	517,410	52,038,639	400,980	62,508,057	0	0	16,937	16,937	364,003	71,560,629
1980	519,562	53,306,807	417,152	63,874,976	0	0	16,937	16,937	364,322	74,005,092
1981	523,599	54,637,353	433,206	65,350,686	0	0	16,937	16,937	364,438	77,575,845
1982	528,136	55,260,554	439,721	66,100,716	0	0	16,937	16,937	364,515	80,127,919
1983	532,039	55,715,449	444,269	66,690,044	0	0	16,937	16,937	364,657	81,350,775
1984	534,097	55,941,120	446,472	67,048,577	0	0	16,937	16,937	364,895	82,170,098
1985	535,914	56,140,998	448,424	67,583,642	0	0	16,937	16,937	365,139	83,151,170
1986	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	84,030,060
1987	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	84,455,481
1988	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	84,854,704
1989	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,151,361
1990	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
1991	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
1992	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
1993	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
1994	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
1995	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
1996	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
1997	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
1998	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
1999	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
2000	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
2001	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
2002	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
2003	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
2004	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
2005	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
2006	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
2007	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
2008	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
2009	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
2010	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
2011	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
2012	536,710	56,228,828	449,282	68,028,994	0	0	16,937	16,937	365,224	85,477,572
2013	528,506	55,528,888	449,282	67,208,180	0	0	16,937	16,937	320,078	84,046,746
2014	523,804	54,967,276	440,037	66,482,824	0	0	16,937	16,937	283,626	83,006,775
2015	515,112	54,049,364	431,712	65,346,871	0	0	16,528	16,528	229,451	81,275,914
2016	499,000	52,337,322	416,177	63,237,857	0	0	16,372	16,372	206,624	78,830,639
2017	465,572	48,547,240	381,560	58,611,213	0	0	16,374	16,374	166,376	73,802,040
2018	416,644	41,879,819	316,452	50,749,517	0	0	16,372	16,372	93,520	65,450,650
2019	350,633	34,398,884	247,376	41,794,025	0	0	13,808	13,808	30,980	56,154,921
2020	263,658	27,283,520	192,536	32,961,035	0	0	2,162	2,162	9,373	47,181,644
2021	153,953	18,964,964	133,789	22,651,402	0	0	1,355	1,355	5,243	36,824,045
2022	89,894	12,075,079	95,715	14,615,784	0	0	2	2	4,290	28,764,519
2023	66,811	9,775,658	92,185	11,948,453	0	0	2	2	3,516	26,054,010
2024	53,189	7,720,731	77,279	9,648,336	0	0	0	0	2,996	23,741,999
2025	35,518	6,404,973	70,432	8,038,821	0	0	0	0	2,329	22,105,545
2026	23,702	5,702,658	66,922	7,164,029	0	0	0	0	1,817	20,868,821
2027	20,593	5,465,199	65,176	6,875,939	0	0	0	0	1,688	20,539,081
2028	19,980	5,071,972	60,109	6,454,964	0	0	0	0	1,515	19,978,797
2029	19,300	4,190,189	48,303	5,520,940	0	0	0	0	1,221	18,635,635
2030	17,149	2,922,022	32,130	4,154,021	0	0	0	0	902	16,596,786
2031	13,111	1,591,476	16,076	2,678,308	0	0	0	0	786	13,480,697
2032	8,575	968,274	9,561	1,928,278	0	0	0	0	710	11,350,695
2033	4,672	513,380	5,013	1,338,952	0	0	0	0	567	10,602,641
2034	2,613	287,709	2,810	980,418	0	0	0	0	329	10,215,768
2035	797	87,830	858	445,352	0	0	0	0	85	9,656,610
TOTAL	26,835,877	2,811,441,411	22,464,104	3,401,451,271	0	0	846,847	846,847	18,261,202	4,339,431,433

a) Unadjusted for prior overpayments or underpayments of charges.

TABLE B-16: MINIMUM OMP&R COMPONENT OF TRANSPORTATION CHARGE FOR EACH CONTRACTOR[a]

(in dollars)

Calendar Year	NORTH BAY AREA			SOUTH BAY AREA				CENTRAL COASTAL AREA		
	Napa County FC & WCD	Solano County FC & WCD	Total	Alameda County FC & WCD, Zone 7	Alameda County Water District	Santa Clara Valley Water District	Total	San Luis Obispo County FC & WCD	Santa Barbara County FC & WCD	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1962	0	0	0	9,557	8,738	0	18,295	0	0	0
1963	0	0	0	37,578	34,357	81,871	153,806	0	0	0
1964	0	0	0	40,294	37,537	89,445	167,276	0	0	0
1965	0	0	0	77,216	74,556	193,134	344,906	0	0	0
1966	0	0	0	76,580	76,128	211,502	364,210	0	0	0
1967	0	0	0	120,933	117,912	320,067	558,912	0	0	0
1968	0	0	0	108,799	105,162	291,161	505,122	12,245	28,589	40,834
1969	89,906	0	89,906	129,866	123,791	332,650	586,307	58,897	137,500	196,397
1970	96,281	0	96,281	117,178	109,522	291,866	518,566	69,070	161,253	230,323
1971	39,692	0	39,692	96,142	91,751	252,363	440,256	71,636	167,244	238,880
1972	38,548	0	38,548	117,172	112,989	321,866	552,027	73,030	170,498	243,528
1973	30,992	0	30,992	113,074	108,363	303,722	525,159	69,698	162,714	232,412
1974	44,540	0	44,540	163,057	155,630	426,363	745,050	69,245	161,659	230,904
1975	45,095	0	45,095	140,185	134,605	376,829	651,619	70,511	164,616	235,127
1976	47,022	0	47,022	162,626	155,068	425,310	743,004	70,727	165,118	235,845
1977	50,775	0	50,775	161,773	154,262	423,051	739,086	75,006	175,113	250,119
1978	56,344	0	56,344	161,485	153,995	422,235	737,715	75,132	175,403	250,535
1979	56,217	0	56,217	161,964	154,458	423,472	739,894	75,479	176,212	251,691
1980	138,561	93,622	232,183	161,810	154,300	423,158	739,268	75,270	175,724	250,994
1981	134,565	91,540	226,105	162,579	155,026	425,109	742,714	75,636	176,581	252,217
1982	135,017	91,846	226,863	163,244	155,663	426,871	745,778	146,263	356,344	502,607
1983	135,824	92,863	228,687	167,010	159,244	435,743	761,997	147,073	363,178	510,251
1984	135,426	92,525	227,951	166,553	158,808	434,551	759,912	145,547	358,598	504,145
1985	135,638	92,643	228,281	166,553	158,821	434,694	760,068	144,442	354,508	498,950
1986	135,721	92,671	228,392	166,664	158,927	435,005	760,596	148,905	364,343	513,248
1987	135,735	92,645	228,380	166,272	158,553	434,087	758,912	147,798	360,440	508,238
1988	134,939	91,818	226,757	165,432	157,744	431,937	755,113	145,508	354,179	499,687
1989	134,895	91,748	226,643	165,146	157,479	431,303	753,928	145,228	352,801	498,029
1990	134,634	91,632	226,266	164,783	157,135	430,330	752,248	146,402	357,499	503,901
1991	134,287	91,384	225,671	164,245	156,619	428,933	749,797	145,556	354,786	500,342
1992	134,713	91,696	226,409	164,792	157,147	430,371	752,310	145,782	354,971	500,753
1993	134,866	91,802	226,668	164,967	157,301	430,787	753,055	145,590	354,286	499,876
1994	134,852	91,781	226,633	164,785	157,141	430,403	752,329	145,190	352,693	497,883
1995	134,850	91,780	226,630	164,775	157,130	430,378	752,283	144,824	351,316	496,140
1996	134,538	91,547	226,085	164,115	156,504	428,718	749,337	145,194	353,053	498,247
1997	134,524	91,526	226,050	163,974	156,366	428,378	748,718	144,248	349,750	493,998
1998	134,650	91,626	226,276	164,239	156,622	429,050	749,911	144,838	351,545	496,383
1999	134,649	91,624	226,273	164,243	156,626	429,059	749,928	144,529	350,400	494,929
2000	134,673	91,660	226,333	164,245	156,627	429,063	749,935	144,805	351,513	496,318
2001	134,658	91,637	226,295	164,264	156,646	429,108	750,018	144,544	350,465	495,009
2002	134,668	91,653	226,321	164,158	156,541	428,852	749,551	145,054	352,587	497,641
2003	134,665	91,649	226,314	164,215	156,600	428,992	749,807	144,846	351,720	496,566
2004	134,663	91,645	226,308	164,170	156,553	428,884	749,607	144,643	351,036	495,679
2005	134,844	91,918	226,762	164,132	156,516	428,791	749,439	144,343	349,997	494,340
2006	134,816	91,876	226,692	164,166	156,550	428,873	749,589	144,194	349,309	493,503
2007	134,812	91,871	226,683	164,202	156,586	428,960	749,748	144,244	349,456	493,700
2008	134,821	91,884	226,705	164,277	156,659	429,141	750,077	144,422	350,059	494,481
2009	134,817	91,879	226,696	164,257	156,640	429,094	749,991	145,440	353,971	499,411
2010	134,814	91,874	226,688	164,268	156,649	429,120	750,037	145,354	353,618	498,972
2011	134,809	91,868	226,677	164,291	156,673	429,173	750,137	145,312	353,430	498,742
2012	134,805	91,861	226,666	164,301	156,684	429,198	750,183	145,296	353,343	498,639
2013	134,789	91,838	226,627	164,287	156,669	429,166	750,122	145,003	352,218	497,221
2014	134,797	91,848	226,645	164,308	156,690	429,215	750,213	145,161	352,838	497,999
2015	134,804	91,859	226,663	164,302	156,685	429,202	750,189	145,042	352,388	497,430
2016	134,800	91,853	226,653	164,200	156,585	428,958	749,743	144,843	351,808	496,651
2017	134,808	91,863	226,671	164,212	156,595	428,984	749,791	144,864	351,875	496,739
2018	134,803	91,858	226,661	164,183	156,566	428,912	749,661	144,775	351,558	496,333
2019	134,777	91,819	226,596	164,253	156,636	429,082	749,971	144,793	351,502	496,295
2020	134,893	91,995	226,888	164,284	156,664	429,152	750,100	144,752	351,311	496,063
2021	134,893	91,995	226,888	164,284	156,664	429,152	750,100	144,752	351,311	496,063
2022	134,893	91,995	226,888	164,284	156,664	429,152	750,100	144,752	351,311	496,063
2023	134,893	91,995	226,888	164,284	156,664	429,152	750,100	144,752	351,311	496,063
2024	134,893	91,995	226,888	164,284	156,664	429,152	750,100	144,752	351,311	496,063
2025	134,893	91,995	226,888	164,284	156,664	429,152	750,100	144,752	351,311	496,063
2026	134,893	91,995	226,888	164,284	156,664	429,152	750,100	144,752	351,311	496,063
2027	134,893	91,995	226,888	164,284	156,664	429,152	750,100	144,752	351,311	496,063
2028	134,893	91,995	226,888	164,284	156,664	429,152	750,100	144,752	351,311	496,063
2029	134,893	91,995	226,888	164,284	156,664	429,152	750,100	144,752	351,311	496,063
2030	134,893	91,995	226,888	164,284	156,664	429,152	750,100	144,752	351,311	496,063
2031	134,893	91,995	226,888	164,284	156,664	429,152	750,100	144,752	351,311	496,063
2032	134,893	91,995	226,888	164,284	156,664	429,152	750,100	144,752	351,311	496,063
2033	134,893	91,995	226,888	164,284	156,664	429,152	750,100	144,752	351,311	496,063
2034	134,893	91,995	226,888	164,284	156,664	429,152	750,100	144,752	351,311	496,063
2035	134,893	91,995	226,888	164,284	156,664	429,152	750,100	144,752	351,311	496,063
TOTAL	8,152,027	5,148,452	13,300,479	11,204,895	10,690,954	29,242,972	51,138,821	8,777,509	21,248,581	30,026,090

a) *Unadjusted for prior overpayments or underpayments of charges.*

TABBE B-16: MINIMUM OMP&R COMPONENT OF

(in dollars)

Calendar Year	SAN JOAQUIN VALLEY AREA									
	Devil's Den Water District	Dudley Ridge Water District	Empire West Side Irrigation District	Hacienda Water District	Kern County Water Agency		County of Kings	Oak Flat Water District	Tulare Lake Basin Water Storage District	Total
					Municipal and Industrial	Agricultural				
	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1962	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0	0
1968	8,709	39,372	2,045	5,801	63,219	706,192	2,091	2,162	75,009	904,600
1969	41,385	45,923	2,262	6,766	83,051	1,197,949	2,313	2,144	84,994	1,466,787
1970	48,507	46,350	2,261	6,828	100,067	1,377,629	2,312	2,181	85,324	1,671,459
1971	50,308	47,911	2,320	7,057	105,929	1,620,579	2,371	2,312	87,834	1,926,621
1972	51,292	50,167	2,442	7,391	122,593	1,687,384	2,497	2,322	92,242	2,018,330
1973	48,959	50,453	2,421	7,431	126,935	1,697,350	2,478	2,373	92,080	2,030,480
1974	48,669	58,511	2,841	8,619	139,270	1,829,634	2,907	2,820	107,462	2,200,733
1975	49,558	59,146	2,847	8,714	144,239	1,888,027	2,913	2,773	108,127	2,266,344
1976	49,713	59,668	2,881	8,789	144,753	1,895,315	2,946	2,830	109,219	2,276,114
1977	52,705	59,162	2,854	8,715	143,002	1,856,487	2,919	2,800	108,275	2,236,919
1978	52,793	59,177	2,854	8,716	143,062	1,857,708	2,920	2,796	108,293	2,238,319
1979	53,035	59,531	2,872	8,769	143,981	1,868,553	2,937	2,805	108,948	2,251,431
1980	52,888	59,256	2,858	8,730	143,328	1,860,687	2,925	2,798	108,443	2,241,913
1981	53,147	59,409	2,866	8,749	143,495	1,864,805	2,932	2,815	108,747	2,246,965
1982	53,147	59,729	2,883	8,799	144,329	1,872,695	2,949	2,822	109,324	2,256,677
1983	54,323	61,388	2,966	9,043	147,930	1,918,195	3,033	2,860	112,432	2,312,170
1984	54,118	61,272	2,960	9,026	147,602	1,913,579	3,029	2,851	112,221	2,306,658
1985	54,182	61,261	2,958	9,024	147,786	1,915,895	3,025	2,846	112,172	2,309,149
1986	57,563	61,153	2,952	9,009	147,849	1,897,294	3,019	2,848	111,941	2,293,628
1987	57,416	60,964	2,941	8,980	147,407	1,891,868	3,010	2,843	111,595	2,287,024
1988	57,195	60,640	2,926	8,933	146,695	1,883,152	2,994	2,831	110,992	2,276,358
1989	57,142	60,708	2,929	8,943	146,863	1,884,264	2,997	2,833	111,119	2,277,798
1990	57,085	60,730	2,929	8,946	147,018	1,885,191	2,998	2,830	111,147	2,278,874
1991	56,926	60,505	2,919	8,913	146,509	1,878,977	2,985	2,822	110,734	2,271,290
1992	57,164	60,887	2,937	8,970	147,438	1,889,918	3,004	2,835	111,430	2,284,583
1993	57,110	60,689	2,929	8,940	146,889	1,884,228	2,995	2,832	111,081	2,277,693
1994	57,149	60,795	2,933	8,956	147,175	1,887,328	3,001	2,834	111,265	2,281,436
1995	57,146	60,792	2,933	8,955	147,170	1,887,235	3,001	2,834	111,261	2,281,327
1996	57,044	60,701	2,928	8,942	147,002	1,884,704	2,995	2,829	111,086	2,278,231
1997	56,916	60,567	2,921	8,922	146,673	1,880,453	2,989	2,826	110,842	2,273,109
1998	57,100	60,739	2,929	8,949	147,088	1,885,955	2,997	2,831	111,159	2,279,747
1999	57,091	60,717	2,928	8,945	147,038	1,885,450	2,996	2,830	111,114	2,279,109
2000	57,054	60,603	2,924	8,927	146,767	1,882,553	2,990	2,828	110,912	2,275,558
2001	57,084	60,694	2,928	8,941	146,981	1,884,840	2,995	2,830	111,070	2,278,363
2002	56,990	60,452	2,916	8,905	146,372	1,878,182	2,984	2,825	110,636	2,270,262
2003	57,030	60,556	2,922	8,920	146,646	1,881,194	2,987	2,827	110,825	2,273,907
2004	56,988	60,451	2,916	8,905	146,375	1,878,274	2,982	2,825	110,634	2,270,350
2005	56,943	60,333	2,911	8,887	146,074	1,874,967	2,978	2,821	110,418	2,266,332
2006	57,006	60,513	2,920	8,915	146,527	1,879,852	2,986	2,826	110,752	2,272,297
2007	57,022	60,564	2,922	8,921	146,652	1,881,191	2,987	2,827	110,839	2,273,925
2008	57,057	60,633	2,925	8,932	146,847	1,883,321	2,993	2,828	110,967	2,276,503
2009	57,027	60,555	2,922	8,919	146,643	1,881,139	2,987	2,827	110,821	2,273,840
2010	57,042	60,596	2,924	8,926	146,744	1,882,251	2,990	2,828	110,896	2,275,197
2011	57,057	60,638	2,925	8,933	146,853	1,883,401	2,993	2,828	110,973	2,276,601
2012	57,064	60,659	2,926	8,935	146,910	1,883,980	2,994	2,829	111,012	2,277,309
2013	57,080	60,722	2,929	8,945	147,049	1,885,501	2,996	2,830	111,125	2,279,177
2014	57,065	60,662	2,926	8,935	146,915	1,884,061	2,994	2,829	111,015	2,277,402
2015	57,064	60,663	2,926	8,935	146,918	1,884,084	2,994	2,829	111,018	2,277,431
2016	56,981	60,450	2,916	8,905	146,378	1,878,193	2,982	2,824	110,633	2,270,262
2017	56,988	60,450	2,916	8,905	146,376	1,878,264	2,982	2,824	110,633	2,270,338
2018	56,978	60,396	2,912	8,896	146,234	1,876,788	2,981	2,822	110,535	2,268,542
2019	57,036	60,554	2,922	8,920	146,636	1,881,140	2,987	2,827	110,818	2,273,840
2020	57,053	60,598	2,924	8,926	146,748	1,882,379	2,990	2,828	110,902	2,275,348
2021	57,053	60,598	2,924	8,926	146,748	1,882,379	2,990	2,828	110,902	2,275,348
2022	57,053	60,598	2,924	8,926	146,748	1,882,379	2,990	2,828	110,902	2,275,348
2023	57,053	60,598	2,924	8,926	146,748	1,882,379	2,990	2,828	110,902	2,275,348
2024	57,053	60,598	2,924	8,926	146,748	1,882,379	2,990	2,828	110,902	2,275,348
2025	57,053	60,598	2,924	8,926	146,748	1,882,379	2,990	2,828	110,902	2,275,348
2026	57,053	60,598	2,924	8,926	146,748	1,882,379	2,990	2,828	110,902	2,275,348
2027	57,053	60,598	2,924	8,926	146,748	1,882,379	2,990	2,828	110,902	2,275,348
2028	57,053	60,598	2,924	8,926	146,748	1,882,379	2,990	2,828	110,902	2,275,348
2029	57,053	60,598	2,924	8,926	146,748	1,882,379	2,990	2,828	110,902	2,275,348
2030	57,053	60,598	2,924	8,926	146,748	1,882,379	2,990	2,828	110,902	2,275,348
2031	57,053	60,598	2,924	8,926	146,748	1,882,379	2,990	2,828	110,902	2,275,348
2032	57,053	60,598	2,924	8,926	146,748	1,882,379	2,990	2,828	110,902	2,275,348
2033	57,053	60,598	2,924	8,926	146,748	1,882,379	2,990	2,828	110,902	2,275,348
2034	57,053	60,598	2,924	8,926	146,748	1,882,379	2,990	2,828	110,902	2,275,348
2035	57,053	60,598	2,924	8,926	146,748	1,882,379	2,990	2,828	110,902	2,275,348
TOTAL	3,730,889	4,028,985	194,637	593,493	9,674,250	124,975,920	199,080	188,750	7,378,876	150,964,880

a) Unadjusted for prior overpayments or underpayments of charges.

TRANSPORTATION CHARGE FOR EACH CONTRACTOR[a]

(in dollars)

Calendar Year	SOUTHERN CALIFORNIA AREA									
	Antelope Valley East Kern Water Agency	Castaic Lake Water Agency	Coachella Valley County Water District	Crestline Lake Arrowhead Water Agency	Desert Water Agency	Littlerock Creek Irrigation District	Mojave Water Agency	Palmdale Water District	San Bernardino Valley Municipal Water District	San Gabriel Valley Municipal Water District
	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
1962	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0	0
1968	67,774	20,539	12,183	3,081	20,091	1,135	25,392	8,512	54,485	14,996
1969	89,014	26,976	16,003	4,048	26,391	1,488	33,351	11,179	71,570	19,698
1970	111,202	33,699	20,003	5,060	32,989	1,861	41,662	13,966	89,461	24,617
1971	172,326	52,227	31,055	7,856	51,216	2,881	64,562	21,642	138,885	38,192
1972	363,816	135,006	109,808	30,761	181,096	6,839	221,323	48,986	544,282	144,602
1973	395,923	168,186	120,915	34,420	199,412	7,249	242,665	53,039	718,027	188,722
1974	453,997	163,858	146,017	41,648	240,815	8,665	292,745	62,724	885,222	232,612
1975	467,587	171,645	147,949	42,390	243,996	8,880	296,202	64,375	897,576	235,565
1976	469,265	178,228	147,762	42,294	243,698	8,918	295,932	64,638	892,952	234,444
1977	460,872	173,659	145,690	41,568	240,274	8,786	292,051	63,625	876,876	230,453
1978	461,020	175,241	146,084	41,792	240,922	8,795	292,596	63,678	880,406	231,201
1979	463,791	175,140	146,969	42,032	242,383	8,850	294,396	64,076	884,738	232,367
1980	462,949	173,934	146,468	42,014	241,561	8,825	293,142	63,903	884,741	232,167
1981	464,067	172,969	144,650	39,216	238,551	8,849	294,362	64,072	835,434	222,786
1982	467,492	189,108	149,799	44,332	247,051	8,924	296,877	64,597	926,943	241,114
1983	510,051	198,773	160,460	45,001	264,628	9,751	323,238	70,559	939,146	248,052
1984	508,152	197,235	159,898	44,715	263,702	9,722	322,395	70,322	933,640	246,815
1985	508,381	191,771	160,906	45,857	265,368	9,728	322,583	70,360	954,391	250,919
1986	515,952	203,761	159,629	44,342	263,265	9,730	322,485	70,383	927,632	245,691
1987	513,635	189,097	167,203	53,403	275,752	9,737	322,892	70,412	1,088,509	277,140
1988	513,442	208,516	163,349	48,245	269,400	9,757	323,852	70,503	996,407	259,310
1989	512,839	185,800	158,927	43,348	262,100	9,738	322,770	70,380	909,395	242,147
1990	513,130	209,484	160,242	44,761	264,273	9,748	323,179	70,457	934,134	247,017
1991	511,831	185,092	160,338	45,236	264,430	9,728	322,429	70,282	942,148	248,432
1992	513,818	219,371	161,209	45,847	265,871	9,761	323,396	70,540	953,619	250,870
1993	513,791	182,408	162,926	47,692	268,701	9,767	323,931	70,564	986,402	257,362
1994	514,262	214,011	162,275	46,789	267,629	9,777	324,162	70,642	970,345	254,270
1995	514,249	197,844	161,803	46,221	266,853	9,777	324,149	70,640	960,266	252,300
1996	512,060	196,382	160,114	45,269	264,058	9,721	321,761	70,265	943,059	248,512
1997	511,234	210,314	161,429	47,186	266,230	9,703	321,108	70,149	977,279	255,085
1998	513,150	198,172	161,571	46,486	266,469	9,751	322,972	70,463	964,845	252,976
1999	513,144	201,100	161,865	46,825	266,950	9,754	323,015	70,464	970,841	254,153
2000	513,413	193,259	161,782	46,349	266,816	9,764	323,811	70,544	962,393	252,641
2001	513,779	206,117	159,844	43,887	263,617	9,771	324,017	70,598	918,599	244,137
2002	512,933	195,414	162,685	47,466	268,300	9,757	323,774	70,495	982,234	256,509
2003	513,346	206,466	161,628	46,119	266,554	9,764	323,902	70,545	958,241	251,848
2004	513,073	193,834	161,860	46,389	266,940	9,762	323,926	70,517	963,096	252,800
2005	512,513	208,743	162,471	47,269	267,950	9,753	323,649	70,439	978,646	255,788
2006	512,582	196,349	161,065	45,831	265,627	9,747	323,038	70,408	953,171	250,710
2007	512,777	195,034	161,506	46,332	266,354	9,748	323,132	70,431	962,028	252,454
2008	513,513	203,407	160,055	44,229	263,969	9,767	323,837	70,555	924,742	245,299
2009	513,208	199,747	163,191	48,091	269,136	9,761	323,768	70,514	993,297	258,668
2010	513,248	195,847	162,129	46,838	267,378	9,760	323,665	70,512	971,044	254,307
2011	513,354	200,459	161,149	45,642	265,766	9,761	323,659	70,524	949,840	250,169
2012	513,413	200,506	161,469	46,033	266,296	9,762	323,664	70,531	956,775	251,524
2013	513,114	198,622	161,783	46,724	266,812	9,752	323,014	70,456	969,027	253,802
2014	513,483	201,524	162,772	47,589	268,444	9,765	323,743	70,545	984,402	256,925
2015	513,511	193,958	163,000	47,859	268,826	9,766	323,763	70,549	989,233	257,873
2016	512,874	200,456	161,730	46,333	266,722	9,756	323,702	70,478	962,099	252,567
2017	512,853	201,796	161,190	45,670	265,830	9,755	323,703	70,472	950,314	250,270
2018	512,604	200,435	161,920	46,627	267,037	9,750	323,573	70,437	967,319	253,564
2019	513,180	191,612	162,518	47,288	268,027	9,761	323,731	70,509	978,992	255,868
2020	513,243	200,163	161,887	46,538	266,979	9,760	323,671	70,512	965,742	253,270
2021	513,243	200,163	161,887	46,538	266,979	9,760	323,671	70,512	965,742	253,270
2022	513,243	200,163	161,887	46,538	266,979	9,760	323,671	70,512	965,742	253,270
2023	513,243	200,163	161,887	46,538	266,979	9,760	323,671	70,512	965,742	253,270
2024	513,243	200,163	161,887	46,538	266,979	9,760	323,671	70,512	965,742	253,270
2025	513,243	200,163	161,887	46,538	266,979	9,760	323,671	70,512	965,742	253,270
2026	513,243	200,163	161,887	46,538	266,979	9,760	323,671	70,512	965,742	253,270
2027	513,243	200,163	161,887	46,538	266,979	9,760	323,671	70,512	965,742	253,270
2028	513,243	200,163	161,887	46,538	266,979	9,760	323,671	70,512	965,742	253,270
2029	513,243	200,163	161,887	46,538	266,979	9,760	323,671	70,512	965,742	253,270
2030	513,243	200,163	161,887	46,538	266,979	9,760	323,671	70,512	965,742	253,270
2031	513,243	200,163	161,887	46,538	266,979	9,760	323,671	70,512	965,742	253,270
2032	513,243	200,163	161,887	46,538	266,979	9,760	323,671	70,512	965,742	253,270
2033	513,243	200,163	161,887	46,538	266,979	9,760	323,671	70,512	965,742	253,270
2034	513,243	200,163	161,887	46,538	266,979	9,760	323,671	70,512	965,742	253,270
2035	513,243	200,163	161,887	46,538	266,979	9,760	323,671	70,512	965,742	253,270
TOTAL	32,558,875	12,585,739	10,201,438	2,922,908	16,824,190	617,937	20,419,382	4,468,648	60,661,020	15,924,630

TABLE B-16: MINIMUM OMP&R COMPONENT OF TRANSPORTATION CHARGE FOR EACH CONTRACTOR[a]

(in dollars)

Calendar Year	SOUTHERN CALIFORNIA AREA (continued)				FEATHER RIVER AREA				FUTURE CONTRACTOR	GRAND TOTAL
	San Gorgonio Pass Water Agency	The Metropolitan Water District of Southern California	Ventura County Flood Control District	Total	City of Yuba City	County of Butte	Plumas County FC & WCD	Total	South Bay	
	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)
1962	0	0	0	0	0	0	0	0	0	18,295
1963	0	0	0	0	0	0	0	0	12,470	166,276
1964	0	0	0	0	0	0	0	0	13,653	180,929
1965	0	0	0	0	0	0	0	0	28,625	373,531
1966	0	0	0	0	0	0	0	0	30,553	394,763
1967	0	0	0	0	0	0	0	0	46,303	605,215
1968	9,188	1,013,083	9,900	1,260,359	0	0	0	0	41,842	2,752,757
1969	12,068	1,336,172	13,003	1,660,961	0	0	0	0	47,833	4,048,191
1970	15,083	1,676,862	16,241	2,082,706	0	0	0	0	54,557	4,653,892
1971	23,417	2,616,523	25,168	3,245,950	0	0	101	101	27,721	5,919,221
1972	89,275	7,622,832	63,065	9,561,691	0	0	55	55	82,169	12,496,348
1973	116,851	9,786,731	77,989	12,110,129	0	0	11	11	45,328	14,974,511
1974	144,148	10,836,838	76,995	13,586,284	0	0	192	192	120,375	16,928,078
1975	146,001	10,433,823	80,353	13,236,342	0	0	194	194	112,729	16,547,450
1976	145,299	12,160,899	82,691	14,967,020	0	0	193	193	120,012	18,389,210
1977	142,797	11,138,140	80,924	13,895,715	0	0	188	188	119,530	17,292,332
1978	143,282	11,325,443	81,466	14,091,926	0	0	185	185	119,414	17,494,438
1979	144,001	11,293,490	81,542	14,073,775	0	0	188	188	119,862	17,493,058
1980	143,898	11,088,165	81,037	13,862,804	0	0	189	189	119,595	17,446,946
1981	137,719	10,758,991	80,524	13,462,190	0	0	192	192	120,436	17,050,819
1982	149,657	12,039,717	88,335	14,913,946	0	0	196	196	120,963	18,767,030
1983	153,563	12,511,693	92,264	15,527,179	0	0	198	198	125,126	19,465,608
1984	152,773	12,643,117	91,664	15,644,150	0	0	196	196	124,768	19,567,780
1985	155,458	12,412,382	89,901	15,438,005	0	0	198	198	124,894	19,359,545
1986	152,034	12,804,365	93,854	15,813,123	0	0	198	198	124,988	19,734,173
1987	172,632	12,958,666	89,052	16,188,130	0	0	199	199	124,281	20,095,164
1988	160,923	12,832,133	95,386	15,951,223	0	0	196	196	123,531	19,832,865
1989	149,706	12,014,858	87,938	14,969,946	0	0	196	196	123,390	18,849,930
1990	152,890	12,950,013	95,693	15,975,021	0	0	193	193	123,127	19,859,630
1991	153,837	12,101,912	87,641	15,103,336	0	0	191	191	122,588	18,973,215
1992	155,409	13,397,534	98,982	16,466,227	0	0	193	193	122,979	20,353,454
1993	159,649	12,140,902	86,881	15,210,976	0	0	195	195	122,867	19,091,330
1994	157,616	13,262,011	97,262	16,351,051	0	0	195	195	122,809	20,232,336
1995	156,325	12,633,669	91,973	15,686,069	0	0	195	195	122,814	19,565,458
1996	153,904	12,498,090	91,404	15,514,599	0	0	192	192	121,963	19,388,654
1997	158,229	13,101,361	95,939	16,185,246	0	0	192	192	121,806	20,049,119
1998	156,803	12,642,775	92,033	15,698,466	0	0	193	193	122,052	19,573,028
1999	157,571	12,770,489	92,991	15,839,162	0	0	193	193	122,057	19,711,651
2000	156,563	12,463,356	90,422	15,511,113	0	0	193	193	122,060	19,381,510
2001	150,980	12,801,672	94,646	15,801,664	0	0	193	193	122,082	19,673,624
2002	159,095	12,637,862	91,105	15,717,629	0	0	193	193	121,958	19,583,555
2003	156,040	12,934,372	94,741	15,993,566	0	0	193	193	122,027	19,862,380
2004	156,660	12,458,877	90,593	15,508,327	0	0	193	193	121,974	19,372,438
2005	158,626	13,087,564	95,449	16,178,860	0	0	193	193	121,929	20,037,855
2006	155,315	12,539,305	91,409	15,574,557	0	0	193	193	121,968	19,438,799
2007	156,452	12,518,830	90,986	15,566,064	0	0	193	193	122,012	19,432,325
2008	151,749	12,687,496	93,754	15,692,372	0	0	193	193	122,097	19,562,428
2009	160,507	12,812,168	92,539	15,914,595	0	0	193	193	122,077	19,786,803
2010	157,660	12,574,966	91,269	15,638,623	0	0	193	193	122,087	19,511,797
2011	154,943	12,683,087	92,787	15,721,140	0	0	193	193	122,113	19,595,603
2012	155,832	12,704,297	92,803	15,752,905	0	0	193	193	122,126	19,628,021
2013	157,337	12,702,199	92,184	15,764,826	0	0	193	193	122,108	19,640,274
2014	159,370	12,812,379	93,134	15,904,075	0	0	193	193	122,134	19,778,661
2015	159,990	12,563,932	90,658	15,652,918	0	0	193	193	122,127	19,526,951
2016	156,514	12,720,125	92,756	15,776,112	0	0	193	193	122,010	19,641,624
2017	155,009	12,728,052	93,194	15,768,108	0	0	193	193	122,021	19,633,861
2018	157,173	12,735,209	92,737	15,798,385	0	0	193	193	121,989	19,661,764
2019	158,677	12,469,670	89,876	15,539,709	0	0	193	193	122,069	19,408,673
2020	156,980	12,718,266	92,682	15,779,693	0	0	193	193	122,104	19,650,389
2021	156,980	12,718,266	92,682	15,779,693	0	0	193	193	122,104	19,650,389
2022	156,980	12,718,266	92,682	15,779,693	0	0	193	193	122,104	19,650,389
2023	156,980	12,718,266	92,682	15,779,693	0	0	193	193	122,104	19,650,389
2024	156,980	12,718,266	92,682	15,779,693	0	0	193	193	122,104	19,650,389
2025	156,980	12,718,266	92,682	15,779,693	0	0	193	193	122,104	19,650,389
2026	156,980	12,718,266	92,682	15,779,693	0	0	193	193	122,104	19,650,389
2027	156,980	12,718,266	92,682	15,779,693	0	0	193	193	122,104	19,650,389
2028	156,980	12,718,266	92,682	15,779,693	0	0	193	193	122,104	19,650,389
2029	156,980	12,718,266	92,682	15,779,693	0	0	193	193	122,104	19,650,389
2030	156,980	12,718,266	92,682	15,779,693	0	0	193	193	122,104	19,650,389
2031	156,980	12,718,266	92,682	15,779,693	0	0	193	193	122,104	19,650,389
2032	156,980	12,718,266	92,682	15,779,693	0	0	193	193	122,104	19,650,389
2033	156,980	12,718,266	92,682	15,779,693	0	0	193	193	122,104	19,650,389
2034	156,980	12,718,266	92,682	15,779,693	0	0	193	193	122,104	19,650,389
2035	156,980	12,718,266	92,682	15,779,693	0	0	193	193	122,104	19,650,389
TOTAL	9,868,178	797,931,353	5,840,045	990,824,343	0	0	12,145	12,145	7,994,642	1,244,261,400

a) Unadjusted for prior overpayments or underpayments of charges.

TABLE B-17: UNIT VARIABLE OMP&R COMPONENT OF TRANSPORTATION CHARGE[a]

(in dollars per acre-foot)

Calendar Year	NORTH BAY AQUEDUCT				SOUTH BAY AQUEDUCT		CALIFORNIA AQUEDUCT			
	Reach 1 Calhoun and Travis Pumping Plants		Reach 3 Cordelia Pumping Plant		Reach 1 South Bay and Del Valle Pumping Plant (b		Reach 1 Delta Pumping Plant		Reach 4 Dos Amigos Pumping Plant	
	Unit Rate	Cumulative Unit Rate	Unit Rate	Cumulative Unit Rate	Unit Rate	Cumulative Unit Rate	Unit Rate	Cumulative Unit Rate	Unit Rate	Cumulative Unit Rate
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1962	0	0	0	0	4 1504604	4 1504604	0	0	0	0
1963	0	0	0	0	4 5633057	4 5633057	0	0	0	0
1964	0	0	0	0	3 5433026	3.5433026	0	0	0	0
1965	0	0	0	0	4 1891495	4 1891495	0	0	0	0
1966	0	0	0	0	3 5059458	3 5059458	.0	0	0	0
1967	0	0	0	0	3 9293202	5 1323883	1 2030681	1 2030681	0	0
1968	0	0	5 7570016	5 7570016	3.3309386	4 7866426	1 4557040	1 4557040	1 0630077	2 5187117
1969	0	0	3 1819873	3 1819873	3 6892357	4 6975811	1 0083454	1 0083454	6948658	1 7032112
1970	0	0	3 7584301	3 7584301	4.4145266	5 3540762	9395496	.9395496	7782945	1 7178441
1971	0	0	4.2082507	4 2082507	3 8631218	4 7414780	8783562	8783562	4116464	1.2900026
1972	0	0	3.9577735	3 9577735	4.3226273	5 2196500	8970227	8970227	5505683	1 4475910
1973	0	0	3 7172996	3.7172996	4 9760624	5 8843930	9083306	9083306	5784869	1.4868175
1974	0	0	4.3973099	4.3973099	4 6853922	5 6241473	9387551	9387551	5405637	1 4793188
1975	0	0	6 0790274	6.0790274	4.2663213	5 2407853	9744640	.9744640	5460731	1.5205371
1976	0	0	6 0060060	6.0060060	3 9783478	5 2279383	1 2495905	1.2495905	5320388	1 7816293
1977	0	0	4 7619048	4.7619048	4 2831104	5 5905132	1 3074028	1.3074028	5778458	1 8852486
1978	0	0	4 7197640	4.7197640	4.6078424	6 1609103	1 5530679	1.5530679	6285225	2 1815904
1979	0	0	4.5325779	4 5325779	4.6565863	6 5812686	1 9246823	1.9246823	6371665	2.5618488
1980	.1843386	.1843386	3.7777778	3 9621164	4 2122849	5.7339401	1.5216552	1.5216552	5765830	2 0982382
1981	2462894	2462894	4.3884892	4.6347786	4.7974600	5.8034449	1.0059849	1 0059849	6337198	1 6397047
1982	.3660685	3660685	4.2657343	4.6318028	4 7453214	5 8989103	1.1535889	1 1535889	.6663905	1 8199794
1983	7498116	.7498116	10 2721088	11 0219204	9 3322511	10.8042718	1.4720207	1.4720207	1.1616967	2 6337174
1984	7060649	7060649	10 0000000	10 7060649	9 2160331	10.6796802	1.4636471	1.4636471	1 1889819	2 6526290
1985	.6332498	.6332498	9.4193548	10 0526046	8.9456225	10.6685847	1 7229622	1.7229622	1 1984919	2 9214541
1986	5544469	.5544469	8 8125000	9 3669469	8.5521168	10 6314454	2 0793286	2 0793286	1 1913692	3.2706978
1987	4778446	4778446	7 9393939	8.4172385	8 0259674	9.8881030	1 8621356	1 8621356	1 1809353	3.0430709
1988	.6060777	.6060777	7 7058824	8.3119601	7 3380166	9 2150227	1 8770061	1 8770061	1 1194032	2.9964093
1989	5241320	.5241320	7 4857143	8.0098463	7.0099441	9.0688892	2 0589451	2.0589451	1 0859038	3.1448489
1990	.6775604	.6775604	7.2777778	7 9553382	6 7543822	9 2332371	2 4788549	2.4788549	1 0700837	3 5489386
1991	6756744	.6756744	6 7741935	7 4498679	6 6059860	9.0425890	2 4366030	2 4366030	1 0661201	3 5027231
1992	.6970221	6970221	6 8229167	7 5199388	6 5305173	9 2508239	2 7203066	2.7203066	1 0668799	3 7871865
1993	6947583	.6947583	6.8341709	7.5289292	6 5508458	8.7203318	2 1694860	2 1694860	1 0990057	3 2684917
1994	.6697375	.6697375	6.6341463	7 3038838	6 4743135	8 9116738	2 4373603	2.4373603	1 0629417	3 5003020
1995	.6682143	.6682143	6.4761905	7 1444048	6 4225308	8 8548153	2 4322845	2.4322845	1 0629179	3 4952024
1996	.6427894	.6427894	5.7798165	6 4226059	5 8168191	8.4977826	2 6809635	2.6809635	1 0162707	3 6972342
1997	.6175567	6175567	5 5752212	6 1927779	5.5982606	8.1451988	2.5469382	2.5469382	.9862633	3 5332015
1998	.6381121	6381121	5 5982906	6 2364027	5.8062979	8.4586567	2.6523588	2.6523588	1 0065140	3 6588728
1999	.6357880	6357880	5.4132231	6 0490111	5.8635053	8.4691273	2.6056220	2.6056220	1.0193933	3 6250153
2000	.6787383	.6787383	5.4400000	6 1187383	6 0767447	8.4749844	2.3982397	2.3982397	1 0564917	3 4547314
2001	.6516937	.6516937	5.1320755	5.7837692	5 9727287	8 5243014	2 5515727	2.5515727	1.0454950	3 5970677
2002	.6696313	.6696313	5.0357143	5 7053456	6 1131489	8.2524786	2 1393297	2 1393297	1 0669515	3 2062812
2003	.6651945	.6651945	4.7796610	5 4448555	6.0871489	8.4016291	2.3144802	2.3144802	1.0636515	3 3781317
2004	.6607955	.6607955	4 7096774	5 3704729	6 1547553	8.2861796	2 1314243	2.1314243	1 0759591	3 2073834
2005	.9846727	.9846727	4.6461538	5 6308265	6.2639787	8.1887912	1 9248125	1.9248125	1.0901567	3 0149692
2006	9347758	.9347758	4.1470588	5 0818346	6 0195372	8 2725054	2 2529682	2 2529682	1.0508119	3.3037801
2007	.9287305	.9287305	4 1126761	5.0414066	6.0299362	8 3674810	2 3375448	2 3375448	1 0436648	3.3812096
2008	9442035	.9442035	3.9459459	4.8901494	6 1131489	8 5584213	2.4452724	2 4452724	1 0630692	3.5083416
2009	.9381758	.9381758	3 9220779	4.8602537	6 2067660	8 5108891	2 3041231	2 3041231	1 0769113	3.3810344
2010	9322052	.9322052	3 7750000	4.7072052	6 1599574	8.5368149	2.3768575	2 3768575	1 0698361	3.4466936
2011	.9243723	.9243723	3 5952381	4.5196104	6.1443564	8.5939220	2.4495656	2 4495656	1 0653773	3.5149429
2012	.9166738	.9166738	3.4318182	4.3484920	6 1287500	8 6218247	2.4930747	2 4930747	1 0535429	3.5466176
2013	.8884255	.8884255	3.2026087	4 1710342	5 9727287	8 5832711	2 6105424	2 6105424	1.0263796	3.6369220
2014	.9016456	.9016456	3.2500000	4.1516456	6.1495532	8.6390937	2 4895405	2 4895405	1.0650849	3.5546254
2015	.9146444	.9146444	3 1200000	4.0346444	6.1339521	8 6251264	2.4911743	2.4911743	1 0650114	3.5561857
2016	9072614	.9072614	3 0961538	4.0034152	6.2379734	8 3660478	2.1280744	2 1280744	1 0809209	3.2089953
2017	9200000	.9200000	3 0740741	3.9940741	6 2691809	8 3943272	2 1251463	2 1251463	1 0863961	3 2115424
2018	9126939	9126939	5.1071429	6.0198368	6 2847819	8 3196201	2 0348382	2 0348382	1.0828913	3.1177295
2019	8661336	.8661336	4 8448276	5.7109612	6.1911649	8 4983436	2 3071787	2 3071787	1 0664046	3 3735833
2020(c	1 0747611	1 0747611	3.5680000	4.6427611	6.1859628	8.5721725	2 3862097	2 3862097	1 0608146	3 4470243

a) Unit rates as shown constitute the rate for the indicated pumping plants, powerplants, and reservoirs. Cumulative unit rates as shown constitute the total rate, cumulative from the Sacramento-San Joaquin Delta, applicable to deliveries from or downstream of the indicated pumping plants and power plants.

b) The relatively minor estimated costs of the Del Valle Pumping Plant have been combined with those of the South Bay Pumping Plant to simplify the allocation procedure.

c) And each year thereafter for the remainder of the project repayment period.

TABLE B-17: UNIT VARIABLE OMP&R COMPONENT

(in dollars per acre-foot)

Calendar Year	CALIFORNIA AQUEDUCT (Continued)											
	Reach 14A Buena Vista Pumping Plant		Reach 15A Wheeler Ridge Pumping Plant		Reach 16A Wind Gap Pumping Plant		Reach 17E A.D. Edmonston Pumping Plant		Reach 18A Cottonwood Powerplant		Reach 22B Pearblossom Pumping Plant	
	Unit Rate	Cumulative Unit Rate	Unit Rate	Cumulative Unit Rate	Unit Rate	Cumulative Unit Rate	Unit Rate	Cumulative Unit Rate	Unit Rate	Cumulative Unit Rate	Unit Rate	Cumulative Unit Rate
	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
1962	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0	0	0	0
1968	0	0	0	0	0	0	0	0	0	0	0	0
1969	0	0	0	0	0	0	0	0	0	0	0	0
1970	3333333	2 0511774	0	0	0	0	0	0	0	0	0	0
1971	1 3292714	2 6192740	2 0982545	4 7175285	0	0	0	0	0	0	0	0
1972	1 0139519	2 4615429	9490083	3 4105512	2 0074913	5 4180425	6 6342970	12 0523395	0	0	2 4565217	14 5088612
1973	7480171	2 2348346	7837541	3 0185887	1 6173865	4 6359752	5 6597412	10 2957164	0	0	1 6923651	11 9880815
1974	9051868	2 3845056	1 0392783	3 4237839	1 9429263	5 3667102	7 0721461	12 4388563	0	0	3 6513186	16 0901749
1975	8534858	2 3740229	9793661	3 3533890	1 8389761	5 1923651	6 6325396	11 8249047	0	0	3 1070817	14 9319864
1976	8934562	2 6750855	9681264	3 6432119	2 0037861	5 6469980	7 3101916	12 9571896	0	0	3 0673669	16 0245565
1977	9541199	2 8393685	1 0394197	3 8787882	2 1498867	6 0286749	7 9263307	13 9550056	0	0	3 2180731	17 1730787
1978	.9962598	3 1778502	1 0768205	4 2546707	2 2278481	6 4825188	8 2496042	14 7321230	0	0	3 4850160	18 2171390
1979	1.0036016	3 5654504	1 0852493	4 6506997	2 2960621	6 9467618	8 3278733	15 2746351	0	0	3 5164197	18 7910548
1980	9536137	3 0518519	1 0412093	4 0930612	2 1959218	6 2889830	7 9628286	14 2518116	0	0	3 3231843	17 5749959
1981	1 0035609	2 6432656	1 0894055	3 7326711	2 3087985	6 0414696	8 3829568	14 4244264	0	0	3 7531938	18 1776202
1982	1 1072187	2 9271981	1 1508834	4 0780815	2 3874257	6 4655072	8 9314292	15 3969364	0	0	3 5896771	18 9866135
1983	1 8615772	4 4952946	1 8030555	6 2983501	3 7314796	10 0298297	14 3730246	24 4028543	- 4272019	23 9756524	6 7471005	30 7227529
1984	1 8288646	4 4814936	2 0123990	6 4938926	3 8183790	10 3122716	14 2515328	24 5638044	- 4261823	24 1376221	6 7107061	30 8483282
1985	1 7949887	4 7164428	1 9824044	6 6988472	3 7805110	10 4793582	14 1028467	24 5822049	- 4304294	24 1517755	6 6127869	30 7645624
1986	1 8333178	5 1040156	1.8830311	6 9870467	3 9831782	10 9702249	13 4706805	24 4409054	- 4340583	24 0068471	6 4242279	30 4310750
1987	1 8692102	4 9122811	1 9638044	6 8760855	3 8137677	10 6898532	14 3839583	25 0738115	- 4411665	24 6326450	6 2607985	30 8934435
1988	1 9994574	4 9958667	2 0826263	7 0784930	4 1800854	11 2585784	15 7608839	27 0194623	- 5186473	26 5008150	5 8293500	32 3301650
1989	1 8447850	4 9896339	1 9060631	6 8956970	4 0801119	10 9758089	15 3917868	26 3675957	- 5548028	25 8127929	5 5097142	31 3225071
1990	1.8361448	5 3850834	2 0352866	7 4203700	4 1494944	11 5698644	15 5084785	27 0783429	- 5299035	26 5484394	5 3376482	31 8860876
1991	1 8311173	5 3338404	2 0420090	7.3758494	4 1639424	11 5397918	15 5614540	27 1012458	- 5400336	26 5612122	5 3156675	31 8768797
1992	1 8802035	5 6673900	1 9863720	7.6537620	4 2750933	11 9288553	15 0479385	26 9767938	- 5343928	26 4424010	5 3394602	31 7818612
1993	1 9504694	5 2189611	2.0510134	7 2699745	4 4360371	11 7060116	15 6142252	27 3202368	- 5243959	26 7958409	5.4326370	32 2284779
1994	1.9219071	5 4222091	2.0432376	7 4654467	4 3989161	11 8643628	15 6550508	27 5194136	- 4986676	27 0207460	5 2719684	32 2927144
1995	1 9265481	5 4217505	2.0531949	7 4749454	4 4058221	11 8807675	15 6750242	27 5557917	- 5427169	27 0130748	5 2655236	32 2785984
1996	1.8013940	5 4986282	2 0349250	7 5335532	4 1204749	11 6540281	14 6635399	26 3175680	- 5377470	25 7798210	4 9657279	30 7455489
1997	1 7921501	5 3253516	1 9288881	7 2542397	4 1678779	11 4221176	14 7572638	26.1793814	- 5997567	25 5796247	4 7639125	30 3435372
1998	1 7703778	5 4292506	1 9969216	7 4261722	4 3332041	11 7593763	15 3368209	27 0961972	- 5205684	26 5756288	4 9515690	31 5271978
1999	1 8635642	5 4885795	1 9965357	7 4851152	4 3296942	11 8148094	15 3240224	27 1388318	- 5445362	26 5942956	4 9964794	31 5907750
2000	1 9311827	5 3859141	2 0667226	7 4526367	4 4847254	11 9373621	15 8654503	27 8028124	- 5541727	27 2486395	5 1871697	32 4358092
2001	1 8470268	5 4440945	2 0857658	7 5298603	4 2811810	11 8110413	16 0894287	27 9004700	- 5372289	27 3632411	5 1267059	32.4899470
2002	1 8826442	5 0889254	2 1257252	7 2146506	4 3634958	11 5781464	16 3963852	27 9745316	- 5784701	27 3960615	5 2015251	32 5975866
2003	1 9507103	5.3288420	2 0959563	7 4247983	4 3649230	11 7897213	16 1597897	27 9495110	- 5828935	27 3666175	5 2012594	32 5678769
2004	1 9756137	5 1829971	2 1221869	7 3051840	4 4190313	11 7242153	16 3641937	28 0884090	- 6164973	27 4719117	5 2572062	32 7291179
2005	1 9818279	4 9967971	2 1267327	7 1235298	4 4278601	11 5513899	16 3873724	27 9387623	- 5883224	27 3504399	5 3339339	32 6843738
2006	1 9097957	5 2135758	2 0519265	7 2655023	4 2730430	11 5385453	15 8118462	27 3503915	- 5822664	26 7681251	5 1435328	31 9116579
2007	1 9046862	5 2858958	2 0472666	7 3331624	4 2626581	11 5958205	15 7699480	27 3657685	- 5784995	26 7872690	5 1418638	31 9291328
2008	1 9203250	5 4286666	2 0629080	7 4915746	4 4513153	11 9428899	15 8873239	27 8302138	- 5919432	27 2382706	5 1765472	32 4148178
2009	1.9423703	5 3234047	2 0856102	7 4090149	4 3417482	11 7507631	16 0586611	27 8094242	- 5806820	27 2287422	5.2758076	32 5045498
2010	1 9304660	5 3771596	2 0729068	7 4500664	4 3158492	11 7659156	15 9631801	27 7290957	- 6111652	27 1179305	5 2496137	32 3675442
2011	1.9213468	5 4362897	2 0635146	7 4998043	4 2965383	11 7963426	15 8885308	27 6848734	- 6146330	27 0702404	5 2485707	32 3188111
2012	1.9164131	5.4630307	2.0589361	7 5219668	4 2867369	11 8087037	15 8515208	27 6602245	- 6044542	27 0557703	5 2328163	32.2885866
2013	1 8659523	5 5028743	2.0066750	7 5095493	4 1785227	11.6880720	15 4458796	27 1339516	- 5811031	26 5528485	5 0875124	31 6403609
2014	1.9194720	5 4740974	2 0614933	7 5355907	4 2923086	11 8278993	15 8714238	27 6993231	- 5855866	27 1137365	5 2347572	32 3484937
2015	1.9216297	5 4778154	2 0646190	7 5424344	4 2985652	11.8409996	15 8966027	27 7376023	- 6013446	27 1362577	5.2184744	32 3547321
2016	1 9488035	5 1577988	2 0926029	7 2504017	4 5156303	11 7660320	16 1126241	27 8786561	- 6102244	27 2684317	5.3216901	32 5901218
2017	1 9592660	5 1708084	2 1036701	7 2744785	4 3797612	11 6542397	16.1977920	27 8520317	- 5988322	27 2531995	5 3593294	32 6125289
2018	1 9639476	5 0816771	2 1082751	7 1899522	4 3891497	11.5791019	16 2326557	27 8117576	- 6023413	27 2094163	5 3618841	32 5713004
2019	1.9421232	5.3157065	2 0870692	7 4027757	4 3454665	11 7482422	16 0700600	27 8183022	-.6121099	27 2061923	5.2703385	32 4765308
2020(C	1 9295569	5 3765812	2 0724285	7.4490097	4 3152512	11.7642609	15 9550142	27 7192751	- 6136761	27 1055990	5.2829621	32 3885611

OF TRANSPORTATION CHARGE[a]

(in dollars per acre-foot)

Calendar Year	CALIFORNIA AQUEDUCT (continued)											
	Reach 26A Devil Canyon Powerplant		Reach 29A Oso Pumping Plant		Reach 29 G Pyramid Powerplant		Reach 29J Castaic Powerplant		Reach 31A Las Perillas and Badger Hill Pumping Plants		Reach 33 Devil's Den, Sawtooth, and Polonio Pumping Plants and San Luis Obispo Powerplant	
	Unit Rate	Cumulative Unit Rate	Unit Rate	Cumulative Unit Rate	Unit Rate	Cumulative Unit Rate	Unit Rate	Cumulative Unit Rate	Unit Rate	Cumulative Unit Rate	Unit Rate	Cumulative Unit Rate
	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)
1962	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0	0	0	0
1968	0	0	0	0	0	0	0	0	1 5011830	4 0198947	0	0
1969	0	0	0	0	0	0	0	0	1 2616654	2 9648766	0	0
1970	0	0	0	0	0	0	0	0	1.6307308	3 3485749	0	0
1971	0	0	0	0	0	0	0	0	1 4978057	2 7878083	0	0
1972	-2 3717647	12 1370965	1 2631162	13 3154557	0	0	-2 9350830	10 3803727	1 7457271	3 1933181	0	0
1973	-3 3247510	8 6633305	8748946	11 1706110	0	0	-4 7848896	6 3857214	1.5827325	3 0695500	0	0
1974	-4 9581341	11 1220408	9976274	13 4364837	0	0	-6 4636020	6 9728817	1 7047990	3 1841178	0	0
1975	-3 5027859	11 4292005	9576977	12 7826024	0	0	-6 5831057	6 1994967	1 6520843	3 1726214	0	0
1976	-5 4671239	10 5574326	9802857	13 9374753	0	0	-9 1145280	4 8229473	1 5681341	3 3497634	0	0
1977	-5 6416953	11 5313834	9888211	14 9438267	0	0	-9 7766266	5 1672001	1 6838359	3 5690845	0	0
1978	-5 7159130	12 5012260	9861630	15 7182860	0	0	-10 0905586	5 6277274	1 7896268	3 9712172	0	0
1979	-6 2715118	12 5195430	9974154	16 2720505	0	0	-11 4398822	4 8321683	1 7588999	4 3207487	0	0
1980	-6 1794627	11 3955332	9853906	15 2372022	0	0	-11 4954792	3 7417230	1 5122184	3 6104566	0	0
1981	-6 2627698	11 9148504	9827096	15 4071360	0	0	-10 5601483	4 8469877	1 7794601	3 4191648	0	0
1982	-6 0819204	12 9046931	9791839	16 3761203	-2 5194688	13 8566515	-9 8973638	3 9592877	1 5344988	3 3544782	10 9471178	14 3015960
1983	-6 3865621	24 3361908	1 1742772	25 5771315	-6 6819397	18 8951918	-9 6366540	9 2585378	2 9472785	5 5809959	22 2087712	27 7897671
1984	-6 2487482	24 5995800	1 1824779	25 7462823	-6 6949003	19 0513820	-9 2760067	9 7753753	2 9130769	5 5657059	21 0250183	26 5907242
1985	-6 4914947	24 2730677	1 2003693	25 7825742	-6 6817616	19 1008126	-9 0761377	10 0246749	2 9185493	5 8400034	18 6623642	24 5023676
1986	-6 5567594	23 8743156	1 1798170	25 6207224	-6 3547410	19 2659814	-8 1647682	11 1012132	2 7977579	6 0684557	17 5449424	23 6133981
1987	-7 2482146	23 6452289	1 3832373	26 4570488	-6 1726466	20 2844022	-7 1136930	13 1707092	2 5956806	5 6387515	15 9878207	21 6265722
1988	-7 1634169	25 1667481	2 0134387	29 0329010	-6 8165438	22 2163572	-6 3226814	15 8936758	2 5178780	5 5142873	14 7430576	20 2573449
1989	-6 8859687	24 4365384	1 8691250	28 2367207	-6 7856337	21 4510870	-6 5667793	14 8843077	2 4122750	5 5571239	13 6079540	19 1650779
1990	-6 8282477	25 0578399	1 9594391	29 0377820	-6 3564738	22 6813082	-6 0182849	16 6630233	2 3515168	5 9004554	16 2231893	22 1236447
1991	-6 8729414	25 0039383	1 9848254	29 0860712	-6 6265242	22 4595470	-6.3224399	16 1371071	2 3231418	5 8258649	15 1856888	21 0115537
1992	-6 8597479	24 9221133	2 1231529	29 0999467	-6 4162767	22 6836700	-6 3897932	16 2938768	2 3326489	6 1198354	14 3726066	20 4924420
1993	-6 8298560	25 3986219	2 2559362	29 5761730	-6 4599345	23 1162385	-5 9855102	17 1307283	2 3667364	5 6352281	14 4982567	20 1334848
1994	-6 7401594	25 5525550	2 1557660	29 6751796	-5 8933669	23 7818127	-6 1903576	17 5914551	2 2813783	5 7816803	13 3617702	19 1434505
1995	-6 8259062	25 4526922	2 1953511	29 7511428	-6 0799957	23 6711471	-6 4575792	17 2135679	2 2630483	5 7582507	12 5997628	18 3580135
1996	-6 8068125	23 9387364	2 1420994	28 4596674	-5 9504427	22 5092247	-6 4680179	16 0412068	2 1101171	5 8073513	13 8687930	19 6761443
1997	-7 3000736	23 0434636	2 2205067	28 3998881	-5 9749067	22 4249814	-6 5082702	15 9167112	2 0321665	5 5653680	12 4601626	18 0255306
1998	-6 9359217	24 5912761	2 2014995	29 2976967	-5 7827038	23 5149929	-6 4341221	17 0808708	2 2602061	5 9190789	12 7363164	18 6553953
1999	-7 2223365	24 3684385	2 1846765	29 3235083	-5 7801466	23 5433617	-6 7164019	16 8269598	2 2644787	5 8894940	12 1231200	18 0126140
2000	-7 3041817	25 1316275	2 2662157	30 0690281	-5 8172065	24 2518216	-6.6794911	17 5723305	2 3294919	5 7842233	12 9383839	18 7226072
2001	-7 8247691	24 6651779	2 2093526	30 1098226	-5 4443508	24 6654718	-6 4618771	18 2035947	2 2728287	5 8698964	12 1950412	18 0649376
2002	-7 5587286	25 0388580	2 2567855	30 2313171	-5 5763880	24 6549291	-6 6728418	17 9820873	2 3003666	5 5066478	13 9551388	19 4617866
2003	-8 1638419	24 4040350	2 2926428	30 2421538	-5 5269318	24 7152220	-6 9943476	17 7208744	2 2772867	5 6554184	13 2338060	18 8892244
2004	-7 9239709	24 8051470	2 3268085	30 4152175	-5 4667228	24 9484947	-6 8772247	18 0712700	2 2800626	5.4874460	13 0883380	18 5757840
2005	-7 9687100	24 7156638	2 3048529	30 2436152	-5 3981078	24 8455074	-6 7357431	18 1097643	2 3044821	5 3194513	12 7437949	18 0632462
2006	-7 9486153	23 9630426	2 2247843	29 5751758	-5 4500381	24 1251377	-6 8289976	17 2961401	2 2016639	5 5054440	12 0477536	17 5531976
2007	-8 0160700	23 9130628	2 2132966	29 5790651	-5 3714594	24 2076057	-6 8323700	17 3752357	2 1989644	5 5801740	12 0194552	17 5996292
2008	-8 1702646	24 2445532	2 2284207	30 0586345	-5 3298751	24 7287594	-6 7406408	17 9881186	2 2256663	5 7340079	12 1514123	17 8854202
2009	-7 9994895	24 5050603	2 2411261	30 0505503	-5 3472225	24 7033278	-6 9023830	17 8009448	2 2554068	5 6364412	14 5513965	20 1878377
2010	-8 0953193	24 2722249	2 2264499	29 9555456	-5 3147047	24 6408409	-6 8941086	17 7467323	2 2356806	5 6823742	14 2734074	19 9557816
2011	-8 1932324	24 1255787	2 2090390	29 8939124	-5 3525860	24 5413264	-6 8681153	17 6732111	2 2215385	5.7364814	14 0827785	19 8192599
2012	-7 9203764	24 3682102	2 2044032	29 8646277	-5 2786953	24 5859324	-6 9156051	17 6703273	2 2084017	5 7550193	14 0026323	19 7576516
2013	-6 7481809	24 8921800	2 1488378	29 2827894	-5 3298593	23 9529301	-6 8002070	17 1527231	2 1425691	5 7794911	13 3003882	19 0798793
2014	-7 9791684	24 3693253	2 2075891	29 9069122	-5 2872168	24 6196954	-6 8559156	17 7637798	2 2026694	5 7572948	13 7073184	19 4646132
2015	-8 0884058	24 2663263	2 2189231	29 9565254	-5 3202270	24 6362984	-6 8007432	17 8355552	2 1937955	5 7499812	13 4575359	19 2075171
2016	-8 2109146	24 3792072	2 2402156	30 1188717	-5 2525022	24 8663695	-6 7390519	18 1273176	2 2211079	5 4301032	13 6020077	19 0321109
2017	-8 2320933	24 3804356	2 2499661	30 1019978	-5 2699130	24 8320848	-6 8135661	18 0185187	2 2761785	5 4877209	13 5698348	19 0575557
2018	-8 2966738	24 2746266	2 2573987	30 0691563	-5 2694587	24 7996976	-6 7258675	18 0738301	2 3865455	5 5042750	13 3919448	18 8962198
2019	-8 0095332	24 4669976	2 2440379	30 0623401	-5 3978829	24 6644572	-6 6839170	17 9805402	2 3413964	5 7149797	13 0373978	18 7523775
2020 (c	-8 0175454	24 3710157	2 2137785	29 9330536	-5 3292660	24 6037876	-6 5984383	18 0053493	2 3269062	5 7739305	12 8362757	18 6102062

TABLE B-18: VARIABLE OMP&R COMPONENT OF

(in dollars)

Calendar Year	NORTH BAY AREA			SOUTH BAY AREA				CENTRAL COASTAL AREA		
	Napa County FC & WCD	Solano County FC & WCD	Total	Alameda County FC & WCD, Zone 7	Alameda County Water District	Santa Clara Valley Water District	Total	San Luis Obispo County FC & WCD	Santa Barbara County FC & WCD	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1962	0	0	0	2,050	34,914	0	36,964	0	0	0
1963	0	0	0	7,899	49,804	0	57,703	0	0	0
1964	0	0	0	5,928	68,166	0	74,094	0	0	0
1965	0	0	0	10,913	68,731	62,896	142,540	0	0	0
1966	0	0	0	19,321	52,112	121,089	192,522	0	0	0
1967	0	0	0	19,392	56,932	160,597	236,921	0	0	0
1968	6,989	0	6,989	29,357	118,790	335,567	483,714	0	0	0
1969	8,550	0	8,550	31,168	3,819	292,491	327,478	0	0	0
1970	13,598	0	13,598	49,520	0	429,991	479,511	0	0	0
1971	10,609	0	10,609	23,788	28,264	415,382	467,434	0	0	0
1972	14,434	0	14,434	54,749	144,433	523,354	722,536	0	0	0
1973	14,096	0	14,096	17,506	14,835	521,251	553,592	0	0	0
1974	17,000	0	17,000	83,238	110,234	494,924	688,396	0	0	0
1975	10,000	0	10,000	83,852	107,437	461,189	652,478	0	0	0
1976	10,000	0	10,000	89,921	111,355	460,058	661,334	0	0	0
1977	8,000	0	8,000	102,865	124,109	491,965	718,939	0	0	0
1978	8,000	0	8,000	120,754	142,317	542,160	805,231	0	0	0
1979	8,000	0	8,000	136,890	157,292	579,152	873,334	0	0	0
1980	10,698	1,244	11,942	126,146	142,202	504,587	772,935	0	0	0
1981	12,885	1,970	14,855	135,801	150,890	510,703	797,394	0	0	0
1982	13,247	3,441	16,688	146,293	160,451	519,104	825,848	0	228,254	228,254
1983	32,404	7,746	40,150	283,072	306,841	950,776	1,540,689	0	489,183	489,183
1984	32,332	7,880	40,212	294,760	316,119	939,811	1,550,690	0	509,106	509,106
1985	31,163	8,150	39,313	309,389	328,592	938,836	1,576,817	0	552,406	552,406
1986	29,974	8,450	38,424	325,322	341,269	935,567	1,602,158	0	557,465	557,465
1987	27,777	8,754	36,531	318,397	329,274	870,153	1,517,824	0	548,688	548,688
1988	28,261	15,091	43,352	311,468	317,919	810,922	1,440,309	0	551,487	551,487
1989	28,034	16,432	44,466	321,039	323,759	816,200	1,460,998	0	556,113	556,113
1990	28,639	25,612	54,251	341,630	340,707	849,458	1,531,795	0	688,819	688,819
1991	27,714	25,540	53,254	348,139	347,236	850,004	1,545,379	17,439	688,759	706,198
1992	28,877	26,347	55,224	370,033	369,108	888,078	1,627,219	30,738	702,379	733,117
1993	29,965	26,262	56,227	361,894	361,022	854,593	1,577,509	42,280	719,973	762,253
1994	29,946	25,316	55,262	383,201	374,290	891,168	1,648,659	51,688	713,954	765,642
1995	30,006	25,259	55,265	394,040	371,902	885,481	1,651,423	60,582	713,208	773,790
1996	28,003	24,297	52,300	390,898	356,906	849,778	1,597,582	76,736	796,195	872,931
1997	27,991	23,344	51,335	374,679	342,098	814,520	1,531,297	82,016	760,496	842,512
1998	29,186	24,121	53,307	389,099	355,264	845,865	1,590,228	97,941	817,199	915,140
1999	29,277	24,033	53,310	389,580	355,703	846,913	1,592,196	109,876	821,916	931,792
2000	30,594	25,656	56,250	389,849	355,949	847,499	1,593,297	128,250	892,413	1,020,663
2001	30,654	24,634	55,288	392,118	358,021	852,429	1,602,568	133,138	897,828	1,030,966
2002	31,950	25,312	57,262	379,614	346,604	825,248	1,551,466	160,559	1,006,855	1,167,414
2003	32,125	25,144	57,269	386,475	352,868	840,163	1,579,506	170,003	1,015,675	1,185,678
2004	33,297	24,978	58,275	381,165	348,020	828,617	1,557,802	181,114	1,036,622	1,217,736
2005	36,600	37,221	73,821	376,684	343,929	818,879	1,539,492	190,567	1,042,250	1,232,817
2006	34,556	35,335	69,891	380,536	347,446	827,250	1,555,232	198,352	1,012,819	1,211,171
2007	35,794	35,106	70,900	384,904	351,434	836,748	1,573,086	212,075	1,015,498	1,227,573
2008	36,187	35,691	71,878	393,688	359,453	855,842	1,608,983	228,039	1,031,988	1,260,027
2009	37,424	35,463	72,887	391,501	357,457	851,089	1,600,047	273,545	1,164,839	1,438,384
2010	37,658	35,237	72,895	392,693	358,546	853,682	1,604,921	286,365	1,151,450	1,437,815
2011	37,965	34,941	72,906	395,320	360,945	859,393	1,615,658	297,289	1,143,571	1,440,860
2012	38,267	34,650	72,917	396,604	362,117	862,181	1,620,902	316,122	1,140,016	1,456,138
2013	38,374	33,582	71,956	394,831	360,498	858,326	1,613,655	324,358	1,100,908	1,425,266
2014	39,856	34,082	73,938	397,398	362,842	863,910	1,624,150	350,364	1,123,107	1,473,471
2015	40,346	34,574	74,920	396,756	362,255	862,512	1,621,523	364,942	1,108,274	1,473,216
2016	41,636	34,294	75,930	384,838	351,374	836,604	1,572,816	380,641	1,098,153	1,478,794
2017	43,136	34,776	77,912	386,139	352,562	839,433	1,578,134	400,209	1,099,620	1,499,829
2018	67,422	34,500	101,922	382,703	349,424	831,962	1,564,089	415,717	1,090,312	1,506,029
2019	66,247	32,740	98,987	390,924	356,931	849,834	1,597,689	431,304	1,082,013	1,513,317
2020	116,069	40,626	156,695	394,320	360,031	857,218	1,611,569	465,255	1,073,808	1,539,063
2021	116,069	40,626	156,695	394,320	360,031	857,218	1,611,569	465,255	1,073,808	1,539,063
2022	116,069	40,626	156,695	394,320	360,031	857,218	1,611,569	465,255	1,073,808	1,539,063
2023	116,069	40,626	156,695	394,320	360,031	857,218	1,611,569	465,255	1,073,808	1,539,063
2024	116,069	40,626	156,695	394,320	360,031	857,218	1,611,569	465,255	1,073,808	1,539,063
2025	116,069	40,626	156,695	394,320	360,031	857,218	1,611,569	465,255	1,073,808	1,539,063
2026	116,069	40,626	156,695	394,320	360,031	857,218	1,611,569	465,255	1,073,808	1,539,063
2027	116,069	40,626	156,695	394,320	360,031	857,218	1,611,569	465,255	1,073,808	1,539,063
2028	116,069	40,626	156,695	394,320	360,031	857,218	1,611,569	465,255	1,073,808	1,539,063
2029	116,069	40,626	156,695	394,320	360,031	857,218	1,611,569	465,255	1,073,808	1,539,063
2030	116,069	40,626	156,695	394,320	360,031	857,218	1,611,569	465,255	1,073,808	1,539,063
2031	116,069	40,626	156,695	394,320	360,031	857,218	1,611,569	465,255	1,073,808	1,539,063
2032	116,069	40,626	156,695	394,320	360,031	857,218	1,611,569	465,255	1,073,808	1,539,063
2033	116,069	40,626	156,695	394,320	360,031	857,218	1,611,569	465,255	1,073,808	1,539,063
2034	116,069	40,626	156,695	394,320	360,031	857,218	1,611,569	465,255	1,073,808	1,539,063
2035	116,069	40,626	156,695	394,320	360,031	857,218	1,611,569	465,255	1,073,808	1,539,063
TOTAL	3,312,847	1,627,221	4,940,068	21,287,851	20,544,267	52,881,672	94,713,790	13,456,329	49,850,739	63,307,068

a) Unadjusted for prior overpayments or underpayments of charges.

TRANSPORTATION CHARGE FOR EACH CONTRACTOR[a]

(in dollars)

Calendar Year	SAN JOAQUIN VALLEY AREA									
	Devil's Den Water District	Dudley Ridge Water District	Empire West Side Irrigation District	Hacienda Water District	Kern County Water Agency		County of Kings	Oak Flat Water District	Tulare Lake Basin Water Storage District	Total
					Municipal and Industrial	Agricultural				
	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1962	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0	0
1968	29,675	66,393	4,982	0	0	428,415	2,267	4,489	63,219	599,440
1969	29,560	53,438	95	4,841	0	306,330	170	3,041	12,060	409,535
1970	39,308	69,413	6,772	16,454	0	468,796	0	5,554	0	606,297
1971	34,820	52,958	7,727	8,590	0	754,492	4,773	6,335	149,415	1,019,110
1972	44,403	61,440	8,389	8,479	0	1,104,421	2,027	7,325	365,578	1,602,062
1973	28,909	32,795	4,460	4,312	0	714,849	2,230	2,919	70,719	861,193
1974	30,886	35,652	4,438	4,882	26,078	718,736	2,219	3,004	63,610	889,505
1975	33,947	39,838	4,561	5,474	24,894	816,755	2,433	3,313	71,313	1,002,528
1976	39,192	50,420	5,345	6,948	74,671	936,922	2,850	4,374	90,507	1,211,229
1977	45,328	57,312	5,656	7,918	81,203	1,119,791	3,205	4,837	103,312	1,428,562
1978	50,434	70,902	6,545	10,035	94,377	1,419,152	4,145	6,057	128,059	1,789,706
1979	54,873	88,640	7,685	12,553	109,886	1,767,694	5,123	7,699	160,372	2,214,525
1980	45,853	77,006	6,295	10,911	195,925	1,540,125	4,616	6,391	139,533	2,026,655
1981	43,423	63,620	4,919	9,183	175,533	1,444,225	3,772	4,326	115,435	1,864,436
1982	42,602	74,619	5,460	10,738	206,052	1,674,800	4,550	5,191	135,225	2,159,237
1983	70,879	112,987	7,901	16,330	327,146	2,780,459	7,375	6,771	205,957	3,535,805
1984	70,684	119,633	7,958	17,242	353,947	3,028,462	8,223	7,026	217,780	3,830,955
1985	74,169	137,893	8,764	20,158	402,549	3,434,523	9,933	8,443	251,245	4,347,677
1986	77,069	161,246	9,812	23,549	463,935	3,952,156	12,102	10,605	294,363	5,004,837
1987	71,612	156,414	9,129	22,823	471,225	3,955,600	12,173	9,683	285,745	4,994,404
1988	70,031	160,308	8,989	23,372	499,898	4,160,643	11,986	10,136	293,049	5,238,412
1989	70,576	174,853	9,435	25,787	525,069	4,393,713	12,580	11,530	319,831	5,543,374
1990	74,935	204,774	10,647	30,166	603,100	4,980,253	14,195	14,129	390,383	6,322,582
1991	73,989	202,107	10,508	29,773	597,944	4,928,239	14,010	13,889	385,299	6,255,758
1992	77,722	218,521	11,362	32,191	632,905	5,237,096	15,149	15,506	416,591	6,657,043
1993	71,567	188,592	9,805	27,783	577,855	4,740,651	13,074	12,366	359,534	6,001,227
1994	73,427	201,968	10,501	29,753	604,065	4,956,648	14,001	13,893	385,034	6,289,290
1995	73,130	201,673	10,486	29,709	603,897	4,951,251	13,981	13,864	384,472	6,282,463
1996	73,753	213,331	11,092	31,426	617,714	5,085,271	14,789	15,281	406,696	6,469,353
1997	70,681	203,865	10,600	30,032	597,160	4,891,963	14,133	14,518	388,652	6,221,604
1998	75,173	211,117	10,977	31,100	616,712	5,068,126	14,635	15,118	402,476	6,445,434
1999	74,796	209,163	10,875	30,813	614,856	5,058,456	14,500	14,852	398,751	6,427,062
2000	73,460	199,338	10,364	29,365	601,147	4,926,779	13,819	13,670	380,020	6,247,962
2001	74,548	207,551	10,791	30,575	613,351	5,033,574	14,388	14,544	395,677	6,394,999
2002	69,934	185,002	9,619	27,253	570,404	4,652,092	12,825	12,194	352,691	5,892,014
2003	71,824	194,919	10,134	28,714	591,555	4,841,278	13,513	13,193	371,595	6,136,725
2004	69,691	185,066	9,622	27,263	573,614	4,677,627	12,830	12,149	352,812	5,920,674
2005	67,557	173,964	9,044	25,627	551,143	4,485,032	12,060	10,971	331,646	5,667,044
2006	69,919	190,628	9,911	28,082	578,707	4,731,772	13,215	12,842	363,416	5,998,492
2007	70,869	195,095	10,144	28,740	587,457	4,808,994	13,525	13,324	371,933	6,100,081
2008	72,822	202,431	10,525	29,821	606,672	4,960,962	14,033	13,938	385,918	6,297,122
2009	71,583	195,086	10,143	28,739	590,925	4,836,238	13,524	13,134	371,914	6,131,286
2010	72,166	198,875	10,341	29,297	597,600	4,895,082	13,786	13,548	379,136	6,209,831
2011	72,853	202,812	10,545	29,877	604,865	4,958,945	14,060	13,963	386,644	6,294,564
2012	73,089	204,639	10,640	30,146	608,197	4,987,308	14,186	14,211	390,128	6,332,544
2013	73,400	209,850	10,911	30,914	614,177	5,045,276	14,548	14,880	400,062	6,414,018
2014	73,118	205,101	10,664	30,214	609,400	4,996,110	14,218	14,190	391,008	6,344,023
2015	73,025	205,192	10,669	30,228	609,850	4,997,615	14,225	14,200	391,180	6,346,184
2016	68,963	185,159	9,627	27,277	573,792	4,665,052	12,836	12,130	352,989	5,907,825
2017	69,693	185,306	9,634	27,298	572,397	4,672,746	12,847	12,113	353,270	5,915,304
2018	69,904	179,893	9,354	26,501	561,656	4,595,102	12,471	11,599	342,950	5,809,430
2019	72,580	194,656	10,121	28,675	590,143	4,842,168	13,495	13,151	371,095	6,136,084
2020	73,329	198,893	10,341	29,300	597,584	4,909,245	13,788	13,601	379,173	6,225,254
2021	73,329	198,893	10,341	29,300	597,584	4,909,245	13,788	13,601	379,173	6,225,254
2022	73,329	198,893	10,341	29,300	597,584	4,909,245	13,788	13,601	379,173	6,225,254
2023	73,329	198,893	10,341	29,300	597,584	4,909,245	13,788	13,601	379,173	6,225,254
2024	73,329	198,893	10,341	29,300	597,584	4,909,245	13,788	13,601	379,173	6,225,254
2025	73,329	198,893	10,341	29,300	597,584	4,909,245	13,788	13,601	379,173	6,225,254
2026	73,329	198,893	10,341	29,300	597,584	4,909,245	13,788	13,601	379,173	6,225,254
2027	73,329	198,893	10,341	29,300	597,584	4,909,245	13,788	13,601	379,173	6,225,254
2028	73,329	198,893	10,341	29,300	597,584	4,909,245	13,788	13,601	379,173	6,225,254
2029	73,329	198,893	10,341	29,300	597,584	4,909,245	13,788	13,601	379,173	6,225,254
2030	73,329	198,893	10,341	29,300	597,584	4,909,245	13,788	13,601	379,173	6,225,254
2031	73,329	198,893	10,341	29,300	597,584	4,909,245	13,788	13,601	379,173	6,225,254
2032	73,329	198,893	10,341	29,300	597,584	4,909,245	13,788	13,601	379,173	6,225,254
2033	73,329	198,893	10,341	29,300	597,584	4,909,245	13,788	13,601	379,173	6,225,254
2034	73,329	198,893	10,341	29,300	597,584	4,909,245	13,788	13,601	379,173	6,225,254
2035	73,329	198,893	10,341	29,300	597,584	4,909,245	13,788	13,601	379,173	6,225,254
TOTAL	4,441,668	11,055,742	620,429	1,616,731	31,466,992	265,976,685	752,231	764,025	20,957,067	337,651,570

Calendar Year	SOUTHERN CALIFORNIA AREA									
	Antelope Valley East Kern Water Agency	Castaic Lake Water Agency	Coachella Valley County Water District	Crestline Lake Arrowhead Water Agency	Desert Water Agency	Littlerock Creek Irrigation District	Mojave Water Agency	Palmdale Water District	San Bernardino Valley Municipal Water District	San Gabriel Valley Municipal Water District
	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
1962	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0	0
1968	0	0	0	0	0	0	0	0	0	0
1969	0	0	0	0	0	0	0	0	0	0
1970	0	0	0	0	0	0	0	0	0	0
1971	0	0	0	0	0	0	0	0	0	0
1972	706	0	0	6,730	0	4,074	797	0	15,476	0
1973	223	0	69,530	5,527	107,892	2,985	0	0	280,918	0
1974	604	0	102,977	18,666	160,902	4,976	0	0	556,101	136,801
1975	575	0	104,525	21,652	164,252	6,149	0	0	600,033	149,724
1976	337,515	7,716	121,786	27,884	192,293	8,294	325,299	1,295	580,658	147,804
1977	405,367	19,118	144,615	34,861	223,250	10,187	360,636	4,186	663,055	170,664
1978	472,135	32,079	168,363	42,263	255,039	13,555	437,212	8,840	750,073	196,269
1979	535,343	36,241	189,094	49,045	281,865	15,887	507,358	15,275	782,472	207,826
1980	572,240	66,228	191,287	50,967	298,775	16,389	478,040	24,798	746,407	188,028
1981	638,016	96,939	220,039	57,987	345,376	18,320	538,057	50,485	816,168	200,647
1982	743,556	88,294	253,016	66,072	398,719	21,248	605,673	80,988	922,686	221,704
1983	1,255,222	227,759	446,922	115,826	706,622	35,964	1,053,791	168,309	1,813,046	426,370
1984	1,360,554	262,957	486,417	125,243	771,208	38,861	1,132,134	211,927	1,918,768	439,347
1985	1,458,403	291,718	522,658	133,825	830,643	41,782	1,199,819	254,560	1,978,255	441,771
1986	1,569,967	345,248	554,151	141,200	882,502	44,172	1,259,846	285,440	2,029,316	442,630
1987	1,735,596	435,951	600,292	152,305	973,143	48,281	1,350,043	326,137	2,104,425	446,423
1988	2,004,018	557,868	861,664	168,763	1,099,226	54,856	1,487,188	386,911	2,340,508	483,705
1989	2,081,506	553,696	685,117	172,587	1,143,271	56,529	1,519,141	411,714	2,370,344	477,978
1990	2,274,043	654,856	736,569	184,939	1,214,859	61,061	1,619,814	459,287	2,543,372	498,651
1991	2,417,720	669,689	736,356	184,885	1,214,510	61,091	1,619,345	459,508	2,565,403	506,080
1992	2,549,675	676,196	734,162	184,336	1,210,889	60,818	1,614,519	457,453	2,557,009	512,897
1993	2,728,045	710,925	744,477	186,926	1,227,905	61,631	1,637,207	463,568	2,605,899	531,340
1994	2,894,631	730,044	745,962	187,298	1,230,352	62,148	1,640,470	467,458	2,621,693	543,246
1995	3,039,264	714,364	745,635	187,216	1,229,813	62,130	1,639,753	467,326	2,611,445	549,777
1996	3,039,245	665,710	710,222	178,325	1,171,406	59,292	1,561,874	445,990	2,456,114	525,216
1997	3,154,124	660,543	700,936	175,992	1,156,089	58,833	1,541,451	442,527	2,364,259	513,408
1998	3,417,650	708,856	728,278	182,859	1,201,186	61,124	1,601,582	459,759	2,523,065	556,253
1999	3,562,653	698,318	729,747	183,227	1,203,608	61,167	1,604,811	460,083	2,500,204	559,498
2000	3,796,594	729,251	749,267	188,129	1,235,804	62,672	1,647,740	471,401	2,578,505	585,568
2001	3,811,793	755,448	750,517	188,442	1,237,867	62,936	1,650,490	473,384	2,530,647	581,605
2002	3,817,132	746,257	753,004	189,065	1,241,967	63,011	1,655,957	473,950	2,568,985	597,176
2003	3,813,419	735,416	752,317	188,894	1,240,837	62,943	1,654,448	473,442	2,503,854	588,869
2004	3,828,602	749,958	756,044	189,829	1,246,979	63,186	1,662,639	475,265	2,545,007	605,244
2005	3,811,340	751,556	755,010	189,571	1,245,275	62,905	1,660,366	473,163	2,535,827	609,982
2006	3,729,973	717,791	737,161	185,088	1,215,834	61,567	1,621,113	463,088	2,458,607	597,878
2007	3,732,485	721,072	737,563	185,189	1,216,500	61,610	1,621,999	463,420	2,453,481	603,327
2008	3,795,161	746,506	748,782	188,007	1,235,004	62,649	1,646,674	471,222	2,487,491	618,235
2009	3,793,855	738,739	750,855	188,527	1,238,423	62,625	1,651,230	471,057	2,514,219	631,739
2010	3,778,659	736,490	747,689	187,732	1,233,204	62,371	1,644,272	469,140	2,490,329	632,291
2011	3,771,933	733,438	746,564	187,448	1,231,346	62,261	1,641,795	468,315	2,475,284	635,226
2012	3,769,799	733,319	745,866	187,274	1,230,194	62,228	1,640,260	468,065	2,500,177	648,195
2013	3,699,485	711,839	730,893	183,515	1,205,498	61,072	1,607,331	459,363	2,553,939	669,101
2014	3,777,680	737,198	747,249	187,621	1,232,477	62,361	1,643,303	469,068	2,500,293	661,628
2015	3,781,041	740,176	747,396	187,657	1,232,716	62,415	1,643,621	469,457	2,489,724	665,625
2016	3,799,603	752,283	752,832	189,023	1,241,683	62,717	1,655,578	471,743	2,501,305	675,306
2017	3,797,481	747,769	753,350	189,153	1,242,537	62,682	1,656,716	471,480	2,501,433	682,165
2018	3,791,521	750,063	752,397	188,913	1,240,966	62,582	1,654,623	470,722	2,490,576	685,759
2019	3,791,042	746,192	750,207	188,364	1,237,356	62,575	1,649,808	470,667	2,510,315	698,045
2020	3,776,862	747,223	748,175	187,853	1,234,005	62,344	1,645,337	468,926	2,500,467	701,884
2021	3,776,862	747,223	748,175	187,853	1,234,005	62,344	1,645,337	468,926	2,500,467	701,884
2022	3,776,862	747,223	748,175	187,853	1,234,005	62,344	1,645,337	468,926	2,500,467	701,884
2023	3,776,862	747,223	748,175	187,853	1,234,005	62,344	1,645,337	468,926	2,500,467	701,884
2024	3,776,862	747,223	748,175	187,853	1,234,005	62,344	1,645,337	468,926	2,500,467	701,884
2025	3,776,862	747,223	748,175	187,853	1,234,005	62,344	1,645,337	468,926	2,500,467	701,884
2026	3,776,862	747,223	748,175	187,853	1,234,005	62,344	1,645,337	468,926	2,500,467	701,884
2027	3,776,862	747,223	748,175	187,853	1,234,005	62,344	1,645,337	468,926	2,500,467	701,884
2028	3,776,862	747,223	748,175	187,853	1,234,005	62,344	1,645,337	468,926	2,500,467	701,884
2029	3,776,862	747,223	748,175	187,853	1,234,005	62,344	1,645,337	468,926	2,500,467	701,884
2030	3,776,862	747,223	748,175	187,853	1,234,005	62,344	1,645,337	468,926	2,500,467	701,884
2031	3,776,862	747,223	748,175	187,853	1,234,005	62,344	1,645,337	468,926	2,500,467	701,884
2032	3,776,862	747,223	748,175	187,853	1,234,005	62,344	1,645,337	468,926	2,500,467	701,884
2033	3,776,862	747,223	748,175	187,853	1,234,005	62,344	1,645,337	468,926	2,500,467	701,884
2034	3,776,862	747,223	748,175	187,853	1,234,005	62,344	1,645,337	468,926	2,500,467	701,884
2035	3,776,862	747,223	748,175	187,853	1,234,005	62,344	1,645,337	468,926	2,500,467	701,884
TOTAL	180,366,986	36,647,642	39,970,560	9,990,495	65,322,142	3,298,676	87,571,215	23,714,052	136,814,642	33,977,165

a) Unadjusted for prior overpayments or underpayments of charges.

TRANSPORTATION CHARGE FOR EACH CONTRACTOR[a]

(in dollars)

Calendar Year	SOUTHERN CALIFORNIA AREA (continued)				FEATHER RIVER AREA				FUTURE CONTRACTOR	GRAND TOTAL
	San Gorgonio Pass Water Agency	The Metropolitan Water District of Southern California	Ventura County Flood Control District	Total	City of Yuba City	County of Butte	Plumas County FC & WCD	Total	South Bay	
	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)
1962	0	0	0	0	0	0	0	0	0	36,964
1963	0	0	0	0	0	0	0	0	0	57,703
1964	0	0	0	0	0	0	0	0	0	74,094
1965	0	0	0	0	0	0	0	0	0	142,540
1966	0	0	0	0	0	0	0	0	0	192,522
1967	0	0	0	0	0	0	0	0	0	236,921
1968	0	0	0	0	0	0	0	0	0	1,090,143
1969	0	0	0	0	0	0	0	0	0	745,563
1970	0	0	0	0	0	0	0	0	0	1,099,406
1971	0	0	0	0	0	0	0	0	0	1,497,153
1972	0	746,743	0	774,526	0	0	0	0	0	3,113,558
1973	0	982,209	0	1,449,284	0	0	0	0	0	2,878,165
1974	0	2,650,267	0	3,631,294	0	0	0	0	0	5,226,195
1975	0	4,810,520	0	5,857,430	0	0	0	0	0	7,522,436
1976	0	5,474,696	0	7,225,240	0	0	0	0	0	9,107,803
1977	0	7,773,219	0	9,809,158	0	0	0	0	0	11,964,659
1978	0	8,510,826	0	10,886,654	0	0	0	0	0	13,489,591
1979	0	8,435,877	0	11,056,283	0	0	0	0	0	14,152,142
1980	77,490	7,749,221	3,743	10,463,613	0	0	0	0	0	13,275,145
1981	92,936	8,621,206	9,694	11,705,870	0	0	0	0	0	14,382,555
1982	113,562	9,285,724	11,879	12,813,121	0	0	0	0	0	16,043,148
1983	238,496	18,669,713	37,033	25,195,073	0	0	0	0	0	30,800,900
1984	265,676	19,077,144	48,876	26,139,112	0	0	0	0	0	32,070,075
1985	286,422	19,003,996	60,147	26,503,999	0	0	0	0	0	33,020,212
1986	307,980	19,319,420	88,810	27,270,682	0	0	0	0	0	34,473,566
1987	331,033	18,624,507	131,707	27,259,843	0	0	0	0	0	34,357,290
1988	380,017	27,481,899	206,617	37,513,240	0	0	0	0	0	44,786,800
1989	395,872	27,329,058	238,150	37,434,963	0	0	0	0	0	45,039,914
1990	433,499	30,166,041	333,262	41,180,253	0	0	0	0	0	49,777,700
1991	432,567	30,098,330	322,742	41,288,226	0	0	0	0	0	49,848,815
1992	431,152	30,693,881	325,877	42,008,864	0	0	0	0	0	51,081,467
1993	439,396	32,250,488	342,615	43,930,422	0	0	0	0	0	52,327,638
1994	442,058	33,396,642	351,829	45,313,831	0	0	0	0	0	54,072,684
1995	440,332	33,272,451	344,270	45,303,776	0	0	0	0	0	54,066,717
1996	414,139	31,460,603	320,823	43,008,959	0	0	0	0	0	52,001,125
1997	398,652	31,078,607	318,335	42,563,756	0	0	0	0	0	51,210,504
1998	425,430	33,753,227	341,617	45,960,886	0	0	0	0	0	54,964,995
1999	421,576	33,640,100	336,539	45,961,531	0	0	0	0	0	54,965,891
2000	434,777	35,311,624	351,447	48,142,779	0	0	0	0	0	57,060,951
2001	426,707	37,723,270	364,072	50,557,178	0	0	0	0	0	59,640,999
2002	433,170	38,100,253	359,643	50,999,570	0	0	0	0	0	59,667,726
2003	422,190	37,707,712	354,417	50,498,758	0	0	0	0	0	59,457,936
2004	429,130	38,803,400	361,426	51,716,709	0	0	0	0	0	60,471,196
2005	427,581	39,165,279	362,195	52,050,050	0	0	0	0	0	60,563,224
2006	414,560	37,867,049	345,923	50,415,632	0	0	0	0	0	59,250,418
2007	413,696	38,207,982	347,505	50,765,829	0	0	0	0	0	59,737,469
2008	419,430	39,633,905	359,759	52,412,825	0	0	0	0	0	61,650,835
2009	423,937	39,585,989	356,018	52,407,213	0	0	0	0	0	61,649,817
2010	419,909	39,492,130	354,935	52,249,151	0	0	0	0	0	61,574,613
2011	417,372	39,301,722	353,465	52,026,169	0	0	0	0	0	61,450,157
2012	421,570	39,438,685	353,406	52,199,038	0	0	0	0	0	61,681,539
2013	430,633	38,995,454	343,055	51,651,178	0	0	0	0	0	61,176,073
2014	421,589	39,566,365	355,276	52,362,108	0	0	0	0	0	61,877,690
2015	419,808	39,602,847	356,709	52,399,192	0	0	0	0	0	61,915,035
2016	421,759	40,086,076	362,545	52,972,453	0	0	0	0	0	62,007,818
2017	421,781	39,930,984	360,370	52,817,901	0	0	0	0	0	61,889,080
2018	419,951	39,942,667	361,478	52,812,218	0	0	0	0	0	61,793,688
2019	423,279	39,920,269	359,610	52,807,729	0	0	0	0	0	62,153,806
2020	421,617	39,900,303	360,107	52,755,103	0	0	0	0	0	62,287,684
2021	421,617	39,900,303	360,107	52,755,103	0	0	0	0	0	62,287,684
2022	421,617	39,900,303	360,107	52,755,103	0	0	0	0	0	62,287,684
2023	421,617	39,900,303	360,107	52,755,103	0	0	0	0	0	62,287,684
2024	421,617	39,900,303	360,107	52,755,103	0	0	0	0	0	62,287,684
2025	421,617	39,900,303	360,107	52,755,103	0	0	0	0	0	62,287,684
2026	421,617	39,900,303	360,107	52,755,103	0	0	0	0	0	62,287,684
2027	421,617	39,900,303	360,107	52,755,103	0	0	0	0	0	62,287,684
2028	421,617	39,900,303	360,107	52,755,103	0	0	0	0	0	62,287,684
2029	421,617	39,900,303	360,107	52,755,103	0	0	0	0	0	62,287,684
2030	421,617	39,900,303	360,107	52,755,103	0	0	0	0	0	62,287,684
2031	421,617	39,900,303	360,107	52,755,103	0	0	0	0	0	62,287,684
2032	421,617	39,900,303	360,107	52,755,103	0	0	0	0	0	62,287,684
2033	421,617	39,900,303	360,107	52,755,103	0	0	0	0	0	62,287,684
2034	421,617	39,900,303	360,107	52,755,103	0	0	0	0	0	62,287,684
2035	421,617	39,900,303	360,107	52,755,103	0	0	0	0	0	62,287,684
TOTAL	21,976,986	1,951,145,125	17,059,531	2,607,855,217	0	0	0	0	0	3,108,467,713

TABLE B-19: TOTAL TRANSPORTATION

(in dollars)

Calendar Year	NORTH BAY AREA			SOUTH BAY AREA				CENTRAL COASTAL AREA		
	Napa County FC & WCD	Solano County FC & WCD	Total	Alameda County FC & WCD, Zone 7	Alameda County Water District	Santa Clara Valley Water District	Total	San Luis Obispo County FC & WCD	Santa Barbara County FC & WCD	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1962	0	0	0	11,607	43,652	0	55,259	0	0	0
1963	0	0	0	147,937	184,166	438,214	770,317	0	0	0
1964	0	0	0	165,637	259,302	607,078	1,032,017	8,253	20,452	28,705
1965	0	0	0	238,465	358,291	1,132,691	1,729,447	13,884	33,756	47,640
1966	20,502	0	20,502	261,428	365,606	1,375,361	2,002,395	23,033	55,338	78,371
1967	45,502	0	45,502	330,272	438,469	1,631,366	2,400,107	41,308	98,240	139,548
1968	132,355	0	132,355	359,321	521,732	1,884,917	2,765,970	67,880	160,542	228,422
1969	268,229	0	268,229	412,928	457,370	1,977,276	2,847,574	118,348	278,568	396,916
1970	284,243	0	284,243	430,290	451,911	2,111,438	2,993,639	130,626	307,401	438,027
1971	227,582	0	227,582	386,322	465,464	2,064,727	2,916,513	134,579	316,769	451,348
1972	231,898	0	231,898	486,321	603,713	2,246,746	3,336,780	137,043	322,696	459,739
1973	225,104	29,804	254,908	445,651	470,133	2,229,846	3,145,630	134,372	316,569	450,941
1974	244,347	30,929	275,276	561,904	613,343	2,328,211	3,503,458	134,492	316,989	451,481
1975	244,636	38,631	283,267	540,466	590,454	2,247,833	3,378,753	136,742	322,574	459,316
1976	254,470	49,158	303,628	569,553	615,425	2,297,196	3,482,174	238,206	559,775	797,981
1977	271,002	68,121	339,123	581,928	627,637	2,327,554	3,537,119	244,076	573,554	817,630
1978	299,237	94,123	393,360	599,965	645,977	2,377,885	3,623,827	267,199	638,180	905,379
1979	418,515	214,150	632,665	617,402	662,167	2,417,904	3,697,473	309,246	760,675	1,069,921
1980	672,437	469,495	1,141,932	607,393	647,731	2,344,961	3,600,085	400,123	1,004,439	1,404,562
1981	685,007	480,109	1,165,116	618,141	657,441	2,353,734	3,629,316	819,527	2,195,840	3,015,367
1982	687,098	483,742	1,170,840	629,510	667,834	2,364,361	3,661,705	1,254,933	3,610,356	4,865,289
1983	707,498	489,722	1,197,220	770,453	818,169	2,805,772	4,394,394	1,292,442	3,992,512	5,284,954
1984	707,404	490,086	1,197,490	782,346	827,616	2,795,058	4,405,020	1,296,456	4,022,388	5,318,844
1985	706,447	490,474	1,196,921	797,656	840,724	2,795,709	4,434,089	1,298,686	4,070,080	5,368,766
1986	705,341	490,802	1,196,143	813,937	853,724	2,793,267	4,460,928	1,305,540	4,090,555	5,396,095
1987	703,158	491,080	1,194,238	806,620	841,355	2,726,935	4,374,910	1,304,433	4,077,875	5,382,308
1988	702,846	496,590	1,199,436	798,851	829,191	2,665,554	4,293,596	1,302,143	4,074,413	5,376,556
1989	702,575	497,861	1,200,436	808,136	834,766	2,670,198	4,313,100	1,301,863	4,077,661	5,379,524
1990	702,919	506,925	1,209,844	828,364	851,370	2,702,483	4,382,217	1,303,037	4,215,065	5,518,102
1991	701,647	506,605	1,208,252	834,335	857,383	2,701,632	4,393,350	1,319,630	4,212,292	5,531,922
1992	703,236	507,724	1,210,960	856,776	879,783	2,741,144	4,477,703	1,333,155	4,226,097	5,559,252
1993	704,477	507,745	1,212,222	848,812	871,851	2,708,075	4,428,738	1,344,505	4,243,006	5,587,511
1994	704,444	506,778	1,211,222	869,937	884,959	2,744,266	4,499,162	1,353,513	4,235,394	5,588,907
1995	704,502	506,720	1,211,222	880,766	882,560	2,738,554	4,501,880	1,362,041	4,233,271	5,595,312
1996	702,187	505,525	1,207,712	876,964	866,938	2,701,191	4,445,093	1,378,565	4,317,995	5,696,560
1997	702,161	504,551	1,206,712	860,604	851,992	2,665,593	4,378,189	1,382,899	4,278,993	5,661,892
1998	703,482	505,428	1,208,910	875,289	865,414	2,697,610	4,438,313	1,399,414	4,337,491	5,736,905
1999	703,572	505,338	1,208,910	875,774	865,857	2,698,667	4,440,298	1,411,040	4,341,063	5,752,103
2000	704,913	506,997	1,211,910	876,045	866,104	2,699,257	4,441,406	1,429,690	4,412,673	5,842,363
2001	704,958	505,952	1,210,910	878,333	868,195	2,704,232	4,450,760	1,434,317	4,417,040	5,851,357
2002	706,264	506,646	1,212,910	865,723	856,673	2,676,795	4,399,191	1,462,248	4,528,189	5,990,437
2003	706,436	506,474	1,212,910	872,641	862,996	2,691,850	4,427,487	1,471,484	4,536,142	6,007,626
2004	707,606	506,304	1,213,910	867,286	858,101	2,680,196	4,405,583	1,482,392	4,556,405	6,038,797
2005	711,090	518,820	1,229,910	862,767	853,973	2,670,365	4,387,105	1,491,545	4,560,994	6,052,539
2006	709,018	516,892	1,225,910	866,653	857,524	2,678,818	4,402,995	1,499,181	4,530,875	6,030,056
2007	710,252	516,658	1,226,910	871,057	861,548	2,688,403	4,421,008	1,512,954	4,533,701	6,046,655
2008	710,654	517,256	1,227,910	879,916	869,640	2,707,678	4,457,234	1,529,096	4,550,794	6,079,890
2009	711,887	517,023	1,228,910	877,709	867,625	2,702,878	4,448,212	1,575,620	4,687,557	6,263,177
2010	712,118	516,792	1,228,910	878,912	868,723	2,705,497	4,453,132	1,588,354	4,673,815	6,262,169
2011	712,420	516,490	1,228,910	881,562	871,146	2,711,261	4,463,969	1,599,236	4,665,748	6,264,984
2012	712,718	516,192	1,228,910	882,856	872,329	2,714,074	4,469,259	1,618,053	4,662,106	6,280,159
2013	712,809	515,101	1,227,910	772,549	770,691	2,353,845	3,897,085	1,625,996	4,621,873	6,247,869
2014	714,299	515,611	1,229,910	740,565	719,461	2,198,188	3,658,214	1,643,906	4,624,240	6,268,146
2015	714,796	516,114	1,230,910	703,400	657,465	1,837,748	3,198,613	1,652,735	4,595,654	6,248,389
2016	695,580	515,828	1,211,408	673,579	624,121	1,645,488	2,943,188	1,659,086	4,563,371	6,222,457
2017	672,087	516,320	1,188,407	646,482	599,060	1,540,410	2,785,952	1,660,399	4,522,002	6,182,401
2018	616,505	516,039	1,132,544	606,951	561,738	1,425,380	2,594,069	1,661,492	4,478,664	6,140,156
2019	570,897	514,240	1,085,137	579,974	537,335	1,349,477	2,466,786	1,673,280	4,461,194	6,134,474
2020	616,244	522,302	1,138,546	570,059	527,834	1,319,485	2,417,378	1,705,085	4,447,718	6,152,803
2021	613,327	522,302	1,135,629	566,886	524,775	1,312,084	2,403,745	1,703,699	4,444,342	6,148,041
2022	611,692	522,302	1,133,994	566,156	523,932	1,307,539	2,397,627	1,702,628	4,441,668	6,144,296
2023	610,592	492,499	1,103,091	565,484	523,288	1,304,192	2,392,964	1,701,968	4,440,011	6,141,979
2024	607,801	491,373	1,099,174	564,946	522,744	1,302,141	2,389,831	1,701,395	4,438,536	6,139,931
2025	601,066	483,671	1,084,737	564,126	521,811	1,299,251	2,385,188	1,700,410	4,435,909	6,136,319
2026	593,159	473,144	1,066,303	563,549	521,221	1,297,237	2,382,007	1,599,163	4,199,209	5,798,372
2027	578,380	454,181	1,032,561	563,265	520,957	1,296,527	2,380,749	1,597,572	4,195,425	5,792,997
2028	555,715	428,180	983,895	562,829	520,558	1,295,575	2,378,962	1,574,574	4,131,089	5,705,663
2029	436,309	308,152	744,461	562,007	519,807	1,293,785	2,375,599	1,532,875	4,009,403	5,542,278
2030	267,430	147,673	415,103	561,119	518,994	1,291,849	2,371,962	1,441,788	3,765,151	5,206,939
2031	253,050	135,703	388,753	560,795	518,698	1,291,143	2,370,636	1,022,750	2,574,607	3,597,357
2032	251,773	133,848	385,621	560,582	518,504	1,290,680	2,369,766	657,971	1,568,108	2,226,079
2033	251,338	133,190	384,528	560,184	518,140	1,289,812	2,368,136	621,273	1,453,715	2,074,988
2034	250,962	132,621	383,583	559,522	517,534	1,288,370	2,365,426	615,733	1,439,182	2,054,915
2035	250,962	132,621	383,583	558,841	516,912	1,286,886	2,362,639	612,398	1,430,700	2,043,098
TOTAL	38,447,167	26,259,727	64,706,894	48,283,371	48,911,627	153,259,403	250,454,401	80,065,578	229,536,674	309,602,252

a) Unadjusted for prior overpayments or underpayments of charges.

CHARGE FOR EACH CONTRACTOR[a]

(in dollars)

Calendar Year	SAN JOAQUIN VALLEY AREA									
	Devil's Den Water District	Dudley Ridge Water District	Empire West Side Irrigation District	Hacienda Water District	Kern County Water Agency		County of Kings	Oak Flat Water District	Tulare Lake Basin Water Storage District	Total
					Municipal and Industrial	Agricultural				
	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1962	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	64,441	0	0	0	0	64,441
1966	0	0	0	0	120,214	0	0	0	0	120,214
1967	0	0	0	0	233,142	0	0	0	0	233,142
1968	69,738	173,640	10,196	5,801	399,116	1,506,886	12,828	10,484	193,418	2,382,107
1969	113,315	167,355	11,863	23,363	475,042	2,268,810	11,460	9,352	295,062	3,375,622
1970	136,117	190,284	18,539	35,528	523,647	2,776,324	11,541	12,068	228,593	3,932,641
1971	141,904	185,832	19,553	26,913	551,083	3,610,144	16,516	13,314	391,330	4,956,589
1972	160,945	206,538	20,337	28,605	577,780	4,641,218	13,967	18,590	953,403	6,621,383
1973	151,592	187,672	16,387	25,948	586,606	4,545,216	14,188	10,459	345,949	5,884,017
1974	161,753	208,554	16,785	29,665	627,272	4,937,029	14,628	11,157	364,800	6,371,643
1975	174,177	223,343	16,914	31,822	634,599	5,363,463	14,885	11,753	390,739	6,861,695
1976	188,051	244,415	17,732	34,840	686,724	5,841,628	15,360	13,037	428,595	7,470,382
1977	205,653	260,768	18,016	37,206	692,622	6,355,552	15,716	13,804	458,478	8,057,815
1978	210,847	284,341	18,905	41,283	707,165	7,033,206	16,697	15,353	500,813	8,828,610
1979	215,528	312,401	20,063	45,324	726,178	7,760,878	17,770	17,171	551,352	9,666,665
1980	206,361	310,460	18,659	45,112	814,738	7,901,717	17,353	16,189	547,579	9,878,168
1981	204,190	307,194	17,291	45,362	797,430	8,234,940	16,601	14,308	541,355	10,178,671
1982	203,369	328,956	17,849	48,437	833,272	8,865,657	17,523	15,513	579,293	10,909,869
1983	232,822	378,001	20,373	55,742	962,610	10,463,391	20,560	17,298	670,704	12,821,501
1984	232,422	394,973	20,424	58,107	993,330	11,109,415	21,530	17,877	699,886	13,547,964
1985	235,971	423,190	21,228	62,980	1,051,069	11,910,043	23,527	19,456	750,873	14,498,337
1986	242,252	456,403	22,270	67,826	1,118,000	12,798,131	25,871	21,953	811,781	15,564,487
1987	236,648	461,350	21,576	68,540	1,124,848	13,192,395	25,933	21,193	820,388	15,972,871
1988	234,846	474,887	21,421	70,511	1,152,809	13,758,605	25,730	21,967	844,660	16,605,436
1989	235,338	499,468	21,870	74,896	1,178,148	14,259,613	26,327	23,696	889,139	17,208,495
1990	239,640	539,379	23,082	80,747	1,256,334	15,124,293	27,943	26,459	997,113	18,314,990
1991	238,535	536,487	22,933	80,321	1,250,669	15,066,065	27,745	26,211	991,616	18,240,582
1992	242,506	553,283	23,805	82,796	1,286,559	15,385,863	28,903	27,841	1,023,604	18,655,160
1993	236,297	523,156	22,240	78,358	1,230,960	14,883,728	26,819	24,698	966,198	17,992,454
1994	238,196	536,638	22,940	80,344	1,257,456	15,102,825	27,752	26,227	991,882	18,284,260
1995	237,896	536,340	22,925	80,299	1,257,283	15,097,335	27,732	26,198	991,316	18,277,324
1996	238,417	547,907	23,526	82,003	1,270,932	15,228,824	28,534	27,610	1,013,365	18,461,118
1997	235,217	538,307	23,027	80,589	1,250,049	15,031,265	27,872	26,844	995,077	18,208,247
1998	239,893	545,731	23,412	81,684	1,270,016	15,212,930	28,382	27,449	1,009,218	18,438,715
1999	239,507	543,755	23,309	81,393	1,268,110	15,202,755	28,246	27,182	1,005,448	18,419,705
2000	238,134	533,816	22,794	79,927	1,254,130	15,068,181	27,559	25,998	986,515	18,237,054
2001	239,252	542,120	23,225	81,151	1,266,548	15,177,263	28,133	26,874	1,002,330	18,386,896
2002	234,544	519,329	22,041	77,793	1,222,992	14,789,123	26,559	24,519	958,910	17,875,810
2003	236,474	529,350	22,562	79,269	1,244,417	14,981,321	27,250	25,520	978,003	18,124,166
2004	234,299	519,392	22,044	77,803	1,226,205	14,814,750	26,562	24,474	959,029	17,904,558
2005	232,120	508,172	21,461	76,149	1,203,433	14,618,848	25,788	23,292	937,647	17,646,910
2006	234,545	525,016	22,337	78,632	1,231,450	14,870,473	26,951	25,168	969,751	17,984,323
2007	235,511	529,534	22,572	79,296	1,240,325	14,949,034	27,262	25,651	978,355	18,087,540
2008	237,499	536,939	22,956	80,388	1,259,735	15,103,132	27,776	26,266	992,468	18,287,159
2009	236,230	529,516	22,571	79,293	1,243,784	14,976,226	27,261	25,461	978,318	18,118,660
2010	236,828	533,346	22,771	79,858	1,250,560	15,036,182	27,526	25,876	985,615	18,198,562
2011	237,530	537,325	22,976	80,445	1,257,934	15,101,195	27,803	26,291	993,200	18,284,699
2012	237,773	539,173	23,072	80,716	1,261,323	15,130,137	27,930	26,540	996,723	18,323,387
2013	238,100	544,447	23,346	81,494	1,267,442	15,189,626	28,294	27,210	1,006,770	18,406,729
2014	237,803	539,638	23,096	80,784	1,262,531	15,139,020	27,962	26,519	997,606	18,334,959
2015	237,709	539,730	23,101	80,798	1,198,543	15,140,548	27,969	26,529	997,781	18,272,708
2016	233,564	519,484	22,049	77,817	1,106,172	14,802,094	26,568	24,454	959,205	17,771,407
2017	234,301	519,631	22,056	77,838	991,848	14,809,859	26,579	24,437	959,486	17,666,035
2018	234,502	514,164	21,772	77,032	878,209	14,730,739	17,732	23,921	949,068	17,447,139
2019	237,236	529,085	22,549	79,230	851,004	14,982,157	18,255	25,478	977,496	17,722,490
2020	238,002	533,366	22,771	79,861	826,968	15,050,473	18,299	25,929	985,658	17,781,327
2021	238,002	533,366	22,771	79,861	805,394	15,050,473	18,156	25,929	985,658	17,759,610
2022	238,002	533,366	22,771	79,861	795,361	15,050,473	18,085	25,929	985,658	17,749,506
2023	238,002	533,366	22,771	79,861	790,877	15,050,473	18,048	25,929	985,658	17,744,985
2024	238,002	533,366	22,771	79,861	788,625	15,050,473	18,026	25,929	985,658	17,742,711
2025	238,002	533,366	22,771	79,861	785,082	15,050,473	17,989	25,929	985,658	17,739,131
2026	238,002	533,366	22,771	79,861	783,249	15,050,473	17,964	25,929	985,658	17,737,273
2027	238,002	533,366	22,771	79,861	782,131	15,050,473	17,936	25,929	985,658	17,736,127
2028	238,002	533,366	22,771	79,861	780,822	15,050,473	17,896	25,929	985,658	17,734,778
2029	238,002	533,366	22,771	79,861	778,237	15,050,473	17,819	25,929	985,658	17,732,116
2030	238,002	533,366	22,771	79,861	775,063	15,050,473	17,716	25,929	985,658	17,728,839
2031	238,002	533,366	22,771	79,861	772,146	15,050,473	17,631	25,929	985,658	17,725,837
2032	238,002	533,366	22,771	79,861	767,657	15,050,473	17,504	25,929	985,658	17,721,221
2033	238,002	533,366	22,771	79,861	763,014	15,050,473	17,376	25,929	985,658	17,716,450
2034	238,002	533,366	22,771	79,861	758,767	15,050,473	17,250	25,929	985,658	17,712,077
2035	238,002	533,366	22,771	79,861	749,814	15,050,473	16,959	25,929	985,658	17,702,833
TOTAL	15,111,929	31,204,071	1,455,137	4,635,834	66,452,045	860,687,620	1,488,812	1,538,053	57,577,831	1,040,151,332

TABLE B-19: TOTAL TRANSPORTATION

(in dollars)

Calendar Year	SOUTHERN CALIFORNIA AREA									
	Antelope Valley East Kern Water Agency	Castaic Lake Water Agency	Coachella Valley County Water District	Crestline Lake Arrowhead Water Agency	Desert Water Agency	Littlerock Creek Irrigation District	Mojave Water Agency	Palmdale Water District	San Bernardino Valley Municipal Water District	San Gabriel Valley Municipal Water District
	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
1962	0	0	0	0	0	0	0	0	0	0
1963	33,947	0	0	0	0	0	0	0	51,980	0
1964	62,565	19,791	14,185	4,246	36,947	1,138	28,078	8,167	80,696	34,589
1965	118,101	37,726	24,865	7,072	40,404	2,077	49,983	15,179	133,157	34,926
1966	214,759	71,474	44,463	12,341	72,726	3,745	89,998	27,593	230,650	61,068
1967	416,086	147,486	85,875	23,341	141,023	7,275	174,822	53,921	432,152	115,351
1968	735,606	311,151	152,881	41,494	251,528	12,902	311,240	95,637	783,837	209,483
1969	1,055,104	468,448	224,986	61,136	370,443	18,671	457,483	137,822	1,201,899	320,768
1970	1,373,132	596,926	314,822	89,436	518,605	25,214	631,441	184,421	1,768,155	465,221
1971	1,693,585	748,246	430,692	127,711	709,703	31,710	852,391	229,777	2,518,112	654,392
1972	2,020,357	920,584	565,311	175,009	931,718	42,282	1,118,734	275,290	3,360,433	863,662
1973	2,102,281	970,080	663,610	182,351	1,087,055	42,587	1,174,901	286,240	3,942,036	944,863
1974	2,179,269	1,006,161	730,779	207,095	1,195,686	46,325	1,238,121	298,346	4,477,601	1,146,984
1975	2,225,847	1,031,187	749,930	215,338	1,228,060	48,296	1,272,881	304,286	4,642,234	1,191,290
1976	2,574,428	1,053,670	776,533	224,049	1,271,518	50,668	1,617,292	307,222	4,689,455	1,207,265
1977	2,638,240	1,064,227	799,766	231,208	1,303,135	52,505	1,653,269	309,654	4,775,903	1,231,087
1978	2,707,785	1,089,416	824,658	239,036	1,336,808	55,928	1,731,919	314,701	4,870,148	1,258,435
1979	2,778,694	1,118,006	847,169	246,285	1,366,571	58,398	1,805,720	322,153	4,910,915	1,272,265
1980	2,829,398	1,180,928	851,532	248,911	1,387,064	59,120	1,780,637	333,343	4,887,614	1,255,771
1981	2,925,849	1,244,848	883,821	254,487	1,439,486	61,569	1,852,949	362,911	4,932,016	1,265,582
1982	3,068,021	1,265,989	927,963	269,210	1,511,252	65,128	1,935,523	398,110	5,156,950	1,312,352
1983	3,679,497	1,424,557	1,137,706	320,942	1,845,268	81,149	2,420,707	494,981	6,082,660	1,530,310
1984	3,875,681	1,462,787	1,179,369	330,763	1,913,430	84,269	2,503,858	540,256	6,195,085	1,545,402
1985	4,273,483	1,490,135	1,219,028	341,097	1,978,504	87,420	2,576,739	584,606	6,286,099	1,554,893
1986	4,734,578	1,557,436	1,250,300	347,224	2,030,003	89,910	2,638,869	616,247	6,315,125	1,551,824
1987	4,897,890	1,633,475	1,304,015	367,390	2,133,131	94,026	2,729,473	656,973	6,551,111	1,587,066
1988	5,166,119	1,774,811	1,561,533	378,690	2,252,862	100,621	2,867,578	717,838	6,695,092	1,606,518
1989	5,243,004	1,747,923	1,380,564	377,617	2,289,607	102,275	2,898,449	742,518	6,637,916	1,583,628
1990	5,435,832	1,872,767	1,433,331	391,382	2,363,368	106,817	2,999,531	790,168	6,835,683	1,609,171
1991	5,578,210	1,863,208	1,433,214	391,803	2,363,176	106,827	2,998,312	790,214	6,865,728	1,618,015
1992	5,712,152	1,903,994	1,431,891	391,865	2,360,996	106,587	2,994,453	788,417	6,868,805	1,627,270
1993	5,890,495	1,901,760	1,443,923	396,300	2,380,842	107,406	3,017,676	794,556	6,950,478	1,652,205
1994	6,057,552	1,952,482	1,444,757	395,769	2,382,217	107,933	3,021,170	798,524	6,950,215	1,661,019
1995	6,202,172	1,920,635	1,443,958	395,119	2,380,902	107,915	3,020,440	798,390	6,929,888	1,665,580
1996	6,199,964	1,870,519	1,406,856	385,276	2,319,700	105,021	2,940,173	776,679	6,757,350	1,637,231
1997	6,314,017	1,879,284	1,398,885	384,860	2,306,555	104,544	2,919,097	773,100	6,699,715	1,631,996
1998	6,579,459	1,915,455	1,426,369	391,027	2,351,891	106,883	2,981,092	790,646	6,846,087	1,672,732
1999	6,724,456	1,907,845	1,428,132	391,734	2,354,794	106,929	2,984,364	790,971	6,829,222	1,677,154
2000	6,958,666	1,930,937	1,447,569	396,160	2,386,856	108,444	3,028,089	802,369	6,899,075	1,701,712
2001	6,974,231	1,969,992	1,446,881	394,011	2,385,720	108,715	3,031,045	804,406	6,807,423	1,689,245
2002	6,978,724	1,950,098	1,452,209	398,213	2,394,503	108,776	3,036,269	804,869	6,909,396	1,717,188
2003	6,975,424	1,950,309	1,450,465	396,695	2,391,627	108,715	3,034,888	804,411	6,820,272	1,704,220
2004	6,990,334	1,952,219	1,454,424	397,900	2,398,155	108,956	3,043,103	806,206	6,866,280	1,721,547
2005	6,972,512	1,968,726	1,454,001	398,522	2,397,461	108,666	3,040,553	804,026	6,872,650	1,729,273
2006	6,891,214	1,922,567	1,434,746	392,601	2,365,697	107,322	3,000,689	793,920	6,769,955	1,712,091
2007	6,893,921	1,924,533	1,435,589	393,203	2,367,090	107,366	3,001,669	794,275	6,773,686	1,719,284
2008	6,957,333	1,958,340	1,445,357	393,918	2,383,209	108,424	3,027,049	802,201	6,770,410	1,727,037
2009	6,955,722	1,946,913	1,450,566	398,300	2,391,795	108,394	3,031,536	801,995	6,865,693	1,753,910
2010	6,940,566	1,940,764	1,446,338	396,252	2,384,818	108,139	3,024,475	800,076	6,819,550	1,750,101
2011	6,933,946	1,942,324	1,444,233	394,772	2,381,348	108,030	3,021,992	799,263	6,783,301	1,748,898
2012	6,931,871	1,942,252	1,443,855	394,989	2,380,726	107,998	3,020,462	799,020	6,815,129	1,763,222
2013	6,827,311	1,918,888	1,429,196	391,921	2,342,994	106,832	2,986,883	790,243	6,829,163	1,773,215
2014	6,877,257	1,927,358	1,432,356	392,646	2,362,365	106,996	2,995,506	791,870	6,762,176	1,761,247
2015	6,825,110	1,904,835	1,422,051	390,126	2,345,373	106,112	2,973,939	785,251	6,703,977	1,752,075
2016	6,746,377	1,889,692	1,406,619	384,697	2,319,915	104,737	2,945,819	775,052	6,590,931	1,730,309
2017	6,542,907	1,810,505	1,365,185	373,164	2,251,580	101,170	2,862,135	748,455	6,377,772	1,680,587
2018	6,284,952	1,668,312	1,310,139	358,809	2,160,801	96,574	2,748,886	714,458	6,086,720	1,608,339
2019	5,986,791	1,504,759	1,240,262	340,246	2,045,566	91,162	2,605,945	674,957	5,717,155	1,516,346
2020	5,676,834	1,392,585	1,151,763	311,697	1,899,604	84,759	2,435,767	629,407	5,145,692	1,378,054
2021	5,417,505	1,259,793	1,046,945	276,218	1,726,733	79,284	2,237,717	591,726	4,445,159	1,202,457
2022	5,282,929	1,170,234	991,079	258,555	1,634,598	76,744	2,128,932	573,558	4,023,711	1,099,597
2023	5,232,629	1,153,918	973,416	253,668	1,605,468	75,759	2,093,310	566,661	3,881,295	1,062,516
2024	5,214,096	1,113,510	964,796	249,292	1,591,251	75,429	2,080,170	564,240	3,788,108	1,041,086
2025	5,181,079	1,096,271	949,126	244,777	1,565,407	74,845	2,048,866	559,951	3,679,761	1,012,656
2026	5,171,116	1,088,087	939,597	242,201	1,549,692	74,656	2,029,485	558,573	3,608,541	993,640
2027	5,166,763	1,084,362	937,121	241,293	1,545,608	74,581	2,024,964	558,019	3,588,414	988,687
2028	5,164,134	1,073,717	936,371	241,092	1,544,373	74,534	2,023,435	557,679	3,584,717	987,692
2029	5,159,205	1,049,188	935,476	240,864	1,542,897	74,452	2,021,580	557,060	3,580,682	986,585
2030	5,144,555	1,015,047	932,805	240,143	1,538,492	74,207	2,016,091	555,220	3,567,920	983,081
2031	5,114,998	980,873	927,450	238,789	1,529,660	73,712	2,005,016	551,508	3,543,972	976,508
2032	5,081,791	967,226	921,434	237,267	1,519,738	73,156	1,992,572	547,337	3,517,065	969,123
2033	5,024,540	957,788	916,258	235,958	1,511,202	72,678	1,981,868	543,749	3,493,918	962,769
2034	4,931,789	953,217	913,528	235,268	1,506,700	72,426	1,976,217	541,855	3,481,710	959,417
2035	4,632,065	949,167	911,118	234,658	1,502,726	72,202	1,971,209	540,176	3,470,933	956,454
TOTAL	345,358,812	99,654,723	76,997,996	20,997,499	126,358,726	5,717,022	160,817,494	41,203,899	365,384,514	93,077,536

a) Unadjusted for prior overpayments or underpayments of charges.

(a

CHARGE FOR EACH CONTRACTOR

(in dollars)

Calendar Year	SOUTHERN CALIFORNIA AREA (continued)				FEATHER RIVER AREA				FUTURE CONTRACTOR	GRAND TOTAL
	San Gorgonio Pass Water Agency	The Metropolitan Water District of Southern California	Ventura County Flood Control District	Total	City of Yuba City	County of Butte	Plumas County FC & WCD	Total	South Bay	
	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)
1962	0	0	0	0	0	0	0	0	0	55,259
1963	0	699,940	0	785,867	0	0	0	0	57,616	1,613,800
1964	21,477	1,261,552	9,246	1,582,677	0	0	0	0	95,252	2,738,651
1965	21,599	2,179,464	17,570	2,682,123	0	0	408	408	164,398	4,688,457
1966	37,711	3,891,507	33,105	4,791,140	0	0	565	565	189,153	7,202,340
1967	71,138	7,681,589	67,723	9,417,782	0	0	562	562	245,151	12,481,794
1968	129,254	15,362,092	142,730	18,539,835	0	0	565	565	313,546	24,362,800
1969	198,145	23,166,116	214,909	27,895,930	0	0	3,129	3,129	382,077	35,169,477
1970	288,136	30,622,171	272,987	37,150,667	0	0	14,775	14,775	410,408	45,224,400
1971	406,175	39,880,387	340,661	48,623,542	0	0	15,683	15,683	387,702	57,578,959
1972	536,091	52,523,325	416,632	63,749,428	0	0	16,989	16,989	443,103	74,859,320
1973	586,750	57,222,111	435,086	69,639,951	0	0	16,946	16,946	407,036	79,799,429
1974	627,669	61,995,203	448,998	75,598,237	0	0	17,129	17,129	482,603	86,699,827
1975	647,193	65,068,198	459,203	79,083,943	0	0	17,131	17,131	475,624	90,559,729
1976	658,307	68,161,765	465,051	83,057,223	0	0	17,130	17,130	483,419	95,611,937
1977	658,915	69,674,989	465,030	84,857,928	0	0	17,125	17,125	483,066	98,109,806
1978	660,013	70,993,125	470,640	86,552,612	0	0	17,122	17,122	483,123	100,804,033
1979	661,411	71,768,006	482,522	87,638,115	0	0	17,125	17,125	483,865	103,205,829
1980	740,950	72,144,193	501,932	88,201,393	0	0	17,126	17,126	483,917	104,727,183
1981	754,254	74,017,550	523,424	90,518,746	0	0	17,129	17,129	484,874	109,009,219
1982	791,355	76,585,995	539,935	93,827,783	0	0	17,133	17,133	485,478	114,938,097
1983	924,098	86,896,855	573,566	107,412,296	0	0	17,135	17,135	489,783	131,617,283
1984	952,546	87,661,381	587,012	108,831,839	0	0	17,133	17,133	489,663	133,807,953
1985	977,794	87,557,376	598,472	109,525,646	0	0	17,135	17,135	490,033	135,530,927
1986	996,724	88,352,613	631,946	111,112,799	0	0	17,135	17,135	490,212	138,237,799
1987	1,040,375	87,812,001	670,041	111,476,967	0	0	17,136	17,136	489,505	138,907,935
1988	1,077,650	96,542,860	751,285	121,493,457	0	0	17,133	17,133	488,755	149,474,369
1989	1,082,288	95,572,744	775,370	120,433,903	0	0	17,133	17,133	488,614	149,041,205
1990	1,123,099	99,344,882	878,237	125,184,268	0	0	17,130	17,130	488,351	155,114,902
1991	1,123,114	98,429,070	859,665	124,420,556	0	0	17,128	17,128	487,812	154,299,602
1992	1,123,271	100,320,243	874,141	126,504,085	0	0	17,130	17,130	488,203	156,912,493
1993	1,135,755	100,620,218	878,778	127,170,392	0	0	17,132	17,132	488,091	156,896,540
1994	1,136,384	102,887,481	898,373	129,693,876	0	0	17,132	17,132	488,033	159,782,592
1995	1,133,367	102,134,948	885,525	129,018,839	0	0	17,132	17,132	488,038	159,109,747
1996	1,104,753	100,187,521	861,509	126,552,552	0	0	17,129	17,129	487,187	156,867,351
1997	1,093,591	100,408,796	863,556	126,777,996	0	0	17,129	17,129	487,030	156,737,195
1998	1,118,943	102,624,830	882,932	129,688,346	0	0	17,130	17,130	487,276	160,015,595
1999	1,115,857	102,639,417	878,812	129,829,687	0	0	17,130	17,130	487,281	160,155,114
2000	1,128,050	104,003,808	891,151	131,682,886	0	0	17,130	17,130	487,284	161,920,033
2001	1,114,397	106,753,770	908,000	134,387,836	0	0	17,130	17,130	487,306	164,792,195
2002	1,128,975	106,966,943	900,030	134,746,193	0	0	17,130	17,130	487,182	164,728,853
2003	1,114,940	106,870,912	898,440	134,521,318	0	0	17,130	17,130	487,251	164,797,888
2004	1,122,500	107,491,105	901,301	135,254,030	0	0	17,130	17,130	487,198	165,321,206
2005	1,122,917	108,481,671	906,926	136,257,904	0	0	17,130	17,130	487,153	166,078,651
2006	1,106,585	106,635,182	886,614	134,019,183	0	0	17,130	17,130	487,192	164,166,789
2007	1,106,858	106,955,640	887,773	134,360,887	0	0	17,130	17,130	487,236	164,647,366
2008	1,107,889	108,550,229	902,795	136,134,191	0	0	17,130	17,130	487,321	166,690,835
2009	1,121,154	108,626,985	897,839	136,350,802	0	0	17,130	17,130	487,301	166,914,192
2010	1,114,279	108,295,924	895,486	135,916,768	0	0	17,130	17,130	487,311	166,563,982
2011	1,109,025	108,213,637	895,534	135,776,303	0	0	17,130	17,130	487,337	166,523,332
2012	1,114,112	108,371,810	895,491	135,980,937	0	0	17,130	17,130	487,350	166,787,132
2013	1,116,476	107,226,541	884,521	134,624,184	0	0	17,130	17,130	442,186	164,863,093
2014	1,104,763	107,346,020	888,447	134,749,007	0	0	17,130	17,130	405,760	164,663,126
2015	1,094,910	106,216,143	879,079	133,398,981	0	0	16,721	16,721	351,578	162,717,900
2016	1,077,273	105,143,523	871,478	131,986,422	0	0	16,565	16,565	328,634	160,480,081
2017	1,042,362	101,206,276	835,124	127,197,222	0	0	16,567	16,567	288,397	155,324,981
2018	993,768	94,557,695	770,667	119,360,120	0	0	16,565	16,565	215,509	146,906,102
2019	932,589	86,788,823	696,862	110,141,463	0	0	14,001	14,001	153,049	137,717,400
2020	842,255	79,902,089	645,325	101,495,831	0	0	2,355	2,355	131,477	129,119,717
2021	732,550	71,583,533	586,578	91,186,198	0	0	1,548	1,548	127,347	118,762,118
2022	668,491	64,693,648	548,504	83,150,580	0	0	195	195	126,394	110,702,592
2023	645,408	62,394,227	544,974	80,483,249	0	0	195	195	125,620	107,992,083
2024	631,786	60,339,300	530,068	78,183,132	0	0	193	193	125,100	105,680,072
2025	614,115	59,023,542	523,221	76,573,617	0	0	193	193	124,433	104,043,618
2026	602,299	58,321,227	519,711	75,698,825	0	0	193	193	123,921	102,806,894
2027	599,190	58,083,768	517,965	75,410,735	0	0	193	193	123,792	102,477,154
2028	598,577	57,690,541	512,898	74,989,760	0	0	193	193	123,619	101,916,870
2029	597,897	56,808,758	501,092	74,055,736	0	0	193	193	123,325	100,573,708
2030	595,746	55,540,591	484,919	72,688,817	0	0	193	193	123,006	98,534,859
2031	591,708	54,210,045	468,865	71,213,104	0	0	193	193	122,890	95,418,770
2032	587,172	53,586,843	462,350	70,463,074	0	0	193	193	122,814	93,288,768
2033	583,269	53,131,949	457,802	69,873,748	0	0	193	193	122,671	92,540,714
2034	581,210	52,906,278	455,599	69,515,214	0	0	193	193	122,433	92,153,841
2035	579,394	52,706,399	453,647	68,980,148	0	0	193	193	122,189	91,594,683
TOTAL	58,681,041	5,560,517,889	45,363,680	7,000,130,831	0	0	858,992	858,992	26,255,844	8,692,160,546

TABLE B-20: CALCULATION OF DELTA WATER RATES

[values in millions of dollars ($) or millions of acre-feet (AF) discounted to 1974 at 4.459 percent per annum, unless otherwise noted]

Procedure	Capital Cost Component	Minimum Operation, Maintenance, Power, and Replacement Component[a]	Total Delta Water Charge
In accordance with amendment to Articles 22(e) and 22(g)			
Commencing in 1975:			
Total costs of "initial conservation facilities" to be reimbursed, and project water entitlements to be delivered, during the project repayment period	$947.94[b] 73.72 AF	$188.19 73.72 AF	$1,136.13 73.72 AF
less, project power revenues to be realized during the project repayment period [c]	$429.09	$ 39.49	$ 468.58
less, Delta Water Charges paid, and project water entitlements, prior to 1975 [d]	$ 27.34 4.40 AF	$ 6.76 4.40 AF	$ 34.10 4.40 AF
Subtotal	$491.51 ÷ 69.32 AF	$141.94 ÷ 69.32 AF	$ 633.45 ÷ 69.32 AF
Rate applicable for remainder of the project repayment period	$ 7.09 per acre-foot	$ 2.05 per acre-foot	$ 9.14 per acre-foot
Commencing in 1988:			
Additional costs to be reimbursed during the project repayment period for additional conveyance works	$117.31	$ 11.12	$ 128.43
less, Delta Water Charges paid, and project water entitlements delivered, during the period 1975 thru 1987	$159.74 22.53 AF	$ 46.18 22.53 AF	$ 205.92 22.53 AF
Cumulative Subtotal	$449.08 ÷ 46.79 AF	$106.88 ÷ 46.79 AF	$ 555.96 ÷ 46.79 AF
Rate applicable for remainder of the project repayment period	$ 9.60 per acre-foot	$ 2.28 per acre-foot	$11.88 per acre-foot
Commencing in 1996:			
Additional costs to be reimbursed during the project repayment period for payments to the Corps of Engineers for initial block of storage	$ 43.20	$ 6.80	$ 50.00
less, Delta Water Charges paid, and project water entitlements delivered during the period 1988 thru 1995	$148.51 15.47 AF	$ 35.27 15.47 AF	$ 183.78 15.47 AF
Cumulative Subtotal	$343.77 ÷ 31.32 AF	$ 78.41 ÷ 31.32 AF	$ 422.18 ÷ 31.32 AF
Rate applicable for remainder of the project repayment period	$10.98 per acre-foot	$ 2.50 per acre-foot	$13.48 per acre-foot
Commencing in 2003:			
Additional costs to be reimbursed during the project repayment period for payments to the Corps of Engineers for reserved block of storage	$ 20.79	$ 3.03	$ 23.82
less, Delta Water Charges paid, and project water entitlements delivered, during the period 1996-2002	$109.69 9.99 AF	$ 24.98 9.99 AF	$ 134.67 9.99 AF
Cumulative Subtotal	$254.87 ÷ 21.33 AF	$ 56.46 ÷ 21.33 AF	$ 311.33 ÷ 21.33 AF
Rate applicable for remainder of the project repayment period	$11.95 per acre-foot	$ 2.65 per acre-foot	$14.60 per acre-foot
Calculation under original provisions of the Contract			
Commencing in 1975:			
Total costs of "initial" and "additional" project conservation facilities to be reimbursed, and project water entitlement to be delivered, during the project repayment period	$1,129.24[b] 73.72 AF	$209.14 73.72 AF	$1,338.38 73.72 AF
less, project power revenues to be realized during the project repayment period [c]	$ 429.09	$ 39.49	$ 468.58
less, Delta Water Charges paid, and project water entitlements delivered, prior to 1975 [d]	$ 27.34 4.40 AF	$ 6.76 4.40 AF	$ 34.10 4.40 AF
TOTAL	$ 672.81 ÷ 69.32 AF	$162.89 ÷ 69.32 AF	$ 835.70 ÷ 69.32 AF
Rate applicable for remainder of the project repayment period	$ 9.71 per acre-foot	$ 2.35 per acre-foot	$12.06 per acre-foot

a) Considering that all operating costs of project conservation facilities will not vary with annual amounts of project water delivered, and therefore are properly classified as "minimum""OMP&R costs.

b) Including net credits of $4,850,000 for settlement as to the magnitude of project capital costs incurred prior to December 31, 1960, and net credits of $5,412,668 for settlement as to the magnitude of project capital costs incurred during the 1961 through 1970 period.

c) Applying all conservation power revenues to reimbursement of capital costs, except that portion equal to specific operating costs of power facilities under the Oroville Revenue Bond Resolution ($1,500,000 annually).

d) Applying all Delta Water Charges paid prior to 1970 to reimbursement of capital costs (the Charge is not divided into components until 1970).

TABLE B-21: EQUIVALENT UNIT CHARGES FOR WATER SUPPLY FOR EACH CONTRACTOR[a]

(in dollars per acre-foot)

Project Service Area and Water Supply Contractor	Transportation Charge				Delta Water Charge	Total Equivalent Unit Charge
	Capital Cost Component	Minimum OMP&R Component	Variable OMP&R Component	Total		
	(1)	(2)	(3)	(4)	(5)	(6)
FEATHER RIVER AREA						
City of Yuba City	0	0	0	0	12.64	12.64
County of Butte	0	0	0	0	12.94	12.94
Plumas County Flood Control and Water Conservation District	14.91	0.16	0	15.07	12.49	27.56
Feather River Area	0.82	0.01	0	0.83	12.85	13.68
NORTH BAY AREA						
Napa County Flood Control and Water Conservation District	76.89	20.19	5.37	102.45	32.22	134.67
Solano County Flood Control and Water Conservation District	14.08	3.22	0.75	18.05	14.30	32.35
North Bay Area	28.60	7.14	1.82	37.56	18.47	56.03
SOUTH BAY AREA						
Alameda County Flood Control and Water Conservation District, Zone 7	11.62	6.15	7.96	25.73	11.29	37.02
Alameda County Water District	11.54	5.06	7.38	23.98	10.16	34.14
Santa Clara Valley Water District	15.79	4.66	7.18	27.63	9.95	37.58
South Bay Area	14.16	5.01	7.36	26.53	10.24	36.77
SAN JOAQUIN VALLEY AREA						
County of Kings	3.49	1.04	2.87	7.40	11.32	18.72
Devil's Den Water District	7.69	4.28	4.61	16.58	9.75	26.33
Dudley Ridge Water District	4.31	1.30	2.74	8.35	10.23	18.58
Empire West Side Irrigation District	2.98	0.89	2.48	6.35	9.69	16.04
Hacienda Water District	4.43	1.33	2.75	8.51	10.32	18.83
Kern County Water Agency	7.51	2.54	4.04	14.09	11.31	25.40
Oak Flat Water District	1.51	0.54	1.74	3.79	9.79	13.58
Tulare Lake Basin Water Storage District	4.15	1.25	2.69	8.09	10.31	18.40
San Joaquin Valley Area	6.97	2.35	3.83	13.15	11.12	24.27
CENTRAL COASTAL AREA						
San Luis Obispo County Flood Control and Water Conservation District	173.02	28.40	18.81	220.23	35.80	256.03
Santa Barbara County Flood Control and Water Conservation District	85.34	12.41	19.60	117.35	15.00	132.35
Central Coastal Area	98.76	14.86	19.47	133.09	18.18	151.27
SOUTHERN CALIFORNIA AREA						
Antelope Valley-East Kern Water Agency	32.87	7.00	25.32	65.19	15.83	81.02
Castaic Lake Water Agency	39.96	7.69	15.00	62.65	13.08	75.73
Coachella Valley County Water District	33.94	9.71	28.95	72.60	12.03	84.63
Crestline-Lake Arrowhead Water Agency	41.28	11.22	29.12	81.62	12.08	93.70
Desert Water Agency	34.78	9.95	29.05	73.78	12.17	85.95
Littlerock Creek Irrigation District	23.59	6.05	24.01	53.65	11.99	65.64
Mojave Water Agency	31.32	9.11	29.42	69.85	12.53	82.38
Palmdale Water District	28.01	7.19	25.99	61.19	15.63	76.82
San Bernardino Valley Municipal Water District	43.52	11.84	21.15	76.51	11.83	88.34
San Gabriel Valley Municipal Water District	48.13	13.37	21.17	82.67	13.96	96.63
San Gorgonio Pass Water Agency	53.34	14.78	23.66	91.78	12.51	104.29
The Metropolitan Water District of Southern California	46.61	10.09	17.45	74.15	14.03	88.18
Ventura County Flood Control District	44.62	8.95	16.48	70.05	13.05	83.10
Southern California Area	44.89	10.01	18.74	73.64	13.88	87.52
ALL AREAS	28.60	6.73	12.07	47.40	12.68	60.08

a) Hypothetical charges which, if assessed on all water delivered to date plus all entitlement water estimated to be delivered during the project repayment period, would produce a sum at the end of the period equivalent to those total charges required under a water supply contract, with interest at the project interest rate; 4.459 percent per annum.

TABLE B-22: EQUIVALENT UNIT COSTS OF WATER DELIVERED FROM OR THRU EACH AQUEDUCT REACH[a]

(in dollars per acre-foot)

Aqueduct Reach	Unit Costs of Reach (b				Cumulative Unit Costs from the Delta			
	Capital Costs	Minimum OMP&R	Variable OMP&R	Total	Capital Costs	Minimum OMP&R	Variable OMP&R	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
NORTH BAY AQUEDUCT								
1	13.96	3.39	72	18.07	13.96	3.39	72	18.07
2	4.24	.72	.00	4.96	18 20	4.11	72	23.03
3	46 23	13.05	4.71	63.99	64.43	17.16	5 43	87.02
SOUTH BAY AQUEDUCT								
1	4.70	3.10	5 64	13.44	5 76	3.63	7.65	17.04
2	46	.37	.00	.83	6 22	4.00	7.65	17.87
4	1 64	57	.00	2.21	7 86	4 57	7.65	20.08
5	3.54	1.01	00	4.55	11 40	5.58	7 65	24.63
6	.20	.04	00	.24	11 60	5.62	7.65	24 87
7	1.66	.09	.00	1.75	13 26	5.71	7 65	26 62
8	2.51	.13	00	2 64	15.77	5.84	7 65	29 26
9	4.86	.46	00	5 32	20.63	6.30	7 65	34 58
CALIFORNIA AQUEDUCT								
1	1 06	53	2.01	3 60	1.06	.53	2 01	3.60
2A	.88	.15	.00	1.03	1.94	68	2 01	4 63
2B	.43	.06	.00	.49	2 37	74	2 01	5.12
3	.36	.06	.00	.42	2.73	.80	2 01	5.54
4	64	.32	.96	1 92	3.37	1.12	2 97	7 46
5	.58	.09	.00	67	3.95	1.21	2.97	8.13
6	.14	.03	.00	17	4.09	1 24	2 97	8.30
7	.45	06	.00	51	4.54	1.30	2.97	8.81
8C	.00	.02	.00	.02	4.54	1.32	2.97	8.83
8D	.29	.09	.00	.38	4.83	1.41	2.97	9.21
9	21	.07	.00	28	5 04	1.48	2 97	9.49
10A	24	07	.00	31	5.28	1 55	2 97	9.80
11B	35	.05	.00	40	5.63	1.60	2.97	10.20
12D	.34	.06	.00	.40	5 97	1 66	2 97	10.60
12E	.21	.07	.00	.28	6.18	1 73	2.97	10.88
13B	46	.14	.00	60	6.64	1.87	2.97	11.48
14A	1 67	.52	1.71	3 90	8.31	2 39	4 68	15.38
14B	.31	.08	00	39	8.62	2 47	4.68	15 77
14C	.28	.06	00	.34	8.90	2 53	4 68	16.11
15A	1.21	.49	1 84	3.54	10.11	3.02	6.52	19.65
16A	2.01	.65	3.83	6.49	12 12	3.67	10.35	26.14
17E	7 06	1.21	14.04	22.31	19.18	4 88	24.39	48 45
17F	1.98	.13	00	2.11	21.16	5.01	24.39	50.56
18A	75	.26	-.39	.62	21.91	5.27	24.00	51.18
19	1.24	.38	00	1.62	23.15	5.65	24 00	52.80
19C	18.62	.12	.00	18 74	41 77	5.77	24.00	71 54
20A	1 08	.38	.00	1.46	24.23	6.03	24.00	54.26
20B	1.39	38	.00	1 77	25.62	6 41	24.00	56.03
21	.76	.18	.00	94	26 38	6 59	24 00	56.97
22A	.50	.14	.00	.64	26 88	6.73	24.00	57.61
22B	5.60	2.32	4.93	12 85	32.48	9.05	28.93	70.46
23	.33	.08	.00	.41	32.81	9.13	28 93	70 87
24	3.88	.73	.00	4 61	36.69	9.86	28.93	75 48
25	1.92	.03	.00	1.95	38.61	9 89	28.93	77.43
26A	2.83	1.32	-6.78	-2.63	41 44	11 21	22 15	74 80
28G	3.86	.42	.00	4.28	45 30	11 63	22 15	79 08
28H	4.02	.12	.00	4.14	49.32	11.75	22.15	83 22
28J	11.00	1.81	.00	12.81	60.32	13 56	22.15	96.03
WEST BRANCH								
29A	2.02	1.10	1.96	5 08	23.18	6 11	26.35	55.64
29F	1.21	29	.00	1.50	24.39	6.40	26.35	57.14
29G	3.91	.84	-5 12	- 37	28.30	7.24	21.23	56.77
29H	3.08	.38	.00	3.46	31 38	7.62	21.23	60.23
29J	5.50	.16	-7 00	-1 34	36.88	7.78	14.23	58.89
30	9.36	.72	.00	10 08	46 24	8.50	14.23	68.97
COASTAL BRANCH								
31A	4.52	3.66	2 13	10.31	9.35	5.07	5.10	19.52
33A	59.76	4.19	13 80	77 75	69.11	9.26	18.90	97.27
34	5.55	.25	.00	5.80	74.66	9.51	18.90	103 07
35	19.19	.52	.00	19.71	93.85	10.03	18.90	122.78

a) Representative of water transportation costs only; does not include conservation costs. The Delta Water Rate should be added to these values in order to approximate total water costs at canalside.

b) Hypothetical rates which, if assessed on all water delivered to date plus all entitlement water to be delivered during the project repayment period, would total a sum at the end of the period equivalent to all Transportation Charges, together with interest at the project interest rate; 4.459 percent per annum.

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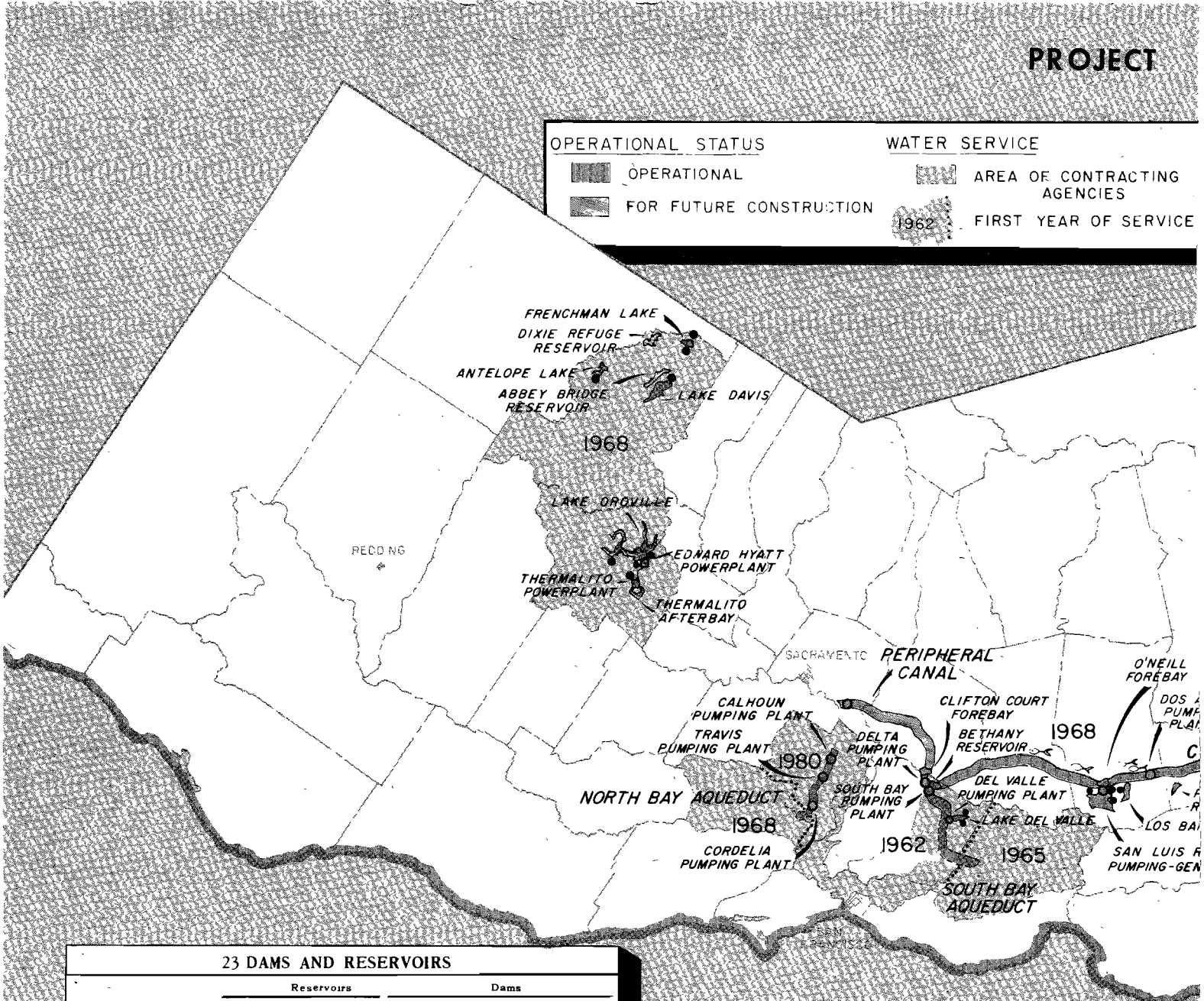


23 DAMS AND RESERVOIRS

Name of Reservoir	Reservoirs: Gross Capacity(1 (Acre-feet)	Surface Area (acres)	Shore-line (miles)	Dams: Structural Height (feet)	Crest Elevation(2 (feet)	Crest Length (feet)	Volume (cubic yards)
Frenchman Lake	55,477	1,580	21	139	5,607	720	537,000
Antelope Lake	22,566	931	15	120	5,025	1,320	380,000
Lake Davis	84,371	4,026	32	132	5,785	800	253,000
Abbey Bridge	45,000	1,950	21	117	5,475	1,150	500,000
Dixie Refuge	16,000	900	15	100	5,754	1,050	400,000
Lake Oroville	3,537,577	15,805	167	770	922	6,920	80,000,000
Thermalito Diversion Pool	13,328	323	10	143	233	1,300	154,000
Fish Barrier Pool	580	52	1	91	181	600	10,500
Thermalito Forebay	11,768	630	10	91	231	15,900	1,840,000
Thermalito Afterbay	57,041	4,302	26	39	142	42,000	5,020,000
Clifton Court Forebay	28,653	2,200	8	30	14	36,500	2,440,000
Bethany	4,804	161	6	121	250	3,940	1,400,000
Lake Del Valle	77,106	1,060	16	235	773	880	4,150,000
San Luis	2,038,771	12,700	65	385	554	18,600	77,645,000
O'Neill Forebay	56,426	2,700	12	88	233	14,350	3,000,000
Los Banos	34,562	623	12	167	384	1,370	2,100,000
Little Panoche	13,236	354	10	152	676	1,440	1,210,000
Buttes	21,800	580	6	190	2,790	2,230	3,130,000
Silverwood Lake	74,970	976	13	249	3,378	2,230	7,600,000
Lake Perris	131,452	2,240	10	128	1,600	11,600	20,000,000
Pyramid Lake	171,196	1,358	21	400	2,606	1,090	6,860,000
Elderberry Forebay	28,231	455	7	200	1,550	1,990	6,000,000
Castaic Lake	323,702	2,230	29	425	1,535	4,900	46,000,000
Totals	6,848,617	58,136	533			172,880	270,629,500

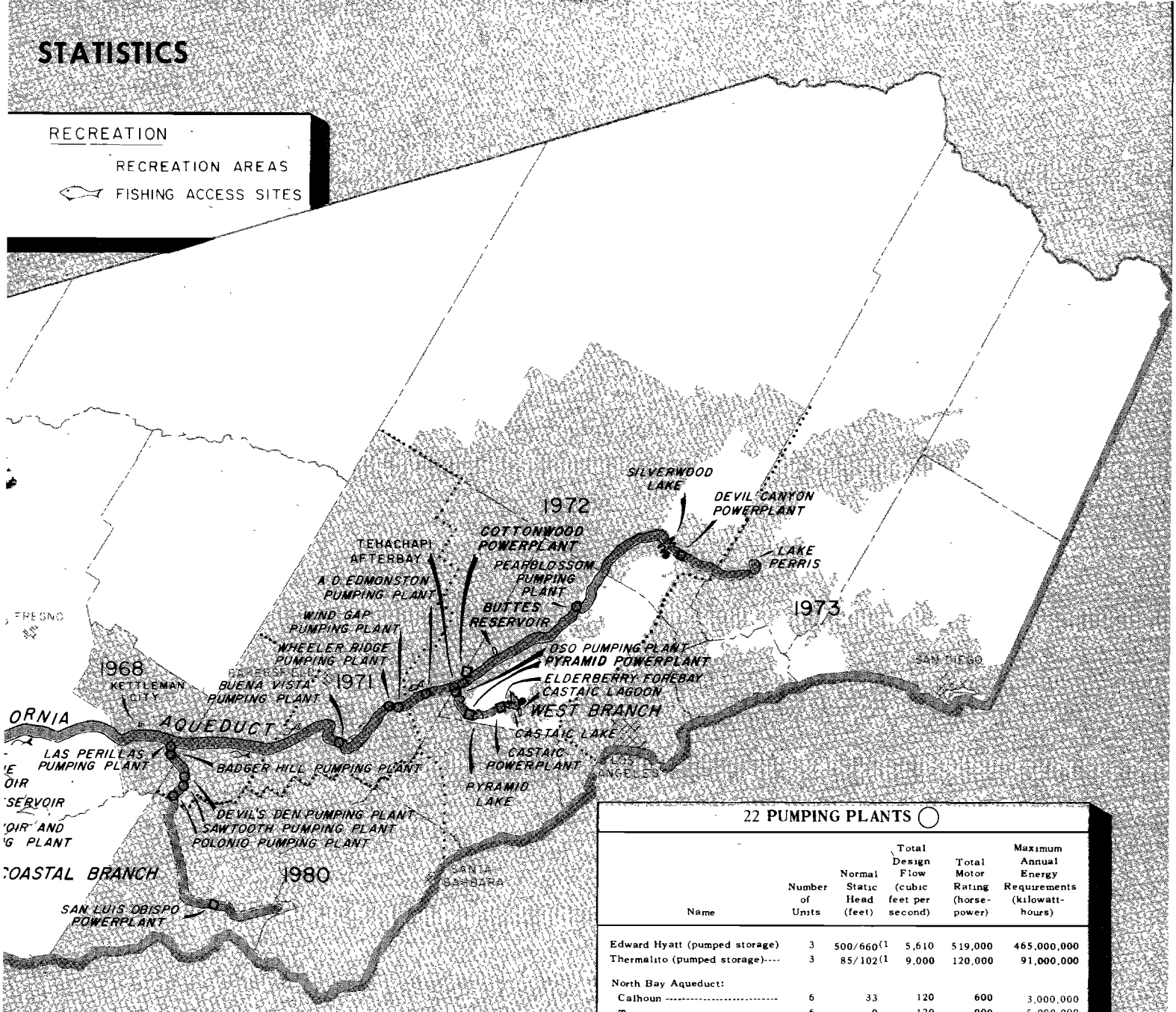
1) At maximum normal operating level

2) Above sea level.

AQUEDUCTS

Name	Length (miles): Total	Canal	Pipeline	Tunnel	Channel and Reservoir
North Bay Aqueduct	26.5	14.3	12.2	0	0
South Bay Aqueduct	42.9	8.4	32.9	1.6	0
Peripheral Canal	43.0	42.0	1.0	0	0
Subtotal	112.4	64.7	46.1	1.6	0
California Aqueduct (main line):					
Delta to O'Neill Forebay	68.4	67.0	0	0	1.4
O'Neill Forebay to Kettleman City	105.7	103.5	0	0	2.2
Kettleman City to A. D. Edmonston Pumping Plant	120.9	120.9	0	0	0
A. D. Edmonston Pumping Plant thru Tehachapi Afterbay	10.6	0.2	2.5	7.9	0
Tehachapi Afterbay thru Lake Perris	138.4	93.4	38.3	3.8	2.9
Subtotal, main line	444.0	385.0	40.8	11.7	6.5
California Aqueduct (branches):					
West Branch	31.9	9.1	6.4	7.2	9.2
Coastal Branch	96.2	14.8	81.4	0	0
Subtotal, branches	128.2	23.9	87.8	7.2	9.2
Totals	684.5	473.6	174.7	20.5	15.7

STATISTICS



8 POWERPLANTS

Name	Number of Units	Normal Static Head (feet)	Total Design Flow (cubic feet per second)	Power Generator Output (kilowatts)	Maximum Annual Energy Output (kilowatt-hours)
Edward Hyatt	6	410/676(1	14,550	678,750	2,475,000,000
Thermalito	4	85/100(1	16,900	119,600	383,000,000
San Luis					
Total	8	99/327(1	13,120	424,000	
State Share			6,872	222,100	170,000,000
Cottonwood	1	140	1,637	15,000	115,000,000
Devil Canyon	2	1,418	1,200	119,700	1,003,000,000
Pyramid	2	740	3,100	157,000	1,001,000,000
Castaic					
Total	7	1,063	18,400	1,250,000	
State Share(2			3,092	214,000	1,457,000,000
San Luis Obispo	1	730	111	5,900	41,000,000
Total, State Share					6,645,000,000

1) Minimum and maximum static heads

2) The City of Los Angeles Department of Water and Power will construct and operate a 1,250,000-kilowatt Castaic Powerplant and will supply the Project with electrical power and energy equivalent to the generation from a 213,984-kilowatt powerplant the State originally planned to construct

22 PUMPING PLANTS

Name	Number of Units	Normal Static Head (feet)	Total Design Flow (cubic feet per second)	Total Motor Rating (horse-power)	Maximum Annual Energy Requirements (kilowatt-hours)
Edward Hyatt (pumped storage)	3	500/660(1	5,610	519,000	465,000,000
Thermalito (pumped storage)	3	85/102(1	9,000	120,000	91,000,000
North Bay Aqueduct:					
Calhoun	6	33	120	600	3,000,000
Travis	6	0	120	900	5,000,000
Cordelia	3	448	48	3,100	14,000,000
South Bay Aqueduct:					
South Bay	9	545	330	27,750	166,000,000
Del Valle	4	0/38(2	120	1,000	2,000,000
California Aqueduct (main line):					
Delta	11	244	10,303	333,000	1,355,000,000
San Luis					
Total	8	99/327(2	11,000	504,000	
State Share			5,762	264,000	313,000,000
Dos Amigos					
Total	6	113	13,200	240,000	
State Share			7,100	130,000	607,000,000
Buena Vista	10(3	205	5,049	136,000	746,000,000
Wheeler Ridge	9(3	233	4,598	140,000	797,000,000
Wind Gap	9(3	518	4,410	308,000	1,761,000,000
A. D. Edmonston	14(3	1,926	4,095	1,040,000	5,916,000,000
Pearblossom	6	542	1,380	113,200	647,000,000
California Aqueduct (branches):					
Oso	8	220	3,128	93,800	446,000,000
Las Perillas	6	55	450	4,050	20,000,000
Badger Hill	6	151	450	10,500	56,000,000
Devil's Den	4	409	126	8,000	51,000,000
Sawtooth	4	331	126	6,500	41,000,000
Polonio	4	810	126	16,000	101,000,000
Peripheral Canal					
Total	9(3	10	21,800	35,200	
State Share			10,900	17,440	88,000,000
Total, State Share					13,691,000,000

1) Minimum and maximum total pumping heads.
2) Minimum and maximum static heads.
3) Includes one spare unit.