

STATE OF CALIFORNIA

The Resources Agency

Department of Water Resources

BULLETIN No. 132-71

THE
CALIFORNIA
STATE WATER PROJECT
IN 1971

June 1971

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

RONALD REAGAN
Governor
State of California

WILLIAM R. GIANELLI
Director
Department of Water Resources

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FOREWORD

A decade has passed since the voters of California approved Proposition 1 of the November 1960 General Election, thereby authorizing the sale of \$1.75 billion in bonds for financing most of the construction costs of the State Water Project.

In 1970, ten years later, Californians again approved two referenda concerning the Project—both by a greater margin of the total votes cast than in 1960:

- Proposition 7 of the June Primary Election which, by raising the statutory interest ceiling, made possible the sale of remaining authorized bonds and averted a shutdown in project construction.
- Proposition 20 of the November General Election which authorized the sale of \$60 million additional in bonds for financing the construction of project-associated recreation developments.

Of the project construction needed to meet initial water delivery commitment dates by mid-1973, 96 percent is either completed or underway. Furthermore, the financial integrity of the Project has been sustained in the face of 25 percent escalation of construction costs during the past four years. The once-predicted financial shortage of \$300 million by 1972 has not materialized due to providing greater assistance from tideland oil funds, rescheduling of certain project construction that could be deferred, and practicing stringent economies.

Through 1970, the partially completed project has already delivered almost one and one-quarter million acre-feet of water to local agencies from Plumas County in the north to Kern County in the south; provided more than six million recreation days of family fun, fishing, and water sports; produced, smoke-free, almost six billion kilowatt-hours of electric power; and prevented about \$33 million in probable flood damages.

The State of California is fulfilling its responsibilities to meet the commitments set forth by the voters in 1960 and reaffirmed in 1970. Every Californian can take pride in these promises kept.

William R. Gianelli

WILLIAM R. GIANELLI, *Director*
Department of Water Resources
The Resources Agency
State of California
May 31, 1971

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ABSTRACT

Bulletin 132-71, "The California State Water Project in 1971", is the ninth in a series of comprehensive annual reports on the Project: it documents management actions and summarizes construction and operations progress during 1970; it updates the Project's long-range financial projections as of the beginning of 1971; and it provides data and computations as contractually required to support charges to be assessed water supply contractors during 1972.

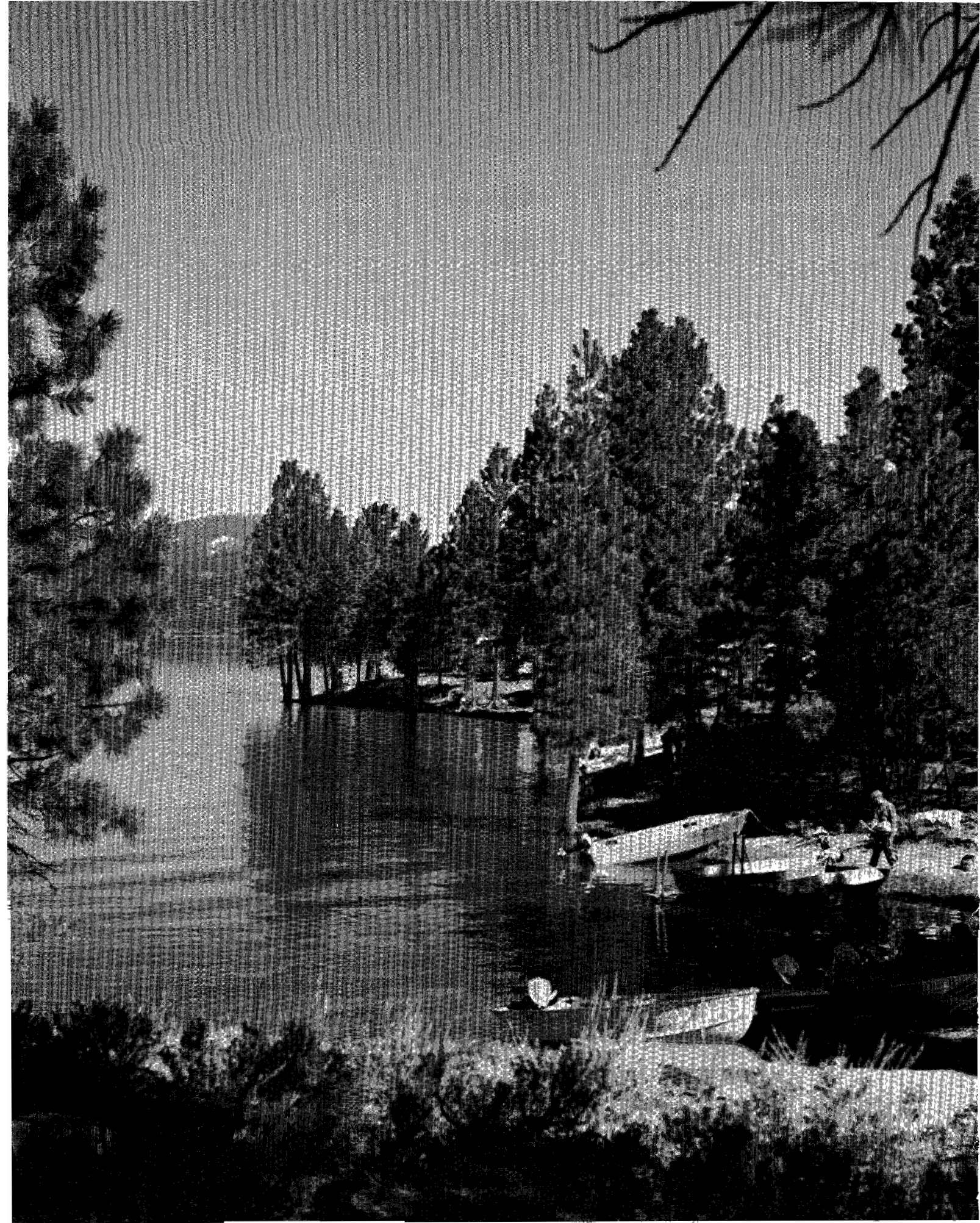
During 1970, project management actions centered on project financing and the Project's recreation and fish and wildlife program. California voters approved two referenda associated with the Project.

Project construction continues on schedule. At the end of 1970, 96 percent of the facilities required to fulfill initial water delivery commitments were either completed or under construction. A contract for the construction of Perris Dam, the southernmost facility of the Project, was awarded in 1970.

Operations during 1970 included 405,097 acre-feet of water delivered from project facilities; 1,804,800 recreation days of use supported by project recreation developments; and 2,679,000,000 kilowatt-hours of electric energy generated at project powerplants. In addition, Lakes Oroville and Del Valle controlled flood flows during January 1970 in the Feather River and Arroyo Del Valle, respectively.

As of the beginning of 1971, about \$1,908 million in capital expenditures had been incurred for the entire Project since 1952. Estimates are that capital expenditures will total \$2,316 million through 1973 and \$2,723 million through 1985. These estimates exclude future construction costs of the Piru Creek Project (to be financed by revenue bonds), the San Joaquin Drainage Facilities (to be constructed once repayment of reimbursable costs is assured), and the Upper Eel River Development or alternatives in lieu thereof. Based upon analyses shown in the report, additional project funds will be required beginning in 1973. By 1985, the total need for such additional funds will be \$89 million.

On the basis of projections and computations summarized in Bulletin 132-71, water charges to be assessed during 1972 will total about \$100 million. Most of these charges will be paid by local agencies south of the Tehachapi Crossing who will be receiving project water for the first time in 1972.



CHAPTER I. CONTINUING HISTORY OF THE PROJECT

This chapter is a record of specific management actions during 1970 which concern either the State Water Project as a whole or the individual, component facilities.

Actions Concerning Project Management

During 1970, overall management actions continued to center on (a) project financing and (b) the Project's recreation and fish and wildlife program. These actions were taken by the California Legislature, the people of California themselves, and the Department of Water Resources. In all policy matters concerning project management, the Department consults with, and seeks the recommendations of, the California Water Commission.

Actions by the California Legislature

Legislation enacted in 1970 concerning the Project as a whole affects primarily the recreation and fish and wildlife program and, to a lesser extent, project financing.

Recreation and Fish and Wildlife Enhancement Bonds. Though not directly affecting the financing of the Project itself, 1970 legislation provides for an assured source of funds for planning and constructing future recreation and fish and wildlife enhancement developments that will be associated with the Project. Enactment of Senate Bill 1268 (California Statutes of 1970, Chapter 782) authorized, subject to approval of the voters at the November 1970 Election, issuance of general obligation bonds in the total amount of not to exceed \$60,000,000 for these developments. The bonds will be repaid by the State General Fund.

The limited recreation developments that have been constructed for the Project up to now have been financed by direct appropriations from the General Fund. With the larger facilities of the Project now completed or nearing completion, the Legislature and the State Administration determined that the investment required for immediate recreation development would be too heavy a financial burden for the General Fund to bear in view of other pressing needs of the State.

The Burns-Porter Act did not provide funds to build recreation developments.

Although the Davis-Dolwig Act charges the Department with the responsibility for acquiring sufficient lands to accommodate recreational use in conjunction with state water projects, and provides for the reimbursement of such land acquisition expenditures, together with joint project costs allocated to recreation and fish and wildlife enhancement, the Act provides no funds for construction of recreation developments themselves.

The Davis-Grunsky Act provides funds to local agencies for the portion of their water projects allocated to recreation and fish and wildlife enhancement, but applies only to local water projects.

The State Beach, Park, Recreational, and Historical Facilities Bond Act of 1964 prohibited use of any of

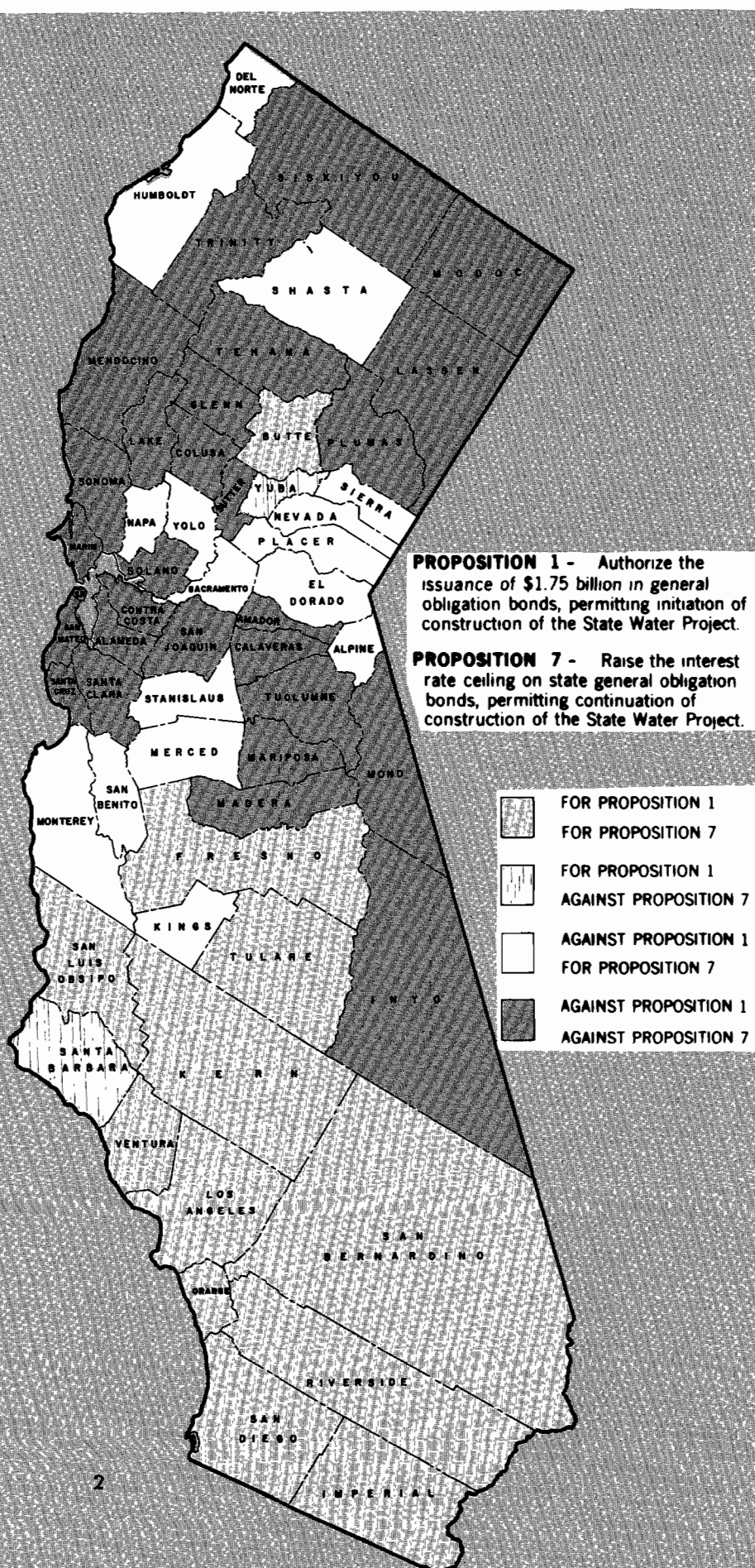
its funds at state water projects. All of these bond funds are committed for other state and local park and recreation projects.

Approval of Recreation and Fish and Wildlife Enhancement Expenditures. Enactment of SB 629 (California Statutes of 1970, Chapter 833) directly affects project financing by approving the reimbursement, in accordance with Davis-Dolwig Act procedures, of reported expenditures for recreation and fish and wildlife enhancement. The legislation approves such costs as reported in the Department's Bulletin 132-70, Appendix D, "Cost of Recreation and Fish and Wildlife Enhancement" (May, 1970). Approval of the reported costs has the effect of making \$10,600,309 additional of tideland oil and gas revenues available for project construction from a continuing annual deposit of \$5,000,000 to the Central Valley Water Project Construction Fund. Of this amount \$551,740 will not be available to the Project until Fiscal Year 1971-72 since the total accumulated amount approved by SB 629 is \$25,551,740 and only \$25,000,000 will have been deposited through fiscal year 1970-71—assuming annual appropriations in the full amount.

Heretofore, the Davis-Dolwig Act required that the Department's cost allocations be reviewed only by the Department of Parks and Recreation and the Department of Fish and Game. However, since enactment of Assembly Bill (AB) 315 (California Statutes of 1970, Chapter 1428), which makes changes necessary to conform statutes to Reorganization Plan No. 2 (1969), the Department of Navigation and Ocean Development must also review these allocations. Written comments by all three departments will be included in the Department's future annual reports to the Legislature.

Tideland Oil and Gas Revenues. Legislation was also enacted in 1970 that temporarily deferred a portion of state revenues flowing to project funds. Enactment of AB 1279 (California Statutes of 1970, Chapter 920) gives first priority, for Fiscal Year 1970-71 only, for the deposit of \$2,000,000 of Long Beach tideland oil and gas revenues in the State Water Quality Control Fund. (This legislation provides for a loan by the State Water Resources Control Board to the Tahoe City Public Utility District for construction of sewerage facilities at Lake Tahoe.) The effect of the legislation is to defer for one year \$2,000,000 of the \$25,000,000 annual appropriation that would have been deposited during Fiscal Year 1970-71 in the Central Valley Water Project Construction Fund under the existing first priority of use of such revenues for project construction.

FIGURE 1: DISTRIBUTION OF VOTES CAST FOR PROPOSITION 1,
1960 GENERAL ELECTION, AND PROPOSITION 7, 1970 PRIMARY ELECTION



COUNTY	PERCENT VOTES FOR	
	PROP. 1	PROP. 7
Alameda	27	44
Alpine	27	63
Amador	37	45
Butte	67	57
Calaveras	24	45
Colusa	24	43
Contra Costa	19	32
Del Norte	21	51
El Dorado	38	51
Fresno	51	56
Glenn	27	46
Humboldt	20	50
Imperial	73	51
Inyo	43	48
Kern	75	60
Kings	47	55
Lake	32	40
Lassen	33	46
Los Angeles	57	63
Madera	47	49
Marin	34	43
Mariposa	38	46
Mendocino	28	44
Merced	39	52
Modoc	17	43
Mono	38	45
Monterey	26	56
Napa	31	51
Nevada	27	54
Orange	69	62
Placer	33	54
Plumas	44	42
Riverside	77	66
Sacramento	40	62
San Benito	41	52
San Bernardino	75	62
San Diego	80	62
San Francisco	39	44
San Joaquin	24	43
San Luis Obispo	53	52
San Mateo	32	47
Santa Barbara	59	50
Santa Clara	43	49
Santa Cruz	23	49
Shasta	41	51
Sierra	26	50
Siskiyou	23	45
Solano	38	43
Sonoma	37	45
Stanislaus	39	58
Sutter	42	40
Tehama	36	49
Trinity	38	37
Tulare	54	55
Tuolumne	31	48
Ventura	69	59
Yolo	40	53
Yuba	52	41
Statewide	51	56

Actions by the Electorate

The voters of California approved two significant referenda concerning the Project during 1970:

- Proposition 7 of the June Primary Election, which raised the statutory interest ceiling on general obligation bonds and made possible the sale of authorized bonds, thus averting a shutdown in project construction.

Proposition 20 of the November General Election, which established funds for financing the capital costs of project-associated recreation developments.

Proposition 7. Last year's report (a) referred to the then-prevailing high interest rates which precluded marketing within the interest ceiling of 5 percent the remaining \$600,000,000 in Burns-Porter Bonds and (b) described legislation which would both raise the interest rate ceiling on state general obligation bonds from 5 percent to 7 percent and remove the interest-rate ceiling on bond anticipation notes (see page 1, Bulletin 132-70). This legislation required approval by the majority of the voters as a constitutional amendment and was designated Proposition 7 of the June 1970 Ballot. Proposition 7 was approved by 56.1 percent of the voters.

Figure 1 shows, by counties, the percentage of votes in favor of Proposition 7. Also shown is the percentage of votes by counties for Proposition 1 of the November 1960 Ballot, which ratified the Burns-Porter Act. As indicated by Figure 1, several northern and central counties were in favor of Proposition 7 in 1970, as contrasted to their negative vote on the Burns-Porter Act in 1960. While a vote for Proposition 7 was not exclusively one for the Project (of the \$1,308,000,000 of authorized bonds that could not be sold because of the 5 percent interest ceiling, \$600,000,000 were for construction of the Project), those interests who were against the Project were, in general, the spearhead of opposition to Proposition 7.

Proposition 20. A previous section referred to a 1970 enactment which would provide \$60,000,000 in Recreation and Fish and Wildlife Enhancement Bonds, subject to the approval of the electorate. Designated as Proposition 20 of the November 1970 Ballot, this legislation was ratified by the voters with 56.8 percent of the votes cast approving the measure.

The Bonds will provide \$54,000,000 to the State Department of Parks and Recreation for recreation developments at the remaining facilities of the Project as they are constructed, and to bolster existing recreation developments at facilities already under heavy use. These will be permanent developments serving over 15 million recreationists annually. The Department of Parks and Recreation expects that these developments will increase by one-third the capacity of today's overloaded State Park System to serve the people of California.

The Bonds will also provide \$6,000,000 to the Department of Fish and Game and to the Wildlife Conservation Board for the development of fishing access,

augmentation of fish populations, and improvement of fisheries and wildlife habitat. The bond money will finance the capital costs of new trout and warmwater fisheries and of enlarging existing hatcheries to provide millions of fish for stocking waters of project lakes. Other fishery projects will include the opening of many fishing areas at various points along the California Aqueduct from the Sacramento-San Joaquin Delta to Lake Perris. Fishing access trails will be built along project lakes. Plantings to provide food and cover for many wildlife species will be developed along the less accessible reaches of canal and reservoir lands.

The location of recreation developments that will be constructed now as a result of the voters' approval of Proposition 20 are shown on Figure 2. Also shown for each development are the costs estimated to be incurred, the year when scheduled to be completed, and the maximum recreation use expected to be supported.

Actions by the Department

During 1970, the Department continued to monitor the capability of authorized funds to finance project costs.

On February 9, 1970, the Director made a progress report to the Assembly Water Committee which included the following conclusions with respect to the Project's financial picture as it appeared at that time:

"1. The Project will require additional financing. The amount required between 1972 and 1975 will depend primarily on the final outcome of our efforts to market additional revenue bonds based on Project power.

"2. The urgent and immediate problem is our financing capabilities during the next six months.

"3. The passage of Proposition 7 at the election next June is the single most important factor now.

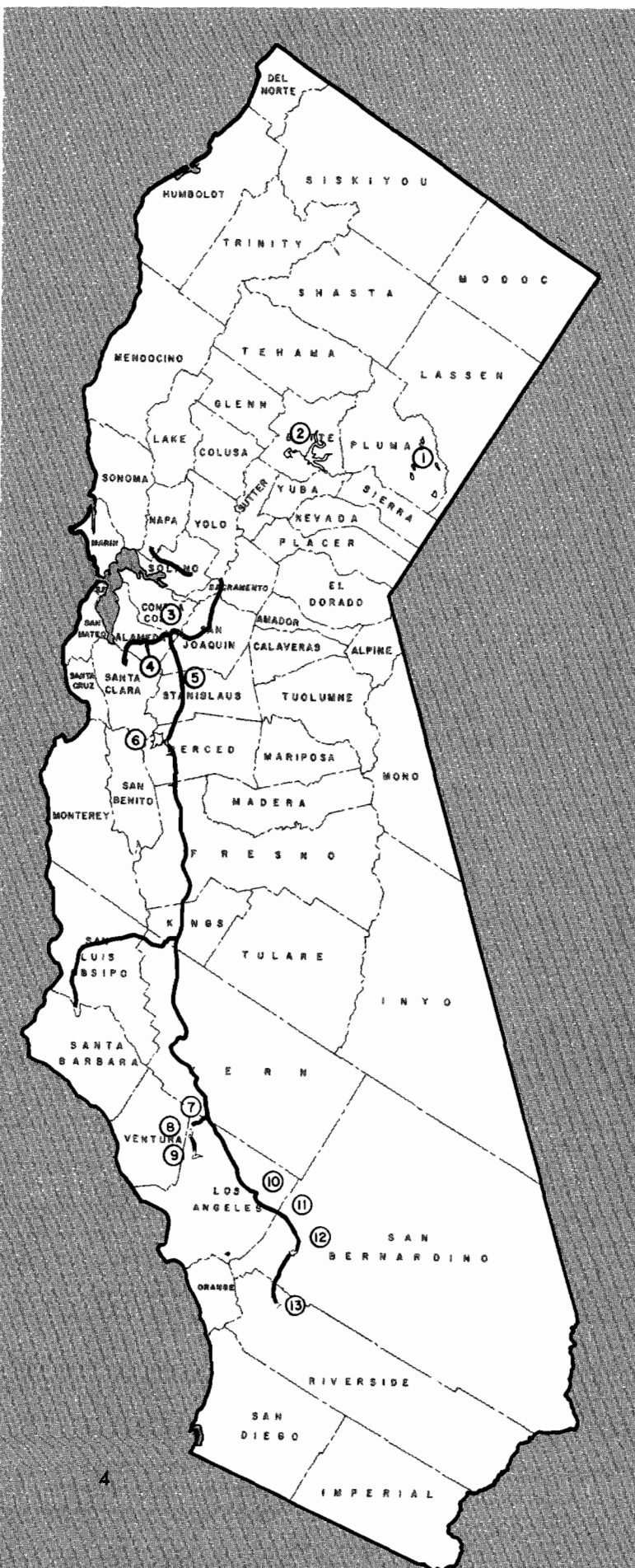
"4. If Proposition 7 does not pass, and if our litigation regarding bond anticipation notes is *not* successful, then the specter of a shutdown of construction will have to be faced immediately.

"5. A shutdown of construction would be disastrous in its strong effects on Project costs, capital requirements, Project revenues, probable use of General Fund to pay interest on the bonds outstanding, heavy staff layoff in DWR, the overall credit of the State, loss to the overall economy, delay in water and power deliveries, and the ability of the customers to complete their own distribution systems. Any shutdown must be synonymous with financial disaster.

"6. Although its capital problems are severe, the Project does not have revenue and repayment problems, so long as it can deliver the water and power. The customers pay all costs, with interest, and the Project will produce a surplus in about 10 years."

The litigation referred to in Item 4 above was not accepted for consideration by the Court. However, this refusal did not impair project financing with short-

FIGURE 2: RECREATION DEVELOPMENTS TO BE FINANCED BY RECREATION
AND FISH AND WILDLIFE ENHANCEMENT BONDS



LOCATION NO.	ASSOCIATED PROJECT FACILITY	ESTIMATED COST, IN DOLLARS	ESTIMATED COMPLETION DATE	ESTIMATED MAXIMUM ANNUAL USE, IN RECREATION DAYS
1	Upper Feather Lakes	1,000,000	1974	200,000
2	Lake Oroville	3,015,000	1977	855,000
3	Bethany Reservoir	800,000	1977	70,000
4	Lake Del Valle	3,200,000	1975	1,633,000
5	Ingram Creek	1,260,000	1974	273,000
6	San Luis Reservoir	3,370,000	1977	2,000,000
7	Peace Valley	1,800,000	1976	410,000
8	Pyramid Lake	1,000,000	1974	70,000
9	Castaic Lake	3,000,000	1973	2,500,000
10	Ritter Canyon	1,100,000	1976	219,000
11	Oro Grande Wash	1,400,000	1977	259,000
12	Silverwood Lake	6,825,000	1976	2,250,000
13	Lake Perris	17,280,000	1974	5,346,000
Recreation Developments along the California Aqueduct		2,950,000		
Fish and Wildlife Enhancement Developments		6,000,000		
Planning		2,500,000		
Contingences		3,500,000		
TOTALS		60,000,000		16,085,000



term borrowing from the State General Fund and with subsequent approval of Proposition 7.

SB 764 of the 1969 Session removed the 5 percent interest ceiling on Burns-Porter Bond anticipation notes. However, the State Attorney General took the position that there was doubt that the Legislature could remove this interest limit without the Electorate's approval. In order to resolve this legal question, the Department brought suit in the California Supreme Court (*Gianelli v. Brooks*, Sac. 7856, filed January 16, 1970). On February 25, 1970, the Court denied, without opinion, the petition for a writ of mandate.

Last year's report referred to the State Administration's intention to provide for a General Fund loan to assist in financing construction of the State Water Project through June 1970—during the period that bonds were unmarketable because of the interest ceiling (see page 1, Bulletin 132-70). The last of the series of documents required for authorizing the loan was signed by Governor Reagan on April 2, 1970. The basic loan commitment was contained in an agreement which extended until June 30, 1970, for a maximum amount of \$75,000,000. The borrowings were to bear interest at the prevailing rates realized by the Surplus Money Investment Fund of the State Treasurer.

The first borrowing was on April 20, 1970, in the amount of \$1,494,000. Transactions under the loan agreement continued on a daily, as-needed basis. A total of \$46,761,000 was eventually borrowed from the General Fund under this arrangement.

With passage of Proposition 7, \$200,000,000 in bond anticipation notes were sold for the Project on June 16, 1970, at a net interest cost of 5.830 percent. The sale was completed with delivery of a check to the State Treasurer on July 10, 1970, some 21 months following the last previous sale of general obligation bonds for the Project. Moneys borrowed from the General Fund were repaid immediately, together with interest charges of about \$346,000.

On June 12, 1970, soon after passage of Proposition 7, opponents of the State Water Project filed a lawsuit (*Morris v. Priest*) in the San Joaquin County Superior Court in an attempt to enjoin the State Treasurer from issuing general obligation bonds or bond anticipation notes. The plaintiff contended that Proposition 7 was unconstitutional. The Court sustained the defendant's demurrer to the complaint without leave to amend. The plaintiff appealed the judgment. (On January 22, 1971, the District Court of Appeal affirmed the judgment of the trial court. This judgment has now become final as the plaintiff did not attempt an appeal to the Supreme Court.)

California Water Commission

During October 1970, a special committee of the California Water Commission made its annual inspection of the Project, as required by California Water Code Section 165.

In December 1970, the Commission transmitted its report to the Department concerning the construc-

tion, operation, and maintenance of the Project. Noted in the report were the Commission's findings that the collection of tumbleweeds in the California Aqueduct has caused a significant maintenance problem in the southern San Joaquin Valley and will cause a similar problem in the Antelope Valley; an opportunity exists to collect very useful hydraulic design information regarding the many overchutes across the Aqueduct in the Antelope Valley; a public relations problem may arise with regard to construction of the Santa Ana Valley Pipeline in populated areas; and a special emphasis must be placed on the design of concessionaire facilities or other major onshore recreation developments at Lake Perris in view of the potential enlargement of the Lake.

The Commission's report presented the following recommendations:

"1. Water Resources present a review of its programs for control of tumbleweed in the California Aqueduct to the Water Commission.

"2. Water Resources consider determination of hydraulic performance and peak discharge experience at overchutes on the California Aqueduct in Antelope Valley.

"3. Steps be taken to avoid potential public relations problems with adjacent residents during construction of the Santa Ana Pipeline.

"4. A firm position be taken on arrangement of recreation facilities at Perris Reservoir to avoid excessive costs when the reservoir capacity is increased from 100,000 to 500,000 acre-feet."

By March 18, 1970 letter, the Department transmitted to the Commission its analysis and plan for followup actions concerning the recommendations and findings set forth in the Commission's 1969 report to the Department. As opposed to the subjects of this year's recommendations, which generally pertain to the physical construction and operation of the Project, last year's recommendations by the Commission primarily concerned financial problems which were subsequently alleviated by voter approval of Propositions 7 and 20.

Miscellaneous

On June 16, 1970, a lawsuit (*Bowker v. Hickel*) was filed in the U.S. District Court for the Northern District of California (San Francisco) which seeks to compel the application of the 160-acre limitation of federal reclamation laws to the State Water Project. The suit was brought by four small landowners and farmers in the San Joaquin Valley against the Secretary of the Interior, the Commissioner of the Bureau of Reclamation, the Chief of the Army Corps of Engineers, and the State Director of Water Resources. Attorneys for the federal agencies and the Department have filed a motion to dismiss the complaint. (A hearing on this motion was pending as of April 30, 1971. Also, on March 11, 1971, the Sierra Club, the North Coast Rivers Association, and an individual owning lands near the Trinity River filed a

motion to intervene in the case of *Bowker v. Hickel*. Besides seeking to apply the 160-acre limitation to the State Water Project, the intervenors seek to require the United States to file environmental impact statements for the operation of the joint federal-state San Luis Division and the federal Trinity Division. A hearing on the motion to intervene also was pending as of April 30, 1971.)

Public Law 91-502, approved October 23, 1970, amended the authorization of the federal Central Valley Project to include Black Butte Dam and Reservoir on which construction was completed by the Corps of Engineers in 1963. In August 1970, a long-term repayment contract was executed between the Bureau of Reclamation and the East San Joaquin Water Conservation District and Calaveras County Water District concerning the water yield of the New Hogan

Dam and Reservoir, also constructed by the Corps of Engineers.

Release of \$13,740,000 in California Water Fund moneys, which have been encumbered since 1958 and 1959 as a state guarantee of local financial commitments for Black Butte and New Hogan Dams and Reservoirs was a possibility suggested by the 1967 "Governor's Task Force" as a way of supplementing project funds (see pages 8-9, Bulletin 132-67). With the actions noted in the preceding paragraph, this state guarantee is no longer required. However, Section 19.8 of the Governor's 1971-72 Budget provides for the transfer of the moneys remaining from the original encumbrance to the unappropriated balance of the General Fund. Thus, as of December 31, 1970, it appeared that these moneys will not be available to project funds.

Actions Affecting Individual Facilities

The remainder of this chapter describes significant actions and events pertaining to individual facilities of the State Water Project that occurred during 1970.

Feather River Facilities

On June 10, 1970, an agreement was executed whereby responsibility for operation, maintenance, and replacement of the Grizzly Valley Pipeline will be transferred to the Plumas County Flood Control and Water Conservation District. By the end of 1970, actions were underway whereby the Department will accept the Pipeline, being constructed by the District, as part of the State Water Project and will formally transfer the Pipeline to the District for operation, maintenance, and replacement.

Enactment of AB 863 (California Statutes of 1970, Chapter 337) authorized the Department of Parks and Recreation, in connection with the development of the Bidwell Canyon-Kelley Ridge facilities of the Lake Oroville State Recreation Area, to develop utilities and access roads located outside of the boundaries of state-owned lands.

On October 3, 1970, the Loafer Creek facilities of the Lake Oroville State Recreation Area were dedicated as the first major permanent campground to be completed at Lake Oroville by the Department of Parks and Recreation. Governor Reagan was the principal speaker.

Delta Facilities

Early in 1970, the State of California completed its official review of the Bureau of Reclamation's feasibility report on the Peripheral Canal. This report is the fundamental document for obtaining authorization of the Canal by Congress as part of the federal Central Valley Project. On April 28, 1970, the Secretary for Resources transmitted the official comments of the State of California on the feasibility report to the Secretary of the Interior. The comments contain the following two recommendations:

1. "The State strongly recommends authorization and funding of the Peripheral Canal by the Congress as soon as possible to protect and enhance the environment and ecology of the Delta and to firm up authorized export water supplies of the federal Central Valley Project and the California State Water Project.
2. "The State wishes to emphasize again, as stressed above, that the authorizing document requires that the Peripheral Canal must be designed, constructed and operated in such a manner that the ecological system in the Delta be protected and maintained, and enhanced where possible."

In an April 29, 1970 press statement, Governor Reagan threw the full weight of the State Administration behind the proposed federal-state Peripheral Canal. Recognizing that authorization of federal participation in this facility could probably not be obtained before 1971, the Governor pointed out that the Canal should be in operation the latter part of this decade to avoid disastrous consequences for both the water users and the environment of the Delta. He also added that, "In view of the time required for federal authorization and funding, all Californians should unite in support of this project to assure its early authorization and completion."

California Aqueduct

On January 17, 1970, Senator Gordon Cologne set off the final blast in the excavation of the San Bernardino Tunnel, commemorating the "holing through" of the last major tunnel of the Aqueduct. Buena Vista Pumping Plant was dedicated on October 16, 1970. Groundbreaking ceremonies were conducted at Perris damsite on October 23, 1970. The principal speaker was Governor Reagan. Other speakers included Senator Cologne and Assemblyman Carley V. Porter.

Plans for recreation development at two project reservoirs were described in reports which were released by the Department during 1970: Bulletin 117-9, "Cas-

taic Lake Area: Recreation Development Plan" (March 1970) and Bulletin 117-10, "Silverwood Lake Recreation Development Plan" (July 1970).

Coastal Branch. Previous bulletins have included a description of the agreements that provided for installation by the Berrenda Mesa Water District (a member unit of the Kern County Water Agency) of two pumps (Units No. 4 and 5) in each of the Las Perillas and Badger Hill Pumping Plants (see pages 7-8, Bulletin 132-69 and page 7, Bulletin 132-70).

On March 19, 1970, two agreements were executed (a) between the Department and the Berrenda Mesa Water District covering the installation of additional pumps and (b) among the Department, the Kern County Water Agency, and the Berrenda Mesa Water District covering the operation of additional pumps. The installation of these pumps will bring both plants to full capacity.

Under the first agreement, the Berrenda Mesa Water District is permitted to install an additional pump (Unit No. 6) in each of the Las Perillas and Badger Hill Pumping Plants. The District is to procure, install, and construct the pumps in accordance with the Department's designs, plans, and specifications. Contract awards for such work are subject to state approval, and other performance of such work is subject to state supervision and approval. Subject to the availability of funds, the Department agrees to purchase the pumping units and appurtenances (original in-place cost less depreciation) within 90 days after the date on which Unit 6 must be ready to make deliveries of entitlement water from the Coastal Branch. The Department estimates this date to be January 1, 1985.

Under the second agreement, the Department will operate and maintain Units No. 6 as integral parts of the Project. However, no water supply contractor other than the Kern County Water Agency will be required to pay any additional charges prior to the Department's purchase of the pumps.

Upper Eel River Development

Included in last year's bulletin was a description of the results of the Department's study on Eel River development alternatives (see page 8, Bulletin 132-70). During 1970, the Department released Bulletin 172A, "Eel River Development Alternatives", Appendix, "Supporting Studies" (January 1970). This document sets forth the criteria and procedures used in the study and presents detailed information on the alternative developments.

On January 6, 1970, in response to Assembly Concurrent Resolution (ACR) 186 of the 1969 Session, the Department submitted a report on the Eel River Basin to the Legislature. The report contained a reevaluation of all alternative proposals for the Eel River Basin that would result in an effective flood control system.

Additional studies of alternative routes for diverting Eel River water to the Sacramento River Basin will be covered in Bulletin 175, scheduled for July 1972 publication. The Bulletin will report on continuing work

on fish, wildlife, water quality, and other basic environmental aspects of Eel River development.

San Joaquin Drainage Facilities

In authorizing the transmittal of the feasibility report on the initial phase of the East Side Division of the federal Central Valley Project, the then Secretary of the Interior, Stewart Udall, stated that he would not recommend authorization of the East Side Division unless California commits itself to construction and operation of the San Joaquin Drainage Facilities (see page 10, Bulletin 132-69).

On August 28, 1970, the Secretary for Resources transmitted to the Secretary of the Interior, Walter J. Hickel, the State's comments on the above report. These comments include the following concerning the Drainage Facilities:

"6. To date there has been no commitment by the agricultural community in the San Joaquin Valley, including areas to be served by the East Side Project, to underwrite guarantees for disposing of poor quality agricultural return waters in the San Joaquin Valley. In this regard, the State has tried to work with Valley interests to resolve this problem but has made little progress.

The East Side Project report has not spelled out the extent to which the Bureau expects the additional delivery of surface water to the service area to result in a water quality drainage problem.

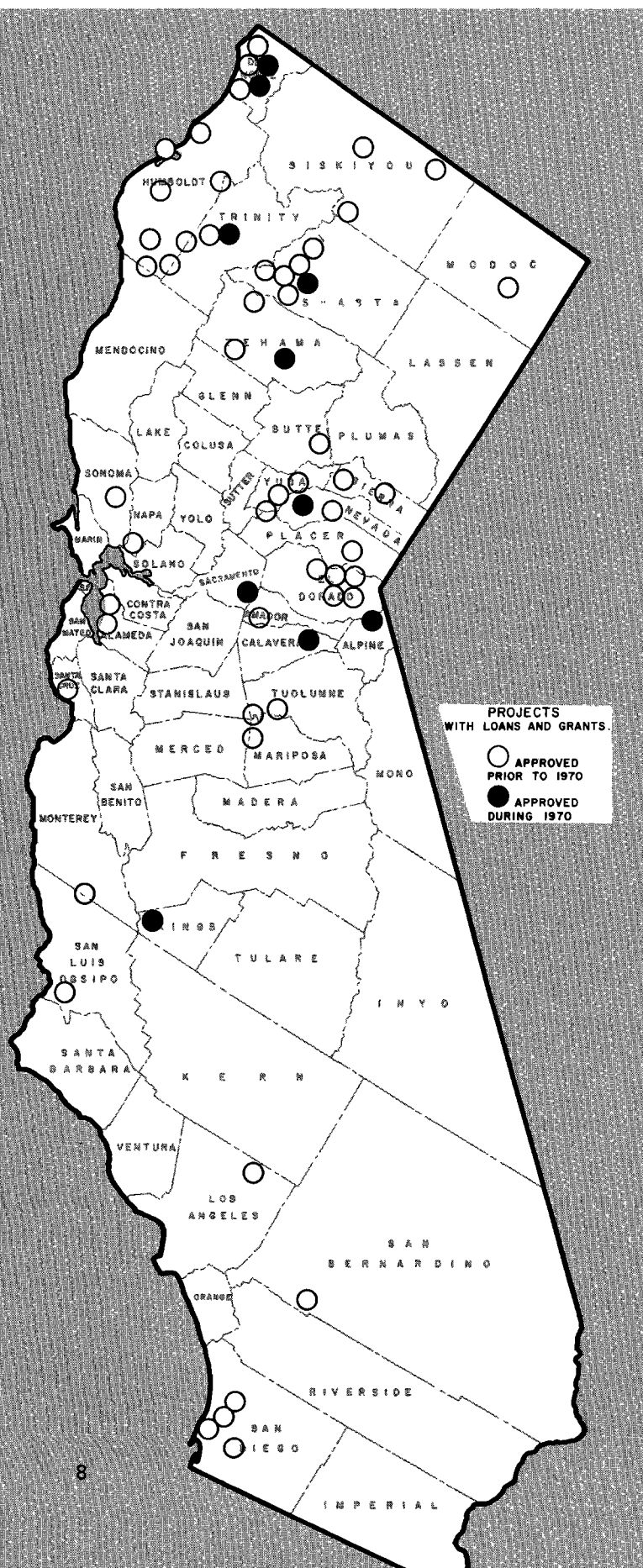
Former Secretary Udall has originally indicated that the East Side Project would not be approved by the Department of the Interior unless the State provides for construction and operation of the San Joaquin Master Drain. Subsequently you have advised the State that you would not recommend funding of the East Side Project until the issue of the Drain had been resolved. We are uncertain as to the present position of the Department of the Interior in the matter."

Completed in mid-1970 was the first three-year phase of joint studies by the Department, the Bureau of Reclamation and the Federal Water Quality Administration to establish the economic feasibility of treatment of agricultural waste waters. These studies were conducted at the Interagency Agricultural Wastewater Treatment Center near Firebaugh and concentrated on two processes: (a) "algae-stripping"—the removal of nitrogen using an algae system; and (b) "denitrification"—the removal of nitrogen using a bacterial system. The Center is now involved in second-phase studies which will provide design criteria and operational parameters for full-scale treatment facilities. These studies will facilitate a decision as to the most appropriate point of discharge for drainage facilities.

Local Projects

As of December 31, 1970, the Department had approved a total of \$84,450,043 in grant and loan applications under the Davis-Grunsky Act Program. A total

**FIGURE 3: LOCATION OF LOCAL PROJECTS
WITH APPROVED LOANS AND GRANTS
UNDER THE DAVIS-GRUNSKY PROGRAM**



of \$17,084,381 was approved in 1970. The location of local projects for which Davis-Grunsky Act loans and grants are authorized are shown, by circles, on Figure 3: the solid circles indicate those for which loans and grants were authorized in 1970 and the open circles indicate those for which loans and grants were authorized in previous years.

The following \$10,913,100 in loans were approved during 1970 for financing the construction of proposed, or the improvement of existing, municipal water distribution systems:

- \$1,100,000 to the Avenal Community Services District, Kings County.
- \$4,000,000 to the Calaveras Public Utility District, Calaveras County.
- \$2,675,000 to the City of Coalinga, Fresno County.
- \$2,700,000 to the Nevada Irrigation District, Nevada County.
- \$76,000 to the City of Tehama, Tehama County.
- \$165,000 to the Big Rock Community Services District, Del Norte County.
- \$8,100 to the Keswick Community Services District, Shasta County.
- \$9,000 to the Del Norte County Flood Control District.
- \$180,000 to the Trinity County Waterworks District No. 1.

The following \$6,171,281 in grants were approved during 1970 for financing (a) the portions of construction costs of proposed water projects that are allocated to recreation and to enhancement of fishery and wildlife habitat and (b) the construction costs of initial water supply and sanitary facilities at such projects:

- \$5,466,000 to the County of Kern for Buena Vista Aquatic Recreation Area.
- \$180,881 to the South Tahoe Public Utility District, Alpine County, for Indian Creek Reservoir.
- \$500,000 to the Sacramento Municipal Utility District, Sacramento County, for Rancho Seco Reservoir.
- \$24,400 to the Trinity County Waterworks District No. 1.

Of the total approved applications as of December 31, 1970, \$23,047,688 (27 percent) were for loans and the remaining \$61,402,355 (73 percent) were for grants. The amount of loans approved in 1970 almost equaled those authorized during all preceding years of the Program.

In last year's report, it was noted that future loan and grant contracts were to contain a provision that qualified the State's obligation to disburse money only if Burns-Porter bonds could be sold after the dates of such contracts. In view of the approval of Proposition 7 and the subsequent sale of bond anticipation notes, the requirement for this provision was deleted by December 4, 1970 resolution of the Commission.

CHAPTER II. PROJECT CONSTRUCTION

By the end of 1970, approximately 96 percent of the "1973 Project facilities" were either completed or under construction. Project water was being delivered between Frenchman Dam, in Plumas County, and the Wind Gap Pumping Plant, in southern Kern County.

The "1973 Project facilities" constitute the current construction program which began in 1957 with the start of road relocations around what is now Lake Oroville, and which will end in 1973 with completion of Pyramid and Perris Dams. These facilities will permit fulfillment of immediate water delivery commitments of the State Water Project. The only major features on which construction was not under way at the end of 1970 were: (a) Santa Ana Valley Pipeline, Sugarloaf Mountain to Lake Perris; (b) Perris Dam Inlet-Outlet Works; and (c) Pyramid Dam.

Plans and Specifications

During 1970, the Department completed plans and specifications for 32 construction and procurement contracts, 29 of which were awarded by the year's end.

Some of the more significant plans and specifications completed were those for:

Pearblossom Pumping Plant, Completion Contract.

Devil Canyon Powerplant Penstocks.

Future construction beyond the "1973 Project facilities" will be required to meet the continuing growth in demands for project water and for water-oriented recreation. The current assumptions concerning the future construction program are described in Chapter V, and refer to such facilities as Phase II of the Coastal Branch and of the North Bay Aqueduct, the Peripheral Canal, Upper Eel River Development or alternatives in lieu thereof, Pyramid Power Complex (hereafter referred to as the "Piru Creek Project"), and Buttes, Abbey Bridge, and Dixie Refuge Dams.

The location of the "1973 Project facilities" and of the facilities under the future construction program are shown on Figure 4, together with a delineation of construction divisions for the overall project.

- Devil Canyon Powerplant, Completion Contract.
- Santa Ana Valley Pipeline, Devil Canyon Powerplant to Mill Street.
- Santa Ana Valley Pipeline, Mill Street to Sugarloaf Mountain.
- Perris Dam.
- Gorman Creek Improvement.
- Angeles Tunnel Intake Works, Phase II.
- Pyramid Dam.

Land Acquisitions

The current land acquisition program for the State Water Project includes land and right-of-way required for the "1973 Project facilities", together with that required for Abbey Bridge Dam and Reservoir and portions of Phase II of the North Bay Aqueduct (to avoid paying for excessive escalation of land prices) and for certain reaches of the Peripheral Canal (to realize joint savings where canal excavation can be used now in constructing the nearby Westside Freeway—Interstate 5).

Approximately \$10.1 million was spent during 1970, bringing the total actual expenditure for project land and right-of-way to \$107.3 million—approximately 90 percent of the \$119.0 million estimated total expenditure under the current program. In addition, \$2.1 million remains on deposit for property currently in condemnation proceedings.

During 1970, title was taken to some 212 parcels (5,990 acres). The largest single acquisition was for \$1.83 million (3,849 acres) at Tejon Ranch. To obtain land required for project construction, the Department presented to the California Water Commission 22 condemnation resolutions covering 114 individual ownerships. In addition, condemnation proceedings were concluded on 53 parcels (1,585 acres).

Nine parcels (113 acres) were sold during 1970, bringing the total of such excess lands sold to 37 par-

Facility or Construction Division	Current Land Acquisition Program		
	Total Parcels Required	Parcels Acquired in 1970	Total Parcels Acquired
Feather River Facilities			
Upper Feather Division ^a -----	28	0	22
Oroville Division-----	937	9	903
Delta Facilities ^b -----	40	5	6
North Bay Aqueduct			
Phase I-----	12	3	11
Phase II ^c -----	14	0	0
South Bay Aqueduct-----	206	5	203
California Aqueduct			
North San Joaquin Division--	205	12	190
San Luis Division-----	22	0	21
South San Joaquin Division--	565	5	542
Tehachapi Division-----	1	1	1
Mojave Division-----	1,629	88	1,531
Santa Ana Division-----	690	75	520
West Branch-----	273	8	171
Coastal Branch (Phase I)-----	48	1	47
Total-----	4,670	212	4,168

NOTE: In addition to requirements for the "1973 Project facilities," the current program includes land and right-of-way for:

^a Abbey Bridge Dam and Reservoir.

^b Certain reaches where excavation can be used for Westside Freeway construction fill (Interstate 5).

^c Certain reaches where land prices are expected to significantly escalate prior to commencement of Phase II construction in the late 1970's.

cels (993 acres). Indices and appraisals of excess lands for the completed aqueduct reaches were compiled. A program to dispose of such lands was developed and initiated.

The Department executed 61 agreements covering 182 relocations during 1970. These agreements in-

involved costs of over \$2.8 million and raised the total commitments under all such agreements to \$44.0 million—approximately 87 percent of the \$50.8 million estimated total relocation cost under the current program. In addition, 79 land exchange agreements were concluded during the year.

Construction Contracts

Construction of the “1973 Project facilities” requires about 450 contracts; the total state payments under those contracts are estimated to be \$1,618 million. As of the end of 1970:

\$985 million had been expended under 331 contracts with final progress payments completed, whether or not settlements of contractor claims are pending.

\$565 million had been either expended or committed under 90 contracts then in progress.

Required contracts include those administered by the Bureau of Reclamation for the federal-state San Luis Division. State payments include a 55 percent share of the Bureau’s contract costs.

Construction status as of December 31, 1970, for each major facility or construction division of the “1973 Project facilities”, is shown in the tabulation below. Construction plans for the immediate future (1971 through 1977) are outlined on Figure 5 — for the remainder of the “1973 Project facilities” and for scheduled construction thereafter.

Facility or Construction Division ^a	Actual Cost of Contracts Completed	Estimated Cost of Contracts In Progress	Estimated Cost of Contracts Not Yet Started ^b	Estimated Total Cost Contracts ^c	Percent Cost of Contracts Either Completed or In Progress of Total
Contracts Administered by Department of Water Resources					
Feather River Facilities:					
Upper Feather Division	8,228	0	0	8,228	100%
Oroville Division	359,118	0	30	359,148	99%
North Bay Aqueduct	1,562	0	0	1,562	100%
South Bay Aqueduct	43,978	0	336	44,314	99%
California Aqueduct:					
North San Joaquin Division	107,202	0	0	107,202	100%
South San Joaquin Division	128,477	49,442	74	177,993	100%
Tehachapi Division	112,411	100,703	398	213,512	100%
Mojave Division	19,503	94,465	3,223	117,191	97%
Santa Ana Division	1,698	99,270	24,259	125,227	81%
West Branch	20,744	209,317	32,494	262,555	88%
Coastal Branch	8,274	0	0	8,274	100%
General Contracts	5,285	10,874	4,407	20,566	79%
Subtotal	816,480	564,071	65,221	1,445,772	95%
Contracts Administered by Bureau of Reclamation					
San Luis Division ^d	168,253	434	3,266	171,953	98%
Total, “1973 Project Facilities”	984,733	564,505	68,487	1,617,725	96%

^a Does not include Upper Eel River Development, Abbey Bridge and Dixie Refuge Units of Upper Feather Division, Peripheral Canal, Phase II of the North Bay Aqueduct and Coastal Branch, future augmentation of San Luis Canal, local projects (Davis-Grunsky), Piru Creek Project of West Branch, Buttes Dam and Reservoir of Mojave Division, San Joaquin Drainage Facilities, or additional pumping and power recovery units and pipe sections scheduled to be installed after 1973.

^b Includes allowance for future construction price escalation of 6% per annum for 1971 and 1972 and 3% per annum for 1973.

^c Does not include additional capital costs for planning, design, right-of-way acquisition, or construction supervision; or initial operating costs during construction period. For complete estimates of capital costs of these facilities, and for facilities beyond the “1973 Project facilities”, see Chapter V, “Estimated Project Costs.”

^d Represents 55% of total cost of features jointly used by State Water Project and federal Central Valley Project.

Construction Progress

During 1970, construction of the “1973 Project facilities” centered primarily on the California Aqueduct, from Buena Vista Pumping Plant in Kern County through Perris Dam in Riverside County, and on the West Branch, from Oso Pumping Plant through Castaic Dam in Los Angeles County.

A strike at the General Electric Company, from November 1969 to February 1970, delayed completion of all G-E contracts and caused numerous delays to other electrical equipment contracts—resulting in schedule slippage for some project facilities.

FIGURE 4: LOCATION OF PROJECT FACILITIES AND CONSTRUCTION DIVISIONS

Upper Feather Division

There was no construction activity by the Department during 1970 in this division. However, Grizzly Valley Pipeline and related treatment facilities were completed by the Plumas County Flood Control and Water Conservation District during the year.

Oroville Division

During 1970, performance testing was completed on generator and pump-generator units of Edward Hyatt and Thermalito Powerplants. Work continued on the Oroville-Thermalito Control System. Relatively small contracts for modification work and landscaping were completed, and a spare transformer for Edward Hyatt Powerplant was purchased. Feather River Fish Hatchery modifications were completed, including the installation of equipment to control Sacramento River Chinook Disease, a cold water virus, and *Ceratomyxa Shasta*, a protozoan parasite.

North Bay Aqueduct

All construction of Phase I and the "1973 Project facilities" portion of the North Bay Aqueduct has been completed.

South Bay Aqueduct

Essentially all construction of the South Bay Aqueduct has been completed and all phases are operational.

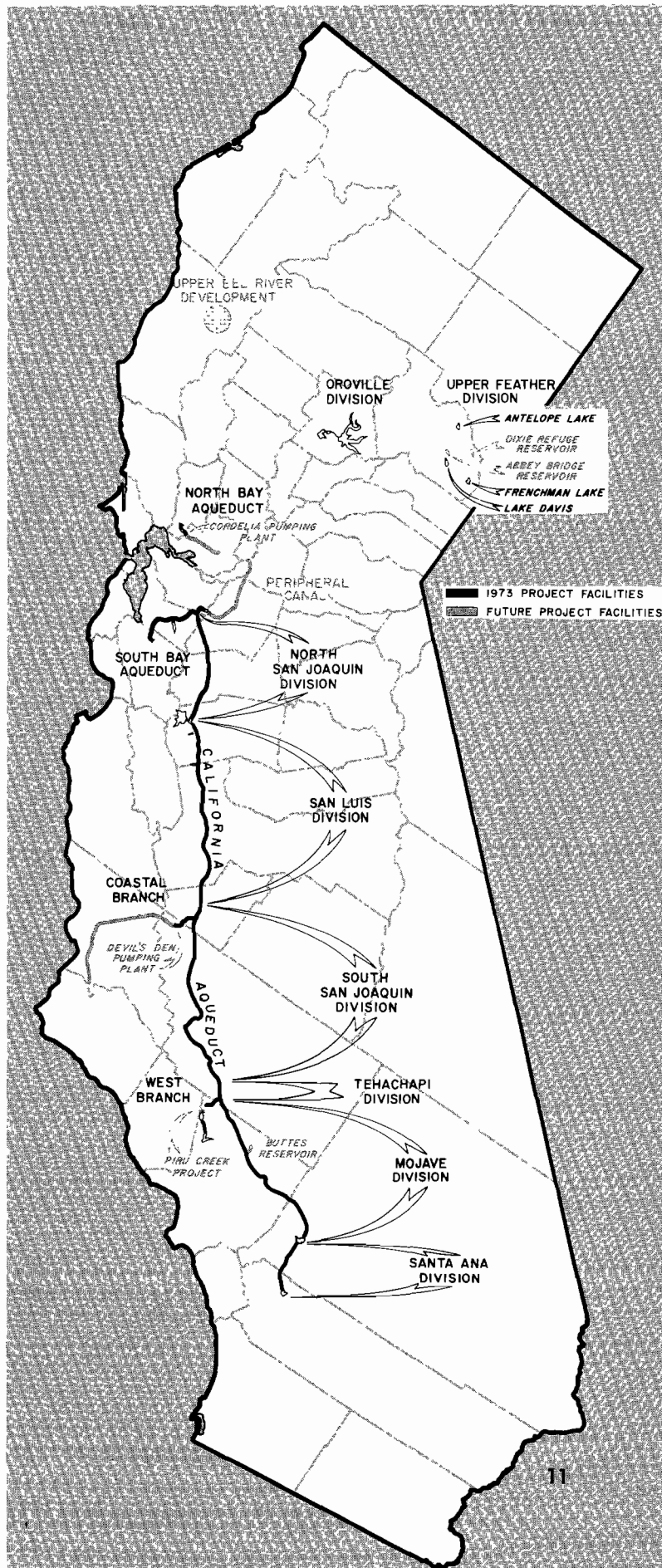
California Aqueduct

During 1970, construction continued on the California Aqueduct Control System to provide remote control and monitoring of aqueduct operations from the Delta to A. D. Edmonston Pumping Plant Intake, including Clifton Court Forebay and Phase I of the Coastal Branch. The contract for the Control System for facilities south of A. D. Edmonston Pumping Plant will be advertised early in 1971.

North San Joaquin Division. All facilities in this construction division are operational. Three contracts were completed during 1970, for canal modification, water treatment plant modification, and fish protective evaluation testing equipment. This essentially completes all construction for the "1973 Project facilities" portion of the division.

San Luis Division. All facilities in this division are operational. The Bureau of Reclamation has initiated raising the lining of portions of the San Luis Canal within areas susceptible to land subsidence. Construction progress during 1970 included raising the concrete lining for a distance of approximately 8.3 miles and placing concrete sills under four control structure gates.

Construction contractors and the Division of Operations and Maintenance have completed certain modifications to Unit No. 3 at Dos Amigos Pumping Plant, and are preparing a series of tests to start in early 1971. These modifications are intended to eliminate vibration problems affecting operation of the Unit.



The contract for construction of Coalinga Operations and Maintenance Subcenter will be advertised early in 1971.

South San Joaquin Division. The 27 miles of concrete-lined canal between Buena Vista Pumping Plant and Wheeler Ridge Pumping Plant became operational in September 1970, and an additional two-mile reach, from Wheeler Ridge Pumping Plant to Wind Gap Pumping Plant, in December. The remaining 13 miles, from Wind Gap Pumping Plant to A. D. Edmonston Pumping Plant, will not be operational until the first unit at the Wind Gap Pumping Plant is complete, now scheduled for June 1971.

Three pumping units were in service at Buena Vista Pumping Plant by the end of 1970; the remaining seven units are scheduled to be operational by the end of 1971.

At Wheeler Ridge Pumping Plant, one unit became operational in December 1970; five more units are scheduled to be in service during 1971, and the remaining three units by the summer of 1972.

Tehachapi Division. Construction continued during 1970 on the A. D. Edmonston Pumping Plant and Discharge Lines. The initial contract was completed in August and the discharge lines are expected to be complete by the fall of 1971. Work under the completion contract is continuing with at least three units scheduled to be operational by the end of 1971, and eight additional units by the end of 1972.

Carley V. Porter Tunnel was completed in November 1970. Work on Pastoria Siphon is scheduled to be completed in early 1971, and on Beartrap Access Structure and Tehachapi Afterbay, in June 1971.



Mojave Division. Construction of the Aqueduct from Tehachapi Afterbay to Pearblossom Pumping Plant continued during 1970, and is scheduled for completion early in 1971. The initial contract for Pearblossom Pumping Plant was completed in 1970 with the installation of the pumps, motors, discharge lines, valves and associated equipment continuing. Construction of the Aqueduct from Pearblossom Pumping Plant to West Fork Mojave River con-





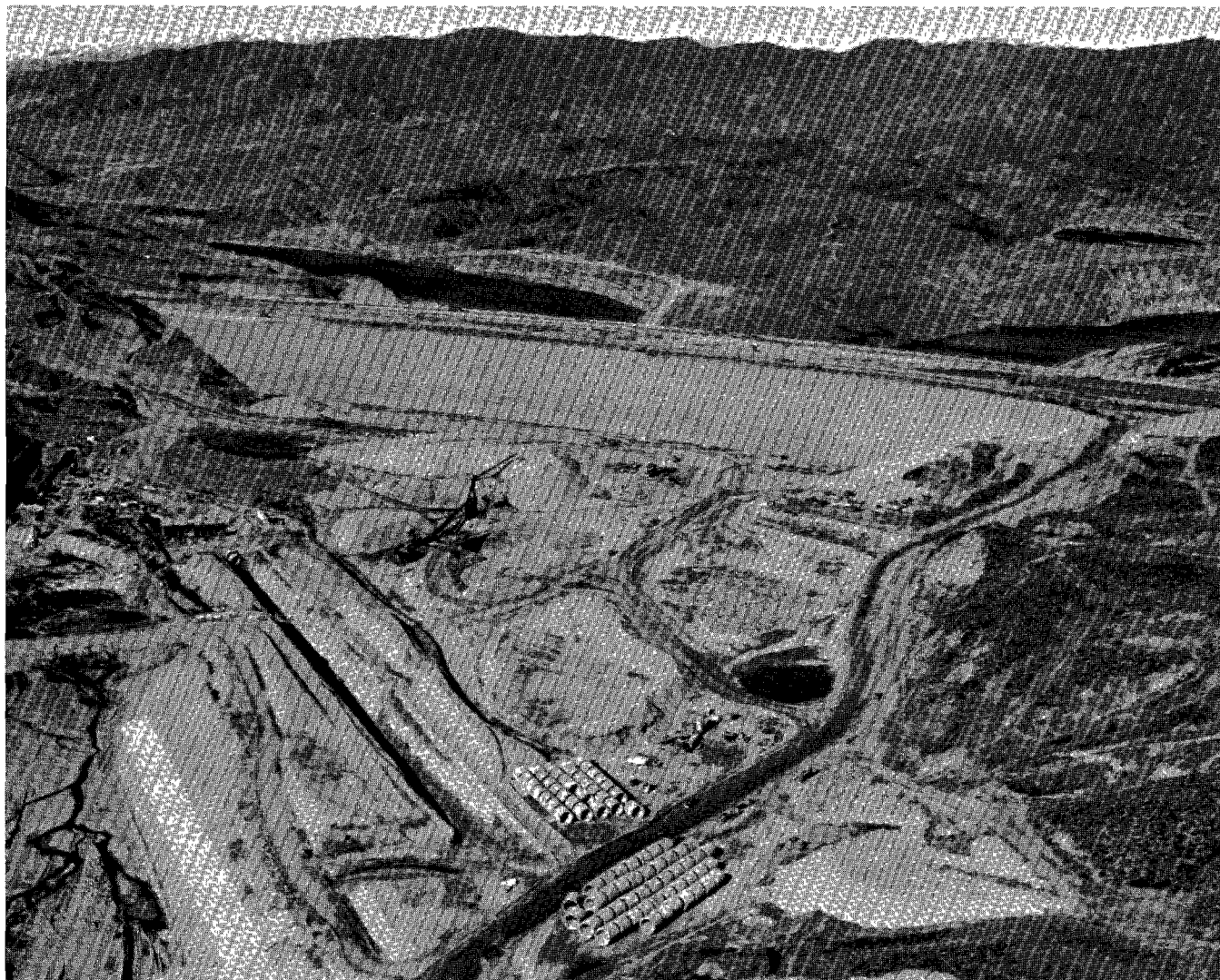
Wind Gap Pumping Plant
and San Joaquin Operations
and Maintenance Center

FIGURE 5: GENERALIZED CONSTRUCTION SCHEDULE

FACILITY, CONSTRUCTION DIVISION OR FEATURE	CALENDAR YEAR						
	1971	1972	1973	1974	1975	1976	1977
UPPER FEATHER DIVISION							
FRENCHMAN DAM AND LAKE, ANTELOPE DAM AND LAKE, AND GRIZZLY VALLEY DAM AND LAKE DAVIS		(COMPLETED)					
GRIZZLY VALLEY PIPELINE		(COMPLETED)					
ABBEY BRIDGE AND DIXIE REFUGE DAMS AND RESERVOIRS		(NOT YET SCHEDULED)					
OROVILLE DIVISION		(COMPLETED)					
DELTA FACILITIES	(SCHEDULED FOR COMPLETION BY 1980)						
UPPER EEL RIVER DEVELOPMENT		(NOT YET SCHEDULED)					
NORTH BAY AQUEDUCT							
(PHASE I) NAPA PIPELINE AND INTERIM FACILITIES		(COMPLETED)					
(PHASE II) LINDSEY SLOUGH THRU CORDELIA PUMPING PLANT		(SCHEDULED FOR COMPLETION BY 1980)					
SOUTH BAY AQUEDUCT		(COMPLETED)					
NORTH SAN JOAQUIN DIVISION							
AQUEDUCT, DELTA PUMPING PLANT TO O'NEILL FOREBAY		(COMPLETED)					
CLIFTON COURT FOREBAY		(COMPLETED)					
DELTA PUMPING PLANT, 7 UNITS		(COMPLETED)					
UNITS 8 & 9		(SCHEDULED FOR COMPLETION BY 1980)					
UNITS 10 & 11 (FINAL)		(SCHEDULED FOR COMPLETION BY 1985)					
SAN LUIS DIVISION		(COMPLETED - POSSIBLE AUGMENTATION SCHEDULED FOR 1986)					
* SOUTH SAN JOAQUIN DIVISION							
AQUEDUCT, KETTLEMAN CITY TO BUENA VISTA PUMPING PLANT		(COMPLETED)					
AQUEDUCT, BUENA VISTA TO A. D. EDMONSTON PUMPING PLANT							
BUENA VISTA PUMPING PLANT, ALL 10 UNITS							
WHEELER RIDGE PUMPING PLANT, ALL 9 UNITS							
WIND GAP PUMPING PLANT, ALL 9 UNITS							
TEHACHAPI DIVISION							
A. D. EDMONSTON PUMPING PLANT, 11 UNITS							
UNITS 10, 12, & 14 (FINAL)							
TUNNELS AND SIPHONS							
MOJAVE DIVISION							
AQUEDUCT, TEHACHAPI AFTERBAY TO SILVERWOOD LAKE							
BUTTES DAM AND RESERVOIR							
PEARBLOSSOM PUMPING PLANT, 4 UNITS							
UNITS 1 & 2 (FINAL)							
CEDAR SPRINGS DAM AND SILVERWOOD LAKE							
SANTA ANA DIVISION							
AQUEDUCT, SILVERWOOD LAKE TO LAKE PERRIS							
DEVIL CANYON POWERPLANT, UNIT 1							
UNIT 2							
PERRIS DAM AND LAKE PERRIS							
WEST BRANCH							
AQUEDUCT, TEHACHAPI AFTERBAY TO CASTAIC LAKE							
OSO PUMPING PLANT, ALL UNITS							
PYRAMID DAM AND LAKE							
CASTAIC DAM AND LAKE							
PIRU POWER PROJECT							
COASTAL BRANCH							
AQUEDUCT, CALIFORNIA AQUEDUCT TO DEVIL'S DEN PUMPING PLANT							
LAS PERILLAS AND BADGER HILL PUMPING PLANTS, 3 UNITS EACH							
UNIT 4, EACH PLANT							
UNIT 5, EACH PLANT							
UNIT 6, EACH PLANT							
DEVIL'S DEN PUMPING PLANT THRU MARIA TERMINUS							
SAN JOAQUIN DRAINAGE FACILITIES							

 REMAINING CONSTRUCTION FOR THE "1973 PROJECT FACILITIES"
 FUTURE SCHEDULED CONSTRUCTION

 INITIAL PROJECT WATER DELIVERY THROUGH THE PLANT
 INITIAL INSTALLATION BY BERRENDA MESA WATER DISTRICT



Looking upstream at Castaic Dam

tinued, as well as construction of Cedar Springs Dam. The dam embankment should "top-out" in early 1971. The completion contract for Pearblossom Pumping Plant was awarded 1970. Contracts for the Pearblossom Operations and Maintenance Subcenter, operating roads, slope protection, and Pearblossom Pumping Plant Control System will be advertised in 1971.

Santa Ana Division. During 1970, construction continued on the San Bernardino Tunnel and Intake Tower and on the turbine, valve and governor, and generator for Unit No. 1 of the Devil Canyon Powerplant. Construction began on the penstock contract, completion contract, and associated equipment for Unit No. 1 of the Devil Canyon Powerplant; the Santa Ana Valley Pipeline from Devil Canyon Powerplant to Sugarloaf Mountain; and Perris Dam.

The construction contract for the last reach of the Aqueduct, from Sugarloaf Mountain to Lake Perris, and the Perris Dam Inlet and Outlet Works will be advertised in early 1971.

West Branch. During 1970, construction continued on Oso Pumping Plant Initial Contract, Discharge

Lines, Pumps, Motors, Valves, Completion Contract, and Control System; Castaic Dam and Outlet Works; Pyramid Dam Initial Facilities; Southern California Operations and Maintenance Center; Angeles Tunnel Intake Works; and Quail Canal. Construction was initiated on Gorman Creek Improvement.

Construction also continued during 1970 on the 50-megawatt unit of the Castaic Powerplant, under the responsibility of the City of Los Angeles, Department of Water and Power. Fabrication of the penstocks began, while fabrication of mechanical and electrical equipment continued.

Contracts will be awarded in 1971 for Pyramid Dam, Pyramid Dam Outlet Works and for completion of Angeles Tunnel Intake Works.

Coastal Branch. During 1970, contracts were awarded for the fabrication and installation of Units No. 5 and 6 of the Las Perillas and Badger Hill Pumping Plants. The cost of this work is being financed by Berrenda Mesa Water District under special agreements with the Department (see Chapter 1, "Actions Affecting Individual Facilities").

CHAPTER III. PROJECT UTILITY MANAGEMENT

This chapter summarizes the Department's management of the Project's water and power "utility" during 1970. These management activities pertain to project water rights, water supply contracts, and power purchase and supply contracts.

Water Rights Management

Water rights management activities by the Department during 1970 included:

Completion of certain agreements and continued negotiation of others with local water right holders to define the quantities each is entitled to divert from flows in stream channels used by the Project.

Administration of completed agreements and negotiation of proposed agreements with water users in the Sacramento-San Joaquin Delta concerning the Project's obligation with respect to any potential loss of, or guarantee of, water having satisfactory quality.

Presentation of testimony before the State Water Resources Control Board to demonstrate that substantial quantities of water will be available to both satisfy reasonable water quality requirements in the Delta and meet project demands.

Feather River

During 1970, negotiations were completed with one appropriative water user, the Plumas Mutual Water Company, and agreements were executed with 12 riparian water users concerning Feather River water right entitlements. Negotiations continue with the remaining six appropriative water users and 30 riparian water users along the Feather River. (These totals are subject to change as water users initiate or discontinue diversions from the River.)

Sacramento-San Joaquin Delta

Previous reports have referred to the administration of completed agreements with municipal water users in the Western Delta—the Contra Costa County Water District and the City of Antioch. The District experienced a below-average offshore water supply during 1970; however, the associated loss was offset by above-average water supply credits built up under the contract during 1969. This loss reduced the District's 70-day credit to 37 days. On the other hand, the City experienced an above-average supply during 1970 and increased its credit to 112 days. These credits will be available to offset loss of available offshore supplies in 1971 or future years.

During 1970, negotiations with the Delta Water Agency, which would embody the November 19, 1965 Delta Water Quality Criteria in a binding agreement with users throughout the Delta, continued at a slow pace. Negotiations with agricultural water users in the Western Delta, involving arrangements for a substitute, overland water supply, were essentially at a standstill during 1970. To a certain extent, the pending decision by the State Water Resources Control Board on quality control in the Delta had the effect

of delaying these negotiations. However, the latter negotiations primarily were delayed pending clarification or establishment of the authority of the Bureau of Reclamation to participate as the operator of the Central Valley Project.

Negotiations also continued during 1970 with industrial users in the Western Delta. Industrial users are seeking (a) a replacement supply for the loss of offshore water of adequate quality due to operation of the Central Valley Project and the State Water Project, (b) compensation for any additional cost of the replacement supply, and (c) compensation for any increase in operation and maintenance cost of cooling systems due to increased salinity. The failure of the Bureau of Reclamation to participate continues to be the major impediment to the completion of these negotiations.

In August 1970, the Director met with representatives of the industries, the Contra Costa County Water District, and the Bureau of Reclamation. At this meeting, the Director made it clear that the Department was extremely interested in reaching agreement with the industries to provide them with a replacement water supply; however, he felt that it was imperative that (a) the Bureau of Reclamation participate to provide that portion of the replacement supply that could be attributed to operation of the Central Valley Project, and (b) the agreements be negotiated simultaneously with implementation of the Modified Kellogg Unit. Furthermore, the Director stated that any additional cooling system costs, due to increased salinity of an offshore supply, would be a subject of future discussions if such costs materialize.

Last year's report included a reference to the Contra Costa County Water District's proposed modification of the Kellogg Unit of the Central Valley Project (see page 18, Bulletin 132-70). Under the proposal, the Central Valley Project would provide a water supply for the District in the Delta, the State Water Project would transport ("wheel") the supply through the Delta Pumping Plant for delivery to the District at the head of the California Aqueduct, and the District would construct conveyance facilities from the California Aqueduct to the existing Contra Costa Canal. In addition to providing the water supply, the Bureau of Reclamation would participate in the Modified Unit by constructing the proposed Kellogg Reservoir when federal funds become available.

During 1970, negotiation of an agreement to implement "wheeling" through the State Water Project's Delta Pumping Plant continued among the Department, the Bureau, and the District. Successful completion of this arrangement will guarantee the delivery

of the replacement supply and the supply needed to meet expanding needs of municipal and industrial water users.

The water rights hearings relative to formulation and revision of permit terms and conditions to applications to appropriate Delta water supplies sought by the State Water Project and the Central Valley Project continued throughout the entire year (see page 18, Bulletin 132-70).

The Department presented testimony by several world-recognized experts in their respective field (Dr. Hans Einstein, sediment transport; Dr. Donald O'Connor, effects of outflows and waste discharges on algae growth; and Professor W. R. Schoonover, soil chemistry and agricultural practices) concerning the environmental benefits which will be realized in the Delta through proper operation of state and federal water projects and, particularly, the Peripheral Canal.

Water Contracts Management

The Department has entered into long-term water supply contracts with 31 local governmental agencies throughout the State. Summary data concerning these contractors are shown on Figure 6. Under legislation enacted in 1970 (California Statutes of 1970, Chapter 443), the name of the Upper Santa Clara Valley Water Agency—one of the contractors—was changed to the Castaic Lake Water Agency.

The 31 contracts commit the entire "minimum project yield" of 4,230,000 acre-feet annually—the contractual limit of the total firm delivery capability of the Project. Each contract includes a schedule of "annual entitlements to project water". These entitlements generally build up to the "maximum annual entitlement" by 1990. However, schedules of several contracts provide for minor increases beyond 1990 so that the total of all annual entitlements will not equal the "minimum project yield" until 2016. These annual entitlements reflect the projections of firm project water demands that prevailed at the time the contracts were executed and provide a basis for firm annual water revenues for financing annual costs of the Project.

Schedules of annual entitlements are shown for each contractor in Appendix B (Table B-4) and are summarized for each major service area in Table 1 (Columns 1 through 7).

For certain contractors, project water service to date has been less than their annual entitlements—due to reasons including above-normal local water supplies and insufficient distribution system capacities. For other contractors, project water service to date has been greater than their annual entitlements—due to the delivery of surplus water under supplementary one-year contracts. Table 1 also shows the actual and projected annual delivery of entitlement water (Column 8) and of surplus water (Column 9). (The latest projection of demands for entitlement water is

Similar expert testimony was also presented by the water supply contractors and the Bureau of Reclamation both in support of the Department's and the Bureau's position and in refutation of testimony presented by the protestants.

Formal presentation of testimony before the State Water Resources Control Board ended in October. At that time, the Director appeared before the Board to restate the Department's position with respect to Delta water problems and water development in the State. He emphasized that the preferred solution for ensuring an adequate and reliable source of water to Delta water users lies not in providing sustained high outflows from the Delta but rather in the adoption of water quality standards equal to the November 19, 1965 Delta Water Quality Criteria and in negotiation of agreements for providing Western Delta overland replacement facilities.

subsequently described under the heading of "Project Water Service Review".)

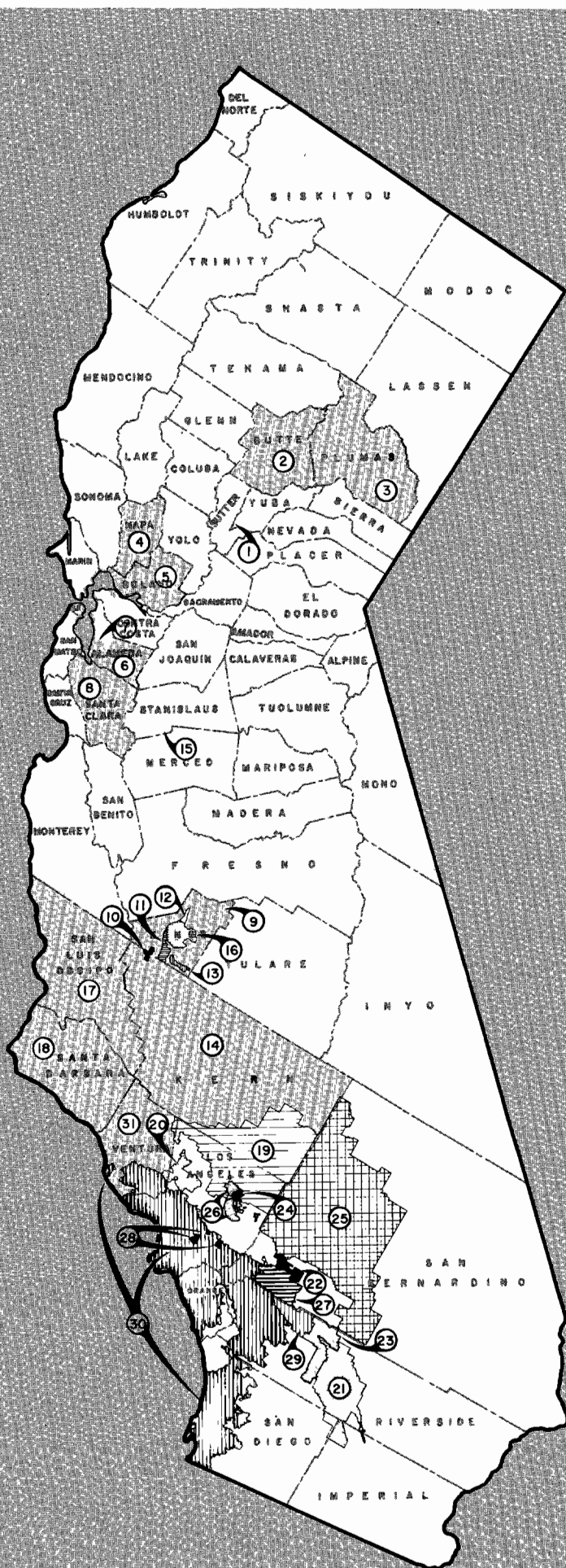
In addition to total project water deliveries (Column 10), Table 1 also presents the actual and projected quantities of project water required to (a) bring water surfaces in completed aqueduct facilities to operational levels (Column 11); (b) compensate for evaporation and seepage losses in operational aqueduct facilities (Column 12), as modified by annual changes in storage within such facilities; and (c) replace water consumed in recreation developments along the aqueduct facilities (Column 13). The total of these quantities (Column 14) generally represents the annual project water demands to be supplied from inflow to the Sacramento-San Joaquin Delta. However, actual diversion demands are modified by annual changes in water conservation storage in San Luis Reservoir. Furthermore, project water demands will be increased for currently unscheduled commitments to deliver 239,600 acre-feet of water by 1985 as compensation for local water used in constructing the California Aqueduct (for soil pre-consolidation in areas susceptible to shallow subsidence).

Project Water Service Review

Last year's report referred to the review which was initiated at the end of 1969 concerning future project water demands (see pages 26-27, Bulletin 132-70). The results of that review were incorporated in the analyses summarized in the Department's Bulletin 160-70, "Water for California—The California Water Plan Outlook in 1970" (December 1970). Quoted below is a pertinent conclusion reported in Bulletin 160-70 (page 5):

"As a result of the projected slower growth of statewide population as compared with projections made four years ago, future water demands are

FIGURE 6: LONG-TERM WATER SUPPLY CONTRACTING AGENCIES



Location No	Contracting Agency	Maximum Annual Entitlement (acre feet)	Gross Area as of July 1, 1970 (acres)	Assessed Valuation (1970 - 1971)	Estimated Population (July 1, 1970)
UPPER FEATHER AREA					
1	City of Yuba	9,600	3,100	29,700,000	14,000
2	County of Butte	27,500	1,067,600	268,321,200	100,800
3	Plumas County Flood Control and Water Conservation District	2,700	1,644,000 ^a	96,460,100 ^a	11,400 ^a
Subtotal		39,800	2,714,700	394,481,300	126,200
NORTH BAY AREA					
4	Napa County Flood Control and Water Conservation District	25,000	508,000	172,979,000	77,500
5	Solano County Flood Control and Water Conservation District	42,000	528,400	375,497,900	166,600
Subtotal		67,000	1,036,400	548,476,900	244,100
SOUTH BAY AREA					
6	Alameda County Flood Control and Water Conservation District, Zone 7	46,000	272,000	219,382,700	82,000
7	Alameda County Water District	42,000	60,300	343,918,700	133,000
8	Santa Clara County Flood Control and Water District	100,000	832,300	2,923,952,700	1,065,500
Subtotal		188,000	1,164,600	3,487,254,100	1,280,500
SAN JOAQUIN VALLEY AREA					
9	County of Kings	4,000	893,000	151,564,600 ^b	64,500
10	Devil's Den Water District	12,700	8,500	1,257,600	50
11	Dudley Ridge Water District	57,700	29,900	6,528,100	50
12	Empire West Side Irrigation District	3,000	7,500	757,200	50
13	Hacienda Water District	8,500	15,300	239,600	50
14	Kern County Water Agency	1,153,400	5,057,200 ^c	1,028,862,200 ^c	349,700 ^c
15	Oak Flat Water District	5,700	2,500	275,000	50
16	Tulare Lake Basin Water Storage District	110,000	193,000	22,184,100	50
Subtotal		1,355,000	6,206,900	1,211,668,400	414,500
CENTRAL COASTAL AREA					
17	San Luis Obispo County Flood Control and Water Conservation District	25,000	2,131,300	307,565,600	105,800
18	Santa Barbara County Flood Control and Water Conservation District	57,700	1,756,900	699,543,000	261,200
Subtotal		82,700	3,888,200	1,007,108,600	367,000
SOUTHERN CALIFORNIA AREA					
19	Antelope Valley-East Kern Water Agency	138,400	1,421,900	367,426,600 ^d	86,700
20	Castaic Lake Water Agency	41,500	125,000	179,462,000	50,200
21	Coachella Valley County Water District	23,100	610,200	225,296,900	57,700
22	Crestline-Lake Arrowhead Water Agency	5,800	53,700	46,760,500	12,800
23	Desert Water Agency	38,100	220,500	162,262,900	28,500
24	Little Rock Creek Irrigation District	2,300	43,300 ^e	4,200,900	1,500
25	Mojave Water Agency	50,800	3,160,400	247,800,000	89,900
26	Palmdale Irrigation District	17,300	73,700	19,277,600	22,200
27	San Bernardino Valley Municipal Water District	102,600	152,100	566,416,600	318,400
28	San Gabriel Valley Municipal Water District	28,800	16,200	350,790,400	147,900
29	San Geronimo Pass Water Agency	17,300	140,600	55,577,300	26,400
30	The Metropolitan Water District of Southern California	2,011,500	3,072,100	27,605,064,300	10,200,000
31	Ventura County Flood Control District	20,000	1,179,500 ^f	1,127,152,300 ^f	377,400 ^f
Subtotal		2,497,500	10,269,200	30,957,488,300	11,419,600
TOTAL		4,230,000	25,280,000 ^g	37,606,477,600 ^g	13,851,900 ^g
NET AREA TOTAL		4,230,000	24,533,000 ^g	36,817,333,100 ^g	13,614,400 ^g

- Total for Plumas County, including Last Chance Creek Water District.
- 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.
- Total for Kern County, including about 60% of Devil's Den Water District, and about 50% of Antelope Valley-East Kern Water Agency.
- Total for Antelope Valley-East Kern Water Agency includes assessed valuation for California City of \$24,311,000 but excludes City's area and population.
- Includes duplicate values for overlapping agency areas.
- Total for Ventura County, including about 8,400 acres in Antelope Valley-East Kern Water Agency, 214,700 acres in The Metropolitan Water District of Southern California, and about 8,400 acres in Castaic Lake Water Agency.
- Excludes all overlapping areas.

TABLE 1: ANNUAL PROJECT

(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
Subtotal, Actual for 9 years 1962-1970	1,870	0	334,338	456,825	0	0	793,033
1971	890	0	116,200	258,500	0	0	375,590
1972	970	0	118,300	345,000	0	356,370	820,640
1973	1,100	0	120,400	390,800	0	472,400	984,700
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
5 Years, 1971-1975	5,800	0	601,800	1,910,000	0	2,121,240	4,638,840
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) Does not include regulated releases of local supply and transportation of nonproject water amounting to 310,576 acre-feet, 1962 to 1970.

WATER REQUIREMENTS

-feet)

Estimated Annual Project Water Demands							Calendar Year
Deliveries to Contracting Agencies			Initial Fill	Operational Losses and Storage	Recreation Water	Total	
Entitlement Water	Surplus Water	Total					
(8)	(9)	(10)	(11)	(12)	(13)	(14)	
0	0	0	9	272	0	281	1962
0	0	0	71	185	0	256	1963
0	0	0	171	152	0	323	1964
0	0	0	93	729	0	822	1965
0	0	0	0	1,746	0	1,746	1966
11,538	0	11,538	8,328	2,885	0	22,751	1967
171,709	121,534	293,243	498,926	117,906	0	910,075	1968
193,020	72,397	265,417	510,614	72,196	0	848,227	1969
233,993	133,024	367,017	29,484	- 3,095	0	393,406	1970
610,260	326,955	937,215(a)	1,047,696	192,976	0	2,177,887	9 Years, 1962-1970
375,590	184,750(b)	560,340	64,778	127,437	200	752,755	1971
618,020	261,705	879,725	129,801	222,918	400	1,232,844	1972
805,180	483,496	1,288,676	309,998	53,516	10,600	1,662,790	1973
916,950	534,941	1,451,891	36,724	365,984	16,800	1,871,399	1974
1,019,880	542,441	1,562,321	12,892	87,967	23,325	1,686,505	1975
3,735,620	2,007,333	5,724,953	554,193	857,822	51,325	7,206,293	5 Years, 1971-1975
1,129,315	512,598	1,641,913	20,807	252,248	27,525	1,942,493	1976
1,189,601	669,600	1,859,201	126,688	471,148	27,725	2,484,762	1977
1,292,792	678,600	1,971,392	67,360	322,548	27,925	2,389,225	1978
1,385,533	676,000	2,061,533	0	251,409	28,115	2,341,057	1979
1,506,994	660,200	2,167,194	0	156,073	44,305	2,367,572	1980
1,642,205	587,000	2,229,205	0	207,784	44,415	2,481,404	1981
1,769,056	537,900	2,306,956	0	160,956	44,525	2,512,437	1982
1,937,527	552,000	2,489,527	0	195,533	44,645	2,729,705	1983
2,207,508	521,000	2,728,508	0	111,559	44,755	2,884,822	1984
2,493,579	449,400	2,942,979	0	135,826	44,875	3,123,680	1985
16,554,110	5,844,298	22,398,408	214,855	2,265,084	378,810	25,257,157	10 Years, 1976-1985
34,663,546	-	34,663,546	0	2,921,515	453,650	38,038,711	10 Years, 1986-1995
38,551,460	-	38,551,460	0	2,542,371	455,000	41,548,831	10 Years, 1996-2005
40,680,170	-	40,680,170	0	2,459,169	455,000	43,594,339	10 Years, 2006-2015
42,174,000	-	42,174,000	0	2,496,128	455,000	45,125,128	10 Years, 2016-2025
42,300,000	-	42,300,000	0	2,500,590	455,000	45,255,590	10 Years, 2026-2035

b) Based on contractor requests for the period 1971 thru 1976. Estimated amounts thereafter thru 1985 based on studies as to the availability and cost of surplus water.

also expected to increase more slowly. This slower projected growth of water demands, particularly in the South Coastal area, is expected to delay the time of need for an additional conservation facility for the State Water Project about 10 years until the mid-1990s. However, the time of need for an additional facility could be advanced by (1) greater-than-planned outflows of fresh water from the Sacramento-San Joaquin Delta, as might be required by the State Water Resources Control Board; (2) the needs of additional service areas; or (3) increased water use in areas tributary to the Delta."

Under the projections basic to Bulletin 160-70, project water demands of certain Southern California contractors—notably, The Metropolitan Water District of Southern California—would not build up to their maximum annual entitlements until well after 2000. By 2020, Bulletin 160-70 estimates are that the fulfillment of all entitlements would require about 700,000 acre-feet of water annually in addition to the yield capability of the "initial project conservation facilities" (including Lake Oroville, San Luis Reservoir, and the Peripheral Canal). This amount essentially would be the required capability of the "additional project conservation facilities" (the Upper Eel River Development or alternatives in lieu thereof). Also, by 2020, there could be demands for "supplemental water", over and above the total maximum annual entitlements of all contractors, of about 700,000 acre-feet annually. Such demands would be located in the North and South Bay areas, southern San Joaquin Valley, and Southern California area.

Project Water Service in 1970

The Project delivered 405,097 acre-feet of water in 1970—not including 468,951 acre-feet which was served to customers of the federal Central Valley Project from the joint-use San Luis Facilities. Monthly quantities of water delivered during the year to each contractor are summarized in Table 2.

Deliveries of water made available by project facilities ("project water") to long-term contractors totaled 365,841 acre-feet:

- 233,993 acre-feet of entitlement water
- 131, 848 acre-feet of surplus water under one-year contracts.

In addition, project facilities transported and delivered 24,225 acre-feet of water not classified as "project water" to long-term contractors:

- 3,618 acre-feet of water from the federal Solano Project through Phase I of the North Bay Aqueduct to the Napa County Flood Control and Water Conservation District.
- 20,607 acre-feet of local water conserved in Lake Del Valle, under agreement with Alameda County Water District and Pleasanton County Water District, to Alameda County Water District. (Of this amount, 13,723 acre-feet was actually project water delivered in exchange for an

equal amount of conserved water which was retained in Lake Del Valle.)

Also, 15,031 acre-feet of project water was delivered to agencies other than long-term contractors:

- 1,176 acre-feet of surplus water to Mustang Water District in Stanislaus and Merced Counties under a one-year contract—the first surplus water contract with an agency other than the 31 long-term contractors.
- 13,855 acre-feet of regulated releases (including water right entitlements) from Frenchman Lake to Last Chance Creek Water District under the ninth of a series of one-year contracts.

Entitlement Water Service in 1970. Annual entitlements to project water under all long-term contracts totaled 322,600 acre-feet for 1970. However, 69,813 acre-feet less than that amount was scheduled for delivery in compliance with contractor requests and 18,794 acre-feet of the scheduled amount was not delivered for the reasons listed below:

- 7,689 acre-feet of Santa Clara County Flood Control and Water District's 1970 entitlement was neither scheduled nor delivered as certain of the District's distribution facilities were under construction during most of the year.
- 324 acre-feet of the 1970 entitlement for Alameda County Flood Control and Water Conservation District, Zone 7, was neither scheduled nor delivered, reflecting reduced user demands.
- 2,167 acre-feet was not delivered because user demands were less than originally anticipated in Butte County; Plumas County Flood Control and Water Conservation District; Empire West Side Irrigation District; and Oak Flat Water District.
- 28,700 acre-feet, the portion of Kern County Water Agency's 1970 annual entitlement designated for municipal and industrial use, was not scheduled since no member unit required that type of water service in 1970.
- 49,727 acre-feet was not delivered because above-average local water supplies resulting from climatic conditions reduced or eliminated four contractors' project water demands in 1970: Alameda County Flood Control and Water Conservation District, Zone 7 (427 acre-feet); Alameda County Water District (16,200 acre-feet); County of Kings (1,300 acre-feet, not scheduled); and Tulare Lake Basin Water Storage District (31,800 acre-feet, not scheduled). Pursuant to the so-called "wet weather provisions" of the agencies' contracts, delivery of this water may be scheduled for future years.

Thus, 233,993 acre-feet was delivered during 1970 under entitlements to project water.

The Hacienda Water District sought and obtained the necessary approvals to take delivery of its 1970 entitlement on lands within the Lost Hills Water Dis-

trict, a member unit of the Kern County Water Agency. The District paid an "extra service charge" for the conveyance of this water through aqueduct reaches beyond its turnout.

Surplus Water Service in 1970. The one-year surplus water contracts originally executed in 1968 with long-term contractors and extended through 1969 were extended once again to provide for surplus service in 1970 (see page 26, Bulletin 132-70).

Pursuant to the extended contracts, the Department approved schedules calling for the delivery of 150,074 acre-feet of surplus water in 1970 to six long-term contractors. Actual deliveries totaled 131,848 acre-feet under these contracts.

Project Water Service Plans for 1971

In September 1970, the Department requested the contractors to submit schedules of requested future deliveries for the six-year period 1971 through 1976, instead of the five-year period prescribed by the contracts. (Under power purchase contracts developed subsequent to the water supply contracts, the Department must have an estimate of water deliveries six years in advance so as to more accurately order the amount of power needed for pumping entitlement water.)

Based on schedules received about October 1, 1970, requests for entitlement water service for 1976 total 1,488,870 acre-feet. Total delivery requests for 1976 were 359,660 acre-feet less than corresponding 1976 entitlements of the following five contractors:

Contractor	(In acre-feet)		
	Entitlement	Request	Reduction
Antelope Valley-East Kern Water Agency.....	44,000	26,000	18,000
Mojave Water Agency.....	17,800	2,040	15,760
Palmdale Irrigation District.....	6,900	300	6,600
Castaic Lake Water Agency.....	9,500	7,500	2,000
The Metropolitan Water District of Southern California.....	655,600	338,300	317,300
Total.....	733,800	374,140	359,660

Determination of 1976 power requirements was based on the above delivery requests. The California Companies (Southern California Edison, Pacific Gas and Electric and San Diego Gas and Electric) were notified of such requirements on December 29, 1970, as required under the EHV Intertie Contract with the Companies. If the actual amounts of entitlement water eventually delivered in 1976 are greater than the amounts requested, the Department may be required to purchase additional power at higher unit costs than power ordered six years in advance. Conversely, if the amounts eventually delivered are less than the amounts requested, the Department may have made a commitment to purchase unneeded power.

Entitlement Water Service for 1971. On December 1, 1970, the Department approved the 1971 entitlement water delivery schedules totalling 375,590 acre-feet. This amount corresponds with the 1971 entitlements of all contractors in the Feather River area (excluding Yuba City), South Bay area, and San Joaquin Valley. While deliveries may be possible south of the Tehachapis in the latter part of the year, 1971 deliveries were not requested by Southern California contractors.

In scheduling entitlement water deliveries for 1971, the Department implemented interim policy guidelines on "extra service." The primary objective of these guidelines is to emphasize that while entitlement water may be delivered at instantaneous rates greater than those provided by the water supply contracts on an "if and when power is available" basis, the Department will be under no obligation to do so unless the respective contractors agree, in advance, to pay the costs of any additional system power necessitated thereby.

Requests for monthly 1971 deliveries to five contractors reflected "extra service" involving peaking rates in excess of the limits set forth in Article 12(b) of their respective contracts. Only one of the five desired such "extra service" if an extra service charge would be incurred. Department analyses indicated that the requested excess peaking service could be provided without causing an increase in the unit costs of project water deliveries. Approved 1971 schedules therefore included monthly amounts equal to those requested by the contractors and at the peaking rates requested.

Surplus Water Service for 1971. Approved monthly schedules of surplus water deliveries for 1971 were issued on December 1, 1970, to eight long-term contractors in the following annual amount (in acre-feet):

Alameda County Water District.....	8,400
County of Kings.....	200
Devil's Den Water District.....	6,700
Dudley Ridge Water District.....	27,100
Empire West Side Irrigation District.....	3,000
Kern County Water Agency.....	95,250
Oak Flat Water District.....	2,600
Tulare Lake Basin Water Storage District.....	22,800
Total.....	166,050

Results of the Department's studies indicated that, with the sources of pumping power to be available during 1971, unit power and energy costs (on an acre-foot basis) for the delivery of combined requested entitlement and surplus water quantities will not exceed the unit power and energy costs for the delivery of requested entitlement water quantities only. As such, surplus water service in 1971 will be provided under an additional one-year extension of 1968 surplus water contracts.

The County of Kings, which had not previously purchased surplus water, executed a surplus water contract for the first time. This contract provides for

TABLE 2: PROJECT WATER

(in acre-

Contracting Agency and Type of Service	Month						
	Jan	Feb	Mar	Apr	May	Jun	Jul
FEATHER RIVER SERVICE AREA							
County of Butte:							
Entitlement Water	0	0	0	0	0	0	0
Last Chance Creek Water District:							
Regulated Releases of Local Supply	0	0	0	0	677	5,092	1,890
Plumas County Flood Control & Water Cons. District:							
Entitlement Water	0	0	0	0	0	11	28
AREA SUBTOTAL	0	0	0	0	677	5,103	1,918
NORTH BAY SERVICE AREA							
Napa County Flood Control & Water Conservation District:							
Transportation of Nonproject Water	677	538	657	337	0	0	0
SOUTH BAY SERVICE AREA							
Alameda County Flood Control & Water Cons. Dist., Zone 7:							
Entitlement Water	310	292	355	900	1,237	1,158	1,360
Alameda County Water District:							
Entitlement Water	0	0	0	0	0	0	0
Surplus Water	0	0	0	0	0	0	0
Agency Subtotal	0	0	0	0	0	0	0
Exchange Water	894	585	464	2,098	1,888	2,214	2,365
Regulated Releases of Local Supply	0	0	0	0	0	0	0
Santa Clara County Flood Control & Water District:							
Entitlement Water	5,727	3,999	4,142	6,157	7,472	6,947	7,569
AREA SUBTOTAL	6,037	4,291	4,497	7,057	8,709	8,105	8,929
SAN JOAQUIN VALLEY SERVICE AREA							
County of Kings							
Entitlement Water	0	0	0	0	0	0	0
Devil's Den Water District:							
Entitlement Water	650	735	715	285	185	654	676
Surplus Water	901	686	11	178	303	687	893
Agency Subtotal	1,551	1,421	726	463	488	1,341	1,569
Dudley Ridge Water District:							
Entitlement Water	2,100	1,500	800	500	2,200	4,000	2,900
Surplus Water	1,583	1,447	1,291	2,015	2,151	2,426	4,024
Agency Subtotal	3,683	2,947	2,091	2,515	4,351	6,426	6,924
Empire West Side Irrigation District:							
Entitlement Water	0	0	0	0	0	0	0
Surplus Water	0	0	0	0	0	0	560
Agency Subtotal	0	0	0	0	0	0	560
Hacienda Water District:							
Entitlement Water	0	330	205	168	267	533	545
Surplus Water	66	243	58	43	377	353	975
Agency Subtotal	66	573	263	211	644	886	1,520
Kern County Water Agency:							
Entitlement Water	1,775	2,607	5,876	8,206	17,779	25,621	30,977
Surplus Water	3,620	4,748	6,855	8,843	2,974	5,900	9,470
Agency Subtotal	5,395	7,355	12,731	17,049	20,753	31,521	40,447
Mustang Water District:							
Surplus Water	0	0	0	166	277	144	311
Oak Flat Water District:							
Entitlement Water	0	22	200	250	300	450	650
Surplus Water	67	0	284	684	528	434	566
Agency Subtotal	67	22	484	934	828	884	1,216
Tulare Lake Basin Water Storage District:							
Entitlement Water	0	0	0	0	0	0	0
AREA SUBTOTAL	10,762	12,318	16,295	21,338	27,341	41,202	52,547
ALL AGENCIES:							
Entitlement Water	10,562	9,485	12,293	16,466	29,440	39,374	44,705
Surplus Water	6,237	7,124	8,499	11,929	6,610	9,944	16,799
Subtotal---Project Water	16,799	16,609	20,792	28,395	36,050	49,318	61,504
Regulated Releases of Local Supply	0	0	0	0	677	5,092	1,890
Transportation of Nonproject Water	677	538	657	337	0	0	0
Exchange Water	894	585	464	2,098	1,888	2,214	2,365
TOTAL WATER	18,370	17,732	21,913	30,830	38,615	56,624	65,759

DELIVERIES IN 1970

feet)

Month						1970 Carry- over	Accumulated Carry-over as of Dec. 31, 1970	Contracting Agency and Type of Service
Aug	Sep	Oct	Nov	Dec	Total			
0	0	0	0	0	0	0	0	FEATHER RIVER SERVICE AREA County of Butte: Entitlement Water Last Chance Creek Water Districts: Regulated Releases of Local Supply Plumas County Flood Control & Water Cons. District: Entitlement Water
4,732	1,182	282	0	0	13,855	0	0	
16	11	4	0	0	70	0	0	
4,748	1,193	286	0	0	13,925	0	0	AREA SUBTOTAL
0	0	383	417	609	3,618	0	0	NORTH BAY SERVICE AREA Napa County Flood Control & Water Conservation District: Transportation of Nonproject Water
1,277	964	737	370	289	9,249	427	1,787	SOUTH BAY SERVICE AREA Alameda County Flood Control & Water Cons. Dist., Zone 7: Entitlement Water Alameda County Water District: Entitlement Water Surplus Water Agency Subtotal Exchange Water Regulated Releases of Local Supply Santa Clara County Flood Control & Water District: Entitlement Water
0	0	0	0	0	0	16,200	31,070	
0	0	0	0	0	0	0	0	
0	0	0	0	0	0	16,200	31,070	
2,056	1,159	0	0	0	13,723	0	0	
0	1,596	2,477	2,198	613	6,884	0	0	
7,825	7,743	8,215	7,432	7,083	80,311	0	20,736	
9,102	8,707	8,952	7,802	7,372	89,560	16,627	53,593	AREA SUBTOTAL
0	0	0	0	0	0	1,300	2,400	SAN JOAQUIN VALLEY SERVICE AREA County of Kings Entitlement Water Devil's Den Water District: Entitlement Water Surplus Water Agency Subtotal Dudley Ridge Water District: Entitlement Water Surplus Water Agency Subtotal Empire West Side Irrigation District: Entitlement Water Surplus Water Agency Subtotal Hacienda Water District: Entitlement Water Surplus Water Agency Subtotal Kern County Water Agency: Entitlement Water Surplus Water Agency Subtotal Mustang Water District: Surplus Water Oak Flat Water District: Entitlement Water Surplus Water Agency Subtotal Tulare Lake Basin Water Storage District: Entitlement Water
682	286	239	237	356	5,700	0	0	
1,021	154	372	517	316	6,039	0	0	
1,703	440	611	754	672	11,739	0	0	
1,700	0	0	0	0	15,700	0	0	
4,247	1,731	1,937	1,319	536	24,707	0	0	
5,947	1,731	1,937	1,319	536	40,407	0	0	
300	540	0	725	0	1,565	0	2,944	
715	644	458	0	0	2,377	0	0	
1,015	1,184	458	725	0	3,942	0	2,944	
452	0	0	0	0	2,500	0	0	
1,126	1,176	2,388	273	0	7,078	0	0	
1,578	1,176	2,388	273	0	9,578	0	0	
21,268	2,291	0	0	0	116,400	0	0	
14,936	15,213	7,666	4,953	3,056	88,234	0	0	
36,204	17,504	7,666	4,953	3,056	204,634	0	0	
278	0	0	0	0	1,176	0	0	
450	100	76	0	0	2,498	0	0	
388	455	0	7	0	3,413	0	0	
838	555	76	7	0	5,911	0	0	
0	0	0	0	0	0	31,800	72,100	
47,563	22,590	13,136	8,031	4,264	277,387	33,100	74,444	AREA SUBTOTAL
33,970	11,935	9,271	8,764	7,728	233,993	49,727	131,037	ALL AGENCIES: Entitlement Water Surplus Water Subtotal---Project Water Regulated Releases of Local Supply Transportation of Nonproject Water Exchange Water
22,711	19,373	12,821	7,069	3,908	133,024	0	0	
56,681	31,308	22,092	15,833	11,636	367,017	49,727	131,037	
4,732	2,778	2,759	2,198	613	20,739	0	0	
0	0	383	417	609	3,618	0	0	
2,056	1,159	0	0	0	13,723	0	0	
63,469	35,245	25,234	18,448	12,858	405,097	49,727	131,037	TOTAL WATER

1971 surplus water service under the same basic provisions as the extended 1968 surplus water contracts.

In October 1970, the Department tentatively adopted a set of principles concerning the sale of water during 1971 to customers other than the 31 long-term contractors. These principles, summarized below, are aimed at disposing temporary surplus supplies which are not needed by the contractors and which will not compete in any way with water service by them:

Contracts will conform to the provisions of Article 21 of the Standard Provisions for Water Supply Contract, including the requirement that the term of such contracts will not extend beyond the end of each calendar year, without right of renewal.

Before the Department will contract to deliver surplus water, the requesting entity must have first contacted and been refused service by the long-term contractor(s) who could conveniently serve the entity.

The Department will consider the purposes to which the entity intends to apply surplus water and will not enter into a contract if the Department determines that it possibly could be obligated to continue water service beyond the term of the contract. (For instance, unless the entity has an alternative source of water supply, the Department ordinarily will not contract to deliver surplus water for, say, irrigating permanent crops or for supplying municipal and/or industrial needs.)

The long-term contractors will have first priority in contracting each year for the delivery of surplus water; any surplus supply which is in excess of the amounts requested by the long-term contractors will be available for service to other entities.

If curtailment of service becomes necessary for any reason, scheduled deliveries of surplus water to entities other than the long-term contractors will be reduced first and, if necessary, eliminated before any reductions will be made in scheduled deliveries of surplus water to the long-term contractors.

Charges will be redetermined annually so as to result in payments for surplus water served from major delivery zones which will be equivalent to the long-term charges for entitlement water served at the downstream end of each delivery zone.

Revenues received from such sale of surplus water will be credited to facility costs allocated to water supply in the following order of priority: (a) variable OMP&R costs of aqueduct reaches between the Delta and the point of delivery; (b) costs of project conser-

vation facilities, based on the prevailing Delta Water Rate; and (c) minimum OMP&R costs of aqueduct reaches between the Delta and the point of delivery.

Deferred Entitlement Deliveries in 1971. Eight of the long-term contracts contain the so-called "wet weather" provisions. Pursuant to these provisions, if scheduled entitlement water cannot be accepted by the contractor because of the availability of above average local water supplies resulting from climatic conditions, the contractor may request later delivery of such entitlement water. As of December 31, 1970, six contractors had been credited with a cumulative total of 131,037 acre-feet of deferred entitlement water (see Table 2).

In 1970 a Department scheduling procedure was established which provides that:

- The delivery of deferred entitlements will be scheduled only if the contractor's full annual entitlement for that year is scheduled.
- All of a contractor's deferred entitlement water must be scheduled before any surplus water will be scheduled for delivery to that contractor.

Two contractors requested delivery of a portion of their deferred entitlement water in 1971; two other contractors having deferred entitlement credits requested the delivery of surplus water in 1971 in lieu of deferred entitlements. At the Department's request, the four contractors agreed to take delivery of surplus water in 1971 in lieu of deferred entitlements and, at the same time, waive their rights to the future delivery of deferred entitlements in an amount equal to either (a) the surplus water quantity received in 1971 or (b) the total deferred entitlement credit as of December 31, 1970, whichever amount is less.

Contract Amendments

Forty-three amendments to twenty-six of the long-term water supply contracts became effective during 1970. Five other amendments had been transmitted by the Department for signature as of December 31, 1970. Potential amendments to each of the 31 long-term contracts involving surplus water and deferred delivery of entitlement water were still under negotiation at the end of 1970.

Amendments which became effective during 1970 were as follows:

- Amendment No. 3 to the contract with San Geronio Pass Water Agency whereby water service to the Agency will be provided from the tailrace of Devil Canyon Powerplant (Reach 26A), instead of the south portal of the San Bernardino Tunnel (Reach 25).
- An amendment to five contracts whereby (a) Article 22 was modified to set the Delta Water Charge at \$6.65 per acre-foot of entitlement for 1970, (b) Article 1 was modified to provide that

the interest costs of all future funds used to supplement those of the Burns-Porter Act in the construction of project facilities will be accounted for in determining the "project interest rate", and (c) Article 17 was modified to clarify the adjustment of water charges due to supplemental financing. The five agencies (together with their respective contract amendment numbers) are: Napa County Flood Control and Water Conservation District (No. 3), Solano County Flood Control and Water Conservation District (No. 2), Alameda County Water District (No. 4), Empire West Side Irrigation District (No. 4), and Crestline-Lake Arrowhead Water Agency (No. 5). This particular amendment became effective for 24 contracts in 1969 (see page 27, Bulletin 132-70).

- An amendment to nine contracts whereby a moratorium was declared delaying the applicability of the Surcharge and Surcharge Credit Provisions (Article 30) of the contracts to project water delivered during 1970. The nine agencies (together with their respective contract amendment numbers) are: Plumas County Flood Control and Water Conservation District (No. 4); Alameda County Flood Control and Water Conservation District, Zone 7 (No. 7); Santa Clara County Flood Control and Water District (No. 7); Devil's Den Water District (No. 6); Dudley Ridge Water District (No. 7); Empire West Side Irrigation District (No. 5); Hacienda Water District (No. 5); Kern County Water Agency (No. 5); and Oak Flat Water District (No. 4).

An amendment to 28 contracts whereby Article 22 was modified to set the Delta Water Charge at \$7.24 per acre-foot of entitlement for 1971. The 28 agencies (together with their respective contract amendment numbers) are: Plumas County Flood Control and Water Conservation District (No. 5); Napa County Flood Control and Water Conservation District (No. 4); Alameda County Flood Control and Water Conservation District, Zone 7 (No. 8); Alameda County Water District (No. 5); Santa Clara County Flood Control and Water District (No. 8); County of Kings (No. 3); Devil's Den Water District (No. 7); Dudley Ridge Water District (No. 8); Empire West Side Irrigation District (No. 6); Hacienda Water District (No. 6); Kern County Water Agency (No. 6); Oak Flat Water District (No. 5); Tulare Lake Basin Water Storage District (No. 6); San Luis Obispo County Flood Control and Water Conservation District; Santa Barbara County Flood Control and Water Conservation District; Antelope Valley-East Kern Water Agency (No. 6); Castaic Lake Water Agency (No. 5); Coachella Valley County Water District (No. 4); Crestline-Lake Arrowhead

Water Agency (No. 6); Desert Water Agency (No. 4); Littlerock Creek Irrigation District (No. 4); Mojave Water Agency (No. 5); Palm-dale Irrigation District (No. 4); San Bernardino Valley Municipal Water District (No. 5); San Gabriel Valley Municipal Water District (No. 5); San Geronimo Pass Water Agency (No. 5); The Metropolitan Water District of Southern California (No. 10); and Ventura County Flood Control District (No. 3).

Figure 7 presents a summary of all amendments to the 31 long-term water supply contracts through December 31, 1970. As of that date, a total of 156 amendments had been signed.

Amendments distributed by the Department but which did not become effective during 1970 were as follows:

- The amendment concerning the 1970 Delta Water Charge (Article 22), project interest rate (Article 1), and adjustment of charges for supplemental financing (Article 17) by County of Butte and City of Yuba City.
- The amendment concerning the 1971 Delta Water Charge by County of Butte, City of Yuba City, and Solano County Flood Control and Water Conservation District.

Amendments under negotiation as of December 31, 1970, included one which would realign and simplify the existing surplus water provisions of all long-term contracts. Negotiations of this amendment started in April 1968 (see page 26, Bulletin 132-70). By the end of 1968, general agreement had been reached on the terms of this amendment and on an additional amendment which would, in effect, provide for the eventual delivery of all entitlement water paid for but not received by a contractor (i.e., would provide for delivery of "deferred entitlements"). The latter amendment would replace the special "wet weather" provisions presently contained in eight contracts. Neither the "surplus water" amendment nor the "deferred entitlements" amendment has been submitted for signature since some of the contractors contend that procedures for allocating power costs must first be mutually agreed to. A task force of Department and contractor representatives worked toward this end in 1969 and 1970. Power cost allocations are complex. Several involved and time-consuming studies are required so that their effect on water charges can be analyzed. These studies had not been completed by December 31, 1970.

Surcharge Moratorium. Previous reports have referred to the moratorium which was declared concerning the effect of the Surcharge and Surcharge Credit Provisions of long-term contracts on project water deliveries through 1969 (see pages 26-27, Bulletin 132-69).

Early in 1970, the Department initiated analyses of the projected payments and administrative costs under

the Surcharge and Surcharge Credit Provisions. The contractors were canvassed as to their estimated future project water use. From these projections the Department prepared and distributed preliminary estimates of surcharge payments and surcharge credits. As a follow-up to these analyses, the Department requested each contractor's best estimate of the annual costs which would be incurred by the contractor and its retail agencies in administering these provisions. By December 31, 1970, not all contractors were able to comply with the Department's request.

For several reasons, including the fact that the magnitude of the unit surcharge was not then precisely known, the Department proposed a one-year extension of the moratorium to cover project water deliveries in 1970. The net portion of surcharge payments which would have been retained by the State had the Surcharge and Surcharge Credit Provisions been applied to 1970 deliveries is estimated to be less than \$20,000, which amount would be reduced further if administrative costs had been included. As of the end of 1970, amendments which would implement the one-year extension of the moratorium were being executed.

1971 Delta Water Charge. Amendments which would establish the Delta Water Charge for 1970 at \$6.65 per acre-foot of entitlement were described in last year's report (see page 28, Bulletin 132-70).

In July 1970, the Director advised the contractors that the Department was not prepared to propose a long-term amendment at that time but was willing to establish the Delta Water Charge for 1971 at \$7.24 per acre-foot of entitlement (see page 225, Bulletin 132-70, for a derivation of the \$7.24 per acre-foot charge, which excludes estimates of future Eel River Development construction and operation costs). Without such an amendment, the 1971 Charge would have been \$10.10 per acre-foot. The majority of the contractors indicated, in writing, that they would agree to such a one-year amendment. On September 10, 1970, in accordance with SCR 157 (see page 1, Bulletin 132-70), the Director advised the Senate Committee on Water Resources and the Assembly Water Committee of the proposed amendment. On October 21, 1970, the Chairman of the Assembly Water Committee notified the Director that the Committee concurred in the proposal, provided that the operation of the amendment be limited to a period of one year. The Senate Committee on Water Resources elected not to comment within the 90-day period provided for by SCR 157.

Negotiation of Water Charge Settlements

During 1970, a task force of representatives of the Department, the State Water Contractors Audit Committee, and The Metropolitan Water District of Southern California continued to meet to discuss and analyze questions concerning the calculation of water charges under long-term contracts.

Agreement was reached on a settlement covering protested planning costs incurred during 1961 through 1966, as noted in last year's report (see page 29, Bulletin 132-70). A settlement letter covering this agreement was sent to all contractors on March 31, 1970.

Agreement was also reached on protested planning costs incurred during 1967. On March 12, 1970, the legislative water committees were advised of the proposed settlement pursuant to SCR 157. The Assembly Water Committee concurred in the proposal by letter dated April 2, 1970. The Senate Committee on Water Resources elected not to comment within 90 days. A settlement letter covering 1967 costs was sent to all contractors on November 2, 1970.

Discussions by the task force are continuing on many subjects, including protested 1968 planning costs, various other categories of protested capital costs, definition of minimum and variable operation costs, and allocation of power costs among project plants and water supply contractors.

The time for filing notices of contest concerning water charges had been extended until December 21, 1970, except those charges covered by the following four settlement letters (see page 29, Bulletin 132-70):

- (a) The "prior capital costs" settlement letter sent to all contractors on August 23, 1966, covering certain capital costs incurred prior to December 31, 1960.
- (b) The "interest calculation" settlement letter sent to all contractors on December 6, 1966, covering interest calculations under the Transportation Charge and the Delta Water Charge.
- (c) The "proportionate use" settlement letter sent to all contractors on May 9, 1967, covering proportionate use cost allocations under Article 24(b) of the water supply contracts.
- (d) The "Reaches 1 through 7" concurrence letter sent to all contractors on March 25, 1969, covering the allocation of cost of Reaches 1 through 7 of the California Aqueduct and San Luis Reservoir between the purposes of transportation and conservation, subject to the qualification that certain inaccuracies in the application of the methods specified in such concurrence letter will be corrected.

There are many issues regarding the calculation of water charges which remain to be resolved. Therefore, the contractors were notified on December 13, 1970 that they will have until December 21, 1971 to file notices of contest and to pursue all remedies available to them on statements of charges submitted prior to that date—excepting charges covered by the above four letters and:

- (e) The "capital costs 1961-1966" settlement letter sent to all contractors on March 31, 1970, covering certain capital costs incurred during the period 1961 through 1966.

FIGURE 7: LONG-TERM WATER SUPPLY CONTRACT AMENDMENTS AS OF DECEMBER 31, 1970

CONTRACTING AGENCY	AMENDMENT NUMBER OF RESPECTIVE CONTRACTS									
	1	2	3	4	5	6	7	8	9	10
FEATHER RIVER AREA										
City of Yuba City	9/20/64 C E S y									
County of Butte	9/28/64 C S y	3/21/69 m								
Plumas County Flood Control and Water Conservation District	9/29/64 C y	4/ 7/69 m	12/31/69 d	12/31/70 M	12/31/70 D					
NORTH BAY AREA										
Napa County Flood Control and Water Conservation District	9/22/64 C I S y	8/25/66 I B	1/ 6/70 d	12/31/70 D						
Solano County Flood Control and Water Conservation District	9/28/64 C P S y	12/31/69 d								
SOUTH BAY AREA										
Alameda County Flood Control and Water Conservation Control District - Zone 7	12/30/63 ABEISw	11/20/64 C S y	3/24/69 T	11/26/68 A	6/20/69 m	12/31/69 d	12/31/70 M	12/31/70 D		
Alameda County Water District	9/23/65 B C I S y	2/27/69 T	2/27/69 m	1/22/70 d	12/31/70 D					
Santa Clara County Flood Control and Water Conservation District	12/15/63 ABIEsw	9/28/64 C S y	2/24/69 T	11/26/68 A	4/ 8/69 m	12/31/69 d	12/31/70 M	12/31/70 D		
SAN JOAQUIN VALLEY AREA										
County of Kings	12/ 3/68 m	12/31/69 d	12/31/70 D							
Devil's Den Water District	9/28/64 A E S y	11/30/65 I	11/26/68 A	3/ 4/69 m	12/30/69 d	12/31/70 M	12/31/70 D			
Dudley Ridge Water District	9/28/64 A E S y	7/29/68 A	9/ 4/68 A	11/20/68 m	12/23/68 d	12/31/69 d	12/31/70 M	12/31/70 D		
Empire West Side Irrigation District	9/28/64 S y	11/14/68 A	4/ 7/69 m	1/25/70 d	12/31/70 M	12/31/70 D				
Hacienda Water District	9/28/64 S y	8/19/68 A	12/19/68 m	12/31/69 d	12/31/70 M	12/31/70 D				
Kern County Water Agency	9/28/64 A E S y	10/10/66 A	12/31/68 m	12/31/69 d	12/31/70 M	12/31/70 D				
Oak Flat Water District	8/10/67 T	12/19/68 m	12/31/69 d	12/31/70 M	12/31/70 D					
Tulare Lake Basin Water Storage District	12/30/63 A E	9/26/64 S y	10/21/68 A	12/19/68 m	12/31/69 d	12/31/70 D				
CENTRAL COASTAL AREA										
San Luis Obispo County Flood Control and Water Conservation District	11/15/63 c s	10/19/64 C S y	12/22/69 d	12/31/70 D						
Santa Barbara County Flood Control and Water Conservation District	11/26/63 c s	1/26/65 A C E S y	12/23/69 d	12/31/70 D						
SOUTHERN CALIFORNIA AREA										
Antelope Valley East-Kern Water Agency	9/22/64 A C E S y	8/24/65 I P	2/16/67 I P	5/11/67 I X	12/31/69 d	12/31/70 D				
Castaic Lake Water Agency	11/15/63 c s	12/22/64 ACEPSy	1/24/66 A E	12/31/69 d	12/31/70 D					
Conchella Valley County Water District	2/26/64 c s	9/28/64 A C E S y	12/31/69 d	12/31/70 D						
Crestline-Lake Arrowhead Water Agency	11/15/63 c s	9/28/64 A C E S y	11/19/65 P	8/30/68 T	3/ 5/70 d	12/31/70 D				
Desert Water Agency	10/ 8/63 c s	10/ 2/64 A C E S y	12/30/69 d	12/31/70 D						
Littlerock Creek Irrigation District	11/15/63 c s	9/26/64 A C E S y	12/31/69 d	12/31/70 D						
Mojave Water Agency	11/15/63 c s	9/28/64 A C E S y	6/21/66 I P	12/17/69 d	12/31/70 D					
Palmdale Irrigation District	11/15/63 c s	9/28/64 A C E S y	12/31/69 d	12/31/70 D						
San Bernardino Valley Municipal Water District	11/15/63 A c e s	9/28/64 A C E S y	6/26/68 A E	12/31/69 d	12/31/70 D					
San Gabriel Valley Municipal Water District	10/30/63 c s	9/28/64 ACEPSy	5/ 8/67 X	12/23/69 d	12/31/70 D					
San Geronimo Pass Water Agency	11/15/63 c s	1/19/65 ACIEPSy	1/12/70 I	12/31/69 d	12/31/70 D					
The Metropolitan Water District of Southern California	9/28/64 A C E S y	2/23/65 I X	8/ 4/65 A E I	11/19/65 I	10/10/66 I	10/10/66 X	6/17/69 IX	6/17/69 A E I	12/31/69 d	12/31/70 D
Ventura County Flood Control District	9/28/64 C S y	12/31/69 d	12/31/70 D							

CODE	
Month/Day/year amendment was executed.	
General Description of Amendment.	
A.	Annual Entitlements, Table A quantities changed.
B.	Bureau water, service provisions changed.
C.	Surcharge-Surcharge credit, initial provisions added.
D.	Surcharge-Surcharge credit, revised provisions added.
E.	1970 Delta Water Rate Amendment.
F.	1971 Delta Water Rate Amendment.
G.	Maximum Annual Entitlement decreased.
H.	Maximum Annual Entitlement increased.
I.	Individual special provision added.
J.	Moratorium on Surcharge thru 12/31/69.
K.	Moratorium on Surcharge for calendar year 1970.
L.	Peaking service decreased.
M.	Peaking service increased.
N.	Surplus water, initial (A & B) provisions added.
O.	Surplus water, revised (A & B) provisions added.
P.	Turnouts, construction by agency authorized.
Q.	Wet Weather Initial provisions added.
R.	Excess capacity.
S.	Minimum Project Yield increased.

The contractors were advised that they need not file a notice of contest with the State or make payments under protest unless they wish to protest amounts due the State which are covered by letters (a), (b), (c), (d) [as qualified] and (e).

During 1970, the Department initiated a procedure whereby all invoices for payments will be sent by certified mail with a return receipt requested. By this procedure, the date the statement is mailed will be established and the party accepting the statement for the contractor will be identified. However, failure of the Department to use certified mail for the statement submittal will neither relieve a contractor of its obligation to make timely payment nor prejudice the Department's right to assess penalty interest when payment is not received in a timely manner.

1971-72 Budget Review

In order to reduce the magnitude of costs protested by the contractors, a regular procedure has been established by which the Department's expenditure proposals can be formally presented to the water contractors through the California Water Commission (see page 30, Bulletin 132-70).

Review of the Department's proposed 1971-72 project budget was conducted on the following schedule:

August 7, 1970—Program statement sent for review to the "Budget Review Subcommittee" of the Water Service Contractors Audit Committee.

August 19, 1970—Subcommittee members met with Department staff for preliminary comments.

September 10, 1970—Subcommittee members again met with Department staff for additional clarifications.

October 9, 1970—California Water Commission Budget Review Committee met with representatives of the Water Contractors Audit Committee to receive their comments.

November 6, 1970—California Water Commission submitted its report summarizing the Commission's comments along with those of the Audit Committee to the Department, with final recommendations.

November 17, 1970—Department submitted to the Department of Finance its proposed budget after considering the points raised as to program content and expenditure level.

The California Water Commission's report included the following comments:

"Special attention should be given to opportunities for reduction in supervision in the executive elements of the Department commensurate with reduction in total staff."

"Consideration should be given to delaying Bulletin 175 (Middle Fork Eel River Development: Additional Study of Alternative Conveyance Routes) so that it will not be released ahead of the appendix on the evaluation of environmental effects. This could allow a reduction in the pro-

gram for 1971-72 to approximately \$400,000. With the delay in requirement for this source of water that can be postulated from the stretch-out in water demands, a level of funding in the subsequent year of about \$250,000 should be considered."

Other comments pertain to the Department's program for the management and disposal of surplus land, the standards and specifications for cement and concrete, the level of power management activities, and ground water monitoring programs carried on in conjunction with project construction and operation.

As an example of the budget changes brought about by the review, the Department reduced the budget request for the Middle Fork Eel River Advanced Planning Program from the \$623,000 originally proposed to a level of \$470,000, including about \$70,000 for work which was not completed on schedule during 1970-71.

Implementation of Additional Service

By the end of 1970, the following additional aqueduct reaches were ready to deliver project water:

- The Grizzly Valley Pipeline, including both the "upper reach" and "lower reach" as defined in Article 45(l) of the water supply contract with the Plumas County Flood Control and Water Conservation District.
- Reaches of the California Aqueduct from and including Buena Vista Pumping Plant to and excluding Wind Gap Pumping Plant.

Under Article 29(c) of the water supply contracts, all future reimbursable minimum operations costs incurred for the above reaches will be returned annually to the State through contractor payments of the minimum operation, maintenance, power, and replacement component, rather than amortized through payments of the capital cost component.

The contractors provide funds for financing the construction costs of delivery structures (turnouts) and of distribution systems required to convey water from project facilities to retail agencies or individual users within their respective boundaries. In previous bulletins, 1968 legislation was referred to whereby the Department is authorized to enter into loan commitment contracts with specified agencies in the San Joaquin Valley (see page 31, Bulletin 132-70). The purpose of such loan commitments is to assist the agencies in marketing general obligation bonds for financing construction of works necessary for project water use.

During 1970, the Department did not receive any applications from the designated agencies for loan commitments. AB 993 and AB 994 were enacted to overcome certain problems of the 1968 legislation (California Statutes of 1970, Chapters 992 and 911, respectively). The 1970 legislation adds the Wheeler Ridge-Maricopa Water Storage District and the

Henry Miller Water District to the list of eligible agencies. In addition to eliminating the requirement that no loan commitment can be made unless the public agency fails to obtain a bid on its bond issue, the new legislation also extends the period of the loan

commitment from seven to not more than ten years, changes the interest rate payable on loans from 5 percent to a rate equal to the net interest cost on the bonds to be supported, and makes other clarifying changes.

Power Contracts Management

Negotiation of the following contracts and agreements was completed during 1970:

Amendment No. 2 to the Contract for Cooperative Development, West Branch (Castaic), with the City of Los Angeles, Department of Water and Power, which provides for advancing the date of payments to the Department.

An agreement to provide Pacific Gas and Electric Company with State Water Project pumping plant power demand signals from the major plants in exchange for a lump sum payment.

During the year, negotiations progressed on the following:

An agreement with the City of Los Angeles, Department of Water and Power, and Southern California Edison Company regarding the development of the Piru Creek Project.

A contract with certain of the water supply contractors in Southern California to provide for revenue bond financing of the Devil Canyon and Castaic Power Facilities.

Amendment No. 3 to the Contract for Cooperative Development, West Branch (Castaic), with the City of Los Angeles, Department of Water and Power, which changes the date of initial operation to not later than October 15, 1971.

A supplement to the Suppliers' Contract to provide power for pumping surplus water on short notice.

A letter agreement supplementing the Oroville-Thermalito Power Sale Contract relative to settlement of Article 29 claims for reductions in generating capacity beyond 25 days.

Increasing amounts of electric energy will be required each year by aqueduct pumping plants until deliveries reach the maximum amounts of water provided for by long-term contracts. Part of the energy will be supplied from recovery generation by aqueduct powerplants. Table 3 presents the estimated annual amounts of energy required by each pumping plant and generated by each powerplant. Data for the 1962 through 1970 period are actual amounts. The energy quantities for the 1971 through 1976 period are based on the water delivery requests submitted by the water contractors on about October 1, 1970. Beginning in 1977, the energy amounts correspond with

the Department's best estimate of annual deliveries, working with the staffs of the water contractors. Estimated annual energy requirements for the 1971 through 2035 period are also shown graphically on Figure 8, together with the portions required during onpeak and offpeak hours, respectively.

Ultimately, about 13 billion kilowatt-hours of energy will be required annually by aqueduct pumping plants, of which slightly less than 20 percent will be supplied by recovery generation. At the present time, the lowest-cost purchased energy is available from the Suppliers, for use during offpeak hours. The cost of purchased energy used during onpeak hours varies with the capacity (maximum instantaneous rate) at which the energy is used. The lowest cost of onpeak capacity under present conditions is Canadian Entitlement power from the Pacific Northwest. The amount of purchased onpeak capacity may be minimized by doing as much project pumping during offpeak hours as possible, consistent with the delivery requirements of the water contractors and the hydraulic limitations of pumping plants and aqueduct.

Purchase of onpeak capacity also may be minimized by accomplishing most of the recovery generation during the onpeak hours. Such onpeak operation is possible at the Devil Canyon Powerplant, in conjunction with regulatory storage capacity in Silverwood Lake, and at San Luis Pumping-Generating Plant, in conjunction with regulatory storage capacity in San Luis Reservoir.

In addition to Canadian Entitlement power, onpeak capacity and energy are available from the Suppliers. Capacity and energy costs from these sources have been established through March 31, 1983. Beginning on April 1, 1983, Canadian Entitlement power will no longer be available, and revised rates will be in effect for Suppliers power. Continuing studies of alternative sources of power are necessary to minimize future project costs.

The Department has purchased 300,000 kilowatts of Canadian Entitlement power. Part of this Canadian Entitlement power is excess to the project pumping needs in 1969, 1970, and 1971. This excess power is presently being sold to the Suppliers. The Department may repurchase a portion of this power commencing in April 1978. If the Department desires to use such power, it must pay the original cost of power plus an additional amount based on changes in utility power costs from the time the power was sold by the Department until the time the power is used by the Department. The five-year notice for this power, if sched-

TABLE 3: ANNUAL PROJECT ENERGY

(in millions of

Calendar Year	Energy										
	North Bay Aqueduct Pumping Plants		Periph- eral Canal Pumping Plant	South Bay Aque- duct Pumping Plants (b)	California Aqueduct						
	Calhoun and Travis	Cor- delia (a)									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Subtotal, 1962-1970	Actual for 9 years, 0	4	0	364	646	361	98	2	0	0	0
1971	0	2	0	104	228	36	92	50	26	48	166
1972	0	3	0	99	290	40	119	104	94	203	741
1973	0	3	0	101	349	43	174	179	187	401	1,487
1974	0	3	0	102	393	46	151	130	133	281	1,033
1975	0	3	0	104	339	50	164	141	143	304	1,119
5 Years, 1971-1975	—	—	—	—	—	—	—	—	—	—	—
	0	14	0	510	1,599	215	700	604	583	1,237	4,546
1976	0	3	0	106	434	53	184	163	166	353	1,300
1977	0	4	0	107	470	56	182	148	146	306	1,130
1978	0	5	0	109	499	59	219	198	201	428	1,576
1979	0	6	0	111	486	63	220	189	189	398	1,460
1980	1	8	0	112	492	66	233	191	195	410	1,501
1981	1	8	14	114	542	69	257	223	222	468	1,714
1982	1	9	15	116	564	73	271	233	232	489	1,780
1983	1	10	14	118	620	76	298	265	264	559	2,037
1984	2	10	18	119	672	79	334	311	315	671	2,441
1985	2	11	18	121	759	83	377	367	376	805	2,942
10 Years, 1976-1985	—	—	—	—	—	—	—	—	—	—	—
	8	74	79	1,133	5,538	677	2,575	2,288	2,306	4,887	17,881
10 Years, 1986-1995	27	142	391	1,367	10,675	1,007	5,104	5,328	5,568	12,020	43,983
10 Years, 1996-2005	30	150	480	1,539	11,637	1,336	5,645	6,063	6,401	13,838	50,825
10 Years, 2006-2015	30	150	480	1,540	12,211	1,666	5,952	6,559	6,961	15,107	55,585
10 Years, 2016-2025	30	150	480	1,540	12,625	1,996	6,165	6,905	7,354	15,980	58,888
10 Years, 2026-2035	30	150	480	1,540	12,650	2,328	6,180	6,930	7,380	16,040	59,120

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 Require- ments	Calendar Year
Pumping Plants				Total	California Aqueduct Powerplants				Total		
Pear- blossom	Oso	Las Per- illas and Badger Hill	Devil's Den, Saw- tooth, and Polonio		San Luis	Devil Canyon	Castaic (c	San Luis Obispo			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	
0	0	61	0	1,536	50	0	0	0	50	1,486	9 Years, 1962-1970
12	13	26	0	803	38	0	23	0	61	742	1971
88	46	21	0	1,848	39	55	112	0	206	1,642	1972
129	118	17	0	3,188	40	201	207	0	448	2,740	1973
207	30	21	0	2,438	42	336	77	0	455	1,983	1974
222	33	22	0	2,644	44	375	97	0	516	2,128	1975
658	240	107	0	10,921	203	967	516	0	1,686	9,235	5 Years, 1971-1975
249	41	25	0	3,077	46	452	129	0	627	2,450	1976
239	23	24	0	2,835	47	407	65	0	519	2,316	1977
284	57	25	0	3,660	49	475	185	0	709	2,951	1978
290	38	26	0	3,476	51	496	120	0	667	2,809	1979
295	40	28	10	3,582	53	503	124	1	681	2,901	1980
332	48	30	13	4,055	55	567	153	2	775	3,280	1981
354	45	32	19	4,233	56	601	142	4	803	3,430	1982
409	51	34	26	4,782	58	717	162	5	942	3,840	1983
495	61	36	37	5,601	60	821	197	8	1,086	4,515	1984
525	106	40	58	6,590	62	839	355	13	1,269	5,321	1985
3,472	510	300	163	41,891	537	5,878	1,632	33	8,078	33,813	10 Years, 1976-1985
5,597	2,544	539	1,529	95,812	715	8,716	8,694	349	18,474	77,338	10 Years, 1986-1995
5,705	3,275	580	1,840	108,930	893	8,798	11,183	420	21,294	87,636	10 Years, 1996-2005
5,709	3,840	580	1,840	118,210	1,071	8,792	13,066	420	23,349	94,861	10 Years, 2006-2015
5,725	4,238	580	1,840	124,496	1,249	8,793	14,340	420	24,802	99,694	10 Years, 2016-2025
5,740	4,260	580	1,840	125,248	1,427	8,790	14,410	420	25,047	100,201	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.

uled, must be given by April 1973. Hence, alternative sources and cost of power service must be evaluated well in advance of April 1973.

In order to determine what the most economic alternatives are, the Department keeps abreast of the improvements in generation and transmission systems. For instance, it may be more economical to transmit or ship power over long transmission lines from mine-mouth plants rather than to ship fuel to sources close to load centers. Convenient, close-at-hand-powerplant sites are becoming harder and harder to find as air and water pollution concerns increase. All of the alternative power sources and locations, including those in Canada, the Northwest, Arizona, and other areas, must be continually monitored and evaluated as to the availability, cost and reliability.

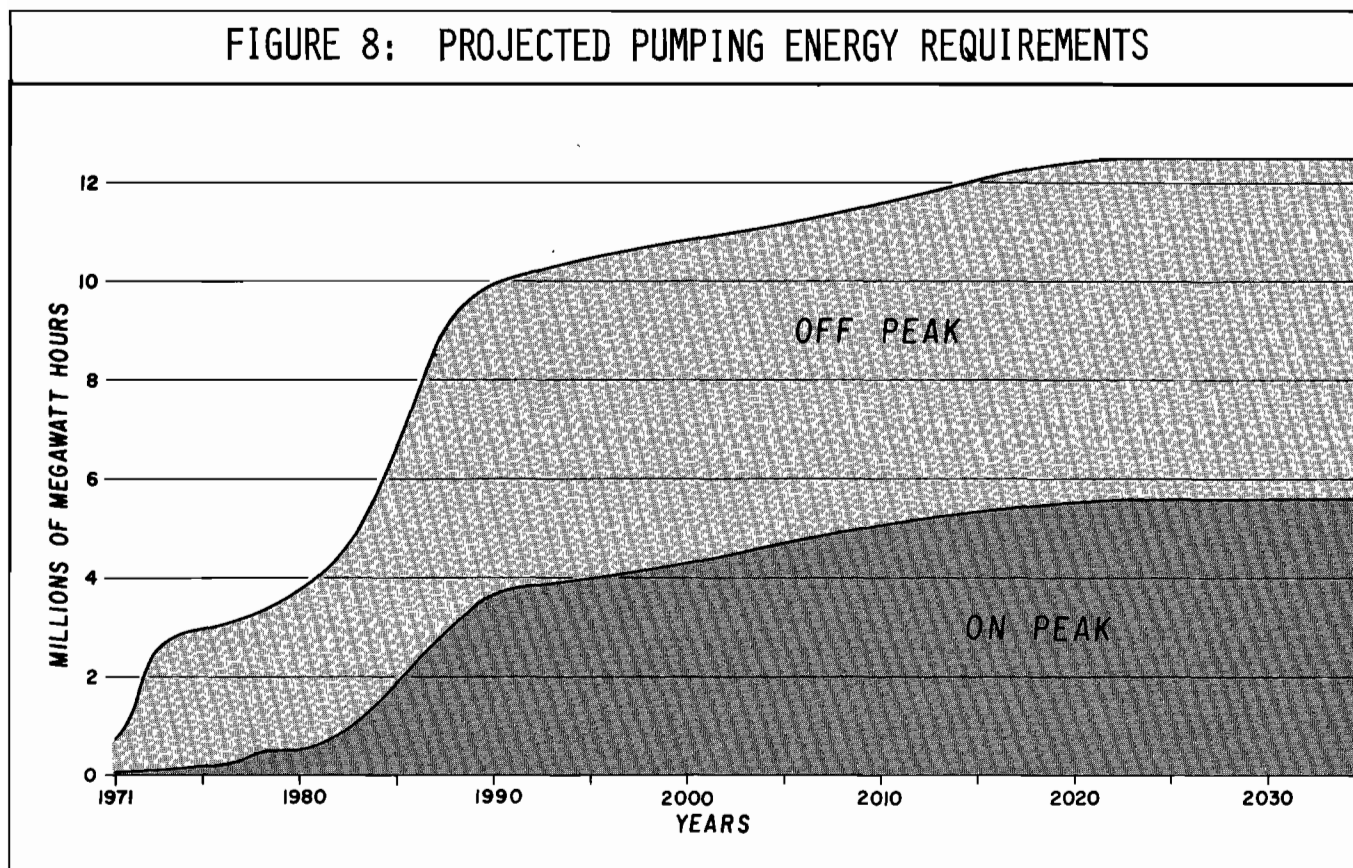
The Department is actively participating in the Western Systems Coordinating Council, which consists of over 40 power systems with large-capacity generating facilities and transmission circuits that are capable of providing bulk power to one another and a reliable power supply to all. Participation in the Council enables the Department to keep informed as to the latest developments in the electric utility indus-

try, plans for the development of power systems throughout the West, and potential alternative power sources for the State Water Project.

The above information also assists the Department in making short-term sales or purchases of power when it is economic to do so. For example, in December 1970, the 500-kilovolt lines of the Pacific Northwest Intertie were put out of service when several towers on each line failed due to the severe snow and wind-storm in Northern California. Until service was restored on these lines, the Department was able to sell its share of the Canadian Entitlement power to the City of Los Angeles, Department of Water and Power. The City accepted and took delivery over the direct current line that runs through Nevada to the Los Angeles area.

The Department is investigating the possibility of another short-term sale of power for a period of three or four years. This is possible because the Project has the ability, in the early years of project operation (1971-1975), to produce more onpeak power than is required for pumping. This ability is partly due to a decrease in the estimated amounts of water required in Southern California during these years.

FIGURE 8: PROJECTED PUMPING ENERGY REQUIREMENTS



CHAPTER IV. PROJECT OPERATIONS

The State Water Project passed its third year of major operations in 1970. As opposed to 1968 and 1969, which were unusually dry and wet years, respectively, 1970 was essentially a "normal" water supply year as a whole. While early storms caused January runoff to be 650 percent of normal above Lake Oroville, runoff during the April through July snowmelt period was about 65 percent of normal in the Sacramento Valley and about 80 percent of normal in the San Joaquin Valley. All demands for project water service were satisfied. Operational highlights during 1970 included the following:

General Highlights

In January, Oroville Dam successfully handled heavy and sustained rainfall that created peak inflow to Lake Oroville of more than 150,000 cubic feet per second. Flood control operations reduced the maximum rate of outflow to the Feather River to about 73,000 cubic feet per second (as recorded at Gridley) and prevented downstream flood damages of about \$2,000,000.

Also during January, the peak flood inflow to Lake Del Valle from Arroyo Del Valle was more than 900 cubic feet per second. Operation of the Lake allowed this runoff to be fully conserved for later use, instead of wasting to San Francisco Bay.

- Over 30 additional miles of the California Aqueduct were placed in operation. By the end of the year, the Project was capable of making water deliveries from the intake to Wind Gap Pumping Plant, about 12 aqueduct miles northwest of A. D. Edmonston Pumping Plant.

The South Bay Aqueduct Control System Model Study program was successfully concluded on September 18, 1970. The Study included test-operating the Aqueduct from the Sacramento Project Operations Control Center.

Remote operation capability was successfully tested by operating the Project from the Delta Pumping Plant to O'Neill Forebay remotely from the Delta Area Control Center.

Water Operations Highlights

All requests for water from the Project were satisfied: 405,097 acre-feet were delivered to local agencies in Plumas, Napa, Santa Clara, Alameda, Stanislaus, Merced, Kings, and Kern Counties.

Under coordinated operations, the Department and the Bureau of Reclamation made sufficient releases from upstream storage reservoirs to the Sacramento-San Joaquin Delta during the critical summer months of June, July, and August to keep quality of water within the interim limits prescribed by the State Water Resources Control Board.

- Water storage in Lake Oroville reached a maximum of 3,094,644 acre-feet on May 31, 1970; Lake Del Valle, 41,760 acre-feet on June 21, 1970; and San Luis Reservoir, 2,020,980 acre-feet on April 22, 1970.

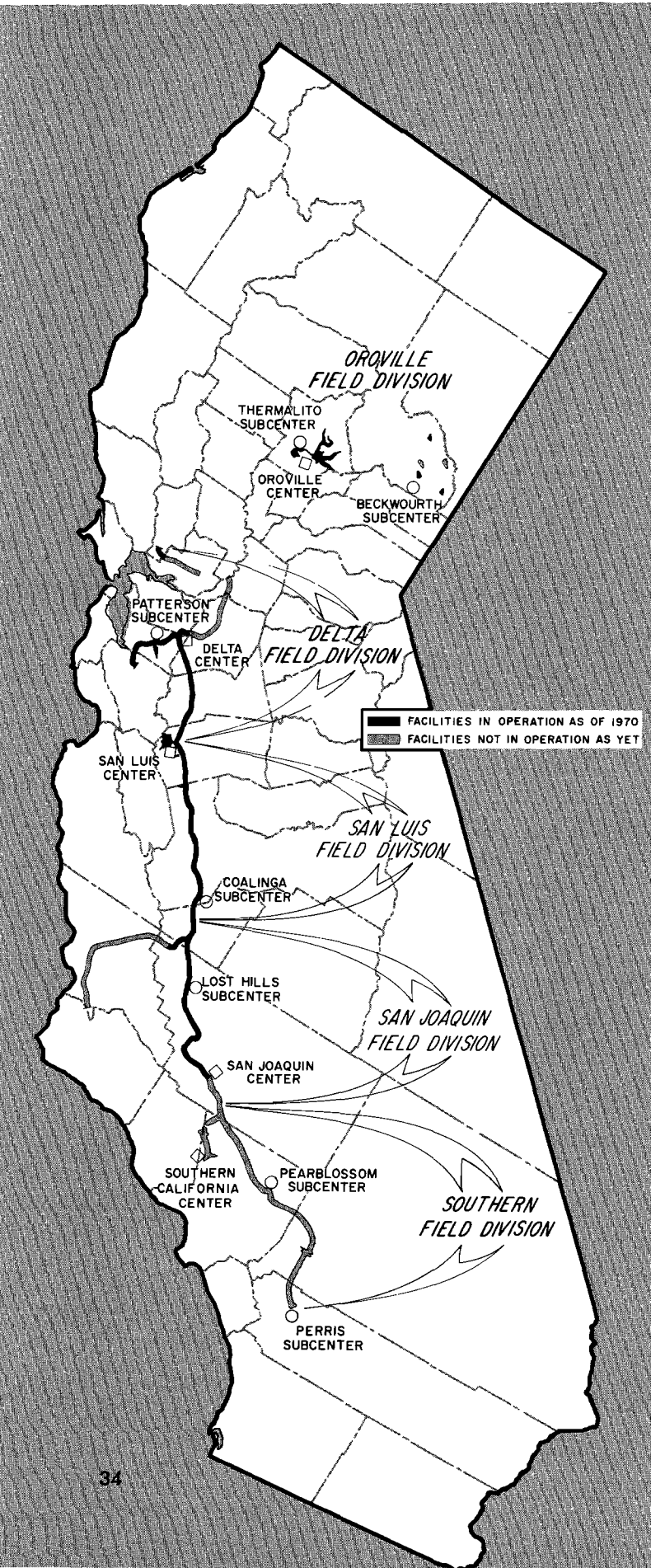
Recreation and Fish and Wildlife Highlights

- Recreation areas at project facilities received 1,804,800 recreation days of use. Project facilities themselves were viewed by over a million sight-seers.
- Four recreation areas were opened to the public during the year:
 - Loafer Creek Recreation Area at Lake Oroville.
 - Rocky Ridge Area at Lake Del Valle.
 - Clifton Court Forebay, for limited hunting and fishing.
 - Niels Hansen Road Fishing Access Site, on the California Aqueduct.
- The Department of Fish and Game planted some 634,200 fish in five project lakes.

Power Operations Highlights

- Project powerplants; Edward Hyatt, Thermalito, and San Luis (State share); generated almost 2,679,000,000 kilowatt-hours of electrical energy.
- Project pumping plants used approximately 325,900,000 kilowatt-hours of energy. Project generation accounted for 43,300,000 kilowatt-hours, while 154,900,000 kilowatt-hours was supplied by Canadian Entitlement power and Bonneville surplus. About 127,700,000 kilowatt-hours of offpeak energy was purchased from California Suppliers.
- Two more project pumping plants were activated; Buena Vista on July 28, 1970 and Wheeler Ridge on December 9, 1970. This makes nine pumping plants that are now in partial or full operation, in addition to three pumping-generating plants.
- Excessive snow load forced both 500 kilovolt transmission lines of the Pacific Northwest Inter-tie out of service on December 17, thereby depriving the Project of 25 megawatts of Canadian Entitlement power for several weeks. A daily pump-storage operation was initiated, as needed, at San Luis to replace the disrupted power supply.

FIGURE 9: OPERATIONS AND MAINTENANCE
FIELD DIVISIONS, CENTERS, AND SUBCENTERS



The results of project operations through 1970 are summarized in the following tabulation:

Year	Water Delivered (acre-feet) ^a		Recreation Supported (recreation days) ^b	Energy Generated (kilowatt-hours)
	Municipal and Industrial Use	Irrigation Use		
1962-----	4,594	13,695	30,000	----
1963-----	6,686	15,770	105,000	----
1964-----	11,292	21,215	332,000	----
1965-----	17,642	26,463	500,000	----
1966-----	27,529	40,399	465,000	----
1967-----	28,736	36,407	438,000	----
1968-----	52,688	255,332	932,000	628,000,000
1969-----	37,436	246,810	1,554,800	2,614,000,000
1970-----	61,915	343,182	1,804,800	2,679,000,000
Total thru 1970 ^c ----	248,518	999,273	6,161,600	5,921,000,000

^a An acre-foot of water (325,900 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 in probable damage prevented by operation of partially completed Oroville Dam during the storm of December 1964 and January 1965.

Operations and Maintenance Field Divisions

Responsibility for operations and maintenance of project facilities is divided among the following five field divisions:

- Oroville Field Division—from the northern extremities of the Project south to Hood, on the Sacramento River, immediately upstream from the proposed intake to the Peripheral Canal.
- Delta Field Division—from Hood on the north, through the Delta area, to O'Neill Forebay of the California Aqueduct on the south, including the North and South Bay Aqueducts and the proposed Peripheral Canal.
- San Luis Field Division—from O'Neill Forebay to Kettleman City, including San Luis Dam and Reservoir.
- San Joaquin Field Division—from Kettleman City to the intake of Tehachapi Tunnel No. 1, including the Coastal Branch.
- Southern Field Division—from the intake of Tehachapi Tunnel No. 1 to the southern extremities of the Project.

Figure 9 shows the areal extent of each field division. The following sections describe 1970 operations of features included in each field division. Water operations during each month of 1970 are summarized for the three Upper Feather River lakes in Table 4; for the Oroville-Thermalito Facilities in Table 5; and for the North Bay, South Bay and California Aqueducts in Table 6. Monthly power operations during each month of 1970 are summarized in Table 7.

TABLE 4: UPPER FEATHER LAKES MONTHLY WATER OPERATIONS IN 1970

(in acre-feet unless otherwise indicated)

Month	Reservoir Storage			Outflow							Inflow
	Water Surface Elevation (in feet)	End-of-Month Storage	Monthly Storage Change	Regulated Releases				Spill	Estimated Evaporation and Seepage	Total Gross Outflow	Computed or Estimated
				Stream Flow Maintenance (a)	Water Supply Contract	Water Right Entitlement	Total				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
FRENCHMAN LAKE											
January	5,588.95	56,991	10,352	123	0	0	123	1,308	104	1,535	11,887
February	5,588.60	56,430	- 561	111	0	0	111	4,848	112	5,071	4,510
March	5,588.56	56,366	- 64	123	0	0	123	3,935	192	4,250	4,186
April	5,588.42	56,143	- 223	119	0	0	119	3,116	319	3,554	3,331
May	5,588.25	55,873	- 270	73	677	0	750	2,759	526	4,035	3,765
June	5,585.32	51,344	- 4,529	0	5,092	0	5,092	43	630	5,765	1,236
July	5,583.49	48,637	- 2,707	0	1,890	0	1,890	0	968	2,858	151
August	5,579.36	42,848	- 5,789	0	4,732	0	4,732	0	1,057	5,789	0
September	5,578.01	41,051	- 1,797	31	1,182	0	1,213	0	797	2,010	213
October	5,577.69	40,632	- 419	18	282	0	300	0	379	679	260
November	5,578.68	41,937	1,305	119	0	0	119	0	211	330	1,635
December	5,579.56	43,118	1,181	123	0	0	123	0	148	271	1,452
Total			- 3,521	840	13,855(b)	0	14,695	16,009	5,443	36,147	32,626
ANTELOPE LAKE											
January	5,002.94	23,451	932	615	0	0	615	10,160	66	10,841	11,773
February	5,002.64	23,166	- 285	555	0	0	555	5,203	76	5,834	5,549
March	5,002.80	23,318	152	615	0	0	615	6,498	114	7,227	7,379
April	5,002.72	23,242	- 76	595	0	0	595	6,795	190	7,580	7,504
May	5,002.68	23,204	- 38	474	0	0	474	9,588	304	10,366	10,328
June	5,002.32	22,865	- 339	595	0	0	595	2,700	301	3,596	3,257
July	5,001.65	22,241	- 624	397	0	218	615	272	461	1,348	724
August	5,000.72	21,391	- 850	372	0	243	615	0	478	1,093	243
September	4,999.90	20,657	- 734	395	0	200	595	0	339	934	200
October	4,999.44	20,251	- 406	615	0	0	615	0	264	879	473
November	5,000.76	21,427	1,176	595	0	0	595	0	142	737	1,913
December	5,002.24	22,790	1,363	615	0	0	615	146	102	863	2,226
Total			271	6,438	0	661	7,099	41,362	2,837	51,298	51,569
LAKE DAVIS											
January	5,776.66	91,181	13,544	492	0	0	492	3,520	280	4,292	17,836
February	5,775.87	87,909	- 3,272	444	0	0	444	6,321	290	7,055	3,783
March	5,774.45	82,172	- 5,737	7,761	4	0	7,765	2,103	486	10,354	4,617
April	5,774.21	81,223	- 949	3,386	5	137	3,528	0	789	4,317	3,368
May	5,774.34	81,736	513	1,259	2	180	1,441	0	1,306	2,747	3,260
June	5,774.00	80,397	- 1,339	913	11	120	1,044	0	1,616	2,660	1,321
July	5,773.29	77,637	- 2,760	536	28	175	739	0	2,523	3,262	502
August	5,772.51	74,665	- 2,972	498	16	209	723	0	2,629	3,352	380
September	5,772.02	72,829	- 1,836	322	11	8	341	0	2,248	2,589	753
October	5,771.74	71,792	- 1,037	443	4	0	447	0	1,074	1,521	484
November	5,772.30	73,875	2,083	476	0	0	476	0	593	1,069	3,152
December	5,773.11	76,945	3,070	492	0	0	492	0	419	911	3,981
Total			- 692	17,022	81(c)	829	17,932	11,944	14,253	44,129	43,437

a) Required specifically to maintain fish and wildlife habitats.

b) Delivered to the Last Chance Creek Water District under interim contract.

c) Delivered to Plumas County Flood Control and Water Conservation District with initial 11 acre-feet for filling and testing Grizzly Valley Pipeline.

TABLE 5: OROVILLE-THERMALITO FACILITIES

(in acre-feet unless

Operation	Month					
	January	February	March	April	May	June
LAKE OROVILLE						
Reservoir Storage						
Water Surface Elevation (feet)	849.61	848.59	859.49	864.44	870.62	863.38
End-of-Month Storage	2,803,122	2,789,481	2,937,675	3,006,773	3,094,644	2,991,880
Monthly Storage Change	- 116,458	- 13,641	148,194	69,098	87,871	- 102,764
Released						
Palermo Canal	126	173	241	1,137	1,323	1,307
EDWARD HYATT POWERPLANT						
Water Released Thru Plant for:						
Generation	741,361	583,614	453,641	216,035	184,325	226,093
Pumpback	0	0	0	0	0	0
Net	741,361	583,614	453,641	216,035	184,325	226,093
THERMALITO DIVERSION DAM POOL						
Reservoir Storage						
Water Surface Elevation (feet)	224.44	223.82	222.73	223.05	223.37	223.31
End-of-Month Storage	13,147	12,949	12,604	12,705	12,806	12,787
Monthly Storage Change	223	- 198	- 345	101	101	- 19
FISH BARRIER DAM AND FISH HATCHERY						
Released to River						
Hatchery	6,419	5,308	5,849	5,627	5,901	5,702
Fish Barrier Dam	1,423,000	19,600	20,350	19,230	19,350	18,980
THERMALITO FOREBAY AND POWER CANAL						
Released From Canal						
Thermalito Irrigation District	0	0	0	0	0	0
California Water Service	0	0	0	0	0	0
Storage						
Water Surface Elevation (feet)	221.33	223.99	222.99	223.07	223.42	223.74
End-of-Month Storage	9,542	11,138	10,527	10,576	10,788	10,984
Monthly Storage Change	- 158	1,596	- 611	49	212	196
THERMALITO POWERPLANT						
Water Released Thru Plant for:						
Generation	855,985	589,108	470,382	212,261	188,863	232,312
Pumpback	0	0	260	0	0	0
Net	855,985	589,108	470,122	212,261	188,863	232,312
THERMALITO AFTERBAY						
Reservoir Storage						
Water Surface Elevation (feet)	128.32	131.62	128.66	132.32	127.26	133.47
End-of-Month Storage	26,798	37,747	27,844	40,295	23,661	44,647
Monthly Storage Change	- 10,448	10,949	- 9,903	12,451	- 16,634	20,986
Released						
Sutter Butte Canal	0	0	4,096	64,550	81,700	78,660
PG&E Lateral	0	0	0	516	594	615
Richvale Canal	0	0	0	8,582	13,450	12,500
Western Canal	0	0	0	21,340	29,940	30,550
Outlet to River	891,100	593,300	488,900	107,900	71,980	80,450
Total	891,100	593,300	492,996	202,888	197,664	202,775

MONTHLY WATER OPERATIONS IN 1970

otherwise indicated)

Month						Total	Operation
July	August	September	October	November	December		
							LAKE OROVILLE
854.34	840.73	829.44	822.93	838.40	849.04	---	Reservoir Storage
2,866,987	2,685,925	2,541,833	2,461,250	2,655,738	2,795,493	---	Water Surface Elevation (feet)
- 124,893	- 181,062	- 144,092	- 80,583	194,488	139,755	- 124,087	End-of-Month Storage
							Monthly Storage Change
1,290	1,291	1,250	858	266	307	9,569	Released
							Palermo Canal
							EDWARD HYATT POWERPLANT
233,281	325,198	285,130	214,519	158,942	366,110	3,988,249	Water Released Thru Plant for:
0	0	0	0	2,721	0	2,721	Generation
233,281	325,198	285,130	214,519	156,221	366,110	3,985,528	Pumpback
							Net
							THERMALITO DIVERSION DAM POOL
224.35	223.30	223.16	224.02	222.52	222.90	---	Reservoir Storage
13,119	12,784	12,740	13,013	12,538	12,657	---	Water Surface Elevation (feet)
332	- 335	- 44	273	- 475	119	- 267	End-of-Month Storage
							Monthly Storage Change
							FISH BARRIER DAM AND FISH HATCHERY
4,340	4,191	4,104	4,147	6,238	6,637	64,463	Released to River
21,880	20,620	19,790	21,150	18,270	18,660	1,640,880	Hatchery
							Fish Barrier Dam
							THERMALITO FOREBAY AND POWER CANAL
0	0	0	0	0	0	0	Released From Canal
0	0	0	0	0	0	0	Thermalito Irrigation District
							California Water Service
224.45	223.74	223.45	224.14	222.77	222.80	---	Storage
11,423	10,984	10,807	11,231	10,395	10,413	---	Water Surface Elevation (feet)
439	- 439	- 177	424	- 836	18	713	End-of-Month Storage
							Monthly Storage Change
							THERMALITO POWERPLANT
238,436	334,194	290,656	211,762	162,723	381,349	4,168,031	Water Released Thru Plant for:
0	0	0	0	0	0	260	Generation
238,436	334,194	290,656	211,762	162,723	381,349	4,167,771	Pumpback
							Net
							THERMALITO AFTERBAY
136.16	132.49	127.80	129.61	128.86	130.49	---	Reservoir Storage
55,586	40,926	25,236	30,866	28,468	33,799	---	Water Surface Elevation (feet)
10,939	- 14,660	- 15,690	5,630	- 2,398	5,331	- 3,447	End-of-Month Storage
							Monthly Storage Change
86,600	83,370	52,410	26,330	6,214	0	483,930	Released
576	570	150	1	0	0	3,022	Sutter Butte Canal
12,780	11,510	5,478	361	0	0	64,661	PG&E Lateral
31,010	28,010	10,210	16,650	8,325	0	176,035	Richvale Canal
86,580	217,700	230,600	158,000	148,000	363,700	3,438,210	Western Canal
							Outlet to River
217,546	341,160	298,848	201,342	162,539	363,700	4,165,858	Total

TABLE 6: AQUEDUCT MONTHLY

(in acre-feet unless

Operation	Month					
	January	February	March	April	May	June
DELTA FIELD DIVISION						
North Bay Aqueduct						
Pumped at Interim (Cordelia) P.P.	677	538	657	337	0	0
Storage Change	0	0	0	0	0	0
Operational Losses	0	0	0	0	0	0
Delivered to Napa County PC&WCD	677	538	657	337	0	0
California Aqueduct						
Pumped at Delta Pumping Plant	40,283	21,385	26,819	52,365	17,426	33,931
Aqueduct Storage Change	433	86	- 600	1,205	- 585	84
Operational Losses	155	418	974	497	783	855
Deliveries	10,542	4,914	5,513	13,204	14,923	13,171
Outflow to San Luis Field Division (At Check 12)	29,153	15,967	20,932	37,459	2,305	19,821
South Bay Aqueduct						
Pumped at South Bay Pumping Plant	10,475	4,892	5,029	12,104	13,818	12,143
Storage Change	5,107	839	- 92	4,472	4,126	3,544
Operational Losses in Aqueduct	- 669	- 238	624	589	969	494
Deliveries to Contracting Agencies	6,037	4,291	4,497	7,057	8,709	8,105
SAN LUIS FIELD DIVISION						
California Aqueduct						
Inflow from Delta Field Division (At Check 12)	29,153	15,967	20,932	37,459	2,305	19,821
Inflow from CVP (Federal O'Neill P.P.)	9,126	55,482	19,391	60,338	52,469	41,001
Total Inflow State and Federal	38,279	71,449	40,323	97,797	54,774	60,822
O'Neill Forebay Operation						
Water Surface Elevation (in feet)	220.57	221.08	222.30	219.46	220.20	221.31
End-of-Month Storage	44,637	45,968	49,180	41,763	43,673	46,573
Monthly Storage Change	- 2,357	1,331	3,212	- 7,417	1,910	2,900
Delivered from Forebay (USBR)	18	140	597	536	675	977
Operational Losses	- 1,195	604	572	6,159	5,040	6,041
Released thru O'Neill Pumping Plant	0	0	0	3,227	17,059	0
Pumped at Dos Amigos Pumping Plant	36,610	42,436	44,510	67,483	75,008	104,478
San Luis Reservoir Operation						
Water Surface Elevation (in feet)	538.89	540.70	539.87	541.54	537.62	532.97
End-of-Month Storage	1,975,840	1,998,684	1,988,196	2,009,315	1,959,867	1,901,758
Monthly Storage Change	11,452	22,844	- 10,488	21,119	- 49,448	- 58,109
Inflow from San Luis P-G Plant	5,203	27,019	52	38,040	174	0
Outflow thru San Luis P-G Plant	0	81	8,620	10,231	45,092	53,574
Operational Losses	- 6,249	4,094	1,920	6,688	4,529	4,535
Aqueduct Dos Amigos P.P. to Kettleman City (Dos Amigos P.P. to Check 21)						
Federal Deliveries (No State delivery in this Division)	26,154	29,103	28,036	47,277	48,561	63,095
Monthly Storage Change	- 110	- 116	- 77	- 157	445	780
Operational Losses	- 666	501	- 298	- 1,373	- 1,177	- 3,640
Outflow to San Joaquin Field Division (At Check 21)	11,232	12,948	16,849	21,736	27,179	44,243
SAN JOAQUIN FIELD DIVISION						
California Aqueduct						
Inflow from San Luis Field Division (At Check 21)	11,232	12,948	16,849	21,736	27,179	44,243
Storage Change (excluding Coastal Br.)	- 238	281	345	702	10	3,657
Operational Losses (excluding Coastal Branch)	685	215	573	758	870	376
Deliveries to Contracting Agencies	7,085	8,268	9,209	13,376	18,640	28,140
Coastal Branch Diversion	3,700	4,184	6,722	6,900	7,659	12,070
California Aqueduct - Coastal Branch						
Pumped at Las Perillas Pumping Plant	3,700	4,184	6,722	6,900	7,659	12,070
Storage Change	- 5	8	5	- 13	8	15
Operational Losses	95	148	115	51	55	21
Deliveries to Contracting Agencies	3,610	4,026	6,602	6,862	7,596	12,034

a) Includes water pumped at Delta Pumping Plant for USBR: 21,462 acre-feet in April, 16,453 acre-feet in June, 11,095 acre-feet in July, 35,619 acre-feet in November, and 66,612 acre-feet in December.

WATER OPERATIONS IN 1970

otherwise indicated)

Month							Operation
July	August	September	October	November	December	Total	
							DELTA FIELD DIVISION
							<u>North Bay Aqueduct</u>
2	0	21	378	417	609	3,636	Pumped at Interim (Cordelia) P.P.
2	0	19	- 10	0	0	11	Storage Change
0	0	2	5	0	0	7	Operational Losses
0	0	0	383	417	609	3,618	Delivered to Napa County FCAWCD
							<u>California Aqueduct</u>
34,953	51,312	38,507	26,008	88,178	113,385	544,552(a)	Pumped at Delta Pumping Plant
481	- 293	- 188	164	- 173	- 123	491	Aqueduct Storage Change
297	913	1,493	749	- 799	- 1,226	5,109	Operational Losses
12,849	12,301	8,185	4,464	3,520	5,071	108,657	Deliveries
21,326	38,391	29,017	20,631	85,634	109,663	430,295(a)	Outflow to San Luis Field Division (At Check 12)
							<u>South Bay Aqueduct</u>
11,322	11,185	7,630	4,388	3,513	5,071	101,570	Pumped at South Bay Pumping Plant
2,079	1,741	- 1,188	- 4,143	- 3,855	- 1,706	10,924	Storage Change
314	342	111	- 421	- 434	- 595	1,086	Operational Losses in Aqueduct
8,929	9,102	8,707	8,952	7,802	7,372	89,560	Deliveries to Contracting Agencies
							SAN LUIS FIELD DIVISION
							<u>California Aqueduct</u>
21,326	38,391	29,017	20,631	85,630	109,663	430,295	Inflow from Delta Field Division (At Check 12)
15,776	0	6,939	35,954	12,212	0	308,688	Inflow from CVP (Federal O'Neill P.P.)
37,102	38,391	35,956	56,585	97,842	109,663	738,983	Total Inflow State and Federal
							<u>O'Neill Forebay Operation</u>
223.90	222.24	218.49	223.63	223.84	223.51	--	Water Surface Elevation (in feet)
53,461	49,085	39,299	52,736	53,300	52,414	--	End-of-Month Storage
6,888	- 4,436	- 9,726	13,437	564	- 8 6	5,420	Monthly Storage Change
893	652	310	49	37	4	4,888	Delivered from Forebay (USBR)
3,339	5,248	1,189	- 263	409	1,149	28,292	Operational Losses
0	0	0	34	16,116	2,165	38,601	Released thru O'Neill Pumping Plant
121,026	104,266	47,039	43,160	29,617	20,925	736,558	Pumped at Dos Amigos Pumping Plant
							<u>San Luis Reservoir Operation</u>
524.82	518.79	518.06	517.59	522.04	529.51	--	Water Surface Elevation (in feet)
1,801,432	1,728,459	1,719,693	1,714,060	1,767,659	1,858,926	--	End-of-Month Storage
- 100,326	- 72,973	- 8,766	- 5,633	53,599	91,267	- 105,462	Monthly Storage Change
0	0	8,661	168	51,099	116,603	247,019	Inflow from San Luis P-G Plant
95,044	67,339	11,517	0	0	30,297	321,795	Outflow thru San Luis P-G Plant
5,282	5,634	5,910	5,801	- 2,500	- 4,961	30,683	Operational Losses
							<u>Aqueduct Dos Amigos P.P. to Kettleman City (Dos Amigos P.P. to Check 21)</u>
70,781	58,959	26,690	28,149	21,559	15,699	464,063	Federal Deliveries (No State delivery in this Division)
1,463	- 858	- 1,115	359	- 38	- 1,889	- 1,313	Monthly Storage Change
- 1,841	- 3,186	- 269	- 1,283	- 1,687	621	- 14,298	Operational Losses
50,623	49,351	21,733	15,935	9,783	6,494	288,106	Outflow to San Joaquin Field Division (At Check 21)
							SAN JOAQUIN FIELD DIVISION
							<u>California Aqueduct</u>
50,623	49,351	21,733	15,935	9,783	6,494	288,106	Inflow from San Luis Field Division (At Check 21)
- 75	2,495	- 1,614	1,411	957	1,655	9,586	Storage Change (excluding Coastal Br.)
- 312	381	1,277	1,490	788	481	7,582	Operational Losses
37,194	31,299	13,539	9,523	7,270	3,108	186,651	(excluding Coastal Branch)
13,816	15,176	8,531	3,511	768	1,250	84,287	Deliveries to Contracting Agencies
							<u>Coastal Branch Diversion</u>
							<u>California Aqueduct - Coastal Branch</u>
13,816	15,176	8,531	3,511	768	1,250	84,287	Pumped at Las Perillas Pumping Plant
8	- 10	- 14	- 82	4	79	3	Storage Change
- 18	38	49	56	10	15	635	Operational Losses
13,826	15,148	8,496	3,537	754	1,156	83,649	Deliveries to Contracting Agencies

TABLE 7: MONTHLY POWER OPERATIONS IN 1970

(in millions of kilowatt-hours)

Operations	Month												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
ENERGY GENERATED BY EDWARD HYATT AND THERMALITO POWERPLANTS													
Gross Generation	500.53	385.06	300.80	144.74	123.46	152.40	154.10	213.56	183.72	135.92	100.38	240.58	2,635.25
Powerplant Use and Pumpback Requirements	0.10	0.14	0.35	0.65	0.65	0.66	0.42	0.40	0.45	0.49	1.66	0.28	6.25
ENERGY USED BY PROJECT PUMPING PLANTS													
Interim (Cordelia)	0.32	0.25	0.32	0.15	0.00	0.00	0.00	0.00	0.01	0.18	0.19	0.29	1.71
South Bay	8.16	3.66	3.78	9.22	10.64	9.28	8.66	8.55	5.85	3.37	2.69	3.91	77.77
Del Valle	0.23	0.03	0.02	0.27	0.22	0.17	0.01	0.01	0.01	0.01	0.01	0.02	1.01
Delta	12.65	7.43	8.91	9.36	5.40	5.42	7.32	15.63	11.81	8.14	16.03	14.20	122.30
San Luis (State Share)	0.00	-	0.02	0.40	0.08	0.02	0.10	0.14	3.55	0.33	16.41	23.55	44.33
Dos Amigos (State Share)	1.77	1.98	2.49	3.08	3.92	6.03	7.04	6.60	3.13	2.30	1.37	0.95	40.66
Las Perillas	0.30	0.31	0.49	0.50	0.55	0.88	1.01	1.11	0.61	0.27	0.09	0.13	6.25
Badger Hill	0.73	0.78	1.24	1.31	1.44	2.39	2.73	2.99	1.63	0.65	0.17	0.29	16.35
Buena Vista	-	-	-	-	-	-	0.00	0.55	0.14	0.38	0.19	0.49	1.75
Wheeler Ridge	-	-	-	-	-	-	-	-	-	-	-	0.10	0.10
Transmission & Other Losses	1.21	1.04	1.24	1.49	1.60	1.56	1.29	1.20	0.95	0.77	0.71	0.58	13.64
Total	25.37	15.48	18.51	25.78	23.85	25.75	28.16	36.78	27.69	16.40	37.59	44.52	325.87
SOURCES OF ENERGY FOR PROJECT PUMPING PLANTS													
San Luis Pumping-Generating Plant (State's Share)	-	0.01	-	1.04	6.07	12.17	13.24	2.56	0.16	-	-	8.01	43.26
Canadian Entitlement Power	11.16	9.78	10.83	10.56	10.93	10.58	10.93	10.93	10.58	10.94	10.58	5.83	123.63
Bonneville Power Administration	1.10	5.76	6.75	4.83	5.95	4.74	0.97	1.21	-	-	-	-	31.31
California "Suppliers"	13.60	-	0.41	9.30	2.76	0.01	0.08	21.45	17.00	5.56	26.90	30.63	127.70
Canadian Entitlement Power-San Luis Energy Banked (a)	0.48	0.07	-	-	1.86	1.75	-	-	0.05	0.11	-	-	4.32
Canadian Entitlement Power-San Luis Energy Withdrawn (a)	-	-	0.50	0.05	-	-	2.95	0.64	-	-	0.11	0.04	4.29
Total	25.38	15.48	18.49	25.78	23.85	25.75	28.17	36.79	27.69	16.39	37.59	44.51	325.87

a) Canadian Entitlement Power or San Luis Energy which was excess to project needs and which was temporarily banked. Such amounts were subsequently withdrawn for use during offpeak periods, in accordance with the Suppliers' Contract.

Oroville Field Division

The following facilities were operational as of the end of 1970:

- Frenchman Dam and Lake.
- Antelope Dam and Lake.
- Grizzly Valley Dam and Lake Davis.
- Grizzly Valley Pipeline.
- Oroville Dam and Lake Oroville.
- Edward Hyatt Powerplant.
- Thermalito Facilities.
- Feather River Fish Barrier Dam and Hatchery.

The location of these facilities is shown on Figures 10 and 11.

All facilities of the Oroville Field Division are operated by the Department of Water Resources except the Grizzly Valley Pipeline, which will be operated by the Plumas County Flood Control and Water Conservation District; the Feather River Fish Hatchery and fishery and wildlife habitat development of the Oroville Borrow Area, which are operated by the Department of Fish and Game; recreation developments associated with the Upper Feather River lakes, which are operated by the United States Forest Service; and recreation areas of the Oroville-Thermalito

Facilities, which are operated by the Department of Parks and Recreation as part of the State Park System.

Frenchman Lake, with a gross storage capacity of 55,477 acre-feet, is operated to supply irrigation water to the Last Chance Creek Water District and to enhance recreational opportunities in the vicinity of the Lake and along the downstream channel of Little Last Chance Creek.

Antelope Lake, with a gross storage capacity of 22,566 acre-feet, is operated to enhance the recreational opportunities in the vicinity of the Lake and along the downstream channel of Indian Creek.

Lake Davis, with a gross storage capacity of 84,371 acre-feet, is operated to enhance recreational opportunities in both the vicinity of the Lake and along the downstream channel of Big Grizzly Creek, and conserves water for Plumas County Flood Control and Water Conservation District.

Grizzly Valley Pipeline, extending for a distance of about six miles from Grizzly Valley Dam to Portola Reservoir in the vicinity of the City of Portola, transports water from Lake Davis to Plumas County Flood Control and Water Conservation District for municipal and industrial use.

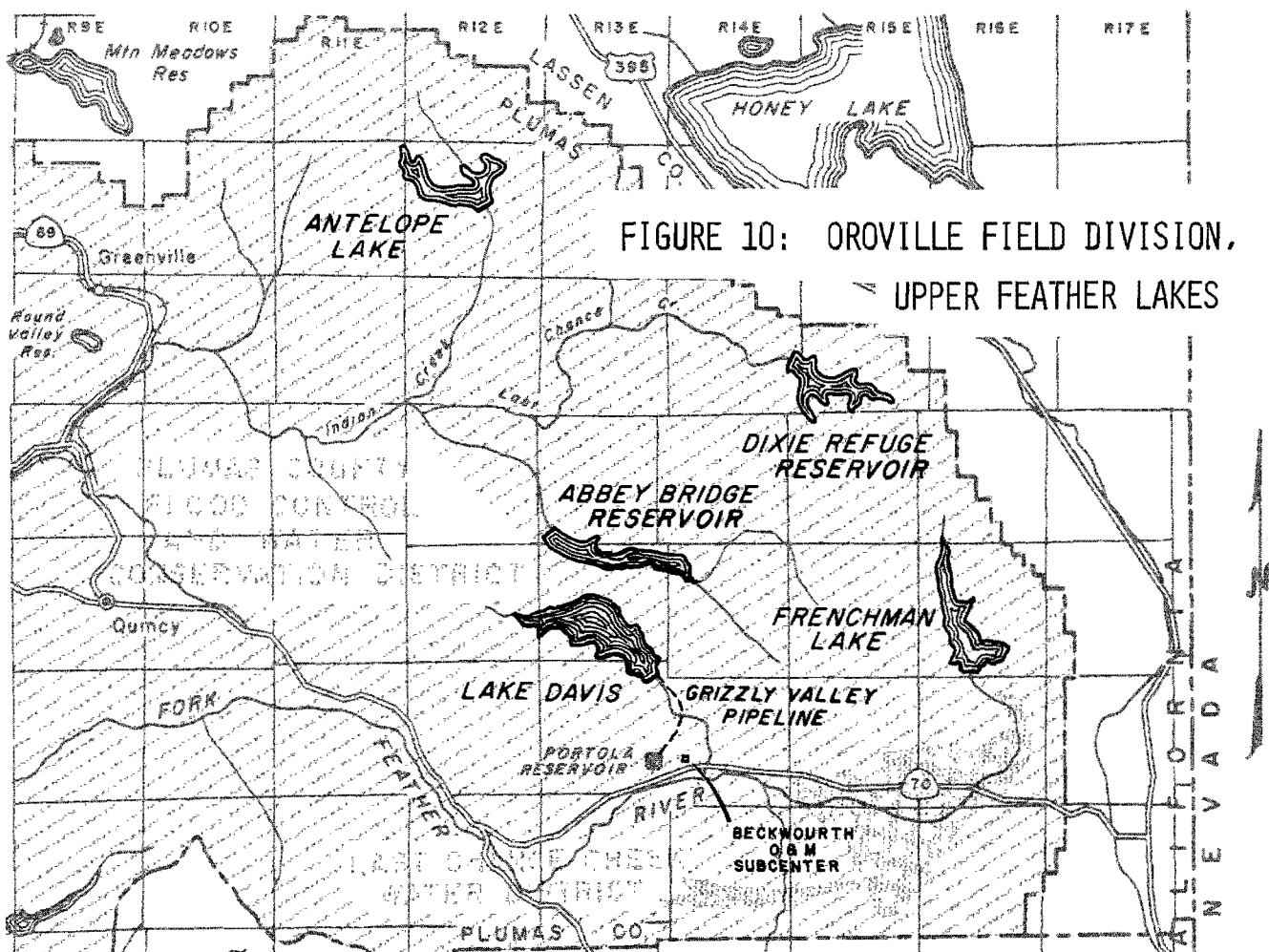
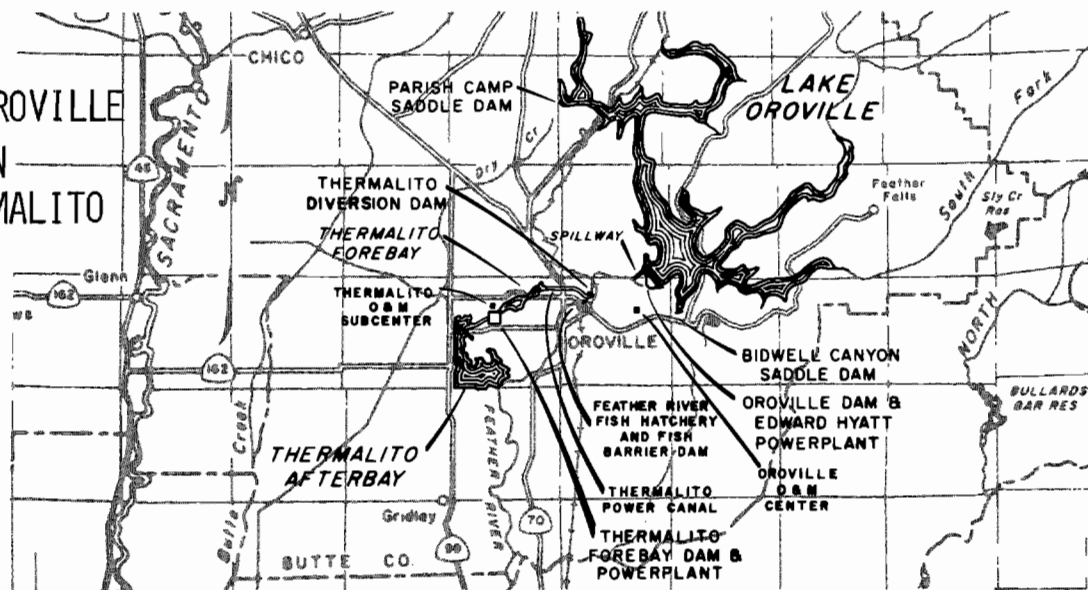


FIGURE 11: OROVILLE
FIELD DIVISION
OROVILLE-THERMALITO
FACILITIES



Lake Oroville, with a gross storage capacity of 3,537,577 acre-feet, is operated for water conservation, power generation, flood control, recreation, and fishery and wildlife habitat enhancement.

Edward Hyatt Powerplant, with six generators (three reversible for pumpback operation), has an installed power generation capacity (name plate rating) of 644,250 kilowatts.

The primary mission of the Thermalito Facilities is to regulate releases from Edward Hyatt Powerplant, including storage of onpeak releases for pumpback offpeak. In addition, the Facilities supplement the power generation of Edward Hyatt Powerplant and enhance recreational opportunities near the City of Oroville. Water deliveries are also made directly from the Facilities, primarily to replace diversions from the Feather River that were severed by project construction.

Thermalito Diversion Dam forms a pool of 13,328 acre-feet gross capacity on the Feather River immediately downstream from the tailrace of Edward Hyatt Powerplant. Thermalito Forebay, located offstream about four miles west of the Diversion Dam, has a gross capacity of 11,768 acre-feet. Water released from Lake Oroville is diverted by the Diversion Dam through Thermalito Power Canal into Thermalito Forebay, from which it is released through Thermalito Powerplant into Thermalito Afterbay. Releases are also made through the Diversion Dam directly into the Feather River to maintain flows for fishery preservation and water right entitlements.

Thermalito Powerplant, with four generators (three reversible for pumpback operation) has an installed power generation capacity (name plate rating) of 115,100 kilowatts.

From Thermalito Afterbay, with a gross storage capacity of 57,041 acre-feet, water may be pumped back into Lake Oroville through Thermalito and Edward Hyatt Powerplants; released to the Feather River Channel; or diverted directly to the Sutter

Butte Canal, P.G.&E. Lateral, Richvale Canal, and Western Canal.

The Feather River Fish Barrier Dam diverts migrating salmon and steelhead into the Feather River Fish Hatchery.

Water Operations

Frenchman Lake contained 46,639 acre-feet of water in storage on January 1, 1970. Inflow to the Lake during the year totaled 32,626 acre-feet. The Lake filled on January 26 and 16,009 acre-feet flowed over the spillway before spilling ceased on June 4. Total regulated releases during the year amounted to 14,695 acre-feet for minimum streamflow requirements and for deliveries to the Last Chance Creek Water District. Total deliveries to the District in 1970 amounted to 13,855 acre-feet, which included both water rights entitlements and project water deliveries under an annual contract. Evaporation and seepage losses were estimated at 5,443 acre-feet. Storage on December 31, 1970 was 43,118 acre-feet.

Antelope Lake contained 22,519 acre-feet of water in storage on January 1, 1970. Inflow to the Lake during the year totaled 51,569 acre-feet. The Lake filled January 9 and 41,362 acre-feet flowed over the spillway before spilling ceased on July 18. Regulated releases from the Lake to satisfy downstream water right entitlements and minimum streamflow requirements totaled 7,099 acre-feet. Evaporation and seepage losses were estimated to total 2,837 acre-feet. Storage on December 31, 1970 was 22,790 acre-feet.

Lake Davis contained 77,637 acre-feet of water in storage on January 1, 1970. Inflow to the Lake during the year totaled 43,437 acre-feet. The Lake filled on January 21 and 11,944 acre-feet flowed over the spillway before spilling ceased on March 22. Total regulated releases for the year were 17,932 acre-feet for minimum streamflow requirements and water right entitlements downstream from the dam. Releases through the Grizzly Valley Pipeline to the Plumas County Flood Control and Water Conservation Dis-

trict totaled 81 acre-feet. Evaporation and seepage losses were estimated at 14,253 acre-feet. Storage on December 31, 1970 was 76,945 acre-feet.

Lake Oroville contained 2,919,580 acre-feet of water in storage on January 1, 1970. A total of 1,578,173 acre-feet was released over the Oroville Spillway. Maximum overflow occurred on January 25 when the spillway release was 59,000 cubic feet per second. Lake Oroville reached a maximum storage of 3,094,644 acre-feet on May 31, 1970. Storage on December 31, 1970 was 2,795,493 acre-feet.

Total water deliveries from the Oroville-Thermalito Facilities during 1970 were as follows, in acre-feet:

Sutter Butte Canal (March 20 to November 27)----	483,930
PG&E Lateral (April 15 to October 1)-----	3,022
Richvale Canal (April 12 to October 7)-----	64,661
Western Canal (April 1 to November 28)-----	176,035
Palermo Canal (continuous)-----	9,569
Total delivered-----	737,217

These deliveries were provided under rights which existed prior to construction of the Project and are not included as part of the water service made available by the Project.

	Total dissolved solids (ppm)	Total hardness (ppm)	Chlorides (ppm)	Sulfates (ppm)	Sodium (%)	Boron (ppm)
Minimum-----	41	26	0.5	0.0	15	0.0
Average-----	58	33	1.1	2.2	17	0.0
Maximum-----	74	37	1.8	6.6	19	0.1

Recreation and Fish and Wildlife Operations

Recreation use of facilities at the Upper Feather lakes totaled 892,900 recreation days during 1970: 396,800 recreation days at Frenchman Lake; 419,700 recreation days at Lake Davis; and 76,400 recreation days at Antelope Lake. During 1970, the Department of Fish and Game planted 61,800 subcatchable and 100,000 fingerling Rainbow Trout in Frenchman Lake; 400 catchable, 88,500 subcatchable, and 49,000 fingerling Rainbow Trout in Lake Davis; and 16,000 catchable and 38,900 fingerling Rainbow Trout in Antelope Lake.

A total of 483,400 recreation days of use was recorded for Lake Oroville and the Thermalito Facilities in 1970. The Department of Fish and Game planted Lake Oroville with 6,300 catchable Rainbow Trout, 36,600 catchable and 11,800 subcatchable Brown Trout, 200 catchable and 60,600 subcatchable Silver Salmon and 164,200 Kokanee Salmon fingerlings.

During 1970, the Feather River Fish Hatchery received 3,585 adult salmon which produced about 8,333,000 eggs. A total of 3,545,000 young salmon and

A total of 5,143,553 acre-feet was released from the Oroville-Thermalito Facilities to the Feather River during the year: 1,705,343 acre-feet through Thermalito Diversion Dam and Feather River Fish Hatchery and 3,438,210 acre-feet through Thermalito Afterbay River Outlet.

Shutters were adjusted at the Oroville Intake Structure to regulate water temperatures to satisfy fishery and rice grower requirements. Shutter adjustments were determined by continuously monitoring the temperature of the water being released from the Oroville-Thermalito Facilities.

Monthly water quality profiles were made at three stations on Lake Oroville. Turbidity measurements, electrical conductivity, and temperature profiles were taken at Thermalito Forebay and Afterbay. Feather River water quality was continuously recorded at the Gridley station. Monthly water samples were collected at various stations on the Feather River and Oroville-Thermalito Facilities. Plankton counts, nutrient determinations, and analyses of selected mineral constituents were made. A summary of mineral analyses from monthly samples collected in the Feather River near Gridley is shown below:

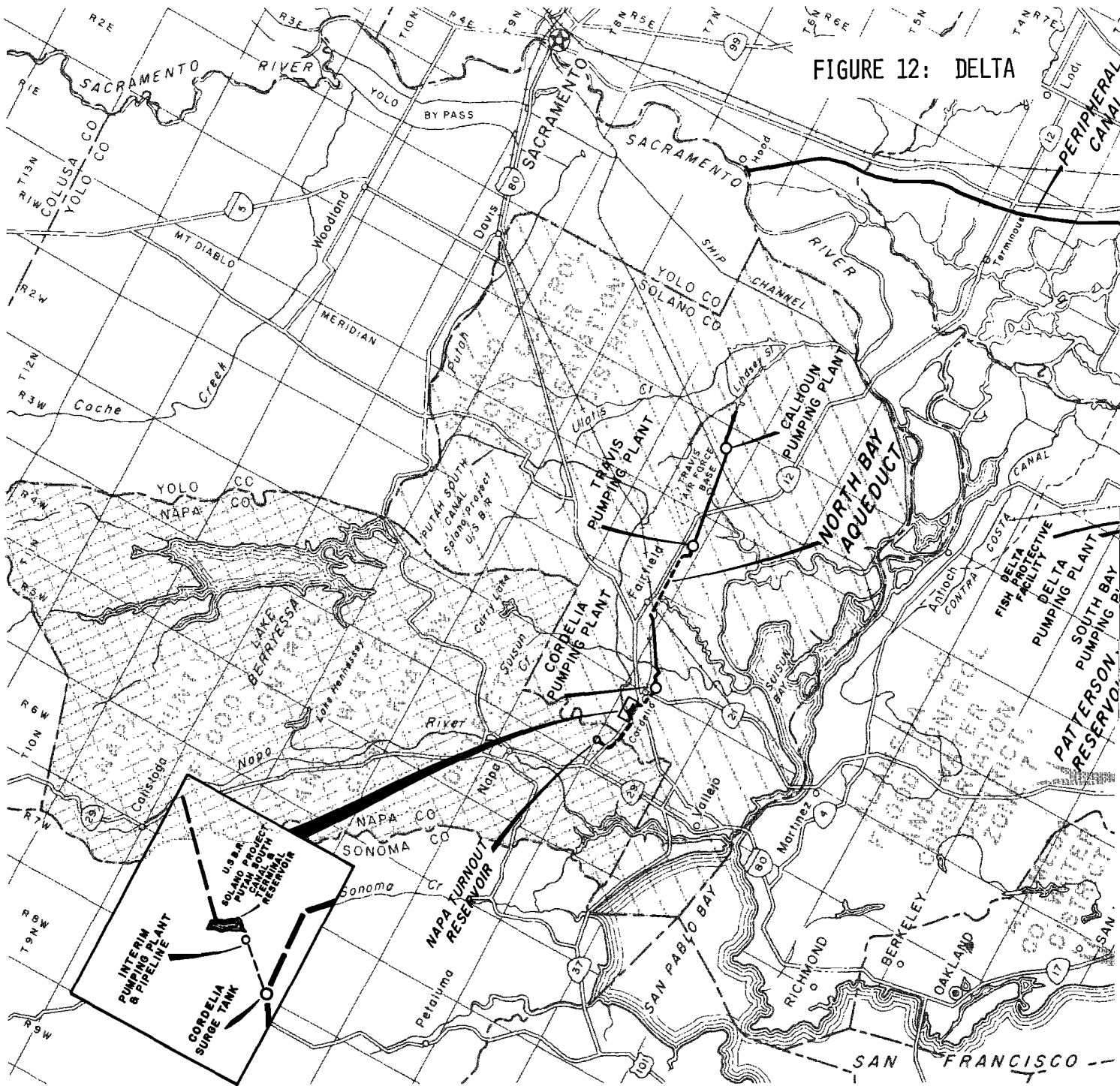
638,000 young steelhead from the 1969 brood were planted in the Feather River.

Water supplied by the Thermalito Irrigation District from a ground water well was used in 1970 to raise the water temperature in the rearing ponds at the Hatchery. This method successfully combatted the Sacramento River Chinook disease (a cold water virus). Another disease, *Ceratomyxa Shasta* (a protozoan parasite) which is injurious to the steelhead, was curtailed by sterilizing the rearing pond water through exposure to ultraviolet light.

In 1970, the Department of Parks and Recreation completed construction of a day-use area at Loafer Creek including a swimming beach, a 255-car parking lot, 100-unit picnic area with utilities, and sanitary facilities. A 137-unit campground at Loafer Creek was also completed.

Southern California Financial Corporation, the contractor and concessionaire, is developing an interpretive center at Kelly Ridge and a marina, trailer sites, and visitor supply facilities primarily at Bidwell Canyon. About 50 percent of necessary roads and utilities had been completed as of the end of 1970. Concession developments are expected to be completed by August 1971.

FIGURE 12: DELTA



Delta Field Division

The following facilities were operational during 1970:

North Bay Aqueduct, Phase I.

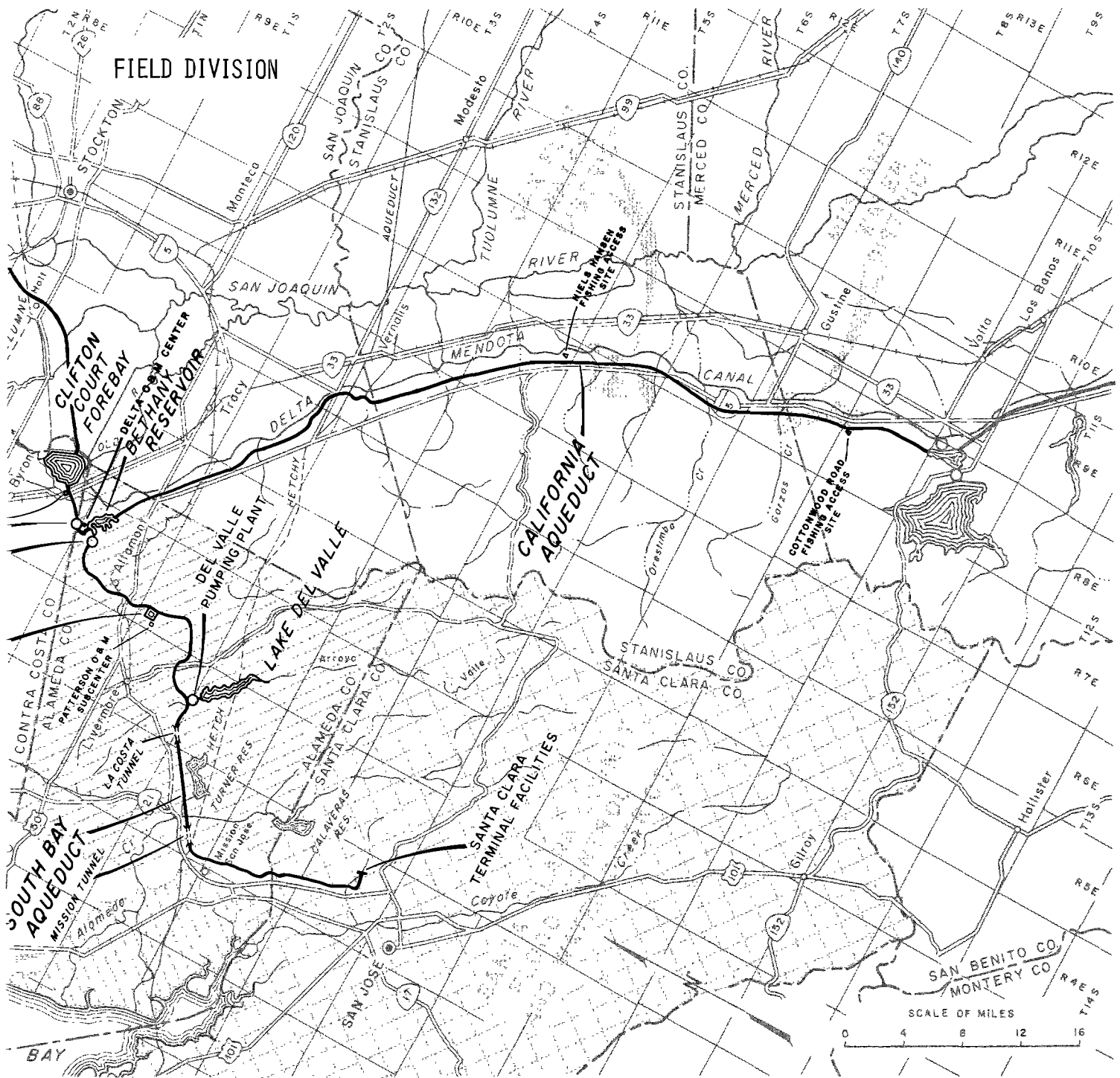
California Aqueduct from the Sacramento-San Joaquin Delta to O'Neill Forebay, including Clifton Court Forebay, Delta Fish Protective Facility, Delta Pumping Plant, and Bethany Reservoir.

- South Bay Aqueduct, including South Bay Pumping Plant and Del Valle features.

The location of these facilities is shown on Figure 12.

The North Bay Aqueduct, Phase I, delivers water from the federal Solano Project terminal reservoir, near Cordelia, to Napa County for municipal and industrial use. Phase II, scheduled to be operational by 1980, will convey water from the Delta for municipal and industrial use in Solano and Napa Counties.

The California Aqueduct from the Delta to O'Neill Forebay supplies water to the South Bay Aqueduct, Oak Flat Water District, and O'Neill Forebay.



The South Bay Aqueduct receives water from the California Aqueduct, through the South Bay Pumping Plant, for delivery to Alameda and Santa Clara Counties, mainly for municipal and industrial use. The Del Valle features of the South Bay Aqueduct include Del Valle Dam, Lake Del Valle, Del Valle Branch Pipeline, and Del Valle Pumping Plant. Lake Del Valle regulates water conveyed through the Aqueduct, provides flood control, enhances local recreational opportunities, and conserves local runoff.

Water Operations

During 1970, 3,618 acre-feet of water was delivered from the North Bay Aqueduct to Napa County Flood Control and Water Conservation District.

The California Aqueduct, from the Delta to O'Neill Forebay, supplied 101,570 acre-feet to the South Bay Aqueduct, 5,911 acre-feet to Oak Flat Water District, and 430,295 acre-feet to O'Neill Forebay. In addition, 1,176 acre-feet was delivered to Mustang Water District under a one-year contract. The amount delivered

to O'Neill Forebay included 151,241 acre-feet of water which was pumped through the Delta Pumping Plant for the Bureau of Reclamation, using power supplied from the federal Central Valley Project.

Water deliveries from the South Bay Aqueduct and Lake Del Valle included 9,249 acre-feet to Alameda County Flood Control and Water Conservation District (Zone 7); 20,607 acre-feet to Alameda County Water District; and 80,311 acre-feet to Santa Clara County Flood Control and Water District.

Water storage in Lake Del Valle on January 1, 1970, was 13,380 acre-feet. Local inflow, supplemented by water pumped from the South Bay Aqueduct, raised the storage level to a maximum of 41,760 acre-feet on June 21 for summer recreation. During the fall, water deliveries from the Lake reduced the storage to a minimum of 23,800 acre-feet on December 1. Local inflow raised the storage level to 27,823 acre-feet by December 31.

A temporary monitoring station was established at Blind Point on the San Joaquin River from April 1 to June 30, 1970. The daily maximum chloride concentration reached 250 ppm in early June, and remained at or above that level for most of the month. The chloride and total dissolved solids concentrations at other Delta stations were well below the "November 19, 1965 Delta Water Quality Criteria" levels.

The specific conductance of water was continuously recorded at the Interim Cordelia Pumping Plant, Delta Pumping Plant, Santa Clara Terminal Facilities, and California Aqueduct near O'Neill Forebay. Monthly water quality samples were also collected at these stations.

Special samples of project water were collected and analyzed for pesticide and mercury levels; all samples analyzed were found to be within the same low ranges as the natural surface waters of the area. A summary of mineral analyses from monthly samples is shown below:

	Total dissolved solids (ppm)	Total hardness (ppm)	Chlorides (ppm)	Sulfates (ppm)	Sodium (%)	Boron (ppm)
North Bay Aqueduct (Interim Cordelia Pumping Plant)						
Minimum-----	148	89	4.0	15	8	0.1
Average-----	164	135	7.2	20	14	0.2
Maximum-----	193	153	12.0	29	25	0.3
Delta Pumping Plant						
Minimum-----	176	72	36	21	43	0.2
Average-----	228	92	53	38	49	0.3
Maximum-----	384	144	94	69	62	0.5
South Bay Aqueduct (at Santa Clara Terminal Facility)						
Minimum-----	177	76	30	21	30	0.1
Average-----	218	98	46	37	45	0.2
Maximum-----	290	161	72	52	55	0.4
California Aqueduct (near O'Neill Forebay)						
Minimum-----	178	76	40	22	44	0.1
Average-----	231	93	53	39	49	0.2
Maximum-----	358	146	96	63	59	0.4

Recreation and Fish and Wildlife Operations

The testing phase of the Delta Fish Protective Facility evaluation program was started in March 1970 and will continue through the anadromous fish runs in 1971. The Department of Fish and Game is supplying biological and fisheries expertise to the program.

During 1970, the Delta Fish Protective Facility captured about 26,600,000 fish. These fish were removed from the Delta Pumping Plant intake channel and transported to release sites throughout the Delta. On July 21, a daily high of 1,300,000 fish were removed from the channel.

The Department of Parks and Recreation officially opened Lake Del Valle for recreation on April 1 and the East Bay Regional Park District assumed operational responsibility for recreation features on July 1.

Over 160,900 recreation days of use were recorded at Lake Del Valle during 1970. Approximately 190 parking spaces were provided at the boat-launching ramp—the latter completed in 1969. A small food and boat rental concession was available. Also, 50 camp units and 64 picnic units, along with sanitary facilities, were open to the public in 1970.

Clifton Court Forebay was opened by the Department of Fish and Game on October 17 to limited hunting and fishing. A second fishing access site was opened on the California Aqueduct in the Delta Field Division at Niels Hansen Road. Stanislaus County is responsible for maintenance of the site. A total of 5,600 recreation days of use were provided in 1970 by Clifton Court Forebay and Cottonwood Road and Niels Hansen Road Fishing Access Sites.



March 1968

*Impact of project water on
agricultural development in Kern
County (Berrenda Mesa Water District)*

October 1970



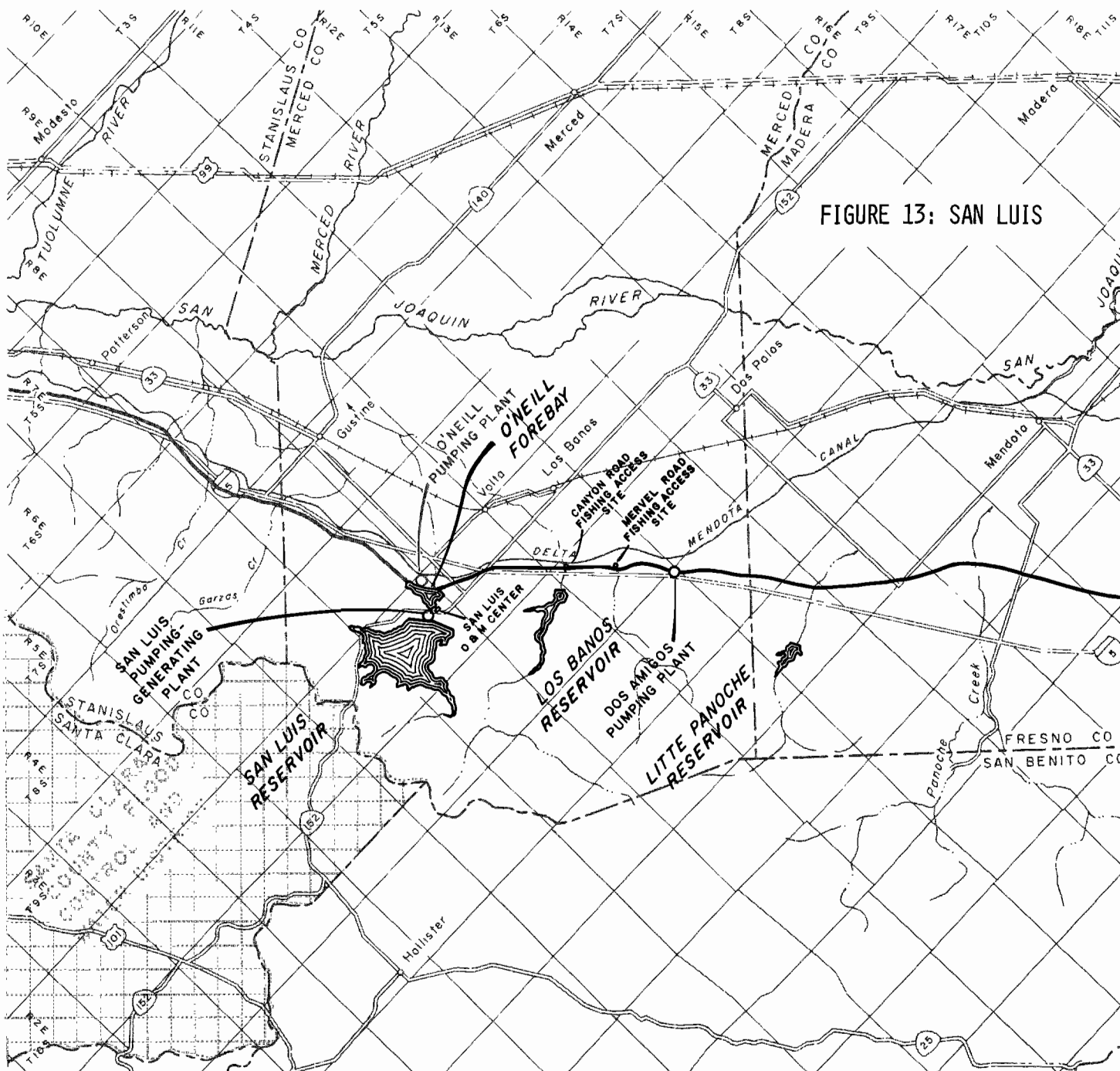


FIGURE 13: SAN LUIS

San Luis Field Division

The following state-federal joint-use facilities were operational throughout 1970:

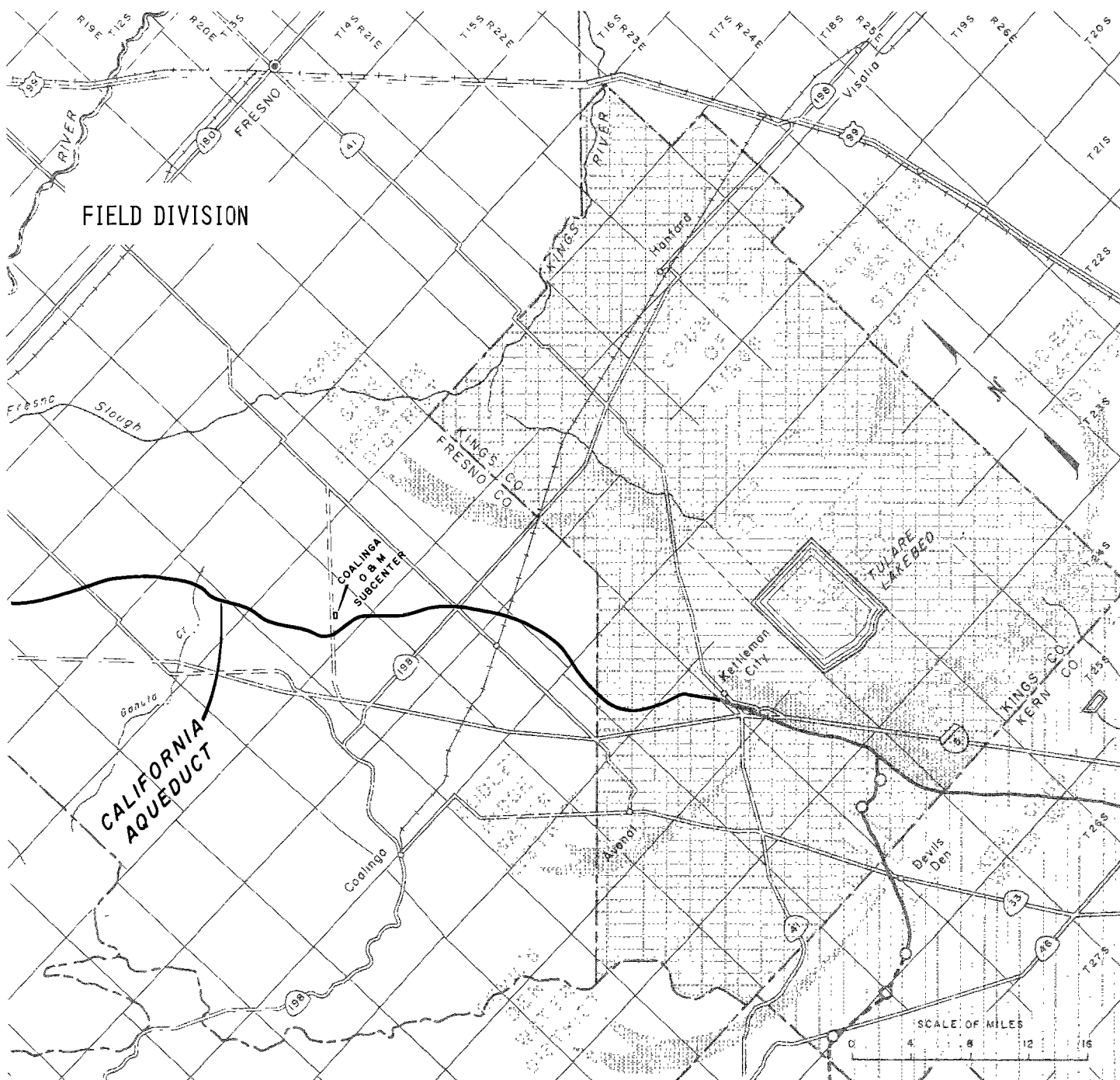
O'Neill Forebay and the California Aqueduct from the Forebay to Dos Amigos Pumping Plant.
San Luis Reservoir and San Luis Pumping-Generating Plant.

California Aqueduct from, and including, Dos Amigos Pumping Plant to Kettleman City.

Los Banos and Little Panoche Reservoirs.

The location of these facilities is shown on Figure 13.

O'Neill Forebay and the Aqueduct between the Forebay and Dos Amigos Pumping Plant regulate flows (a) pumped from the federal Delta-Mendota Canal through the federal O'Neill Pumping Plant, (b) delivered from the Delta Field Division through the California Aqueduct, and (c) released from San Luis Reservoir through the San Luis Pumping-Generating Plant. Flows so regulated are (a) pumped either into the California Aqueduct through the Dos Amigos Pumping Plant or into San Luis Reservoir through the San Luis Pumping-Generating Plant, and (b) released to the Delta-Mendota Canal.



San Luis Reservoir, with a gross storage capacity of 2,038,008 acre-feet, regulates inflow to O'Neill Forebay from year to year and from month to month within a particular year. During winter and spring months, when inflow exceeds demand south of the Forebay, the excess water is pumped into the Reservoir. During summer and fall months, when demand south of the Forebay exceeds inflow to the Forebay, water is released from the Reservoir.

Los Banos Reservoir, with a storage capacity of 34,562 acre-feet is operated for flood control and recreation. Little Panoche Reservoir, with a storage capacity of 13,236 acre-feet, is operated for flood control only. The primary purpose of both of these

reservoirs is to protect the California Aqueduct from flood damage.

Deliveries are made directly from the facilities within the San Luis Field Division to water customers of the federal Central Valley Project only.

During 1970, all joint-use facilities within the San Luis Field Division were operated by the Department under an extended interim agreement with the Bureau of Reclamation. The proposed formal agreement for overall coordinated operation of the State Water Project and the federal Central Valley Project and the supplemental agreement for operation of the joint-use facilities were still being reviewed in Washington, D.C. as of December 31.

Water Operations

Inflow to O'Neill Forebay totaled 1,060,778 acre-feet during 1970: 430,295 acre-feet from the California Aqueduct; 308,688 acre-feet through O'Neill Pumping Plant from the Delta-Mendota Canal; and 321,795 acre-feet through releases from San Luis Reservoir storage. During 1970, outflow from the Forebay totaled 1,027,066 acre-feet: 736,558 acre-feet pumped through Dos Amigos Pumping Plant; 38,601 acre-feet released to the Delta-Mendota Canal through O'Neill Pumping Plant; 4,888 acre-feet delivered through 10 temporary turnouts to customers of the federal Central Valley Project; and 247,019 acre-feet pumped into San Luis Reservoir through San Luis Pumping-Generating Plant.

On January 1, 1970, San Luis Reservoir storage was 1,964,388 acre-feet. Water pumped into the Reservoir during the year totaled 247,019 acre-feet; water released to the Forebay amounted to 321,795 acre-feet. Annual evaporation, seepage, and other losses totaled 30,683 acre-feet. On December 31, storage in the Reservoir was 1,858,926 acre-feet, of which 1,002,688 acre-feet was project water and the remainder, Bureau water of the federal Central Valley Project.

On January 1, 1970, storage in Los Banos and Little Panoche Reservoirs was 19,622 and 281 acre-feet, re-

spectively. On December 31, 1970, storage was 19,833 and 332 acre-feet, respectively.

A total of 736,558 acre-feet was pumped through Dos Amigos Pumping Plant during 1970. Deliveries from the Aqueduct between the Pumping Plant and Kettleman City totaled 464,063 acre-feet to customers of the Central Valley Project. Aqueduct flows past Kettleman City totaled 288,106 acre-feet during the year.

Monthly water samples were obtained from both O'Neill Forebay and San Luis Reservoir and examined for phytoplankton and zooplankton content. Monthly water quality profiles were made in San Luis Reservoir. The specific conductance of water was continuously recorded immediately south of O'Neill Forebay and near Kettleman City; monthly samples were collected from these stations for mineral and nutrient analyses as well as plankton counts.

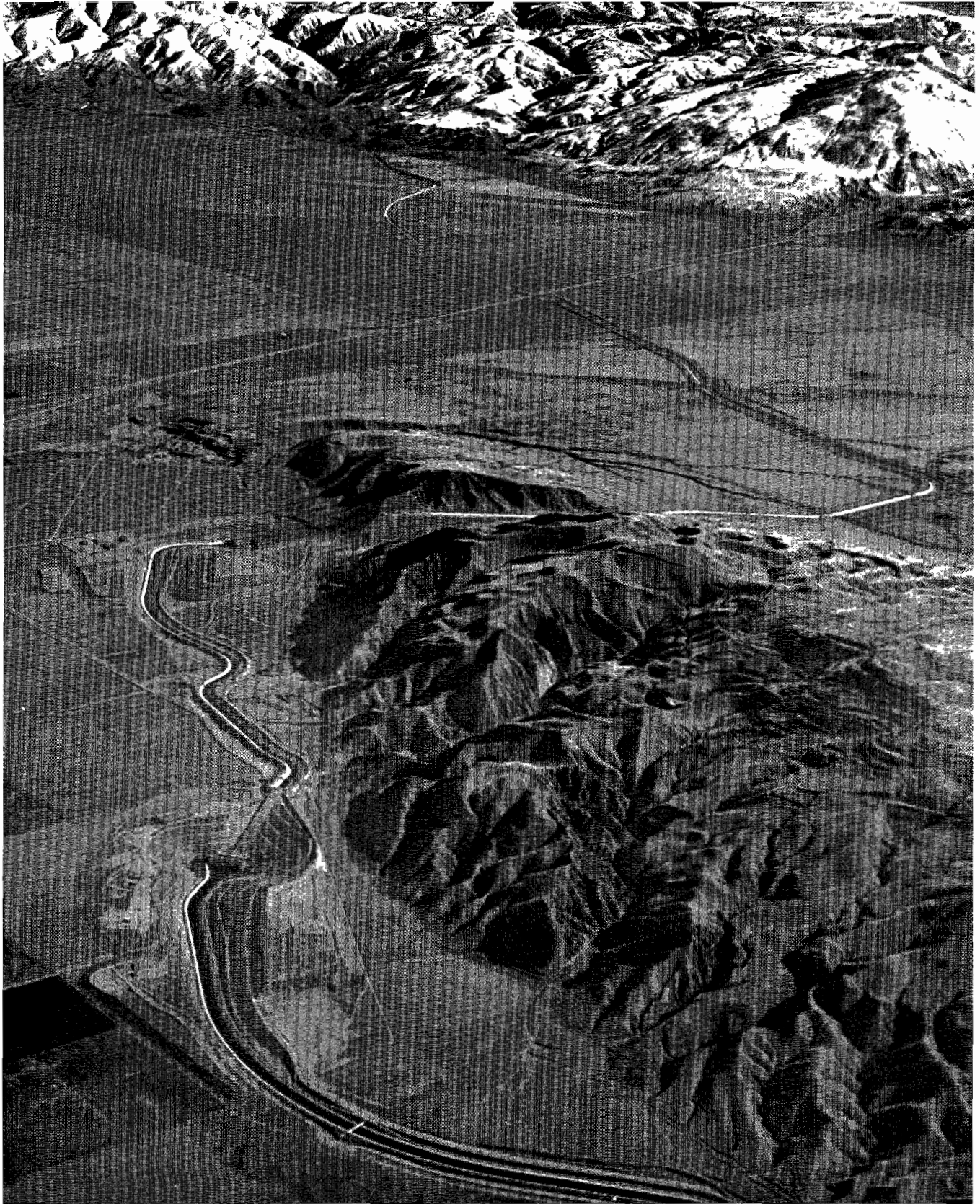
Special samples of project water were collected and analyzed for pesticide and mercury levels; all samples analyzed were found to be within the same low ranges as the natural surface waters of the area. A summary of mineral analyses from monthly samples is shown below:

	Total dissolved solids (ppm)	Total hardness (ppm)	Chlorides (ppm)	Sulfates (ppm)	Sodium (%)	Boron (ppm)
California Aqueduct (immediately south of O'Neill Forebay)						
Minimum.....	204	79	50	30	40	0.1
Average.....	238	98	58	41	49	0.2
Maximum.....	307	134	80	53	56	0.4
California Aqueduct (near Kettleman City)						
Minimum.....	190	84	46	29	46	0.1
Average.....	229	97	54	39	49	0.2
Maximum.....	270	109	62	53	57	0.3

Recreation and Fish and Wildlife Operations

Recreation use of facilities within the San Luis Field Division totaled 262,000 recreation days during 1970: 94,300 recreation days at San Luis Reservoir; 144,000 recreation days at O'Neill Forebay; 13,100 recreation days at Los Banos Reservoir; and 10,600 recreation days at Canyon Road and Mervel Road Fishing Access Sites.

During 1970, approximately 940 additional temporary parking spaces were provided at San Luis Reservoir (Basalt Area), 20 camp units were constructed and 125 overflow camping units were provided at O'Neill Forebay (Medeiros Area), and temporary parking for 320 vehicles was provided at Los Banos Reservoir.



Looking toward the Tehachapi Mountains — Wheeler Ridge Pumping Plant in foreground

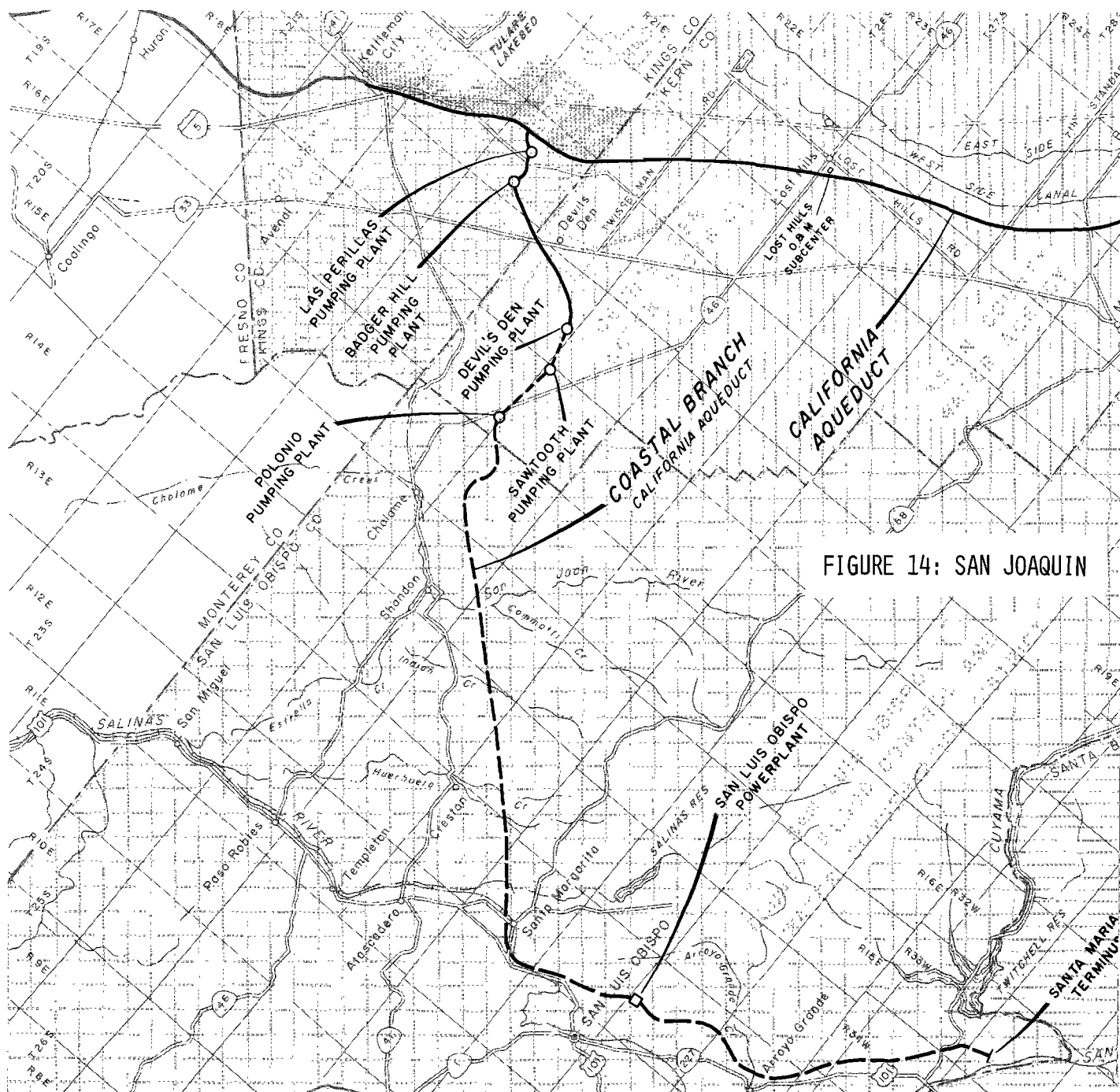


FIGURE 14: SAN JOAQUIN

San Joaquin Field Division

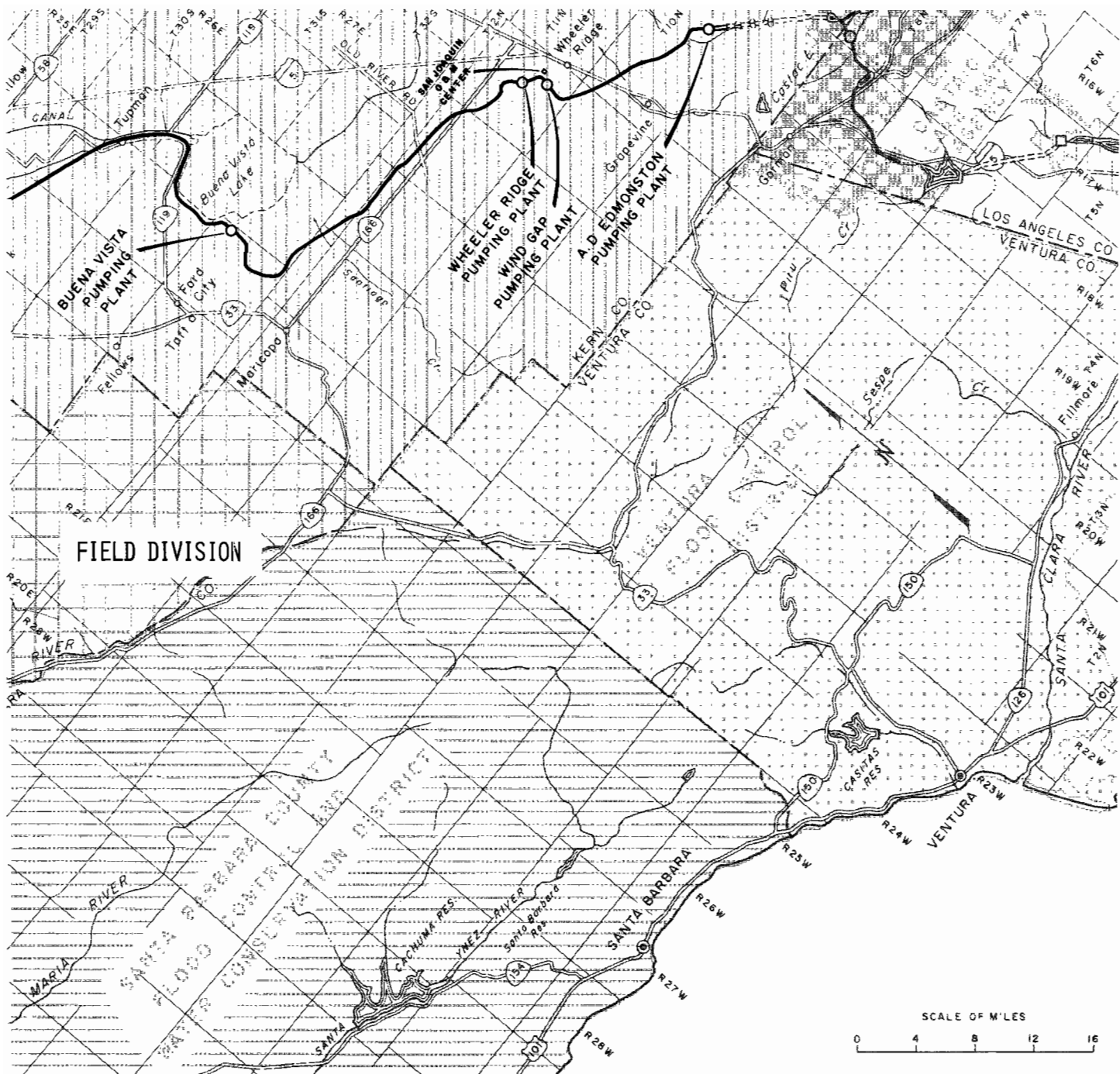
The following facilities were operational as of the end of 1970:

California Aqueduct from Kettleman City to Wind Gap Pumping Plant, including Buena Vista and Wheeler Ridge Pumping Plants.

Coastal Branch of the California Aqueduct to the site of the Devil's Den Pumping Plant, including the Las Perillas and Badger Hill Pumping Plants.

The location of these facilities is shown on Figure 14.

The California Aqueduct delivers project water to the Coastal Branch and to agricultural users in Tulare Lake Basin Water Storage District, Empire West Side Irrigation District, Dudley Ridge Water District, Hacienda Water District, and Kern County Water Agency. Through an exchange agreement, the Aqueduct also provides water for recreation use in Kings County. In the future, the Aqueduct will deliver water to municipal and industrial users in Kern County Water Agency.



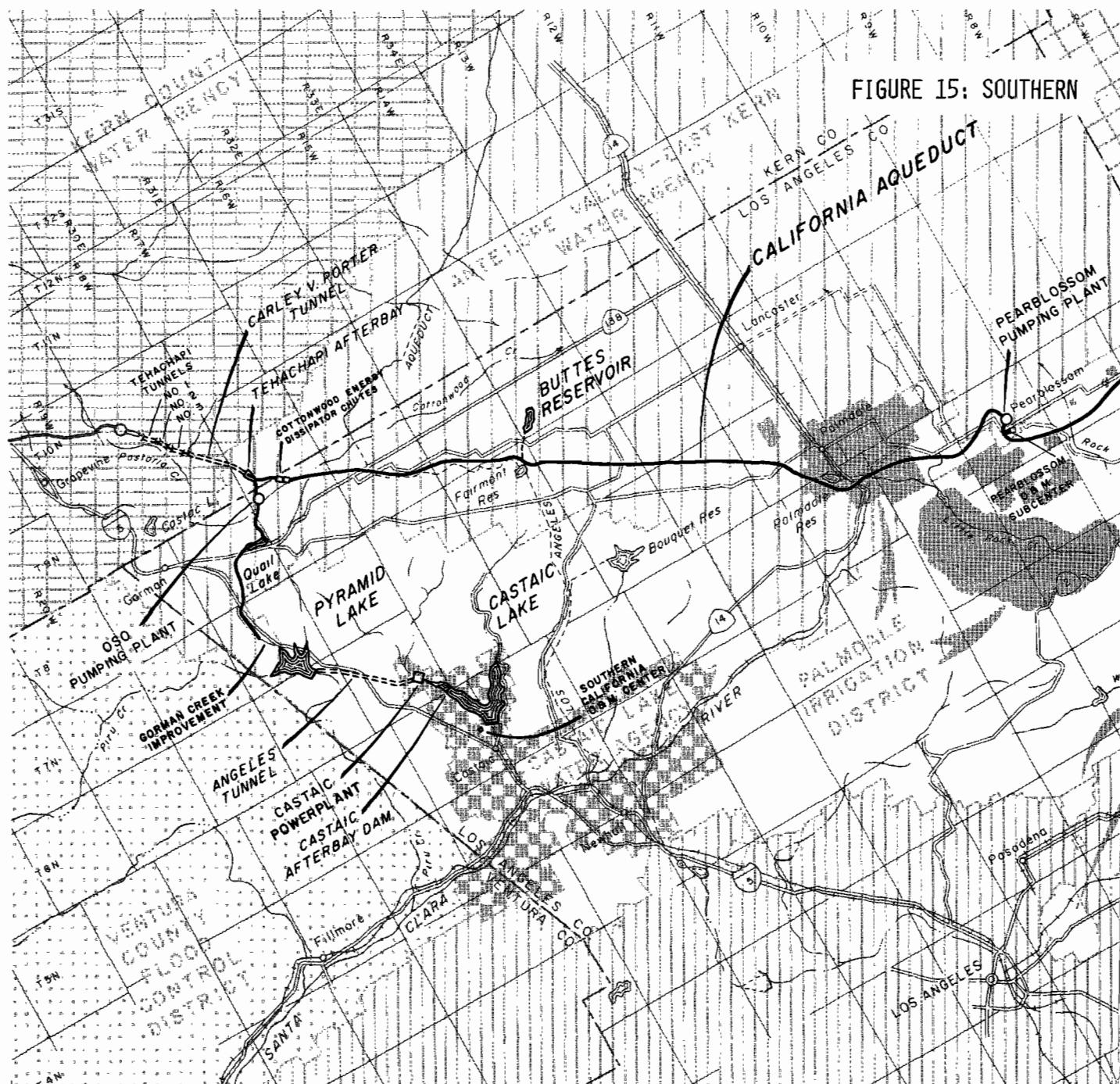
The operational portion of the Coastal Branch (the first 15 miles) delivers water to agricultural users in Devil's Den Water District and Kern County Water Agency.

Water Operations

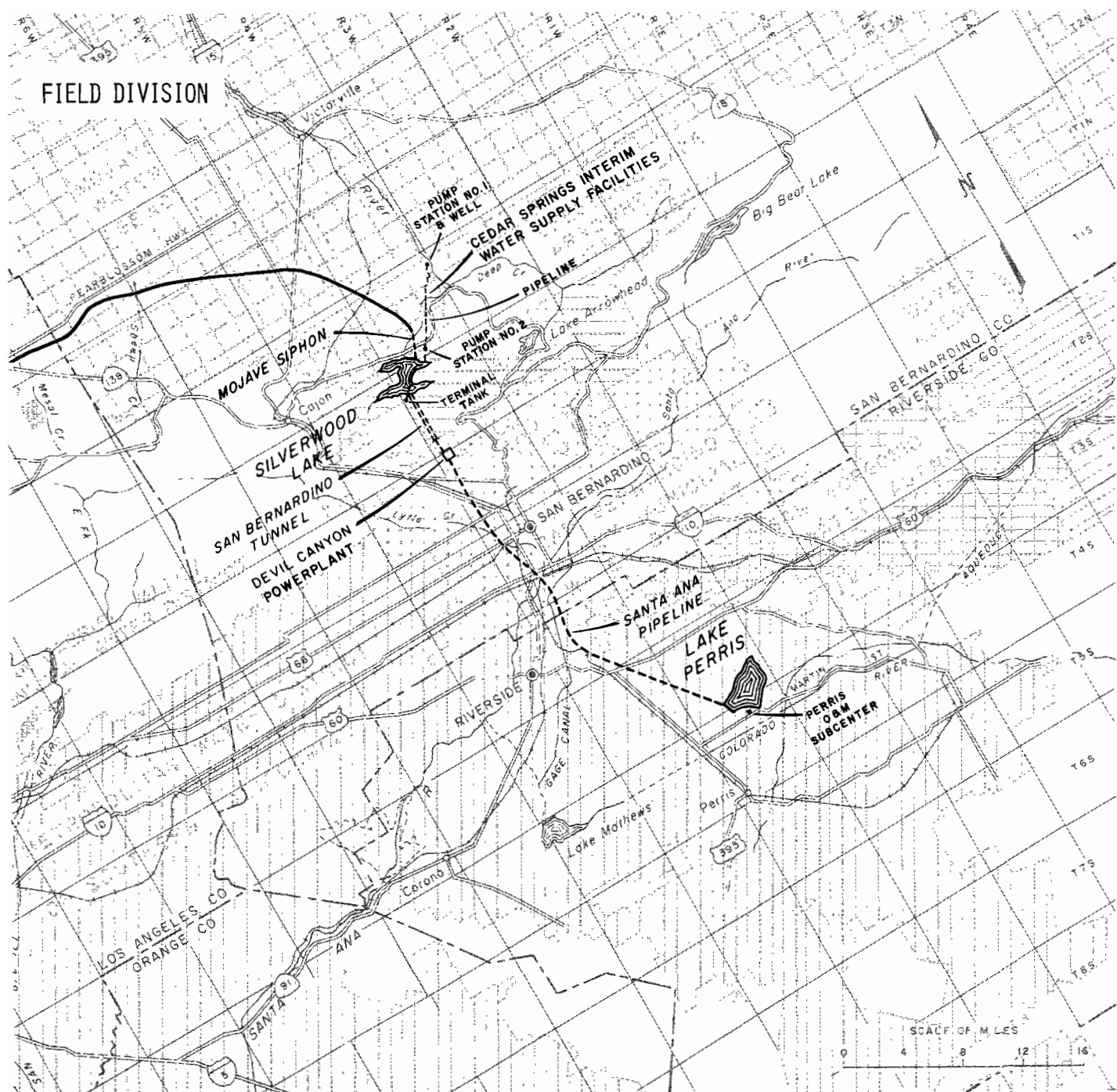
During 1970, the following amounts of project water were delivered from the 288,106 acre-feet conveyed past Kettleman City: 40,407 acre-feet to Dudley Ridge Water District; 3,942 acre-feet to Empire West Side Irrigation District; 9,578 acre-feet to Hacienda Water District; 204,634 acre-feet to Kern County Water Agency; and 11,739 to Devil's Den Water District. Tulare Lake Basin Water Storage District and Kings

County requested that delivery of 1970 entitlement water be deferred until a later date because of above-normal local water supplies.

The specific conductance of project water was continuously recorded in the Coastal Branch near Devil's Den throughout 1970 and, since September 1970, in the California Aqueduct near Buena Vista Lakebed. Monthly water quality samples were collected from both stations during these periods. Special samples of project water were collected and analyzed for pesticide and mercury levels; all samples analyzed were found to be within the same low ranges as the natural surface waters of the area. A summary of mineral analyses is presented on the following page:



	Total dissolved solids (ppm)	Total hardness (ppm)	Chlorides (ppm)	Sulfates (ppm)	Sodium (%)	Boron (ppm)
Coastal Branch (near Devil's Den)						
Minimum	193	86	47	31	43	0.2
Average	220	98	54	39	48	0.3
Maximum	270	114	62	49	51	0.3
California Aqueduct (near Buena Vista Lakebed)						
Minimum	240	103	57	39	46	0.3
Average	245	106	59	42	48	0.3
Maximum	252	111	62	45	50	0.3



Southern Field Division

None of the project water facilities in this field division, the locations of which are shown on Figure 15, were operational during 1970.

The Cedar Springs Interim Water Supply Facilities were operated and maintained using a local supply from ground water wells. Completed sections of the

California Aqueduct were maintained, including Tunnels No. 1, 2, and 3; Carley V. Porter Tunnel; the Aqueduct between Cottonwood and Fairmont; and the portion of the Santa Ana Valley Pipeline under the Riverside International Raceway.



Looking across the snow-capped Tehachapi Mountains into Antelope Valley — A. D. Edmonston Pumping Plant in foreground

CHAPTER V. PROJECT FINANCING

This chapter presents a financial analysis of the State Water Project, including (a) the definite construction program for the "1973 Project facilities", which will permit the fulfillment of initial water delivery commitments, and (b) the more-flexible program beyond the "1973 Project facilities" under the particular assumptions described in the following pages.

The year ending December 31, 1970 was the 14th year of a 17-year construction program which began in 1957 with the start of highway and railroad relocations around the site of Lake Oroville in Butte County, and which will end in 1973 with the completion of Pyramid Dam in Los Angeles County and Perris Dam in Riverside County. Overall, about 96 percent of the "1973 Project facilities" were either completed or under construction by the end of 1970. These facilities include:

Three dams and reservoirs of the five planned for the Upper Feather Division—Frenchman and Antelope Dams and Lakes and Grizzly Valley Dam and Lake Davis—and the Grizzly Valley Pipeline (completed).

The Oroville Division, including Oroville Dam and Lake Oroville, Edward Hyatt Powerplant, and the Thermalito Facilities (completed).

Phase I of the North Bay Aqueduct (completed).

The South Bay Aqueduct, including the Del Valle features (completed).

The California Aqueduct (essentially completed for the first 282 miles of its 444-mile length, with the remainder in various stages of completion) including San Luis Dam and Reservoir (completed), Cedar Springs Dam and Lake Silverwood and Perris Dam and Lake Perris (under construction).

The West Branch of the California Aqueduct, including Castaic and Pyramid Dams and Lakes and the Gorman Creek Improvement (under construction).

Phase I of the Coastal Branch of the California Aqueduct (completed).

The construction program extending beyond the "1973 Project facilities" includes the following:

- Abbey Bridge and Dixie Refuge Dams and Reservoirs, planned for the Upper Feather Division to satisfy the growth in future demands for water-oriented recreation.
- Phase II of the North Bay Aqueduct, to permit delivery of a project water supply from the Delta to Solano and Napa Counties, commencing in 1980.
- The Peripheral Canal, to protect the environment of the Sacramento-San Joaquin Delta (particularly the striped bass and salmon fishery) and to facilitate transfer of surplus water across the Delta to Clifton Court Forebay.
- The Upper Eel River Development, or equivalent alternatives in lieu thereof, to raise the Project's water yield as demands increase under contractual entitlements.
- Supplemental developments on the main line of the California Aqueduct, to provide for the build-up in water delivery obligations, including additional pump units (in the Delta, A. D. Edmonston, and Pearblossom Pumping Plants), an additional power recovery unit (in the Devil Canyon Powerplant), San Luis Canal modifications, and Buttes Dam and Reservoir.
- Piru Creek Project, to replace the interim Gorman Creek Improvement and to control energy and to generate electric power from large flows dropping through the West Branch of the California Aqueduct.
- Phase II of the Coastal Branch of the California Aqueduct, to provide a project water supply to San Luis Obispo and Santa Barbara Counties, commencing in 1980.
- The San Joaquin Drainage Facilities, to dispose of and/or reclaim agricultural waste water of the San Joaquin Valley.

Potential Sources of Additional Funds

Eventually, additional funds will have to be obtained in order to complete the construction of project facilities.

Of several courses of action available for obtaining additional funds, the Department is currently concentrating on two sets of negotiations to provide a basis for additional revenue bond financing. The bonds

would be supported by power revenues from facilities located south of the Tehachapis—the Devil Canyon-Castaic Power Facilities and the Piru Creek Project. Successful conclusion of these negotiations could produce more than \$150 million of additional funds for project construction.

The first issue of revenue bonds—for the Devil Canyon-Castaic Power Facilities—would be tentatively scheduled for sale early in 1972 and could provide over \$100 million for construction. These bonds would not require the construction of additional facilities but would involve the sale of Devil Canyon-Castaic power for firm annual payments (Castaic power being the Project's share under cooperative agreement with the City of Los Angeles). These payments would support a revenue bond issue which would finance the capital costs of project facilities allocated to such power production.

As of the end of 1970, negotiations were under way for the sale of Devil Canyon-Castaic power to the six water supply contractors whose deliveries will be conveyed through the Devil Canyon-Castaic Power Facilities.

Project Financial Management

Funds for financing the construction costs of the State Water Project are provided under three broad authorities:

Burns-Porter Financing, derived from the sale of general obligation bonds and certain of the State's tideland gas and oil revenues, as authorized by the Burns-Porter Act (California Water Code Sections 12930-12944).

Revenue Bond Financing, derived from the sale of revenue bonds, as authorized by the State's Central Valley Project Act (California Water Code Sections 11100-11925).

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

Construction funds accrue to, and are expended from, three primary depositories; each having somewhat different characteristics:

California Water Resources Development Bond Fund-Bond Proceeds Account, in which are deposited proceeds from the sale of general obligation bonds and from which moneys may be expended *only* for the Davis-Grunsky Program and for project construction costs (i.e., capital costs as defined herein, which exclude interest costs during the construction period).

California Water Fund, in which are deposited certain tideland gas and oil revenues under the continuing authorization of the Burns-Porter Act from which moneys may be expended only in the manner described above for the Bond Proceeds Account. Expenditures from the Fund "offset" an equal amount of authorized general obligation bonds as described in a following section.

The second issue of revenue bonds—for the Piru Creek Project—would be tentatively scheduled for sale early in 1973 and could provide more than sufficient funds to finance the construction of facilities required to replace the interim Gorman Creek Improvement. (Such facilities would be needed by the mid-1980s to control the energy from large flows dropping through the West Branch.)

The Department has reached agreement with the Southern California Edison Company and the City of Los Angeles, Department of Water and Power, on a program of geologic exploration and preliminary design necessary to determine the feasibility of the Piru Creek Project and on basic principles for negotiating the necessary contracts for this arrangement.

- *Central Valley Water Project Construction Fund*, in which are deposited "miscellaneous receipts" and proceeds from the sale of revenue bonds and from which moneys may be expended for project construction or for interest on general obligation bonds, except that:

- (1) Proceeds from the sale of revenue bonds may be used only for purposes specified in the resolution authorizing sale of an issue of such bonds.
- (2) Payments by water supply contractors for the cost of delivery structures (turnouts) are held in trust for that purpose.

As opposed to construction funds, project operating revenues accrue to, and are expended from, two primary depositories:

- *California Water Resources Development Bond Fund-Revenue Account*, in which are deposited revenues derived from project water sales and from miscellaneous sources (such as federal payments for a share of the joint operating costs of the San Luis Facilities and General Fund appropriations for joint project costs that are allocated to recreation) and from which moneys are paid in accordance with the following priorities stipulated in the Burns-Porter Act:

- (1) Project operation and maintenance costs.
- (2) General obligation bond service.
- (3) Repayment of the California Water Fund.
- (4) Deposits to a reserve for future construction.

- *Central Valley Water Project Revenue Fund*, in which are deposited revenues pledged to revenue bonds, derived from power sale contracts, and from which disbursements are made as described by terms of the resolution authorizing issuance of revenue bonds; generally, operation and maintenance costs allocated to power, deposits to specified reserves, and revenue bond service.

The above summary of project financial management is shown graphically on Figure 16. Not all accounts and subaccounts of the primary depositories are shown for purposes of simplification.

The sources of project funds are described in greater detail in the following paragraphs:

General obligation bonds provide most of the funds for financing project capital costs. The Burns-Porter Act authorizes the issuance of \$1.75 billion in such bonds for construction of the "State Water Facilities", a specific group of works defined in the Act which, together with certain "Additional Facilities" (the Upper Eel River Development or alternatives in lieu thereof), constitute the State Water Project. This authorization includes a reservation of \$130 million in bonds specifically for financial assistance to local agencies under the Davis-Grunsky Act Program. As of December 31, 1970, \$1.35 billion in general obligation bonds had been sold, including \$200 million in outstanding bond anticipation notes.

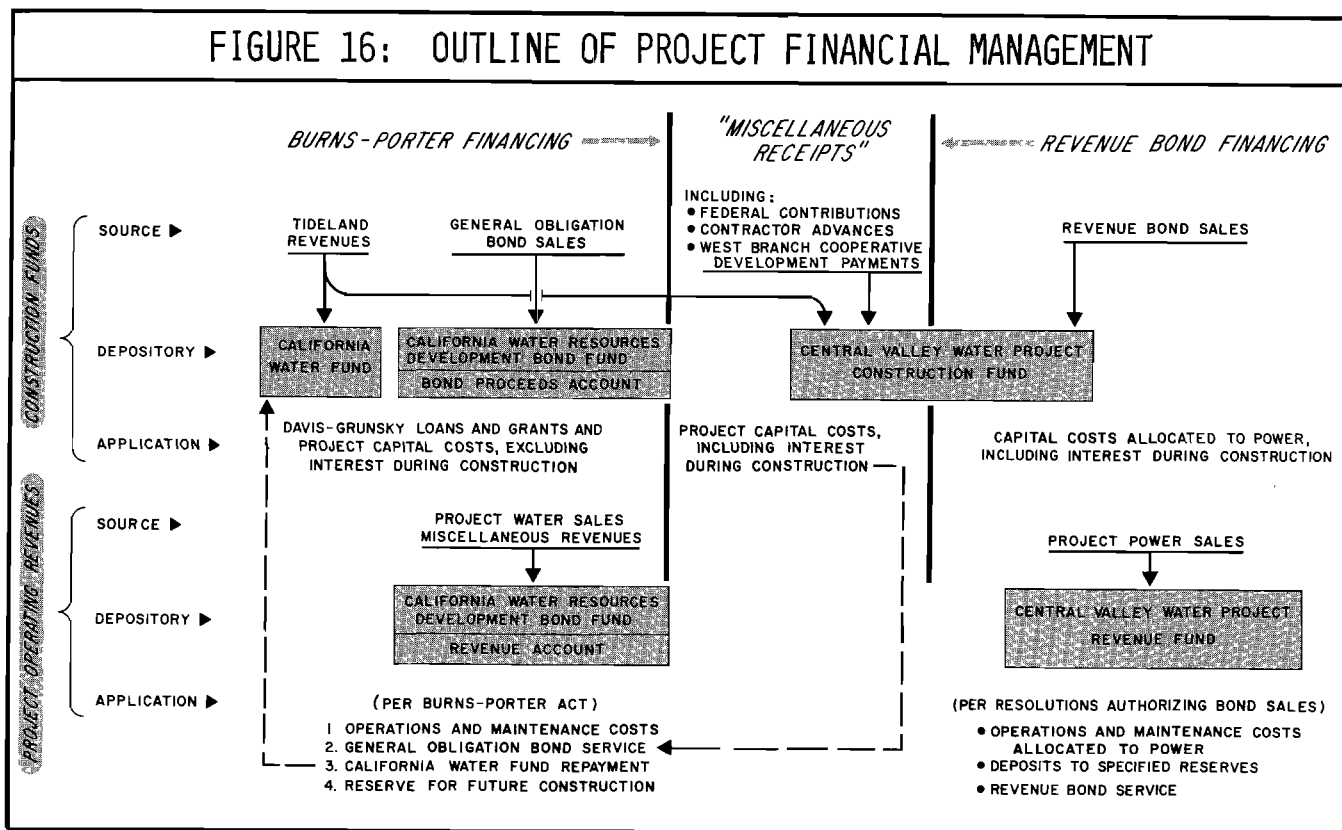
California Water Fund moneys are also pledged to purposes of the Burns-Porter Act. As of December 31, 1970, accruals to the Fund totaled about \$176 million. By enactment of SB 261 on June 28, 1968 (see pages 1-2, Bulletin 132-69), the balance of moneys in the Fund, and moneys which would have accrued to the Fund through Fiscal Year 1971-72, were appropriated to the Central Valley Water Project Construction

Fund. Under this Act, \$25 million annually will accrue to the California Water Fund commencing in Fiscal Year 1972-73.

The Burns-Porter Act also provides that, to the extent California Water Fund moneys are used in lieu of bond proceeds for construction of the "State Water Facilities", an equal amount of bonds is reserved ("offset") for construction of the "Additional Facilities". The amount of bonds to be "offset" was effectively limited to about \$176 million by enactment of SB 261. By the time moneys will again accrue to the California Water Fund (commencing in Fiscal Year 1972-73), all authorized general obligation bonds are expected to have been either totally expended or reserved for "Additional Facilities" and the Davis-Grunsky Act Program.

Revenue Bonds had been sold by the Department in the total amount of almost \$245 million as of December 31, 1970. (These Central Valley Project Revenue Bonds, Oroville Division, will finance about \$213 million of the estimated construction costs that are included in this analysis. The remainder of the \$245 million has been applied to interest charges during construction and to certain reserves—including \$5 million for additional construction costs of the Oroville Power Facilities.) The Department plans to issue additional revenue bonds which would be supported by power recovery revenues as previously described.

FIGURE 16: OUTLINE OF PROJECT FINANCIAL MANAGEMENT



Miscellaneous receipts are derived from the following sources:

Specific appropriations made by the Legislature for project construction prior to the effective date of the Burns-Porter Act. (The use of these appropriations totaled about \$100 million.)

State tideland gas and oil revenues during the period June 28, 1968 through June 30, 1972 by enactment of SB 261 of the 1968 Legislature. (About \$44 million had been received as of December 31, 1970, and an additional \$50 million is expected to be received before June 30, 1972.)

A continuing annual appropriation of \$5 million from tideland gas and oil revenues to reimburse project fund expenditures for recreation and fish and wildlife enhancement, provided for by enactment of AB 12 of the 1966 Legislature, First Extraordinary Session (see pages 10-11, Bulletin 132-66). (\$20 million had been so appropriated and reimbursed to the Project as of December 31, 1970. Annual appropriations are expected to continue beyond 2000 to fully reimburse the Project for eventual expenditures for recreation and fish and wildlife enhancement.)

Federal contributions for the costs of project facilities which are allocable to flood control. (Almost \$72 million of such contributions had been received as of December 31, 1970, of which about \$2 million are held for revenue bond reserves. Additional contributions of about \$2 million are expected under present agreements.)

Federal contributions for the costs of project and recreation development lands reserved for "open space". (Less than \$2 million of such contributions had been received as of December 31, 1970; about the total expected.)

- Payments by the City of Los Angeles, Department of Water and Power, for Cooperative Development, West Branch (Castaic). (Such payments are to commence in 1971 and will total about \$38 million.)
- Advance payments by water contractors for project construction of turnout structures and of excess delivery capability in certain aqueduct reaches. (Such payments amounted to about \$44 million as of December 31, 1970, and additional payments of about \$30 million are expected.)
- Other income, including certain right-of-way proceeds and interest earnings. (Such income totaled about \$16 million as of December 31, 1970.)

The first call on miscellaneous receipts is coverage of any general obligation bond service which exceeds available operating revenues—to avoid withdrawals from the State General Fund for this purpose. Such withdrawals would have a detrimental effect on the State's overall credit rating. Because of this first call, the ability of available funds to finance capital costs depends on the total miscellaneous receipts which must be reserved for future bond service coverage. Thus, a financial analysis of the State Water Project requires a comprehensive projection of annual bond service requirements and annual operating revenues for all future years until the final bond maturity.

Assumptions Basic to the Financial Analysis

Though construction is well under way and water and power sales contracts guarantee eventual repayment of reimbursable costs, future capital requirements, bond service, and operating revenues depend on several undefined aspects of the Project. These uncertainties concern primarily the future facilities to be completed following the "1973 Project facilities".

As compared with the assumptions basic to last year's analysis, the current financial analysis is predicated on the projected delay in buildup of project water demands as reported in Bulletin 160-70 (see "Project Water Service Review," Chapter III). This delay defers the estimated dates when operation of future facilities will be first required for purposes of water supply; such as the Peripheral Canal, the Upper Eel River Development or alternative(s) thereto, and certain additional pump units in aqueduct pumping plants. This delay affects, in turn, estimated costs and project operating revenues associated with such facilities.

Assumptions Concerning Future Capital Requirements

Listed below are the major assumptions regarding future expenditures to be incurred to complete the State Water Project:

- Costs and salaries prevailing on December 31, 1970, will escalate during future years as follows:

Years	Percent increase per year	
	State salaries	Construction costs
1971 through 1972-----	5	6
1973 through 1975-----	2	3
After 1975-----	0	0

- Abbey Bridge and Dixie Refuge Dams and Reservoirs will be constructed so as to be operational in 1979 and 1981, respectively—assuming that these facilities will be needed by those dates to

satisfy growing demands for water-oriented recreation. The total capital costs for these facilities are estimated to be \$14 million.

The Peripheral Canal will require the expenditure of about \$169 million in project funds—the State's share of capital costs for a joint federal-state facility as presented in the Bureau of Reclamation's final feasibility report, with allowances for rising construction prices and salaries, state planning costs, and operation costs to be incurred prior to completion. Construction of the Peripheral Canal will be initiated so that the facility will be operational in 1980. This schedule and/or estimated expenditure may have to be modified (a) to conform to the timing of federal authorization and funding or (b) to permit the State to proceed without federal participation.

The Upper Eel River Development, or alternatives in lieu thereof, will be constructed by 1996 to provide sufficient additional water in the Sacramento-San Joaquin Delta to maintain the project water yield until the end of the project repayment period. The estimated costs reported for the "Upper Eel River Development" in last year's bulletin (\$159 million, reflecting minor adjustments for planning and preoperating costs), together with state payments under an assumed Water Supply Act of 1958 contract for future conservation storage on the Eel River, will approximate the eventual costs of the particular development to be constructed.

Phase II construction of the North Bay Aqueduct, estimated to require \$16 million, is scheduled to commence in 1976 so that deliveries of project water to Napa and Solano Counties from the Sacramento-San Joaquin Delta can begin in 1980. However, these dates may be accelerated if mutually agreed to by the Counties and the Department. Purchase of right-of-way in critical areas subject to early municipal and industrial development will commence in 1971.

Buttes Dam and Reservoir will be constructed during the period 1981 through 1985. The capital costs of the Dam and Reservoir are estimated to be \$14 million, based on construction of an assumed 21,800-acre-foot facility. Construction is conditioned on financial feasibility. Therefore, these estimated expenditures may be modified, depending on the availability of project funds as well as on the final size of the facility to be constructed.

The San Luis Canal of the California Aqueduct will be modified to maintain, and eventually augment, the design conveyance capacity between Dos Amigos Pumping Plant and Kettleman City. Modifications to compensate for subsidence along

the Canal will cost the State about \$8 million during the period 1971 through 1983 to maintain the present design capacity. In addition, about \$10 million will be expended during the period 1983 through 1985 for raising the Canal lining to increase the design capacity of the Canal by about 1,000 cubic feet per second.

- The installation schedules for those pump units remaining to be fabricated will be modified as follows:

Pumping Plant	Unit No.	Scheduled initial operation (date)		
		Previous	Modified	Deferral (years)
Delta-----	8	1/ 1/76	1/ 1/80	4
	9	3/ 1/76	3/ 1/80	4
	10	1/ 1/83	1/ 1/85	2
	11	3/ 1/83	3/ 1/85	2
A. D. Edmonston---	10	8/13/76	6/ 1/83	7
	12	10/13/76	10/ 1/83	7
	14	2/13/77	2/ 1/84	7

- Phase II construction of the Coastal Branch of the California Aqueduct will commence in 1975 and will be completed so as to permit initial delivery of project water to San Luis Obispo and Santa Barbara Counties in 1980. Under the Counties' water contracts, the year of initial water delivery (and the schedule for expending approximately \$68 million in capital costs for Phase II construction) may be accelerated or deferred, or such deliveries (and expenditures) may be eliminated entirely—depending on the exercise of options available to the Counties. The purchase by the State, from the Berrenda Mesa Water District, of Units No. 6 of the Las Perillas and Badger Hill Pumping Plants will occur on January 1, 1985. (This is the estimated date when the pumps will be needed for delivering entitlement water to all Coastal Branch contractors. The specific dates for purchase or replacement of Units No. 4 and purchase of Units No. 5 are set forth in respective agreements.)
- The Piru Creek Project on the West Branch of the California Aqueduct will be needed by about 1984 to replace the interim Gorman Creek Improvement. Since the physical and financial plan for the Piru Creek Project is currently under negotiation, neither the future costs of the Project nor the additional revenue bonds which will offset such costs are included in the financial analysis—except for the costs of preliminary investigation and design, which are currently classified as non-reimbursable by the water supply contractors.

The San Joaquin Drainage Facilities will be constructed at some indefinite time after 1980, as-

suming that beneficiaries will guarantee repayment of the reimbursable costs of the Facilities. The only costs for the Facilities included in the current financial analysis are those incurred to date and the State's share of those to be incurred in the future to complete federal-state feasibility studies concerning the treatment of agricultural waste waters.

Assumptions Concerning Future Construction Funds

Listed below are the major assumptions regarding future funds to be made available to the Department for financing (a) construction costs and (b) any general obligation bond service which exceeds project operating revenues:

Additional funds required to complete the financing of capital costs of the State Water Project will be provided from sale of bonds. For purposes of this analysis, the total issue of such bonds has been sized so as to yield an additional \$89 million.

Sale of Piru Creek Project power revenue bonds will provide additional funds at least equal to the capital costs of the works required to replace the interim Gorman Creek Improvement.

Annual appropriations from the State's tideland gas and oil revenues to the Department will continue indefinitely in the full amounts presently provided for by law—\$30 million annually.

Repayments to the California Water Fund, which will be derived from project revenues under the "third priority" of use specified by the Burns-Porter Act, will be available to the Department for expenditure.

The initial payment by the City of Los Angeles, Department of Water and Power, will be made on October 15, 1971 (rather than March 1, 1971) under proposed Amendment No. 3 to the Contract for Cooperative Development, West Branch (Castaic).

Project funds will realize short-term interest income on the unexpended balance of all moneys, including moneys in the California Water Fund, at a rate equivalent to 5.5 percent per annum through 1972 and 5.0 percent per annum thereafter.

The \$13.74 million in California Water Fund moneys which were encumbered under 1958 and 1959 legislation as a guarantee for conservation cost repayment of Black Butte and New Hogan Dams and Reservoirs will not be available to the State Water Project.

Assumptions Concerning Future Bond Service

Listed below are the major assumptions as to the magnitude of annual principal and interest payments on future bond sales:

- The schedule for future bond sales (excluding any "offset" bonds for the construction of the Upper Eel River Development or alternatives in lieu thereof) will be as shown in the lower left-hand section of Table 8.
- All future series of bond anticipation notes and all future series of general obligation bonds will be sold at 2.5 percent and 5.5 percent interest, respectively, as shown in the lower portion of Column 1, Table 8.
- The service pattern for all future series of general obligation bonds will provide for no maturities during the first nine years after issuance, with maturities scheduled so as to produce approximately level annual service for the years thereafter, and with a final maturity 50 years after issuance. [Under such a service pattern, the weighted redemptions (dollar-years of outstanding principal) of future series roughly correspond with those of past series, as shown in Column 2, Table 8.]
- Bonds which will provide the additional funds needed to complete project construction will bear 6.0 percent interest and will have a term of 50 years. Maturities will be scheduled so as to produce level annual service for the term of the bonds.
- Future service on Piru Creek Project power revenue bonds will be directly offset by future Piru Creek Project power revenues (neither of which are shown in the analysis).

Assumptions Concerning Future Project Revenues

Listed below are the major assumptions regarding the flow to the Project of "net operating revenues" (the portion of total operating revenues which exceeds the costs of project operations, maintenance, pumping power, replacement, and revenue bonds service and which can be applied to general obligation bond service under the "second priority" of use specified by the Burns-Porter Act):

- The "project interest rate" will escalate in the future as shown in Column 4, Table 8. Such rates that prevail on April 1 will be effective concerning the determination of water revenues to be received during the following year.
- The "project repayment period" will extend through the year 2035. This is the same assumption that has been used for previous reports.
- Operation of the amendment of Water Supply Contract Article 22, under which the projected reimbursable costs of constructing and operating the Upper Eel River Development (or alternatives in lieu thereof) will be excluded from Delta Water Rate calculations, will be limited to 1970 and 1971 charges only.

TABLE 8: BOND SALES AND PROJECT INTEREST RATES

(in thousands unless otherwise noted)

Bond Sales ^{a/}	Dollar-years ^{b/}	Interest cost ^{c/}	Percent interest cost ^{d/}	Project interest Rates ^{e/}
<u>Actual Issues</u>	(1)	(2)	(3)	(4)
\$50,000,000 Bond Anticipation Notes, dated 12/1/63, due 6/15/64	26,945	531	1.971	1.970
\$100,000,000 Series "A" Bonds dated 3/1/64, due 1973-2013	3,402,000	119,750	3.520	3.508
\$50,000,000 Series "B" Bonds, dated 5/1/64, due 1974-2014	1,726,000	60,985	3.533	3.516
\$100,000,000 Series "C" Bonds, dated 11/1/64, due 1974-2014	3,452,000	123,764	3.585	3.544
\$100,000,000 Series "D" Bonds, dated 3/1/65, due 1975-2015	3,497,900	122,403	3.499	3.531
\$100,000,000 Series "E" Bonds, dated 12/1/65, due 1975-2015	3,497,900	130,029	3.717	3.573
\$100,000,000 Series "F" Bonds, dated 7/1/66, due 1976-2016	3,497,900	137,359	3.927	3.638
\$100,000,000 Series "G" Bonds, dated 12/1/66, due 1976-2016	3,497,900	143,788	4.111	3.711
\$100,000,000 Series "H" Bonds, dated 4/1/67, due 1977-2017	3,497,900	129,260	3.695	3.709
\$100,000,000 Series "J" Bonds, dated 8/1/67, due 1977-2017	3,497,900	143,199	4.094	3.754
\$100,000,000 Series "K" Bonds, dated 11/1/67, due 1977-2017	3,497,900	163,887	4.685	3.853
\$100,000,000 Series "L" Bonds, dated 8/1/68, due 1978-2018	3,497,900	166,918	4.772	3.941
\$100,000,000 Series "M" Bonds, dated 10/1/68, due 1978-2018	3,497,900	169,989	4.860	4.021
\$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, dated 6/1/70, due 6/1/71	200,000	11,660	5.830	4.030
\$100,000,000 Series "N" Bonds, dated 6/1/70, due 1980-2020	3,447,900	190,298	5.519	4.148
\$100,000,000 Series "Q" Bond Anticipation Notes, dated 3/1/71, due 3/1/72	100,000	2,349	2.35	4.143
<u>Projected Issues</u>				
\$100,000,000 Series "P" Bonds, dated 6/1/70, due 1980-2020	3,397,950	193,377	5.691	4.225
\$100,000,000 Series "R" Bond Anticipation Notes, dated 8/1/71, due 8/1/72	100,000	2,500	2.500	4.251
\$100,000,000 Series "Q" Bonds, dated 3/1/71, due 1981-2021	3,397,900	186,884	5.500	4.335
\$32,725,000 Series "S" Bond Anticipation Notes, dated 4/1/72, due 4/1/73	32,725	818	2.500	4.333
\$100,000,000 Series "R" Bonds, dated 8/1/71, due 1981-2021	3,397,900	186,884	5.500	4.406
\$88,418,000 Supplemental Bonds, dated 2/1/73, due 1974-2023	3,341,033	200,462	6.000	4.499
\$32,725,000 Series "S" Bonds, dated 4/1/72, due 1982-2022	1,111,963	61,158	5.500	4.518

^{a/} Excludes Central Valley Project Revenue Bonds, Oroville Division, which do not affect the calculation of the "project interest rate".

^{b/} A unit equivalent to one dollar of principal amount outstanding for one year.

^{c/} In thousands of dollars.

^{d/} The total interest cost (without regard to premiums received) divided by the total dollar-years, expressed as a percent.

^{e/} Determined by dividing cumulative interest costs by cumulative dollar-years, expressed as a percent.

Revenues from the sale or other disposal of Oroville power will be available to the Project after the final maturity of Oroville Division Revenue Bonds.

In accordance with the Davis-Dolwig Act, future appropriations will be made from the State General Fund in annual amounts equal to those multi-

ple-purpose operating costs of the Project that are allocable to recreation and fish and wildlife enhancement.

Of the \$130 million in total expenditures under the Davis-Grunsky Act Program, approximately 27 percent will be for loans and 73 percent for grants.

Estimated Project Costs

This section summarizes the estimated total costs of the State Water Project under the assumptions previously described.

Estimated Capital Expenditures

About \$1,908 million in capital expenditures had been incurred through December 31, 1970. Construction through 1973 will require an additional \$408 million, for a total of \$2,316 million through that critical year. Total expenditures which will have been incurred by the end of the Project's nominal construction period (1985) are now estimated to total \$2,723 million. This excludes future expenditures for construction of the Piru Creek Project, the Upper Eel River Development (or alternatives in lieu thereof), and the San Joaquin Drainage Facilities. By the end of the project repayment period (2035), an estimated additional \$141 million in expenditures will have been incurred for state-constructed works of the Upper Eel River Development (or alternatives in lieu thereof) and \$535 million in state principal and interest payments that will have been incurred under a Federal Water Supply Act of 1958 contract for federal-constructed conservation storage capacity. (The latter payments will be financed indirectly by moneys derived from operating revenues and will not add to the demands on construction funds.)

Estimated annual expenditures for each major facility are shown in Table 9 and are summarized graphically on Figure 17.

Composition of Estimated Capital Expenditures. Total capital expenditures for each facility include all costs incurred for the facility between the dates when authorized for construction and December 31 of the year when declared capable of delivering water in accordance with contract provisions. Capital expenditures also include the costs of constructing additional works or betterments within the operational period, such as for installing those pump units that are staged in accordance with the buildup in water deliveries.

The estimated composition of annual capital expenditures for the Project as a whole is shown in Table 10.

The current estimate of \$2,864 million for the total capital expenditures during the project repayment period, including the costs of state-constructed works of the Upper Eel River Development (or alternatives in lieu thereof), is about \$27 million more than the corresponding estimate of \$2,837 million shown in

Bulletin 132-70. This \$27 million increase is primarily attributable to the increased allowances for future inflation of construction prices caused by the deferred construction of certain project facilities—namely, the Peripheral Canal.

Allocation of Capital Expenditures Among Project Purposes. The Department must allocate estimated capital costs among project purposes before projections can be made of the future operating revenues and of miscellaneous receipts to be available to the Project. The estimated distribution of actual and projected annual capital costs among project purposes is shown in Table 11.

For purposes of Table 11, the costs allocable to power generation are not separated from the costs allocable to water supply. Under the water supply contracts, both the costs allocated to power generation and the revenues realized from such generation are combined with water supply costs in determining water charges.

Operating Costs

Changes in operating costs cause concomitant changes in operating revenues and thus have no material effect on the financial analysis. Generally, the portion of operating revenues received for reimbursement of operating costs is directly applied to such costs during the year in which they are incurred. For this reason, projections of the salaries of operations and maintenance personnel are not increased herein to allow for future price escalation during the project repayment period.

The composition of actual and estimated operating costs of the State Water Project is summarized in Table 12. These costs include the total for all project facilities, except that only the State's share is included for the Delta Facilities and for conservation storage on the Eel River or alternative(s) in lieu thereof. No operating costs are included for the Piru Creek Project or for the San Joaquin Drainage Facilities.

Pumping Power Costs. As shown in Table 12, the costs of pumping power constitutes the largest single item of annual operating costs for the Project. Under full project water deliveries, power costs, including costs for transmission service, are estimated to be over \$40 million annually.

The electrical capacity and energy requirements of project pumping plants are met by project recovery

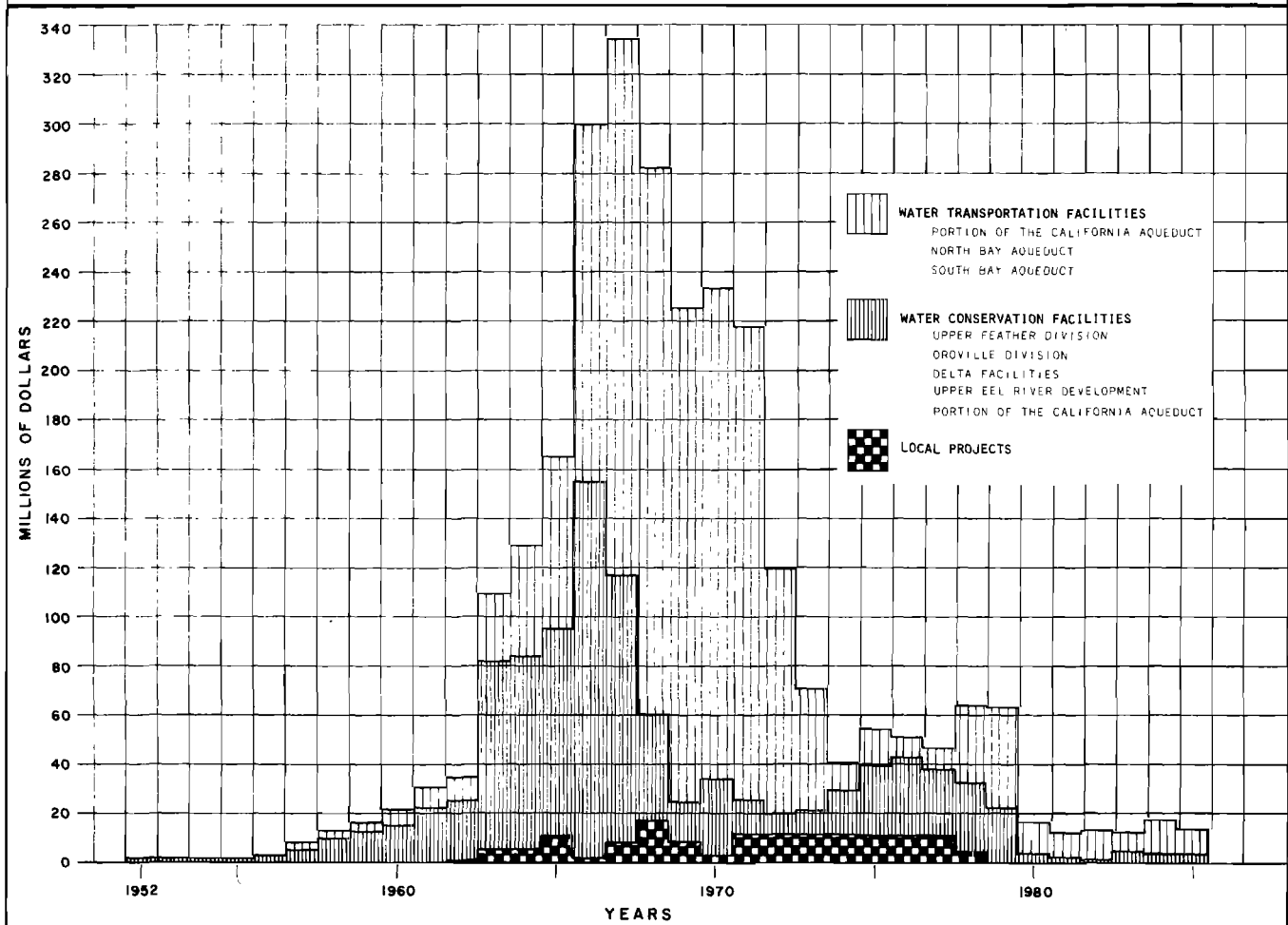
TABLE 9: SUMMARY OF CAPITAL EXPENDITURES FOR MAJOR FACILITIES

(in thousands of dollars)

Calendar Year	Local Projects (Davis-Grunsky Program)	San Joaquin Drainage Facilities	Upper Feather Division	Oroville Division	Delta Facilities (Peripheral Canal) (a)	Upper Eel River Development (b)	California Aqueduct (a)	North Bay Aqueduct	South Bay Aqueduct	Unassigned Costs (c)	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<u>Financed from legislative appropriations provided prior to Burns-Porter Act (d)</u>											
19 years, 1952-1970	0	324	2,896	63,682	774	0	21,068	132	11,037	184	100,097
<u>Financed from project funds provided subsequent to Burns-Porter Act (e)</u>											
11 years, 1960-1970	52,728	5,709	11,512	431,949	13,878	6,359	1,218,696	3,822	56,238	6,821	1,807,712
Subtotal, actual for 19 years 1952-1970	52,728	6,033	14,408	495,631	14,652	6,359	1,239,764	3,954	67,275	7,005	1,907,809
<u>To be financed from project funds through 1985 (f)</u>											
1971	10,565	0	579	7,340	1,699	442	195,195	138	321	1,761	218,040
1972	10,530	0	227	4,491	1,855	321	101,393	130	142	1,343	120,432
1973	10,505	0	37	2,985	5,973	226	49,105	125	439	878	70,273
1974	10,240	0	24	861	16,998	118	12,042	106	197	329	40,915
1975	10,343	0	209	1,003	27,198	12	13,839	161	609	95	53,469
5 years, 1971-1975	52,183	0	1,076	16,680	53,723	1,119	371,574	660	1,708	4,406	503,129
1976	10,280	0	330	98	32,715	134	6,801	591	22	12	50,983
1977	10,192	0	2,445	0	23,779	128	9,158	1,221	233	12	47,168
1978	4,617	0	3,806	0	22,966	129	29,489	3,396	32	12	64,447
1979	0	0	670	0	20,092	188	34,168	8,005	0	12	63,135
1980	0	0	2,987	0	599	244	12,009	1,459	0	12	17,310
1981	0	0	1,785	0	77	131	9,955	53	0	6	12,007
1982	0	0	0	0	77	131	12,334	11	0	0	12,553
1983	0	0	0	0	78	3,011	8,896	10	0	0	11,995
1984	0	0	0	0	14	2,941	14,822	4	0	0	17,781
1985	0	0	0	0	14	2,970	11,277	4	0	0	14,265
10 years, 1976-1985	25,089	0	12,023	98	100,411	10,007	148,909	14,754	287	66	311,644
Subtotal, Projected for 15 years, 1971-1985	77,272	0	13,099	16,778	154,134	11,126	520,483	15,414	1,995	4,472	814,773
Total, Actual and projected through 1985 1952-1985	130,000	6,033	27,507	512,409	168,786	17,485	1,760,247	19,368	69,270	11,477	2,722,582
<u>To be financed from project funds after 1985 (g)</u>											
10 years, 1986-1995	0	0	0	0	0	141,391	0	0	0	0	141,391
10 years, 1996-2005	0	0	0	0	0	99,838	0	0	0	0	99,838
10 years, 2006-2015	0	0	0	0	0	145,110	0	0	0	0	145,110
10 years, 2016-2025	0	0	0	0	0	145,110	0	0	0	0	145,110
10 years, 2026-2035	0	0	0	0	0	145,110	0	0	0	0	145,110
Total, Projected after 1985 1986-2035	0	0	0	0	0	676,559	0	0	0	0	676,559

- a) Excludes the United States' costs of the San Luis Division (California Aqueduct) and the Delta Facilities.
b) Estimated capital expenditures thru 1995 are for facilities required to convey Eel River water to the Sacramento Valley. Expenditures after 1995 represent the State's payments for the capital costs of conservation storage on the Eel River under an assumed Federal Water Supply Act of 1958 contract.
c) Includes the temporarily unassigned initial costs of mobile equipment for project operations and maintenance and interest accruals on condemnation deposits reserved for land purchases that must be paid when litigation is completed.
d) Includes actual expenditures financed by special legislative appropriations from the General Fund and California Water Fund. The funds so made available by these prior appropriations are included in the classification of "Miscellaneous Receipts" (Table 16, Column 2).
e) Includes actual expenditures from general obligation and revenue bond proceeds, California Water Fund, and "Miscellaneous Receipts".
f) An estimate of the projected sources of financing for these capital expenditures are presented in Table 15 for each calendar year.
g) Primarily, would be financed thru repayments to the California Water Fund under the "third priority" use of project revenues as defined in the Burns-Porter Act, in the manner indicated in Table 15.

FIGURE 17: CAPITAL EXPENDITURES 1952-1985



generation and by purchased power. Sources of recovery generation are or will be San Luis Pumping-Generating Plant, Devil Canyon Powerplant, Castaic Powerplant, and San Luis Obispo Powerplant. Sources of purchased power are Canadian Entitlement, Bonneville Power Administration, and the California Suppliers. Column 5, Table 12, shows the actual power costs from 1962 through 1970 and estimated power costs from 1971 through 2035 which are assigned to project pumping plants. Pumping plant power costs consist of purchased power costs and the costs assigned to recovery generation. The recovery generation costs are shown as negative quantities in Column 6 and are equal in magnitude to the additional purchased power costs which would result if the recovery generation were not available, plus the payment by the City of Los Angeles, Department of Water and Power, for peaking capacity foregone under the Contract for Cooperative Development, West Branch (Castaic).

The unit capacity and energy rates which were used to calculate power costs for this analysis are the same as used in the preparation of last year's report. The rates have been established by existing power

contracts and are firm through March 1983. Under terms of the contracts, negotiations of new rates must be completed by March 1978 to become effective March 1983. It was assumed for last year's bulletin that rates for the period 1983 through 2035 would reflect anticipated economies from cooperative development of nuclear power (see page 59, Bulletin 132-70). The power costs shown in Table 12 for the 1983 through 2035 period reflect estimates which are based on 1967 construction and operating costs of such a cooperative development.

Current costs (1970) of construction and operation costs of nuclear powerplants are significantly higher than was anticipated four years ago. There are many reasons to believe that future costs will increase above the current level. Suitable sites for such plants will be more difficult to obtain due to greater emphasis on environmental and safety considerations. Right-of-way required for power transmission lines will also be subject to environmental problems. Higher power costs can be expected to result in the future because of these factors, together with the effects of price escalation, delays now being experienced in fabrication schedules,

TABLE 10: COMPOSITION OF CAPITAL EXPENDITURES^(a)

(in thousands of dollars)

Calendar Year	Surveys and Engineering Studies	Preliminary and Final Design	Rights-of-Way and Relocation	Construction Contracts and Supervision	Operating Costs Incurred During Construction (b)	Loans and Grants (Davis-Grunsky Program)	Project Payments to the United States (c)	Total Capital Expenditures
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Subtotal, Actual for 19 years, 1952-1970	28,634	107,312	167,858	1,356,445	48,416	52,728	146,416	1,907,809
1971	1,852	3,316	15,602	176,153	9,451	10,565	1,101	218,040
1972	1,741	2,246	4,683	94,909	4,841	10,530	1,482	120,432
1973	1,567	1,469	6,014	39,213	4,878	10,505	6,627	70,273
1974	1,259	778	1,663	9,116	1,005	10,240	16,854	40,915
1975	1,028	2,161	823	11,321	479	10,343	27,314	53,469
5 Years, 1971-1975	7,447	9,970	28,785	330,712	20,654	52,183	53,378	503,129
1976	1,023	2,826	1,045	2,921	461	10,280	32,427	50,983
1977	1,008	2,253	2,768	7,055	1,120	10,192	22,772	47,168
1978	943	1,221	2,185	33,017	692	4,617	21,772	64,447
1979	888	1,012	913	40,891	516	0	18,915	63,135
1980	447	861	350	15,211	108	0	333	17,310
1981	0	708	0	10,064	70	0	1,165	12,007
1982	0	309	0	11,338	27	0	879	12,553
1983	0	3,444	0	8,088	235	0	228	11,995
1984	0	2,748	0	14,798	235	0	0	17,781
1985	0	2,733	0	11,295	237	0	0	14,265
10 Years, 1976-1985	4,309	18,115	7,261	154,678	3,701	25,089	98,491	311,644
Subtotal, Projected for 15 Years, 1971-1985	11,756	28,085	36,046	485,390	24,355	77,272	151,869	814,773
Total, Actual and projected through 1985 1952-1985	40,390	135,397	203,904	1,841,835	72,771	130,000	298,285	2,722,582
10 Years, 1986-1995	0	240	0	139,509	1,642	0	0	141,391
10 Years, 1996-2005	0	0	0	0	0	0	99,838	99,838
10 Years, 2006-2015	0	0	0	0	0	0	145,110	145,110
10 Years, 2016-2025	0	0	0	0	0	0	145,110	145,110
10 Years, 2026-2035	0	0	0	0	0	0	145,110	145,110
Total, Projected after 1985 1986-2035	0	240	0	139,509	1,642	0	535,168	676,559

a) Projected expenditures based on prices prevailing on December 31, 1970, with allowances for future price escalation.

b) Operating costs incurred prior to transfer of respective facilities from construction to operation and for initial filling of aqueduct facilities, including allowances for future price escalation.

c) State's share of construction expenditures incurred by the United States for San Luis Division and Delta Facilities, and principal and interest payments for conservation storage on the Kel River, assumed to commence in 1996 under a federal Water Supply Act of 1958 contract.

TABLE 11: DISTRIBUTION OF CAPITAL EXPENDITURES BY PROJECT PURPOSE (a)

(in thousands of dollars)

Calendar Year	Unspecified (b)	Agricultural Waste Water Disposal (c)	Recreation and Fish and Wildlife Enhancement (d)	Flood Control (e)	Water Supply and Power Generation (f)		Total Capital Expenditures
					Conservation Facilities	Transportation Facilities	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Subtotal, Actual for 19 years, 1952-1970	60,959	6,033	82,122	73,190	567,464	1,118,041	1,907,809
1971	12,326	0	6,621	1,678	9,280	188,135	218,040
1972	11,873	0	3,518	123	7,043	97,875	120,432
1973	11,363	0	2,372	54	8,782	47,682	70,273
1974	10,569	0	2,786	42	15,887	11,631	40,915
1975	10,438	0	4,404	93	24,865	13,669	53,469
5 Years, 1971-1975	56,589	0	19,701	1,990	65,857	358,992	503,129
1976	10,292	0	5,042	70	28,683	6,896	50,983
1977	10,204	0	5,842	0	20,930	10,192	47,168
1978	4,629	0	7,130	0	20,796	31,892	64,447
1979	12	0	3,637	0	18,247	41,239	63,135
1980	12	0	3,249	0	997	13,052	17,310
1981	6	0	2,064	0	601	9,336	12,007
1982	0	0	370	0	703	11,480	12,553
1983	0	0	270	0	4,027	7,698	11,995
1984	0	0	262	0	3,648	13,871	17,781
1985	0	0	128	0	3,071	11,066	14,265
10 Years, 1976-1985	25,155	0	27,994	70	101,703	156,722	311,644
Subtotal, Projected for 15 Years, 1971-1985	81,744	0	47,695	2,060	167,560	515,714	814,773
Total, Actual and projected through 1985 1952-1985	142,703	6,033	129,817	75,250	735,024	1,633,755	2,722,582
10 Years, 1986-1995	0	0	0	0	141,391	0	141,391
10 Years, 1996-2005	0	0	0	0	99,838	0	99,838
10 Years, 2006-2015	0	0	0	0	145,110	0	145,110
10 Years, 2016-2025	0	0	0	0	145,110	0	145,110
10 Years, 2026-2035	0	0	0	0	145,110	0	145,110
Total, Projected after 1985 1986-2035	0	0	0	0	676,559	0	676,559

- a) Based on cost allocations of respective project facilities (preliminary, subject to revision).
- b) Consists of temporarily "Unassigned Costs" (\$11,477,000), planning costs incurred for facility features subsequently deleted from the Project (\$1,226,000), and loans and grants under the Davis-Grunsky Program (\$130,000,000).
- c) Planning costs which will be reimbursed by future beneficiaries of the San Joaquin Drainage Facilities.
- d) Includes joint capital costs of project facilities which are allocated to these purposes, and costs of acquiring recreation land. (These costs will be reimbursed by a continuing appropriation of tideland gas and oil revenues of \$5 million annually.) Excludes the costs of recreation developments themselves, which are financed by the General Fund.
- e) Costs will be reimbursed by federal appropriations under executed agreements.
- f) These costs, as reduced by revenues from the sale of project power, will be reimbursed by project water supply contractors.

TABLE 12: COMPOSITION OF OPERATING COSTS (a)

(in thousands of dollars)

Calendar Year	Salaries and Expenses of Sacramento Headquarters Personnel (b)	Salaries and Expenses of Field Personnel (b)			Pumping Power (c)		Deposits to Re-placement Sinking Fund Account (d)	Total Operating Costs	Operating Costs Incurred During Construction (e)	Total Operating Costs Incurred Following Construction
		Operations	Plant Maintenance	Civil Maintenance	Used by Pumping Plants	Produced by Recovery Plants				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Subtotal, Actual for 9 Years, 1962-1970	43,336	28,276	(f)	(f)	7,535	- 393	846	79,600	48,416	31,184
1971	8,476	5,160	3,567	5,176	3,925	- 280	535	26,559	9,448	17,111
1972	8,312	5,838	3,962	6,294	7,577	- 1,130	757	31,610	4,830	26,780
1973	8,350	5,968	4,171	6,549	11,682	- 2,850	856	34,726	4,856	29,870
1974	8,052	5,976	4,171	6,549	9,836	- 2,964	858	32,478	976	31,502
1975	7,074	5,976	4,171	6,549	9,553	- 3,034	864	31,153	429	30,724
5 Years, 1971-1975	40,264	28,918	20,042	31,117	42,573	- 10,258	3,870	156,526	20,539	135,987
1976	7,659	5,976	4,171	6,549	12,719	- 5,025	914	32,963	400	32,563
1977	7,520	5,977	4,171	6,549	12,284	- 4,735	958	32,724	1,050	31,674
1978	7,082	5,977	4,171	6,549	13,667	- 4,890	958	33,514	607	32,907
1979	7,685	6,001	4,171	6,549	13,400	- 5,016	958	33,748	434	33,314
1980	7,532	6,210	4,389	6,796	14,467	- 5,352	980	35,022	105	34,917
1981	7,082	6,184	4,389	6,795	16,447	- 6,192	980	35,685	67	35,618
1982	7,685	6,237	4,389	6,795	18,293	- 6,512	980	37,867	24	37,843
1983	7,532	6,207	4,389	6,795	19,838	- 7,261	993	38,493	197	38,296
1984	7,082	6,206	4,389	6,795	20,037	- 6,148	993	39,354	197	39,157
1985	7,685	6,205	4,389	6,795	22,813	- 7,384	993	41,496	199	41,297
10 Years, 1976-1985	74,544	61,180	43,018	66,967	163,965	- 58,515	9,707	360,866	3,280	357,586
10 Years, 1986-1995	74,429	62,058	43,890	67,950	299,464	- 75,208	9,930	482,513	1,364	481,149
10 Years, 1996-2005	73,979	64,106	43,890	70,004	340,216	- 76,714	9,930	525,411	0	525,411
10 Years, 2006-2015	74,582	64,635	43,890	70,500	370,561	- 80,464	9,930	553,634	0	553,634
10 Years, 2016-2025	70,923	64,763	43,890	70,500	395,055	- 81,123	9,930	573,938	0	573,938
10 Years, 2026-2035	70,570	64,856	43,890	70,500	395,960	- 80,430	9,930	575,276	0	575,276
Subtotal, Projected for 65 Years, 1971-2035	479,291	410,516	282,510	447,538	2,007,794	- 462,712	63,227	3,228,164	25,183	3,202,981
Total, Actual and projected, 1962-2035	522,627	438,792	282,510	447,538	2,015,329	- 463,105	64,073	3,307,764	73,599	3,234,165

a) Projected costs based on state salary levels prevailing on December 31, 1970.

b) Costs of direct labor (including a prorated share of departmental indirect charges) and of related supplies and equipment.

c) Does not include the value of Oroville power or the federal share of power used by pumping plants of the San Luis Division.

d) Funds, presently earning about 5½% per annum, for financing the future costs of replacing major components expected to wear out during the project repayment period.

e) These costs are included in Column 5 of Table 10, together with a \$814,000 allowance for future escalation of salary levels.

f) These costs are included in the \$28,276,000 shown in Column 2.

and requirements imposed by the Atomic Energy Commission causing changes during construction in previously approved designs (a practice called "back-fitting"). A partial offset to these probable cost increases will be the potential economies to be realized due to technological advances—which some industries predict will be very significant.

Because of the uncertainties of future powerplant costs so far in the future, past projections of power rates for the 1983 through 2035 period have not been revised. Indications are, however, that such rates could be as much as 50 percent higher than those basic to the amounts shown in Table 12. The magnitude of estimated power costs for 1983 and beyond indicates the necessity of a continuing program to investigate alternative sources of power to minimize the charges for project water.

Allocation of Operating Costs Among Project Purposes. Allocation of actual and projected costs of operations, maintenance, pumping power, and replacement deposits among project purposes and separation of such costs into "minimum and variable" categories are summarized in Table 13. The water supply contracts define variable costs as those "incurred in an amount which is dependent upon and varies with the amount of project water delivered"—minimum costs as those which do not so vary. The items of costs included in the minimum and variable categories are defined in Appendix B. For the same reason as described for Table 11, the allocated costs shown in Table 13 are not separated between water supply and power generation purposes.

Estimated Net Operating Revenues Available for General Obligation Bond Service

Net operating revenues are herein defined as those project operating revenues which remain after deducting payments of operating costs and which can be applied to general obligation bond service under

the "second priority" of use specified by the Burns-Porter Act. Actual and estimated net operating revenues are shown in Table 14 and sources of project revenues, on Figure 18.

FIGURE 18: SOURCES OF PROJECT OPERATING REVENUES

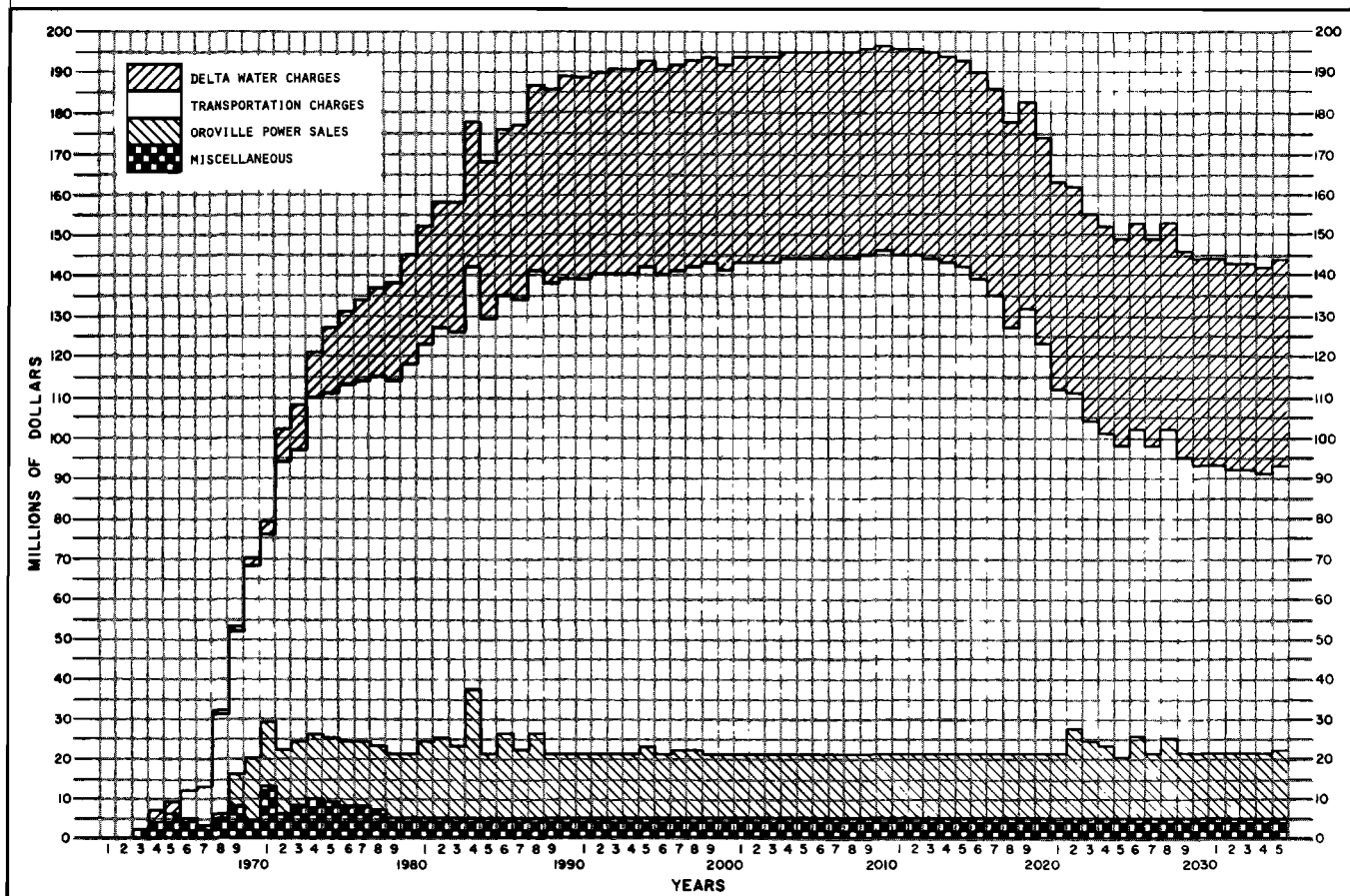


TABLE 13: DISTRIBUTION OF OPERATING COSTS BY PROJECT PURPOSE^(a)

(in thousands of dollars)

Calendar Year	Miscellaneous Purposes		Recreation and Fish and Wildlife Enhancement (c)			Water Supply and Power Generation					Total, Operating Costs Incurred Following Construction
	Federal (San Luis)	Other (b)	Minimum	Variable	Total	Conservation Facilities Minimum	Transportation Facilities			Total	
							Minimum	Variable	Total		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Subtotal, 1962-1970	Actual for 9 Years, 4,003	20	1,406	0	1,406	8,692	13,316	3,747	17,063	25,755	31,184
1971	1,695	114	728	0	728	5,968	7,073	1,533	8,606	14,574	17,111
1972	1,816	102	1,308	1	1,309	5,872	14,488	3,193	17,681	23,553	26,780
1973	1,875	89	1,406	116	1,522	6,441	15,888	4,055	19,943	26,384	29,870
1974	1,888	349	1,469	129	1,598	6,952	16,211	4,504	20,715	27,667	31,502
1975	1,888	196	1,411	154	1,565	5,740	16,077	5,258	21,335	27,075	30,724
5 Years, 1971-1975	9,162	850	6,322	400	6,722	30,973	69,737	18,543	88,280	119,253	135,987
1976	1,888	210	1,404	229	1,633	6,245	16,068	6,519	22,587	28,832	32,563
1977	1,888	220	1,435	199	1,634	6,126	16,450	5,356	21,806	27,932	31,674
1978	1,884	233	1,446	220	1,666	5,775	16,529	6,820	23,349	29,124	32,907
1979	1,884	234	1,482	194	1,676	6,600	16,356	6,564	22,920	29,520	33,314
1980	1,887	235	1,544	232	1,776	6,892	16,748	7,379	24,127	31,019	34,917
1981	1,896	229	1,531	257	1,788	5,916	16,830	8,959	25,789	31,705	35,618
1982	1,894	233	1,582	272	1,854	6,725	16,845	10,292	27,137	33,862	37,843
1983	1,894	232	1,596	253	1,849	6,943	16,683	10,695	27,378	34,321	38,296
1984	1,893	235	1,589	240	1,829	6,660	16,469	12,071	28,540	35,200	39,157
1985	1,891	235	1,545	255	1,800	6,136	16,822	14,413	31,235	37,371	41,297
10 Years, 1976-1985	18,899	2,296	15,154	2,351	17,505	64,018	165,800	89,068	254,868	318,886	357,586
10 Years, 1986-1995	18,888	2,340	15,923	2,498	18,421	68,792	166,679	206,029	372,708	441,500	481,149
10 Years, 1996-2005	18,908	2,341	15,863	2,590	18,453	70,118	167,988	247,603	415,591	485,709	525,411
10 Years, 2006-2015	18,900	2,341	15,840	2,658	18,498	71,227	167,817	274,851	442,668	513,895	553,634
10 Years, 2016-2025	18,900	2,351	16,289	2,678	18,967	74,175	168,046	291,499	459,545	533,720	573,938
10 Years, 2026-2035	18,900	2,354	16,320	2,672	18,992	74,120	168,230	292,680	460,910	535,030	575,276
Subtotal, 1971-2035	Projected for 65 Years, 122,557	14,873	101,711	15,847	117,558	453,423	1,074,297	1,420,273	2,494,570	2,947,993	3,202,981
Total, Actual and projected, 1962-2035	126,560	14,893	103,117	15,847	118,964	462,115	1,087,613	1,424,020	2,511,633	2,973,748	3,234,165

a) Based on cost allocations of respective project facilities (preliminary, subject to revision).

b) Includes costs for waste water monitoring in the San Joaquin Valley, a share of Lake Del Valle costs allocated to flood control, a share of Angeles Tunnel maintenance costs allocated to City of Los Angeles, and annual administrative charges for completed Davis-Grunsky projects.

c) Includes joint operating costs of project facilities which are allocated to these purposes. (These costs are being financed by the General Fund.) Excludes the operating costs of recreation development themselves.

Project operating revenues are primarily derived from water supply contractor payments of two separate charges:

The Delta Water Charge, which, together with projected power revenues and credits, will return to the State, with interest, the costs of project conservation facilities allocated to water supply and power generation.

The Transportation Charge, which will return to the State, with interest, the costs of project transportation facilities allocated to water supply.

Both of these charges include three components: a capital cost component, which will return to the State reimbursable capital costs; and a minimum and a variable operation, maintenance, power, and replacement component, which will return to the State reimbursable minimum and variable operating costs, respectively.

Table 14 presents a summary of estimated annual payments under the Delta Water Charge and the Transportation Charge by all water supply contractors. A detailed development of water charges for each contractor is presented in Appendix B, which supports the Department's determination of 1972 water charges. However, there are significant differences between the bases for the financial analysis and the determination of water charges, as follows:

The capital costs shown in Appendix B are based on state salaries and construction prices prevailing on about December 31, 1970. The capital costs for the financial analyses include allowances for future price escalation. (The Department determines water charges on estimates reflecting then-prevailing price levels. To do otherwise would be to charge inflated prices—under certain of the rate calculations—before contractor payment capacities have had the opportunity to similarly inflate.)

The calculations basic to Appendix B use the project interest rate which prevailed when this report was prepared (4.143 percent). The calculations basic to the financial analysis use projected changes in the rate as shown in Table 8.

The calculations summarized in Appendix B develop what past payments should have been under

the annual redetermination and adjustment process specified in the water supply contracts for the Transportation Charge. The financial analysis shows actual Transportation Charges paid through 1970 and those to be paid in 1971 under outstanding statements, with adjustments for any apparent overpayments or underpayments added to those charges to be paid in 1972.

- The calculations summarized in Appendix B develop the annual amounts of water charges. The financial analysis accounts for the projected flow of payments of such charges to the State. (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.) The financial analysis also accounts for prepayments of the capital cost component which will result under various contract amendments involving excess aqueduct capacity.

Net operating revenues also include the following:

- Repayments of loans under the Davis-Grunsky Act Program.
- Continuing appropriations from the State General Fund in amounts equal to the operating costs allocable to recreation and fish and wildlife enhancement.
- Federal payments for a share of the annual operating costs of the joint-use San Luis Division of the California Aqueduct.

Net operating revenues available for general obligation bond service exclude revenues from the sale of Oroville power through 2018—the maturity of Central Valley Project Revenue Bonds, Oroville Division. (Conversely, the specific operating costs of Oroville power facilities from 2018 are excluded from operating costs in the determination of net operating revenues. These operating costs will be funded exclusively by revenues from Oroville power sales and are estimated to be \$1,500,000 annually, including \$560,000 annually for deposits to reserves for replacements, future increases in cost levels, and other contingencies.)

Financial Analysis

The current financial analysis of the State Water Project is summarized in Table 15. The actual and projected sources of funds for financing capital expenditures during the project construction period are shown in that table and, graphically, on Figure 19.

The financial analysis indicates that, on the basis of the assumptions which were previously described, about \$89 million in additional financing will have to

be secured in order to complete project construction. The need for such additional financing will first arise in late 1973. However, should major changes from present assumptions occur, additional financing might well be required prior to late 1973. Similarly, construction of the Peripheral Canal entirely by the State instead of jointly with the United States could increase the total amount of additional funds required.

TABLE 14: NET OPERATING REVENUES AVAILABLE FOR COVERAGE OF BOND SERVICE

(in thousands of dollars)

Calendar Year	Project Operating Revenues									Total Project Operating Revenues	Less Operating Costs (i)	Available Net Operating Revenues
	Water Supply Revenues (a)					Davis-Grunsky Loan Repayments (d)	Payments for Operating Costs Allocated to:		Miscellaneous Income (g) and Oroville Power Revenues (h)			
	Delta Water Charges (b)		Transportation Charges (c)		Total Water Supply Revenues		Recreation and Fish & Wildlife Enhancement (e)	United States (San Luis) (f)				
	Capital Costs	Operating Costs	Capital Costs	Operating Costs								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Subtotal, 1962-1970	Actual for 8 years,					647	861	3,342	29,928	171,154	29,737	141,417
	3,264	646	113,496	18,970	136,376							
1971	2,054	690	39,974	7,136	49,854	36	1,273	2,356	9,306	62,825	15,558	47,267
1972	6,566	1,523	56,321	15,804	80,214	218	1,309	1,816	3,155	86,712	25,280	61,432
1973	9,346	1,848	53,816	19,627	84,637	288	1,522	1,875	4,630	92,952	28,370	64,582
1974	11,585	2,176	75,158	20,493	109,412	362	1,598	1,888	6,165	119,425	30,002	89,423
1975	13,248	2,488	64,891	21,021	101,648	434	1,565	1,888	5,440	110,975	29,224	81,751
5 Years, 1971-1975	42,799	8,725	290,160	84,081	425,765	1,338	7,267	9,823	28,696	472,889	128,434	344,455
1976	15,042	2,826	66,979	22,219	107,066	504	1,633	1,888	4,465	115,556	31,063	84,493
1977	16,845	3,164	67,709	21,987	109,705	590	1,634	1,888	3,540	117,357	30,174	87,183
1978	18,649	3,503	68,578	22,923	113,653	800	1,666	1,884	2,315	120,318	31,407	88,911
1979	20,424	3,836	70,527	22,882	117,669	844	1,676	1,884	765	122,838	31,814	91,024
1980	22,539	4,234	72,963	23,858	123,594	908	1,776	1,887	15	128,180	33,417	94,763
1981	24,519	4,606	74,029	25,313	128,467	986	1,788	1,896	15	133,152	34,118	99,034
1982	26,455	4,969	74,878	26,768	133,070	1,031	1,854	1,894	15	137,864	36,343	101,521
1983	28,457	5,345	75,903	27,239	136,944	1,073	1,849	1,894	15	141,775	36,796	104,979
1984	30,436	5,717	76,668	27,999	140,820	1,112	1,829	1,893	15	145,669	37,657	108,012
1985	32,472	6,100	77,654	30,585	146,811	1,152	1,800	1,891	15	151,669	39,797	111,872
10 Years, 1976-1985	235,838	44,300	785,888	251,773	1,257,799	9,000	17,505	18,899	11,175	1,314,378	342,586	971,792
10 Years, 1986-1995	405,827	76,230	795,830	369,361	1,647,248	11,979	18,421	18,888	150	1,696,686	466,150	1,230,536
10 Years, 1996-2005	427,231	80,250	799,300	413,378	1,720,159	11,527	18,453	18,908	150	1,769,197	510,410	1,258,787
10 Years, 2006-2015	427,318	80,266	791,465	441,137	1,740,186	10,513	18,498	18,900	150	1,788,247	538,633	1,249,614
10 Years, 2016-2025	427,370	80,280	404,351	458,084	1,370,085	7,933	18,968	18,900	102,700	1,518,586	558,941	959,645
10 Years, 2026-2035	427,370	80,280	128,051	459,770	1,095,471	816	18,990	18,900	146,650	1,280,827	560,280	720,547
Subtotal, 1971-2035	Projected for 65 years,					53,106	118,102	123,218	289,671	9,840,810	3,105,434	6,735,376
	2,393,753	450,331	3,935,045	2,477,584	9,256,713							
Total, Actual and projected, 1962-2035	2,397,017	450,977	4,048,541	2,496,554	9,393,089	53,753	118,963	126,560	319,599	10,011,964	3,135,171	6,876,793

a) These projected revenues have been adjusted to project interest rates which match the projected sale of bonds noted in Table 8. Payments of water charges are shown on a cash basis to be consistent with the payments of bond service shown in Table 18.

b) These charges, together with power revenues, repay the reimbursable capital costs (Table 11, Column 5) and operating costs (Table 13, Column 6) of project conservation facilities allocable to water supply and power generation.

c) These charges repay the reimbursable capital costs (Table 11, Column 6) and reimbursable operating costs (Table 13, Column 9) of project transportation facilities allocable to water supply.

d) Based on the assumption that about 27 percent of all future expenditures under the Program will be for loans, to be repaid during the last 40 years of a 50-year loan repayment period with interest at 2-1/2 percent.

e) These costs (from Table 13, Column 5) are being financed by annual appropriations from the General Fund.

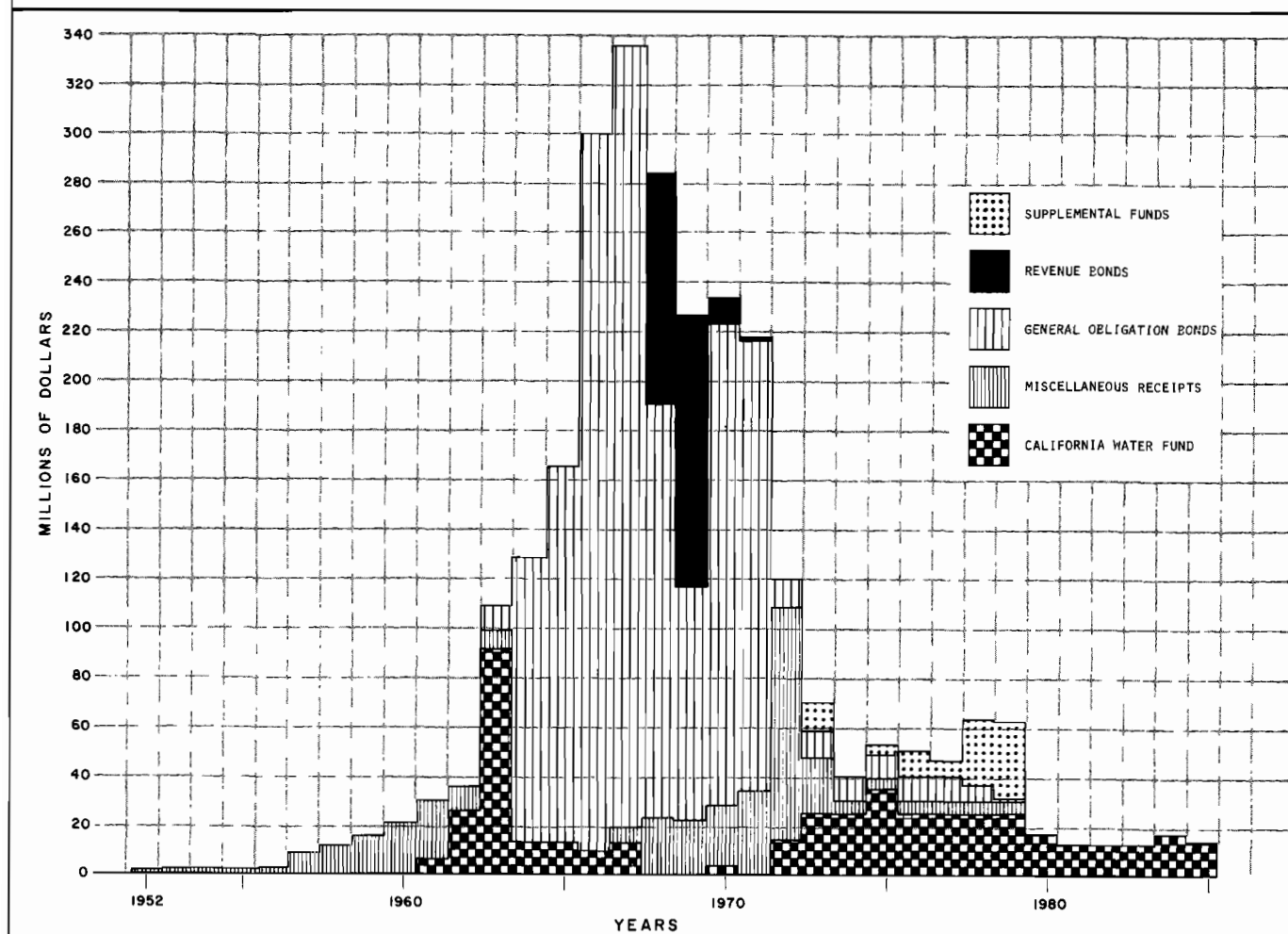
f) From Table 13, Column 1. (Operating costs allocable to flood control are repaid on a capitalized basis by the United States; and these advances, together with payments for capital costs allocable to flood control, are treated in the financial analysis as "miscellaneous receipts".)

g) Includes annual payments of \$15,000 by the City of Los Angeles for a share of the operating costs of the Angeles Tunnel plus income projected through 1979 from premiums and accrued interest associated with the sale of general obligation bonds, interest earnings on short term investments, and other miscellaneous income sources.

h) Oroville power revenues are pledged to the payment of certain operating costs of the Oroville Division and to the service on revenue bonds. These revenues are assumed to be available to the Project commencing in 2019.

i) From Table 13, Column 11, less those costs financed by the sale of Oroville power of \$1,500,000 in 1970 and thereafter.

FIGURE 19: FINANCING OF CAPITAL EXPENDITURES 1952-1985



The financial analysis indicates that about \$28 million in future miscellaneous receipts, which could otherwise be applied to capital expenditures, must be applied to general obligation bond service to prevent withdrawals from the General Fund for this purpose. Table 16 summarizes the annual amounts of miscellaneous receipts accruing to the Project, the amount of such receipts which must be applied to bond service, and the remaining amounts available for application to capital expenditures.

Principal and interest payments for conservation storage capacity above the Delta, under an assumed Federal Water Supply Act of 1958 contract, will be made from the California Water Fund with moneys derived from the portion of operating revenues which exceed operating costs and general obligation bond service (see Tables 9 and 15). Such net revenues will accrue to the California Water Fund, under the "third priority" of use provided by the Burns-Porter Act, until all expenditures therefrom have been repaid. All

net revenue remaining after repayment of the California Water Fund will be available for financing the construction of "Additional Facilities" under the "fourth priority" of use.

The application of project operating revenues is shown graphically on Figure 20 and compares directly with those revenues shown, by respective sources, on Figure 18.

Included in those funds which the financial analysis indicates will be unused are about \$167 million in "offset bonds". Summarized in Table 17 is the projected use of "offset bonds" for the State's construction of the interbasin diversion features of an assumed Upper Eel River Development. This residual amount of "offset bonds" could be reduced by about \$150 million if those miscellaneous receipts and California Water Fund moneys accruing after 1979—used, in the financial analysis, to assist in financing the Development—were used instead for future costs of the San Joaquin Drainage Facilities or for other costs which

**TABLE 15: FINANCIAL ANALYSIS FOR THE STATE WATER PROJECT,
DECEMBER 31, 1970**

(in thousands of dollars)

Calendar Year	Total Capital Expenditures (a)	Financing of Capital Expenditures								Burns-Porter and Supplemental Bond Service (g)	Available Net Operating Revenues (h)(m)	Burns-Porter and Supplemental Bond Service in Excess of Net Operating Revenues (i)	Disposition of Net Operating Revenues in Excess of Bond Service	
		Burns-Porter Bonds(b)				Assumed Supplemental Bonds	California Water Fund (b)	Oroville Division Revenue Bonds (b)(e)	Miscellaneous Receipts (f)				Paid to California Water Fund (j)	Available for Construction (k)
		From Portion Reserved for:		From Remaining Portion	Total									
		Davis-Grunsky Program (c)	Add'l. Facil. (Offset Bonds)(d)											
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
Prior Appropriations (l)	100,097							100,097						
11 Years, 1960-1970	1,807,712	52,728	6,359	1,290,913	1,350,000(n)	0	176,954	213,435	79,287	198,980	141,417	61,150	0	0
1971	218,040	10,565	442	153,755	164,762	0	0	0	42,936	63,035	47,267	12,181	0	0
1972	120,432	10,530	321	0	10,851	0	15,000	0	92,959	65,760	61,432	4,328	0	0
1973	70,273	10,505	226	0	10,731	9,428	25,750	0	24,364	75,176	64,582	10,594	0	0
1974	40,915	10,240	118	0	10,358	0	25,750	0	4,807	80,448	89,423	0	8,975	0
1975	53,469	10,343	12	0	10,355	3,433	34,725	0	4,956	82,281	81,751	530	0	0
5 Years, 1971-1975	503,129	52,183	1,119	153,755	207,057	12,861	101,225	0	170,022	366,700	344,455	27,633	8,975	0
1976	50,983	10,280	134	0	10,414	9,694	25,750	0	5,125	84,021	84,493	0	472	0
1977	47,168	10,192	128	0	10,320	5,493	26,222	0	5,133	86,862	87,183	0	321	0
1978	64,447	4,617	129	0	4,746	28,409	26,071	0	5,221	88,871	88,911	0	40	0
1979	63,135	0	188	0	188	31,961	25,750	0	5,196	89,199	91,024	0	1,825	0
1980	17,310	0	0	0	0	0	17,310	0	0	90,873	94,763	0	3,890	0
1981	12,007	0	0	0	0	0	12,007	0	0	92,533	99,034	0	6,501	0
1982	12,553	0	0	0	0	0	12,553	0	0	92,691	101,521	0	8,830	0
1983	11,995	0	0	0	0	0	11,995	0	0	92,582	104,979	0	12,397	0
1984	17,781	0	0	0	0	0	17,781	0	0	92,752	108,012	0	15,260	0
1985	14,265	0	0	0	0	0	14,265	0	0	92,435	111,872	0	19,437	0
10 Years, 1976-1985	311,644	25,089	579	0	25,668	75,557	189,744	0	20,675	902,819	971,792	0	68,973	0
Subtotal, Projected for 15 years, 1971-1985	814,773	77,272	1,698	153,755	232,725	88,418	290,969	0	190,697	1,269,519	1,316,247	27,633	77,948	0
Total, Actual and projected thru 1985 1952-1985	2,722,582	130,000	8,057	1,444,668	1,582,725	88,418	467,923	213,435	370,081	1,468,499	1,457,664	88,783	77,948	0
10 Years, 1986-1995	141,391	0	0	0	0	0	141,391	0	0	912,065	1,230,536	0	318,471	0
10 Years, 1996-2005	99,838	0	0	0	0	0	99,838	0	0	884,060	1,258,787	0	312,733	61,994
10 Years, 2006-2015	145,110	0	0	0	0	0	145,110	0	0	825,509	1,249,614	0	145,110	278,995
10 Years, 2016-2025	145,110	0	0	0	0	0	145,110	0	0	230,463	959,645	0	145,110	584,070
10 Years, 2026-2035	145,110	0	0	0	0	0	145,110	0	0	0	720,547	0	145,110	575,437
Total, Projected subsequent after 1985 1986-2035	676,559	0	0	0	0	0	676,559	0	0	2,852,097	5,419,129	0	1,066,534	1,500,496

a) From Table 9, Column 11.

b) These capital funds through 1970 produce a temporary excess (\$11,964,000) which will be used in 1971 and 1972. Expenditures of proceeds from the future sale of bonds are shown in Columns 2 thru 6. Future Burns-Porter and supplemental bond sales are assumed under the following schedule, with bond service (Column 10) and project revenues (Column 11) determined thereon:

Calendar Year	Notes Issued	Bonds Issued		New Construction Funds
		Authorized	Supplemental	
		(in \$ millions)		
1971	200,000			200,000
1972	32,725	200,000		32,725
1973		32,725	88,418	88,418
Totals	232,725	232,725	88,418	321,143

c) Under the Burns-Porter Act, \$130,000,000 in bonds are reserved for Davis-Grunsky Loans and Grants.

d) See Table 17, Column 10.

e) From revenue bonds supported by sale of Oroville power.

f) See Table 16, Column 9.

g) See Table 18, Column 7.

h) From Table 14, Column 12.

i) These amounts are funded by miscellaneous receipts, and include interest on General Fund borrowing in 1970 of \$346,000. (See Table 16, Column 10.)

j) Projected reimbursement of expenditures from California Water Fund under the "third priority" of use of revenues as specified by the Burns-Porter Act. Total of repayments shown in Column 13 equal the total of expenditures shown in Column 7.

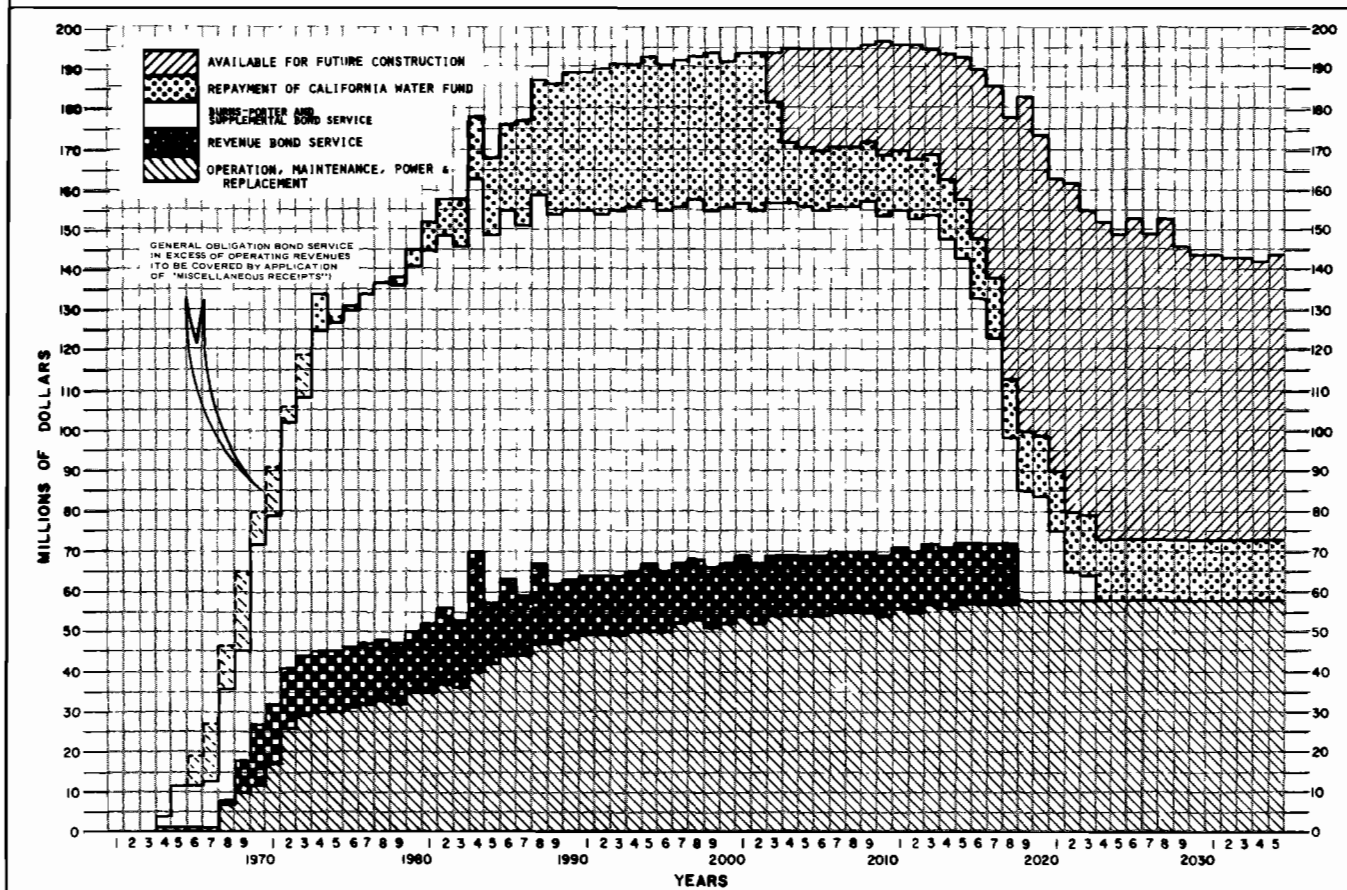
k) Amounts available for future construction under the "fourth priority" of use of revenues as specified by the Burns-Porter Act.

l) Expenditures during the period 1952 through 1970 from specific appropriations made prior to the effective date of Burns-Porter Act. (See Table 9, Column 11.)

m) Available revenues through 1970 produce a temporary excess (\$3,587,000) which will be used to cover bond service in 1971.

n) Includes \$200,000,000 from sale of Series N and P Bond Anticipation Notes.

FIGURE 20: APPLICATION OF PROJECT OPERATING REVENUES



eventually may be incurred in addition to those assumed for the financial analysis.

Annual service on actual and projected issues of general obligation bonds is summarized in Table 18. Similar data was shown in Bulletin 132-69 for Central Valley Project Revenue Bonds, Oroville Division.

Also shown in the 1969 bulletin, and not repeated in this bulletin since those data are still current, are schedules showing the maturities and coupon rates of outstanding general obligation bond issues through Series "M" and additional data for Central Valley Project Revenue Bonds, Oroville Division.

TABLE 16: ANALYSIS OF MISCELLANEOUS RECEIPTS

(in thousands of dollars)

Calendar Year	Cumulative Balance at Beginning of Year (a)	Miscellaneous Receipts						Cumulative Balance Plus Receipts (h)	Expenditures		Balance at End of Year (j)
		Legislative Appropriations (b)	Federal Reimbursements (c)	Cooperative Power Development (d)	Total Advances by Water Contractors (e)	Interest Earnings on Short Term Investments of Receipts (f)	Total (g)		Financing of Capital Expenditures (i)	Coverage of Bond Service	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Prior Appropriations	-	100,097	0	0	0	0	100,097	-	100,097	0	-
11 Years, 1960-1970	-	63,558	71,635	0	45,428	20,939	201,560	201,560	79,287	61,150	61,123
1971	61,123	32,103	1,522	13,293	4,815	3,980	55,713	116,836	42,936	12,181	61,719
1972	61,719	17,000	64	20,198	19,601	2,116	58,979	120,698	92,959	4,328	23,411
1973	23,411	5,000	10	4,320	1,815	402	11,547	34,958	24,364	10,594	0
1974	0	5,000	0	0	6	125	5,131	5,131	4,807	0	324
1975	324	5,000	0	0	37	125	5,162	5,486	4,956	530	0
5 Years, 1971-1975	-	64,103	1,596	37,811	26,274	6,748	136,532	-	170,022	27,633	-
1976	0	5,000	0	0	0	125	5,125	5,125	5,125	0	0
1977	0	5,000	0	0	8	125	5,133	5,133	5,133	0	0
1978	0	5,000	0	0	94	127	5,221	5,221	5,221	0	0
1979	0	5,000	0	0	70	126	5,196	5,196	5,196	0	0
1980	0	5,000	0	0	559	225	5,784	5,784	0	0	5,784
1981	5,784	5,000	0	0	2	500	5,502	11,286	0	0	11,286
1982	11,286	5,000	0	0	21	725	5,746	17,032	0	0	17,032
1983	17,032	5,000	0	0	178	1,000	6,178	23,210	0	0	23,210
1984	23,210	5,000	0	0	126	1,250	6,376	29,586	0	0	29,586
1985	29,586	5,000	0	0	1,691	1,500	8,191	37,777	0	0	37,777
10 Years, 1976-1985	-	50,000	0	0	2,749	5,703	58,452	-	20,675	0	-
TOTALS, 1952-1985	-	277,758	73,231	37,811	74,451	33,390	496,641	-	370,081	88,783	-

a) Each value corresponds with that shown in Column 11 for the preceding year.

b) Includes:

o Specific appropriations which financed project construction and which were made available by the Legislature prior to the effective date of the Burns-Porter Act (\$100,097,000).

o Moneys diverted from the California Water Fund to other project funds during the period June 28, 1968, through June 30, 1972 (\$82,661,000).

o A continuing annual appropriation of \$5,000,000 from tideland gas and oil revenues to reimburse project expenditures for recreation and fish and wildlife enhancement totaling \$95,000,000 through 1985. (Note that these annual appropriations will continue beyond 2000 until all such expenditures are reimbursed, but appropriations accruing after 1980 cannot be applied to the project construction expenditures assumed herein.)

c) Includes flood control contributions for Oroville (\$66,824,000, of which \$2,400,000 are held for revenue bond reserves and are deducted herein) and Del Valle (\$4,856,000) plus federal grants for open-space grants (\$1,551,000).

d) Receipts from payments by the City of Los Angeles under the Contract for Cooperative Development of the West Branch (Castaic).

e) Values from Tables B-8 and B-9, plus an advance payment of capital cost component in 1972 (\$16,300,000) by The Metropolitan Water District of Southern California for West Branch capacity, in accordance with Amendment No. 7 to the District's contract. Also includes income from the sale of right-of-way originally purchased for Airpoint Reservoir (\$1,275,000) and miscellaneous additional income (\$159,000).

f) At an assumed rate of 5.5 percent per annum through 1972, and 5.0 percent per annum thereafter.

g) Total of the values shown in Columns 2 through 6 for each year.

h) Total of the values shown in Columns 1 and 7 for each year.

i) Miscellaneous receipts remaining after covering general obligation bond service (Column 10).

j) Balance of miscellaneous receipts available on December 31.

TABLE 17: ANALYSIS OF OFFSET BONDS

(in thousands of dollars)

Calendar Year	Financing of Capital Expenditures												Balance at End of Year of Unissued Offset Bonds (f)
	Total State Water Project				State Water Facilities				Additional Facilities				
	California Water Fund (a)	Burns-Porter and Supplemental Bonds(b)	All Other (c)	Total (d)	California Water Fund	Burns-Porter and Supplemental Bonds	All Other	Total	California Water Fund	Burns-Porter Bonds	All Other	Total (e)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Prior Appropriations	0	0	100,097	100,097	0	0	100,097	100,097	0	0	0	0	0
11 Years, 1960-1970	175,332	1,341,483	290,897	1,807,712	175,332	1,335,124	290,897	1,801,353	0	6,359	0	6,359	168,973(g)
1971	0	173,279	44,761	218,040	0	172,837	44,761	217,598	0	442	0	442	168,531
1972	16,622	10,851	92,959	120,432	16,622	10,530	92,959	120,111	0	321	0	321	168,210
1973	25,750	20,159	24,364	70,273	25,750	19,933	24,364	70,047	0	226	0	226	167,984
1974	25,750	10,358	4,807	40,915	25,750	10,240	4,807	40,797	0	118	0	118	167,866
1975	34,725	13,788	4,956	53,469	34,725	13,776	4,956	53,457	0	12	0	12	167,854
5 Years, 1971-1975	102,847	228,435	171,847	503,129	102,847	227,316	171,847	502,010	0	1,119	0	1,119	-
1976	25,750	20,108	5,125	50,983	25,750	19,974	5,125	50,849	0	134	0	134	167,720
1977	26,222	15,813	5,133	47,168	26,222	15,685	5,133	47,040	0	128	0	128	167,592
1978	26,071	33,155	5,221	64,447	26,071	33,026	5,221	64,318	0	129	0	129	167,463
1979	25,790	32,149	5,196	63,135	25,790	31,961	5,196	62,947	0	188	0	188	167,275
1980	17,310	0	0	17,310	17,066	0	0	17,066	244	0	0	244	167,275
1981	12,007	0	0	12,007	11,876	0	0	11,876	131	0	0	131	167,275
1982	12,553	0	0	12,553	12,422	0	0	12,422	131	0	0	131	167,275
1983	11,995	0	0	11,995	8,984	0	0	8,984	3,011	0	0	3,011	167,275
1984	17,781	0	0	17,781	14,840	0	0	14,840	2,941	0	0	2,941	167,275
1985	14,265	0	0	14,265	11,295	0	0	11,295	2,970	0	0	2,970	167,275
10 Years, 1976-1985	189,744	101,225	20,675	311,644	180,316	100,646	20,675	301,637	9,428	579	0	10,007	-
TOTALS, 1952-1985	467,923	1,671,143	583,516	2,722,582	458,495	1,663,086	583,516	2,705,097	9,428	8,057	0	17,485	-

a) From Column 7, Table 15.

b) Total of Columns 5 and 6, Table 15.

c) Total of Columns 8 and 9, Table 15.

d) From Column 1, Table 15.

e) From Column 6, Table 9, thru 1985.

f) California Water Fund expenditures thru 1971 (totaling \$175,332,000) reserve bonds (Offset Bonds) to be used solely for financing the construction of Additional Facilities.

g) Balance of unissued "offset" bonds on December 31, 1970.

TABLE 18: SERVICE ON ACTUAL AND PROJECTED BOND SALES

(in thousands of dollars)

Calendar Year	Bond Service on Actual Issues Through Series "Q" Bond Anticipation Notes			Bond Service on Projected Issues (a/b)			Total Bond Service, Actual and Projected (c)
	Principal	Interest	Total	Principal	Interest	Total	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
11 Years, 1960-1970	0	198,980(d)	198,980	0	0	0	198,980
1971	0	60,130	60,130	0	2,905	2,905	63,035
1972	0	54,300	54,300	0	11,460	11,460	65,760
1973	1,200	53,125	54,325	0	20,851	20,851	75,176
1974	3,000	53,050	56,050	307	24,091	24,398	80,448
1975	5,000	52,884	57,884	325	24,072	24,397	82,281
5 Years, 1971-1975	9,200	273,489	282,689	632	83,379	84,011	366,700
1976	7,000	52,625	59,625	344	24,052	24,396	84,021
1977	10,200	52,266	62,466	365	24,031	24,396	86,862
1978	12,700	51,776	64,476	387	24,008	24,395	88,871
1979	13,650	51,154	64,804	410	23,985	24,395	89,199
1980	15,050	50,462	65,512	1,435	23,926	25,361	90,873
1981	15,550	49,715	65,265	3,460	23,808	27,268	92,533
1982	16,250	48,941	65,191	3,919	23,581	27,500	92,691
1983	16,950	48,135	65,085	4,147	23,350	27,497	92,582
1984	18,050	47,288	65,338	4,313	23,101	27,414	92,752
1985	18,650	46,394	65,044	4,545	22,846	27,391	92,435
10 Years, 1976-1985	144,050	498,756	642,806	23,325	236,688	260,013	902,819
10 Years, 1986-1995	231,250	410,090	641,340	59,580	211,145	270,725	912,065
10 Years, 1996-2005	330,850	294,774	625,624	89,354	169,082	258,436	884,060
10 Years, 2006-2015	451,250	133,800	585,050	132,808	107,651	240,459	825,509
10 Years, 2016-2025	83,400	6,626	90,026	116,299	24,138	140,437	230,463
10 Years, 2026-2035	0	0	0	0	0	0	0
TOTAL 1960-2035	1,250,000	1,816,515	3,066,515	421,998	832,083	1,254,081	4,320,596

a) Service on projected issues is assumed as follows (See Table 8):

- (1) Bond anticipation notes at 2.5 percent net interest cost.
- (2) Burns-Porter Bond issues at 5.5 percent net interest cost, with amortization commencing in the 10th year of such issues, to produce level annual bond service for the 41-year period beginning with the 10th and ending with the 50th year.
- (3) Supplemental bond issues at 6.0 percent net interest cost with level annual bond service through the fifty year life.

b) Includes service on Series P bonds sold April 1971.

c) Actual and projected expenditures for bond service are on a cash basis. (See Table 15, Column 10.)

d) Includes interest on General Fund borrowing in 1970 of \$346,000.

APPENDIX B
DATA AND COMPUTATIONS USED IN
DETERMINING WATER CHARGES FOR 1972

APPENDIX B - DATA AND COMPUTATIONS USED IN DETERMINING WATER CHARGES FOR 1972

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APPENDIX B

DATA AND COMPUTATIONS USED IN DETERMINING WATER CHARGES FOR 1972

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 1972 based on all aspects of the State Water Project as known on April 1, 1971.

The redetermined Transportation Charges that are derived herein for prior years, through 1970, do not equal those amounts actually paid by contractors under statements previously furnished by the State. The indicated overpayment or underpayment (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 during 1972. 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.

In accordance with Article 22(b) of the Standard Provisions, the Delta Water Charge is established as \$3.50 per acre-foot of entitlement through 1969. Article 22(b) was being amended, as of December 31, 1970, to establish the Delta Water Charge for 1970 and 1971 as \$6.65 and \$7.24 per acre-foot of entitlement, respectively. The Delta Water Charge for 1972 and thereafter is to be based on rates determined in accordance with Article 22(f). This determination is described herein. The Standard Provisions do not require a projection of future annual Delta Water Charges, as is required for the Transportation Charge.

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 as shown herein. However, 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 of the surcharge, pursuant to Article 30(d) of the Standard Provisions, on that project water applied to "excess lands". (Initial payments of the surcharge are due to the State in 1972, based on project water applied to "excess lands" in 1971 as determined by the contractors and their retail agencies.)
- Payments for the sale and service of surplus project water to contractors pursuant to Article 21 of the Standard Provisions and under the so-called "Agricultural and Ground Water Replenishment" provisions. (This redetermination does not include information concerning the future sale and service of surplus water. However, the redetermined variable OMP&R components for 1968, 1969, and 1970 include charges associated with surplus water deliveries since surplus water was marketed to contractors during these years at the same unit variable OMP&R components as entitlement water.)
- Payments for the sale and service of surplus project water to entities other than contractors pursuant to Article 21 of the Standard Provisions. (Payments received for such sales are applied to reimbursable project costs in the manner described in Chapter III, "Surplus Water Service for 1971". Past deliveries under such sales are excluded from the water conveyance quantities shown in this appendix. However, an indicator of unit prices for potential sales in 1972 is presented in the last section of this appendix.)

Organization of Information

The computational procedure and relationships among summary tabulations for this redetermination are outlined on Figure B-1. All tables indicated thereon

are bound at the end of this appendix—all figures indicated thereon are interspersed among the 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 the reimbursable costs of aqueduct reaches among contractors is based on two specific applications of the proportionate-use-of-facilities method:

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

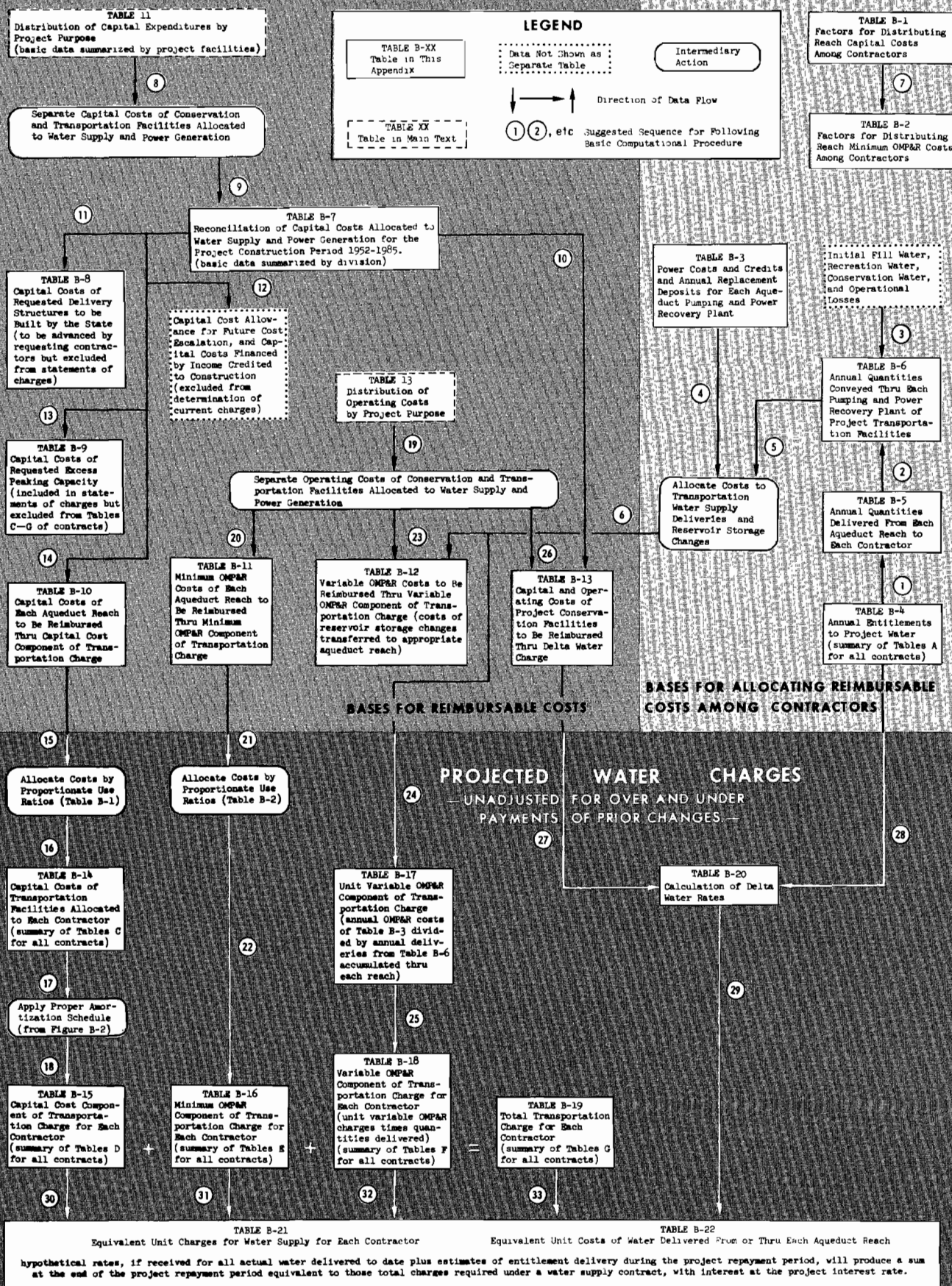
actual annual use of that reach by the respective contractors.

Proportionate Maximum Use of Facilities

The derivation of ratios that represent the proportionate maximum use of each aqueduct reach by the respective contractors was described in last year's report. (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.) Since still valid, the description of that derivation is not repeated herein. For convenience, each aqueduct reach is described below and contractor ratios that are applicable to reimbursable capital costs and minimum OMP&R costs of each such reach are summarized in Tables B-1 and B-2, respectively.

Reach Number	Reach Description	Reach Number	Reach Description
GRIZZLY VALLEY PIPELINE		CALIFORNIA AQUEDUCT (Continued)	
-	Grizzly Valley Dam to Portola Reservoir	14A	Buena Vista Pumping Plant thru Santiago Creek
NORTH BAY AQUEDUCT		14B	Santiago Creek thru Old River Road
1	Lindsey Slough to Suisun City	14C	Old River Road to Wheeler Ridge Pumping Plant
2	Suisun City to Cordelia Pumping Plant	15A	Wheeler Ridge Pumping Plant to Wind Gap Pumping Plant
3	Cordelia Pumping Plant thru Napa Turnout Reservoir (Including the interim facilities)	16A	Wind Gap Pumping Plant to A.D. Edmonston Pumping Plant
SOUTH BAY AQUEDUCT		17E	A.D. Edmonston Pumping Plant to Carley V. Porter Tunnel
1	Bethany Reservoir thru Altamont Turnout	17F	Carley V. Porter Tunnel to Junction, West Branch, California Aqueduct
2	Altamont Turnout thru Patterson Reservoir	18A	Junction, West Branch, California Aqueduct thru Cottonwood Chutes
4	Patterson Reservoir to Del Valle Junction	19	Cottonwood Chutes to Fairmont
5	Del Valle Junction thru Lake Del Valle	19C	Buttes Junction thru Buttes Reservoir
6	Del Valle Junction thru South Livermore Turnout	20A	Fairmont thru 70th Street West
7	South Livermore Turnout thru Vallecitos Turnout	20B	70th Street West to Palmdale
8	Vallecitos Turnout thru Alameda-Bayside Turnout	21	Palmdale to Littlerock Creek
9	Alameda-Bayside Turnout thru Santa Clara Terminal Facilities	22A	Littlerock Creek to Pearblossom Pumping Plant
CALIFORNIA AQUEDUCT		22B	Pearblossom Pumping Plant to West Fork Mojave River
1	Delta Thru Bethany Reservoir	23	West Fork Mojave River to Silverwood Lake
2A	Bethany Reservoir to Orestimba Creek	24	Cedar Springs Dam and Silverwood Lake
2B	Orestimba Creek to O'Neill Forebay	25	Silverwood Lake to South Portal, San Bernardino Tunnel
3	O'Neill Forebay to Dos Amigos Pumping Plant	26A	South Portal, San Bernardino Tunnel thru Devil Canyon Powerplant
4	Dos Amigos Pumping Plant to Panoche Creek	28G	Devil Canyon Powerplant to Barton Road
5	Panoche Creek to Five Points	28H	Barton Road to Lake Perris
6	Five Points to Arroyo Pasaajero	28J	Perris Dam and Lake Perris
7	Arroyo Pasaajero to Kettleman City	WEST BRANCH	
8C	Kettleman City thru Milham Avenue	29A	Junction, West Branch, California Aqueduct thru Oso Pumping Plant
8D	Milham Avenue thru Avenal Gap	29F	Oso Pumping Plant thru Quail Embankment
9	Avenal Gap thru Twisselman Road	29G	Quail Embankment to Pyramid Lake
10A	Twisselman Road thru Lost Hills	29H	Pyramid Lake and Lake
11B	Lost Hills to 7th Standard Road	29J	Pyramid Lake thru Castaic Powerplant
12D	7th Standard Road thru Elk Hills Road	30	Castaic Dam and Lake
12E	Elk Hills Road thru Tupman Road	COASTAL BRANCH	
13B	Tupman Road to Buena Vista Pumping Plant	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 Santa Maria Terminal

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



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 necessary to deliver water to the contractor which constitute OMP&R costs incurred in an amount which is dependent upon and varies with the amount of project water delivered to the contractor. 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 quantities conveyed through the reach during the year.

Under the State's procedure, variable OMP&R costs originate with certain operational costs of project plants—namely pumping power costs (for electric capacity and energy) and deposits to sinking funds for financing the periodic replacement of rotating machinery and associated electrical equipment. 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:

- (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, power and replacement 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. The portion of such costs that is allocated to direct deliveries is designated as variable OMP&R costs to be repaid by contractors for the reach in which the plant is located. The remaining portions of such costs that are allocated to (a) through (d) water quantities are designated as follows:

- (a) A portion of the joint OMP&R costs of the reach containing the plant that are 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.

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, in an amount equivalent to the original plant costs of conveying the water placed in

storage, with an offsetting credit applied to the minimum OMP&R costs of the respective reservoirs. (Under current procedures, the unit cost of conveying water placed in storage is taken as the unit cost of conveying water to the storage site during years when such storage is released. After several years' operation, periodic analyses would be made to determine whether or not the costs so associated with water delivered from storage would be equivalent to the actual costs of conveying water to storage. If not equivalent, appropriate adjustments would be made for past charges.)

The State's procedure is necessary for separating from total pumping plant costs those costs that do not "depend upon and vary with the amount of project water delivered to the contractor" and, therefore, should not be repaid through the variable OMP&R component during that year. Under the current procedure, aqueduct powerplant costs are treated the same as pumping plant costs—except that the value of recovery power is treated as a negative cost.

Bases for Costs. The actual and projected annual power and replacement costs for each aqueduct pumping plant and the annual "net value" of power recovery for each aqueduct powerplant are summarized in Table B-3. These costs include the following:

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

Excluded are costs for salaries of plant operations and maintenance personnel. Since such costs are incurred in annual amounts that do not vary with actual water quantities delivered, they are classified as minimum OMP&R costs.

Bases for Water Conveyance. Table B-4 summarizes the schedules of annual entitlements as set forth in Table A of each contract. The years of initial water delivery that are basic to these schedules are set forth in Article 6(a) of each contract as modified, in certain instances, through written notifications by the State.

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.)

Table B-6 summarizes the estimated total respective 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 from 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 estimated total quantities of project water to be stored in San Luis Reservoir (a project conservation facility) and to be lost through evaporation and seepage from the Reservoir and from the portion of the Aqueduct which is allocated to water conservation (all such quantities included under the heading "Conservation Water").

The costs of the Delta Pumping Plant are allocated between project transportation and conservation facilities—the San Luis Pumping-Generating Plant is classified as a project conservation facility. Under present procedures, the following variable-type OMP&R costs are transferred to the capital costs (during initial fill) and the minimum OMP&R costs (subsequent to initial fill) of San Luis Reservoir:

- Variable OMP&R costs of the Delta Pumping Plant which are allocated to annual water quantities that compensate for losses due to evaporation and seepage from San Luis Reservoir (and from the portion of the Aqueduct allocated to water conservation) and/or that cause a net annual accretion in San Luis Reservoir storage.
- All variable-type OMP&R costs (including power credits) of the San Luis Pumping-Generating Plant.

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 11 and 13 (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. This redetermination is concerned only with those costs of project facilities which are allocated to water supply and power generation.

Capital Costs

Of the \$2,369,000,000 in capital costs shown allocated to water supply and power generation in Table 11 for purposes of the current financial analysis (excluding \$676,559,000 in construction costs and payments to the Corps of Engineers after 1985), only about \$2,214,000,000 would be returned to the State under payments of Delta Water and Transportation Charges and electric power sales on the basis of current prices. The reasons for the difference between these two cost estimates are summarized below:

- \$55,000,000 for allowances for future construction price escalation which are included in cost estimates for the financial analysis but excluded in those for the determination of current charges.

\$11,000,000 for the costs of delivery structures that are constructed by the State and billed to the contractors under separate invoices.

- \$46,000,000 for the costs of requested excess capacity which are not included in the costs to be reimbursed under the Delta Water Charge or the Transportation Charge.
- \$43,000,000 for miscellaneous income which is realized as a consequence of capital expenditures but cannot be returned to the fund that financed the original expenditures. Such income is treated as "miscellaneous receipts" in the financial analysis but is deducted from associated capital costs for water charge determinations. (The notable example of such income is that realized from the sale of lands originally purchased for Airpoint Reservoir, financed by a special appropriation.)

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 determination of water charges.

Costs of Delivery Structures. Costs of delivery structures constructed by the State are paid directly by each contractor requesting such structures. The Department has established the following general procedures concerning the time and method of payment for the capital costs of a delivery structure constructed by the State:

The State estimates the cost of the structure at least one year prior to the date the invoice is furnished, to assist the contractor in budgeting funds. This estimate is based on information provided by the contractor.

The actual invoice is furnished to the contractor at least 60 days prior to initiation of construction of the structure. The invoice is based on reestimated costs reflecting the actual plans and specifications for the structure.

Estimated capital costs of all requested delivery structures to be constructed by the State are tabulated for each reach and each contractor in Table B-8. The costs shown therein are incomplete in many respects and are not to be construed as those preliminary estimates or invoices to be furnished by the State. The following tabulation indicates the general location and construction status of the delivery structures requested as of the end of 1970:

Project Facility	Number of Delivery Structures				
	Requested by Agencies	Under Construction		Completed	
		by State	by Agencies	by State ^a	by Agencies
Oroville Division.....	6	0	2	0	3
North Bay Aqueduct (Phase I).....	2	0	0	1	0
South Bay Aqueduct.....	19	1	0	12	6
California Aqueduct:					
North San Joaquin Division.....	4	0	0	0	4
San Luis Division (served by the federal Central Valley Project).....					
South San Joaquin Division.....	39	0	1	26	10
Tehachapi Division.....	1	1	0	0	0
Mojave Division.....	15	13	0	1	0
Santa Ana Division.....	11	5	0	0	0
West Branch.....	5	5	1	0	0
Coastal Branch (Phase I).....	2	0	0	1	1
Total.....	104	25	4	43	24

^a Does not include seven "stubs" that have been constructed by the State but will be completed in the future by the agencies.

Costs of Requested Excess Capacity. Amendments have been executed to the contracts with three agencies which provide for excess capacity in the project transportation facilities. These amendments, and the estimated additional costs to be incurred by the State thereunder, are listed below:

1. The Metropolitan Water District of Southern California:
 - a. Pursuant to Amendment 2 as modified by Amendment 7, 188 cubic feet per second in reaches from Kettleman City to the Junction of the West Branch\$10,551,000
 - b. Pursuant to Amendments 4 and 5, providing for future enlargement of Lake Perris\$14,353,636
 - c. Pursuant to Amendment 6, 787 cubic feet per second in the reach from Silverwood Lake to the South Portal of the San Bernardino Tunnel\$6,823,844

Subtotal, The Metropolitan Water District of Southern California.....\$31,728,480
2. San Gabriel Valley Municipal Water District; pursuant to Amendment 3, 21 cubic feet per second in the reach from Silverwood Lake to the South Portal of the San Bernardino Tunnel\$182,156

3. Antelope Valley-East Kern Water Agency; pursuant to Amendment 4, 19 cubic feet per second in the reaches of the West Branch from the Junction to the Peace Valley Pipeline\$109,000

Total, All Agencies\$32,019,636

Under Amendment 2 of the contract with The Metropolitan Water District of Southern California, 809 cubic feet per second excess capacity originally was provided in reaches of the West Branch at the District's request. Under Amendment 7, such capacity is reclassified as basic capacity of the project transportation facilities. This aspect of Amendment 7 requires prepayments of the District's capital cost component of the Transportation Charge, in lieu of advances of funds for the originally requested capacity.

Listed in Table B-9 are estimates of the annual amounts for:

- Additional costs to be 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 contrac-

tor's account (generally, to the contractor's next installment of the capital cost component of the Transportation Charge).

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.

Provision for the potential enlargement of Lake Perris at the request of The Metropolitan Water District of Southern California will affect the reimbursable costs of the Santa Ana Valley Pipeline—however, excess capacity will not necessarily be provided therein for the District. Because of the potential enlargement, the Pipeline must be designed to pass the basic flow to a higher terminal water surface elevation in Lake Perris than would otherwise be necessary. This requires pipe sections of greater cross-sectional area than required under the original plan. Amendment 5 of the contract with The Metropolitan Water District of Southern California specifically provides that the additional costs to be incurred because of the Pipeline modifications will be allocated to the District, and returned to the State through payments of the Transportation Charge. The estimated additional costs that will be repaid through the District's capital cost component for the aqueduct reach from Devil Canyon Powerplant to Barton Road are as follows (all reimbursable costs for the reach from Barton Road to Lake Perris will be borne by the District in any event):

1970	\$362,000
1971	6,198,000
1972	139,000
Total	<u>\$6,699,000</u>

Annual Operating Costs

Allowances for future price escalation are not included in those projected annual operating costs that are summarized in Table 13. Furthermore, the allocation of normal operating costs incurred for reaches which include excess capacity is reflected in the allocation factors shown in Table B-2. Therefore, all of the estimated operating costs that Table 13 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 this appendix under the heading "Proportionate Annual Use of Facilities". 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 operating costs are considered to be incurred in annual amounts that do not vary with the annual amounts of project water 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 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 and/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, equivalent to the variable OMP&R costs of conveying from the Delta those deliveries derived from storage withdrawals.
- A distributed share of those "general operating costs" and "direct operating costs" which cannot be identified solely with one facility or aqueduct reach.

The allocation of "general operating costs" among facilities and reaches was studied by representatives of the Department and the contractors during 1968 and 1969. This redetermination accounts for certain procedural refinements as a result of these studies which were described in last year's report (see pages 111-113, Bulletin 132-70).

Costs to Be Returned to the State Through Payments Under the Transportation Charge

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 of the Transportation Charge.

The actual and projected costs to be reimbursed through payments of the minimum and variable OMP&R components of the Transportation Charge are shown in Tables B-11 and B-12, respectively. The 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.

Costs to Be Returned Through Payments Under the Delta Water Charge and the 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 (a) of the Delta Water Charge and (b) under Oroville power sales. The operating costs included in that tabulation are the same as those for project conservation facilities shown in Table 13 to be allocable to water supply and power generation.

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. These credits are as follows:

Year	Category		Delta Water Charge Credit
	2b	4	
Subtotal, thru 1960-----	----	----	\$4,850,000
1961-----	\$187,217	\$244,310	431,527
1962-----	219,358	259,922	479,280
1963-----	450,685	28,058	478,743
1964-----	636,700	114,630	751,330
1965-----	626,568	136,967	763,535
1966-----	684,142	51,766	735,908
1967-----	806,628	5,517	812,145
Subtotal, 1961-1967-----	\$3,611,298	\$841,170	\$4,452,468
TOTAL-----	----	----	\$9,302,468

Category 2b—Those portions that benefit areas outside of the Project of programs that are necessary for the Project.

Category 4—Those programs or portions of programs that pertain to facilities other than the "project facilities" as defined by the Standard Provisions.

Project Water Charges

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 the 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 those capital costs of aqueduct reaches presented in Table B-10, as determined by application of those proportionate-use ratios set forth in Table B-1. These allocated capital 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 Table C, but are ignored in Table B-14.)

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.

Capital Cost Components. 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 and/or underpayments, are to be set forth in Table D of the respective contracts. (Credits for the portion of advance payments 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.)

Minimum OMP&R Components. Table B-16 summarizes the minimum OMP&R components of the Transportation Charge for each contractor for each year of the project repayment period. These estimated components, subsequently adjusted for prior overpayments and/or underpayments, are to be set forth in Tables E of the respective contracts. These components represent the accumulated share of those reach costs presented in Table B-11, as determined by application of the proportionate-use ratios shown for each reach for each contractor in Table B-2.

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 the 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 (and

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	1972	a
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 ID		•						
Plumas County FC&WCD						•		
San Bernardino Valley MWD	•							
San Gabriel Valley MWD	• ^d							
San Geronio Pass WA	• ^d							
San Luis Obispo County FC&WCD		• ^e						
Santa Barbara County FC&WCD		• ^e						
Santa Clara County FC&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.

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

Table B-18 summarizes the variable OMP&R components of the Transportation Charge for each contractor 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 and/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. These estimated payments, subsequently adjusted for prior overpayments and/or underpayments, are to be set forth in Tables G of the respective contracts. The amounts shown in Table B-19 represent the sums of the corresponding amounts shown in Tables B-15, B-16, and B-18.

Delta Water Charges per Acre-Foot of Entitlement

Payments of the Delta Water Charge through December 31, 1969 were based on \$3.50 per acre-foot of project water entitlement, in accordance with Article 22(b) of the Standard Provisions. Under amendments to Article 22(b), the 1970 Charge was \$6.65 per acre-foot of entitlement and the 1971 Charge will be \$7.24 per acre-foot of entitlement. The Delta Water Charge after December 31, 1971 will be determined by the State in accordance with the formula specified in Article 22(c) of the Standard Provisions. For this redetermination, the formula of Article 22(c) may be paraphrased so as to be applicable for any given year of the project repayment period as follows:

- The present worths, at the project interest rate, of all costs of appropriate project conservation facilities, allocated to water supply and power generation, that have been incurred, and that are estimated to be incurred, during the entire project repayment period; *minus*

The present worths, at the project interest rate, of all revenues from the sale of power that have been realized, and that are estimated to be realized, during the project repayment period; *minus*

- The present worths, at the project interest rate, of all Delta Water Charges received or billed for payment in years prior to the given year; *the above quantities all divided by*

The present worths, at the project interest rate, of the annual entitlements to project water for the given year and for the remaining years of the project repayment period.

The future Delta Water Charges applicable after December 31, 1971 are herein calculated on the following two alternative bases as to the time when the projected construction and operating costs of the authorized Upper Eel River Development initially would be included in the calculation:

In accordance with the present provisions of Articles 22(e) and 22(g), whereby all such costs will be included in the calculation of the Charge after December 31, 1971.

In accordance with an original understanding whereby the costs of each facility of the Development will be included in the calculation of the Charge in years when the State first incurs major construction costs for the respective facility.

This redetermination assumes the following schedule of events for an Upper Eel River Development: (a) construction of the Dos Rios-Grindstone Tunnel by the State would commence in 1986; (b) construction of the Stony Creek Conveyance Channel by the State would commence in 1995; (c) initial payments to the Corps of Engineers by the State would commence in 1996 under an assumed contract executed pursuant to the Water Supply Act of 1958 for a "block" of water conservation storage initially used for water supply; and (d) initial payments on the "block" of such storage reserved for future use would commence in 2004.

The calculation of the Delta Water Charge under the two alternative bases is summarized in Table B-20. However, the statements of charges supported by this redetermination include the Delta Water Charge as calculated under the present provisions of the contracts. Pursuant to Article 22(f), upon each such computation of the rates to be used in determining the components of the Delta Water Charge, a document establishing such rates shall be prepared by the State

and attached to each contract as an amendment of that article. This bulletin constitutes the document referred to in Article 22(f) for Delta Water Charges to be paid in 1972.

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 may be defined as those hypothetical payments for each acre-foot of such water that would provide the same total sum at the end of the project repayment period as those annual payments to be made under the Delta Water Charge and Transportation Charge, with interest taken into account at the project interest rate. These equivalent unit charges do not reflect the service of surplus water (primarily, to San Joaquin Valley contractors). The potential charges for surplus water service generally will be considerably less than the charges for entitlement water. Furthermore, current estimates of future entitlement water service are noticeably less (for certain Southern California contractors) than the amounts shown in Tables A of the respective contracts. Thus, the equivalent unit charges for total project water deliveries may be less than those summarized in Table B-21, depending on (a) the extent of future surplus water deliveries to the respective contractors and (b) whether or not current projections of reduced entitlement water use by certain contractors prove to be valid.

Equivalent Water Costs, by Reach

Table B-22 presents a summary of the equivalent unit costs of entitlement water conveyed 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 (b) for surplus water service to entities other than long-term water supply contractors. It should be noted that the cumulative unit costs shown for reaches in Table B-22 do not necessarily equal the equivalent unit 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.

APPENDIX B TABLES

TABLE B-1: FACTORS FOR DISTRIBUTING

REACH	FEATHER RIVER AREA	NORTH BAY AREA		SOUTH BAY AREA				TOTAL
	Plumas County FC&WCD	Napa County FC&WCD	Solano County FC&WCD	Alameda County FC&WCD, Zone 7	Alameda County Water District	Santa Clara County FC&WCD	Future Contractor	
<u>Grizzly Valley Pipeline</u>								
1	1.00000000							1 00000000
<u>North Bay Aqueduct</u>								
1		.39808876	.60191124					1 00000000
2		.39808861	.60191139					1 00000000
3		1 00000000						1 00000000
<u>South Bay Aqueduct</u>								
1				22599574	20663014	49203156	07534256	1 00000000
2				22599655	20663057	49203231	07534057	1 00000000
4				19504789	21450020	51077363	07967828	1 00000000
5				14436367	12972254	31592778	40998601	1 00000000
6				15294154	22150155	52968662	09587029	1 00000000
7					26369573	63058671	10571756	1 00000000
8					05060332	74539970	20399698	1 00000000
9						1 00000000		1 00000000
<u>California Aqueduct</u>								
1				00954800	00872976	02078790	00343990	-

REACH	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	Littlerock Creek Irrigation District	
<u>California Aqueduct</u>									
1	00531147	01240007	.02939503	00890866	00528393	00133630	00871425	00049187	
2A	00555266	01296315	03072975	00931319	00552151	00139640	00910607	00051421	
2B	00555876	01297741	03076360	00932344	00552915	00139833	00911867	00051477	
3	00555769	01297494	03075777	00932168	00552856	00139818	00911771	00051469	
4	00555659	01297235	03075165	00931982	00552794	00139801	00911670	00051459	
5	00555520	01296912	03074401	00931751	00552717	00139780	00911543	00051448	
6	00555311	01296424	03073244	00931400	00552602	00139750	00911351	00051428	
7	00555243	01296267	03072873	00931287	00552565	00139740	00911289	00051421	
8C	00555159	01296069	03072405	00931145	00552517	00139729	00911211	00051414	
8D	00566628	01322842	03135878	00950380	00564073	00142650	00930269	00052475	
9			03437577	01041812	00618845	00156502	01020599	00057523	
10A			03492681	01058510	00628966	00159061	01037292	00058444	
11B			03848657	01166387	00694140	00175542	01144773	00064401	
12D			04046660	01226391	00730484	00184732	01204709	00067713	
12E			04052108	01228042	00731580	00185010	01206514	00067804	
13B			04397523	01332721	00794772	00200991	01310729	00073586	
14A			04618687	01399742	00835456	00211281	01377821	00077287	
14B			04702647	01425185	00851020	00215218	01403490	00078692	
14C			04846557	01468794	00877627	00221947	01447369	00081102	
15A			04927653	01493368	00892667	00225752	01472172	00082461	
16A			05113510	01549688	00927016	00234437	01528820	00085571	
17E			05355379	01622984	00971819	00245767	01602709	00089617	
17F			05366827	01626453	00973908	00246295	01606154	00089809	
18A			13238112		02399390	00606794	03957043	00221525	
19			13237766		02399451	00606810	03957141	00221522	
19C			1 00000000						
20A			06847931		02576424	00651572	04249001	00237800	
20B			02276024		02702916	00683554	04457607	00249470	
21			02318953		02754716	00696650	04543034	00254199	
22A			01181870		02794143	00706620	04608043		
22B					02827552	00715073	04663153		
23					00324449	00818121	00535117		
24					01024605	01251569	01690478		
25									
26A									
28G									
28H									
28J									
29A									
29F					02736564				
29G					02736563				
29H					02736564				
29J					02646380				
30					02736563				
					02637131				
31A	10522767	24566277							
33A	29988697	70011303							
34	20553239	79446761							
35	14771038	85228962							

REACH CAPITAL COSTS AMONG CONTRACTORS

REACH	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	03253707
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	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				
31A	07364766					57546190			

CALIFORNIA AREA								
	MoJave Water Agency	Palmdale Irrigation District	San Bernardino Valley Municipal Water District	San Gabriel Valley Municipal Water District	San Geronimo Pass Water Agency	The Metropolitan Water District of Southern California	Ventura County Flood Control District	Total
	01101303	00369180	02363192	00650450	00398446	43940274	00429334	1 00000000
	01151300	00385943	02469456	00679800	00416362	45932582	00448829	1 00000000
	01152575	00386368	02472869	00680672	00416938	45985090	00449324	1 00000000
	01152359	00386296	02472604	00680580	00416893	45976953	00449238	1 00000000
	01152131	00386218	02472327	00680482	00416846	45968397	00449149	1 00000000
	01151846	00386122	02471980	00680361	00416788	45957712	00449037	1 00000000
	01151416	00385978	02471455	00680178	00416698	45941544	00448869	1 00000000
	01151278	00385931	02471286	00680118	00416671	45936361	00448816	1 00000000
	01151103	00385874	02471072	00680044	00416634	45929816	00448747	1 00000000
	01174889	00393847	02522753	00694206	00425349	46880430	00458017	1 00000000
	01287942	00431739	02767698	00761389	00466647	51396901	00502081	1 00000000
	01308595	00438661	02812957	00773752	00474279	52223261	00510129	1 00000000
	01442004	00483371	03104405	00853455	00523416	57558975	00562119	1 00000000
	01516215	00508241	03266922	00897860	00550817	60527969	00591035	1 00000000
	01518261	00508926	03271816	00899157	00551643	60610827	00591831	1 00000000
	01647710	00552311	03554404	00976456	00599288	65787670	00642278	1 00000000
	01730602	00580090	03736328	01026125	00629961	69105032	00674576	1 00000000
	01762074	00590636	03805925	01045073	00641694	70365858	00686838	1 00000000
	01816015	00608712	03924903	01077498	00661754	72526114	00707853	1 00000000
	01846415	00618901	03992156	01095807	00673092	73744044	00719696	1 00000000
	01916080	00642247	04145755	01137676	00698987	76533787	00746838	1 00000000
	02006742	00672629	04346097	01192239	00732766	80165539	00782162	1 00000000
	02011032	00674067	04355438	01194797	00734341	80337045	00783834	1 00000000
	04960424	01662681	10730447	02944861	01809192	57469531		1 00000000
	04960300	01662640	10730706	02944877	01809230	57469557		1 00000000
								1 00000000
	05324853	01784830	11522151	03161800	01942666	61700972		1 00000000
	05586076	01872390	12087842	03316988	02038045	64729088		1 00000000
	05692052		12319478	03380326	02077093	65963499		1 00000000
	05773081		12495765	03428607	02106816	66905055		1 00000000
	05842136		12645206	03469615	02132008	67705257		1 00000000
			14467449	03969012	02439238	77446614		1 00000000
			22243002	04339444	02843498	66607404		1 00000000
			14947726	03997502	02520426	78534346		1 00000000
			14947726	03997502	02520426	78534346		1 00000000
			05126137			94873863		1 00000000
						1 00000000		1 00000000
						1 00000000		1 00000000
						95944607	01318829	1 00000000
						95944608	01318829	1 00000000
						95944609	01318827	1 00000000
						96446829	00906791	1 00000000
						95944608	01318829	1 00000000
						96499830	00863039	1 00000000
								1 00000000
								1 00000000
								1 00000000
								1 00000000

TABLE B-2: FACTORS FOR DISTRIBUTING REACH

REACH	FEATHER RIVER AREA	NORTH BAY AREA		SOUTH BAY AREA				TOTAL
	Plumas County FC&WCD	Napa County FC&WCD	Solano County FC&WCD	Alameda County FC&WCD, Zone 7	Alameda County Water District	Santa Clara County FC&WCD	Future Contractor	
<u>Grizzly Valley Pipeline</u>								
1	1 00000000							1 00000000
<u>North Bay Aqueduct</u>								
1		39808876	60191124					1 00000000
2		39808861	60191139					1 00000000
3		1 00000000						1 00000000
<u>South Bay Aqueduct</u>								
1				22599574	20663014	49203156	07534256	1 00000000
2				22599655	20663057	49203231	07534057	1 00000000
4				19504789	21450020	51077363	07967828	1 00000000
5				14436367	12972254	31592778	40998601	1 00000000
6				15294154	22150155	52968662	09587029	1 00000000
7					26369573	63058671	10571756	1 00000000
8					05060332	74539970	20399698	1 00000000
9						1 00000000		1 00000000
<u>California Aqueduct</u>								
1				00954800	00872976	02078790	00343990	—

REACH	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	Littlerock Creek Irrigation District	
<u>California Aqueduct</u>									
1	00531147	01240007	02939503	00890866	00528393	00133630	00871425	00049187	
2A	00555266	01296315	03072975	00931319	00552151	00139640	00910607	00051421	
2B	00555876	01297741	03076360	00932344	00552915	00139833	00911867	00051477	
3	00555769	01297494	03075777	00932168	00552856	00139818	00911771	00051469	
4	00555659	01297235	03075165	00931982	00552794	00139801	00911670	00051459	
5	00555520	01296912	03074401	00931751	00552717	00139780	00911543	00051448	
6	00555311	01296424	03073244	00931400	00552602	00139750	00911351	00051428	
7	00555243	01296267	03072873	00931287	00552565	00139740	00911289	00051421	
8C	00549671	01283255	03042012	00921937	00546665	00138249	00901561	00050905	
8D	00560860	01309375	03103938	00940703	00557923	00141095	00920128	00051940	
9			03398205	01029883	00611262	00154585	01008094	00056864	
10A			03451663	01046082	00621064	00157063	01024262	00057757	
11B			03796305	01150525	00684053	00172991	01128139	00063524	
12D			03987187	01208371	00719023	00181834	01185809	00066717	
12E			03992309	01209924	00720053	00182095	01187505	00066803	
13B			04324825	01310695	00780756	00197447	01287616	00072369	
14A			04536499	01374841	00819606	00207273	01351685	00075911	
14B			04616419	01399059	00834387	00211013	01376063	00077249	
14C			04753265	01440528	00859629	00217396	01417689	00079540	
15A			04830162	01463830	00873855	00220995	01441151	00080829	
16A			05006206	01517177	00906311	00229201	01494676	00083775	
17E			05234459	01586347	00948480	00239865	01564222	00087593	
17F			05245356	01589650	00950462	00240367	01567491	00087775	
18A			13238112		02399390	00606794	03957043	00221525	
19			13237766		02399451	00606810	03957141	00221522	
19C			1 00000000						
20A			06847931		02576424	00651572	04249001	00237800	
20B			02276024		02702916	00683554	04457607	00249470	
21			02318953		02754716	00696650	04543034	00254199	
22A			0118187C		02794143	00706620	04608043		
22B					02827552	00715073	04663153		
23					00324449	00818121	00535117		
24					01024605	01251569	01690478		
25									
26A									
28G									
28H									
28J									
29A			00304299	02728237					
29F			00304379	02728234					
29G				02736564					
29H				02646380					
29J				02736563					
30				02637131					
31A	10522767	24566277							
33A	29988697	70011303							
34	20553239	79446761							
35	14771038	85228962							

MINIMUM OMP&R COSTS AMONG CONTRACTORS

REACH	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	03253707
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				
31A	07364766					57546190			

CALIFORNIA AREA								Total
	Mojave Water Agency	Palmdale Irrigation District	San Bernardino Valley Municipal Water District	San Gabriel Valley Municipal Water District	San Geronimo Pass Water Agency	The Metropolitan Water District of Southern California	Ventura County Flood Control District	
01101303		00369180	02363192	00650450	00398446	43940274	00429334	1 00000000
.01151300		00385943	02469456	00679800	00416362	45932582	00448829	1 00000000
01152575		00386368	02472869	00680672	00416938	45985090	00449324	1 00000000
01152359		00386296	02472604	00680580	00416893	45976953	00449238	1 00000000
01152131		00386218	02472327	00680482	00416846	45968397	00449149	1 00000000
01151846		00386122	02471980	00680361	00416788	45957712	00449037	1 00000000
01151416		00385978	02471455	00680178	00416698	45941544	00448869	1 00000000
01151278		00385931	02471286	00680118	00416671	45936361	00448816	1 00000000
01139703		00382056	02444913	00673013	00412224	46619410	00444309	1 00000000
01162908		00389834	02495260	00686817	00420714	47575203	00453354	1 00000000
01273174		00426793	02733801	00752279	00460932	52108733	00496332	1 00000000
01293209		00433508	02777635	00764260	00468324	52938182	00504140	1 00000000
01422367		00476795	03059311	00841338	00515814	58274744	00554474	1 00000000
01493906		00500769	03215687	00884093	00542180	61234745	00582351	1 00000000
01495830		00501413	03220286	00885312	00542956	61318897	00583099	1 00000000
01620441		00543178	03491750	00959625	00588725	66464178	00631662	1 00000000
01699773		00569765	03665478	01007092	00618017	69750337	00662575	1 00000000
01729729		00579803	03731574	01025102	00629159	70996969	00674247	1 00000000
01781020		00596992	03844447	01055888	00648190	73127981	00694231	1 00000000
01809845		00606653	03908064	01073222	00658915	74327706	00705461	1 00000000
01875830		00628766	04053195	01112817	00683383	77068316	00731170	1 00000000
01961383		00657438	04241764	01164221	00715176	80626315	00764506	1 00000000
01965466		00658807	04250630	01166651	00716671	80794577	00766097	1 00000000
04960424		01662681	10730447	02944861	01809192	57469531		1 00000000
04960300		01662640	10730706	02944877	01809230	57469557		1 00000000
05324853	01784830		11522151	03161800	01942666	61700972		1 00000000
05586076	01872390		12087842	03316988	02038045	64729088		1 00000000
05692052			12319478	03380326	02077093	65963499		1 00000000
05773081			12495765	03428607	02106816	66905055		1 00000000
05842136			12645206	03469615	02132008	67705257		1 00000000
			14467449	03969012	02439238	77446614		1 00000000
			22243002	04339444	02843498	66607404		1 00000000
			11825184	03722720	01993915	82458181		1 00000000
			14947726	03997502	02520426	78534346		1 00000000
			.05126137			94873863		1 00000000
						1 00000000		1 00000000
						1 00000000		1 00000000
						95652648	01314816	1 00000000
						95652573	01314814	1 00000000
						95944609	01318827	1 00000000
						96446829	00906791	1 00000000
						95944608	01318829	1 00000000
						96499830	00863039	1 00000000
								1 00000000
								1 00000000
								1 00000000
								1 00000000

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

(in

Calendar Year	NORTH BAY AQUEDUCT		SOUTH BAY AQUEDUCT	CALIFORNIA				
	Reach 1	Reach 3	Reach 1	Reach 1	Reach 4	Reach 14A	Reach 15A	Reach 16A
	Calhoun and Travis Pumping Plants	Cordelia Pumping Plant	South Bay Pumping Plant (b)	Delta Pumping Plant	Dos Amigos Pumping Plant	Buena Vista Pumping Plant	Wheeler Ridge Pumping Plant	Wind Gap Pumping Plant
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1962	0	0	38,130	0	0	0	0	0
1963	0	0	58,871	0	0	0	0	0
1964	0	0	75,239	0	0	0	0	0
1965	0	0	146,297	0	0	0	0	0
1966	0	0	195,949	0	0	0	0	0
1967	0	0	224,948	31,165	0	0	0	0
1968	0	7,292	344,971	1,343,224	256,137	0	0	0
1969	0	8,432	274,712	881,870	178,411	0	0	0
1970	0	13,842	451,300	392,628	237,639	20,101	16,681	22,722
1971	0	12,000	471,400	756,000	304,100	255,200	93,100	160,000
1972	0	20,000	653,400	895,000	531,100	454,800	324,300	650,400
1973	0	18,000	553,400	1,271,000	684,100	644,800	599,300	1,240,400
1974	0	17,000	534,400	1,287,000	599,100	488,800	436,300	884,400
1975	0	13,000	388,400	1,038,000	548,100	492,800	480,300	981,400
1976	0	21,000	564,400	1,429,200	697,100	684,800	626,300	1,284,400
1977	0	21,000	486,400	2,112,200	637,100	573,800	583,300	1,192,400
1978	0	23,000	497,400	2,043,200	761,100	666,800	684,300	1,414,400
1979	0	29,000	574,400	1,689,200	818,100	679,800	692,300	1,417,400
1980	7,000	39,200	587,400	1,787,200	923,100	799,800	734,300	1,506,400
1981	8,000	43,200	530,400	2,102,200	975,100	830,800	848,300	1,751,400
1982	10,000	52,200	604,400	2,362,200	1,139,100	903,800	928,300	1,918,400
1983	10,000	56,200	633,400	3,058,400	1,204,100	979,800	912,300	1,885,400
1984	9,000	50,200	552,400	2,474,400	1,182,100	1,040,800	1,007,300	2,325,400
1985	13,000	59,200	541,400	3,054,400	1,323,100	1,193,800	1,187,300	2,481,400
1986	12,000	54,200	498,400	3,851,400	1,423,100	1,254,800	1,272,300	2,671,400
1987	13,000	55,200	502,400	4,065,400	1,543,100	1,382,800	1,421,300	2,985,400
1988	19,000	54,200	483,400	4,382,400	1,739,100	1,577,800	1,559,300	3,285,400
1989	28,000	56,200	484,400	3,909,400	1,838,100	1,609,800	1,588,300	3,344,400
1990	27,000	56,200	480,400	4,694,400	1,860,100	1,592,800	1,571,300	3,309,400
1991	27,000	56,200	497,400	4,643,400	1,853,100	1,593,800	1,676,300	3,527,400
1992	27,000	56,200	500,400	4,294,400	1,905,100	1,670,800	1,666,300	3,506,400
1993	28,000	57,200	527,400	3,875,400	1,937,100	1,694,800	1,690,300	3,555,400
1994	26,000	54,200	524,400	4,467,400	1,880,100	1,646,800	1,644,300	3,461,400
1995	27,000	56,200	541,400	4,623,400	1,935,100	1,693,800	1,691,300	3,558,400
1996	26,000	55,200	528,400	4,104,400	1,881,100	1,662,800	1,762,300	3,711,400
1997	27,000	55,200	551,400	3,829,400	1,931,100	1,774,800	1,790,300	3,769,400
1998	27,000	55,200	546,400	4,512,400	1,911,100	1,680,800	1,782,300	3,754,400
1999	26,000	54,200	543,400	4,333,400	1,964,100	1,764,800	1,782,300	3,970,400
2000	27,000	55,200	549,400	4,992,400	1,930,100	1,862,800	1,895,300	3,990,400
2001	27,000	55,200	545,400	4,872,400	1,985,100	1,780,800	1,903,300	4,009,400
2002	27,000	54,200	542,400	4,727,400	2,006,100	1,764,800	1,885,300	3,969,400
2003	26,000	53,200	531,400	4,685,400	1,950,100	1,746,800	1,867,300	3,933,400
2004	26,000	53,200	529,400	4,691,400	1,951,100	1,748,800	1,870,300	4,147,400
2005	27,000	55,200	543,400	4,848,400	2,065,100	1,882,800	1,919,300	4,044,400
2006	27,000	55,200	547,400	4,873,400	2,087,100	1,898,800	1,936,300	4,079,400
2007	27,000	54,200	542,400	4,819,400	2,151,100	1,972,800	2,027,300	4,272,400
2008	27,000	55,200	544,400	4,848,400	2,092,100	1,897,800	1,936,300	4,300,400
2009	26,000	54,200	538,400	4,785,400	2,163,100	1,971,800	2,028,300	4,277,400
2010	28,000	57,200	566,400	3,339,400	2,261,100	2,079,800	2,138,300	4,508,400
2011	26,000	54,200	539,400	5,098,400	2,199,100	1,985,800	2,043,300	4,309,400
2012	26,000	54,200	540,400	4,821,400	2,124,100	1,994,800	2,052,300	4,328,400
2013	27,000	56,200	555,400	5,023,400	2,179,100	2,048,800	2,108,300	4,446,400
2014	27,000	54,200	540,400	4,864,400	2,133,100	2,008,800	2,069,300	4,365,400
2015	27,000	55,200	545,400	4,897,400	2,186,100	2,023,800	2,083,300	4,620,400
2016	27,000	56,200	554,400	5,020,400	2,221,100	2,062,800	2,124,300	4,712,400
2017	27,000	55,200	542,400	4,906,400	2,207,100	2,024,800	2,192,300	4,624,400
2018	27,000	55,200	542,400	4,907,400	2,239,100	2,028,800	2,197,300	4,634,400
2019 (c)	27,000	55,200	542,400	4,910,400	2,262,100	2,121,800	2,201,300	4,644,400

a) Includes the costs of electric capacity and energy used by pumping plants, exclusive of associated power transmission 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							Grand Total	Calendar Year
Reach 17E	Reach 22B	Reach 26A	Reach 29A	Reach 29J	Reach 31A	Reach 33A		
A. D. Edmonston Pumping Plant	Pear- blossom Pumping Plant	Devil Canyon Powerplant	Oso Pumping Plant	Castaic Powerplant	Las Perillas and Badger Hill Pumping Plants	Devil's Den, Sawtooth and Polonio PP's and San Luis Obispo Pwp		
(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	
0	0	0	0	0	0	0	38,130	1962
0	0	0	0	0	0	0	58,871	1963
0	0	0	0	0	0	0	75,239	1964
0	0	0	0	0	0	0	146,297	1965
0	0	0	0	0	0	0	195,949	1966
0	0	0	0	0	0	0	256,113	1967
0	0	0	0	0	125,001	0	2,076,625	1968
0	0	0	0	0	81,996	0	1,425,421	1969
0	0	0	0	0	142,807	0	1,297,720	1970
509,800	104,000	0	51,000	- 69,000	128,700	0	2,776,300	1971
2,288,600	293,100	- 241,500	227,800	- 615,000	145,700	0	5,627,700	1972
4,570,600	509,100	- 916,500	422,800	-1,524,000	105,700	0	8,178,700	1973
3,226,600	781,100	-1,316,500	127,800	-1,267,000	119,700	0	5,918,700	1974
3,583,600	773,100	-1,055,500	131,800	-1,366,000	86,700	0	6,095,700	1975
4,700,600	1,148,900	-1,938,100	157,800	-1,976,000	152,700	0	7,553,100	1976
4,423,400	999,900	-2,023,100	150,800	-1,650,000	120,700	0	7,627,900	1977
5,215,400	1,114,900	-1,871,100	193,800	-2,311,000	127,700	0	8,559,900	1978
5,207,400	1,242,900	-2,399,100	153,800	-2,398,000	154,700	3,000	7,864,900	1979
5,533,400	1,314,900	-2,637,100	157,800	-2,442,000	174,500	90,800	8,576,700	1980
6,435,400	1,442,900	-2,604,100	182,800	-2,510,000	158,500	81,800	10,276,700	1981
7,006,400	1,650,900	-3,058,100	174,800	-2,406,000	196,500	108,800	11,591,700	1982
6,894,400	1,862,900	-3,663,100	151,800	-2,390,000	213,500	122,800	11,931,900	1983
7,658,400	1,975,900	-3,737,100	167,800	-2,062,000	190,500	161,800	12,996,900	1984
9,081,400	2,085,900	-3,159,100	236,800	-2,762,000	206,500	196,800	15,739,900	1985
9,777,400	1,784,900	-3,429,100	312,800	-3,571,000	196,400	223,800	16,332,900	1986
10,926,400	1,778,900	-3,096,100	585,800	-4,081,000	206,500	278,800	18,567,900	1987
12,038,400	2,019,900	-3,039,100	729,800	-4,660,000	210,500	278,800	20,678,900	1988
12,240,400	2,045,900	-2,636,100	702,800	-3,797,000	224,500	372,800	22,011,900	1989
12,868,400	2,016,900	-3,288,100	786,800	-3,662,000	227,500	428,800	22,969,900	1990
12,901,400	2,028,900	-2,951,100	691,800	-3,568,000	226,500	435,800	23,639,900	1991
12,827,400	1,990,900	-3,108,100	840,800	-3,223,000	225,500	425,800	23,605,900	1992
13,005,400	2,035,900	-2,991,100	752,800	-3,454,000	228,500	438,800	23,381,900	1993
13,430,400	1,963,900	-3,031,100	783,800	-3,485,000	220,500	419,800	24,006,900	1994
13,023,400	2,025,900	-3,286,100	806,800	-3,624,000	227,500	421,800	23,721,900	1995
13,586,400	1,940,900	-3,161,100	949,800	-3,668,000	220,500	414,800	24,014,900	1996
13,800,400	2,100,900	-3,140,100	859,800	-3,656,000	224,500	418,800	24,336,900	1997
13,747,400	2,071,900	-3,062,100	957,800	-3,965,000	221,500	416,800	24,657,900	1998
14,535,400	2,055,900	-2,658,100	1,014,800	-3,723,000	220,500	431,800	26,315,900	1999
14,602,400	2,075,900	-3,742,100	921,800	-4,218,000	224,500	390,800	25,557,900	2000
14,680,400	2,074,900	-2,976,100	1,071,800	-4,010,000	221,500	419,800	26,660,900	2001
14,533,400	2,051,900	-2,728,100	970,800	-3,668,000	220,500	424,800	26,781,900	2002
15,167,400	2,012,900	-2,837,100	1,012,800	-3,821,000	215,500	410,800	26,954,900	2003
15,192,400	2,011,900	-2,581,100	1,015,800	-3,581,000	214,500	420,800	27,710,900	2004
15,615,400	2,064,900	-2,854,100	1,095,800	-4,069,000	221,500	420,800	27,880,900	2005
15,755,400	2,085,900	-3,015,100	1,061,800	-4,273,000	222,500	420,800	27,762,900	2006
15,653,400	2,049,900	-2,892,100	1,106,800	-4,353,000	220,500	416,800	28,068,900	2007
15,757,400	2,074,900	-2,976,100	1,062,800	-4,365,000	221,500	410,800	27,588,900	2008
15,676,400	2,028,900	-2,407,100	1,116,800	-4,043,000	218,500	432,800	28,867,900	2009
16,523,400	2,151,900	-2,288,100	1,075,800	-4,281,000	231,500	451,800	28,843,900	2010
16,586,400	2,044,900	-2,632,100	1,078,800	-4,150,000	220,500	425,800	29,829,900	2011
16,666,400	2,050,900	-2,875,100	1,132,800	-4,806,000	220,500	411,800	28,742,900	2012
16,300,400	2,105,900	-2,834,100	1,165,800	-4,465,000	225,500	428,800	29,371,900	2013
16,805,400	2,043,900	-2,766,100	1,199,800	-4,400,000	220,500	419,800	29,585,900	2014
16,932,400	2,074,900	-3,024,100	1,154,800	-4,734,000	221,500	412,800	29,476,900	2015
17,273,400	2,092,900	-3,067,100	1,239,800	-5,145,000	225,500	412,800	29,810,900	2016
17,764,400	2,055,900	-2,897,100	1,214,800	-4,932,000	220,500	413,800	30,419,900	2017
17,801,400	2,059,900	-2,998,100	1,265,800	-5,038,000	221,500	411,800	30,355,900	2018
17,839,400	2,058,900	-2,925,100	1,222,800	-4,965,000	221,500	413,800	30,630,900	2019 (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-

Sheet 1 of 4

CALENDAR YEAR	NORTH BAY AREA			SOUTH BAY AREA (b)				CENTRAL COASTAL AREA		
	Napa County FC & WCD	Solano County FC & WCD	Total	Alameda County FC & WCD, Zone 7	Alameda County Water District	Santa Clara County FC & WD	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, 1970.

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)

Sheet 2 of 4

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	2,900	36,700	345,000
1973	8,700	22,000	3,000	2,900	310,500	1,500	3,100	39,100	390,800
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	348,700	6,415,700	77,623,325

TABLE B-4: ANNUAL ENTITLE-

(in acre-feet)

Sheet 3 of 4

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 Irrigation 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	1,600	5,200	580	8,000	170	8,400	1,620	46,000	10,600
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	2,251,900	1,286,111	321,610	2,107,600	127,210	2,848,100	983,720	5,953,500	1,651,800

MENTS TO PROJECT WATER (a

(in acre-feet)

Sheet 4 of 4

CALENDAR YEAR	SOUTHERN CALIFORNIA AREA (continued)				FEATHER RIVER AREA				TOTAL STATE WATER PROJECT
	San Geronio 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	254,200	0	356,370	0	500	470	970	820,640
1973	0	354,600	0	472,400	0	600	500	1,100	984,700
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	112,459,700	988,000	139,545,551	497,600	1,400,600	112,820	2,011,020	238,124,534

TABLE B-5: ANNUAL QUANTITIES DELIVERED

(in acre-feet)

Sheet 1 of 4

CALENDAR YEAR	NORTH BAY AQUEDUCT		TOTAL NORTH BAY AQUEDUCT (a)	SOUTH BAY AQUEDUCT						
	Reach 2 SC FC&MCD	Reach 3 NC FC&MCD(a)		Reach 1		Reach 2 AC FC&MCD	Reach 4 AC FC&MCD	Reach 5 AC FC&MCD	Reach 6 AC FC&MCD	Reach 7 ACWD
				ACWD	AC FC&MCD					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
1962	0	0	0	8,412	141	353	0	0	0	0
1963	0	0	0	10,914	814	917	0	0	0	0
1964	0	0	0	19,238	248	1,425	0	0	0	0
1965	0	0	0	15,280	637	1,830	138	0	0	1,127
1966	0	0	0	0	2,475	2,537	499	0	0	14,864
1967	0	0	0	0	1,527	2,991	862	0	0	14,882
1968	0	1,214	1,214	0	1,608	3,799	721	5	0	24,817
1969	0	2,687	2,687	0	1,165	3,459	1,851	160	0	813
1970	0	3,618	3,618	0	1,345	4,558	3,182	164	0	0
1971	0	4,532	4,532	0	1,400	4,993	4,627	160	20	25,400
1972	0	4,794	4,794	0	1,390	6,082	2,100	160	3,467	14,967
1973	0	5,116	5,116	0	1,145	5,204	154	160	6,937	13,800
1974	0	5,569	5,569	0	1,385	5,728	61	0	7,626	14,600
1975	0	6,054	6,054	0	782	5,965	0	0	9,253	15,500
1976	0	6,484	6,484	0	265	5,965	0	0	11,075	16,300
1977	0	8,000	8,000	0	0	6,000	2,100	200	10,100	17,200
1978	0	9,500	9,500	0	0	6,500	2,100	200	10,800	18,100
1979	0	11,000	11,000	0	0	6,900	2,100	200	11,600	18,900
1980	6,750	12,500	19,250	0	0	7,400	2,100	200	12,300	19,800
1981	8,000	13,750	21,750	0	0	7,800	2,100	200	12,900	21,000
1982	9,400	15,000	24,400	0	0	8,100	2,100	200	13,600	22,200
1983	10,330	16,250	26,580	0	0	8,500	2,100	200	14,200	23,400
1984	11,160	17,500	28,660	0	0	8,900	2,100	200	14,800	24,600
1985	12,670	18,750	31,420	0	0	9,300	2,100	200	15,400	25,800
1986	15,240	20,000	35,240	0	0	9,600	2,100	200	16,100	27,100
1987	18,320	21,250	39,570	0	0	10,000	2,100	200	16,700	28,300
1988	24,900	22,500	47,400	0	0	10,400	2,100	200	17,300	29,500
1989	31,350	23,750	55,100	0	0	10,800	2,100	200	17,900	30,700
1990	37,800(b)	25,000	62,800	0	0	11,100	2,100	200	18,600	31,900
1991	37,800	25,000	62,800	0	0	12,800	0	0	21,200	33,400
1992	37,800	25,000	62,800	0	0	13,500	0	0	22,500	34,900
1993	37,800	25,000	62,800	0	0	14,200	0	0	23,600	36,400
1994	37,800	25,000	62,800	0	0	15,000	0	0	25,000	37,000
1995	37,800	25,000	62,800	0	0	15,800	0	0	26,200	37,000
1996	37,800	25,000	62,800	0	0	16,500	0	0	27,500	37,000
1997(c)	37,800	25,000	62,800	0	0	17,000	0	0	29,000	37,000

CALENDAR YEAR	SOUTH BAY AQUEDUCT (continued)		TOTAL SOUTH BAY AQUEDUCT	NORTH SAN JOAQUIN DIVISION	CALIFORNIA AQUEDUCT					
					SOUTH SAN JOAQUIN DIVISION					
					Reach 8C			Reach 8D		
	Reach 8 ACWD	Reach 9 SCC FCM&CD			Reach 2A OPWD	TL&WS D	EW&SD	KC	DRWD	EW&D
	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1962	0	0	8,406	0	0	0	0	0	0	0
1963	0	0	12,645	0	0	0	0	0	0	0
1964	0	0	20,911	0	0	0	0	0	0	0
1965	0	15,014	34,026	0	0	0	0	0	0	0
1966	0	34,538	54,913	0	0	0	0	0	0	0
1967	0	39,101	56,763	0	0	0	0	0	0	0
1968	0	70,105	101,055	3,064	25,107	1,474	900	26,360	0	0
1969	0	62,264	69,712	3,016	7,081	56	100	31,375	0	0
1970	0	80,311	89,560	5,911	0	3,942	0	40,407	3,408	0
1971	0	88,000	124,600	5,400	30,000	6,000	1,500	45,000	0	27,000
1972	2,933	88,000	118,300	2,900	35,000	3,000	1,400	20,000	2,600	1,700
1973	8,000	88,000	120,400	3,100	23,100	3,000	1,500	22,000	2,900	16,000
1974	5,000	88,000	122,400	3,200	24,000	3,000	1,500	24,100	3,300	19,000
1975	5,000	88,000	124,500	3,400	19,900	3,000	1,600	26,200	3,600	27,000
1976	5,000	88,000	126,605	3,500	23,800	3,000	1,600	28,300	3,900	27,000
1977	5,000	88,000	128,600	3,700	38,400	3,000	1,700	30,400	4,200	16,400
1978	5,000	88,000	130,700	3,900	41,000	3,000	1,900	32,500	4,600	17,700
1979	5,000	88,000	132,700	4,000	43,800	3,000	2,000	34,600	4,900	18,800
1980	5,000	88,000	134,800	4,200	46,600	3,000	2,200	36,700	5,200	19,900
1981	5,000	88,000	137,000	4,300	49,300	3,000	2,300	38,800	5,600	21,100
1982	5,000	88,000	139,200	4,500	52,000	3,000	2,500	41,000	5,900	22,300
1983	5,000	88,000	141,400	4,600	54,700	3,000	2,600	42,900	6,200	23,500
1984	5,000	88,000	143,600	4,800	57,500	3,000	3,100	45,100	6,500	24,600
1985	5,000	88,000	145,800	4,900	60,200	3,000	3,400	47,200	6,900	25,800
1986	5,000	88,000	148,100	5,100	63,000	3,000	3,700	49,300	7,200	27,100
1987	5,000	88,000	150,300	5,200	65,700	3,000	4,000	51,400	7,500	28,200
1988	5,000	88,000	152,500	5,400	68,500	3,000	4,000	53,500	7,800	29,300
1989	5,000	90,000	156,700	5,600	71,200	3,000	4,000	55,600	8,100	30,400
1990	5,000	92,000	160,900	5,700	77,000	3,000	4,000	57,700	8,500	33,000
1991	5,000	94,000	166,400	5,700	77,000	3,000	4,000	57,700	8,500	33,000
1992	5,000	96,000	171,900	5,700	77,000	3,000	4,000	57,700	8,500	33,000
1993	5,000	98,000	177,400	5,700	77,000	3,000	4,000	57,700	8,500	33,000
1994	5,000	100,000	182,000	5,700	77,000	3,000	4,000	57,700	8,500	33,000
1995	5,000	100,000	184,000	5,700	77,000	3,000	4,000	57,700	8,500	33,000
1996	5,000	100,000	186,000	5,700	77,000	3,000	4,000	57,700	8,500	33,000
1997(c)	5,000	100,000	188,000	5,700	77,000	3,000	4,000	57,700	8,500	33,000

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&WD) 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)

Sheet 2 of 4

CALENDAR YEAR	CALIFORNIA AQUEDUCT (continued)									
	SOUTH SAN JOAQUIN DIVISION (continued)									
	Reach 9		Reach 10A		Reach 11B	Reach 12D	Reach 12E		Reach 13B	
	KCWA (Ag.)	HWD	KCWA (Ag.)	HWD	KCWA (Ag.)	KCWA (Ag.)	KCWA (M&I)	KCWA (Ag.)	KCWA (M&I)	KCWA (Ag.)
	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
1968	30,951	0	0	0	24,776	0	0	0	0	0
1969	24,489	0	0	2,842	64,682	0	0	0	0	0
1970	46,114	1,855	158	4,315	72,279	0	0	9,279	2	4,842
1971	35,700	12,000	0	9,000	66,300	0	0	3,150	0	0
1972	42,500	0	2,800	0	61,235	0	0	3,600	10,000	3,100
1973	50,100	0	15,305	0	59,684	0	28,000	27,804	10,000	3,300
1974	70,200	0	9,423	0	81,500	0	31,400	19,582	10,000	2,400
1975	76,100	0	10,823	0	88,400	0	35,000	24,289	10,000	2,800
1976	82,700	0	12,982	0	95,900	0	37,300	31,069	10,000	3,600
1977	82,700	0	60,200	0	97,300	2,400	40,800	12,300	3,600	20,000
1978	82,700	0	76,700	0	104,600	2,400	43,100	14,600	3,600	23,800
1979	82,700	0	92,600	0	111,600	2,400	45,400	17,000	3,600	27,800
1980	82,700	0	109,100	0	118,000	2,400	47,700	19,500	3,600	32,200
1981	82,700	0	128,200	0	124,700	2,400	50,200	22,500	3,600	36,900
1982	82,700	0	145,700	0	130,800	2,400	53,600	25,400	3,600	41,500
1983	82,700	0	166,100	0	135,600	2,400	56,000	29,100	3,600	47,600
1984	84,100	0	183,000	0	141,300	2,400	59,400	32,100	3,600	52,400
1985	86,500	0	199,000	0	145,400	2,400	62,900	35,500	3,600	57,900
1986	89,100	0	214,000	0	150,000	2,400	65,300	38,600	3,600	63,100
1987	91,100	0	230,900	0	153,300	2,400	68,800	42,200	5,164	68,500
1988	92,100	0	247,000	0	155,800	2,400	71,200	45,800	10,336	73,900
1989	93,200	0	259,000	0	157,200	2,400	73,500	48,300	14,498	78,100
1990(C)	93,600	0	274,600	0	157,800	2,400	79,000	51,200	15,700	82,200

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
	KCWA (M&I)	KCWA (Ag.)	KCWA (Ag.)	KCWA (Ag.)	KCWA (Ag.)	KCWA (M&I)	KCWA (Ag.)	KCWA (M&I)	AVEKWA	AVEKWA
	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)
1970	0	0	3	0	0	0	0	0	0	0
1971	0	22,800	50,300	25,600	7,600	0	100	0	0	0
1972	0	13,090	42,610	19,463	4,415	2,500	3,359	500	0	0
1973	0	7,362	25,903	10,780	17,961	2,400	6,727	500	0	0
1974	0	9,309	21,366	8,969	15,581	2,400	5,687	600	0	0
1975	0	10,796	25,607	10,163	17,406	2,500	6,617	700	0	0
1976	0	12,865	30,731	12,172	20,457	2,520	8,165	800	0	0
1977	11,600	16,500	26,100	12,600	22,900	3,800	4,000	800	0	0
1978	12,400	17,300	27,300	15,100	24,000	4,100	10,900	900	0	0
1979	13,200	19,200	30,400	16,700	28,500	4,400	12,100	1,000	0	0
1980	13,900	21,000	36,200	18,400	31,200	4,800	13,300	1,100	0	10,000
1981	14,600	23,200	42,500	20,300	34,400	5,200	15,000	1,200	0	15,000
1982	15,400	24,100	46,900	21,100	35,700	5,700	21,700	1,300	4,000	15,000
1983	16,200	26,600	54,100	23,200	39,300	6,300	24,100	1,400	5,000	20,000
1984	16,900	27,900	56,700	24,300	41,100	7,200	32,200	1,500	6,000	25,000
1985	17,600	31,900	60,600	25,900	43,900	8,200	35,000	1,600	7,000	30,000
1986	18,400	33,200	65,700	26,800	45,700	9,400	41,100	1,700	9,000	35,000
1987	17,636	35,400	71,100	28,700	48,700	10,700	44,900	1,800	11,000	40,000
1988	13,164	37,200	78,600	30,100	51,200	12,300	47,400	1,900	14,000	45,000
1989	9,702	38,500	81,500	31,200	52,800	13,600	52,200	1,900	13,000	55,000
1990	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	14,000	65,000
1991(C)	7,300	40,100	84,800	32,400	55,000	15,000	55,200	2,000	15,000	76,400

TABLE B-5: ANNUAL QUANTITIES DELIVERED

(in acre-feet)

Sheet 3 of 4

CALENDAR YEAR	CALIFORNIA AQUEDUCT (continued)								
	MOJAVE DIVISION (continued)								
	Reach 20A	Reach 20B	Reach 21		Reach 22A	Reach 22B			
	AVEKWA	PID	LCID	AVEKWA	AVEKWA	MWD-SC(d)	CVCWD(d)	DWA(d)	MWA
	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)
1972	13,000	0	170	0	1,000	0	0	0	0
1973	14,500	0	290	0	1,500	0	0	0	1,320
1974	16,000	0	400	0	2,000	-13,400	6,400	10,000	1,560
1975	20,000	100	520	300	2,700	-18,300	7,000	11,000	1,800
1976	22,000	300	640	500	3,500	-19,600	7,600	12,000	2,040
1977	27,000	600	730	1,500	4,500	-21,421	8,421	13,000	3,000
1978	29,500	1,060	920	2,000	5,500	-23,242	9,242	14,000	4,000
1979	34,000	1,740	1,040	2,500	5,500	-25,063	10,063	15,000	5,000
1980	27,000	2,700	1,150	3,000	5,500	-27,884	10,884	17,000	6,000
1981	26,000	4,000	1,270	3,500	5,500	-31,105	12,105	19,000	8,000
1982	26,000	5,700	1,380	4,000	6,000	-34,326	13,326	21,000	10,000
1983	25,000	7,860	1,500	4,500	6,000	-37,547	14,547	23,000	12,000
1984	25,000	10,540	1,610	5,000	6,000	0	15,768	25,000	16,000
1985	25,000	13,800	1,730	5,000	6,000	0	16,989	27,000	20,000
1986	25,000	17,300	1,840	5,500	6,000	0	18,210	29,000	24,000
1987	25,000	17,300	1,960	5,500	6,500	0	19,431	31,500	30,000
1988	25,000	17,300	2,070	5,500	6,500	0	20,652	34,000	36,000
1989	25,000	17,300	2,190	5,500	6,500	0	21,873	36,500	42,000
1990	25,000	17,300	2,300	6,000	6,500	0	23,100	38,100	48,000
1991(c)	25,000	17,300	2,300	6,500	6,500	0	23,100	38,100	50,800

CALENDAR YEAR	CALIFORNIA AQUEDUCT (continued)							
	SANTA ANA DIVISION							
	Reach 24	Reach 26A				Reach 28C		Reach 28J
	CLAWA	MWD-SC	SBVMWD	SGVMWD	SGPWA	MWD-SC	SBVMWD	MWD-SC
	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)
1972	580	0	43,540	0	0	0	2,460	0
1973	870	0	44,420	11,500	0	5,000	2,580	0
1974	1,160	10,000	44,300	12,300	0	10,000	2,700	184,200
1975	1,450	66,000	49,680	13,100	0	10,000	2,820	165,300
1976	1,740	128,000	52,060	14,000	0	10,000	2,940	140,000
1977	2,030	150,000	54,300	14,800	0	10,000	3,200	91,421
1978	2,320	175,000	56,700	15,700	0	10,000	3,300	98,242
1979	2,610	185,000	59,000	16,600	0	10,000	3,500	105,063
1980	2,900	195,000	61,900	17,400	6,800	10,000	3,600	107,884
1981	3,190	225,000	61,800	18,300	7,800	10,000	6,700	121,105
1982	3,480	255,000	64,200	19,100	8,800	10,000	7,300	124,326
1983	3,770	310,000	66,600	19,900	9,800	10,000	7,900	137,547
1984	4,060	396,500	69,500	20,700	10,800	10,000	8,500	150,000
1985	4,350	346,500	72,500	21,800	11,800	10,000	9,000	200,000
1986	4,640	296,500	75,400	23,200	12,900	10,000	9,600	250,000
1987	4,930	284,000	78,800	24,600	14,000	10,000	10,200	262,500
1988	5,220	284,000	82,200	26,000	15,100	10,000	10,800	262,500
1989	5,510	284,000	85,500	27,400	16,200	10,000	11,500	262,500
1990	5,800	284,000	89,000	28,800	17,300	10,000	12,500	262,500
1991(c)	5,800	284,000	88,900	28,800	17,300	10,000	13,700	262,500

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 46 provides for compliance with the repayment of the Agreement.

FROM EACH AQUEDUCT REACH TO EACH CONTRACTOR

(in acre-feet)												Sheet 4 of 4
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			
	AVKWA	MWD-SC	VCFCD	CLWA	KCWA (Ag.)	DDWD	SLOC FC&WCD	SLOC FC&WCD	SLOC FC&WCD	SBC FC&WCD		
	(58)	(59)	(60)	(61)	(62)	(63)	(64)	(65)	(66)	(67)	(68)	
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	74,000	13,400	0	0	0	0	434,850	
1972	0	93,000	0	0	61,528	7,700	0	0	0	0	498,750	
1973	0	208,300	0	1,600	44,674	8,700	0	0	0	0	683,680	
1974	0	67,200	0	3,700	58,583	9,700	0	0	0	0	793,320	
1975	0	73,400	0	5,700	64,299	10,700	0	0	0	0	893,770	
1976	0	79,900	0	7,500	71,539	11,700	0	0	0	0	1,000,720	
1977	0	90,000	0	11,400	66,000	12,700	0	0	0	0	1,058,581	
1978	0	90,000	0	13,400	70,800	12,700	0	0	0	0	1,159,242	
1979	0	95,000	0	15,300	75,300	12,700	0	0	0	0	1,249,553	
1980	1,500	100,000	1,000	17,700	79,400	12,700	400	200	400	1,200	1,348,234	
1981	2,000	100,000	2,000	20,100	83,800	12,700	400	200	400	2,300	1,473,065	
1982	3,000	105,000	3,000	22,100	87,700	12,700	800	400	800	4,600	1,593,186	
1983	3,500	110,000	4,000	24,600	90,800	12,700	1,200	600	1,200	6,900	1,754,877	
1984	4,000	143,500	5,000	26,900	94,500	12,700	1,800	900	1,800	10,400	2,018,178	
1985	5,000	323,500	6,000	29,100	97,100	12,700	3,000	1,500	3,000	17,300	2,295,969	
1986	5,500	508,500	8,000	30,900	100,100	12,700	4,000	2,000	4,000	23,100	2,578,290	
1987	6,000	683,500	10,000	32,900	102,200	12,700	5,000	2,500	5,000	28,800	2,852,121	
1988	7,000	813,500	13,000	35,300	103,800	12,700	6,200	3,100	6,200	35,800	3,080,742	
1989	8,000	843,500	16,000	37,400	104,700	12,700	8,000	4,000	8,000	46,100	3,201,773	
1990	8,500	868,500	20,000	39,300	105,100	12,700	10,000	5,000	10,000	57,700	3,329,200	
1991	9,000	888,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,368,700	
1992	9,000	908,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,388,700	
1993	9,000	928,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,408,700	
1994	9,000	948,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,428,700	
1995	9,000	968,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,448,700	
1996	9,000	988,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,468,700	
1997	9,000	1,008,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,488,700	
1998	9,000	1,028,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,508,700	
1999	9,000	1,048,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,528,700	
2000	9,000	1,068,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,548,700	
2001	9,000	1,090,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,570,700	
2002	9,000	1,112,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,592,700	
2003	9,000	1,134,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,614,700	
2004	9,000	1,156,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,636,700	
2005	9,000	1,178,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,658,700	
2006	9,000	1,200,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,680,700	
2007	9,000	1,222,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,702,700	
2008	9,000	1,244,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,724,700	
2009	9,000	1,266,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,746,700	
2010	9,000	1,288,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,768,700	
2011	9,000	1,306,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,786,700	
2012	9,000	1,324,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,804,700	
2013	9,000	1,342,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,822,700	
2014	9,000	1,360,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,840,700	
2015	9,000	1,378,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,858,700	
2016	9,000	1,396,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,876,700	
2017	9,000	1,414,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,894,700	
2018	9,000	1,432,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,912,700	
2019	9,000	1,450,500	20,000	41,500	105,100	12,700	10,000	5,000	10,000	57,700	3,930,700	
2020(C)	9,000	1,455,000	20,000	41,500	105,100	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)

Sheet 1 of 7

Calendar Year	NORTH BAY AQUEDUCT							SOUTH BAY AQUEDUCT					
	CALHOUN AND TRAVIS PUMPING PLANTS			CORDELIA PUMPING PLANT				SOUTH BAY PUMPING PLANT					
	Operational Losses	Water Supply Delivery	Total	Initial Fill Water	Operational Losses	Water Supply Delivery (a)	Total	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries		Total
											Water Supply	Recreation	
	(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(b)	1,214	1,228	0	1,847	0	101,055	0	102,902
1969	0	0	0	0	2	2,687	2,689	5,087	1,440	- 16,363(c)	69,712	0	59,876
1970	0	0	0	0	18	3,618	3,636	21,816	1,086	- 10,892	89,560	0	101,570
1971	0	0	0	0	0	4,532	4,532	0	1,230	0	124,600	30	125,860
1972	0	0	0	0	0	4,794	4,794	0	1,230	0	118,300	60	119,590
1973	0	0	0	0	0	5,116	5,116	0	1,230	0	120,400	90	121,720
1974	0	0	0	0	0	5,569	5,569	0	1,230	0	122,400	120	123,750
1975	0	0	0	0	0	6,054	6,054	0	1,230	0	124,500	150	125,880
1976	0	0	0	0	0	6,484	6,484	0	1,230	0	126,605	180	128,015
1977	0	0	0	0	0	8,000	8,000	0	1,230	0	128,600	210	130,040
1978	0	0	0	0	0	9,500	9,500	0	1,230	0	130,700	240	132,170
1979	0	0	0	0	0	11,000	11,000	0	1,230	0	132,700	260	134,190
1980	1,400	19,250	20,650	0	0	12,500	12,500	0	1,230	0	134,800	280	136,310
1981	1,400	21,750	23,150	0	0	13,750	13,750	0	1,230	0	137,000	290	138,520
1982	1,400	24,400	25,800	0	0	15,000	15,000	0	1,230	0	139,200	300	140,730
1983	1,400	26,580	27,980	0	0	16,250	16,250	0	1,230	0	141,400	320	142,950
1984	1,400	28,660	30,060	0	0	17,500	17,500	0	1,230	0	143,600	330	145,160
1985	1,400	31,620	33,020	0	0	18,750	18,750	0	1,230	0	145,800	350	147,380
1986	1,400	35,240	36,640	0	0	20,000	20,000	0	1,230	0	148,100	360	149,690
1987	1,400	39,570	40,970	0	0	21,250	21,250	0	1,230	0	150,300	380	151,910
1988	1,400	47,400	48,800	0	0	22,500	22,500	0	1,230	0	152,500	400	154,130
1989	1,400	55,100	56,500	0	0	23,750	23,750	0	1,230	0	156,700	410	158,340
1990	1,400	62,800	64,200	0	0	25,000	25,000	0	1,230	0	160,900	425	162,555
1991	1,400	62,800	64,200	0	0	25,000	25,000	0	1,230	0	166,400	425	168,055
1992	1,400	62,800	64,200	0	0	25,000	25,000	0	1,230	0	171,900	425	173,555
1993	1,400	62,800	64,200	0	0	25,000	25,000	0	1,230	0	177,400	425	179,055
1994	1,400	62,800	64,200	0	0	25,000	25,000	0	1,230	0	182,000	425	183,655
1995	1,400	62,800	64,200	0	0	25,000	25,000	0	1,230	0	184,000	425	185,655
1996	1,400	62,800	64,200	0	0	25,000	25,000	0	1,230	0	186,000	425	187,655
1997	1,400	62,800	64,200	0	0	25,000	25,000	0	1,230	0	188,000	425	189,655
1998	1,400	62,800	64,200	0	0	25,000	25,000	0	1,230	0	188,000	425	189,655
1999	1,400	62,800	64,200	0	0	25,000	25,000	0	1,230	0	188,000	425	189,655
2000(d)	1,400	62,800	64,200	0	0	25,000	25,000	0	1,230	0	188,000	425	189,655

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 aqueduct 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.

AND POWER RECOVERY PLANT OF PROJECT TRANSPORTATION FACILITIES

(in acre-feet)

Sheet 2 of 7

Calendar Year	CALIFORNIA AQUEDUCT														
	NORTH SAN JOAQUIN DIVISION								SAN LUIS DIVISION						
	DELTA PUMPING PLANT								DOS AMIGOS PUMPING PLANT						
	Transportation Water						Conservation Water	Total	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries		Total	
	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries		Total									
				Water Supply	Recreation										
(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		
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	8,974	43,058	-114,080(c)	265,417	0	203,369	470,556	673,925	3,887	9,922	-97,717(c)	192,689	0	108,781	
1970	29,484	20,767	-10,892	365,771	0	405,130	-12,995	392,135	7,668	1,901	0	270,300	0	279,869	
1971	64,778	135,552	0	559,450	200	759,980	-8,115	751,865	64,778	100,628	0	429,450	0	594,856	
1972	129,801	168,495	-4,770	617,050	400	910,976	59,193	970,169	129,801	133,571	-4,770	495,850	0	754,452	
1973	309,998	177,143	-16,846	804,080	10,600	1,284,975	-106,781	1,178,194	309,998	142,219	-16,846	680,580	10,000	1,125,951	
1974	36,724	191,007	-27,195	915,720	16,800	1,133,056	202,172	1,335,228	36,724	156,083	-27,195	790,120	16,000	971,732	
1975	12,892	190,743	-20,230	1,018,270	23,325	1,225,000	-82,546	1,142,454	12,892	155,819	-20,230	890,370	22,325	1,061,176	
1976	20,807	189,286	-3,937	1,127,325	27,525	1,361,006	66,899	1,427,905	20,807	154,362	-3,937	997,220	26,325	1,194,777	
1977	126,688	192,894	22,978	1,187,181	27,725	1,557,466	255,276	1,812,742	126,688	157,970	22,978	1,054,881	26,325	1,388,842	
1978	67,360	197,278	20,700	1,289,942	27,925	1,603,205	104,570	1,707,775	67,360	162,354	20,700	1,155,342	26,325	1,432,081	
1979	0	197,611	1,300	1,382,253	28,115	1,609,279	52,498	1,661,777	0	162,687	1,300	1,245,553	26,325	1,435,865	
1980	0	199,721	-20,000	1,483,034	44,305	1,707,060	-25,048	1,682,012	0	164,797	-20,000	1,344,034	42,325	1,531,156	
1981	0	200,306	12,100	1,610,065	44,415	1,866,886	-6,022	1,860,864	0	165,382	12,100	1,468,765	42,325	1,688,572	
1982	0	199,439	-14,300	1,732,386	44,525	1,962,050	-25,583	1,936,467	0	164,515	-14,300	1,588,686	42,325	1,781,226	
1983	0	199,404	5,700	1,896,277	44,645	2,146,026	-10,971	2,135,055	0	164,480	5,700	1,750,277	42,325	1,962,782	
1984	0	199,099	-13,500	2,161,778	44,755	2,392,132	-75,440	2,316,692	0	164,175	-13,500	2,013,378	42,325	2,206,378	
1985	0	198,980	-1,200	2,441,769	44,875	2,684,424	-63,354	2,621,070	0	164,056	-1,200	2,291,069	42,325	2,496,250	
1986	0	198,703	-40,000	2,726,390	44,985	2,930,078	367,717	3,297,795	0	163,779	-40,000	2,573,190	42,325	2,739,294	
1987	0	198,096	-46,851	3,002,421	45,105	3,198,771	-92,171	3,106,600	0	163,172	-46,851	2,846,921	42,325	3,005,567	
1988	0	198,506	21,801	3,233,242	45,225	3,498,774	-96,238	3,402,536	0	163,582	21,801	3,075,342	42,325	3,303,050	
1989	0	198,175	-9,419	3,358,273	45,335	3,592,364	-93,173	3,499,191	0	163,251	-9,419	3,195,973	42,325	3,392,130	
1990	0	197,965	-25,092	3,490,100	45,500	3,708,473	391,727	4,100,200	0	163,041	-25,092	3,323,500	42,325	3,503,774	
1991	0	197,869	11,400	3,535,100	45,500	3,789,869	258,819	4,048,688	0	162,945	11,400	3,363,000	42,325	3,579,670	
1992	0	198,159	8,700	3,560,600	45,500	3,812,959	45,151	3,858,110	0	163,235	8,700	3,383,000	42,325	3,597,260	
1993	0	197,704	-16,100	3,586,100	45,500	3,813,204	92,758	3,905,962	0	162,780	-16,100	3,403,000	42,325	3,592,005	
1994	0	198,085	6,600	3,610,700	45,500	3,860,885	64,564	3,925,449	0	163,161	6,600	3,423,000	42,325	3,635,086	
1995	0	197,935	-4,000	3,632,700	45,500	3,872,135	80,115	3,952,250	0	163,011	-4,000	3,443,000	42,325	3,644,336	
1996	0	197,847	1,000	3,654,700	45,500	3,899,047	30,162	3,929,209	0	162,923	1,000	3,463,000	42,325	3,669,248	
1997	0	197,620	-13,000	3,676,700	45,500	3,906,820	29,809	3,936,629	0	162,696	-13,000	3,483,000	42,325	3,675,021	
1998	0	197,994	22,500	3,696,700	45,500	3,962,694	67,393	4,030,087	0	163,070	22,500	3,503,000	42,325	3,730,895	
1999	0	198,895	134,500	3,716,700	45,500	4,095,595	-650,136	3,445,459	0	163,971	134,500	3,523,000	42,325	3,863,796	
2000	0	197,736	-164,500	3,736,700	45,500	3,815,436	589,921	4,405,357	0	162,812	-164,500	3,543,000	42,325	3,583,637	
2001	0	198,217	68,855	3,758,700	45,500	4,071,272	243,944	4,315,216	0	163,293	68,855	3,565,000	42,325	3,839,473	
2002	0	198,315	-11,613	3,780,700	45,500	4,012,902	-83,180	3,929,722	0	163,391	-11,613	3,587,000	42,325	3,781,103	
2003	0	198,285	-400	3,802,700	45,500	4,046,085	67,001	4,113,086	0	163,361	-400	3,609,000	42,325	3,814,286	
2004	0	198,294	12,725	3,824,700	45,500	4,081,219	101,571	4,182,790	0	163,370	12,725	3,631,000	42,325	3,849,420	
2005	0	198,126	-21,413	3,846,700	45,500	4,068,913	121,903	4,190,816	0	163,202	-21,413	3,653,000	42,325	3,837,114	
2006	0	197,967	-1,300	3,868,700	45,500	4,110,867	41,987	4,152,854	0	163,043	-1,300	3,675,000	42,325	3,879,068	
2007	0	198,162	12,500	3,890,700	45,500	4,146,862	36,533	4,183,395	0	163,238	12,500	3,697,000	42,325	3,915,063	
2008	0	197,820	-21,900	3,912,700	45,500	4,134,120	52,068	4,186,188	0	162,896	-21,900	3,719,000	42,325	3,902,321	
2009	0	198,106	7,358	3,934,700	45,500	4,185,664	21,641	4,207,305	0	163,182	7,358	3,741,000	42,325	3,953,865	
2010	0	198,833	25,647	3,956,700	45,500	4,226,680	-841,680	3,385,000	0	163,909	25,647	3,763,000	42,325	3,994,881	
2011	0	197,834	-55,654	3,974,700	45,500	4,162,380	933,265	5,095,645	0	162,910	-55,654	3,781,000	42,325	3,930,581	
2012	0	197,239	-13,735	3,992,700	45,500	4,221,704	-23,111	4,198,593	0	162,315	-13,735	3,799,000	42,325	3,989,905	
2013	0	197,479	20,469	4,010,700	45,500	4,274,148	156,644	4,430,792	0	162,555	20,469	3,817,000	42,325	4,042,349	
2014	0	197,489	2,300	4,028,700	45,500	4,273,989	59,255	4,333,244	0	162,565	2,300	3,835,000	42,325	4,042,190	
2015	0	197,532	5,200	4,046,700	45,500	4,294,932	49,221	4,344,153	0	162,608	5,200	3,853,000	42,325	4,063,133	
2016	0	197,593	-500	4,064,700	45,500	4,307,293	46,821	4,354,114	0	162,669	-500	3,871,000	42,325	4,075,494	
2017	0	197,735	7,700	4,082,700	45,500	4,333,635	69,424	4,403,059	0	162,811	7,700	3,889,000	42,325	4,101,836	
2018	0	197,523	-13,400	4,100,700	45,500	4,330,323	44,408	4,374,731	0	162,599	-13,400	3,907,000	42,325	4,098,524	
2019	0	197,273	-3,878	4,118,700	45,500	4,357,595	49,475	4,407,070	0	162,349	-3,878	3,925,000	42,325	4,125,796	
2020(d)	0	198,491	0	4,123,200	45,500	4,367,191	50,168	4,417,359	0	163,567	0	3,929,500	42,325	4,135,392	

a) Between 1968 and 1979, inclusive, annual quantities delivered are from nonproject water pumped through an interim facility.

b) Net result of operational losses and decrease in storage in the terminal facilities.

c) Reflects 410 acre-feet of Del Valle storage release and 15,953 acre-feet delivery of local inflow to Del Valle. For Valley plants, also reflects delivery of 97,717 acre-feet of Kern River flood flow.

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

TABLE B-6: ANNUAL QUANTITIES CONVEYED THRU EACH PUMPING

(in acre-feet)

Sheet 3 of 7

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		Total	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries		Total
				Water Supply	Recreation					Water Supply	Recreation	
	(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	64,778	25,876	0	106,400	0	197,054	64,778	13,076	0	7,700	0	85,554
1972	129,801	58,819	- 4,770	239,687	0	423,537	129,801	46,019	- 4,770	164,524	0	335,574
1973	309,998	67,467	- 16,846	364,513	10,000	735,132	309,998	54,667	- 16,846	320,468	10,000	678,287
1974	36,724	81,331	- 27,195	422,432	16,000	529,292	36,724	68,531	- 27,195	382,788	16,000	476,848
1975	12,892	81,067	- 20,230	486,659	16,000	576,388	12,892	68,267	- 20,230	440,093	16,000	517,022
1976	20,807	79,610	- 3,937	552,830	20,000	669,310	20,807	66,810	- 3,937	497,062	20,000	600,742
1977	126,688	83,218	22,978	562,781	20,000	815,665	126,688	70,418	22,978	495,981	20,000	736,065
1978	67,360	87,602	20,700	619,642	20,000	815,304	67,360	74,802	20,700	547,542	20,000	730,404
1979	0	87,935	1,300	667,353	20,000	776,588	0	75,135	1,300	587,853	20,000	684,288
1980	0	87,845	- 20,000	720,934	20,000	808,779	0	75,045	- 20,000	631,434	20,000	706,479
1981	0	88,430	12,100	797,665	20,000	918,195	0	75,630	12,100	697,065	20,000	804,795
1982	0	87,563	- 14,300	869,286	20,000	962,549	0	74,763	- 14,300	761,786	20,000	842,249
1983	0	87,528	5,700	980,677	20,000	1,093,905	0	74,728	5,700	860,577	20,000	961,005
1984	0	87,223	- 13,500	1,193,178	20,000	1,286,901	0	74,423	- 13,500	1,067,378	20,000	1,148,301
1985	0	87,104	- 1,200	1,416,769	20,000	1,522,673	0	74,304	- 1,200	1,280,769	20,000	1,373,873
1986	0	86,827	- 40,000	1,647,990	20,000	1,714,817	0	74,027	- 40,000	1,503,890	20,000	1,557,917
1987	0	86,220	- 46,851	1,868,557	20,000	1,927,926	0	73,420	- 46,851	1,715,721	20,000	1,762,290
1988	0	86,630	21,801	2,042,506	20,000	2,170,937	0	73,830	21,801	1,883,442	20,000	1,999,073
1989	0	86,299	- 9,419	2,113,775	20,000	2,210,655	0	73,499	- 9,419	1,952,873	20,000	2,036,953
1990	0	86,089	- 25,092	2,183,300	20,000	2,268,297	0	73,289	- 25,092	2,018,700	20,000	2,068,897
1991	0	85,993	11,400	2,222,800	20,000	2,340,193	0	73,193	11,400	2,058,200	20,000	2,162,793
1992	0	86,283	8,700	2,242,800	20,000	2,357,783	0	73,483	8,700	2,078,200	20,000	2,180,383
1993	0	85,828	- 16,100	2,262,800	20,000	2,352,528	0	73,028	- 16,100	2,098,200	20,000	2,175,128
1994	0	86,209	6,600	2,282,800	20,000	2,395,609	0	73,409	6,600	2,118,200	20,000	2,218,209
1995	0	86,059	- 4,000	2,302,800	20,000	2,404,859	0	73,259	- 4,000	2,138,200	20,000	2,227,459
1996	0	85,971	1,000	2,322,800	20,000	2,429,771	0	73,171	1,000	2,158,200	20,000	2,252,371
1997	0	85,744	- 13,000	2,342,800	20,000	2,435,544	0	72,944	- 13,000	2,178,200	20,000	2,258,144
1998	0	86,118	22,500	2,362,800	20,000	2,491,418	0	73,318	22,500	2,198,200	20,000	2,314,018
1999	0	87,019	134,500	2,382,800	20,000	2,624,319	0	74,219	134,500	2,218,200	20,000	2,446,919
2000	0	85,860	-164,500	2,402,800	20,000	2,344,160	0	73,060	-164,500	2,238,200	20,000	2,166,760
2001	0	86,341	68,855	2,424,800	20,000	2,599,996	0	73,541	68,855	2,260,200	20,000	2,422,596
2002	0	86,439	- 11,613	2,446,800	20,000	2,541,626	0	73,639	- 11,613	2,282,200	20,000	2,364,226
2003	0	86,409	- 400	2,468,800	20,000	2,574,809	0	73,609	- 400	2,304,200	20,000	2,397,409
2004	0	86,418	12,725	2,490,800	20,000	2,609,943	0	73,618	12,725	2,326,200	20,000	2,432,543
2005	0	86,250	- 21,413	2,512,800	20,000	2,597,637	0	73,450	- 21,413	2,348,200	20,000	2,420,237
2006	0	86,091	- 1,300	2,534,800	20,000	2,639,591	0	73,291	- 1,300	2,370,200	20,000	2,462,191
2007	0	86,286	12,500	2,556,800	20,000	2,675,586	0	73,486	12,500	2,392,200	20,000	2,498,186
2008	0	85,944	- 21,900	2,578,800	20,000	2,662,844	0	73,144	- 21,900	2,414,200	20,000	2,485,444
2009	0	86,230	7,358	2,600,800	20,000	2,714,388	0	73,430	7,358	2,436,200	20,000	2,536,988
2010	0	86,957	25,647	2,622,800	20,000	2,755,404	0	74,157	25,647	2,458,200	20,000	2,578,004
2011	0	85,958	- 55,654	2,640,800	20,000	2,691,104	0	73,158	- 55,654	2,476,200	20,000	2,513,704
2012	0	85,363	- 13,735	2,658,800	20,000	2,750,428	0	72,563	- 13,735	2,494,200	20,000	2,573,028
2013	0	85,603	20,469	2,676,800	20,000	2,802,872	0	72,803	20,469	2,512,200	20,000	2,625,472
2014	0	85,613	2,300	2,694,800	20,000	2,802,713	0	72,813	2,300	2,530,200	20,000	2,625,313
2015	0	85,656	5,200	2,712,800	20,000	2,823,656	0	72,856	5,200	2,548,200	20,000	2,646,256
2016	0	85,717	- 500	2,730,800	20,000	2,836,017	0	72,917	- 500	2,566,200	20,000	2,658,617
2017	0	85,859	7,700	2,748,800	20,000	2,862,359	0	73,059	7,700	2,584,200	20,000	2,684,959
2018	0	85,647	- 13,400	2,766,800	20,000	2,859,047	0	72,847	- 13,400	2,602,200	20,000	2,681,647
2019	0	85,397	- 3,878	2,784,800	20,000	2,886,319	0	72,597	- 3,878	2,620,800	20,000	2,708,919
2020(a)	0	86,615	0	2,789,300	20,000	2,895,915	0	73,815	0	2,624,700	20,000	2,718,515

AND POWER RECOVERY PLANT OF PROJECT TRANSPORTATION FACILITIES

(in acre-feet)

Sheet 4 of 7

Calendar Year	CALIFORNIA AQUEDUCT (Continued)											
	SOUTH SAN JOAQUIN DIVISION (Continued)						TEHACHAPI DIVISION					
	WIND GAP PUMPING PLANT						A. D. EDMONSTON PUMPING PLANT					
	Initial Fill Water	Opera- tional Losses	Reservoir Storage Changes	Deliveries		Total	Initial Fill Water	Opera- tional Losses	Reservoir Storage Changes	Deliveries		Total
Water Supply				Recre- ation	Water Supply					Recre- ation		
	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)
1971	64,778	12,276	0	100	0	77,154	62,815	8,570	0	0	0	71,385
1972	129,801	45,219	- 4,770	160,109	0	330,359	129,801	39,919	- 4,770	154,250	0	319,200
1973	309,998	53,867	- 16,846	302,507	10,000	659,526	309,998	48,567	- 16,846	293,380	10,000	645,099
1974	36,724	67,731	- 27,195	367,207	16,000	460,467	36,724	62,431	- 27,195	359,120	16,000	447,080
1975	12,892	67,467	- 20,230	422,687	16,000	498,816	12,892	62,167	- 20,230	413,570	16,000	484,399
1976	20,807	66,010	- 3,937	476,605	20,000	579,485	20,807	60,710	- 3,937	465,920	20,000	563,500
1977	126,688	69,618	22,978	473,081	20,000	712,365	126,688	64,318	22,978	465,281	20,000	699,265
1978	67,360	74,002	20,700	523,542	20,000	705,604	67,360	68,702	20,700	508,542	20,000	685,304
1979	0	74,335	1,300	559,353	20,000	654,988	0	69,035	1,300	542,853	20,000	633,188
1980	0	74,245	- 20,000	600,234	20,000	674,479	0	68,945	- 20,000	582,134	20,000	651,079
1981	0	74,830	12,100	662,665	20,000	769,595	0	69,530	12,100	642,465	20,000	744,095
1982	0	73,963	- 14,300	726,086	20,000	805,749	0	68,663	- 14,300	698,686	20,000	773,049
1983	0	73,928	5,700	821,277	20,000	920,905	0	68,628	5,700	790,877	20,000	885,205
1984	0	73,623	- 13,500	1,026,278	20,000	1,106,401	0	68,323	- 13,500	986,878	20,000	1,061,701
1985	0	73,504	- 1,200	1,236,869	20,000	1,329,173	0	68,204	- 1,200	1,193,669	20,000	1,280,673
1986	0	73,227	- 40,000	1,458,190	20,000	1,511,417	0	67,927	- 40,000	1,407,690	20,000	1,455,617
1987	0	72,620	- 46,851	1,667,021	20,000	1,712,790	0	67,320	- 46,851	1,611,421	20,000	1,651,890
1988	0	73,030	21,801	1,832,242	20,000	1,947,073	0	67,730	21,801	1,772,542	20,000	1,882,073
1989	0	72,699	- 9,419	1,900,073	20,000	1,983,353	0	67,399	- 9,419	1,834,273	20,000	1,912,253
1990	0	72,489	- 25,092	1,963,700	20,000	2,031,097	0	67,189	- 25,092	1,893,500	20,000	1,955,597
1991	0	72,393	11,400	2,003,200	20,000	2,106,993	0	67,093	11,400	1,933,000	20,000	2,031,493
1992	0	72,683	8,700	2,023,200	20,000	2,124,583	0	67,383	8,700	1,953,000	20,000	2,049,083
1993	0	72,228	- 16,100	2,043,200	20,000	2,119,328	0	66,928	- 16,100	1,973,000	20,000	2,043,828
1994	0	72,609	6,600	2,063,200	20,000	2,162,409	0	67,309	6,600	1,993,000	20,000	2,086,909
1995	0	72,459	- 4,000	2,083,200	20,000	2,171,659	0	67,159	- 4,000	2,013,000	20,000	2,096,159
1996	0	72,371	1,000	2,103,200	20,000	2,196,571	0	67,071	1,000	2,033,000	20,000	2,121,071
1997	0	72,144	- 13,000	2,123,200	20,000	2,202,344	0	66,844	- 13,000	2,053,000	20,000	2,126,844
1998	0	72,518	22,500	2,143,200	20,000	2,258,218	0	67,218	22,500	2,073,000	20,000	2,182,718
1999	0	73,419	134,500	2,163,200	20,000	2,391,119	0	68,119	134,500	2,093,000	20,000	2,315,619
2000	0	72,260	-164,500	2,183,200	20,000	2,110,960	0	66,960	-164,500	2,113,000	20,000	2,035,460
2001	0	72,741	68,855	2,205,200	20,000	2,366,796	0	67,441	68,855	2,135,000	20,000	2,291,296
2002	0	72,839	- 11,613	2,227,200	20,000	2,308,426	0	67,539	- 11,613	2,157,000	20,000	2,232,926
2003	0	72,809	- 400	2,249,200	20,000	2,341,609	0	67,509	- 400	2,179,000	20,000	2,266,109
2004	0	72,818	12,725	2,271,200	20,000	2,376,743	0	67,518	12,725	2,201,000	20,000	2,301,243
2005	0	72,650	- 21,413	2,293,200	20,000	2,364,437	0	67,350	- 21,413	2,223,000	20,000	2,288,937
2006	0	72,491	- 1,300	2,315,200	20,000	2,406,391	0	67,191	- 1,300	2,245,000	20,000	2,330,891
2007	0	72,686	12,500	2,337,200	20,000	2,442,386	0	67,386	12,500	2,267,000	20,000	2,366,886
2008	0	72,344	- 21,900	2,359,200	20,000	2,429,644	0	67,044	- 21,900	2,289,000	20,000	2,354,144
2009	0	72,630	7,358	2,381,200	20,000	2,481,188	0	67,330	7,358	2,311,000	20,000	2,405,688
2010	0	73,357	25,647	2,403,200	20,000	2,522,204	0	68,057	25,647	2,333,000	20,000	2,446,704
2011	0	72,358	- 55,654	2,421,200	20,000	2,457,904	0	67,058	- 55,654	2,351,000	20,000	2,382,404
2012	0	71,763	- 13,735	2,439,200	20,000	2,517,228	0	66,463	- 13,735	2,369,000	20,000	2,441,728
2013	0	72,003	20,469	2,457,200	20,000	2,569,672	0	66,703	20,469	2,387,000	20,000	2,494,172
2014	0	72,013	2,300	2,475,200	20,000	2,569,513	0	66,713	2,300	2,405,000	20,000	2,494,013
2015	0	72,056	5,200	2,493,200	20,000	2,590,456	0	66,756	5,200	2,423,000	20,000	2,514,956
2016	0	72,117	- 500	2,511,200	20,000	2,602,817	0	66,817	- 500	2,441,000	20,000	2,527,317
2017	0	72,259	7,700	2,529,200	20,000	2,629,159	0	66,959	7,700	2,459,000	20,000	2,553,659
2018	0	72,047	- 13,400	2,547,200	20,000	2,625,847	0	66,747	- 13,400	2,477,000	20,000	2,550,347
2019	0	71,797	- 3,878	2,565,200	20,000	2,653,119	0	66,497	- 3,878	2,495,000	20,000	2,577,619
2020(d)	0	73,015	0	2,569,700	20,000	2,662,715	0	67,715	0	2,499,500	20,000	2,587,215

TABLE B-6: ANNUAL QUANTITIES CONVEYED THRU EACH PUMPING

(in acre-feet)

Sheet 5 of 7

Calendar Year	CALIFORNIA AQUEDUCT (Continued)											
	MOJAVE DIVISION						SANTA ANA DIVISION					
	PEARLBLOSSOM PUMPING PLANT						DEVIL CANYON POWERPLANT					
	Initial Fill Water	Opera- tional Losses	Reservoir Storage Changes	Deliveries		Total	Initial Fill Water	Opera- tional Losses	Reservoir Storage Changes	Deliveries		Total
				Water Supply	Recre- ation					Water Supply	Recre- ation	
(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)	
1971	14,118	1,482	0	0	0	15,600	0	0	0	0	0	0
1972	68,434	13,786		46,580	0	128,800	168	0	0	46,000	0	46,168
1973	100,063	19,585	- 29	66,690	5,000	191,309	97,937	3,404		64,500	0	165,841
1974	20,027	28,097	- 19,474	269,220	11,000	308,870	17,999	12,028	- 9,552	266,500	6,000	292,975
1975	10,000	27,991	- 27,141	310,150	11,000	332,000	10,000	11,847	- 26,277	306,900	6,000	308,470
1976	4,168	25,700	- 18,248	350,780	11,000	373,400	4,168	10,360	4,472	347,000	6,000	372,000
1977	0	25,605	14,892	328,751	11,000	380,248	0	10,515	1,357	323,721	6,000	341,593
1978	0	27,140	21,700	365,262	11,000	425,102	0	11,275	14,500	358,942	6,000	390,717
1979	0	27,657	9,300	386,773	11,000	434,730	0	11,980	10,500	379,163	6,000	407,643
1980	0	27,441	- 7,000	411,484	11,000	442,925	0	11,728	- 6,500	402,584	6,000	413,812
1981	0	27,914	- 1,900	461,895	11,000	498,909	0	12,037	- 3,000	450,705	6,000	465,742
1982	0	27,104	- 8,300	502,206	11,000	532,010	0	11,149	- 12,000	488,726	6,000	493,875
1983	0	27,102	- 300	577,517	11,000	615,319	0	11,334	10,000	561,747	6,000	589,081
1984	0	26,705	- 18,500	726,828	11,000	746,033	0	11,135	- 8,500	666,000	6,000	674,635
1985	0	27,084	13,800	739,939	11,000	791,823	0	11,391	0	671,600	6,000	688,991
1986	0	27,243	- 7,000	753,450	11,000	784,693	0	11,378	- 500	677,600	6,000	694,478
1987	0	27,038	2,149	769,961	11,000	810,148	0	11,182	2,549	684,100	6,000	703,831
1988	0	27,424	18,801	786,472	11,000	843,697	0	11,490	6,501	690,600	6,000	714,591
1989	0	27,215	- 1,919	802,983	11,000	839,279	0	11,655	- 2,519	697,100	6,000	712,236
1990	0	27,409	- 19,092	819,100	11,000	838,417	0	11,506	- 5,192	704,100	6,000	716,414
1991	0	26,964	7,400	823,000	11,000	868,364	0	11,316	3,000	705,200	6,000	725,516
1992	0	27,304	- 7,300	823,000	11,000	854,004	0	11,591	1,000	705,200	6,000	723,791
1993	0	27,028	900	823,000	11,000	861,928	0	11,134	- 8,000	705,200	6,000	714,334
1994	0	27,268	16,600	823,000	11,000	877,868	0	11,354	4,500	705,200	6,000	727,054
1995	0	27,206	0	823,000	11,000	861,206	0	11,335	2,500	705,200	6,000	725,035
1996	0	27,189	- 18,000	823,000	11,000	843,189	0	11,363	- 4,500	705,200	6,000	718,063
1997	0	26,987	2,000	823,000	11,000	862,987	0	11,322	2,000	705,200	6,000	724,522
1998	0	27,056	1,500	823,000	11,000	862,556	0	11,427	0	705,200	6,000	722,627
1999	0	27,618	38,500	823,000	11,000	900,118	0	11,771	17,000	705,200	6,000	739,971
2000	0	27,138	- 46,500	823,000	11,000	814,638	0	11,423	- 16,500	705,200	6,000	706,123
2001	0	26,922	9,855	823,000	11,000	870,777	0	11,152	- 1,945	705,200	6,000	720,407
2002	0	27,216	- 6,613	823,000	11,000	854,603	0	11,427	- 1,513	705,200	6,000	721,114
2003	0	26,959	- 400	823,000	11,000	860,559	0	11,320	486	705,200	6,000	723,006
2004	0	26,980	12,725	823,000	11,000	873,705	0	11,233	3,100	705,200	6,000	725,533
2005	0	26,937	587	823,000	11,000	861,524	0	11,253	- 713	705,200	6,000	721,740
2006	0	26,984	- 1,300	823,000	11,000	859,684	0	11,237	- 2,000	705,200	6,000	720,437
2007	0	27,082	- 5,500	823,000	11,000	855,582	0	11,322	0	705,200	6,000	722,522
2008	0	26,995	11,100	823,000	11,000	872,095	0	11,262	0	705,200	6,000	722,462
2009	0	27,228	- 10,642	823,000	11,000	850,586	0	11,371	2,507	705,200	6,000	725,078
2010	0	27,103	7,962	823,000	11,000	869,065	0	11,384	- 241	705,200	6,000	722,343
2011	0	27,010	- 13,969	823,000	11,000	847,041	0	11,271	- 3,586	705,200	6,000	718,885
2012	0	26,683	4,265	823,000	11,000	864,948	0	10,990	- 1,735	705,200	6,000	720,455
2013	0	26,815	3,469	823,000	11,000	864,284	0	11,064	269	705,200	6,000	722,533
2014	0	26,563	- 4,700	823,000	11,000	855,863	0	11,043	2,500	705,200	6,000	724,743
2015	0	26,876	9,200	823,000	11,000	870,076	0	11,179	- 3,000	705,200	6,000	719,379
2016	0	26,738	- 12,500	823,000	11,000	848,238	0	11,037	500	705,200	6,000	722,737
2017	0	26,739	700	823,000	11,000	861,439	0	11,144	2,000	705,200	6,000	724,344
2018	0	26,699	2,600	823,000	11,000	863,299	0	11,048	- 1,500	705,200	6,000	720,748
2019	0	26,537	4,900	823,000	11,000	865,437	0	10,938	- 500	705,200	6,000	721,638
2020(a)	0	26,852	0	823,000	11,000	860,852	0	11,128	0	705,200	6,000	722,328

AND POWER RECOVERY PLANT OF PROJECT TRANSPORTATION FACILITIES

(in acre-feet)

Sheet 6 of 7

Calendar Year	CALIFORNIA AQUEDUCT (Continued)											
	WEST BRANCH, CALIFORNIA AQUEDUCT											
	OSO PUMPING PLANT						CASTAIC POWERPLANT					
	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries		Total	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries		Total
				Water Supply	Recreation					Water Supply	Recreation	
	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)
1971	45,438	1,255	0	0	0	46,693	32,709	17	0	0	0	32,726
1972	61,367	12,133	- 4,770	93,000	0	161,730	61,367	6,249	- 4,770	93,000	0	155,846
1973	209,935	14,982	- 16,817	209,900	5,000	423,000	65,779	8,475	- 16,817	209,900	5,000	272,337
1974	16,697	20,334	- 7,721	70,900	5,000	105,210	2,533	8,464	- 7,721	70,900	5,000	79,176
1975	2,892	20,176	6,911	79,100	5,000	114,079	0	8,283	6,911	79,100	5,000	99,294
1976	16,639	21,010	14,311	87,400	5,000	144,360	15,675	9,117	14,311	87,400	5,000	131,503
1977	126,688	24,713	8,086	101,400	5,000	265,887	126,188	12,820	8,086	101,400	5,000	253,494
1978	67,360	27,562	- 1,000	103,400	5,000	202,322	67,360	15,677	- 1,000	103,400	5,000	190,437
1979	0	27,378	- 8,000	110,300	5,000	134,678	0	15,492	- 8,000	110,300	5,000	122,792
1980	0	27,504	- 13,000	120,200	5,000	139,704	0	15,617	- 13,000	118,700	5,000	126,317
1981	0	27,616	14,000	124,100	5,000	170,716	0	15,729	14,000	122,100	5,000	156,829
1982	0	27,559	- 6,000	133,100	5,000	159,659	0	15,672	- 6,000	130,100	5,000	144,772
1983	0	27,526	6,000	142,100	5,000	180,626	0	15,639	6,000	138,600	5,000	165,239
1984	0	27,618	5,000	179,400	5,000	217,018	0	15,730	5,000	175,400	5,000	201,130
1985	0	27,120	- 15,000	363,600	5,000	380,720	0	15,231	- 15,000	358,600	5,000	363,831
1986	0	26,684	- 33,000	552,900	5,000	551,584	0	14,795	- 33,000	547,400	5,000	534,195
1987	0	26,282	- 49,000	732,400	5,000	714,682	0	14,392	- 49,000	726,400	5,000	696,792
1988	0	26,306	3,000	868,800	5,000	903,106	0	14,416	3,000	861,800	5,000	884,216
1989	0	26,184	- 7,500	904,900	5,000	928,584	0	14,293	- 7,000	896,900	5,000	909,193
1990	0	25,780	- 6,000	936,300	5,000	961,080	0	13,903	- 6,000	927,800	5,000	940,703
1991	0	26,129	4,000	959,000	5,000	994,129	0	14,251	4,000	950,000	5,000	973,251
1992	0	26,079	16,000	979,000	5,000	1,026,079	0	14,186	16,000	970,000	5,000	1,005,186
1993	0	25,900	- 17,000	999,000	5,000	1,012,900	0	14,007	- 17,000	990,000	5,000	992,007
1994	0	26,041	- 10,000	1,019,000	5,000	1,040,041	0	14,148	- 10,000	1,010,000	5,000	1,019,148
1995	0	25,953	- 4,000	1,039,000	5,000	1,065,953	0	14,060	- 4,000	1,030,000	5,000	1,045,060
1996	0	25,882	19,000	1,059,000	5,000	1,108,882	0	13,989	19,000	1,050,000	5,000	1,087,989
1997	0	25,857	- 15,000	1,079,000	5,000	1,094,857	0	13,964	- 15,000	1,070,000	5,000	1,073,964
1998	0	26,162	21,000	1,099,000	5,000	1,151,162	0	14,269	21,000	1,090,000	5,000	1,130,269
1999	0	26,501	96,000	1,119,000	5,000	1,246,501	0	14,608	96,000	1,110,000	5,000	1,225,608
2000	0	25,822	-118,000	1,139,000	5,000	1,051,822	0	13,929	-118,000	1,130,000	5,000	1,030,929
2001	0	26,519	59,000	1,161,000	5,000	1,251,519	0	14,626	59,000	1,152,000	5,000	1,230,626
2002	0	26,323	- 5,000	1,183,000	5,000	1,209,323	0	14,430	- 5,000	1,174,000	5,000	1,188,430
2003	0	26,550	0	1,205,000	5,000	1,236,550	0	14,657	0	1,196,000	5,000	1,215,657
2004	0	26,538	0	1,227,000	5,000	1,258,538	0	14,645	0	1,218,000	5,000	1,237,645
2005	0	26,413	- 22,000	1,249,000	5,000	1,258,413	0	14,520	- 22,000	1,240,000	5,000	1,237,520
2006	0	26,207	0	1,271,000	5,000	1,302,207	0	14,314	0	1,262,000	5,000	1,281,314
2007	0	26,304	18,000	1,293,000	5,000	1,342,304	0	14,411	18,000	1,284,000	5,000	1,321,411
2008	0	26,049	- 33,000	1,315,000	5,000	1,313,049	0	14,156	- 33,000	1,306,000	5,000	1,292,156
2009	0	26,102	18,000	1,337,000	5,000	1,386,102	0	14,209	18,000	1,328,000	5,000	1,365,209
2010	0	26,954	17,685	1,359,000	5,000	1,408,639	0	15,061	17,685	1,350,000	5,000	1,387,746
2011	0	26,048	- 41,685	1,377,000	5,000	1,366,363	0	14,155	- 41,685	1,368,000	5,000	1,345,470
2012	0	25,780	- 18,000	1,395,000	5,000	1,407,780	0	13,887	- 18,000	1,386,000	5,000	1,386,887
2013	0	25,888	17,000	1,413,000	5,000	1,460,888	0	13,995	17,000	1,404,000	5,000	1,439,995
2014	0	26,150	7,000	1,431,000	5,000	1,469,150	0	14,257	7,000	1,422,000	5,000	1,448,257
2015	0	25,880	- 4,000	1,449,000	5,000	1,475,880	0	13,987	- 4,000	1,440,000	5,000	1,454,987
2016	0	26,079	12,000	1,467,000	5,000	1,510,079	0	14,186	12,000	1,458,000	5,000	1,489,186
2017	0	26,220	7,000	1,485,000	5,000	1,523,220	0	14,327	7,000	1,476,000	5,000	1,502,327
2018	0	26,048	- 16,000	1,503,000	5,000	1,518,048	0	14,155	- 16,000	1,494,000	5,000	1,497,155
2019	0	25,960	- 8,778	1,521,000	5,000	1,543,182	0	14,067	- 8,778	1,512,000	5,000	1,522,289
2020(d)	0	26,863	0	1,525,500	5,000	1,557,363	0	14,970	0	1,516,500	5,000	1,536,470

TABLE B-6: ANNUAL QUANTITIES CONVEYED THRU EACH PUMPING
AN POWER RECOVERY PLANT OF PROJECT TRANSPORTATION FACILITIES

(in acre-feet)

Sheet 7 of 7

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	Opera- tional Losses	Water Supply Delivery	Total	Opera- tional Losses	Water Supply Delivery	Total
	(76)	(77)	(78)	(79)	(80)	(81)	(82)
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	0	0	0	0	0
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	2,027	87,400	89,427	0	0	0
1972	0	2,027	69,228	71,255	0	0	0
1973	0	2,027	53,374	55,401	0	0	0
1974	0	2,027	68,283	70,310	0	0	0
1975	0	2,027	74,999	77,026	0	0	0
1976	0	2,027	83,239	85,266	0	0	0
1977	0	2,027	78,700	80,727	0	0	0
1978	0	2,027	83,500	85,527	0	0	0
1979	0	2,027	88,000	90,027	0	0	0
1980	0	4,227	94,300	98,527	2,200	2,200	4,400
1981	0	4,227	99,800	104,027	2,200	3,300	5,500
1982	0	4,227	107,000	111,227	2,200	6,600	8,800
1983	0	4,227	113,400	117,627	2,200	9,900	12,100
1984	0	4,227	122,100	126,327	2,200	14,900	17,100
1985	0	4,227	134,600	138,827	2,200	24,800	27,000
1986	0	4,227	145,900	150,127	2,200	33,100	35,300
1987	0	4,227	156,200	160,427	2,200	41,300	43,500
1988	0	4,227	167,800	172,027	2,200	51,300	53,500
1989	0	4,227	183,500	187,727	2,200	66,100	68,300
1990	0	4,227	200,500	204,727	2,200	82,700	84,900
1991	0	4,227	200,500	204,727	2,200	82,700	84,900
1992	0	4,227	200,500	204,727	2,200	82,700	84,900
1993	0	4,227	200,500	204,727	2,200	82,700	84,900
1994	0	4,227	200,500	204,727	2,200	82,700	84,900
1995	0	4,227	200,500	204,727	2,200	82,700	84,900
1996	0	4,227	200,500	204,727	2,200	82,700	84,900
1997	0	4,227	200,500	204,727	2,200	82,700	84,900
1998	0	4,227	200,500	204,727	2,200	82,700	84,900
1999	0	4,227	200,500	204,727	2,200	82,700	84,900
2000(a)	0	4,227	200,500	204,727	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)	Total (g)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
CONSERVATION FACILITIES									
Upper Feather Division									
Frenchman Dam and Lake	171	1	0	0	587	0	759	2,560	3,319
Grizzly Valley Dam and Lake Davis	30	0	0	0	222	0	252	4,897	5,149
Antelope Dam and Lake	0	0	0	0	0	0	0	5,021	5,021
Abbey Bridge Dam and Res.	0	0	0	0	0	0	0	7,945	7,945
Dixie Refuge Dam and Res.	0	0	0	0	0	0	0	5,760	5,760
Total, Upper Feather Div.	201	1	0	0	809	0	1,011	26,185	27,194
Oroville Division									
Multipurpose Facilities	3,142	313	150	0	323,725	0	327,330	81,563	408,893
Specific Power Facilities	5	45	0	0	103,466	0	103,516	0	103,516
Total, Oroville Division	3,147	358	150	0	427,191	0	430,846	81,563	512,409
California Aqueduct									
North San Joaquin Div.	167	863	0	0	51,134	0	52,164	2,061	54,225
San Luis Division	251	23	0	0	89,048	0	89,322	3,521	92,843
Total, California Aqueduct	418	886	0	0	140,182	0	141,486	5,582	147,068
Delta Facilities	0	21,606	0	0	123,552	0	145,158	23,628	168,786
Upper Eel River Development	0	815	0	0	15,708	0	16,523	962	17,485
TOTAL, CONSERVATION FAC.	3,766	23,666	150	0	707,442	0	735,024	137,918	872,942
TRANSPORTATION FACILITIES									
Upper Feather Division, Grizzly Valley Pipeline	0	0	0	0	0	314	314	0	314
North Bay Aqueduct	18	2,408	30	0	0	16,912	19,368	0	19,368
South Bay Aqueduct	1,576	230	285	0	0	47,774	49,865	19,405	69,270
California Aqueduct									
North San Joaquin Div.	387	1,930	13	0	0	114,386	116,716	3,977	120,693
San Luis Division	1	1,737	0	0	0	98,708	100,446	3,121	103,567
South San Joaquin Div.	272	282	2,222	3,244	0	242,669	248,689	7,926	256,615
Tehachapi Division	21	4,904	19	6,991	0	261,994	273,929	8,463	282,392
Mojave Division	530	3,994	714	0	0	218,483	223,721	7,564	231,285
Santa Ana Division	264	1,798	2,977	21,184	0	158,665	184,888	5,430	190,318
West Branch	36,249	2,061	4,232	106	0	288,260	330,908	12,384	343,292
Coastal Branch	9	11,972	81	0	0	72,849	84,911	105	85,016
Total, California Aqueduct	37,733	28,678	10,258	31,525	0	1,456,014	1,564,208	48,970	1,613,178
TOTAL, TRANSPORTATION FAC.	39,327	31,316	10,573	31,525	0	1,521,014	1,633,755	68,375	1,702,130
SAN JOAQUIN DRAINAGE FACILITIES	0	0	0	0	0	0	0	6,033	6,033
UNASSIGNED & DAVIS-GRUNSKY	0	0	0	0	0	0	0	141,477	141,477
TOTAL, 1952-1985	43,093	54,982	10,723	31,525	707,442	1,521,014	2,368,779 (g)	353,803 (g)	2,722,582 (g)

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, 1970.

c) See Table B-8.

d) See Table B-9.

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

f) See Table B-10.

g) Total as shown in Table 11.

TABLE B-8: CAPITAL COSTS OF REQUESTED DELIVERY

(in

Project Area and Water Supply Contractor	Calendar													
	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
FEATHER RIVER AREA														
County of Butte	0	0	0	0	0	0	1,873	4,641	45,706	52,115	1,118	195	0	0
Thermalito Irrigation District (b)	0	0	0	0	0	0	1,360	2,502	14,686	25,142	252	0	0	0
Subtotals	0	0	0	0	0	0	3,233	7,143	60,392	77,257	1,370	195	0	0
NORTH BAY AREA														
Napa County Flood Control	0	0	0	0	0	0	0	0	687	2,249	- 345	287	0	0
and Water Conservation District	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Solano County Flood Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
and Water Conservation District	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotals	0	0	0	0	0	0	0	0	687	2,249	- 345	287	0	0
SOUTH BAY AREA														
Alameda County Flood Control and	2,810	3,993	1,673	40,599	27,828	10,928	6,843	891	8,674	561	12,846	11,943	112	1,000
Water Conservation District, Zone 7	1,351	1,919	806	19,514	21,101	11,050	82,950	-3,628	4,115	0	0	0	0	1,000
Alameda County Water District	0	0	0	0	175	66	255	4,908	7,298	- 19	105	0	0	0
Santa Clara County Flood Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
and Water District	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotals	4,161	5,912	2,479	60,113	49,104	22,044	90,048	2,171	20,087	542	12,951	11,943	112	2,000
SAN JOAQUIN VALLEY														
Devil's Den Water District	0	0	0	0	0	0	0	1,063	5,298	42,678	27,905	- 640	268	0
Dudley Ridge Water District	0	0	0	0	0	0	0	1,793	58,875	124,834	101,757	- 2,553	15	0
Empire West Side Irrigation District	0	0	0	0	0	0	0	185	1,590	2,766	1,685	- 32	0	0
Hacienda Water District	0	0	0	0	0	0	0	211	4,816	8,126	5,044	- 201	0	0
Kern County Water Agency	0	0	0	0	0	7	1	26,845	273,367	282,353	315,546	505,280	255,848	14,600
Oak Flat Water District	0	0	0	0	0	0	5,156	-5,123	336	10,879	2,082	0	0	0
Tulare Lake Basin Water Storage	0	0	0	0	0	0	0	2,938	62,079	116,149	71,818	- 866	0	0
District	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotals	0	0	0	0	0	7	5,157	27,912	406,361	587,785	525,837	500,988	256,131	14,600
SOUTHERN CALIFORNIA AREA														
Antelope Valley-East Kern Water	0	0	0	0	0	0	453	- 453	3,877	18,061	29,899	38,224	20,231	71,000
Agency	0	0	0	59	372	288	1,037	2,800	2,740	16,510	24,396	12,281	10,657	210,000
Castaic Lake Water Agency	0	0	0	0	0	0	0	4	0	35	130	2,552	640	9,400
Coachella Valley County Water	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crestline-Lake Arrowhead Water	0	0	0	0	0	0	916	189	- 14	99	6,995	41	564	4,000
Agency	0	0	0	0	0	0	0	0	0	58	214	4,210	1,056	15,500
Desert Water Agency	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Little Rock Creek Irrigation District	0	0	0	0	0	0	0	0	0	165	485	9,115	4,473	6,300
Mojave Water Agency	0	0	0	0	0	0	0	0	0	366	302	558	8,349	1,572
Palm Dale Irrigation District	0	0	0	0	0	0	0	0	61	- 7	1,524	974	9,887	4,474
San Bernardino Valley	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal Water District	0	0	0	0	0	0	373	758	786	3,410	22,690	13,622	22,096	480,700
San Gabriel Valley Municipal	0	0	0	0	0	0	0	0	0	557	1,734	10,531	2,761	120,000
Water District	0	0	0	0	0	0	0	0	0	277	2,814	3	3,312	53,000
San Geronimo Pass Water Agency	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Metropolitan Water District of	0	0	0	748	4,735	3,664	13,743	28,021	35,482	217,158	347,215	139,891	334,575	2,179,000
Southern California	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ventura County Flood Control	0	0	0	30	191	147	532	1,268	1,402	8,456	12,496	5,463	3,712	26,000
District	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotals	0	0	0	837	5,298	4,099	17,054	32,048	44,631	266,612	450,600	254,169	410,123	3,226,400
TOTALS	4,161	5,912	2,479	60,950	54,402	26,150	115,492	69,274	532,158	934,445	990,413	767,582	666,366	3,243,000

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 relocation agreement.

STRUCTURES TO BE BUILT BY THE STATE^(a)

dollars)

Year														Total	Project Area and Water Supply Contractor	
1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985			
(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)		
															FEATHER RIVER AREA	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	105,648	County of Butte	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	43,942	Thermalito Irrigation District (b	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	149,590	Subtotals	
															NORTH BAY AREA	
0	0	0	0	0	0	0	0	0	0	0	0	0	1,000	3,878	Napa County Flood Control and Water Conservation District	
0	0	0	0	0	0	25,000	0	0	0	0	0	1,000	0	26,000	Solano County Flood Control and Water Conservation District	
0	0	0	0	0	0	25,000	0	0	0	0	0	1,000	1,000	29,878	Subtotals	
															SOUTH BAY AREA	
1,000	0	0	0	0	0	0	0	0	0	0	0	0	0	131,701	Alameda County Flood Control and Water Conservation District, Zone 7	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	140,178	Alameda County Water District	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	12,788	Santa Clara County Flood Control and Water District	
1,000	0	0	0	0	0	0	0	0	0	0	0	0	0	284,667	Subtotals	
															SAN JOAQUIN VALLEY	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	76,572	Devil's Den Water District	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	284,721	Dudley Ridge Water District	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,194	Empire West Side Irrigation District	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	17,996	Hacienda Water District	
7,000	0	0	0	0	2,000	0	0	0	2,000	0	0	0	0	1,684,847	Kern County Water Agency	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	13,330	Oak Flat Water District	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	252,118	Tulare Lake Basin Water Storage District	
7,000	0	0	0	0	2,000	0	0	0	2,000	0	0	0	0	2,335,778	Subtotals	
															SOUTHERN CALIFORNIA AREA	
0	0	6,000	37,000	0	1,000	34,000	14,000	74,000	0	8,000	58,000	0	0	413,292	Antelope Valley-East Kern Water Agency	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	280,540	Castaic Lake Water Agency	
0	0	0	0	0	0	0	0	0	0	4,000	40,000	0	0	56,761	Coachella Valley County Water District	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	12,790	Crestline-Lake Arrowhead Water Agency	
0	0	0	0	0	0	0	0	0	0	7,000	65,000	0	0	93,038	Desert Water Agency	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	20,537	Littlerock Creek Irrigation District	
0	0	0	0	0	0	0	11,000	89,000	0	2,000	15,000	0	0	173,947	Mojave Water Agency	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	22,613	Palmdale Irrigation District	
0	0	0	0	0	0	0	5,000	46,000	0	0	0	5,000	40,000	640,435	San Bernardino Valley Municipal Water District	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	135,583	San Gabriel Valley Municipal Water District	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	59,406	San Geronimo Pass Water Agency	
325,000	125,000	0	0	0	0	0	40,000	350,000	0	0	0	120,000	1,650,000	5,914,232	The Metropolitan Water District of Southern California	
0	0	0	0	0	5,000	35,000	0	0	0	0	0	0	0	99,697	Ventura County Flood Control District	
325,000	125,000	6,000	37,000	0	6,000	69,000	70,000	559,000	0	21,000	178,000	125,000	1,690,000	7,922,871	Subtotals	
333,000	125,000	6,000	37,000	0	8,000	94,000	70,000	559,000	2,000	21,000	178,000	126,000	1,691,000	10,722,784	TOTALS	

TABLE B-9: CAPITAL COSTS OF

(in dollars unless otherwise indicated)

Sheet 1 of 2

TOTAL REQUIRED ADVANCE OF FUNDS										
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 (g)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<u>THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA</u>										
8C	1968	188.00000	8,257.54768	0.02276705	564,409	12,850	2,000	10,850	1,558	12,408
8D	1968	188.00000	8,058.99281	0.02332798	13,883,435	323,872	113,000	210,872	29,914	240,786
9	1968	188.00000	7,268.54004	0.02586489	9,172,143	237,236	71,000	166,236	32,691	198,927
10A	1968	188.00000	7,117.74784	0.02641285	9,872,050	260,749	92,000	168,749	32,939	201,688
11B	1968	188.00000	6,313.19561	0.02977890	13,490,866	401,743	108,000	293,743	59,255	352,998
12D	1969	188.00000	5,929.95263	0.03170346	12,133,810	384,684	156,000	228,684	48,624	277,308
12E	1969	188.00000	5,907.22734	0.03182542	7,696,988	244,960	118,000	126,960	26,374	153,334
13B	1969	188.00000	5,341.25081	0.03519775	16,275,834	572,873	139,000	433,873	74,920	508,793
14A	1970	188.00000	5,008.96939	0.03753267	56,002,426	2,101,921	559,000	1,542,921	383,754	1,926,675
14B	1970	188.00000	4,888.19779	0.03845998	10,130,665	389,625	175,000	214,625	55,861	270,486
14C	1970	188.00000	4,700.84105	0.03999284	9,321,134	372,779	223,000	149,779	38,975	188,754
15A	1970	188.00000	4,597.94994	0.04088779	38,349,984	1,568,046	593,000	975,046	198,062	1,173,108
16A	1971	188.00000	4,387.78387	0.04284623	61,017,735	2,614,380	995,000	1,619,380	430,635	2,050,015
17E	1971	188.00000	4,136.09906	0.04545346	220,189,946	10,008,395	5,811,000	4,197,395	1,212,675	5,410,070
17F	1971	188.00000	4,126.98262	0.04555386	57,900,600	2,637,595	1,396,000	1,241,595	433,806	1,675,401
25	1971	787.00000	2,019.63064	0.38967521	31,187,219	12,152,886	6,823,844	5,329,042	1,388,284	6,717,326
28J	1973	-	-	-	-	14,505,818	14,505,818	0	0	0
<u>SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT</u>										
25	1971	21.00000	2,019.63064	0.01039794	31,243,329	324,866	182,156	142,710	40,925	183,635
<u>ANTELOPE VALLEY-EAST KERN WATER AGENCY</u>										
29A	1971	19.00000	3,128.83908	0.00607254	30,585,204	185,730	85,000	100,730	25,163	125,893
29F	1971	19.00000	3,128.01611	0.00607414	13,009,911	79,024	24,000	55,024	15,565	70,589

a) Column 1 divided by Column 2.

b) Reach costs are compounded at the project interest rate of 4.143 percent per annum as follows:

Reaches	Period	Year costs compounded to
8C thru 17F	1952 - 1965	1965
25 and 28J (for MWD)	1952 - 1966	1966
25 (for SQVWWD)	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 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 1971 with 1972 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.

l) In addition to these reconciliation amounts, a portion of the incremental costs included in Column 6 would be allocated to recreation and, together with interest earnings thereon, would be credited to the contractors' accounts following the Department's report of these joint costs to the Legislature pursuant to Water Code Section 11912. These credits, currently assumed to be applied in 1975, would be as follows: The Metropolitan Water District of Southern California, \$727,300 and Antelope Valley-East Kern Water District, \$4,400.

REQUESTED EXCESS PEAKING CAPACITY

(in dollars)

Sheet 2 of 2

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	
		(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA											
8C	1. Incremental Costs		1,000	1,000							2,000
	2. Advance Payments		6,425	6,425		-12,408					442
8D	1. Incremental Costs	4,000	45,000	64,000							113,000
	2. Advance Payments	11,464	128,976	183,432		-240,786					83,086
9	1. Incremental Costs	4,000	24,000	35,000	8,000						71,000
	2. Advance Payments	13,365	80,192	116,947	26,732		-198,927				38,309
10A	1. Incremental Costs	5,000	30,000	46,000	11,000						92,000
	2. Advance Payments	14,171	85,027	130,375	31,176		-201,688				59,061
11B	1. Incremental Costs	7,000	42,000	48,000	11,000						108,000
	2. Advance Payments	26,039	156,233	178,552	40,919		-352,998				48,745
12D	1. Incremental Costs	16,000	20,000	18,000	84,000	18,000					156,000
	2. Advance Payments	39,455	49,318	44,387	207,138	44,386		-277,308			107,376
12W	1. Incremental Costs	10,000	14,000	14,000	66,000	14,000					118,000
	2. Advance Payments	20,759	29,063	29,063	137,012	29,063		-153,334			91,626
13B	1. Incremental Costs	1,000	2,000	14,000	96,000	26,000					139,000
	2. Advance Payments	4,121	8,243	57,699	397,653	107,157		-508,793			64,080
14A	1. Incremental Costs	51,000	65,000	39,000	194,000	150,000	60,000				559,000
	2. Advance Payments	191,767	244,409	146,646	729,468	564,022	225,609		-1,926,675		175,246
14B	1. Incremental Costs	31,000	14,000	10,000	45,000	63,000	12,000				175,000
	2. Advance Payments	69,019	31,170	22,264	100,189	140,265	26,718		-270,486		119,139
14C	1. Incremental Costs	39,000	18,000	13,000	58,000	80,000	15,000				223,000
	2. Advance Payments	65,195	30,090	21,732	96,956	133,732	25,074		-188,754		184,025
15A	1. Incremental Costs	4,000	10,000	46,000	243,000	162,000	128,000				593,000
	2. Advance Payments	10,577	26,443	121,636	642,555	428,370	338,465		-1,173,108		394,938
16A	1. Incremental Costs	14,000	12,000	56,000	387,000	357,000	119,000	50,000			995,000
	2. Advance Payments	36,785	31,530	147,141	1,016,849	938,024	312,675	131,376		-2,050,015	564,365
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	51,670	446,081	1,996,168	3,394,691	2,695,429	948,998	475,358		-5,410,070	4,598,325
17F	1. Incremental Costs	78,000	203,000	468,000	349,000	276,000	15,000	7,000			1,396,000
	2. Advance Payments	147,373	383,547	884,237	659,399	521,473	28,341	13,225		-1,675,401	962,194
25	1. Incremental Costs			932,118	2,289,874	1,910,988	1,211,656	479,208			6,823,844
	2. Advance Payments			1,660,050	4,078,138	3,403,363	2,157,892	853,443		-6,717,326	5,435,560
26J	1. Incremental Costs	1,131,775	108,229	4,641,381	236,387	673,046	2,223,000	3,802,000	1,690,000		14,505,818
	2. Advance Payments	1,131,775	108,229	4,641,381	236,387	673,046	2,223,000	3,802,000	1,690,000		14,505,818
Totals Unadjusted for past payments	1. Incremental Costs	294,000	1,890,775	3,071,347	10,454,255	4,858,375	2,784,702	3,035,208	3,802,000	1,690,000	31,880,662
	2. Advance Payments	701,760	2,868,522	5,854,983	16,198,256	8,988,477	3,983,205	2,756,967	242,977	-14,162,812	27,432,335
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	-2,718,318(k)	-15,852,812(k)	12,926,517
	2. Interest Credits - Amendment 2 (h)								-1,526,489(k)		-1,526,489
	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	3,605,930	1,690,000	14,505,818
	4. Interest Credits - Amendment 5 (i)								-638,455		-638,455
	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	-14,162,812	25,267,391
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	44,376	109,015	90,977	57,684	22,814		-183,635	141,231
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	44,376	109,015	90,977	57,684	22,814		-183,635	141,231
Current Adjustments	1. Advance Payments and Adjustments (g)	0	0	0	184,422	49,052	44,911	61,588	-15,107	-183,635	141,231
	2. Interest Credit								-5,156		-5,156
	3. Net Required Advance of Funds	0	0	0	184,422	49,052	44,911	61,588	-20,263(k)	-183,635(k)	136,075
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	17,480	30,591	56,812	56,812	24,035		-125,893	59,837
29F	1. Incremental Costs	0	0	3,000	4,000	14,000	2,000	1,000			24,000
	2. Advance Payments	0	0	9,878	13,171	46,097	6,585	3,293		-70,589	8,435
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	27,358	43,762	102,909	63,397	27,328		-196,482	68,272
Current Adjustments	1. Advance Payments and Adjustments (g)				85,495	52,625	101,648	34,062	-9,076	-196,482	68,272
	2. Interest Credit	0	0	0					-3,718		-3,718
	3. Net Required Advance of Funds	0	0	0	85,495	52,625	101,648	34,062	-12,794(k)	-196,482(k)	64,554

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

(in dollars)

Sheet 1 of 4

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	60
1953	0	0	0	0	0	477	166	144	315
1954	0	0	0	0	0	1,466	508	437	1,013
1955	0	0	0	0	0	1,944	674	560	1,336
1956	0	0	0	0	0	18,789	6,515	5,090	13,248
1957	0	13,290	3,391	9,953	26,634	45,090	15,639	12,285	35,218
1958	0	19,197	5,009	25,889	50,095	195,960	80,973	7,705	23,234
1959	0	7,457	2,040	18,423	27,920	496,101	148,740	25,080	17,815
1960	0	8,467	3,864	7,278	19,609	1,134,009	68,712	71,554	70,713
1961	4	2,031	10,330	3,607	15,968	3,238,271	229,561	306,946	80,873
1962	270	312	1,156	2,665	121	1,474,160	234,212	697,447	38,425
1963	57	3,832	384	2,965	6,413	466,314	67,281	2,284,111	214,148
1964	7,762	36,919	17,014	28,337	82,270	2,508,677	13,029	175,452	279,623
1965	3,110	71,145	25,456	191,132	287,733	733,816	143,910	75,363	488,771
1966	81-	63,218	17,771	462,626	543,615	727,344	138,133	114,666	1,826,580
1967	1	51,230	19,654	1,565,475	1,636,359	277,574	8,754	240,631	3,726,276
1968	51,545	69,867	25,964	848,225	944,056	799,432	5,699	61,849	3,021,112
1969	234,364	73,446	32,003	54,357	159,806	412,581	4,159	3,036	917,326
1970	17,224	69,935	48,529	13,104	131,568	49,743	2,921	9,994	247,747
1971	0	68,000	31,000	38,000	137,000	59,000	7,000	15,000	110,000
1972	0	70,000	29,000	25,000	124,000	37,000	4,000	9,000	37,000
1973	0	63,000	24,000	31,000	118,000	354,000	1,000	2,000	15,000
1974	0	51,000	23,000	22,000	96,000	6,000	0	2,000	152,000
1975	0	97,000	32,000	17,000	146,000	1,000	0	1,000	505,000
1976	0	394,000	89,000	53,000	536,000	1,000	0	2,000	11,000
1977	0	894,000	95,000	126,000	1,115,000	22,000	7,000	28,000	58,000
1978	0	2,031,000	363,000	479,000	2,873,000	3,000	1,000	4,000	8,000
1979	0	4,345,000	850,000	1,366,000	6,561,000	0	0	0	0
1980	0	795,000	162,000	243,000	1,200,000	0	0	0	0
1981	0	23,000	20,000	4,000	47,000	0	0	0	0
1982	0	5,000	3,000	3,000	11,000	0	0	0	0
1983	0	4,000	3,000	3,000	10,000	0	0	0	0
1984	0	1,000	1,000	1,000	3,000	0	0	0	0
1985	0	1,000	1,000	1,000	3,000	0	0	0	0
TOTAL	314,256	9,332,346	1,935,485	5,644,336	16,912,167	13,064,845	1,178,222	4,149,308	11,899,833

Calendar Year	SOUTH BAY AQUEDUCT (continued)					CALIFORNIA AQUEDUCT			
	Reach 6	Reach 7	Reach 8	Reach 9	Total	NORTH SAN JOAQUIN DIVISION			
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1952	8	66	72	132	499	3,974	3,304	1,505	8,783
1953	38	327	336	641	2,444	10,459	8,653	3,978	23,090
1954	123	1,005	1,003	1,954	7,509	13,689	11,243	5,200	30,132
1955	160	1,293	1,149	2,454	9,570	7,325	5,991	2,771	16,087
1956	1,559	11,959	11,043	28,372	96,575	9,241	5,177	2,402	16,820
1957	3,659	28,676	27,385	563,114	731,066	11,211	5,636	2,615	19,462
1958	2,244	17,888	17,400	560,921	906,325	18,515	15,695	7,285	41,495
1959	363	3,414	3,777	150,248	845,538	121,948	99,130	44,810	265,888
1960	958	3,777	4,358	360,499	1,714,580	187,518	103,664	49,135	340,317
1961	4,401	20,028	21,573	180	3,901,473	164,175	214,478	45,294	423,947
1962	6,802	149,392	198,027	208,829	3,007,294	622,448	494,801	171,233	1,288,482
1963	234,556	1,272,831	954,102	138,257	5,631,600	2,191,452	1,352,252	681,210	4,224,914
1964	29,200	1,787,644	2,336,690	2,929,678	10,059,993	5,248,626	1,879,568	705,452	7,833,646
1965	15,396	395,851	603,747	1,906,301	4,363,155	5,930,292	7,035,908	3,046,108	16,012,308
1966	19,132	33,738	181,104	758,656	3,799,353	8,601,971	14,170,742	5,761,062	28,533,775
1967	45,673	135,551	140,820	339,262	4,823,195	9,697,512	10,764,245	6,711,902	27,173,659
1968	83,590	2,393	60,875	236,347	4,255,113	6,398,613	868,880	1,302,482	8,569,975
1969	3,985	9,151	163,396	25,763	1,533,325	3,632,815	731,365	363,397	4,727,577
1970	2,441	4,437	22,058	17,092	322,249	2,231,657	151,835	86,931	2,470,423
1971	18,000	53,000	21,000	34,000	317,000	1,517,000	367,000	93,000	1,977,000
1972	12,000	6,000	11,000	21,000	137,000	583,000	72,000	32,000	687,000
1973	5,000	2,000	3,000	6,000	388,000	353,000	2,000	22,000	333,000
1974	3,000	2,000	2,000	4,000	171,000	186,000	43,000	13,000	242,000
1975	2,000	1,000	2,000	3,000	515,000	595,000	27,000	6,000	628,000
1976	0	1,000	1,000	3,000	19,000	367,000	9,000	3,000	379,000
1977	2,000	10,000	20,000	43,000	190,000	549,000	9,000	5,000	563,000
1978	0	1,000	3,000	6,000	26,000	1,684,000	0	0	1,684,000
1979	0	0	0	0	0	1,438,000	0	0	1,438,000
1980	0	0	0	0	0	336,000	1,000	1,000	338,000
1981	0	0	0	0	0	355,000	1,000	1,000	357,000
1982	0	0	0	0	0	637,000	0	0	637,000
1983	0	0	0	0	0	1,664,000	0	0	1,664,000
1984	0	0	0	0	0	1,273,000	0	0	1,273,000
1985	0	0	0	0	0	165,000	0	0	165,000
TOTAL	404,942	3,950,635	4,811,915	8,314,156	47,773,856	56,805,441	38,453,567	19,126,772	114,385,780

BURSED THRU CAPITAL COST COMPONENT OF TRANSPORTATION CHARGE

(in dollars)

Sheet 2 of 4

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	2,543	3,623	4,110	1,045	1,289	12,610	14	717	1,165
1953	7,128	10,356	11,321	2,929	3,612	35,346	51	2,666	4,370
1954	8,848	12,808	14,102	3,637	4,485	43,880	52	2,708	4,215
1955	4,339	6,183	7,013	1,784	2,199	21,518	18	876	1,166
1956	3,938	5,612	6,367	1,619	1,996	19,532	70	3,628	4,809
1957	4,294	6,117	6,942	1,764	2,177	21,294	204	10,524	13,947
1958	14,955	24,820	28,348	7,098	9,103	84,324	349	17,843	23,652
1959	34,409	56,972	64,131	16,075	20,644	192,231	371	18,760	24,648
1960	40,235	64,712	68,874	21,811	38,909	234,541	898	45,407	28,235
1961	175,649	296,368	180,942	42,638	74,021	769,618	1,721	79,257	36,583
1962	576,254	566,285	264,531	24,888	28,979	1,460,937	4,138	162,621	65,457
1963	2,281,689	2,103,424	2,581,582	71,774	34,438	7,072,907	4,208	166,892	85,069
1964	4,401,453	5,092,081	1,101,204	172,387	263,018	11,030,143	2,249	95,574	125,165
1965	3,793,083	5,876,601	2,992,923	1,117,596	698,881	14,479,084	9,813	494,896	600,372
1966	2,537,864	8,795,819	5,995,386	4,377,731	7,957,875	29,664,675	129,314	5,360,984	2,638,144
1967	827,207	4,394,947	2,847,277	2,041,744	3,695,522	13,806,697	133,195	5,154,476	3,533,382
1968	110,852	405,231	696,804	196,098	421,874	1,830,859	38,928	646,039	1,007,125
1969	331	129,182	117,471	110,865	160,198	518,047	54,057	131,955	97,673
1970	31,462	86,082	146,511	51,591	98,499	414,145	4,555	138,535	121,912
1971	100,000	228,000	425,000	49,000	295,000	1,097,000	4,000	62,000	66,000
1972	74,000	394,000	506,000	23,000	355,000	1,352,000	11,000	45,000	39,000
1973	49,000	226,000	785,000	24,000	535,000	1,619,000	4,000	25,000	23,000
1974	26,000	127,000	440,000	14,000	299,000	906,000	2,000	17,000	14,000
1975	29,000	141,000	511,000	14,000	345,000	1,040,000	2,000	24,000	23,000
1976	23,000	109,000	389,000	12,000	263,000	796,000	1,000	4,000	3,000
1977	10,000	34,000	110,000	6,000	73,000	233,000	1,000	4,000	4,000
1978	0	0	0	0	0	0	0	0	0
1979	0	0	0	0	0	0	0	0	0
1980	8,000	36,000	130,000	4,000	88,000	266,000	1,000	1,000	1,000
1981	24,000	123,000	450,000	12,000	306,000	915,000	1,000	1,000	1,000
1982	18,000	93,000	340,000	8,000	230,000	689,000	0	0	0
1983	4,000	137,000	265,000	65,000	144,000	615,000	0	0	0
1984	0	1,134,000	1,781,000	636,000	862,000	4,413,000	0	0	0
1985	0	785,000	1,233,000	440,000	597,000	3,055,000	0	0	0
TOTAL	15,221,533	31,504,223	24,500,839	9,572,074	17,909,719	98,708,388	411,205	12,717,358	8,591,089

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	31,513	15,641	25,845	11,743	3,305	3,471	26,291
1958	23,652	44,982	71,548	35,510	58,682	34,089	10,912	11,456	55,611
1959	24,646	64,946	103,305	51,272	84,728	60,057	20,003	21,006	75,934
1960	50,046	69,880	85,774	42,849	66,986	69,750	21,367	21,031	66,240
1961	74,553	58,998	84,906	48,200	54,601	224,862	78,725	62,802	137,933
1962	59,203	58,621	72,420	41,753	46,230	192,884	71,868	56,601	131,168
1963	54,815	88,979	186,913	87,976	61,767	372,717	132,350	114,258	117,843
1964	128,137	220,948	393,403	220,772	75,409	1,076,599	687,340	654,995	490,236
1965	659,649	1,317,944	1,395,748	935,986	214,482	3,358,035	1,686,001	1,541,239	408,088
1966	2,878,627	3,845,845	677,019	436,736	422,644	4,898,012	1,018,881	703,519	1,818,747
1967	3,675,156	4,847,609	2,033,900	1,220,512	1,208,434	2,700,696	574,551	510,122	1,621,404
1968	1,053,870	1,398,557	5,029,164	3,020,377	8,339,303	9,794,281	1,589,671	1,970,976	7,396,441
1969	164,114	249,020	820,425	528,502	3,761,138	14,458,067	1,800,934	1,563,974	9,610,220
1970	124,349	105,844	125,613	93,600	313,398	10,897,095	1,309,215	1,045,650	8,831,953
1971	96,000	118,000	139,000	159,000	272,000	3,896,000	245,000	213,000	4,276,000
1972	43,000	50,000	65,000	67,000	82,000	1,142,000	93,000	85,000	1,033,000
1973	24,000	20,000	25,000	18,000	23,000	67,000	27,000	23,000	66,000
1974	15,000	12,000	15,000	11,000	15,000	42,000	14,000	13,000	28,000
1975	25,000	17,000	23,000	18,000	23,000	67,000	19,000	17,000	49,000
1976	4,000	3,000	4,000	3,000	4,000	4,000	3,000	3,000	2,000
1977	4,000	4,000	4,000	3,000	5,000	4,000	3,000	3,000	2,000
1978	0	0	0	0	0	0	0	0	0
1979	0	0	0	0	0	0	0	0	0
1980	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
1981	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
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	9,210,124	12,637,932	11,420,381	7,076,434	15,185,671	53,381,657	9,414,050	8,643,176	36,273,210

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

(in dollars)

Sheet 3 of 4

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	60,396	30,601	13,702	44,303	12,971	4,819	0	7,453
1954	17,016	61,342	45,716	20,623	66,339	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	240,399	114,072	50,737	164,809	22,988	8,542	0	9,293
1958	150,629	538,915	167,035	74,292	241,327	39,299	14,604	0	15,890
1959	225,458	775,134	143,373	60,013	203,386	42,059	24,209	0	24,570
1960	210,286	778,749	173,508	45,916	219,424	30,306	27,674	1,163	43,169
1961	229,913	1,173,054	388,128	86,522	474,650	39,007	37,639	1,635	36,989
1962	172,769	1,135,733	360,105	84,387	444,492	70,065	274,106	1,268	21,056
1963	456,373	1,930,160	1,212,005	130,462	1,342,467	27,919	425,117	2,787	40,270
1964	1,811,053	5,981,880	1,893,474	798,913	2,692,387	100,544	731,424	4,766	66,947
1965	1,232,374	13,854,627	2,589,880	2,387,722	4,977,602	131,148	772,668	5,265	145,271
1966	2,992,821	27,821,293	5,439,187	9,662,968	15,102,155	389,208	1,733,820	5,223	294,093
1967	3,458,091	30,671,528	26,214,393	12,577,126	38,791,519	1,352,750	938,062	5,387	672,849
1968	7,530,602	48,815,334	32,838,312	7,558,527	40,396,839	151,291	7,380,507	60,763	1,810,235
1969	13,333,060	46,573,139	40,762,061	7,081,012	47,843,073	228,349	2,585,373	4,700	4,557,656
1970	14,363,521	37,475,240	37,121,818	7,193,510	44,315,328	2,171,963	1,199,732	3,849	2,855,025
1971	7,282,000	16,828,000	21,791,000	6,321,000	28,112,000	1,975,000	581,000	11,000	962,000
1972	3,698,000	6,453,000	11,524,000	105,000	11,629,000	74,000	533,000	19,000	380,000
1973	299,000	644,000	2,972,000	42,000	3,014,000	43,000	355,000	22,000	266,000
1974	48,000	246,000	198,000	12,000	210,000	23,000	109,000	12,000	70,000
1975	73,000	380,000	246,000	121,000	367,000	14,000	18,000	9,000	8,000
1976	4,000	42,000	270,000	148,000	418,000	2,000	9,000	13,000	4,000
1977	4,000	45,000	4,000	1,000	5,000	2,000	9,000	1,268,000	8,000
1978	0	0	145,000	0	145,000	1,000	4,000	783,000	5,000
1979	0	0	565,000	0	565,000	1,000	2,000	376,000	3,000
1980	1,000	13,000	2,509,000	1,000	2,510,000	1,000	1,000	47,000	1,000
1981	1,000	13,000	5,450,000	1,000	5,451,000	1,000	1,000	114,000	1,000
1982	0	0	7,830,000	0	7,830,000	0	0	121,000	0
1983	0	0	3,729,000	0	3,729,000	0	0	206,000	0
1984	0	0	549,000	0	549,000	0	0	5,019,000	0
1985	0	0	29,000	0	29,000	0	0	4,118,000	0
TOTAL	57,707,074	242,669,361	207,380,903	54,612,624	261,993,527	6,980,176	17,792,671	12,234,806	12,326,292

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	17,283	55,601	1,405	18,915	19,276	23,173	205,446	32,017	53,789
1959	19,347	62,239	1,574	22,572	22,244	50,528	269,342	41,184	61,651
1960	36,972	61,855	9,290	122,507	22,504	105,636	461,076	66,458	100,975
1961	37,257	30,978	13,871	212,861	10,713	357,003	777,953	29,348	62,089
1962	21,711	16,824	8,097	213,201	7,794	304,748	938,870	27,714	61,996
1963	42,535	35,244	16,165	258,760	13,295	320,690	1,182,782	62,503	159,906
1964	69,396	55,847	28,329	345,154	13,548	306,545	1,722,500	104,448	279,972
1965	263,232	112,173	64,976	882,937	16,563	628,021	3,022,254	316,569	252,103
1966	1,186,056	233,082	142,669	1,801,483	33,887	1,044,797	6,864,318	449,668	388,506
1967	1,898,197	532,457	405,745	3,184,849	67,691	2,494,481	11,552,468	3,164,232	670,114
1968	2,509,131	1,196,576	1,458,523	4,461,381	113,057	2,801,854	21,943,318	7,756,741	1,756,358
1969	7,623,642	2,260,216	1,522,560	7,871,043	271,456	11,121,994	38,046,989	6,482,095	2,016,216
1970	7,299,829	2,848,270	1,698,644	23,936,394	1,275,052	17,316,166	60,604,924	1,685,855	7,989,855
1971	2,068,000	1,044,000	668,000	18,279,000	2,075,000	9,228,000	36,891,000	3,141,000	10,048,000
1972	368,000	260,000	186,000	5,170,000	190,000	1,261,000	8,441,000	123,000	5,061,000
1973	256,000	160,000	125,000	2,270,000	48,000	147,000	3,692,000	49,000	1,278,000
1974	71,000	44,000	38,000	2,677,000	22,000	73,000	3,139,000	12,000	3,081,000
1975	8,000	6,000	5,000	4,629,000	4,000	24,000	4,725,000	3,000	2,323,000
1976	5,000	4,000	4,000	1,341,000	3,000	10,000	1,395,000	2,000	274,000
1977	11,000	8,000	7,000	28,000	3,000	9,000	1,353,000	2,000	2,000
1978	8,000	6,000	4,000	17,000	1,000	9,000	838,000	0	0
1979	5,000	4,000	3,000	12,000	0	6,000	412,000	0	0
1980	1,000	1,000	1,000	1,000	1,000	1,000	56,000	1,000	1,000
1981	1,000	1,000	1,000	1,000	1,000	1,000	123,000	1,000	1,000
1982	0	0	0	0	0	0	121,000	0	0
1983	0	0	0	0	0	0	206,000	0	0
1984	0	0	0	0	0	0	5,019,000	0	0
1985	0	0	0	0	0	0	4,118,000	0	0
TOTAL	23,850,796	9,137,384	6,415,565	77,790,736	4,269,493	47,685,494	218,483,413	23,609,277	36,017,358

BURSED THRU CAPITAL COST COMPONENT OF TRANSPORTATION CHARGE

(in dollars)

Sheet 4 of 4

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	2,292	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	1,406	2,488
1957	24,732	24,848	17,062	116,829		1,860	2,656	4,931	5,202	9,209
1958	42,283	42,484	29,167	199,740		3,181	4,542	8,430	8,893	15,745
1959	48,946	49,176	42,442	243,399		6,353	8,396	15,582	16,436	31,103
1960	71,430	71,696	99,646	410,205		15,593	10,316	15,558	21,295	50,358
1961	37,296	40,394	737,510	906,637		18,708	7,334	6,879	16,838	34,418
1962	39,128	40,344	77,029	246,211		31,433	17,509	16,126	42,545	86,110
1963	74,725	73,959	1,928,369	2,299,462		66,585	38,695	28,958	80,162	172,166
1964	129,231	80,031	153,778	747,460		134,099	46,995	71,732	117,640	255,027
1965	141,151	98,988	204,345	1,013,156		347,308	62,803	340,285	125,699	603,898
1966	189,836	332,896	558,966	1,919,872		445,795	245,826	1,201,014	341,054	4,533,111
1967	233,510	317,717	1,071,248	5,456,821		1,482,826	981,428	1,075,422	866,473	31,507,144
1968	393,128	328,916	722,038	10,957,181		3,970,891	438,492	319,685	1,110,685	36,569,156
1969	1,032,044	1,583,336	964,037	12,077,728		6,714,693	356,350	672,804	1,210,846	8,522,963
1970	1,847,325	1,092,317	3,511,050	16,126,402		8,081,096	6,205,696	2,669,556	3,118,591	7,972,678
1971	19,603,000	7,915,000	10,114,000	50,821,000		6,314,000	3,371,000	1,899,000	6,845,000	2,393,000-
1972	1,410,000	12,127,000	16,193,000	34,914,000		1,584,000	608,000	987,000	11,472,000	14,936,000-
1973	659,000	2,898,000	8,635,000	13,519,000		150,000	68,000	165,000	17,741,000	1,740,000-
1974	79,000	80,000	297,000	3,549,000		68,000	35,000	838,000	846,000	187,000
1975	13,000	27,000	168,000	2,534,000		9,000	4,000	10,000	88,000	26,000
1976	7,000	7,000	55,000	345,000		1,000	3,000	3,000	19,000	14,000
1977	5,000	5,000	2,000	16,000		1,000	2,000	3,000	7,000	14,000
1978	0	0	0	0		0	0	0	0	10,000
1979	0	0	0	0		0	0	0	0	10,000
1980	1,000	1,000	1,000	5,000		1,000	1,000	1,000	1,000	6,000
1981	1,000	1,000	1,000	5,000		1,000	1,000	1,000	1,000	1,000
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	26,135,153	27,285,700	45,616,926	158,664,414		29,471,130	12,523,083	10,359,127	44,109,636	71,573,242

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	100,390	100,889
1953	4,470	17,953	0	0	0	0	0	314,853	317,297
1954	5,909	23,736	0	0	0	0	0	402,005	409,514
1955	1,999	8,028	0	0	0	0	0	162,531	172,101
1956	2,136	8,582	0	0	0	0	0	250,693	347,268
1957	7,907	31,765	0	0	0	0	0	714,727	1,472,427
1958	13,517	54,308	0	0	0	0	0	1,365,555	2,321,975
1959	37,997	116,067	28,105	46,896	7,381	7,380	89,762	2,155,209	3,028,667
1960	56,929	170,049	45,101	53,461	7,333	8,974	114,869	2,729,230	4,463,419
1961	103,087	187,264	16,910	13,672	1,140	2,796	34,518	4,747,641	8,665,086
1962	239,268	432,991	7,093	7,450	591	1,499	16,633	5,964,349	8,972,034
1963	238,188	624,754	15,875	15,853	1,188	3,009	35,925	18,713,371	24,351,441
1964	1,211,880	1,837,373	308,862	25,259	1,835	4,631	340,587	32,185,976	42,336,001
1965	3,331,981	4,811,974	733,717	41,729	3,121	7,760	786,327	58,957,332	63,611,330
1966	8,413,810	15,180,610	2,240,499	53,748	3,722	9,599	2,307,568	127,394,266	131,737,153
1967	18,371,744	54,285,037	6,268,760	51,769	3,407	8,817	6,332,753	188,070,482	194,530,037
1968	16,997,785	59,406,694	2,630,639	60,569	4,344	11,289	2,706,841	194,627,041	199,877,755
1969	17,849,690	35,327,346	396,987	41,897	2,557	6,588	448,029	185,561,928	187,489,423
1970	23,228,802	51,276,419	236,955	37,992	2,316	5,962	283,225	212,966,106	213,437,147
1971	15,813,000	31,849,000	207,000	31,000	2,000	5,000	245,000	167,820,000	168,274,000
1972	9,745,000	9,460,000	34,000	20,000	2,000	3,000	59,000	72,995,000	73,256,000
1973	714,000	17,098,000	24,000	18,000	2,000	3,000	47,000	39,966,000	40,472,000
1974	72,000	2,046,000	16,000	17,000	2,000	3,000	38,000	10,376,000	10,643,000
1975	14,000	151,000	138,000	1,075,000	103,000	262,000	1,578,000	11,403,000	12,064,000
1976	30,000	70,000	157,000	1,489,000	124,000	338,000	2,108,000	5,553,000	6,108,000
1977	694,000	721,000	1,054,000	3,177,000	179,000	529,000	4,939,000	7,875,000	9,180,000
1978	174,000	184,000	316,000	15,936,000	1,267,000	3,214,000	20,733,000	23,584,000	26,483,000
1979	1,290,000	1,300,000	261,000	18,266,000	1,471,000	3,646,000	23,644,000	27,359,000	33,920,000
1980	1,408,000	1,418,000	273,000	3,296,000	281,000	725,000	4,575,000	9,181,000	10,381,000
1981	151,000	156,000	541,000	177,000	17,000	43,000	778,000	7,798,000	7,845,000
1982	0	0	110,000	86,000	8,000	21,000	225,000	9,502,000	9,513,000
1983	0	0	0	0	0	0	0	6,214,000	6,224,000
1984	0	0	0	0	0	0	0	11,254,000	11,257,000
1985	0	0	383,000	0	0	0	383,000	7,750,000	7,753,000
TOTAL	120,223,547	288,259,765	16,443,503	44,038,295	3,496,935	8,870,304	72,849,037	1,456,013,685	1,521,013,964

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)

Sheet 1 of 8

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)
1962	0	0	0	0	0	76,550	9,146	0	0
1963	0	0	0	0	0	147,632	19,482	0	0
1964	0	0	0	0	0	148,100	15,295	19,707	0
1965	0	0	0	0	0	257,516	45,289	46,829	0
1966	0	0	0	0	0	264,640	22,663	64,284	0
1967	0	0	0	0	0	421,474	29,831	110,101	0
1968	0	0	0	0	0	351,918	35,813	63,048	0
1969	0	0	0	92,347	92,347	439,047	41,233	71,230	0
1970	0	0	0	95,448	95,448	353,653	40,044	61,601	101,287
1971	200	0	0	77,000	77,000	416,000	44,000	76,000	150,000
1972	200	0	0	83,000	83,000	427,000	45,000	79,000	152,000
1973	200	0	0	86,000	86,000	442,000	46,000	81,000	157,000
1974	200	0	0	87,000	87,000	446,000	47,000	82,000	158,000
1975	200	0	0	86,000	86,000	445,000	46,000	80,000	158,000
1976	200	0	0	87,000	87,000	445,000	46,000	81,000	158,000
1977	200	0	0	91,000	91,000	445,000	46,000	81,000	157,000
1978	200	0	0	95,000	95,000	444,000	46,000	81,000	157,000
1979	200	0	0	96,000	96,000	444,000	46,000	81,000	157,000
1980	200	123,000	25,000	78,000	226,000	445,000	46,000	81,000	157,000
1981	200	113,000	24,000	75,000	212,000	446,000	46,000	81,000	158,000
1982	200	113,000	24,000	76,000	213,000	447,000	47,000	82,000	158,000
1983	200	112,000	24,000	75,000	211,000	445,000	47,000	82,000	157,000
1984	200	112,000	24,000	75,000	211,000	444,000	46,000	81,000	157,000
1985	200	112,000	24,000	75,000	211,000	445,000	46,000	81,000	157,000
1986	200	112,000	24,000	75,000	211,000	445,000	46,000	81,000	158,000
1987	200	113,000	24,000	75,000	212,000	445,000	46,000	81,000	158,000
1988	200	113,000	24,000	75,000	212,000	446,000	46,000	81,000	158,000
1989	200	113,000	24,000	75,000	212,000	446,000	46,000	81,000	158,000
1990	200	113,000	24,000	75,000	212,000	446,000	46,000	80,000	158,000
1991	200	113,000	24,000	75,000	212,000	446,000	46,000	80,000	158,000
1992	200	113,000	24,000	75,000	212,000	446,000	46,000	80,000	158,000
1993	200	113,000	24,000	75,000	212,000	446,000	46,000	80,000	158,000
1994	200	113,000	24,000	75,000	212,000	446,000	46,000	80,000	158,000
1995	200	113,000	24,000	75,000	212,000	446,000	46,000	81,000	158,000
1996	200	113,000	24,000	76,000	213,000	446,000	46,000	80,000	158,000
1997	200	113,000	24,000	76,000	213,000	446,000	46,000	80,000	158,000
1998	200	113,000	24,000	76,000	213,000	446,000	46,000	80,000	158,000
1999	200	113,000	24,000	76,000	213,000	446,000	46,000	81,000	158,000
2000	200	113,000	24,000	76,000	213,000	446,000	46,000	81,000	158,000
2001	200	113,000	24,000	76,000	213,000	446,000	46,000	80,000	158,000
2002	200	113,000	24,000	76,000	213,000	446,000	46,000	81,000	158,000
2003	200	113,000	24,000	76,000	213,000	446,000	46,000	80,000	158,000
2004	200	113,000	24,000	75,000	212,000	446,000	46,000	80,000	158,000
2005	200	113,000	24,000	75,000	212,000	446,000	46,000	81,000	158,000
2006	200	113,000	24,000	75,000	212,000	446,000	46,000	81,000	158,000
2007	200	113,000	24,000	75,000	212,000	446,000	46,000	80,000	158,000
2008	200	113,000	24,000	75,000	212,000	446,000	46,000	81,000	158,000
2009	200	113,000	24,000	75,000	212,000	446,000	46,000	80,000	158,000
2010	200	113,000	24,000	75,000	212,000	446,000	46,000	80,000	158,000
2011	200	113,000	24,000	75,000	212,000	446,000	46,000	80,000	158,000
2012	200	113,000	24,000	75,000	212,000	446,000	46,000	80,000	158,000
2013	200	113,000	24,000	75,000	212,000	446,000	46,000	81,000	158,000
2014	200	113,000	24,000	75,000	212,000	446,000	46,000	80,000	158,000
2015	200	113,000	24,000	75,000	212,000	446,000	46,000	80,000	158,000
2016	200	113,000	24,000	75,000	212,000	446,000	46,000	81,000	158,000
2017	200	113,000	24,000	75,000	212,000	446,000	46,000	80,000	158,000
2018	200	113,000	24,000	75,000	212,000	446,000	46,000	80,000	158,000
2019	200	113,000	24,000	75,000	212,000	446,000	46,000	80,000	158,000
2020(a)	200	113,000	24,000	75,000	212,000	446,000	46,000	81,000	158,000

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

REIMBURSED THRU MINIMUM OMP&R COMPONENT OF TRANSPORTATION CHARGE

(in dollars)

Sheet 2 of 8

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)
1962	0	0	0	0	85,696	0	0	0	0
1963	0	0	0	0	167,114	0	0	0	0
1964	0	0	0	0	183,102	0	0	0	0
1965	2,186	7,505	5,438	13,378	378,141	0	0	0	0
1966	4,091	12,651	11,363	26,834	406,526	0	0	0	0
1967	1,972	11,332	15,854	34,854	625,418	0	0	0	0
1968	1,434	10,485	14,777	34,185	511,660	1,017,815	289,956	122,203	1,429,974
1969	1,650	7,507	11,556	33,226	605,449	957,462	345,276	192,146	1,494,884
1970	1,548	6,016	8,979	26,101	599,229	968,835	328,336	146,394	1,443,565
1971	4,000	8,000	12,000	37,000	747,000	1,263,000	398,000	146,000	1,807,000
1972	4,000	8,000	11,000	38,000	764,000	1,400,000	428,000	155,000	1,983,000
1973	5,000	9,000	11,000	38,000	789,000	1,480,000	452,000	161,000	2,093,000
1974	5,000	9,000	11,000	39,000	797,000	1,496,000	458,000	162,000	2,116,000
1975	5,000	9,000	11,000	38,000	792,000	1,492,000	456,000	161,000	2,109,000
1976	5,000	9,000	11,000	38,000	793,000	1,475,000	457,000	161,000	2,093,000
1977	5,000	9,000	11,000	38,000	792,000	1,470,000	460,000	162,000	2,092,000
1978	5,000	9,000	11,000	38,000	791,000	1,466,000	459,000	162,000	2,087,000
1979	5,000	9,000	11,000	38,000	791,000	1,474,000	456,000	161,000	2,091,000
1980	5,000	9,000	11,000	38,000	792,000	1,490,000	458,000	162,000	2,110,000
1981	5,000	9,000	11,000	39,000	795,000	1,495,000	461,000	163,000	2,119,000
1982	5,000	9,000	11,000	39,000	798,000	1,496,000	464,000	163,000	2,123,000
1983	5,000	9,000	11,000	38,000	794,000	1,470,000	464,000	164,000	2,098,000
1984	5,000	9,000	11,000	38,000	791,000	1,467,000	458,000	162,000	2,087,000
1985	5,000	9,000	11,000	38,000	792,000	1,468,000	460,000	162,000	2,090,000
1986	5,000	9,000	11,000	38,000	793,000	1,469,000	460,000	162,000	2,091,000
1987	5,000	9,000	11,000	38,000	793,000	1,471,000	463,000	163,000	2,097,000
1988	5,000	9,000	11,000	38,000	794,000	1,473,000	463,000	163,000	2,099,000
1989	5,000	9,000	11,000	38,000	794,000	1,473,000	460,000	162,000	2,095,000
1990	5,000	9,000	11,000	38,000	793,000	1,473,000	461,000	163,000	2,097,000
1991	5,000	9,000	11,000	38,000	793,000	1,473,000	461,000	162,000	2,096,000
1992	5,000	9,000	11,000	38,000	793,000	1,473,000	460,000	162,000	2,095,000
1993	5,000	9,000	11,000	38,000	793,000	1,473,000	458,000	162,000	2,093,000
1994	5,000	9,000	11,000	38,000	793,000	1,473,000	461,000	162,000	2,096,000
1995	5,000	9,000	11,000	39,000	795,000	1,475,000	462,000	163,000	2,100,000
1996	5,000	9,000	11,000	39,000	794,000	1,476,000	461,000	162,000	2,099,000
1997	5,000	9,000	11,000	39,000	794,000	1,476,000	459,000	162,000	2,097,000
1998	5,000	9,000	11,000	39,000	794,000	1,476,000	461,000	163,000	2,100,000
1999	5,000	9,000	11,000	39,000	795,000	1,476,000	464,000	163,000	2,103,000
2000	5,000	9,000	11,000	39,000	795,000	1,476,000	462,000	163,000	2,101,000
2001	5,000	9,000	11,000	39,000	794,000	1,476,000	461,000	163,000	2,100,000
2002	5,000	9,000	11,000	39,000	795,000	1,476,000	463,000	163,000	2,102,000
2003	5,000	9,000	11,000	39,000	794,000	1,476,000	462,000	163,000	2,101,000
2004	5,000	9,000	11,000	39,000	794,000	1,475,000	461,000	163,000	2,099,000
2005	5,000	9,000	11,000	39,000	795,000	1,476,000	462,000	163,000	2,101,000
2006	5,000	9,000	11,000	39,000	795,000	1,476,000	462,000	163,000	2,101,000
2007	5,000	9,000	11,000	39,000	794,000	1,476,000	462,000	163,000	2,101,000
2008	5,000	9,000	11,000	39,000	795,000	1,476,000	462,000	163,000	2,101,000
2009	5,000	9,000	11,000	39,000	794,000	1,475,000	461,000	163,000	2,099,000
2010	5,000	9,000	11,000	39,000	794,000	1,475,000	459,000	162,000	2,096,000
2011	5,000	9,000	11,000	39,000	794,000	1,475,000	459,000	162,000	2,096,000
2012	5,000	9,000	11,000	39,000	794,000	1,476,000	462,000	163,000	2,101,000
2013	5,000	9,000	11,000	39,000	795,000	1,475,000	461,000	163,000	2,099,000
2014	5,000	9,000	11,000	39,000	794,000	1,475,000	461,000	163,000	2,099,000
2015	5,000	9,000	11,000	39,000	794,000	1,475,000	461,000	163,000	2,099,000
2016	5,000	9,000	11,000	39,000	795,000	1,476,000	462,000	163,000	2,101,000
2017	5,000	9,000	11,000	39,000	794,000	1,475,000	461,000	163,000	2,099,000
2018	5,000	9,000	11,000	39,000	794,000	1,475,000	461,000	163,000	2,099,000
2019	5,000	9,000	11,000	39,000	794,000	1,475,000	461,000	163,000	2,099,000
2020 (a)	5,000	9,000	11,000	39,000	795,000	1,476,000	465,000	163,000	2,104,000

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

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

(in dollars)

Sheet 3 of 8

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)
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	135,233	406,922	164,863	62,911	115,285	885,214	0	0	0
1969	68,616	399,315	198,438	54,596	271,928	992,893	10,791	137,557	111,390
1970	21,578	318,755	203,038	54,440	192,364	790,175	12,175	156,402	154,809
1971	112,000	593,000	227,000	99,000	160,000	1,191,000	3,000	201,000	200,000
1972	117,000	632,000	239,000	105,000	169,000	1,262,000	3,000	201,000	201,000
1973	123,000	655,000	248,000	109,000	175,000	1,310,000	3,000	204,000	204,000
1974	122,000	662,000	249,000	109,000	175,000	1,317,000	3,000	204,000	204,000
1975	122,000	659,000	246,000	108,000	174,000	1,309,000	3,000	203,000	202,000
1976	122,000	659,000	248,000	109,000	175,000	1,313,000	3,000	205,000	203,000
1977	124,000	658,000	248,000	109,000	175,000	1,314,000	3,000	204,000	203,000
1978	123,000	656,000	248,000	109,000	175,000	1,311,000	3,000	204,000	203,000
1979	122,000	656,000	247,000	108,000	174,000	1,307,000	3,000	203,000	203,000
1980	123,000	661,000	249,000	109,000	176,000	1,318,000	3,000	204,000	204,000
1981	125,000	665,000	252,000	111,000	176,000	1,329,000	3,000	206,000	205,000
1982	126,000	669,000	254,000	112,000	177,000	1,338,000	3,000	207,000	206,000
1983	126,000	668,000	262,000	115,000	181,000	1,352,000	3,000	206,000	206,000
1984	123,000	666,000	259,000	112,000	181,000	1,341,000	3,000	204,000	203,000
1985	124,000	665,000	258,000	111,000	179,000	1,337,000	3,000	204,000	204,000
1986	124,000	661,000	250,000	109,000	176,000	1,320,000	3,000	204,000	204,000
1987	125,000	663,000	252,000	110,000	176,000	1,326,000	3,000	206,000	205,000
1988	125,000	665,000	253,000	110,000	177,000	1,330,000	3,000	206,000	205,000
1989	124,000	664,000	251,000	109,000	176,000	1,324,000	3,000	205,000	204,000
1990	124,000	664,000	251,000	110,000	176,000	1,325,000	3,000	205,000	204,000
1991	124,000	664,000	251,000	109,000	176,000	1,324,000	3,000	205,000	204,000
1992	124,000	664,000	251,000	109,000	176,000	1,324,000	3,000	205,000	204,000
1993	123,000	663,000	249,000	109,000	175,000	1,319,000	3,000	204,000	203,000
1994	124,000	664,000	251,000	109,000	176,000	1,324,000	3,000	205,000	204,000
1995	124,000	665,000	252,000	110,000	176,000	1,327,000	3,000	205,000	205,000
1996	125,000	665,000	251,000	109,000	176,000	1,326,000	3,000	205,000	204,000
1997	124,000	665,000	250,000	109,000	176,000	1,324,000	3,000	204,000	204,000
1998	124,000	666,000	252,000	110,000	176,000	1,328,000	3,000	205,000	204,000
1999	125,000	667,000	253,000	110,000	177,000	1,332,000	3,000	206,000	205,000
2000	124,000	666,000	252,000	110,000	176,000	1,328,000	3,000	205,000	205,000
2001	124,000	666,000	252,000	110,000	176,000	1,328,000	3,000	205,000	205,000
2002	125,000	667,000	253,000	110,000	177,000	1,332,000	3,000	206,000	205,000
2003	124,000	666,000	252,000	110,000	176,000	1,328,000	3,000	205,000	205,000
2004	124,000	666,000	252,000	110,000	176,000	1,328,000	3,000	205,000	204,000
2005	125,000	666,000	252,000	110,000	176,000	1,329,000	3,000	205,000	205,000
2006	125,000	666,000	253,000	110,000	177,000	1,331,000	3,000	206,000	205,000
2007	124,000	666,000	252,000	110,000	177,000	1,329,000	3,000	205,000	205,000
2008	125,000	666,000	252,000	110,000	176,000	1,329,000	3,000	205,000	205,000
2009	124,000	666,000	252,000	110,000	176,000	1,328,000	3,000	205,000	205,000
2010	123,000	665,000	251,000	109,000	176,000	1,324,000	3,000	205,000	204,000
2011	123,000	665,000	251,000	109,000	176,000	1,324,000	3,000	205,000	204,000
2012	124,000	666,000	252,000	110,000	176,000	1,328,000	3,000	205,000	205,000
2013	124,000	666,000	252,000	110,000	176,000	1,328,000	3,000	205,000	205,000
2014	124,000	666,000	252,000	110,000	176,000	1,328,000	3,000	205,000	204,000
2015	124,000	666,000	252,000	110,000	176,000	1,328,000	3,000	205,000	205,000
2016	124,000	666,000	252,000	110,000	177,000	1,329,000	3,000	205,000	205,000
2017	124,000	666,000	252,000	110,000	176,000	1,328,000	3,000	205,000	204,000
2018	124,000	666,000	252,000	110,000	176,000	1,328,000	3,000	205,000	205,000
2019	124,000	666,000	252,000	110,000	176,000	1,328,000	3,000	205,000	205,000
2020 (a)	126,000	668,000	255,000	111,000	177,000	1,337,000	3,000	207,000	206,000

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

REIMBURSED THRU MINIMUM OMP&R COMPONENT OF TRANSPORTATION CHARGE

(in dollars)

Sheet 4 of 8

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)
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	116,377	72,971	0	0	0	0	0	0	0
1970	153,831	99,921	137,221	136,215	145,649	2,144	2,292	936	171
1971	216,000	122,000	196,000	137,000	191,000	723,000	164,000	110,000	553,000
1972	217,000	123,000	197,000	137,000	192,000	734,000	159,000	105,000	577,000
1973	220,000	125,000	200,000	139,000	193,000	722,000	160,000	106,000	567,000
1974	220,000	125,000	200,000	139,000	193,000	728,000	160,000	106,000	573,000
1975	219,000	124,000	198,000	138,000	192,000	726,000	159,000	105,000	572,000
1976	220,000	125,000	199,000	139,000	192,000	727,000	160,000	106,000	571,000
1977	220,000	125,000	199,000	139,000	192,000	725,000	159,000	105,000	571,000
1978	220,000	125,000	199,000	138,000	192,000	724,000	160,000	106,000	570,000
1979	219,000	124,000	199,000	138,000	192,000	724,000	159,000	106,000	570,000
1980	221,000	125,000	200,000	139,000	193,000	726,000	161,000	107,000	570,000
1981	222,000	126,000	201,000	140,000	194,000	729,000	161,000	107,000	572,000
1982	223,000	127,000	203,000	140,000	195,000	731,000	162,000	108,000	573,000
1983	223,000	126,000	202,000	140,000	195,000	727,000	161,000	107,000	570,000
1984	220,000	125,000	199,000	139,000	192,000	724,000	160,000	106,000	570,000
1985	220,000	125,000	200,000	139,000	193,000	725,000	160,000	106,000	570,000
1986	221,000	125,000	200,000	140,000	193,000	725,000	160,000	106,000	570,000
1987	222,000	126,000	201,000	140,000	194,000	726,000	160,000	106,000	571,000
1988	222,000	126,000	202,000	139,000	194,000	727,000	161,000	107,000	571,000
1989	221,000	126,000	200,000	139,000	193,000	727,000	160,000	106,000	571,000
1990	221,000	126,000	201,000	139,000	194,000	726,000	160,000	106,000	571,000
1991	221,000	126,000	200,000	139,000	194,000	726,000	160,000	106,000	571,000
1992	221,000	125,000	200,000	139,000	193,000	726,000	160,000	106,000	571,000
1993	220,000	125,000	200,000	139,000	193,000	726,000	160,000	106,000	571,000
1994	221,000	126,000	200,000	139,000	193,000	726,000	160,000	106,000	571,000
1995	222,000	126,000	201,000	140,000	194,000	727,000	160,000	106,000	571,000
1996	221,000	126,000	200,000	140,000	193,000	728,000	160,000	106,000	572,000
1997	221,000	125,000	200,000	139,000	193,000	727,000	160,000	106,000	572,000
1998	221,000	126,000	201,000	139,000	194,000	728,000	160,000	106,000	572,000
1999	222,000	126,000	202,000	140,000	195,000	729,000	161,000	107,000	572,000
2000	222,000	126,000	201,000	140,000	194,000	729,000	161,000	107,000	572,000
2001	222,000	126,000	201,000	140,000	194,000	728,000	160,000	106,000	572,000
2002	222,000	126,000	202,000	140,000	194,000	728,000	161,000	107,000	572,000
2003	222,000	126,000	201,000	140,000	194,000	728,000	160,000	106,000	572,000
2004	221,000	126,000	201,000	140,000	194,000	727,000	160,000	106,000	572,000
2005	222,000	126,000	201,000	140,000	194,000	728,000	161,000	106,000	572,000
2006	222,000	126,000	201,000	140,000	194,000	728,000	161,000	107,000	572,000
2007	222,000	126,000	201,000	140,000	194,000	728,000	161,000	107,000	572,000
2008	222,000	126,000	201,000	140,000	194,000	728,000	160,000	106,000	572,000
2009	222,000	126,000	201,000	140,000	194,000	728,000	161,000	106,000	572,000
2010	222,000	125,000	200,000	139,000	193,000	728,000	160,000	106,000	572,000
2011	222,000	125,000	200,000	139,000	193,000	727,000	160,000	106,000	572,000
2012	222,000	126,000	201,000	140,000	194,000	728,000	160,000	106,000	572,000
2013	222,000	126,000	201,000	140,000	194,000	728,000	160,000	106,000	572,000
2014	222,000	126,000	201,000	140,000	194,000	728,000	160,000	106,000	572,000
2015	222,000	126,000	201,000	140,000	194,000	728,000	160,000	106,000	572,000
2016	222,000	126,000	201,000	140,000	194,000	728,000	161,000	106,000	572,000
2017	222,000	126,000	201,000	140,000	194,000	728,000	160,000	106,000	572,000
2018	222,000	126,000	201,000	140,000	194,000	728,000	160,000	106,000	572,000
2019	222,000	126,000	201,000	140,000	194,000	728,000	160,000	106,000	572,000
2020(a)	223,000	127,000	202,000	140,000	195,000	729,000	161,000	107,000	572,000

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

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

(in dollars)

Sheet 5 of 8

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)
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	449,086	0	0	0	0	0	0	0
1970	0	1,001,766	0	0	0	0	0	0	0
1971	0	2,816,000	0	0	0	0	0	0	0
1972	913,000	3,759,000	1,494,000	27,000	1,521,000	124,000	303,000	0	300,000
1973	935,000	3,778,000	1,549,000	29,000	1,578,000	132,000	318,000	0	316,000
1974	950,000	3,805,000	1,600,000	29,000	1,629,000	132,000	317,000	0	316,000
1975	949,000	3,790,000	1,600,000	29,000	1,629,000	132,000	317,000	0	313,000
1976	951,000	3,801,000	1,593,000	29,000	1,622,000	133,000	323,000	0	318,000
1977	942,000	3,787,000	1,578,000	29,000	1,607,000	131,000	312,000	0	307,000
1978	943,000	3,787,000	1,560,000	29,000	1,589,000	132,000	318,000	0	313,000
1979	945,000	3,785,000	1,567,000	29,000	1,596,000	133,000	321,000	0	315,000
1980	951,000	3,804,000	1,573,000	29,000	1,602,000	134,000	324,000	0	319,000
1981	954,000	3,820,000	1,568,000	29,000	1,597,000	134,000	321,000	0	320,000
1982	957,000	3,835,000	1,567,000	29,000	1,596,000	135,000	324,000	0	323,000
1983	951,000	3,817,000	1,559,000	29,000	1,588,000	133,000	316,000	0	316,000
1984	948,000	3,793,000	1,559,000	29,000	1,588,000	132,000	312,000	0	312,000
1985	947,000	3,796,000	1,559,000	29,000	1,588,000	132,000	311,000	0	311,000
1986	947,000	3,798,000	1,560,000	29,000	1,589,000	132,000	283,000	39,000	310,000
1987	948,000	3,808,000	1,562,000	29,000	1,591,000	132,000	283,000	39,000	310,000
1988	948,000	3,811,000	1,563,000	29,000	1,592,000	132,000	282,000	39,000	309,000
1989	948,000	3,803,000	1,563,000	29,000	1,592,000	132,000	282,000	39,000	309,000
1990	947,000	3,803,000	1,563,000	29,000	1,592,000	132,000	282,000	39,000	309,000
1991	947,000	3,802,000	1,563,000	29,000	1,592,000	132,000	281,000	39,000	308,000
1992	947,000	3,800,000	1,563,000	29,000	1,592,000	131,000	281,000	39,000	308,000
1993	947,000	3,797,000	1,563,000	29,000	1,592,000	132,000	281,000	39,000	308,000
1994	947,000	3,801,000	1,563,000	29,000	1,592,000	132,000	281,000	39,000	308,000
1995	948,000	3,808,000	1,565,000	29,000	1,594,000	132,000	281,000	40,000	308,000
1996	948,000	3,806,000	1,566,000	29,000	1,595,000	132,000	282,000	40,000	309,000
1997	948,000	3,802,000	1,566,000	29,000	1,595,000	132,000	282,000	40,000	309,000
1998	948,000	3,807,000	1,566,000	29,000	1,595,000	132,000	282,000	40,000	309,000
1999	949,000	3,817,000	1,566,000	29,000	1,595,000	132,000	282,000	40,000	309,000
2000	951,000	3,816,000	1,566,000	29,000	1,595,000	133,000	287,000	40,000	313,000
2001	949,000	3,811,000	1,566,000	29,000	1,595,000	132,000	282,000	40,000	309,000
2002	949,000	3,815,000	1,566,000	29,000	1,595,000	132,000	283,000	40,000	310,000
2003	949,000	3,811,000	1,566,000	29,000	1,595,000	132,000	283,000	40,000	310,000
2004	948,000	3,807,000	1,565,000	29,000	1,594,000	132,000	283,000	40,000	310,000
2005	949,000	3,812,000	1,565,000	29,000	1,594,000	132,000	284,000	40,000	311,000
2006	949,000	3,814,000	1,565,000	29,000	1,594,000	132,000	284,000	40,000	311,000
2007	949,000	3,813,000	1,565,000	29,000	1,594,000	132,000	284,000	40,000	311,000
2008	949,000	3,811,000	1,565,000	29,000	1,594,000	132,000	284,000	40,000	311,000
2009	949,000	3,812,000	1,565,000	29,000	1,594,000	132,000	283,000	40,000	310,000
2010	949,000	3,806,000	1,565,000	29,000	1,594,000	132,000	284,000	40,000	311,000
2011	949,000	3,805,000	1,565,000	29,000	1,594,000	132,000	284,000	40,000	311,000
2012	949,000	3,811,000	1,565,000	29,000	1,594,000	132,000	284,000	40,000	311,000
2013	949,000	3,811,000	1,565,000	29,000	1,594,000	132,000	283,000	40,000	310,000
2014	949,000	3,810,000	1,565,000	29,000	1,594,000	132,000	284,000	40,000	310,000
2015	949,000	3,811,000	1,565,000	29,000	1,594,000	132,000	284,000	40,000	311,000
2016	950,000	3,813,000	1,565,000	29,000	1,594,000	132,000	284,000	40,000	311,000
2017	949,000	3,810,000	1,565,000	29,000	1,594,000	132,000	285,000	40,000	311,000
2018	949,000	3,811,000	1,565,000	29,000	1,594,000	132,000	285,000	40,000	312,000
2019	949,000	3,811,000	1,565,000	29,000	1,594,000	132,000	284,000	40,000	311,000
2020 (a)	950,000	3,822,000	1,565,000	29,000	1,594,000	132,000	284,000	40,000	311,000

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

REIMBURSED THRU MINIMUM OMP&R COMPONENT OF TRANSPORTATION CHARGE

(in dollars)

Sheet 6 of 8

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)
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	252,000	192,000	222,000	1,526,000	22,000	188,000	3,129,000	68,000	0
1973	267,000	200,000	234,000	1,602,000	24,000	221,000	3,314,000	73,000	877,000
1974	264,000	200,000	234,000	1,614,000	24,000	84,000	3,185,000	73,000	874,000
1975	263,000	199,000	234,000	1,593,000	24,000	208,000	3,283,000	73,000	868,000
1976	268,000	202,000	235,000	1,595,000	24,000	149,000	2,949,000	73,000	857,000
1977	258,000	196,000	233,000	1,556,000	24,000	369,000	3,386,000	73,000	854,000
1978	264,000	199,000	233,000	1,571,000	24,000	321,000	3,375,000	73,000	852,000
1979	266,000	201,000	234,000	1,581,000	24,000	199,000	3,274,000	73,000	852,000
1980	269,000	202,000	235,000	1,593,000	24,000	214,000	3,314,000	73,000	855,000
1981	270,000	204,000	236,000	1,600,000	24,000	244,000	3,353,000	74,000	859,000
1982	273,000	205,000	237,000	1,612,000	24,000	296,000	3,429,000	74,000	861,000
1983	266,000	201,000	234,000	1,585,000	24,000	59,000	3,134,000	73,000	854,000
1984	263,000	199,000	234,000	1,571,000	24,000	67,000	3,114,000	73,000	854,000
1985	262,000	199,000	233,000	1,568,000	24,000	401,000	3,441,000	73,000	854,000
1986	261,000	198,000	233,000	1,560,000	24,000	122,000	3,162,000	73,000	855,000
1987	261,000	198,000	234,000	1,561,000	24,000	201,000	3,243,000	73,000	856,000
1988	260,000	198,000	234,000	1,562,000	24,000	365,000	3,405,000	73,000	858,000
1989	260,000	198,000	234,000	1,561,000	24,000	210,000	3,249,000	73,000	858,000
1990	260,000	198,000	234,000	1,562,000	24,000	29,000	3,069,000	73,000	858,000
1991	260,000	198,000	234,000	1,559,000	24,000	257,000	3,292,000	73,000	858,000
1992	259,000	197,000	234,000	1,558,000	24,000	99,000	3,130,000	73,000	858,000
1993	259,000	197,000	234,000	1,558,000	24,000	316,000	3,348,000	73,000	857,000
1994	259,000	197,000	234,000	1,558,000	24,000	355,000	3,387,000	73,000	857,000
1995	260,000	198,000	234,000	1,560,000	24,000	173,000	3,210,000	74,000	859,000
1996	260,000	198,000	234,000	1,562,000	24,000	36,000	3,077,000	74,000	860,000
1997	260,000	198,000	234,000	1,564,000	24,000	204,000	3,247,000	74,000	860,000
1998	260,000	198,000	234,000	1,562,000	24,000	221,000	3,262,000	74,000	860,000
1999	260,000	198,000	234,000	1,562,000	24,000	472,000	3,513,000	74,000	860,000
2000	264,000	200,000	235,000	1,577,000	24,000	206,000	2,867,000	74,000	860,000
2001	260,000	198,000	234,000	1,564,000	24,000	354,000	3,397,000	74,000	860,000
2002	261,000	198,000	235,000	1,566,000	24,000	140,000	3,189,000	74,000	860,000
2003	261,000	199,000	235,000	1,566,000	24,000	193,000	3,243,000	74,000	860,000
2004	261,000	198,000	234,000	1,564,000	24,000	327,000	3,373,000	74,000	859,000
2005	262,000	199,000	235,000	1,568,000	24,000	223,000	3,278,000	74,000	859,000
2006	262,000	199,000	235,000	1,568,000	24,000	216,000	3,271,000	74,000	859,000
2007	262,000	199,000	234,000	1,567,000	24,000	135,000	3,188,000	74,000	859,000
2008	262,000	199,000	235,000	1,567,000	24,000	351,000	3,405,000	74,000	859,000
2009	261,000	198,000	234,000	1,565,000	24,000	38,000	3,085,000	74,000	859,000
2010	262,000	199,000	235,000	1,568,000	24,000	314,000	3,369,000	74,000	859,000
2011	262,000	199,000	235,000	1,569,000	24,000	70,000	3,126,000	74,000	859,000
2012	262,000	199,000	235,000	1,568,000	24,000	285,000	3,340,000	74,000	859,000
2013	261,000	199,000	234,000	1,566,000	24,000	247,000	3,296,000	74,000	859,000
2014	261,000	199,000	234,000	1,566,000	24,000	110,000	3,160,000	74,000	859,000
2015	262,000	199,000	235,000	1,567,000	24,000	365,000	3,419,000	74,000	859,000
2016	262,000	199,000	235,000	1,570,000	24,000	34,000	3,091,000	74,000	859,000
2017	262,000	199,000	235,000	1,569,000	24,000	188,000	3,245,000	74,000	859,000
2018	262,000	199,000	235,000	1,570,000	24,000	261,000	3,320,000	74,000	859,000
2019	262,000	199,000	235,000	1,569,000	24,000	277,000	3,333,000	74,000	859,000
2020 (a)	262,000	199,000	234,000	1,567,000	24,000	206,000	3,259,000	74,000	859,000

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

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

(in dollars)

Sheet 7 of 8

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)
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	68,000	696,000	103,000	98,000	199,000	127,000
1973	89,000	0	0	1,039,000	742,000	102,000	101,000	215,000	105,000
1974	86,000	32,000	215,000	1,280,000	740,000	106,000	99,000	250,000	96,000
1975	85,000	29,000	36,000	1,091,000	742,000	106,000	99,000	236,000	100,000
1976	84,000	28,000	356,000	1,398,000	742,000	109,000	101,000	244,000	101,000
1977	84,000	28,000	275,000	1,314,000	739,000	101,000	96,000	218,000	98,000
1978	84,000	28,000	450,000	1,487,000	738,000	106,000	99,000	235,000	98,000
1979	84,000	28,000	415,000	1,452,000	739,000	108,000	100,000	241,000	97,000
1980	84,000	28,000	243,000	1,283,000	742,000	110,000	101,000	246,000	96,000
1981	85,000	28,000	290,000	1,336,000	746,000	111,000	102,000	247,000	100,000
1982	85,000	28,000	181,000	1,229,000	747,000	113,000	103,000	253,000	103,000
1983	84,000	28,000	398,000	1,437,000	741,000	108,000	100,000	239,000	107,000
1984	84,000	28,000	213,000	1,252,000	740,000	105,000	98,000	230,000	111,000
1985	84,000	28,000	298,000	1,337,000	740,000	104,000	98,000	227,000	114,000
1986	84,000	28,000	281,000	1,321,000	741,000	102,000	97,000	223,000	113,000
1987	85,000	28,000	311,000	1,353,000	742,000	103,000	97,000	225,000	117,000
1988	85,000	28,000	349,000	1,393,000	743,000	102,000	97,000	223,000	118,000
1989	85,000	28,000	274,000	1,318,000	743,000	102,000	97,000	216,000	119,000
1990	85,000	28,000	243,000	1,287,000	743,000	102,000	97,000	222,000	120,000
1991	85,000	28,000	315,000	1,359,000	742,000	102,000	97,000	220,000	121,000
1992	85,000	28,000	296,000	1,340,000	742,000	102,000	97,000	220,000	121,000
1993	85,000	28,000	216,000	1,259,000	742,000	101,000	97,000	220,000	121,000
1994	85,000	28,000	325,000	1,368,000	742,000	102,000	97,000	220,000	121,000
1995	85,000	28,000	304,000	1,350,000	743,000	102,000	97,000	220,000	121,000
1996	85,000	28,000	248,000	1,295,000	745,000	102,000	97,000	221,000	121,000
1997	85,000	28,000	305,000	1,352,000	745,000	102,000	97,000	222,000	121,000
1998	85,000	28,000	288,000	1,335,000	745,000	102,000	97,000	221,000	121,000
1999	85,000	28,000	452,000	1,499,000	745,000	102,000	97,000	221,000	121,000
2000	85,000	28,000	145,000	1,192,000	745,000	105,000	99,000	230,000	121,000
2001	85,000	28,000	271,000	1,318,000	745,000	102,000	97,000	222,000	121,000
2002	85,000	28,000	283,000	1,330,000	745,000	103,000	97,000	223,000	121,000
2003	85,000	28,000	299,000	1,346,000	745,000	103,000	97,000	224,000	121,000
2004	85,000	28,000	325,000	1,371,000	744,000	103,000	97,000	223,000	121,000
2005	85,000	28,000	290,000	1,336,000	744,000	103,000	98,000	226,000	121,000
2006	85,000	28,000	275,000	1,321,000	744,000	103,000	98,000	225,000	121,000
2007	85,000	28,000	295,000	1,341,000	744,000	103,000	98,000	224,000	121,000
2008	85,000	28,000	294,000	1,340,000	744,000	103,000	98,000	225,000	121,000
2009	85,000	28,000	326,000	1,372,000	744,000	103,000	97,000	223,000	121,000
2010	85,000	28,000	304,000	1,350,000	744,000	103,000	98,000	225,000	121,000
2011	85,000	28,000	266,000	1,312,000	744,000	103,000	98,000	226,000	121,000
2012	85,000	28,000	277,000	1,323,000	744,000	103,000	98,000	225,000	121,000
2013	85,000	28,000	295,000	1,341,000	744,000	103,000	97,000	223,000	121,000
2014	85,000	28,000	318,000	1,364,000	744,000	103,000	98,000	224,000	121,000
2015	85,000	28,000	265,000	1,311,000	744,000	103,000	98,000	225,000	121,000
2016	85,000	28,000	298,000	1,344,000	745,000	104,000	98,000	226,000	121,000
2017	85,000	28,000	316,000	1,362,000	745,000	104,000	98,000	226,000	121,000
2018	85,000	28,000	280,000	1,326,000	745,000	104,000	98,000	227,000	121,000
2019	85,000	28,000	289,000	1,335,000	744,000	104,000	98,000	226,000	121,000
2020 (a)	85,000	28,000	293,000	1,339,000	744,000	103,000	98,000	224,000	121,000

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

REIMBURSED THRU MINIMUM OMP&R COMPONENT OF TRANSPORTATION CHARGE

(in dollars)

Sheet 8 of 8

Calendar Year	CALIFORNIA AQUEDUCT (continued)							TOTAL	GRAND TOTAL
	WEST BRANCH (continued)		COASTAL BRANCH						
	Reach 30	Subtotal	Reach 31A	Reach 33A	Reach 34	Reach 35	Subtotal		
	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)
1962	0	0	0	0	0	0	0	0	85,696
1963	0	0	0	0	0	0	0	0	167,114
1964	0	0	0	0	0	0	0	0	183,102
1965	0	0	0	0	0	0	0	0	378,141
1966	0	0	0	0	0	0	0	0	406,526
1967	0	0	0	0	0	0	0	0	625,418
1968	0	0	0	0	0	0	0	2,315,188	2,826,848
1969	0	0	486,729	0	0	0	486,729	3,423,592	4,121,388
1970	0	0	556,023	0	0	0	556,023	3,791,529	4,486,206
1971	0	0	436,000	0	0	0	436,000	6,250,000	7,074,200
1972	242,000	1,465,000	453,000	0	0	0	453,000	13,640,000	14,487,200
1973	182,000	1,447,000	457,000	0	0	0	457,000	15,016,000	15,891,200
1974	239,000	1,530,000	463,000	0	0	0	463,000	15,325,000	16,209,200
1975	241,000	1,524,000	461,000	0	0	0	461,000	15,196,000	16,074,200
1976	247,000	1,544,000	465,000	0	0	0	465,000	15,185,000	16,065,200
1977	343,000	1,595,000	468,000	0	0	0	468,000	15,563,000	16,446,200
1978	267,000	1,543,000	465,000	0	0	0	465,000	15,644,000	16,530,200
1979	216,000	1,501,000	464,000	0	0	0	464,000	15,470,000	16,357,200
1980	240,000	1,535,000	446,000	240,000	23,000	56,000	765,000	15,731,000	16,749,200
1981	231,000	1,537,000	449,000	224,000	17,000	43,000	733,000	15,824,000	16,831,200
1982	239,000	1,558,000	448,000	222,000	16,000	41,000	727,000	15,835,000	16,846,200
1983	241,000	1,536,000	445,000	218,000	15,000	38,000	716,000	15,678,000	16,683,200
1984	299,000	1,583,000	443,000	217,000	14,000	37,000	711,000	15,469,000	16,471,200
1985	240,000	1,523,000	443,000	216,000	13,000	35,000	707,000	15,819,000	16,822,200
1986	144,000	1,420,000	443,000	215,000	13,000	34,000	705,000	15,406,000	16,410,200
1987	25,000	1,309,000	444,000	216,000	13,000	34,000	707,000	15,434,000	16,439,200
1988	352,000	1,635,000	444,000	215,000	12,000	33,000	704,000	15,969,000	16,975,200
1989	293,000	1,570,000	444,000	215,000	12,000	33,000	704,000	15,655,000	16,661,200
1990	300,000	1,584,000	444,000	215,000	12,000	32,000	703,000	15,460,000	16,465,200
1991	378,000	1,660,000	444,000	215,000	12,000	32,000	703,000	15,828,000	16,833,200
1992	482,000	1,764,000	444,000	215,000	12,000	32,000	703,000	15,748,000	16,753,200
1993	217,000	1,498,000	444,000	215,000	12,000	32,000	703,000	15,609,000	16,614,200
1994	272,000	1,554,000	444,000	215,000	12,000	32,000	703,000	15,825,000	16,830,200
1995	319,000	1,602,000	444,000	215,000	12,000	32,000	703,000	15,694,000	16,701,200
1996	504,000	1,790,000	445,000	215,000	12,000	32,000	704,000	15,692,000	16,699,200
1997	232,000	1,519,000	445,000	215,000	12,000	32,000	704,000	15,640,000	16,647,200
1998	514,000	1,800,000	445,000	215,000	12,000	32,000	704,000	15,931,000	16,938,200
1999	1,153,000	2,439,000	445,000	216,000	12,000	33,000	706,000	17,004,000	18,012,200
2000	648,000-	652,000	445,000	215,000	12,000	32,000	704,000	14,255,000	15,263,200
2001	843,000	2,130,000	445,000	216,000	12,000	32,000	705,000	16,384,000	17,391,200
2002	321,000	1,610,000	445,000	216,000	12,000	32,000	705,000	15,678,000	16,686,200
2003	365,000	1,655,000	445,000	215,000	12,000	32,000	704,000	15,783,000	16,790,200
2004	367,000	1,655,000	444,000	215,000	12,000	32,000	703,000	15,930,000	16,936,200
2005	175,000	1,467,000	445,000	215,000	12,000	32,000	704,000	15,621,000	16,628,200
2006	362,000	1,653,000	445,000	215,000	12,000	32,000	704,000	15,789,000	16,796,200
2007	516,000	1,806,000	445,000	215,000	12,000	32,000	704,000	15,876,000	16,882,200
2008	85,000	1,376,000	445,000	215,000	12,000	32,000	704,000	15,660,000	16,667,200
2009	518,000	1,806,000	445,000	215,000	12,000	33,000	705,000	15,801,000	16,807,200
2010	525,000	1,816,000	444,000	216,000	12,000	33,000	705,000	16,060,000	17,066,200
2011	4,000-	1,288,000	444,000	215,000	12,000	32,000	703,000	15,248,000	16,254,200
2012	205,000	1,496,000	445,000	215,000	12,000	32,000	704,000	15,697,000	16,703,200
2013	504,000	1,792,000	445,000	215,000	12,000	32,000	704,000	15,965,000	16,972,200
2014	425,000	1,715,000	445,000	215,000	12,000	32,000	704,000	15,774,000	16,780,200
2015	326,000	1,617,000	445,000	215,000	12,000	32,000	704,000	15,883,000	16,889,200
2016	465,000	1,759,000	445,000	215,000	12,000	32,000	704,000	15,735,000	16,742,200
2017	427,000	1,721,000	445,000	215,000	12,000	32,000	704,000	15,863,000	16,869,200
2018	224,000	1,519,000	445,000	215,000	12,000	32,000	704,000	15,701,000	16,707,200
2019	287,000	1,580,000	445,000	215,000	12,000	32,000	704,000	15,784,000	16,790,200
2020(a)	370,000	1,660,000	445,000	215,000	12,000	32,000	704,000	15,819,000	16,826,200

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

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

(in dollars)

Sheet 1 of 2

CALENDAR YEAR	NORTH BAY AQUEDUCT			SOUTH BAY AQUEDUCT		CALIFORNIA AQUEDUCT						
	Reach 1	Reach 3		Reach 1		Reach 1	Reach 4	Reach 14A	Reach 15A	Reach 16A	Reach 17E	Reach 22B
	Calhoun and Travis Pumping Plants	Cordelia Pumping Plant	Total	South Bay and Del Valle Pumping Plants (a)	Total	Delta Pumping Plant	Dos Amigos Pumping Plant	Buena Vista Pumping Plant	Wheeler Ridge Pumping Plant	Wind Gap Pumping Plant	A. D. Edmonston Pumping Plant	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	36,964	0	0	0	0	0	0	0
1963	0	0	0	57,703	57,703	0	0	0	0	0	0	0
1964	0	0	0	74,094	74,094	0	0	0	0	0	0	0
1965	0	0	0	142,540	142,540	0	0	0	0	0	0	0
1966	0	0	0	190,275	190,275	0	0	0	0	0	0	0
1967	0	0	0	218,493	218,493	16,134	0	0	0	0	0	0
1968	0	7,149	7,149	338,779	338,779	432,820	214,979	0	0	0	0	0
1969	0	8,426	8,426	240,763	240,763	272,225	145,496	0	0	0	0	0
1970	0	13,773	13,773	397,937	397,937	366,231	229,514	10	0	0	0	0
1971	0	12,000	12,000	466,681	466,681	562,528	219,541	137,797	8,380	207	0	0
1972	0	20,000	20,000	646,352	646,352	564,840	345,698	252,257	154,387	305,826	1,071,742	105,998
1973	0	18,000	18,000	547,399	547,399	849,244	403,267	304,947	268,265	537,256	1,959,275	177,394
1974	0	17,000	17,000	528,570	528,570	856,431	470,365	365,000	325,356	653,047	2,395,520	631,581
1975	0	13,000	13,000	384,142	384,142	900,511	445,860	392,876	383,622	778,221	2,858,815	659,019
1976	0	21,000	21,000	558,183	558,183	1,105,606	568,578	542,381	494,523	1,006,013	3,697,083	1,009,396
1977	0	21,000	21,000	481,014	481,014	1,383,300	483,903	395,904	393,044	791,872	2,943,267	864,483
1978	0	23,000	23,000	491,868	491,868	1,542,104	613,492	505,958	512,043	1,047,448	3,862,570	957,960
1979	0	29,000	29,000	568,022	568,022	1,395,712	704,426	576,127	585,428	1,190,536	4,388,814	1,102,360
1980	6,525	39,200	45,725	580,893	580,893	1,554,528	798,231	693,152	635,512	1,295,910	4,777,473	1,200,782
1981	7,516	43,200	50,716	524,580	524,580	1,815,486	846,436	719,031	731,584	1,501,227	5,530,494	1,327,175
1982	9,457	52,200	61,657	597,829	597,829	2,091,294	1,004,459	799,328	819,778	1,685,875	6,169,283	1,521,176
1983	9,500	56,200	65,700	626,532	626,532	2,701,602	1,067,417	869,158	807,184	1,660,340	6,079,507	1,717,269
1984	8,581	50,200	58,781	546,463	546,463	2,289,180	1,068,786	950,036	920,085	2,118,118	6,985,230	1,876,037
1985	12,449	59,200	71,649	535,596	535,596	2,827,976	1,206,396	1,099,014	1,093,877	2,281,076	8,358,078	1,949,222
1986	11,541	54,200	65,741	493,106	493,106	3,137,357	1,316,027	1,176,630	1,195,512	2,506,623	9,186,793	1,697,911
1987	12,556	55,200	67,756	497,075	497,075	3,864,421	1,436,287	1,304,785	1,343,900	2,819,520	10,331,463	1,689,781
1988	18,455	54,200	72,655	478,287	478,287	4,164,353	1,619,208	1,484,460	1,469,107	3,091,640	11,337,801	1,882,897
1989	27,306	56,200	83,506	479,383	479,383	3,740,768	1,726,379	1,531,954	1,514,927	3,187,076	11,677,115	1,951,281
1990	26,411	56,200	82,611	475,509	475,509	3,967,156	1,751,074	1,518,172	1,501,059	3,158,702	12,294,671	1,924,503
1991	26,411	56,200	82,611	492,502	492,502	4,054,371	1,740,935	1,513,850	1,595,234	3,353,636	12,275,901	1,922,909
1992	26,411	56,200	82,611	495,629	495,629	3,954,008	1,787,233	1,583,436	1,581,867	3,325,380	12,173,956	1,899,272
1993	27,389	57,200	84,589	522,525	522,525	3,933,237	1,821,691	1,612,149	1,611,091	3,365,747	12,395,622	1,925,055
1994	25,433	54,200	79,633	519,674	519,674	4,097,815	1,765,233	1,562,380	1,562,754	3,284,588	12,761,689	1,841,154
1995	26,411	56,200	82,611	536,574	536,574	4,241,981	1,824,742	1,617,340	1,618,591	3,402,804	12,466,350	1,930,144
1996	25,433	55,200	80,633	523,740	523,740	3,798,848	1,766,135	1,577,279	1,674,536	3,523,223	12,906,968	1,852,995
1997	26,411	55,200	81,611	546,588	546,588	3,561,959	1,622,318	1,696,286	1,715,027	3,608,269	13,223,920	2,003,554
1998	26,411	55,200	81,611	541,632	541,632	4,139,115	1,794,364	1,594,028	1,693,095	3,563,177	13,056,364	1,976,884
1999	25,433	54,200	79,633	538,658	538,658	4,674,544	1,790,862	1,602,383	1,615,704	3,591,945	13,137,986	1,879,700
2000	26,411	55,200	81,611	544,606	544,606	4,048,219	1,819,616	1,778,678	1,813,899	3,815,999	13,978,549	1,978,715
2001	26,411	55,200	81,611	540,641	540,641	4,241,830	1,842,185	1,659,472	1,774,186	3,732,359	13,666,545	1,956,422
2002	26,411	54,200	80,611	537,667	537,667	4,534,158	1,896,955	1,690,893	1,810,629	3,809,760	13,763,636	1,960,143
2003	25,433	53,200	78,633	526,763	526,763	4,330,816	1,844,692	1,674,281	1,794,011	3,776,684	14,578,435	1,922,974
2004	25,433	53,200	78,633	524,781	524,781	4,289,767	1,840,392	1,668,970	1,788,537	3,963,228	14,530,614	1,895,140
2005	26,411	55,200	81,611	538,658	538,658	4,424,012	1,953,759	1,804,843	1,844,162	3,883,698	15,010,620	1,970,857
2006	26,411	55,200	81,611	542,623	542,623	4,537,596	1,976,226	1,821,980	1,862,384	3,921,419	15,161,310	1,992,039
2007	26,411	54,200	80,611	537,667	537,667	4,475,870	2,028,265	1,881,158	1,936,828	4,078,780	14,956,430	1,958,659
2008	26,411	55,200	81,611	539,649	539,649	4,493,428	1,976,127	1,814,382	1,855,088	4,117,308	15,100,476	1,958,093
2009	25,433	54,200	79,633	533,701	533,701	4,460,382	2,039,452	1,879,733	1,937,208	4,082,359	14,973,692	1,931,735
2010	27,389	57,200	84,589	561,458	561,458	3,903,160	2,129,719	1,979,528	2,036,730	4,295,251	15,753,891	2,037,241
2011	25,433	54,200	79,633	534,693	534,693	3,921,164	2,084,274	1,907,612	1,967,575	4,147,470	15,980,298	1,953,137
2012	25,433	54,200	79,633	535,684	535,684	4,562,303	2,011,762	1,914,031	1,973,685	4,160,296	16,035,279	1,947,323
2013	26,411	56,200	82,611	550,553	550,553	4,547,122	2,057,622	1,956,647	2,017,341	4,251,785	15,590,969	2,005,309
2014	26,411	54,200	80,611	535,684	535,684	4,514,444	2,019,765	1,926,294	1,988,656	4,192,938	16,157,088	1,948,225
2015	26,411	55,200	81,611	540,641	540,641	4,554,173	2,069,276	1,939,327	2,000,594	4,434,447	16,266,160	1,955,482
2016	26,411	56,200	82,611	549,562	549,562	4,671,707	2,102,568	1,976,813	2,040,070	4,522,991	16,594,600	1,998,553
2017	26,411	55,200	81,611	537,667	537,667	4,547,970	2,091,879	1,943,546	2,108,968	4,446,296	17,096,866	1,961,060
2018	26,411	55,200	81,611	537,667	537,667	4,580,372	2,124,906	1,950,924	2,117,863	4,464,709	17,167,289	1,960,164
2019	26,411	55,200	81,611	537,667	537,667	4,578,758	2,146,920	2,040,351	2,121,667	4,474,252	17,203,351	1,956,752
2020(b)	26,411	55,200	81,611	537,667	537,667	4,583,400	2,149,500	2,043,700	2,125,300	4,482,200	17,234,600	1,968,400

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

THRU VARIABLE OMP&R COMPONENT OF TRANSPORTATION CHARGE

(in dollars)

Sheet 2 of 2

CALENDAR YEAR	CALIFORNIA AQUEDUCT (continued)										GRAND TOTAL	
	Reach 24	Reach 26A	Reach 28J	Reach 29A	Reach 29H	Reach 29J	Reach 30	Reach 31A	Reach 33A			
	Silver- wood Lake (c)	Devil Canyon Powerplant	Lake Perris (c)	Oso Pumping Plant	Pyramid Lake (c)	Castaic Powerplant	Castaic Lake (c)	Las Perillas and Badger Hill Pumping Plants	Devil's Den, Sawtooth and Polonio PP's and San Luis Obispo Pwp			
	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	Total	(22)	(23)
1961	0	0	0	0	0	0	0	0	0	0	0	36,96
1962	0	0	0	0	0	0	0	0	0	0	0	57,70
1963	0	0	0	0	0	0	0	0	0	0	0	74,09
1964	0	0	0	0	0	0	0	0	0	0	0	142,54
1965	0	0	0	0	0	0	0	0	0	0	0	
1966	0	0	0	0	0	0	0	0	0	0	0	190,27
1967	0	0	0	0	0	0	0	0	0	16,134	0	234,62
1968	0	0	0	0	0	0	0	123,311	0	771,110	0	1,117,03
1969	0	0	0	0	0	0	0	78,030	0	495,751	0	744,94
1970	0	0	0	0	0	0	0	141,726	0	737,481	0	1,149,19
1971	0	0	0	0	0	0	0	125,783	0	1,054,236	0	1,532,91
1972	0	240,621-	0	124,274	0	348,173-	48,977	141,555	0	2,526,760	0	3,193,11
1973	437	356,451-	0	192,991	0	1,080,495-	131,449	101,833	0	3,489,412	0	4,054,81
1974	149,679	1,154,610-	101,174	76,744	0	1,011,010-	17,227-	116,249	0	3,958,299	0	4,509,86
1975	12,677	960,216-	301,697	91,367	0	1,088,188-	0	84,418	0	4,860,899	0	5,258,04
1976	392,720	1,807,851-	0	95,537	0	1,313,296-	0	149,070	0	5,939,760	0	6,518,94
1977	0	1,917,253-	0	57,510	0	660,016-	0	117,669	0	4,853,683	0	5,355,69
1978	0	1,718,933-	0	98,088	0	1,242,649-	1,920	124,673	0	6,304,874	0	6,819,54
1979	20,065	2,231,487-	0	116,825	0	1,997,812-	36,204-	151,217	0	5,966,007	0	6,563,02
1980	8,696	2,524,125-	71,641	121,085	0	2,043,425-	49,098-	167,014	45,400	6,752,776	0	7,379,39
1981	0	2,503,250-	35,672	132,884	0	1,954,173-	0	152,060	49,080	8,383,706	0	8,959,00
1982	0	2,951,913-	147,070	139,153	0	2,062,447-	1,078-	189,032	81,600	9,632,610	0	10,292,09
1983	172,570	3,493,128-	0	119,422	0	2,004,897-	0	205,828	100,473	10,002,945	0	10,695,17
1984	152,535	3,642,181-	82,569	136,714	0	1,798,214-	0	184,126	140,984	11,446,005	0	12,071,24
1985	0	3,079,360-	0	216,822	0	2,608,418-	79,982	200,212	180,764	13,805,641	0	14,412,88
1986	90,967	3,343,293-	4,529	294,833	0	3,438,674-	184,884	190,967	209,852	14,410,918	0	14,969,76
1987	5,559	3,009,304-	0	560,160	0	3,967,424-	326,640	201,059	264,700	17,172,047	0	17,736,87
1988	0	2,937,068-	0	702,077	0	4,541,863-	0	205,328	267,335	18,745,275	0	19,296,21
1989	0	2,570,756-	25,167	679,199	6,006	3,716,428-	54,844	219,445	360,792	20,387,769	0	20,950,65
1990	191,089	3,207,753-	47,546	761,602	0	3,588,414-	49,607	222,803	417,689	21,009,506	0	21,567,62
1991	0	2,868,462-	0	667,355	0	3,482,761-	0	221,823	424,507	21,419,298	0	21,994,41
1992	110,866	3,028,267-	0	802,222	0	3,110,180-	0	220,844	414,766	21,715,403	0	22,293,64
1993	0	2,919,355-	73,956	729,835	0	3,387,821-	141,631	223,782	427,429	21,574,049	0	22,181,16
1994	0	2,939,990-	0	760,407	0	3,419,523-	84,543	215,947	408,922	21,987,921	0	22,587,22
1995	33,420	3,196,201-	0	783,373	0	3,557,905-	33,220	222,803	410,870	21,831,332	0	22,450,71
1996	181,183	3,084,663-	40,584	907,074	0	3,539,925-	0	215,947	404,051	22,224,235	0	22,828,60
1997	0	3,056,358-	0	835,567	0	3,591,443-	129,016	219,865	407,948	22,575,928	0	23,204,12
1998	0	2,988,254-	0	914,400	0	3,823,736-	0	216,927	406,000	22,542,364	0	23,165,60
1999	0	2,533,197-	0	910,999	0	3,371,821-	0	215,947	420,611	23,935,733	0	24,554,02
2000	448,614	3,649,767-	159,296	894,788	0	4,140,553-	1,084,475	219,865	380,673	24,631,066	0	25,257,28
2001	0	2,905,243-	18,419	994,280	0	3,753,796-	0	216,927	408,922	23,852,508	0	24,474,76
2002	70,658	2,662,171-	15,240	945,655	0	3,608,031-	45,850	215,947	413,792	25,103,114	0	25,721,39
2003	12,243	2,767,229-	0	986,959	0	3,759,215-	0	211,051	400,155	25,005,858	0	25,611,25
2004	0	2,508,765-	0	990,344	0	3,524,159-	0	210,071	409,896	25,554,035	0	26,157,44
2005	0	2,785,873-	7,264	1,068,446	0	4,004,818-	205,222	216,927	409,896	26,009,044	0	26,629,31
2006	0	2,942,961-	19,827	1,036,354	0	4,208,591-	0	217,906	409,896	25,805,385	0	26,429,61
2007	77,049	2,822,763-	0	1,066,146	0	4,229,760-	0	215,947	406,000	26,028,609	0	26,646,88
2008	0	2,904,991-	0	1,037,669	0	4,594,857-	292,032	216,927	400,155	25,761,837	0	26,383,09
2009	181,931	2,341,109-	0	1,077,237	0	3,932,808-	0	213,989	421,585	26,925,386	0	27,538,72
2010	0	2,233,034-	2,649	1,037,689	0	4,164,559-	0	226,720	440,093	27,447,778	0	28,093,32
2011	147,857	2,568,865-	37,935	1,054,286	0	4,090,918-	397,311	215,947	414,766	27,569,849	0	28,184,17
2012	0	2,807,299-	17,574	1,108,033	0	4,140,550-	163,586	215,947	401,129	27,833,299	0	28,352,38
2013	0	2,766,112-	0	1,127,585	0	4,353,390-	0	220,844	417,689	27,082,431	0	27,715,59
2014	100,660	2,691,511-	0	1,168,645	0	4,320,227-	0	215,947	408,922	27,630,046	0	28,246,34
2015	0	2,951,883-	29,600	1,130,638	0	4,672,223-	36,857	216,927	402,103	27,411,478	0	28,033,73
2016	186,380	2,992,678-	0	1,204,432	0	5,037,255-	0	220,844	402,103	27,891,130	0	28,523,30
2017	18,562	2,820,531-	0	1,184,310	0	4,845,570-	0	215,947	403,077	28,352,388	0	28,971,66
2018	0	2,927,186-	15,251	1,239,911	0	4,973,543-	150,572	216,927	401,129	28,489,288	0	29,108,56
2019	0	2,856,443-	5,103	1,198,268	0	4,902,812-	82,624	216,927	403,077	28,668,835	0	29,288,11
2020 (b)	0	2,855,700-	0	1,197,800	0	4,900,500-	0	216,927	403,077	28,648,704	0	29,267,98

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.

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			ADDITIONAL PROJECT CONSERVATION FACILITIES (UPPER DELTA RIVER DEVELOPMENT)										Total(e)
	WATER SUPPLY AND POWER GENERATION			Planning and Pre-operating Costs (a & c)	DOS RIOS-GRINDSTONE TUNNEL		STORY CREEK CONVEYANCE CHANNEL		DOS RIOS DAM AND RESERVOIR					
					Capital Costs (a)	Operating Costs (d)	Capital Costs (a)	Operating Costs (d)	Initial Storage		Reserved Storage			
	Capital Costs (a)	Operating Costs (b)	Project Power Revenues						Capital Costs (a)	Operating Costs (d)	Capital Costs (a)	Operating Costs (d)	Capital Costs (a)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)		
1952	171,318	0	0	0	0	0	0	0	0	0	0	171,318		
1953	312,174	0	0	0	0	0	0	0	0	0	0	312,174		
1954	308,606	0	0	0	0	0	0	0	0	0	0	308,606		
1955	194,638	0	0	0	0	0	0	0	0	0	0	194,638		
1956	1,362,882	0	0	0	0	0	0	0	0	0	0	1,362,882		
1957	6,226,749	0	0	0	0	0	0	0	0	0	0	6,226,749		
1958	9,532,347	0	0	0	0	0	0	0	0	0	0	9,532,347		
1959	11,432,016	0	0	0	0	0	0	0	0	0	0	11,432,016		
1960	14,764,737	0	0	0	0	0	0	0	0	0	0	14,764,737		
1961	18,686,455	0	0	0	0	0	0	0	0	0	0	18,686,455		
1962	9,046,974	78	0	0	0	0	0	0	0	0	0	9,047,052		
1963	73,501,592	176	0	0	0	0	0	0	0	0	0	73,501,768		
1964	62,445,246	76	0	126,905	0	0	0	0	0	0	0	62,572,227		
1965	70,985,288	165	0	652,284	0	0	0	0	0	0	0	71,637,737		
1966	131,139,593	211	0	1,189,273	0	0	0	0	0	0	0	132,329,077		
1967	97,138,478	3,555	0	1,215,753	0	0	0	0	0	0	0	98,357,786		
1968	40,388,737	1,276,021	1,004,618	868,331	0	0	0	0	0	0	0	41,528,471		
1969	5,672,443	2,539,783	8,112,261	794,288	0	0	0	0	0	0	0	854,253		
1970	4,842,065	4,871,690	16,485,475	589,346	0	0	0	0	0	0	0	- 6,182,374		
1971	8,799,933	5,967,886	16,150,000	441,900	0	0	0	0	0	0	0	- 940,281		
1972	6,600,948	5,872,237	16,150,000	319,800	0	0	0	0	0	0	0	- 3,357,035		
1973	7,849,690	6,441,224	16,150,000	224,400	0	0	0	0	0	0	0	- 1,634,686		
1974	13,366,245	6,951,992	16,150,000	116,900	0	0	0	0	0	0	0	- 4,289,437		
1975	20,619,939	5,739,812	16,150,000	10,300	0	0	0	0	0	0	0	10,220,051		
1976	23,546,687	6,245,118	16,430,000	120,700	0	0	0	0	0	0	0	13,482,505		
1977	17,348,910	6,125,847	16,492,000	116,100	0	0	0	0	0	0	0	7,096,857		
1978	17,211,889	5,774,712	16,150,000	116,600	0	0	0	0	0	0	0	6,953,201		
1979	15,057,764	6,600,285	16,150,000	174,100	0	0	0	0	0	0	0	5,682,149		
1980	722,692	6,891,873	16,150,000	229,500	0	0	0	0	0	0	0	- 8,305,935		
1981	437,910	5,916,091	18,528,000	118,100	0	0	0	0	0	0	0	- 12,055,899		
1982	508,501	6,724,884	20,354,000	118,600	0	0	0	0	0	0	0	- 13,002,015		
1983	847,139	6,942,757	18,222,000	293,400	2,500,000	0	0	0	0	0	0	- 7,638,704		
1984	579,303	6,660,196	31,817,000	204,700	2,500,000	0	0	0	0	0	0	- 21,872,801		
1985	84,210	6,136,374	16,150,000	206,600	2,500,000	0	0	0	0	0	0	- 7,222,816		
Subtotal 1952-1985	691,734,398	103,683,043	292,795,354	8,207,880	7,500,000	0	0	0	0	0	0	518,329,967		
1986	0	8,348,457	20,879,000	192,400	10,000,000	0	0	0	0	0	0	- 2,338,143		
1987	0	16,164,394	16,150,000	161,300	13,000,000	0	0	0	0	0	0	- 2,735,654		
1988	0	7,125,325	21,374,000	128,600	13,000,000	0	0	0	0	0	0	- 1,119,075		
1989	0	6,224,694	16,150,000	129,100	13,000,000	0	0	0	0	0	0	- 3,203,794		
1990	0	7,059,970	16,150,000	129,800	13,000,000	0	0	0	0	0	0	- 4,039,770		
1991	0	7,120,358	16,150,000	130,600	13,000,000	0	0	0	0	0	0	- 4,100,298		
1992	0	6,409,485	16,150,000	131,400	13,000,000	0	0	0	0	0	0	- 3,390,885		
1993	0	6,454,256	16,443,000	132,200	14,000,000	0	100,000	0	0	0	0	- 4,243,456		
1994	0	6,679,340	16,150,000	132,900	12,000,000	0	100,000	0	0	0	0	- 2,762,240		
1995	0	7,207,077	18,261,000	95,600	3,600,000	0	3,500,000	0	0	0	0	- 3,858,323		
1996	0	6,541,841	16,150,000	0	0	151,400	0	64,100	5,573,000(f)	232,900	0	4,400	- 3,582,359	
1997	0	7,408,602	16,595,000	0	0	151,400	0	64,100	5,573,000	232,900	0	4,600	- 3,160,398	
1998	0	7,330,075	16,570,000	0	0	151,400	0	64,100	5,573,000	232,900	0	4,800	- 3,213,725	
1999	0	4,436,989	16,150,000	0	0	151,400	0	64,100	5,573,000	232,900	0	5,000	- 5,686,671	
2000	0	7,524,957	16,150,000	0	0	151,400	0	64,100	5,573,000	232,900	0	5,200	- 2,998,443	
2001	0	7,331,293	16,150,000	0	0	151,400	0	64,100	5,573,000	232,900	0	5,400	- 2,791,907	
2002	0	5,723,061	16,150,000	0	0	151,400	0	64,100	5,573,000	232,900	0	5,600	- 4,399,939	
2003	0	6,929,218	16,150,000	0	0	151,400	0	64,100	5,573,000	232,900	0	5,900	- 3,193,482	
2004	0	6,325,206	16,150,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000(f)	145,500	- 95,194	
2005	0	5,749,994	16,150,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	- 670,406	
2006	0	6,654,883	16,150,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	234,481	
2007	0	6,627,647	16,150,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	207,247	
2008	0	6,349,132	16,150,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	128,932	
2009	0	6,209,398	16,150,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	- 211,022	
2010	0	4,798,089	16,150,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	- 1,622,311	
2011	0	6,625,263	16,150,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	204,863	
2012	0	6,514,441	16,150,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	94,041	
2013	0	7,375,601	16,150,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	955,201	
2014	0	6,555,471	16,150,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	135,071	
2015	0	7,381,254	16,150,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	960,854	
2016	0	6,919,429	16,150,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	499,089	
2017	0	6,802,995	16,150,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	382,595	
2018	0	6,798,005	16,150,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	377,605	
2019	0	6,807,546	16,150,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	387,146	
2020	0	6,818,708	16,150,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	398,308	
2021	0	6,818,708	16,430,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	118,308	
2022	0	6,818,708	23,076,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	- 6,527,692	
2023	0	6,818,708	19,289,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	- 2,740,692	
2024	0	6,818,708	17,722,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	- 1,173,692	
2025	0	6,818,708	16,150,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	398,308	
2026	0	6,818,708	20,879,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	- 4,330,692	
2027	0	6,818,708	16,590,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	- 41,692	
2028	0	6,818,708	21,374,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000	145,500	- 4,825,692	
2029	0	6,818,708	16,150,000	0	0	151,300	0	64,000	5,573,000	232,800	3,563,000			

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

(in dollars)

Sheet 1 of 2

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 County FC & WD	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	84	99	412	595	121	285	406
1953	0	0	0	325	407	1,823	2,555	338	788	1,126
1954	0	0	0	827	1,096	5,201	7,124	422	989	1,411
1955	0	0	0	987	1,332	6,361	8,680	211	496	707
1956	0	0	0	8,950	12,178	64,398	85,526	220	516	736
1957	16,594	10,040	26,634	21,871	29,608	651,063	702,542	286	664	950
1958	35,525	14,570	50,095	67,963	68,145	734,280	870,388	796	1,863	2,659
1959	22,204	5,716	27,920	154,416	143,170	493,664	791,250	22,250	58,016	80,266
1960	12,187	7,422	19,609	297,911	276,105	1,021,201	1,595,217	27,022	69,944	96,966
1961	8,528	7,440	15,968	857,500	801,670	1,922,888	3,582,058	13,576	33,473	47,049
1962	629	-508	121	534,651	563,945	1,676,134	2,774,730	19,390	46,218	65,608
1963	4,337	2,076	6,413	653,813	1,082,986	3,318,736	5,055,535	70,317	166,062	236,379
1964	49,807	32,463	82,270	699,064	1,236,892	7,342,002	9,277,958	145,218	341,952	487,170
1965	229,588	58,145	287,733	342,599	451,051	3,362,164	4,155,814	262,313	617,317	879,630
1966	494,866	48,749	543,615	566,710	537,771	2,165,353	3,269,834	606,338	1,421,589	2,027,927
1967	1,593,693	42,666	1,636,359	735,190	711,571	2,148,129	3,594,890	932,400	2,182,318	3,114,718
1968	886,374	57,682	944,056	701,461	646,004	1,834,091	3,181,556	357,639	842,030	1,199,669
1969	96,335	63,471	159,806	261,314	247,736	724,266	1,233,316	85,140	202,912	288,052
1970	60,263	71,305	131,568	71,298	67,473	159,119	297,890	53,973	129,763	183,736
1971	77,411	59,589	137,000	50,959	63,393	199,032	313,384	49,307	118,279	167,586
1972	64,411	59,589	124,000	23,763	25,089	87,919	136,771	21,931	53,349	75,280
1973	65,634	52,366	118,000	86,918	80,598	199,917	367,433	19,698	48,139	67,837
1974	51,459	44,541	96,000	25,924	24,304	64,203	114,431	14,074	35,009	49,083
1975	68,354	77,646	146,000	79,312	71,934	179,094	330,340	406,036	1,113,287	1,519,323
1976	245,277	290,723	536,000	5,708	5,582	16,993	28,283	544,932	1,482,720	2,027,652
1977	519,709	595,291	1,115,000	25,936	28,407	123,581	177,924	1,182,897	3,086,337	4,269,234
1978	1,432,024	1,440,976	2,873,000	18,918	17,840	50,411	87,169	5,556,347	15,001,361	20,557,708
1979	3,434,071	3,126,929	6,561,000	13,730	12,553	29,893	56,176	6,353,727	17,146,324	23,500,051
1980	623,971	576,029	1,200,000	3,208	2,933	6,985	13,126	1,185,285	3,223,462	4,408,747
1981	21,118	25,882	47,000	3,390	3,099	7,380	13,869	126,846	323,298	450,144
1982	6,184	4,816	11,000	6,082	5,561	13,242	24,885	49,321	128,321	177,642
1983	5,786	4,214	10,000	15,888	14,526	34,591	65,005	12,254	28,610	40,864
1984	1,796	1,204	3,000	12,155	11,113	26,463	49,731	31,275	73,013	104,288
1985	1,796	1,204	3,000	1,575	1,440	3,430	6,445	58,148	135,752	193,900
TOTAL	10,129,931	6,782,236	16,912,167	6,350,400	7,247,611	28,674,419	42,272,430	18,210,048	48,114,456	66,324,504

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	Agriculture				
	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1952	86	392	19	59	957	9,381	19	13	733	11,659
1953	241	1,085	55	160	2,949	28,180	55	32	2,017	34,774
1954	302	1,362	67	201	3,444	33,293	68	43	2,542	41,322
1955	152	681	36	99	1,529	15,122	37	22	1,283	18,961
1956	156	709	34	104	2,784	24,690	34	24	1,282	29,817
1957	202	915	37	135	6,238	51,328	38	29	1,539	60,461
1958	567	2,566	116	378	14,333	121,712	120	58	4,543	144,393
1959	3,937	8,435	421	1,243	27,617	272,961	431	377	15,708	331,130
1960	5,747	10,965	526	1,614	31,520	330,351	538	494	20,014	401,769
1961	6,261	22,670	1,103	3,340	53,648	568,245	1,127	648	41,656	698,698
1962	11,950	31,657	2,529	7,611	98,989	1,073,241	2,587	1,902	95,269	1,345,735
1963	46,121	203,210	10,395	29,936	355,821	3,892,105	10,631	6,020	383,904	4,938,143
1964	96,770	334,613	17,283	49,293	613,150	6,851,287	17,682	12,049	635,612	8,627,739
1965	175,490	549,018	28,038	80,876	1,120,442	12,392,631	28,685	22,176	1,036,349	15,433,705
1966	415,638	1,132,958	53,739	166,898	2,271,014	25,742,982	54,966	39,077	2,054,738	31,932,010
1967	643,243	820,743	37,722	120,906	1,982,319	23,473,491	38,592	34,971	1,463,945	28,615,932
1968	236,495	193,270	9,423	28,473	1,111,387	11,598,665	9,637	12,210	355,703	13,555,263
1969	50,079	94,207	4,766	13,877	630,244	6,525,036	4,875	7,347	176,920	7,507,351
1970	29,040	52,392	2,589	7,719	429,409	4,234,510	2,648	3,995	97,134	4,859,436
1971	27,395	54,926	2,794	8,091	265,661	2,479,856	2,856	3,175	103,437	2,948,191
1972	10,690	37,002	1,880	5,452	135,420	1,162,303	1,920	1,099	69,622	1,425,388
1973	9,543	35,148	1,802	5,177	70,206	708,461	1,842	593	66,477	899,249
1974	5,761	20,721	1,060	3,052	37,209	413,606	1,084	386	39,146	522,025
1975	16,759	29,820	1,526	4,393	53,923	665,741	1,561	1,041	56,345	831,109
1976	16,165	20,806	1,075	3,066	34,728	470,110	1,101	629	39,558	587,238
1977	80,696	13,883	718	2,046	23,141	862,884	733	934	26,369	1,011,404
1978	29,636	28,762	1,493	4,237	46,487	697,713	1,527	2,815	54,792	867,462
1979	24,655	24,560	1,275	3,618	40,638	590,705	1,304	2,403	46,788	735,946
1980	22,443	10,567	548	1,558	22,543	348,557	560	564	20,110	427,450
1981	44,819	22,496	1,167	3,315	47,962	716,733	1,193	595	42,836	881,116
1982	13,234	23,200	1,205	3,417	53,951	479,394	1,232	1,065	44,196	620,894
1983	8,720	39,415	2,047	5,808	71,232	706,962	2,093	2,781	75,090	914,148
1984	22,264	100,643	5,226	14,826	162,666	1,805,109	5,342	2,128	191,731	2,309,935
1985	40,913	57,438	2,983	8,461	92,218	1,250,614	3,048	276	109,426	1,565,377
TOTAL	2,096,170	4,001,235	195,697	589,439	9,915,779	110,597,959	200,166	161,971	7,376,814	135,135,230

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

(in dollars)

Sheet 2 of 2

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 Irrigation District	San Bernardino Valley Municipal Water District	San Gabriel Valley Municipal Water District
	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
1952	3,195	790	866	257	1,429	70	1,724	424	6,214	1,582
1953	10,182	2,550	2,719	817	4,487	228	5,420	1,349	19,496	4,964
1954	12,956	3,218	3,535	1,055	5,835	294	7,049	1,719	25,189	6,434
1955	5,495	1,435	1,400	410	2,311	120	2,807	727	9,435	2,429
1956	9,470	2,624	2,152	603	3,550	187	4,360	1,227	13,038	3,406
1957	26,425	7,105	6,409	1,839	10,572	547	12,893	3,470	41,300	10,694
1958	50,637	13,801	11,943	3,393	19,694	1,024	24,094	6,617	75,009	19,493
1959	71,972	21,191	16,505	4,840	27,225	1,408	32,963	9,390	103,517	26,733
1960	77,632	23,808	21,548	6,663	35,536	1,539	42,229	10,396	146,642	37,214
1961	130,096	39,569	35,353	12,561	58,308	2,339	65,585	16,960	238,131	58,458
1962	205,549	58,941	47,435	15,079	78,236	3,525	91,848	26,135	282,403	71,537
1963	569,418	168,901	115,565	32,506	190,590	9,695	233,103	72,084	612,277	161,317
1964	1,119,009	350,917	218,518	58,406	360,377	18,987	446,984	141,458	1,097,259	293,886
1965	1,946,790	674,549	393,992	105,997	649,773	33,455	804,370	248,945	1,967,353	526,949
1966	4,053,767	1,532,113	832,535	221,162	1,373,018	71,090	1,705,255	529,125	4,047,272	1,090,119
1967	4,960,931	2,844,171	1,087,078	300,170	1,792,816	88,834	2,198,583	656,583	5,896,132	1,567,760
1968	5,970,806	3,028,220	1,372,818	375,816	2,264,053	108,722	2,779,310	793,183	8,091,166	2,155,869
1969	5,880,653	2,447,283	1,729,793	549,835	2,852,825	124,623	3,338,350	892,263	11,058,669	2,815,147
1970	5,182,712	2,675,824	2,112,802	715,555	3,484,526	111,409	3,991,164	781,852	14,195,336	3,558,798
1971	2,914,216	1,583,012	1,246,235	422,023	2,055,345	56,256	2,366,126	402,308	10,131,803	2,415,082
1972	1,143,371	542,322	387,895	112,007	639,721	20,584	773,707	149,537	2,822,204	728,908
1973	354,939	527,266	142,509	37,853	235,025	6,760	291,204	47,685	901,669	234,203
1974	94,475	72,469	95,975	25,162	158,286	1,701	196,735	11,946	911,361	244,476
1975	101,070	30,378	148,313	37,777	244,599	1,580	306,086	11,741	1,016,400	275,898
1976	74,762	19,983	49,540	12,650	81,697	1,057	102,238	7,857	265,322	72,263
1977	1,296,390	26,874	6,730	1,813	11,095	524	13,771	3,781	32,930	8,817
1978	841,638	22,218	11,625	3,037	19,173	1,016	23,983	7,515	53,713	14,614
1979	449,372	56,274	13,967	3,593	23,036	1,248	28,865	9,307	63,530	17,352
1980	200,461	83,791	27,945	7,083	46,083	2,577	57,738	19,296	125,628	34,443
1981	445,471	104,453	60,214	15,244	99,301	5,556	124,441	41,655	269,936	74,046
1982	580,232	139,175	83,267	21,057	137,323	7,684	172,077	57,680	372,384	102,182
1983	473,521	81,074	48,430	12,249	79,871	4,475	100,239	33,599	216,592	59,465
1984	5,221,482	61,366	36,452	9,218	60,116	3,388	75,863	25,432	163,025	44,848
1985	4,218,317	30,403	18,038	4,560	29,749	1,678	37,584	12,599	80,675	22,203
TOTAL	48,697,412	17,278,068	10,390,101	3,132,290	17,135,581	694,180	20,458,748	5,035,845	65,353,010	16,761,589

CALENDAR YEAR	SOUTHERN CALIFORNIA AREA (Continued)				FEATHER RIVER AREA				FUTURE CONTRACTOR	GRAND TOTAL
	San Geronimo 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)
1952	982	70,250	372	88,155	0	0	0	0	74	100,889
1953	3,079	222,016	1,202	278,509	0	0	0	0	338	317,297
1954	3,998	285,890	1,517	358,689	0	0	0	0	968	409,514
1955	1,505	113,797	681	142,552	0	0	0	0	1,201	172,101
1956	2,107	175,771	1,252	219,747	0	0	0	0	11,442	347,268
1957	6,626	521,587	3,372	652,839	0	0	0	0	29,001	1,472,427
1958	12,070	973,375	6,565	1,217,715	0	0	0	0	36,725	2,321,975
1959	16,573	1,396,317	9,996	1,738,630	0	0	0	0	59,471	3,028,667
1960	23,150	1,785,004	11,164	2,222,525	0	0	0	0	127,333	4,463,419
1961	36,589	3,282,375	18,591	3,994,915	0	0	4	4	326,394	8,665,086
1962	44,515	3,574,071	27,275	4,526,549	0	0	270	270	259,021	8,972,034
1963	99,678	11,100,432	80,134	13,445,700	0	0	57	57	669,214	24,351,441
1964	181,107	18,397,323	163,740	22,847,971	0	0	7,762	7,762	1,005,131	42,336,001
1965	324,789	34,403,934	311,031	42,391,927	0	0	3,110	3,110	459,411	63,611,330
1966	671,276	76,239,171	702,794	93,068,697	0	0	-81	-81	895,151	131,737,153
1967	969,479	132,272,538	1,292,559	155,927,634	0	0	1	1	1,640,503	194,530,037
1968	1,335,411	149,938,793	1,385,965	179,600,132	0	0	51,545	51,545	1,345,534	199,877,755
1969	1,754,771	143,065,751	1,102,146	177,612,109	0	0	234,364	234,364	454,425	187,489,423
1970	2,223,543	167,611,236	1,183,319	207,828,076	0	0	17,224	17,224	119,217	213,437,147
1971	1,508,746	138,865,418	673,173	164,639,743	0	0	0	0	68,096	168,274,000
1972	453,424	63,516,543	179,330	71,469,553	0	0	0	0	25,008	73,256,000
1973	144,997	35,873,998	185,802	38,983,910	0	0	0	0	35,571	40,472,000
1974	152,319	7,800,568	31,512	9,796,985	0	0	0	0	64,476	10,643,000
1975	171,043	6,668,133	14,259	9,027,277	0	0	0	0	209,951	12,064,000
1976	44,581	2,181,122	9,439	2,922,511	0	0	0	0	6,316	6,108,000
1977	5,423	1,152,785	10,092	2,571,025	0	0	0	0	35,413	9,180,000
1978	8,974	1,069,746	9,998	2,087,250	0	0	0	0	10,411	26,483,000
1979	10,657	2,362,821	21,858	3,061,880	0	0	0	0	4,947	33,920,000
1980	21,162	3,669,679	34,635	4,330,521	0	0	0	0	1,156	10,381,000
1981	45,493	5,116,122	49,718	6,451,650	0	0	0	0	1,221	7,845,000
1982	62,785	6,873,470	67,072	8,676,388	0	0	0	0	2,191	9,513,000
1983	36,518	4,003,154	39,072	5,188,259	0	0	0	0	5,724	6,224,000
1984	27,487	3,027,417	29,573	8,785,667	0	0	0	0	4,379	11,257,000
1985	13,602	1,499,650	14,652	5,983,710	0	0	0	0	568	7,753,000
TOTAL	10,418,459	1,029,110,257	7,673,860	1,252,139,400	0	0	314,256	314,256	7,915,977	1,521,013,964

**TABLE B-15: CAPITAL COST COMPONENT OF TRANSPORTATION CHARGE
FOR EACH CONTRACTOR^(a)**

(in dollars)

Sheet 1 of 4

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 County FC & WD	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	96,614	94,234	337,488	528,336	0	0	0
1964	0	0	0	110,209	145,364	494,171	749,744	7,173	17,678	24,851
1965	0	0	0	138,877	203,760	840,800	1,183,437	12,495	30,240	42,735
1966	19,372	0	19,372	152,927	225,054	999,534	1,377,515	21,234	50,875	72,109
1967	42,736	0	42,736	176,167	250,444	1,101,764	1,528,375	38,730	92,005	130,735
1968	117,977	0	117,977	206,317	284,038	1,203,181	1,693,536	51,607	122,330	173,937
1969	159,824	0	159,824	235,084	314,537	1,289,772	1,839,393	55,423	131,573	186,996
1970	164,372	0	164,372	245,800	326,233	1,323,966	1,895,999	57,470	136,549	194,019
1971	167,217	0	167,217	248,724	329,419	1,331,478	1,909,621	58,841	139,927	198,768
1972	170,872	26,990	197,862	302,676	332,412	1,340,874	1,975,962	60,141	143,110	203,251
1973	173,913	29,804	203,717	303,798	333,596	1,345,025	1,982,419	61,007	145,234	206,241
1974	177,012	32,276	209,288	307,901	337,401	1,354,464	1,999,766	61,818	147,229	209,047
1975	179,441	34,379	213,820	309,125	338,549	1,357,495	2,005,169	62,403	148,696	211,099
1976	182,668	38,045	220,713	312,870	341,945	1,365,950	2,020,765	172,523	413,589	586,112
1977	194,248	51,770	246,018	313,139	342,208	1,366,752	2,022,099	198,251	483,591	681,842
1978	218,784	79,875	298,659	314,364	343,549	1,372,587	2,030,500	254,097	629,303	883,400
1979	286,393	147,906	434,299	315,257	344,392	1,374,967	2,034,616	516,422	1,337,543	1,853,965
1980	448,521	295,534	744,055	315,905	344,984	1,376,378	2,037,267	816,393	2,147,051	2,963,444
1981	477,980	322,729	800,709	316,057	345,123	1,376,708	2,037,888	872,352	2,299,237	3,171,589
1982	478,977	323,951	802,928	316,217	345,269	1,377,056	2,038,542	878,341	2,314,500	3,192,841
1983	479,269	324,178	803,447	316,504	345,532	1,377,682	2,039,718	880,669	2,320,558	3,201,227
1984	479,542	324,377	803,919	317,254	346,217	1,379,315	2,042,786	881,248	2,321,909	3,203,157
1985	479,627	324,434	804,061	317,828	346,742	1,380,564	2,045,134	882,724	2,325,356	3,208,080
1986	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
1987	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
1988	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
1989	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
1990	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
1991	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
1992	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
1993	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
1994	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
1995	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
1996	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
1997	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
1998	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
1999	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
2000	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
2001	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
2002	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
2003	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
2004	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
2005	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
2006	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
2007	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
2008	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
2009	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
2010	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
2011	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
2012	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
2013	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
2014	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
2015	479,712	324,491	804,203	317,902	346,810	1,380,726	2,045,438	885,470	2,331,765	3,217,235
2016	460,340	324,491	784,831	130,654	121,756	381,192	633,602	864,236	2,280,890	3,145,126
2017	436,976	324,491	761,467	102,956	96,367	278,962	478,285	846,740	2,239,760	3,086,500
2018	361,735	324,491	686,226	67,295	62,772	177,545	307,612	833,863	2,209,435	3,043,298
2019	319,888	324,491	644,379	33,516	32,273	90,954	156,743	830,047	2,200,192	3,030,239
2020	315,340	324,491	639,831	21,019	20,577	56,760	98,356	828,000	2,195,217	3,023,217
2021	312,495	324,491	636,986	17,632	17,391	49,248	84,271	826,629	2,191,839	3,018,468
2022	308,840	297,501	606,341	15,226	14,399	39,852	69,477	825,329	2,188,655	3,013,984
2023	305,799	294,687	600,486	14,104	13,214	35,701	63,019	824,463	2,186,531	3,010,994
2024	302,700	292,215	594,915	10,001	9,409	26,262	45,672	823,652	2,184,537	3,008,189
2025	300,271	290,112	590,383	8,777	8,261	23,231	40,269	823,067	2,183,069	3,006,136
2026	297,044	286,446	583,490	5,032	4,865	14,776	24,673	712,946	1,918,176	2,631,122
2027	285,464	272,721	558,185	4,763	4,602	13,974	23,339	687,219	1,848,174	2,535,393
2028	260,927	244,616	505,543	3,538	3,261	8,139	14,938	631,372	1,702,463	2,333,835
2029	193,319	176,585	369,904	2,645	2,418	5,759	10,822	369,048	994,222	1,363,270
2030	31,190	28,957	60,147	1,997	1,826	4,348	8,171	69,077	184,714	253,791
2031	1,732	1,762	3,494	1,846	1,687	4,018	7,551	13,118	32,529	45,647
2032	735	540	1,275	1,685	1,541	3,670	6,896	7,129	17,265	24,394
2033	443	313	756	1,398	1,278	3,044	5,720	4,800	11,207	16,007
2034	170	114	284	648	593	1,411	2,652	4,222	9,856	14,078
2035	85	57	142	74	68	162	304	2,745	6,409	9,154
TOTAL	23,985,598	16,224,550	40,210,148	15,562,601	17,340,503	69,036,300	101,939,404	44,273,495	116,588,255	160,861,750

a) Unadjusted for prior overpayments or underpayments of charges.

TABLE B-15: CAPITAL COST COMPONENT OF

(in dollars)

Sheet 2 of 4

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	59,796	0	0	0	0	59,796
1966	0	0	0	0	112,694	0	0	0	0	112,694
1967	0	0	0	0	219,912	0	0	0	0	219,912
1968	29,531	61,711	2,927	0	313,501	338,578	7,834	3,649	52,053	809,784
1969	39,907	61,819	8,781	10,668	365,972	695,321	8,289	3,966	186,752	1,381,475
1970	45,494	67,753	8,781	11,113	395,727	845,719	8,519	4,125	135,124	1,522,355
1971	53,475	77,247	8,781	10,224	416,000	1,123,266	8,644	4,442	145,322	1,847,401
1972	61,457	86,310	8,781	11,557	428,542	1,681,993	8,779	4,601	155,945	2,447,965
1973	69,438	94,940	8,781	12,891	434,935	1,939,923	8,870	4,918	166,143	2,740,839
1974	77,420	104,003	8,781	14,669	438,250	2,172,423	8,956	5,077	182,715	3,012,294
1975	85,401	113,065	8,781	16,002	440,007	2,418,001	9,008	5,394	199,287	3,294,946
1976	93,382	122,128	8,781	17,336	442,552	2,736,962	9,081	5,553	215,859	3,651,634
1977	101,364	131,190	8,781	18,669	444,192	3,073,361	9,133	5,870	232,856	4,025,416
1978	101,364	140,253	8,781	20,447	445,285	3,416,299	9,168	6,188	249,428	4,397,213
1979	101,364	149,315	8,781	21,781	447,479	3,751,244	9,240	6,346	266,000	4,761,550
1980	101,364	158,378	8,781	23,114	449,398	4,093,455	9,302	6,664	282,571	5,133,027
1981	101,364	167,440	8,781	24,892	450,462	4,479,987	9,328	6,822	299,143	5,548,219
1982	101,364	176,935	8,781	26,226	452,727	4,836,729	9,384	7,140	315,715	5,935,001
1983	101,364	185,134	8,781	27,559	455,274	5,242,878	9,443	7,298	332,287	6,370,018
1984	101,364	194,628	8,781	28,893	458,637	5,609,065	9,541	7,615	348,859	6,767,383
1985	101,364	203,690	8,781	30,671	466,316	5,965,808	9,794	7,774	365,431	7,159,629
1986	101,364	212,753	8,781	32,004	470,670	6,319,644	9,937	8,091	382,427	7,545,671
1987	101,364	221,815	8,781	33,338	470,670	6,680,019	9,937	8,250	398,999	7,933,173
1988	101,364	230,878	8,781	34,671	470,670	7,016,418	9,937	8,567	415,571	8,296,857
1989	101,364	239,940	8,781	36,449	470,670	7,259,090	9,937	8,885	432,143	8,567,259
1990	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
1991	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
1992	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
1993	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
1994	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
1995	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
1996	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
1997	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
1998	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
1999	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
2000	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
2001	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
2002	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
2003	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
2004	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
2005	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
2006	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
2007	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
2008	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
2009	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
2010	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
2011	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
2012	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
2013	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
2014	101,364	249,003	8,781	37,783	470,670	7,511,207	9,937	9,043	467,411	8,865,199
2015	101,364	249,003	8,781	37,783	410,874	7,511,207	9,937	9,043	467,411	8,805,403
2016	101,364	249,003	8,781	37,783	357,976	7,511,207	9,937	9,043	467,411	8,752,505
2017	101,364	249,003	8,781	37,783	250,758	7,511,207	9,937	9,043	467,411	8,645,287
2018	101,364	249,003	8,781	37,783	157,169	7,511,207	2,104	9,043	467,411	8,543,865
2019	101,364	249,003	8,781	37,783	104,699	7,511,207	1,649	9,043	467,411	8,490,940
2020	101,364	249,003	8,781	37,783	74,944	7,511,207	1,418	9,043	467,411	8,460,954
2021	101,364	249,003	8,781	37,783	54,671	7,511,207	1,293	9,043	467,411	8,440,556
2022	101,364	249,003	8,781	37,783	42,128	7,511,207	1,159	9,043	467,411	8,427,879
2023	101,364	249,003	8,781	37,783	35,735	7,511,207	1,068	9,043	467,411	8,421,395
2024	101,364	249,003	8,781	37,783	32,420	7,511,207	981	9,043	467,411	8,417,993
2025	101,364	249,003	8,781	37,783	30,664	7,511,207	930	9,043	467,411	8,416,186
2026	101,364	249,003	8,781	37,783	28,118	7,511,207	856	9,043	467,411	8,413,566
2027	101,364	249,003	8,781	37,783	26,478	7,511,207	804	9,043	467,411	8,411,874
2028	101,364	249,003	8,781	37,783	25,386	7,511,207	770	9,043	467,411	8,410,748
2029	101,364	249,003	8,781	37,783	23,191	7,511,207	697	9,043	467,411	8,408,480
2030	101,364	249,003	8,781	37,783	21,272	7,511,207	636	9,043	467,411	8,406,500
2031	101,364	249,003	8,781	37,783	20,208	7,511,207	609	9,043	467,411	8,405,409
2032	101,364	249,003	8,781	37,783	17,944	7,511,207	553	9,043	467,411	8,403,089
2033	101,364	249,003	8,781	37,783	15,397	7,511,207	495	9,043	467,411	8,400,484
2034	101,364	249,003	8,781	37,783	12,034	7,511,207	396	9,043	467,411	8,397,022
2035	101,364	249,003	8,781	37,783	4,354	7,511,207	144	9,043	467,411	8,389,090
TOTAL	6,535,981	14,655,463	591,254	2,201,192	23,533,508	427,211,705	496,859	553,213	27,261,536	503,040,711

a.) Unadjusted for prior overpayments or underpayments of charges.

TRANSPORTATION CHARGE FOR EACH CONTRACTOR^(a)

(in dollars)

Sheet 3 of 4

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 Irrigation District	San Bernardino Valley Municipal Water District	San Gabriel Valley Municipal Water District
	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
1963	30,935	0	0	0	0	0	0	0	49,414	0
1964	57,818	17,287	13,464	4,064	34,891	1,064	26,580	7,592	78,320	33,156
1965	110,649	33,855	23,781	6,821	38,696	1,960	47,683	14,271	130,124	34,002
1966	202,560	65,701	42,382	11,825	69,373	3,540	85,658	26,024	223,006	58,881
1967	393,945	138,035	81,688	22,267	134,195	6,896	166,166	51,005	414,085	110,347
1968	628,160	272,313	133,010	36,438	218,837	11,090	269,965	82,003	692,452	184,364
1969	910,052	415,281	197,824	54,181	325,727	16,223	401,181	119,451	1,074,450	286,146
1970	1,187,688	530,821	279,490	80,140	460,414	22,107	558,791	161,576	1,596,549	419,054
1971	1,432,373	657,152	379,239	113,923	624,925	27,367	747,221	198,489	2,266,736	587,071
1972	1,569,958	731,888	438,076	133,847	721,961	30,023	858,930	217,483	2,745,076	701,091
1973	1,623,939	757,492	456,389	139,135	752,164	30,994	895,458	224,542	2,878,317	735,504
1974	1,640,696	782,386	463,117	140,922	763,259	31,314	909,206	226,794	2,920,887	746,562
1975	1,645,156	785,807	467,649	142,110	770,732	31,394	918,494	227,358	2,963,913	758,104
1976	1,649,928	787,241	474,651	143,894	782,280	31,468	932,945	227,912	3,011,900	771,129
1977	1,653,458	788,185	476,990	144,491	786,137	31,518	937,772	228,283	3,024,426	774,541
1978	1,714,663	789,453	477,307	144,576	786,661	31,543	938,422	228,462	3,025,981	774,957
1979	1,754,398	790,502	477,856	144,720	787,566	31,591	939,554	228,816	3,028,516	775,647
1980	1,775,613	793,159	478,516	144,889	788,654	31,650	940,917	229,256	3,031,516	776,466
1981	1,785,077	797,115	479,835	145,224	790,830	31,772	943,643	230,167	3,037,447	778,093
1982	1,806,109	802,046	482,678	145,944	795,518	32,034	949,518	232,133	3,050,191	781,588
1983	1,833,503	808,617	486,609	146,938	802,001	32,397	957,642	234,856	3,067,772	786,413
1984	1,855,858	812,445	488,895	147,516	805,772	32,608	962,375	236,443	3,077,998	789,220
1985	2,102,374	815,342	490,616	147,951	808,610	32,768	965,956	237,643	3,085,694	791,337
1986	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
1987	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
1988	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
1989	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
1990	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
1991	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
1992	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
1993	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
1994	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
1995	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
1996	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
1997	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
1998	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
1999	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
2000	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
2001	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
2002	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
2003	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
2004	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
2005	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
2006	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
2007	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
2008	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
2009	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
2010	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
2011	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
2012	2,301,528	816,777	491,468	148,166	810,015	32,847	967,731	238,238	3,089,503	792,386
2013	2,270,593	816,777	491,468	148,166	797,331	32,847	967,731	238,238	3,040,089	779,874
2014	2,243,710	799,490	478,004	144,103	788,333	31,783	941,151	230,646	3,011,183	772,258
2015	2,190,879	782,923	467,687	141,345	771,319	30,887	920,048	223,967	2,959,379	758,383
2016	2,098,968	751,076	449,086	136,341	740,642	29,307	882,072	212,214	2,866,497	733,505
2017	1,907,582	678,742	409,780	125,900	675,819	25,951	801,564	187,233	2,675,418	682,039
2018	1,673,368	544,464	358,458	111,728	591,177	21,757	697,765	156,235	2,397,052	608,022
2019	1,391,476	401,497	293,644	93,985	484,287	16,624	566,549	118,787	2,015,053	506,240
2020	1,113,840	285,956	211,978	68,027	349,601	10,740	408,940	76,662	1,492,954	373,332
2021	869,155	159,626	112,229	34,244	185,090	5,481	220,510	39,749	822,767	205,314
2022	731,570	84,889	53,392	14,319	88,053	2,825	108,801	20,756	344,427	91,294
2023	677,589	59,285	35,079	9,031	57,851	1,853	72,273	13,696	211,186	56,881
2024	660,832	34,392	28,350	7,244	46,755	1,534	58,525	11,445	168,617	45,824
2025	656,372	30,970	23,819	6,056	39,282	1,453	49,236	10,881	125,590	34,282
2026	651,600	29,536	16,817	4,273	27,734	1,379	34,786	10,326	77,604	21,256
2027	648,070	28,593	14,478	3,676	23,877	1,329	29,959	9,955	65,077	17,845
2028	586,865	27,324	14,161	3,590	23,353	1,304	29,309	9,777	63,523	17,428
2029	547,130	26,275	13,612	3,447	22,448	1,256	28,176	9,422	60,987	16,738
2030	525,915	23,618	12,952	3,277	21,361	1,197	26,814	8,983	57,987	15,919
2031	516,450	19,662	11,633	2,943	19,185	1,076	24,088	8,072	52,056	14,293
2032	495,419	14,731	8,790	2,223	14,497	813	18,213	6,105	39,312	10,797
2033	468,025	8,160	4,859	1,229	8,014	450	10,088	3,382	21,731	5,973
2034	445,669	4,333	2,573	650	4,243	239	5,356	1,796	11,506	3,166
2035	199,154	1,435	852	215	1,405	79	1,774	595	3,809	1,048
TOTAL	115,076,397	40,838,856	24,573,399	7,408,310	40,501,265	1,642,354	48,386,542	11,911,907	154,475,155	39,619,806

TABLE B-15: CAPITAL COST COMPONENT OF TRANSPORTATION CHARGE
FOR EACH CONTRACTOR^(a)

(in dollars)

Sheet 4 of 4

CALENDAR YEAR	SOUTHERN CALIFORNIA AREA (continued)				FEATHER RIVER AREA				FUTURE CONTRACTOR	GRAND TOTAL
	San Geronimo 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)	
1963	0	636,693	0	717,042	0	0	0	0	42,846	1,288,224
1964	20,599	1,160,764	8,148	1,463,747	0	0	0	0	74,440	2,312,782
1965	21,041	2,029,334	15,879	2,508,096	0	0	383	383	121,894	3,916,341
1966	36,375	3,653,604	30,563	4,509,492	0	0	530	530	143,584	6,235,296
1967	68,067	7,252,989	63,743	8,903,428	0	0	526	526	185,846	11,011,558
1968	113,838	13,497,808	124,767	16,265,045	0	0	526	526	262,297	19,324,102
1969	176,885	20,576,682	190,201	24,744,284	0	0	2,960	2,960	326,822	28,641,754
1970	259,731	27,331,067	242,235	33,129,663	0	0	14,025	14,025	348,276	37,268,709
1971	364,708	35,244,288	298,102	42,941,594	0	0	14,838	14,838	353,904	47,433,343
1972	435,939	41,800,369	329,884	50,714,525	0	0	14,838	14,838	357,119	55,911,522
1973	457,346	44,799,096	338,350	54,088,726	0	0	14,838	14,838	358,300	59,595,080
1974	464,191	46,492,771	347,122	55,929,227	0	0	14,838	14,838	359,979	61,734,439
1975	471,383	46,861,049	348,610	56,391,759	0	0	14,838	14,838	363,023	62,494,654
1976	479,458	47,175,864	349,283	56,817,953	0	0	14,838	14,838	372,935	63,684,950
1977	481,563	47,278,838	349,729	56,955,931	0	0	14,838	14,838	373,234	64,319,378
1978	481,819	47,333,263	350,205	57,077,312	0	0	14,838	14,838	374,906	65,076,828
1979	482,242	47,383,768	350,677	57,175,853	0	0	14,838	14,838	375,397	66,650,518
1980	482,745	47,495,321	351,709	57,320,411	0	0	14,838	14,838	375,631	68,588,673
1981	483,745	47,668,573	353,344	57,524,865	0	0	14,838	14,838	375,685	69,473,793
1982	485,892	47,910,114	355,691	57,829,456	0	0	14,838	14,838	375,743	70,189,349
1983	488,857	48,234,622	358,858	58,239,085	0	0	14,838	14,838	375,846	71,044,179
1984	490,581	48,423,618	360,703	58,484,032	0	0	14,838	14,838	376,117	71,692,232
1985	491,878	48,566,548	362,099	58,898,816	0	0	14,838	14,838	376,323	72,506,881
1986	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	73,185,055
1987	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	73,572,557
1988	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	73,936,241
1989	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,206,643
1990	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
1991	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
1992	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
1993	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
1994	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
1995	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
1996	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
1997	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
1998	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
1999	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
2000	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
2001	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
2002	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
2003	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
2004	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
2005	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
2006	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
2007	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
2008	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
2009	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
2010	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
2011	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
2012	492,521	48,637,349	362,791	59,181,320	0	0	14,838	14,838	376,350	74,504,583
2013	484,736	48,000,656	362,791	58,431,297	0	0	14,838	14,838	333,505	73,177,123
2014	480,030	47,476,585	354,642	57,751,918	0	0	14,838	14,838	301,910	72,200,715
2015	471,479	46,608,015	346,912	56,673,223	0	0	14,454	14,454	254,456	70,556,748
2016	456,145	44,983,745	332,228	54,671,826	0	0	14,308	14,308	232,766	68,234,964
2017	424,453	41,384,360	299,047	50,277,888	0	0	14,311	14,311	190,504	63,454,242
2018	378,682	35,139,541	238,024	42,916,273	0	0	14,311	14,311	113,053	55,624,638
2019	315,635	28,060,667	172,590	34,437,034	0	0	11,878	11,878	49,528	46,820,741
2020	232,790	21,306,282	120,555	26,051,657	0	0	813	813	28,074	38,302,902
2021	127,812	13,393,061	64,689	16,239,727	0	0	0	0	22,446	28,442,454
2022	56,582	6,836,980	32,907	8,466,795	0	0	0	0	19,231	20,603,707
2023	35,175	3,838,253	24,441	5,092,593	0	0	0	0	18,050	17,206,537
2024	28,329	2,144,578	15,669	3,252,094	0	0	0	0	16,371	15,335,234
2025	21,138	1,776,300	14,181	2,789,560	0	0	0	0	13,327	14,855,861
2026	13,063	1,461,486	13,508	2,363,368	0	0	0	0	3,415	14,019,634
2027	10,958	1,358,511	13,062	2,225,390	0	0	0	0	3,116	13,757,297
2028	10,702	1,304,086	12,586	2,104,008	0	0	0	0	1,445	13,370,517
2029	10,278	1,253,581	12,114	2,005,464	0	0	0	0	953	12,158,893
2030	9,775	1,142,028	11,082	1,860,908	0	0	0	0	719	10,590,236
2031	8,776	968,776	9,446	1,656,456	0	0	0	0	665	10,119,222
2032	6,628	727,235	7,099	1,351,862	0	0	0	0	607	9,788,123
2033	3,664	402,727	3,933	942,235	0	0	0	0	504	9,365,706
2034	1,940	213,731	2,088	697,290	0	0	0	0	234	9,111,560
2035	642	70,801	692	282,501	0	0	0	0	27	8,681,218
TOTAL	24,626,362	2,431,867,451	18,139,545	2,959,067,349	0	0	741,897	741,897	18,817,503	3,784,678,762

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)

Sheet 1 of 4

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 County FC & WD	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	19,367	17,708	0	37,075	0	0	0
1963	0	0	0	37,767	34,531	82,225	154,523	0	0	0
1964	0	0	0	40,771	37,989	90,462	169,222	0	0	0
1965	0	0	0	77,901	75,352	196,231	349,484	0	0	0
1966	0	0	0	78,094	77,972	219,645	375,711	0	0	0
1967	0	0	0	123,770	121,097	333,155	578,022	0	0	0
1968	0	0	0	109,860	106,357	296,709	512,926	12,613	29,448	42,061
1969	92,347	0	92,347	131,829	125,807	340,047	597,683	65,634	153,230	218,864
1970	95,448	0	95,448	125,098	118,542	314,725	558,365	71,625	167,216	238,841
1971	77,000	0	77,000	153,108	145,439	391,904	690,451	63,368	147,941	211,309
1972	83,000	0	83,000	158,001	149,968	403,076	711,045	66,497	155,243	221,740
1973	86,000	0	86,000	163,646	155,535	416,373	735,554	67,794	158,267	226,061
1974	87,000	0	87,000	165,268	157,052	420,993	743,313	68,586	160,122	228,708
1975	86,000	0	86,000	164,388	156,174	417,906	738,468	68,290	159,426	227,716
1976	87,000	0	87,000	164,420	156,240	418,062	738,722	68,659	160,287	228,946
1977	91,000	0	91,000	164,229	156,067	417,642	737,938	68,970	161,014	229,984
1978	95,000	0	95,000	163,964	155,826	417,066	736,856	68,612	160,176	228,788
1979	96,000	0	96,000	164,041	155,896	417,232	737,169	68,498	159,914	228,412
1980	136,917	89,083	226,000	164,420	156,241	418,058	738,719	151,744	389,912	541,656
1981	129,538	82,462	212,000	164,837	156,622	419,969	741,428	144,229	363,883	508,112
1982	130,538	82,462	213,000	165,494	157,259	421,485	744,238	143,100	359,920	503,020
1983	129,140	81,860	211,000	164,650	156,488	418,645	739,783	140,875	352,891	493,766
1984	129,140	81,860	211,000	163,974	155,835	417,087	736,896	139,880	349,744	489,624
1985	129,140	81,860	211,000	164,209	156,049	417,601	737,859	139,073	346,529	485,602
1986	129,140	81,860	211,000	164,363	156,188	417,937	738,488	138,537	344,769	483,306
1987	129,538	82,462	212,000	164,382	156,205	417,979	738,566	139,019	345,895	484,914
1988	129,538	82,462	212,000	164,627	156,430	418,512	739,569	138,398	343,625	482,023
1989	129,538	82,462	212,000	164,627	156,430	418,512	739,569	138,337	343,482	481,819
1990	129,538	82,462	212,000	164,432	156,215	418,002	738,649	138,207	342,668	480,875
1991	129,538	82,462	212,000	164,432	156,215	418,002	738,649	138,196	342,642	480,838
1992	129,538	82,462	212,000	164,432	156,215	418,002	738,649	138,190	342,629	480,819
1993	129,538	82,462	212,000	164,432	156,215	418,002	738,649	138,146	342,525	480,671
1994	129,538	82,462	212,000	164,432	156,215	418,002	738,649	138,196	342,642	480,838
1995	129,538	82,462	212,000	164,646	156,447	419,553	740,646	138,233	342,732	480,965
1996	130,538	82,462	213,000	164,461	156,241	419,064	739,766	138,328	342,952	481,280
1997	130,538	82,462	213,000	164,461	156,241	419,064	739,766	138,300	342,887	481,187
1998	130,538	82,462	213,000	164,461	156,241	419,064	739,766	138,345	342,991	481,336
1999	130,538	82,462	213,000	164,656	156,456	419,574	740,686	138,835	344,648	483,483
2000	130,538	82,462	213,000	164,656	156,456	419,574	740,686	138,350	343,004	481,354
2001	130,538	82,462	213,000	164,461	156,241	419,064	739,766	138,645	343,691	482,336
2002	130,538	82,462	213,000	164,656	156,456	419,574	740,686	138,683	343,782	482,465
2003	130,538	82,462	213,000	164,461	156,241	419,064	739,766	138,350	343,004	481,354
2004	129,538	82,462	212,000	164,451	156,232	419,043	739,726	138,234	342,732	480,966
2005	129,538	82,462	212,000	164,656	156,456	419,574	740,686	138,356	343,017	481,373
2006	129,538	82,462	212,000	164,656	156,456	419,574	740,686	138,372	343,056	481,428
2007	129,538	82,462	212,000	164,461	156,241	419,064	739,766	138,356	343,017	481,373
2008	129,538	82,462	212,000	164,656	156,456	419,574	740,686	138,356	343,017	481,373
2009	129,538	82,462	212,000	164,451	156,232	419,043	739,726	138,486	343,831	482,317
2010	129,538	82,462	212,000	164,451	156,232	419,043	739,726	138,642	344,194	482,836
2011	129,538	82,462	212,000	164,451	156,232	419,043	739,726	138,195	342,641	480,836
2012	129,538	82,462	212,000	164,461	156,241	419,064	739,766	138,350	343,004	481,354
2013	129,538	82,462	212,000	164,646	156,447	419,553	740,646	138,339	342,978	481,317
2014	129,538	82,462	212,000	164,451	156,232	419,043	739,726	138,339	342,978	481,317
2015	129,538	82,462	212,000	164,451	156,232	419,043	739,726	138,339	342,978	481,317
2016	129,538	82,462	212,000	164,656	156,456	419,574	740,686	138,356	343,017	481,373
2017	129,538	82,462	212,000	164,451	156,232	419,043	739,726	138,339	342,978	481,317
2018	129,538	82,462	212,000	164,451	156,232	419,043	739,726	138,339	342,978	481,317
2019	129,538	82,462	212,000	164,451	156,232	419,043	739,726	138,339	342,978	481,317
2020	129,538	82,462	212,000	164,656	156,456	419,574	740,686	138,428	343,186	481,614
2021	129,538	82,462	212,000	164,656	156,456	419,574	740,686	138,428	343,186	481,614
2022	129,538	82,462	212,000	164,656	156,456	419,574	740,686	138,428	343,186	481,614
2023	129,538	82,462	212,000	164,656	156,456	419,574	740,686	138,428	343,186	481,614
2024	129,538	82,462	212,000	164,656	156,456	419,574	740,686	138,428	343,186	481,614
2025	129,538	82,462	212,000	164,656	156,456	419,574	740,686	138,428	343,186	481,614
2026	129,538	82,462	212,000	164,656	156,456	419,574	740,686	138,428	343,186	481,614
2027	129,538	82,462	212,000	164,656	156,456	419,574	740,686	138,428	343,186	481,614
2028	129,538	82,462	212,000	164,656	156,456	419,574	740,686	138,428	343,186	481,614
2029	129,538	82,462	212,000	164,656	156,456	419,574	740,686	138,428	343,186	481,614
2030	129,538	82,462	212,000	164,656	156,456	419,574	740,686	138,428	343,186	481,614
2031	129,538	82,462	212,000	164,656	156,456	419,574	740,686	138,428	343,186	481,614
2032	129,538	82,462	212,000	164,656	156,456	419,574	740,686	138,428	343,186	481,614
2033	129,538	82,462	212,000	164,656	156,456	419,574	740,686	138,428	343,186	481,614
2034	129,538	82,462	212,000	164,656	156,456	419,574	740,686	138,428	343,186	481,614
2035	129,538	82,462	212,000	164,656	156,456	419,574	740,686	138,428	343,186	481,614
TOTAL	8,244,710	4,622,085	12,866,795	11,420,931	10,859,531	29,063,391	51,343,853	8,537,927	21,096,101	29,634,028

a) Unadjusted for prior overpayments or underpayments of charges.

TABLE B-16: MINIMUM OMP&R COMPONENT OF

(in dollars)

Sheet 2 of 4

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	8,972	40,554	2,105	5,975	65,115	727,372	2,153	2,206	77,258	931,710
1969	46,102	46,356	2,279	6,830	84,310	1,201,617	2,329	2,202	85,689	1,477,714
1970	50,278	42,171	2,044	6,213	93,496	1,278,877	2,089	2,191	77,358	1,554,717
1971	44,551	56,234	2,732	8,285	132,890	1,683,933	2,795	2,805	103,299	2,037,524
1972	46,753	60,538	2,957	8,918	149,397	1,810,251	3,024	3,086	111,500	2,196,424
1973	47,672	63,350	3,099	9,333	154,515	1,865,352	3,169	3,262	116,801	2,266,553
1974	48,230	63,875	3,126	9,410	155,639	1,880,002	3,197	3,298	117,796	2,284,573
1975	48,020	63,592	3,112	9,370	154,890	1,871,222	3,182	3,289	117,277	2,273,954
1976	48,278	63,427	3,102	9,343	154,808	1,872,191	3,172	3,262	116,925	2,274,508
1977	48,496	63,413	3,102	9,340	154,669	1,872,843	3,172	3,259	116,916	2,275,210
1978	48,244	63,272	3,095	9,320	154,376	1,868,448	3,165	3,250	116,650	2,269,820
1979	48,165	63,249	3,094	9,319	154,293	1,866,844	3,164	3,259	116,624	2,268,011
1980	46,960	63,799	3,120	9,398	155,466	1,868,774	3,192	3,288	117,635	2,271,622
1981	47,267	64,179	3,139	9,455	156,324	1,879,590	3,212	3,303	118,339	2,284,808
1982	47,246	64,429	3,152	9,492	156,962	1,885,594	3,225	3,309	118,795	2,292,204
1983	46,983	64,235	3,143	9,463	156,463	1,878,763	3,216	3,266	118,446	2,283,978
1984	46,742	63,807	3,122	9,400	155,305	1,865,795	3,195	3,250	117,671	2,268,287
1985	46,737	63,788	3,120	9,396	155,358	1,866,237	3,194	3,256	117,635	2,268,721
1986	46,675	63,503	3,105	9,354	154,968	1,861,607	3,177	3,257	117,088	2,262,734
1987	46,804	63,752	3,117	9,392	155,547	1,868,134	3,189	3,266	117,524	2,270,725
1988	46,826	63,858	3,122	9,407	155,737	1,870,365	3,195	3,269	117,725	2,273,504
1989	46,784	63,661	3,112	9,377	155,254	1,865,428	3,185	3,264	117,370	2,267,435
1990	46,796	63,714	3,115	9,386	155,379	1,866,587	3,188	3,266	117,472	2,268,903
1991	46,788	63,678	3,113	9,380	155,284	1,865,742	3,186	3,266	117,404	2,267,841
1992	46,784	63,661	3,112	9,377	155,205	1,865,016	3,185	3,264	117,370	2,266,974
1993	46,752	63,517	3,107	9,357	154,912	1,861,814	3,178	3,260	117,116	2,263,013
1994	46,788	63,678	3,113	9,380	155,270	1,865,579	3,186	3,266	117,404	2,267,664
1995	46,815	63,802	3,120	9,399	155,639	1,869,165	3,193	3,270	117,639	2,272,042
1996	46,881	63,765	3,118	9,394	155,479	1,868,292	3,191	3,271	117,570	2,270,961
1997	46,861	63,676	3,115	9,380	155,253	1,866,111	3,187	3,267	117,418	2,268,268
1998	46,893	63,819	3,121	9,402	155,579	1,869,417	3,194	3,271	117,672	2,272,368
1999	46,923	63,963	3,128	9,423	155,990	1,873,561	3,201	3,276	117,925	2,277,390
2000	46,896	63,837	3,122	9,404	155,749	1,871,025	3,195	3,272	117,706	2,274,206
2001	46,893	63,819	3,121	9,402	155,688	1,870,295	3,194	3,271	117,672	2,273,355
2002	46,919	63,945	3,127	9,420	155,940	1,872,949	3,200	3,274	117,891	2,276,665
2003	46,896	63,837	3,122	9,404	155,716	1,870,614	3,195	3,272	117,706	2,273,762
2004	46,816	63,802	3,120	9,399	155,581	1,868,606	3,193	3,269	117,639	2,271,425
2005	46,900	63,855	3,123	9,407	155,749	1,871,050	3,196	3,272	117,740	2,274,292
2006	46,911	63,909	3,125	9,414	155,842	1,872,104	3,198	3,272	117,823	2,275,598
2007	46,899	63,855	3,123	9,406	155,756	1,871,138	3,196	3,272	117,740	2,274,385
2008	46,900	63,855	3,123	9,407	155,743	1,870,935	3,196	3,272	117,740	2,274,171
2009	46,889	63,802	3,120	9,399	155,665	1,870,103	3,193	3,269	117,639	2,273,079
2010	46,788	63,677	3,114	9,380	155,300	1,866,035	3,186	3,265	117,401	2,268,146
2011	46,788	63,677	3,114	9,380	155,293	1,865,904	3,186	3,265	117,401	2,268,008
2012	46,896	63,837	3,122	9,404	155,714	1,870,614	3,195	3,272	117,706	2,273,760
2013	46,889	63,802	3,120	9,399	155,659	1,869,988	3,193	3,269	117,639	2,272,958
2014	46,889	63,802	3,120	9,399	155,627	1,869,665	3,193	3,269	117,639	2,272,603
2015	46,889	63,802	3,120	9,399	155,659	1,869,988	3,193	3,269	117,639	2,272,958
2016	46,899	63,855	3,123	9,406	155,756	1,871,089	3,196	3,272	117,740	2,274,336
2017	46,889	63,802	3,120	9,399	155,627	1,869,665	3,193	3,269	117,639	2,272,603
2018	46,889	63,802	3,120	9,399	155,659	1,869,988	3,193	3,269	117,639	2,272,958
2019	46,889	63,802	3,120	9,399	155,659	1,869,988	3,193	3,269	117,639	2,272,958
2020	46,950	64,087	3,134	9,442	156,294	1,876,724	3,207	3,278	118,144	2,281,260
2021	46,950	64,087	3,134	9,442	156,294	1,876,724	3,207	3,278	118,144	2,281,260
2022	46,950	64,087	3,134	9,442	156,294	1,876,724	3,207	3,278	118,144	2,281,260
2023	46,950	64,087	3,134	9,442	156,294	1,876,724	3,207	3,278	118,144	2,281,260
2024	46,950	64,087	3,134	9,442	156,294	1,876,724	3,207	3,278	118,144	2,281,260
2025	46,950	64,087	3,134	9,442	156,294	1,876,724	3,207	3,278	118,144	2,281,260
2026	46,950	64,087	3,134	9,442	156,294	1,876,724	3,207	3,278	118,144	2,281,260
2027	46,950	64,087	3,134	9,442	156,294	1,876,724	3,207	3,278	118,144	2,281,260
2028	46,950	64,087	3,134	9,442	156,294	1,876,724	3,207	3,278	118,144	2,281,260
2029	46,950	64,087	3,134	9,442	156,294	1,876,724	3,207	3,278	118,144	2,281,260
2030	46,950	64,087	3,134	9,442	156,294	1,876,724	3,207	3,278	118,144	2,281,260
2031	46,950	64,087	3,134	9,442	156,294	1,876,724	3,207	3,278	118,144	2,281,260
2032	46,950	64,087	3,134	9,442	156,294	1,876,724	3,207	3,278	118,144	2,281,260
2033	46,950	64,087	3,134	9,442	156,294	1,876,724	3,207	3,278	118,144	2,281,260
2034	46,950	64,087	3,134	9,442	156,294	1,876,724	3,207	3,278	118,144	2,281,260
2035	46,950	64,087	3,134	9,442	156,294	1,876,724	3,207	3,278	118,144	2,281,260
TOTAL	3,159,890	4,268,071	208,824	628,766	10,333,858	124,609,850	213,669	218,625	7,870,993	151,512,546

a) Unadjusted for prior overpayments or underpayments of charges.

TRANSPORTATION CHARGE FOR EACH CONTRACTOR^(a)

(in dollars)

Sheet 3 of 4

CALENDAR YEAR	SOUTHERN CALIFORNIA AREA									
	Antelope Valley-East Kern Water Agency	Castaic Lake Water Agency	Coachella Valley County Water District	Crestline Creek Arrowhead Water Agency	Desert Water Agency	Littlerock Creek Irrigation District	Mojave Water Agency	Palmdale Irrigation 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	69,806	21,155	12,548	3,173	20,693	1,168	26,151	8,768	56,118	15,446
1969	90,361	27,386	16,244	4,107	26,792	1,510	33,857	11,348	72,654	19,996
1970	104,417	31,644	18,784	4,752	30,980	1,747	39,122	13,114	84,013	23,117
1971	209,534	63,504	37,756	9,548	62,266	3,507	78,504	26,316	168,861	46,437
1972	435,960	143,752	143,462	38,313	236,600	8,527	292,886	60,334	685,707	185,280
1973	449,424	145,884	149,417	40,158	246,422	8,813	304,498	62,353	854,672	228,925
1974	454,113	149,544	149,131	38,725	245,949	8,887	306,809	62,893	828,592	224,234
1975	452,795	149,068	149,485	40,044	246,528	8,856	304,910	62,685	851,115	228,247
1976	453,994	149,517	146,375	35,716	241,400	8,902	306,047	62,950	772,471	212,988
1977	449,655	150,406	149,233	41,579	246,116	8,782	300,978	62,168	876,282	232,340
1978	450,038	148,686	149,519	41,177	246,589	8,813	302,589	62,358	868,792	231,132
1979	451,121	147,675	148,894	39,806	245,553	8,844	303,877	62,536	844,441	226,601
1980	454,082	149,192	150,091	40,259	247,527	8,906	306,034	62,986	852,888	228,653
1981	454,869	149,566	150,841	40,748	248,769	8,925	306,958	63,099	862,322	230,702
1982	456,708	150,427	152,202	41,605	251,013	8,971	308,672	63,403	877,887	234,053
1983	453,031	149,366	147,926	38,171	243,958	8,878	304,853	62,786	815,696	221,184
1984	450,326	150,105	146,958	38,008	242,362	8,816	302,674	62,367	812,770	220,239
1985	450,165	148,548	150,205	42,142	247,722	8,810	302,313	62,324	886,279	234,519
1986	484,975	145,715	146,302	38,385	241,282	8,734	300,153	61,775	819,700	221,169
1987	485,858	143,058	147,322	39,430	242,965	8,749	300,597	61,886	838,424	224,899
1988	486,009	151,768	149,021	41,486	245,767	8,748	300,635	61,879	875,285	232,120
1989	485,385	149,866	147,296	39,507	242,918	8,739	300,340	61,800	840,178	225,222
1990	485,464	150,261	145,482	37,253	239,926	8,740	300,429	61,810	800,110	217,417
1991	485,159	152,233	147,666	40,070	243,532	8,731	300,112	61,762	850,140	227,123
1992	484,869	154,942	145,920	38,059	240,652	8,723	299,848	61,711	814,427	220,112
1993	484,683	147,832	148,109	40,770	244,264	8,718	299,781	61,689	862,400	229,447
1994	485,069	149,425	148,579	41,273	245,038	8,726	299,923	61,737	871,383	231,225
1995	486,722	150,875	146,936	39,051	242,325	8,743	300,384	61,833	832,302	223,715
1996	486,863	155,813	145,623	37,360	240,163	8,745	300,574	61,859	802,400	217,927
1997	486,585	148,583	147,352	39,463	243,016	8,741	300,588	61,823	839,798	225,226
1998	486,997	156,119	147,544	39,679	243,329	8,749	300,627	61,877	843,660	225,986
1999	487,625	173,158	150,225	42,851	247,756	8,758	300,863	61,955	899,994	237,015
2000	488,652	125,980	144,108	34,577	237,660	8,794	302,569	62,176	752,883	208,610
2001	487,156	164,869	148,992	41,367	245,717	8,752	300,804	61,896	873,623	231,862
2002	487,744	151,261	147,020	38,748	242,468	8,762	301,270	61,993	827,027	222,849
2003	487,448	152,354	147,537	39,402	243,317	8,762	301,207	61,953	838,682	225,113
2004	487,133	152,268	148,749	41,038	245,317	8,754	300,871	61,919	867,615	230,689
2005	487,692	147,404	147,983	39,812	244,049	8,769	301,491	62,010	845,822	226,544
2006	487,833	152,350	147,935	39,732	243,971	8,771	301,544	62,028	844,379	226,271
2007	487,729	156,358	147,034	38,698	242,483	8,770	301,393	62,016	826,035	222,667
2008	487,646	144,990	149,258	41,405	246,154	8,769	301,415	62,005	874,129	232,053
2009	487,344	156,313	145,853	37,438	240,537	8,757	301,008	61,948	803,627	218,228
2010	487,146	156,441	148,816	40,927	245,427	8,758	301,284	61,940	865,621	230,372
2011	487,100	142,504	146,336	37,878	241,336	8,757	301,325	61,934	811,437	219,808
2012	487,615	148,145	148,605	40,584	245,075	8,769	301,463	62,001	859,551	229,217
2013	487,321	155,930	148,043	40,065	244,150	8,760	301,107	61,939	850,328	227,356
2014	487,419	153,892	146,657	38,355	241,864	8,761	301,143	61,952	819,935	221,433
2015	487,555	151,317	149,386	41,576	246,364	8,768	301,381	61,993	877,169	232,640
2016	487,748	155,121	146,112	37,463	240,963	8,770	301,627	62,016	804,076	218,422
2017	487,660	154,052	147,646	39,379	243,495	8,769	301,535	62,006	838,133	225,051
2018	487,763	148,734	148,454	40,310	244,829	8,772	301,661	62,028	854,639	228,293
2019	487,558	150,343	148,540	40,489	244,970	8,768	301,498	61,993	857,848	228,890
2020	488,412	152,716	147,883	39,616	243,888	8,781	301,648	62,103	842,378	225,899
2021	488,412	152,716	147,883	39,616	243,888	8,781	301,648	62,103	842,378	225,899
2022	488,412	152,716	147,883	39,616	243,888	8,781	301,648	62,103	842,378	225,899
2023	488,412	152,716	147,883	39,616	243,888	8,781	301,648	62,103	842,378	225,899
2024	488,412	152,716	147,883	39,616	243,888	8,781	301,648	62,103	842,378	225,899
2025	488,412	152,716	147,883	39,616	243,888	8,781	301,648	62,103	842,378	225,899
2026	488,412	152,716	147,883	39,616	243,888	8,781	301,648	62,103	842,378	225,899
2027	488,412	152,716	147,883	39,616	243,888	8,781	301,648	62,103	842,378	225,899
2028	488,412	152,716	147,883	39,616	243,888	8,781	301,648	62,103	842,378	225,899
2029	488,412	152,716	147,883	39,616	243,888	8,781	301,648	62,103	842,378	225,899
2030	488,412	152,716	147,883	39,616	243,888	8,781	301,648	62,103	842,378	225,899
2031	488,412	152,716	147,883	39,616	243,888	8,781	301,648	62,103	842,378	225,899
2032	488,412	152,716	147,883	39,616	243,888	8,781	301,648	62,103	842,378	225,899
2033	488,412	152,716	147,883	39,616	243,888	8,781	301,648	62,103	842,378	225,899
2034	488,412	152,716	147,883	39,616	243,888	8,781	301,648	62,103	842,378	225,899
2035	488,412	152,716	147,883	39,616	243,888	8,781	301,648	62,103	842,378	225,899
TOTAL	31,158,516	9,819,155	9,551,640	2,555,767	15,752,526	569,814	19,490,550	4,033,574	54,132,368	14,523,448

TABLE B-16: MINIMUM OMP&R COMPONENT OF TRANSPORTATION CHARGE
FOR EACH CONTRACTOR^(a)

(in dollars)

Sheet 4 of 4

CALENDAR YEAR	SOUTHERN CALIFORNIA AREA (continued)				FEATHER RIVER AREA				FUTURE CONTRACTOR	GRAND TOTAL
	San Geronimo 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	37,075
1963	0	0	0	0	0	0	0	0	12,591	167,114
1964	0	0	0	0	0	0	0	0	13,880	183,102
1965	0	0	0	0	0	0	0	0	28,657	378,141
1966	0	0	0	0	0	0	0	0	30,815	406,526
1967	0	0	0	0	0	0	0	0	47,396	625,418
1968	9,461	1,043,473	10,195	1,298,155	0	0	0	0	41,996	2,826,848
1969	12,250	1,356,612	13,199	1,686,316	0	0	0	0	48,464	4,121,388
1970	14,163	1,575,687	15,250	1,956,790	0	0	0	0	82,045	4,486,206
1971	28,472	3,182,177	30,600	3,947,482	0	0	200	200	110,234	7,074,200
1972	113,906	8,750,043	67,558	11,162,328	0	0	200	200	112,463	14,487,200
1973	141,328	9,759,813	68,771	12,460,478	0	0	200	200	116,354	15,891,200
1974	138,201	10,070,877	70,175	12,748,130	0	0	200	200	117,276	16,209,200
1975	140,682	9,926,308	69,988	12,630,911	0	0	200	200	116,951	16,074,200
1976	130,869	10,027,472	70,150	12,618,851	0	0	200	200	116,973	16,065,200
1977	143,672	10,263,830	70,281	12,995,322	0	0	200	200	116,546	16,446,200
1978	142,845	10,360,841	69,700	13,083,079	0	0	200	200	116,457	16,530,200
1979	139,847	10,222,331	69,398	12,910,924	0	0	200	200	116,484	16,357,200
1980	141,135	10,142,620	70,016	12,854,389	0	0	200	200	116,614	16,749,200
1981	142,444	10,238,064	70,227	12,967,534	0	0	200	200	117,118	16,831,200
1982	144,600	10,216,061	70,585	12,976,187	0	0	200	200	117,351	16,846,200
1983	136,270	10,185,535	70,118	12,837,772	0	0	200	200	116,701	16,683,200
1984	135,702	10,008,133	70,273	12,648,733	0	0	200	200	116,460	16,471,200
1985	145,069	10,254,409	69,774	13,002,279	0	0	200	200	116,539	16,822,200
1986	136,372	9,924,142	68,816	12,597,520	0	0	200	200	116,952	16,410,200
1987	138,805	9,915,831	68,012	12,615,836	0	0	200	200	116,959	16,439,200
1988	143,534	10,383,728	70,882	13,150,862	0	0	200	200	117,042	16,975,200
1989	139,017	10,132,634	70,233	12,843,135	0	0	200	200	117,042	16,661,200
1990	133,905	9,996,442	70,372	12,647,611	0	0	200	200	116,962	16,465,200
1991	140,271	10,288,899	71,012	13,016,710	0	0	200	200	116,962	16,833,200
1992	135,683	10,260,756	71,894	12,937,596	0	0	200	200	116,962	16,753,200
1993	141,805	10,063,658	69,549	12,802,705	0	0	200	200	116,962	16,614,200
1994	142,964	10,258,454	70,091	13,013,887	0	0	200	200	116,962	16,830,200
1995	138,025	10,176,788	70,599	12,878,298	0	0	200	200	117,049	16,701,200
1996	134,225	10,213,248	72,221	12,877,021	0	0	200	200	116,972	16,699,200
1997	139,009	10,117,781	69,842	12,827,807	0	0	200	200	116,972	16,647,200
1998	139,505	10,388,159	72,327	13,114,558	0	0	200	200	116,972	16,938,200
1999	146,729	11,345,527	77,933	14,180,389	0	0	200	200	117,052	18,012,200
2000	128,072	8,880,112	62,509	11,436,702	0	0	200	200	117,052	15,263,200
2001	143,352	10,781,984	75,197	13,565,571	0	0	200	200	116,972	17,391,200
2002	137,436	10,158,789	70,765	12,856,132	0	0	200	200	117,052	16,686,200
2003	138,919	10,249,344	71,108	12,965,146	0	0	200	200	116,972	16,790,200
2004	142,581	10,356,917	71,063	13,114,914	0	0	200	200	116,969	16,936,200
2005	139,851	10,081,679	69,491	12,802,597	0	0	200	200	117,052	16,628,200
2006	139,673	10,243,633	71,116	12,969,236	0	0	200	200	117,052	16,796,200
2007	137,315	10,354,584	72,422	13,057,504	0	0	200	200	116,972	16,882,200
2008	143,464	10,081,731	68,699	12,841,718	0	0	200	200	117,052	16,667,200
2009	134,414	10,315,048	72,398	12,982,909	0	0	200	200	116,969	16,807,200
2010	142,364	10,484,803	72,424	13,246,323	0	0	200	200	116,969	17,066,200
2011	135,440	9,774,746	67,860	12,436,461	0	0	200	200	116,969	16,254,200
2012	141,604	10,136,790	69,729	12,879,148	0	0	200	200	116,972	16,703,200
2013	140,391	10,410,370	72,270	13,148,030	0	0	200	200	117,049	16,972,200
2014	136,509	10,267,859	71,606	12,957,385	0	0	200	200	116,969	16,780,200
2015	143,849	10,293,267	70,765	13,066,030	0	0	200	200	116,969	16,889,200
2016	134,528	10,247,681	72,026	12,916,553	0	0	200	200	117,052	16,742,200
2017	138,871	10,328,121	71,667	13,046,385	0	0	200	200	116,969	16,869,200
2018	140,993	10,147,626	69,928	12,884,030	0	0	200	200	116,969	16,707,200
2019	141,388	10,224,295	70,450	12,967,030	0	0	200	200	116,969	16,790,200
2020	139,428	10,269,377	71,259	12,993,388	0	0	200	200	117,052	16,826,200
2021	139,428	10,269,377	71,259	12,993,388	0	0	200	200	117,052	16,826,200
2022	139,428	10,269,377	71,259	12,993,388	0	0	200	200	117,052	16,826,200
2023	139,428	10,269,377	71,259	12,993,388	0	0	200	200	117,052	16,826,200
2024	139,428	10,269,377	71,259	12,993,388	0	0	200	200	117,052	16,826,200
2025	139,428	10,269,377	71,259	12,993,388	0	0	200	200	117,052	16,826,200
2026	139,428	10,269,377	71,259	12,993,388	0	0	200	200	117,052	16,826,200
2027	139,428	10,269,377	71,259	12,993,388	0	0	200	200	117,052	16,826,200
2028	139,428	10,269,377	71,259	12,993,388	0	0	200	200	117,052	16,826,200
2029	139,428	10,269,377	71,259	12,993,388	0	0	200	200	117,052	16,826,200
2030	139,428	10,269,377	71,259	12,993,388	0	0	200	200	117,052	16,826,200
2031	139,428	10,269,377	71,259	12,993,388	0	0	200	200	117,052	16,826,200
2032	139,428	10,269,377	71,259	12,993,388	0	0	200	200	117,052	16,826,200
2033	139,428	10,269,377	71,259	12,993,388	0	0	200	200	117,052	16,826,200
2034	139,428	10,269,377	71,259	12,993,388	0	0	200	200	117,052	16,826,200
2035	139,428	10,269,377	71,259	12,993,388	0	0	200	200	117,052	16,826,200
TOTAL	8,962,827	659,179,744	4,593,678	834,323,607	0	0	13,000	13,000	7,896,989	1,087,590,818

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)

Sheet 1 of 3

Calendar Year	NORTH BAY AQUEDUCT				SOUTH BAY AQUEDUCT		CALIFORNIA AQUEDUCT			
	Reach 1		Reach 3		Reach 1		Reach 1		Reach 4	
	Calhoun and Travis Pumping Plants		Cordelia Pumping Plant		South Bay and Del Valle Pumping Plant ^(b)		Delta Pumping Plant		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 4650265	3 4650265	0	0	0	0
1967	0	0	0	0	3 8492152	3 2475511	1 3983359	1 3983359	0	0
1968	0	0	5 8887974	5 8887974	3 3524219	4 8283992	1 4759773	1 4759773	1 1368295	2 6128068
1969	0	0	3 1358392	3 1358392	3 4536809	4 4793311	1 0256502	1 0256502	7550820	1 7807322
1970	0	0	3 8067993	3 8067993	4 4432448	5 4445024	1 0012576	1 0012576	8491084	1 8503660
1971	0	0	2 6478376	2 6478376	3 7454334	4 7509352	1 0055018	1 0055018	5112143	1 5167161
1972	0	0	4 1718815	4 1718815	5 4636686	6 3861870	9225184	9225184	7039548	1 6264732
1973	0	0	3 5183737	3 5183737	4 5465033	5 6252728	1 0787695	1 0787695	6075744	1 6863439
1974	0	0	3 0526127	3 0526127	4 1838224	5 2822622	9638798	9638798	6165279	1 5804077
1975	0	0	2 1473406	2 1473406	3 0854779	3 9940503	9085724	9085724	5165010	1 4250734
1976	0	0	3 2387415	3 2387415	4 4088543	5 4097609	1 0009066	1 0009066	5834570	1 5843636
1977	0	0	2 6250000	2 6250000	3 7403888	4 9055860	1 1651972	1 1651972	6387285	1 6239257
1978	0	0	2 4210526	2 4210526	3 7633359	4 9597471	1 1964112	1 1964112	5314643	1 7278755
1979	0	0	2 6363636	2 6363636	4 2804974	5 2970002	1 0165028	1 0165028	5697614	1 5862642
1980	3389610	3389610	3 1360000	3 4749610	4 3092953	5 3718320	1 0625367	1 0625367	6028776	1 6654143
1981	3455632	3455632	3 1418182	3 4873814	3 8290511	4 9587409	1 1296898	1 1296898	5774702	1 7071600
1982	3875820	3875820	3 4800000	3 8675820	4 2947486	5 5145986	1 2198500	1 2198500	6395033	1 8593533
1983	3574116	3574116	3 4584615	3 8158731	4 4309194	5 8633873	1 4324679	1 4324679	6134658	2 0459337
1984	2994068	2994068	2 8685714	3 1679782	3 8054526	4 8735271	1 0680745	1 0680745	5375653	1 6038398
1985	3937065	3937065	3 1573333	3 5510398	3 6734979	4 8388239	1 1653260	1 1653260	5300355	1 6953615
1986	3274972	3274972	2 7100000	3 0374972	3 3295476	4 4974187	1 1678711	1 1678711	5195139	1 6873850
1987	3173111	3173111	2 5976471	2 9149582	3 3072189	4 6158518	1 3086329	1 3086329	5134136	1 8220465
1988	3893460	3893460	2 4088689	2 7982349	4 1363082	4 4242878	1 2879806	1 2879806	5265131	1 8144937
1989	4955717	4955717	2 3663158	2 8618875	3 0592406	4 1764702	1 1172296	1 1172296	5418719	1 6591015
1990	4205573	4205573	2 2480000	2 6685573	2 9553076	4 1002272	1 1449196	1 1449196	5308843	1 6758039
1991	4205573	4205573	2 2480000	2 6685573	2 9597476	4 1066376	1 1468900	1 1468900	5176732	1 6645632
1992	4205573	4205573	2 2480000	2 6685573	2 8832403	3 9963243	1 1130840	1 1130840	5295974	1 6426814
1993	4361306	4361306	2 2800000	2 7241306	2 9456222	3 9376378	1 9921756	1 9921756	5392809	1 5314565
1994	4049841	4049841	2 1680000	2 5729841	2 8553516	3 9934124	1 1380608	1 1380608	5172095	1 6552703
1995	4205573	4205573	2 2480000	2 6685573	2 9161630	4 0859775	1 1698145	1 1698145	5309884	1 7008029
1996	4049841	4049841	2 2080000	2 6129841	2 8158065	3 8603935	1 0445870	1 0445870	5126662	1 5572532
1997	4205573	4205573	2 2080000	2 6285573	2 9073830	3 8801439	9727609	9727609	5254666	1 4982275
1998	4205573	4205573	2 2080000	2 6285573	2 8810213	4 0006994	1 1196781	1 1196781	5122367	1 6319148
1999	4049841	4049841	2 1680000	2 5729841	2 8652021	4 1229157	1 2577136	1 2577136	5083344	1 7660480
2000	4205573	4205573	2 2080000	2 6285573	2 8966404	4 0300970	1 1332566	1 1332566	5385871	1 6718437
2001	4205573	4205573	2 2080000	2 6285573	2 8757500	4 0048707	1 1291207	1 1291207	5170244	1 6461451
2002	4205573	4205573	2 1680000	2 5885573	2 8599309	4 0629166	1 2029857	1 2029857	5305595	1 7335452
2003	4049841	4049841	2 1280000	2 5329841	2 8019309	3 9410755	1 1391446	1 1391446	5112624	1 6504070
2004	4049841	4049841	2 1280000	2 5329841	2 7913883	3 9129840	1 1215957	1 1215957	5068557	1 6284514
2005	4205573	4205573	2 2080000	2 6285573	2 8652021	4 0221130	1 1569109	1 1569109	5381908	1 6951017
2006	4205573	4205573	2 2080000	2 6285573	2 8862926	4 0597987	1 1735061	1 1735061	5380414	1 7115475
2007	4205573	4205573	2 1680000	2 5885573	2 8599309	4 0119614	1 1520305	1 1520305	5494420	1 7014725
2008	4205573	4205573	2 2080000	2 6285573	2 8704734	4 0286629	1 1581895	1 1581895	5361170	1 6943065
2009	4049841	4049841	2 1680000	2 5729841	2 8388351	3 9762380	1 1374029	1 1374029	5470850	1 6844879
2010	4361306	4361306	2 2880000	2 7241306	2 9864787	3 9730076	9865289	9865289	5659992	1 5525281
2011	4049841	4049841	2 1680000	2 5729841	2 8441117	3 8446524	1 0005407	1 0005407	5594845	1 5600252
2012	4049841	4049841	2 1680000	2 5729841	2 8493830	3 9977200	1 1483370	1 1483370	5323690	1 6807060
2013	4205573	4205573	2 2480000	2 6685573	2 9284734	4 0622211	1 1337477	1 1337477	5390679	1 6728156
2014	4205573	4205573	2 1680000	2 5885573	2 8493830	3 9719603	1 1225773	1 1225773	5277093	1 6502866
2015	4205573	4205573	2 2080000	2 6285573	2 8757500	4 0031039	1 1273539	1 1273539	5380332	1 6653871
2016	4205573	4205573	2 2480000	2 6685573	2 9232021	4 0762262	1 1530241	1 1530241	5449892	1 6980133
2017	4205573	4205573	2 2080000	2 6285573	2 8599309	3 9742472	1 1143163	1 1143163	5380759	1 6523922
2018	4205573	4205573	2 2080000	2 6285573	2 8599309	3 9816916	1 1217607	1 1217607	5463184	1 6680791
2019	4205573	4205573	2 2080000	2 6285573	2 8599309	3 9741407	1 1142098	1 1142098	5482820	1 6624918
2020 ^(c)	4205573	4205573	2 2080000	2 6285573	2 8599309	3 9715432	1 1116123	1 1116123	5470162	1 6586285

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 powerplants.

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 COM-

(in dollars per acre-foot)

Sheet 2 of 3

Calendar Year	CALIFORNIA AQUEDUCT (Continued)									
	Reach 14A		Reach 15A		Reach 16A		Reach 17E		Reach 22B	
	Buena Vista Pumping Plant		Wheeler Ridge Pumping Plant		Wind Gap Pumping Plant		A. D. Edmonston Pumping Plant		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
	(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	0	0	0	0	0	0	0	0	0	0
1969	0	0	0	0	0	0	0	0	0	0
1970	3 3333333	5.1836993	0	0	0	0	0	0	0	0
1971	1 2950846	2 8118007	1 0883117	3 9001124	2 0700000	5 9701124	0	0	0	0
1972	1 0738129	2 7002861	9664061	3 666922	1 9687650	5 6354572	7 1698023	12 8052595	2 2756119	15 0808714
1973	8771237	2 5634676	8835516	3 4470192	1 8807466	5 3277658	7 0851115	12 4128773	2 6611336	15 0740109
1974	9234954	2 5039031	9149660	3 188691	1 9206578	5 3395269	7 2170528	12 5565797	2 5288946	15 0854743
1975	8549785	2 2800519	9289764	3 2090283	1 9674606	5 1764889	7 3980318	12 5745207	2 3286152	14 9031359
1976	1 0231445	2 6075081	1 0425460	3 6500541	2 2164497	5 8665038	8 3417969	14 2083007	3 0768630	17 2851637
1977	7034726	2 3273983	7924578	3 1198561	1 6738613	4 7937174	6 3257859	11 1195033	2 6295981	13 7491014
1978	8178529	2 5457284	9368779	3 4826063	2 0045230	5 4871293	7 6103449	13 0974742	2 6226654	15 7201396
1979	8753688	2 4616330	1 0117087	3 4733417	2 1640091	5 6373508	8 2240975	13 8614483	2 8590155	16 7204638
1980	9888977	2 6543120	1 0393802	3 6936922	2 2334273	5 9271195	8 4988147	14 4259342	2 9686744	17 3946086
1981	9048197	2 6119797	1 0540581	3 6660378	2 2757426	5 9417804	8 6486268	14 5904072	2 8921118	17 4825190
1982	9389660	2 7983193	1 1021691	3 9004884	2 3808901	6 2813785	9 0633317	15 3447102	3 1031370	18 4478472
1983	8956904	2 9416241	9493189	3 8909430	2 0473348	5 9382778	7 7884766	13 7267544	3 0275369	16 7542913
1984	8087645	2 4126043	8772084	3 2898127	2 1017697	5 3915824	7 2133293	12 6049117	2 6485427	15 2534544
1985	7840163	2 4793778	8641996	3 3435774	1 8668743	5 2104517	7 0911165	12 3015682	2 6343023	14 9358705
1986	7317393	2 4191243	8166674	3 2357917	1 7674809	5 0032726	6 7170144	11 7202870	2 2746473	13 9949343
1987	7172476	2 5392941	8065076	3 3458017	1 7430038	5 0888055	6 6144844	11 7032899	2 1957723	13 8990622
1988	7267832	2 5412769	7800118	3 3212887	1 6873541	5 0086428	6 3963511	11 4049939	2 3941056	13 7990995
1989	7282000	2 3873015	7797430	3 1670445	1 6862352	4 8532797	6 4010357	11 2543154	2 4376867	13 6920021
1990	7034411	2 3792450	7529360	3 1321810	1 6293660	4 7615470	6 5802926	11 3418396	2 4056049	13 7474445
1991	6810550	2 3456182	7750632	3 1206814	1 6741394	4 7948208	6 3506989	11 1455197	2 3364642	13 4819839
1992	7086316	2 3513130	7642238	3 1155368	1 6503944	4 7659312	6 2600691	11 0260003	2 3312527	13 3572530
1993	7204163	2 2518728	7771042	3 0289770	1 6776072	4 7065842	6 3632554	11 0698396	2 3620304	13 4318700
1994	6874247	2 3426950	7412742	3 0839692	1 6007149	4 6846841	6 4355464	11 1202305	2 2371252	13 3573557
1995	7043243	2 4051272	7592957	3 1644229	1 6385628	4 8029857	6 2129826	11 0159683	2 3523998	13 3683681
1996	6843443	2 2415975	7824205	3 0240180	1 6896334	4 7136514	6 4054432	11 1190946	2 3018566	13 4209512
1997	7287084	2 2269359	7928193	3 0197552	1 7115401	4 7312953	6 4886751	11 2199704	2 4344508	13 6544212
1998	6746360	2 3065508	7702188	3 0767696	1 6625495	4 7393191	6 2982943	11 0376134	2 4020462	13 4396596
1999	6724794	2 4385274	7283852	3 1669126	1 6604775	4 8273901	6 2771118	11 1045019	2 2840340	13 3885359
2000	7946558	2 4664995	8747163	3 3412158	1 8903248	5 2315406	7 1740052	12 4055458	2 5482479	14 9537937
2001	6849241	2 3310692	7856446	3 1167138	1 6940205	4 8107343	6 4070290	11 2177633	2 3828153	13 6005786
2002	6943588	2 4279040	7974279	3 2253319	1 7195268	4 9448587	6 5086792	11 4535379	2 4009976	13 8545355
2003	6784191	2 3288261	7888820	3 1077081	1 6797853	4 7874934	6 6931464	11 4806398	2 3390595	13 8196993
2004	6700530	2 2985044	7688668	3 0673712	1 7449930	4 8123642	6 6018233	11 4141875	2 3027230	13 7169105
2005	7248130	2 4199147	7930215	3 2129362	1 7105128	4 9234490	6 8221188	11 7455678	2 3967983	14 1423661
2006	7193538	2 4309013	7864138	3 2173151	1 6952354	4 9125505	6 7593893	11 6719398	2 4263572	14 0982970
2007	7373334	2 4388059	8115087	3 2503146	1 7492731	4 9995877	6 8134998	11 6130875	2 3959137	14 0090012
2008	7126966	2 4070031	7790560	3 1860591	1 7699712	4 9560303	6 6934736	11 6495039	2 3792139	14 0287178
2009	7264249	2 4109128	7994914	3 2104042	1 7239321	4 9343363	6 5163890	11 4507253	2 3852965	13 8360218
2010	7548075	2 3073356	8294398	3 1367754	1 7874842	4 9242596	6 7533300	11 6775896	2 4761094	14 1536990
2011	7379128	2 2979380	8128641	3 1108021	1 7532823	4 8640844	6 9620434	11 8261278	2 4141677	14 2402955
2012	7252689	2 4059749	7976205	3 2035954	1 7195105	4 9231059	6 8256581	11 7487640	2 3711252	14 1198892
2013	7309646	2 4037802	8030177	3 2067979	1 7309378	4 9371357	6 8353955	11 4725312	2 3860794	14 3280575
2014	7167337	2 3670203	7882108	3 1523111	1 6989217	4 8541528	6 7382969	11 5924497	2 3881154	13 9805651
2015	7167303	2 3821174	7872632	3 1693806	1 7836243	4 9530049	6 7326822	11 6856871	2 3847339	14 0704210
2016	7273583	2 4253716	7990246	3 2243962	1 8104998	5 0348960	6 8346788	11 8695748	2 4673499	14 3369247
2017	7073883	2 3597805	8165111	3 1762916	1 7588894	4 9351810	6 9564494	11 8916304	2 3865893	14 2782197
2018	7096071	2 3776862	8193844	3 1970706	1 7309378	4 9619870	6 9799915	11 4719785	2 3860794	14 3280575
2019	7351235	2 3976153	8126120	3 1523111	1 7505430	4 9607703	6 9208830	11 8816533	2 3790304	14 2606837
2020(c)	7326928	2 3913213	8097306	3 2010519	1 7442503	4 9453022	6 8952190	11 8405212	2 3917375	14 2322587

PONENT OF TRANSPORTATION CHARGE^(a)

(in dollars per acre-foot)

Sheet 3 of 3

Calendar Year	CALIFORNIA AQUEDUCT (Continued)									
	Reach 26A		Reach 29A		Reach 29J		Reach 31A		Reach 33	
	Devil Canyon Powerplant		Oso Pumping Plant		Castaic Powerplant		Las Perillas and Badger Hill Pumping Plants		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
	(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	1 5601285	4 1729353	0	0
1969	0	0	0	0	0	0	1 2572506	3 0379828	0	0
1970	0	0	0	0	0	0	1 6942940	3 5446600	0	0
1971	0	0	0	0	0	0	1 4391648	2 9558809	0	0
1972	-5 2308913	9 8499801	1 4085269	14 2137864	-3 9461935	10 2675929	2 0447651	3 6712383	0	0
1973	-5 5263721	9 5476388	9995236	13 4124009	-5 5960124	7 8163885	1 9079140	3 5942579	0	0
1974	-4 4935535	10 5919208	1 2147109	13 7712906	-16 0023131	-2 2310225	1 7024589	3 2828666	0	0
1975	-3 4217302	11 4814057	1 1553350	13 7298557	-13 7571302	- 0272745	1 1255883	2 5506617	0	0
1976	-5 2099452	12 0752185	1 0931007	15 3014014	-15 0262700	2751314	1 7908673	3 3752309	0	0
1977	-5 9225444	7 8265570	5671598	11 6866631	-6 5090335	5 1776296	1 4951588	3 1190845	0	0
1978	-4 7888879	10 9312517	9578917	14 0553659	-12 1352418	1 9201241	1 4930898	3 2209653	0	0
1979	-5 8852947	10 8351691	1 1419855	15 0034338	-19 5289574	-4 5255236	1 7183750	3 3046392	0	0
1980	-6 3727023	11 0219063	1 1295258	15 5554600	-19 3323083	-3 7768483	1 7710923	3 4365066	20 6363636	24 0728702
1981	-5 5912936	11 8912254	1 0707816	15 6611888	-16 0046929	- 3435041	1 5236473	3 2308073	14 8727273	18 1035346
1982	-6 1920544	12 2557928	1 0948310	16 4395412	-16 6192314	- 1796902	1 7666542	3 6260075	12 3636364	15 9896439
1983	-6 2183296	10 535617	8404152	14 5671696	-14 4639033	1032663	1 8150617	3 8609954	10 1487879	14 0097833
1984	-5 5394384	9 7140160	7732107	13 3781224	-10 2520810	3 1260414	1 5079934	3 1118332	9 4620134	12 5738466
1985	-4 5851102	10 3507603	6219802	12 9235484	-7 5914389	5 3321095	1 4874591	3 1828206	7 2888710	10 4716916
1986	-4 9376653	9 0572690	5670953	12 2873823	-6 6848246	5 6025577	1 3088897	2 9962747	6 3399396	9 3362143
1987	-4 9389241	9 5001381	8196668	12 5229567	-5 8768406	6 6661161	1 2871895	3 1092360	6 4092010	9 5184370
1988	-4 2529221	9 5461774	8080997	12 2130936	-5 2702054	6 9428882	1 2236472	3 0381409	5 2112086	8 2493495
1989	-3 7011605	9 9908416	7568516	12 0111670	-4 1762315	7 8349355	1 1958856	2 8549871	5 4582753	8 3132624
1990	-4 5896648	9 1577797	8186628	12 1605024	-3 8928336	8 2676688	1 1112369	2 7870408	5 0506530	7 8376938
1991	-4 0675865	9 043974	6958853	11 8414050	-3 6660642	8 1753408	1 1063491	2 7709123	5 1330955	7 9040078
1992	-4 2941960	9 1630570	8194300	11 8454303	-3 2063711	8 6390592	1 1014663	2 7441477	5 0153083	7 7594560
1993	-4 1872561	9 2446139	7432132	11 8130528	-3 4818303	8 3312225	1 1161197	2 6475762	5 1648281	7 8160043
1994	-4 1690159	9 1883398	7536241	11 8738546	-3 4195228	8 4543318	1 0770424	2 7323127	4 9464633	7 7609560
1995	-4 5323327	8 8360354	7568826	11 7728509	-3 4677437	8 3051072	1 1112369	2 8120398	4 9681983	7 7802381
1996	-4 4022589	9 0186923	8565382	11 9756328	-3 3713571	8 6042757	1 0770424	2 6342956	4 8857437	7 5200393
1997	-4 3340301	9 3203911	7853077	12 0052781	-3 4042112	8 6010667	1 0965835	2 5948110	4 9328658	7 5276768
1998	-4 2374560	9 2022036	8320282	11 8696416	-3 5080147	8 3616269	1 0819302	2 7138450	4 9093108	7 6231558
1999	-3 5921682	9 7963677	8141189	11 9186208	-3 0376766	8 8809442	1 0770424	2 8430904	5 0859855	7 9290759
2000	-5 2995023	9 6542914	8763837	13 2819295	-4 0914558	9 1904737	1 0965835	2 7684272	4 6030593	7 3714865
2001	-4 1311373	9 4694413	8563988	12 0741621	-3 2585035	8 8156586	1 0819302	2 7280753	4 9446433	7 6727186
2002	-3 7831750	10 0713605	8027633	12 2563012	-3 0864250	9 1698762	1 0770424	2 8105876	5 0035308	7 8141184
2003	-3 9240343	9 8956650	8190531	12 2996929	-3 1431564	9 1565365	1 0526234	2 7030304	4 8386336	7 5416640
2004	-3 5575227	10 1593878	8071263	12 2213138	-2 8933982	9 3279156	1 0477357	2 6761871	4 9564208	7 6326079
2005	-3 9544711	10 1878950	8707790	12 6163468	-3 2880282	9 3283186	1 0819302	2 7770319	4 9564208	7 7334527
2006	-4 1850978	9 9131992	8153847	12 4873245	-3 3348582	9 1524663	1 0868130	2 7983605	4 9564208	7 7547813
2007	-4 0027836	10 0062176	8245522	12 4376397	-3 2942056	9 1434341	1 0770424	2 7785149	4 9093108	7 6878257
2008	-4 1193860	9 9093318	8094144	12 4589183	-3 6094717	8 8494666	1 0819302	2 7762367	4 8386336	7 6148703
2009	-3 3197802	10 5162416	8057120	12 2564373	-2 9614518	9 2949855	1 0672768	2 7517647	5 0977630	7 8495277
2010	-3 1676078	10 9860912	7637160	12 4413056	-3 0848585	9 3564471	1 1307731	2 6833012	5 3215599	8 0048611
2011	-3 6613656	10 5789299	7895410	12 6156688	-3 0844240	9 5312448	1 0770424	2 6370676	5 0153083	7 6523759
2012	-3 9906736	10 1292156	8046717	12 5534357	-3 4653146	9 0881211	1 0770424	2 7577484	4 8504111	7 6081595
2013	-3 9224504	9 9866652	7980078	12 2705390	-3 1007051	9 1698339	1 1014663	2 7742819	5 0506530	7 8249349
2014	-3 8166634	10 1639017	8166625	12 4091122	-3 0381343	9 3709779	1 0770424	2 7273290	4 9446433	7 6219723
2015	-4 2037635	9 8666575	7824486	12 4681357	-3 2536375	9 2144982	1 0819302	2 7473173	4 8621886	7 6095059
2016	-4 2437294	10 0931953	8210170	12 6905918	-3 4549074	9 2356844	1 1014663	2 7994796	4 8621886	7 6616682
2017	-3 9996185	10 2786012	7975205	12 6891509	-3 2829072	9 4062437	1 0770424	2 7294346	4 8739661	7 6034007
2018	-4 1597079	10 1683496	8338337	12 7758122	-3 3650495	9 4107627	1 0819302	2 7500093	4 8504111	7 6004204
2019	-4 0534175	10 2072662	7923892	12 6740425	-3 2615357	9 4125068	1 0819302	2 7445224	4 8739661	7 6183881
2020 ^(c)	-4 0448495	10 1827692	7851852	12 6257064	-3 2314540	9 3942524	1 0819302	2 7405587	4 8739661	7 6145248

TABLE B-18: VARIABLE OMP&R COMPONENT OF

(in dollars)

Sheet 1 of 4

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 County FC & WD	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	19,096	51,504	119,675	190,275	0	0	0
1967	0	0	0	19,108	56,924	158,595	234,627	0	0	0
1968	7,149	0	7,149	29,612	119,826	338,495	487,933	0	0	0
1969	8,426	0	8,426	29,720	3,642	278,901	312,263	0	0	0
1970	13,773	0	13,773	50,357	0	437,253	487,610	0	0	0
1971	12,000	0	12,000	53,211	120,674	418,082	591,967	0	0	0
1972	20,000	0	20,000	79,188	114,313	561,985	755,486	0	0	0
1973	18,000	0	18,000	76,503	105,755	495,025	677,283	0	0	0
1974	17,000	0	17,000	78,177	103,532	464,839	646,548	0	0	0
1975	13,000	0	13,000	63,905	81,878	351,476	497,259	0	0	0
1976	21,000	0	21,000	93,616	115,228	476,059	684,903	0	0	0
1977	21,000	0	21,000	90,263	108,904	431,691	630,858	0	0	0
1978	23,000	0	23,000	97,211	114,570	436,458	648,239	0	0	0
1979	29,000	0	29,000	110,177	126,598	466,136	702,911	0	0	0
1980	43,437	2,288	45,725	118,180	133,222	472,721	724,123	24,073	28,887	52,960
1981	47,951	2,765	50,716	114,051	128,927	436,370	679,348	18,104	41,637	59,741
1982	58,014	3,643	61,657	132,350	149,997	485,285	767,632	31,979	73,553	105,532
1983	62,008	3,692	65,700	146,585	166,520	515,978	829,083	42,028	96,668	138,696
1984	55,440	3,341	58,781	126,712	144,256	428,871	699,839	56,582	130,768	187,350
1985	66,582	5,067	71,649	130,648	149,036	425,817	705,501	78,538	181,160	259,698
1986	60,750	4,991	65,741	125,927	144,367	395,774	666,068	93,362	215,667	309,029
1987	61,943	5,813	67,756	133,859	153,707	406,196	693,762	118,981	274,131	393,112
1988	62,960	9,695	72,655	132,728	152,638	389,337	674,703	127,866	295,327	423,193
1989	67,970	15,536	83,506	129,470	149,100	375,883	654,453	166,266	383,240	549,506
1990	66,714	15,897	82,611	131,207	151,299	377,221	659,727	195,942	452,235	648,177
1991	66,714	15,897	82,611	139,625	157,695	386,025	683,345	197,600	456,062	653,662
1992	66,714	15,897	82,611	143,868	159,453	383,647	686,968	193,987	447,721	641,708
1993	68,103	16,486	84,589	149,631	163,018	385,888	698,537	195,400	450,984	646,384
1994	64,325	15,308	79,633	159,736	167,724	399,341	726,801	191,924	442,960	634,884
1995	66,714	15,897	82,611	171,611	171,611	408,597	751,819	194,506	448,919	643,425
1996	65,325	15,308	80,633	169,857	162,137	386,040	718,034	188,002	433,906	621,908
1997	65,714	15,897	81,611	178,487	162,966	388,014	729,467	188,193	434,346	622,539
1998	65,714	15,897	81,611	184,032	168,029	400,070	752,131	190,579	439,855	630,434
1999	64,325	15,308	79,633	189,654	173,162	412,292	775,108	198,227	457,507	655,734
2000	65,714	15,897	81,611	185,385	169,264	403,010	757,659	184,287	425,335	609,622
2001	65,714	15,897	81,611	184,225	168,205	400,486	752,916	191,818	442,715	634,533
2002	64,714	15,897	80,611	186,894	170,642	406,292	763,828	195,353	450,874	646,227
2003	63,325	15,308	78,633	181,290	165,525	394,107	740,922	188,543	435,154	623,697
2004	63,325	15,308	78,633	179,997	164,345	391,299	735,641	190,815	440,401	631,216
2005	65,714	15,897	81,611	185,017	168,928	402,212	756,157	193,337	446,220	639,557
2006	65,714	15,897	81,611	186,750	170,511	405,981	763,242	193,870	447,450	641,320
2007	64,714	15,897	80,611	184,550	168,502	401,196	754,248	192,196	443,587	635,783
2008	65,714	15,897	81,611	185,319	169,204	402,866	757,389	190,372	439,378	629,750
2009	64,325	15,308	79,633	182,907	167,002	397,624	747,533	196,238	452,918	649,156
2010	68,103	16,486	84,589	182,758	166,866	397,301	746,925	200,121	461,881	662,002
2011	64,325	15,308	79,633	176,854	161,476	384,465	722,795	191,310	441,541	632,851
2012	64,325	15,308	79,633	183,896	167,904	399,772	751,572	190,203	438,991	629,194
2013	66,714	15,897	82,611	186,862	170,613	406,222	763,697	195,624	451,499	647,123
2014	64,714	15,897	80,611	182,711	166,822	397,196	746,729	191,799	442,673	634,472
2015	65,714	15,897	81,611	184,143	168,131	400,309	752,583	190,238	439,068	629,306
2016	66,714	15,897	82,611	187,506	171,201	407,623	766,330	191,543	442,078	633,621
2017	65,714	15,897	81,611	182,816	166,918	397,425	747,159	190,085	438,716	628,801
2018	65,714	15,897	81,611	183,158	167,231	398,169	748,558	190,010	438,545	628,555
2019	65,714	15,897	81,611	182,811	166,914	397,414	747,139	190,459	439,581	630,040
2020	65,714	15,897	81,611	182,691	166,805	397,154	746,650	190,362	439,358	629,720
2021	65,714	15,897	81,611	182,691	166,805	397,154	746,650	190,362	439,358	629,720
2022	65,714	15,897	81,611	182,691	166,805	397,154	746,650	190,362	439,358	629,720
2023	65,714	15,897	81,611	182,691	166,805	397,154	746,650	190,362	439,358	629,720
2024	65,714	15,897	81,611	182,691	166,805	397,154	746,650	190,362	439,358	629,720
2025	65,714	15,897	81,611	182,691	166,805	397,154	746,650	190,362	439,358	629,720
2026	65,714	15,897	81,611	182,691	166,805	397,154	746,650	190,362	439,358	629,720
2027	65,714	15,897	81,611	182,691	166,805	397,154	746,650	190,362	439,358	629,720
2028	65,714	15,897	81,611	182,691	166,805	397,154	746,650	190,362	439,358	629,720
2029	65,714	15,897	81,611	182,691	166,805	397,154	746,650	190,362	439,358	629,720
2030	65,714	15,897	81,611	182,691	166,805	397,154	746,650	190,362	439,358	629,720
2031	65,714	15,897	81,611	182,691	166,805	397,154	746,650	190,362	439,358	629,720
2032	65,714	15,897	81,611	182,691	166,805	397,154	746,650	190,362	439,358	629,720
2033	65,714	15,897	81,611	182,691	166,805	397,154	746,650	190,362	439,358	629,720
2034	65,714	15,897	81,611	182,691	166,805	397,154	746,650	190,362	439,358	629,720
2035	65,714	15,897	81,611	182,691	166,805	397,154	746,650	190,362	439,358	629,720
TOTAL	3,808,913	784,559	4,593,472	10,424,057	10,578,911	28,102,366	49,105,334	9,576,152	22,073,866	31,650,018

a) Unadjusted for prior overpayments or underpayments of charges.

TRANSPORTATION CHARGE FOR EACH CONTRACTOR^(a)

(in dollars)

Sheet 2 of 4

CALENDAR YEAR	SAN JOAQUIN VALLEY AREA									
	Devil's Den Water District	Oudley 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	30,805	68,874	5,168	0	0	444,625	2,351	4,552	65,581	621,956
1969	30,289	55,871	99	5,061	0	317,049	179	3,093	12,610	424,251
1970	41,611	74,768	7,294	17,723	0	500,494	0	5,918	0	647,808
1971	39,609	68,253	9,100	31,852	0	685,978	2,275	5,430	86,453	928,950
1972	28,268	32,529	4,880	4,229	36,755	648,137	2,278	2,675	59,691	819,442
1973	31,270	37,100	5,059	4,890	83,075	634,624	2,529	3,344	65,936	867,827
1974	31,844	38,088	4,742	5,216	85,777	664,600	2,371	3,084	67,958	903,680
1975	27,293	37,337	4,276	5,130	85,872	648,739	2,280	3,089	66,836	880,852
1976	39,490	44,838	4,753	6,179	101,091	867,909	2,535	3,503	80,486	1,150,784
1977	39,613	49,367	4,872	6,821	126,212	871,367	2,761	4,311	88,991	1,194,315
1978	40,906	56,156	5,183	7,948	146,544	1,050,074	3,283	4,666	101,426	1,416,186
1979	41,969	54,885	4,759	7,773	148,887	1,109,219	3,173	4,066	99,300	1,474,031
1980	43,644	61,121	4,997	8,660	166,649	1,273,643	3,664	4,463	110,750	1,677,591
1981	41,031	66,238	5,121	9,560	178,386	1,389,036	3,926	4,858	120,184	1,818,340
1982	46,051	76,234	5,579	10,970	205,200	1,648,011	4,649	5,489	138,150	2,140,333
1983	49,034	87,771	6,137	12,684	226,220	1,900,531	5,729	6,589	159,992	2,454,687
1984	39,521	72,333	4,811	10,424	199,541	1,660,003	4,972	5,127	131,675	2,128,407
1985	40,422	80,021	5,086	11,698	218,786	1,824,705	5,764	5,710	145,801	2,337,993
1986	38,053	83,188	5,063	12,150	227,728	1,897,732	6,243	5,956	151,864	2,427,977
1987	39,487	93,653	5,466	13,666	255,065	2,124,596	7,289	6,805	171,091	2,717,118
1988	38,584	97,075	5,444	14,153	264,675	2,213,859	7,258	6,955	177,458	2,825,461
1989	36,259	92,246	4,978	13,604	256,547	2,139,276	6,636	6,256	168,730	2,724,532
1990	35,395	96,694	5,028	14,245	270,174	2,211,328	6,704	6,526	184,338	2,830,432
1991	35,191	96,046	4,994	14,149	268,970	2,198,107	6,659	6,537	183,102	2,813,755
1992	34,851	94,783	4,928	13,963	266,268	2,179,831	6,570	6,345	180,695	2,788,234
1993	33,625	88,366	4,595	13,017	254,206	2,072,394	6,126	5,655	168,460	2,646,444
1994	34,700	95,509	4,966	14,070	266,366	2,179,342	6,621	6,487	182,080	2,790,141
1995	35,714	98,136	5,102	14,456	272,701	2,238,631	6,803	6,668	187,089	2,865,300
1996	33,455	89,854	4,672	13,237	256,779	2,086,574	6,229	5,954	171,298	2,668,052
1997	32,954	86,447	4,494	12,734	251,549	2,041,792	5,993	5,545	164,805	2,606,313
1998	34,466	94,161	4,896	13,871	264,546	2,158,880	6,528	6,382	179,511	2,763,241
1999	36,107	101,901	5,298	15,012	279,666	2,291,812	7,064	7,169	194,266	2,938,295
2000	35,159	96,465	5,016	14,211	279,614	2,257,915	6,687	6,460	183,903	2,885,430
2001	34,647	94,982	4,938	13,993	267,503	2,179,788	6,584	6,436	181,076	2,789,947
2002	35,694	100,025	5,201	14,735	278,970	2,274,913	6,934	6,857	190,690	2,914,019
2003	34,328	95,229	4,951	14,029	268,067	2,177,846	6,602	6,493	181,545	2,789,090
2004	33,987	93,962	4,886	13,842	266,008	2,154,881	6,513	6,393	179,130	2,759,602
2005	35,269	97,808	5,086	14,409	275,534	2,242,823	6,781	6,594	186,461	2,870,765
2006	35,540	98,756	5,135	14,548	276,861	2,257,316	6,846	6,689	188,271	2,889,962
2007	35,287	98,175	5,104	14,462	277,154	2,256,426	6,806	6,567	187,162	2,887,143
2008	35,259	97,762	5,083	14,402	275,663	2,240,501	6,777	6,602	186,374	2,868,423
2009	34,947	97,195	5,053	14,318	274,037	2,232,190	6,738	6,483	185,293	2,856,254
2010	34,078	89,581	4,658	13,196	261,087	2,116,764	6,210	5,623	170,778	2,701,975
2011	33,490	90,013	4,680	13,261	261,123	2,110,639	6,240	5,703	171,602	2,696,751
2012	35,023	96,977	5,042	14,286	274,071	2,228,545	6,722	6,546	184,878	2,852,090
2013	35,234	96,521	5,018	14,219	272,965	2,225,665	6,691	6,462	184,009	2,846,784
2014	34,637	95,222	4,951	14,028	269,560	2,192,621	6,601	6,399	181,531	2,805,550
2015	34,891	96,093	4,996	14,156	272,768	2,213,325	6,661	6,426	183,193	2,832,509
2016	35,553	97,975	5,094	14,433	277,769	2,254,749	6,792	6,572	186,782	2,885,719
2017	34,664	95,343	4,957	14,046	271,520	2,198,730	6,609	6,352	181,763	2,813,984
2018	34,925	96,249	5,004	14,179	273,639	2,216,711	6,672	6,394	183,489	2,837,262
2019	34,854	95,926	4,988	14,131	273,116	2,216,219	6,650	6,351	182,874	2,835,109
2020	34,805	95,703	4,976	14,099	272,388	2,210,907	6,634	6,336	182,449	2,828,297
2021	34,805	95,703	4,976	14,099	272,388	2,210,907	6,634	6,336	182,449	2,828,297
2022	34,805	95,703	4,976	14,099	272,388	2,210,907	6,634	6,336	182,449	2,828,297
2023	34,805	95,703	4,976	14,099	272,388	2,210,907	6,634	6,336	182,449	2,828,297
2024	34,805	95,703	4,976	14,099	272,388	2,210,907	6,634	6,336	182,449	2,828,297
2025	34,805	95,703	4,976	14,099	272,388	2,210,907	6,634	6,336	182,449	2,828,297
2026	34,805	95,703	4,976	14,099	272,388	2,210,907	6,634	6,336	182,449	2,828,297
2027	34,805	95,703	4,976	14,099	272,388	2,210,907	6,634	6,336	182,449	2,828,297
2028	34,805	95,703	4,976	14,099	272,388	2,210,907	6,634	6,336	182,449	2,828,297
2029	34,805	95,703	4,976	14,099	272,388	2,210,907	6,634	6,336	182,449	2,828,297
2030	34,805	95,703	4,976	14,099	272,388	2,210,907	6,634	6,336	182,449	2,828,297
2031	34,805	95,703	4,976	14,099	272,388	2,210,907	6,634	6,336	182,449	2,828,297
2032	34,805	95,703	4,976	14,099	272,388	2,210,907	6,634	6,336	182,449	2,828,297
2033	34,805	95,703	4,976	14,099	272,388	2,210,907	6,634	6,336	182,449	2,828,297
2034	34,805	95,703	4,976	14,099	272,388	2,210,907	6,634	6,336	182,449	2,828,297
2035	34,805	95,703	4,976	14,099	272,388	2,210,907	6,634	6,336	182,449	2,828,297
TOTAL	2,435,857	5,821,350	341,297	867,613	15,469,472	127,795,977	386,702	398,985	10,646,595	164,163,848

TABLE B-18: VARIABLE OMP&R COMPONENT OF

(in dollars)

Sheet 3 of 4

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 Irrigation 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	179,273	0	0	8,747	0	2,178	0	0	453,099	0
1973	198,606	12,505	0	13,115	0	3,599	19,898	0	458,286	109,799
1974	226,019	8,257-	96,547	17,499	150,856	5,023	23,534	0	529,596	130,280
1975	289,215	156-	104,322	21,609	163,935	6,539	26,825	1,258	602,773	150,406
1976	369,417	2,063	131,367	30,077	207,422	9,094	35,262	4,263	664,137	169,053
1977	366,944	59,026	115,781	27,910	178,738	8,118	41,247	6,670	450,028	115,832
1978	484,606	25,731	145,287	36,471	220,081	12,050	62,881	13,883	655,876	171,620
1979	582,180	69,242-	168,258	43,641	250,807	14,416	83,603	24,118	677,198	179,864
1980	679,712	66,850-	189,324	50,444	295,707	16,589	104,367	38,950	721,933	191,781
1981	760,844	6,904-	211,626	55,769	332,168	18,530	139,861	58,362	814,549	217,609
1982	893,277	3,970-	245,837	64,198	387,406	21,176	184,478	87,464	450,028	234,086
1983	881,453	2,540	243,726	63,164	385,349	20,591	201,052	107,892	784,928	209,665
1984	898,041	84,091	240,517	61,928	381,336	20,294	244,054	132,856	757,694	201,080
1985	962,632	155,164	253,746	64,970	403,268	21,282	298,717	169,760	843,587	225,648
1986	1,011,063	173,119	254,848	64,936	405,852	21,565	335,879	202,760	769,868	210,130
1987	1,105,027	219,315	270,072	68,522	437,821	22,938	416,971	202,467	845,512	233,702
1988	1,180,371	245,084	284,979	72,031	469,169	23,608	496,767	197,306	887,795	248,199
1989	1,277,794	293,026	299,485	75,443	499,759	24,648	575,065	194,700	969,111	273,749
1990	1,424,690	324,918	317,565	79,736	523,778	26,087	659,877	196,214	929,515	263,744
1991	1,548,804	339,276	311,433	78,195	513,664	25,636	684,885	192,818	965,917	271,134
1992	1,533,375	358,520	308,553	77,471	508,913	25,360	678,550	190,749	929,869	261,016
1993	1,538,755	345,745	310,276	77,905	511,755	25,495	682,338	191,509	948,497	266,245
1994	1,545,824	350,855	308,556	77,472	508,915	25,578	678,553	192,379	942,724	264,625
1995	1,531,422	344,662	308,810	77,537	509,335	25,337	679,114	190,577	906,578	254,479
1996	1,546,591	357,077	310,025	77,842	511,339	25,575	681,784	192,360	925,317	259,738
1997	1,559,912	356,944	315,417	79,196	520,234	25,806	693,644	194,107	956,272	268,427
1998	1,535,094	347,007	310,457	77,950	512,051	25,387	682,736	190,950	944,146	265,023
1999	1,544,190	368,559	309,275	77,653	510,103	25,540	680,137	192,107	1,005,107	282,135
2000	1,724,814	381,404	345,434	86,732	569,739	28,533	759,652	214,617	990,530	278,043
2001	1,560,245	365,851	314,173	78,884	518,182	25,800	690,909	194,069	971,565	272,720
2002	1,592,394	380,549	320,040	80,355	527,858	26,343	703,810	198,147	1,033,319	290,056
2003	1,596,291	379,996	319,234	80,155	526,530	26,405	702,041	198,615	1,015,296	284,995
2004	1,586,987	387,109	316,860	79,558	522,614	26,252	696,819	197,466	1,042,352	292,550
2005	1,633,423	387,125	326,689	82,026	538,824	27,015	718,431	203,199	1,045,278	293,412
2006	1,622,735	379,827	325,671	81,769	537,144	26,846	716,194	201,925	1,017,094	285,500
2007	1,614,672	379,452	323,608	81,253	535,741	26,710	711,658	200,906	1,026,637	288,178
2008	1,619,576	367,253	324,062	81,366	534,494	26,794	712,659	201,538	1,016,697	285,389
2009	1,592,032	385,742	319,612	80,249	527,153	26,337	702,870	198,098	1,078,967	302,867
2010	1,623,051	388,293	326,951	82,091	539,257	26,859	719,008	202,022	1,127,174	316,400
2011	1,643,842	395,546	328,950	82,594	542,555	27,201	723,407	204,592	1,085,399	304,674
2012	1,633,271	377,157	326,171	81,896	537,968	27,022	717,290	203,254	1,039,258	291,721
2013	1,594,981	380,548	321,301	80,674	529,938	26,387	706,582	198,475	1,024,634	287,616
2014	1,611,745	388,894	322,952	81,088	532,660	26,663	710,212	200,549	1,042,815	292,720
2015	1,624,341	382,400	325,027	81,609	536,082	26,876	714,777	202,162	1,012,320	284,159
2016	1,650,138	383,280	331,183	83,155	546,236	27,300	728,315	205,343	1,035,561	290,685
2017	1,652,980	390,359	329,827	82,814	544,000	27,351	725,334	205,727	1,054,585	296,025
2018	1,660,275	390,546	330,979	83,103	545,900	27,467	727,866	206,595	1,043,273	292,849
2019	1,651,553	390,620	329,421	82,711	543,333	27,328	724,444	205,552	1,047,267	293,970
2020	1,645,795	389,862	328,765	82,547	542,249	27,233	722,998	204,841	1,044,750	293,263
2021	1,645,795	389,862	328,765	82,547	542,249	27,233	722,998	204,841	1,044,750	293,263
2022	1,645,795	389,862	328,765	82,547	542,249	27,233	722,998	204,841	1,044,750	293,263
2023	1,645,795	389,862	328,765	82,547	542,249	27,233	722,998	204,841	1,044,750	293,263
2024	1,645,795	389,862	328,765	82,547	542,249	27,233	722,998	204,841	1,044,750	293,263
2025	1,645,795	389,862	328,765	82,547	542,249	27,233	722,998	204,841	1,044,750	293,263
2026	1,645,795	389,862	328,765	82,547	542,249	27,233	722,998	204,841	1,044,750	293,263
2027	1,645,795	389,862	328,765	82,547	542,249	27,233	722,998	204,841	1,044,750	293,263
2028	1,645,795	389,862	328,765	82,547	542,249	27,233	722,998	204,841	1,044,750	293,263
2029	1,645,795	389,862	328,765	82,547	542,249	27,233	722,998	204,841	1,044,750	293,263
2030	1,645,795	389,862	328,765	82,547	542,249	27,233	722,998	204,841	1,044,750	293,263
2031	1,645,795	389,862	328,765	82,547	542,249	27,233	722,998	204,841	1,044,750	293,263
2032	1,645,795	389,862	328,765	82,547	542,249	27,233	722,998	204,841	1,044,750	293,263
2033	1,645,795	389,862	328,765	82,547	542,249	27,233	722,998	204,841	1,044,750	293,263
2034	1,645,795	389,862	328,765	82,547	542,249	27,233	722,998	204,841	1,044,750	293,263
2035	1,645,795	389,862	328,765	82,547	542,249	27,233	722,998	204,841	1,044,750	293,263
TOTAL	86,477,197	18,509,591	18,134,474	4,576,265	29,709,953	1,501,220	35,972,325	10,686,786	59,682,221	16,445,846

a) Unadjusted for prior overpayments or underpayments of charges.

TRANSPORTATION CHARGE FOR EACH CONTRACTOR (a)

(in dollars)

Sheet 4 of 4

CALENDAR YEAR	SOUTHERN CALIFORNIA AREA (continued)				FEATHER RIVER AREA				FUTURE CONTRACTOR	GRAND TOTAL
	San Geronimo 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)	
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	190,275
1967	0	0	0	0	0	0	0	0	0	234,627
1968	0	0	0	0	0	0	0	0	0	1,117,038
1969	0	0	0	0	0	0	0	0	0	744,940
1970	0	0	0	0	0	0	0	0	0	1,149,191
1971	0	0	0	0	0	0	0	0	0	1,532,917
1972	0	954,887	0	1,598,184	0	0	0	0	0	3,193,112
1973	0	1,675,893	0	2,491,701	0	0	0	0	0	4,054,811
1974	0	1,765,544	0	2,936,641	0	0	0	0	0	4,503,869
1975	0	2,500,204	0	3,866,930	0	0	0	0	0	5,258,041
1976	0	3,040,101	0	4,662,256	0	0	0	0	0	6,518,943
1977	0	2,139,230	0	3,509,524	0	0	0	0	0	5,355,697
1978	0	2,903,631	0	4,732,117	0	0	0	0	0	6,819,542
1979	0	2,402,244	0	4,357,087	0	0	0	0	0	6,563,029
1980	74,950	2,585,864	3,776-	4,878,995	0	0	0	0	0	7,379,394
1981	92,752	3,656,378	687-	6,350,857	0	0	0	0	0	8,959,002
1982	107,852	4,119,388	538-	7,216,942	0	0	0	0	0	10,292,096
1983	103,252	4,202,986	413	7,207,011	0	0	0	0	0	10,695,177
1984	104,911	5,854,439	15,631	8,996,872	0	0	0	0	0	12,071,249
1985	122,139	7,485,140	31,992	11,038,045	0	0	0	0	0	14,412,886
1986	116,839	7,889,271	44,820	11,500,950	0	0	0	0	0	14,969,765
1987	133,002	9,843,120	66,661	13,865,130	0	0	0	0	0	17,736,878
1988	144,147	10,960,491	90,258	15,300,205	0	0	0	0	0	19,296,217
1989	161,852	12,168,669	125,360	16,938,661	0	0	0	0	0	20,950,658
1990	158,430	12,276,772	165,353	17,346,679	0	0	0	0	0	21,567,626
1991	162,870	12,502,899	163,507	17,761,038	0	0	0	0	0	21,994,411
1992	156,790	12,892,174	172,782	18,094,122	0	0	0	0	0	22,293,643
1993	159,932	12,880,169	166,624	18,105,209	0	0	0	0	0	22,181,163
1994	158,957	13,132,246	169,085	18,355,769	0	0	0	0	0	22,587,228
1995	152,865	12,960,744	166,102	18,107,562	0	0	0	0	0	22,450,717
1996	156,023	13,524,224	172,086	18,739,981	0	0	0	0	0	22,828,608
1997	161,244	13,860,973	172,021	19,164,197	0	0	0	0	0	23,204,127
1998	159,197	13,720,958	167,234	18,938,190	0	0	0	0	0	23,165,607
1999	169,476	14,763,353	177,619	20,105,254	0	0	0	0	0	24,554,024
2000	167,021	15,192,633	183,809	20,922,961	0	0	0	0	0	25,257,283
2001	163,823	14,883,220	176,312	20,215,753	0	0	0	0	0	24,474,760
2002	174,235	15,806,203	183,398	21,316,707	0	0	0	0	0	25,721,392
2003	171,195	15,895,028	183,131	21,378,912	0	0	0	0	0	25,611,254
2004	175,758	16,441,434	186,558	21,952,357	0	0	0	0	0	26,157,449
2005	176,252	16,662,984	186,565	22,281,223	0	0	0	0	0	26,629,313
2006	171,499	16,504,230	183,050	22,053,484	0	0	0	0	0	26,429,619
2007	173,107	16,746,311	182,869	22,289,102	0	0	0	0	0	26,646,887
2008	171,433	16,527,675	176,988	22,045,924	0	0	0	0	0	26,383,097
2009	181,932	17,624,385	185,900	23,206,144	0	0	0	0	0	27,538,720
2010	190,059	18,169,539	187,130	23,897,834	0	0	0	0	0	28,093,325
2011	183,015	18,339,744	190,626	24,052,145	0	0	0	0	0	28,184,175
2012	175,235	17,674,123	181,761	23,266,127	0	0	0	0	0	27,578,616
2013	172,770	17,868,078	183,396	23,375,380	0	0	0	0	0	27,715,595
2014	175,835	18,405,427	187,419	23,978,979	0	0	0	0	0	28,246,341
2015	170,693	18,192,985	184,290	23,737,721	0	0	0	0	0	28,033,730
2016	174,611	18,514,502	184,713	24,155,022	0	0	0	0	0	28,523,303
2017	177,822	19,025,162	188,125	24,700,111	0	0	0	0	0	28,971,666
2018	175,911	19,139,601	188,215	24,812,580	0	0	0	0	0	29,108,566
2019	176,585	19,333,180	188,250	24,994,214	0	0	0	0	0	29,288,113
2020	176,162	19,335,354	187,885	24,981,704	0	0	0	0	0	29,267,982
2021	176,162	19,335,354	187,885	24,981,704	0	0	0	0	0	29,267,982
2022	176,162	19,335,354	187,885	24,981,704	0	0	0	0	0	29,267,982
2023	176,162	19,335,354	187,885	24,981,704	0	0	0	0	0	29,267,982
2024	176,162	19,335,354	187,885	24,981,704	0	0	0	0	0	29,267,982
2025	176,162	19,335,354	187,885	24,981,704	0	0	0	0	0	29,267,982
2026	176,162	19,335,354	187,885	24,981,704	0	0	0	0	0	29,267,982
2027	176,162	19,335,354	187,885	24,981,704	0	0	0	0	0	29,267,982
2028	176,162	19,335,354	187,885	24,981,704	0	0	0	0	0	29,267,982
2029	176,162	19,335,354	187,885	24,981,704	0	0	0	0	0	29,267,982
2030	176,162	19,335,354	187,885	24,981,704	0	0	0	0	0	29,267,982
2031	176,162	19,335,354	187,885	24,981,704	0	0	0	0	0	29,267,982
2032	176,162	19,335,354	187,885	24,981,704	0	0	0	0	0	29,267,982
2033	176,162	19,335,354	187,885	24,981,704	0	0	0	0	0	29,267,982
2034	176,162	19,335,354	187,885	24,981,704	0	0	0	0	0	29,267,982
2035	176,162	19,335,354	187,885	24,981,704	0	0	0	0	0	29,267,982
TOTAL	9,074,863	874,974,100	8,761,212	1,174,506,053	0	0	0	0	0	1,424,018,725

TABLE B-19: TOTAL TRANSPORTATION

(in dollars)

Sheet 1 of 4

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 County FC & WD	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	21,417	52,622	0	74,039	0	0	0
1963	0	0	0	142,280	178,569	419,713	740,562	0	0	0
1964	0	0	0	156,908	251,519	584,633	993,060	7,173	17,678	24,851
1965	0	0	0	227,691	347,843	1,099,927	1,675,461	12,495	30,240	42,735
1966	19,372	0	19,372	250,117	354,530	1,338,854	1,943,501	21,234	50,875	72,109
1967	42,736	0	42,736	319,045	428,465	1,593,514	2,341,024	38,730	92,005	130,735
1968	125,126	0	125,126	345,789	510,221	1,838,385	2,694,395	64,220	151,778	215,998
1969	260,597	0	260,597	396,633	443,986	1,908,720	2,749,339	121,057	284,803	405,860
1970	273,593	0	273,593	421,255	444,775	2,075,944	2,941,974	129,095	303,765	432,860
1971	256,217	0	256,217	455,043	595,532	2,141,464	3,192,039	122,209	287,868	410,077
1972	273,872	26,990	300,862	539,865	596,693	2,305,935	3,442,493	126,638	298,353	424,991
1973	277,913	29,804	307,717	543,947	594,886	2,256,423	3,395,256	128,801	303,501	432,302
1974	281,012	32,276	313,288	551,346	597,985	2,240,296	3,389,627	130,404	307,351	437,755
1975	278,441	34,379	312,820	537,418	576,601	2,126,877	3,240,896	130,693	308,122	438,815
1976	290,668	38,045	328,713	570,906	613,413	2,260,071	3,444,390	241,182	573,876	815,058
1977	306,248	51,770	358,018	567,631	607,179	2,216,085	3,390,895	267,221	644,605	911,826
1978	336,784	79,875	416,659	575,539	613,945	2,226,111	3,415,595	322,709	789,479	1,112,188
1979	411,393	147,906	559,299	589,475	626,886	2,258,335	3,474,696	584,920	1,497,457	2,082,377
1980	628,875	386,905	1,015,780	598,505	634,447	2,267,157	3,500,109	992,210	2,565,850	3,558,060
1981	655,469	407,956	1,063,425	594,945	630,672	2,233,047	3,458,664	1,034,685	2,704,757	3,739,442
1982	667,529	410,056	1,077,585	614,061	652,525	2,283,826	3,550,412	1,053,420	2,747,973	3,801,393
1983	670,417	409,730	1,080,147	627,739	668,540	2,312,305	3,608,584	1,063,572	2,770,117	3,833,689
1984	664,122	409,578	1,073,700	607,940	646,308	2,225,273	3,479,521	1,077,710	2,802,421	3,880,131
1985	675,349	411,361	1,086,710	612,685	651,827	2,223,982	3,488,494	1,100,335	2,853,045	3,953,380
1986	669,602	411,342	1,080,944	608,192	647,365	2,194,437	3,449,994	1,117,369	2,892,201	4,009,570
1987	671,193	412,766	1,083,959	616,143	656,722	2,204,901	3,477,766	1,143,470	2,951,791	4,095,261
1988	672,210	416,648	1,088,858	615,257	655,878	2,188,575	3,459,710	1,151,734	2,970,717	4,122,451
1989	677,220	422,489	1,099,709	611,999	652,340	2,175,121	3,439,460	1,190,073	3,058,487	4,248,560
1990	675,964	422,850	1,098,814	613,541	654,324	2,175,949	3,443,814	1,219,619	3,126,668	4,346,287
1991	675,964	422,850	1,098,814	621,959	660,720	2,184,753	3,467,432	1,221,266	3,130,469	4,351,735
1992	675,964	422,850	1,098,814	626,202	662,478	2,182,375	3,471,055	1,217,647	3,122,115	4,339,762
1993	677,353	423,439	1,100,792	631,965	666,043	2,184,616	3,482,624	1,219,016	3,125,274	4,344,290
1994	673,575	422,261	1,095,836	642,070	670,749	2,198,069	3,510,888	1,215,590	3,117,367	4,332,957
1995	675,964	422,850	1,098,814	654,159	674,868	2,208,876	3,537,903	1,218,209	3,123,416	4,341,625
1996	675,575	422,261	1,097,836	652,220	665,188	2,185,830	3,503,238	1,211,800	3,108,623	4,320,423
1997	675,964	422,850	1,098,814	660,850	666,017	2,187,804	3,514,671	1,211,963	3,108,998	4,320,961
1998	675,964	422,850	1,098,814	666,395	671,080	2,199,860	3,537,335	1,214,394	3,114,611	4,329,005
1999	674,575	422,261	1,096,836	672,212	676,428	2,212,592	3,561,232	1,222,532	3,133,920	4,356,452
2000	675,964	422,850	1,098,814	667,943	672,530	2,203,310	3,543,783	1,208,107	3,100,104	4,308,211
2001	675,964	422,850	1,098,814	666,588	671,256	2,200,276	3,538,120	1,215,933	3,118,171	4,334,104
2002	674,964	422,850	1,097,814	669,452	673,908	2,206,592	3,549,952	1,219,506	3,126,421	4,345,927
2003	673,575	422,261	1,095,836	663,653	668,576	2,193,897	3,526,126	1,212,363	3,109,923	4,322,286
2004	672,575	422,261	1,094,836	662,350	667,387	2,191,068	3,520,805	1,214,519	3,114,898	4,329,417
2005	674,964	422,850	1,097,814	667,575	672,194	2,202,512	3,542,281	1,217,163	3,121,002	4,338,165
2006	674,964	422,850	1,097,814	669,308	673,777	2,206,281	3,549,366	1,217,712	3,122,271	4,339,983
2007	673,964	422,850	1,096,814	666,913	671,553	2,200,986	3,539,452	1,216,022	3,118,369	4,334,391
2008	674,964	422,850	1,097,814	667,877	672,470	2,203,166	3,543,513	1,214,198	3,114,160	4,328,358
2009	673,575	422,261	1,095,836	665,260	670,044	2,197,393	3,532,697	1,220,194	3,128,514	4,348,708
2010	677,353	423,439	1,100,792	665,111	669,908	2,197,070	3,532,089	1,224,233	3,137,840	4,362,073
2011	673,575	422,261	1,095,836	659,207	664,518	2,184,234	3,507,959	1,214,975	3,115,947	4,330,922
2012	673,575	422,261	1,095,836	666,259	670,955	2,199,562	3,536,776	1,214,023	3,113,760	4,327,783
2013	675,964	422,850	1,098,814	666,540	679,636	2,186,013	3,015,189	1,219,433	3,126,242	4,345,675
2014	673,964	422,850	1,096,814	659,425	674,500	2,192,794	3,532,697	1,208,434	3,099,738	4,308,172
2015	674,964	422,850	1,097,814	496,126	467,414	1,359,278	2,322,818	1,201,552	3,083,571	4,285,123
2016	656,592	422,850	1,079,442	482,816	449,413	1,208,389	2,140,618	1,194,135	3,065,985	4,260,120
2017	632,228	422,850	1,055,078	450,223	419,517	1,095,430	1,965,170	1,175,164	3,021,454	4,196,618
2018	556,987	422,850	979,837	414,904	386,235	994,757	1,795,896	1,162,212	2,990,958	4,153,170
2019	515,140	422,850	937,990	380,778	355,419	907,411	1,643,608	1,158,845	2,982,751	4,141,596
2020	510,592	422,850	933,442	368,366	343,838	873,488	1,585,692	1,156,790	2,977,761	4,134,551
2021	507,747	422,850	930,597	364,979	340,652	865,976	1,571,607	1,155,419	2,974,383	4,129,802
2022	504,092	395,860	899,952	362,573	337,660	856,580	1,556,813	1,154,119	2,971,199	4,125,318
2023	501,051	393,046	894,097	361,451	336,475	852,429	1,550,355	1,153,253	2,969,075	4,122,328
2024	497,952	390,574	888,526	357,348	332,670	842,990	1,533,008	1,152,442	2,967,081	4,119,523
2025	495,523	388,471	883,994	356,124	331,522	839,959	1,527,605	1,151,857	2,965,613	4,117,470
2026	492,296	384,805	877,101	352,379	328,126	831,504	1,512,009	1,041,736	2,700,720	3,742,456
2027	480,716	371,080	851,796	352,110	327,863	830,702	1,510,675	1,016,009	2,630,718	3,646,727
2028	456,179	342,975	799,154	350,885	326,522	824,867	1,502,274	960,162	2,485,007	3,445,169
2029	388,571	274,944	663,515	349,992	325,679	822,487	1,498,158	697,838	1,776,766	2,474,604
2030	226,442	127,316	353,758	349,344	325,087	821,076	1,495,507	397,867	967,258	1,365,125
2031	196,984	100,121	297,105	349,193	324,948	820,746	1,494,887	341,908	815,073	1,156,981
2032	195,987	98,899	294,886	349,032	324,802	820,398	1,494,232	335,919	799,809	1,135,728
2033	195,695	98,672	294,367	348,745	324,539	819,772	1,493,056	333,590	793,751	1,127,341
2034	195,422	98,473	293,895	347,995	323,854	818,139	1,489,988	333,012	792,400	1,125,412
2035	195,337	98,416	293,753	347,421	323,329	816,890	1,487,640	331,535	788,953	1,120,488
TOTAL	36,039,221	21,631,194	57,670,415	37,407,589	38,778,945	126,202,057	202,388,591	62,387,574	159,758,222	222,145,796

a) Unadjusted for prior overpayments or underpayments of charges.

CHARGE FOR EACH CONTRACTOR^(a)

(In dollars)

Sheet 2 of 4

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	59,796	0	0	0	0	59,796
1966	0	0	0	0	112,694	0	0	0	0	112,694
1967	0	0	0	0	219,912	0	0	0	0	219,912
1968	69,308	171,139	10,200	5,975	378,616	1,510,575	12,338	10,407	194,892	2,363,450
1969	116,298	164,046	11,159	22,559	450,282	2,213,987	10,797	9,261	285,051	3,283,440
1970	137,383	184,692	18,119	35,049	489,223	2,625,090	10,608	12,234	212,482	3,724,880
1971	137,635	201,734	20,613	50,361	548,890	3,493,177	13,714	12,677	335,074	4,813,875
1972	136,478	179,377	16,618	24,704	614,694	4,140,381	14,081	10,362	327,136	5,463,831
1973	148,380	195,390	16,939	27,114	672,525	4,439,899	14,568	11,524	348,880	5,875,219
1974	157,494	205,966	16,649	29,295	679,666	4,717,025	14,524	11,459	368,469	6,200,547
1975	160,714	213,994	16,169	30,502	680,769	4,937,962	14,470	11,772	383,400	6,449,752
1976	181,150	230,393	16,636	32,858	698,451	5,477,062	14,788	12,318	413,270	7,076,926
1977	189,473	243,970	16,755	34,830	725,073	5,817,571	15,066	13,440	438,763	7,494,941
1978	190,514	259,681	17,059	37,715	746,205	6,334,821	15,616	14,104	467,504	8,083,219
1979	191,498	267,449	16,634	38,873	750,659	6,727,307	15,577	13,671	481,924	8,503,592
1980	191,968	283,288	16,898	41,172	771,513	7,235,872	16,158	14,415	510,956	9,082,240
1981	189,662	297,857	17,041	43,907	785,172	7,748,613	16,466	14,983	537,666	9,651,367
1982	194,661	317,598	17,512	46,688	814,889	8,370,334	17,258	15,938	572,660	10,367,538
1983	197,381	337,140	18,061	49,706	837,957	9,022,172	18,388	17,153	610,725	11,108,683
1984	187,627	330,768	16,714	48,717	813,483	9,134,863	17,708	15,992	598,205	11,164,077
1985	188,523	347,499	16,987	51,765	840,460	9,656,750	18,752	16,740	628,867	11,766,343
1986	186,092	359,444	16,949	53,508	853,366	10,078,983	19,357	17,304	651,379	12,236,382
1987	187,655	379,220	17,364	56,396	881,282	10,672,749	20,415	18,321	687,614	12,921,016
1988	186,774	391,811	17,347	58,231	891,082	11,100,642	20,390	18,791	710,754	13,395,822
1989	184,407	395,847	16,871	59,430	882,471	11,263,794	19,758	18,405	718,243	13,559,226
1990	183,555	409,411	16,924	61,414	896,223	11,589,122	19,829	18,835	769,221	13,964,534
1991	183,343	408,727	16,888	61,312	894,924	11,575,056	19,782	18,846	767,917	13,946,795
1992	182,999	407,447	16,821	61,123	892,143	11,556,054	19,692	18,652	765,476	13,920,407
1993	181,741	400,886	16,483	60,157	879,788	11,445,415	19,241	17,958	752,987	13,774,656
1994	182,852	408,190	16,860	61,233	892,306	11,556,128	19,744	18,796	766,895	13,923,004
1995	183,893	410,941	17,003	61,638	899,010	11,619,003	19,933	18,981	772,139	14,002,541
1996	181,700	402,622	16,571	60,414	882,928	11,466,073	19,357	18,268	756,279	13,804,212
1997	181,179	399,126	16,390	59,897	877,472	11,419,110	19,117	17,855	749,634	13,739,780
1998	182,723	406,983	16,798	61,056	890,795	11,539,504	19,659	18,696	764,594	13,900,808
1999	184,394	414,867	17,207	62,218	906,326	11,676,580	20,202	19,488	779,602	14,080,884
2000	183,419	409,305	16,919	61,398	906,033	11,640,147	19,819	18,775	769,020	14,024,835
2001	182,904	407,804	16,840	61,178	893,861	11,561,290	19,715	18,750	766,159	13,928,501
2002	183,977	412,973	17,109	61,938	905,580	11,659,069	20,071	19,174	775,992	14,055,883
2003	182,588	408,069	16,854	61,216	894,453	11,559,667	19,734	18,808	766,662	13,928,051
2004	182,167	406,767	16,787	61,024	892,259	11,534,694	19,643	18,705	764,180	13,896,226
2005	183,533	410,666	16,990	61,599	901,953	11,625,080	19,914	18,909	771,612	14,010,256
2006	183,815	411,668	17,041	61,745	903,373	11,640,627	19,981	19,004	773,505	14,030,759
2007	183,550	411,033	17,008	61,651	903,580	11,638,771	19,939	18,882	772,313	14,026,727
2008	183,523	410,620	16,987	61,592	902,076	11,622,643	19,910	18,917	771,525	14,007,793
2009	183,200	410,000	16,954	61,500	900,372	11,613,500	19,868	18,795	770,343	13,994,532
2010	182,230	402,261	16,553	60,359	887,057	11,494,006	19,333	17,931	755,590	13,835,320
2011	181,642	402,693	16,575	60,424	887,086	11,487,750	19,363	18,011	756,414	13,829,958
2012	183,283	409,817	16,945	61,473	900,455	11,610,366	19,854	18,861	769,995	13,991,049
2013	183,487	409,326	16,919	61,401	899,294	11,606,860	19,821	18,774	769,059	13,984,941
2014	182,890	408,027	16,852	61,210	895,857	11,573,493	19,731	18,711	766,581	13,943,352
2015	183,144	408,898	16,897	61,338	839,301	11,594,520	19,791	18,738	768,243	13,910,870
2016	183,816	410,833	16,998	61,622	791,501	11,637,045	19,925	18,887	771,933	13,912,560
2017	182,917	408,148	16,858	61,228	677,905	11,579,602	19,739	18,664	766,813	13,731,874
2018	183,178	409,054	16,905	61,361	586,467	11,597,906	11,969	18,706	768,539	13,654,085
2019	183,107	408,731	16,889	61,313	533,474	11,597,414	11,492	18,663	767,924	13,599,007
2020	183,119	408,793	16,891	61,324	503,626	11,598,838	11,259	18,657	768,004	13,570,511
2021	183,119	408,793	16,891	61,324	483,353	11,598,838	11,134	18,657	768,004	13,550,113
2022	183,119	408,793	16,891	61,324	470,810	11,598,838	11,000	18,657	768,004	13,537,436
2023	183,119	408,793	16,891	61,324	464,417	11,598,838	10,909	18,657	768,004	13,530,952
2024	183,119	408,793	16,891	61,324	461,102	11,598,838	10,822	18,657	768,004	13,527,550
2025	183,119	408,793	16,891	61,324	459,346	11,598,838	10,771	18,657	768,004	13,525,743
2026	183,119	408,793	16,891	61,324	456,800	11,598,838	10,697	18,657	768,004	13,523,123
2027	183,119	408,793	16,891	61,324	455,160	11,598,838	10,645	18,657	768,004	13,521,431
2028	183,119	408,793	16,891	61,324	454,068	11,598,838	10,611	18,657	768,004	13,520,305
2029	183,119	408,793	16,891	61,324	451,873	11,598,838	10,538	18,657	768,004	13,518,037
2030	183,119	408,793	16,891	61,324	449,954	11,598,838	10,477	18,657	768,004	13,516,057
2031	183,119	408,793	16,891	61,324	448,890	11,598,838	10,450	18,657	768,004	13,514,966
2032	183,119	408,793	16,891	61,324	446,626	11,598,838	10,394	18,657	768,004	13,512,646
2033	183,119	408,793	16,891	61,324	444,079	11,598,838	10,336	18,657	768,004	13,510,041
2034	183,119	408,793	16,891	61,324	440,716	11,598,838	10,237	18,657	768,004	13,506,579
2035	183,119	408,793	16,891	61,324	433,036	11,598,838	9,985	18,657	768,004	13,498,647
TOTAL	12,131,728	24,744,884	1,141,375	3,697,571	49,336,838	679,617,532	1,097,230	1,170,823	45,779,124	818,717,105

TABLE B-19: TOTAL TRANSPORTATION

(in dollars)

Sheet 3 of 4

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 Irrigation 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	30,935	0	0	0	0	0	0	0	49,414	0
1964	57,818	17,287	13,464	4,064	34,891	1,064	26,580	7,592	78,320	33,156
1965	110,649	33,855	23,781	6,821	38,696	1,960	47,683	14,271	130,124	34,002
1966	202,560	65,701	42,382	11,825	69,373	3,540	85,658	26,024	223,006	58,881
1967	393,945	138,035	81,688	22,267	134,195	6,896	166,166	51,005	414,085	110,347
1968	697,966	293,468	145,558	39,611	239,530	12,258	296,116	90,771	748,570	199,810
1969	1,000,413	442,667	214,068	58,288	352,519	17,733	435,038	130,799	1,147,104	306,142
1970	1,292,105	562,465	298,274	84,892	491,394	23,854	597,913	174,690	1,680,562	442,171
1971	1,641,907	720,656	416,995	123,471	687,191	30,874	825,725	224,805	2,435,597	633,508
1972	2,185,191	875,640	581,538	180,907	958,561	40,728	1,151,816	277,817	3,883,882	886,371
1973	2,271,969	915,881	605,806	192,408	998,586	43,406	1,219,854	286,895	4,191,275	1,074,228
1974	2,320,828	923,673	708,795	197,146	1,160,064	45,224	1,239,549	289,687	4,279,075	1,101,076
1975	2,387,166	934,719	721,456	203,763	1,181,195	46,789	1,250,229	291,301	4,417,801	1,136,757
1976	2,473,339	938,821	752,393	209,687	1,231,102	49,464	1,274,254	295,125	4,448,508	1,153,170
1977	2,470,057	927,617	742,004	213,980	1,210,991	48,418	1,279,997	297,121	4,350,736	1,122,713
1978	2,649,307	963,870	772,113	222,224	1,253,331	52,406	1,303,892	304,703	4,550,649	1,177,709
1979	2,787,699	868,935	795,008	228,167	1,283,926	54,851	1,327,034	315,470	4,550,155	1,182,112
1980	2,909,407	875,501	817,931	235,592	1,331,888	57,145	1,351,318	331,192	4,606,337	1,196,900
1981	3,000,790	939,777	842,302	241,741	1,371,767	59,227	1,390,462	351,628	4,714,318	1,226,404
1982	3,156,094	948,503	880,717	251,747	1,433,937	62,181	1,442,668	383,000	4,804,366	1,249,727
1983	3,167,987	960,523	878,261	248,273	1,431,308	61,866	1,463,547	405,534	4,668,396	1,217,262
1984	3,204,225	1,046,641	876,370	247,452	1,429,470	61,718	1,509,103	431,666	4,648,462	1,210,539
1985	3,515,171	1,119,054	894,567	255,063	1,459,600	62,860	1,566,986	469,727	4,815,560	1,251,504
1986	3,797,566	1,135,611	892,618	251,487	1,457,149	63,146	1,603,763	502,773	4,679,071	1,223,685
1987	3,892,413	1,179,150	908,862	256,118	1,490,801	64,534	1,685,299	502,591	4,773,439	1,250,987
1988	3,967,908	1,213,629	925,468	261,683	1,524,951	65,203	1,765,133	497,423	4,852,583	1,272,705
1989	4,064,707	1,259,669	938,249	263,116	1,552,692	66,234	1,843,136	494,738	4,898,792	1,291,357
1990	4,211,682	1,291,956	954,515	265,155	1,573,719	67,674	1,928,037	496,262	4,819,128	1,273,547
1991	4,335,491	1,308,286	950,567	266,431	1,567,211	67,214	1,952,728	492,818	4,905,560	1,290,643
1992	4,319,772	1,330,239	945,941	263,696	1,559,580	66,930	1,946,129	490,698	4,833,799	1,273,514
1993	4,324,966	1,310,354	949,853	266,841	1,566,034	67,024	1,949,850	491,436	4,900,400	1,288,078
1994	4,332,421	1,317,057	948,603	266,911	1,563,968	67,151	1,946,207	492,354	4,903,610	1,288,236
1995	4,319,672	1,312,314	947,214	264,754	1,561,675	66,927	1,947,229	490,648	4,828,383	1,270,580
1996	4,334,982	1,329,667	947,116	263,368	1,561,517	67,167	1,950,089	492,457	4,817,220	1,270,051
1997	4,348,025	1,322,304	954,237	266,825	1,573,265	67,394	1,961,963	494,168	4,885,573	1,286,039
1998	4,323,619	1,319,903	949,469	265,795	1,565,395	66,983	1,951,094	491,065	4,877,309	1,283,395
1999	4,333,343	1,358,494	950,968	268,670	1,567,874	67,145	1,948,731	492,300	4,994,604	1,311,536
2000	4,514,994	1,324,161	981,010	269,475	1,617,414	70,174	2,029,952	515,031	4,832,916	1,279,039
2001	4,348,929	1,347,497	954,633	268,417	1,573,914	67,399	1,959,444	494,203	4,934,691	1,296,968
2002	4,381,666	1,348,587	958,528	267,269	1,580,341	67,952	1,972,811	498,378	4,949,849	1,305,291
2003	4,385,267	1,349,127	958,239	267,723	1,579,862	68,014	1,970,979	498,806	4,943,481	1,302,494
2004	4,375,648	1,356,154	957,077	268,762	1,577,946	67,853	1,965,421	497,623	4,999,470	1,315,665
2005	4,422,643	1,351,306	966,140	270,004	1,592,888	68,631	1,987,653	503,447	4,980,603	1,312,342
2006	4,412,096	1,348,954	965,074	269,667	1,591,130	68,464	1,985,469	502,191	4,950,976	1,304,157
2007	4,403,929	1,352,587	962,110	268,117	1,586,239	68,327	1,980,782	501,160	4,942,175	1,303,231
2008	4,408,750	1,329,020	964,788	270,937	1,590,663	68,410	1,981,805	501,781	4,980,329	1,309,828
2009	4,380,904	1,358,832	956,933	265,853	1,577,705	67,941	1,971,609	498,280	4,972,097	1,313,481
2010	4,411,725	1,361,511	967,235	271,184	1,594,699	68,464	1,988,023	502,200	5,082,298	1,339,158
2011	4,432,470	1,354,827	966,754	268,638	1,593,906	68,805	1,992,463	504,764	4,986,339	1,316,868
2012	4,422,414	1,342,079	966,244	270,646	1,593,058	68,638	1,986,484	503,493	4,988,312	1,313,324
2013	4,432,855	1,353,255	960,812	268,905	1,571,419	67,994	1,975,420	498,652	4,915,051	1,294,846
2014	4,342,874	1,342,276	967,613	263,546	1,562,857	67,207	1,952,506	493,147	4,973,933	1,286,411
2015	4,302,775	1,316,640	942,100	264,530	1,553,765	66,531	1,936,206	488,122	4,848,868	1,275,182
2016	4,236,854	1,289,477	926,381	256,959	1,527,841	65,377	1,912,014	479,573	4,706,134	1,242,612
2017	4,048,222	1,223,153	887,253	248,093	1,463,314	62,071	1,828,433	454,966	4,568,136	1,203,115
2018	3,821,406	1,083,744	837,891	235,141	1,381,906	57,996	1,727,292	424,858	4,294,964	1,129,164
2019	3,530,587	942,460	771,605	217,185	1,272,590	52,720	1,592,491	386,332	3,920,168	1,029,100
2020	3,248,047	828,534	688,626	190,190	1,135,738	46,754	1,433,586	343,606	3,380,082	892,494
2021	3,003,362	702,204	588,877	156,407	971,227	41,495	1,245,156	306,693	2,709,895	724,476
2022	2,865,777	627,467	530,040	136,482	874,190	38,839	1,133,447	287,700	2,231,555	610,456
2023	2,811,796	601,863	511,727	131,194	843,988	37,867	1,096,919	280,640	2,098,314	576,043
2024	2,795,039	576,970	504,998	129,407	832,892	37,548	1,083,171	278,389	2,055,745	564,986
2025	2,790,579	573,548	500,467	128,219	825,419	37,467	1,073,882	277,825	2,012,718	553,444
2026	2,785,807	572,114	493,465	126,436	813,871	37,393	1,059,432	277,270	1,964,732	540,418
2027	2,782,277	571,171	491,126	125,839	810,014	37,343	1,054,605	276,899	1,952,205	537,007
2028	2,721,072	569,902	490,809	125,753	809,490	37,318	1,053,955	276,721	1,950,651	536,590
2029	2,681,337	568,853	490,260	125,610	808,585	37,270	1,052,822	276,366	1,948,115	535,900
2030	2,660,122	566,196	489,600	125,440	807,498	37,211	1,051,460	275,927	1,945,115	535,081
2031	2,650,657	562,240	488,281	125,106	805,322	37,090	1,048,734	275,016	1,939,184	533,455
2032	2,629,626	557,309	485,438	124,386	800,634	36,827	1,042,859	273,049	1,926,440	529,959
2033	2,602,232	550,738	481,507	123,392	794,151	36,464	1,034,734	270,326	1,908,859	525,135
2034	2,579,876	546,911	479,221	122,813	790,380	36,253	1,030,002	268,740	1,898,634	522,328
2035	2,333,361	544,013	477,500	122,378	787,542	36,093	1,026,420	267,539	1,890,937	520,210
TOTAL	232,712,110	69,167,602	52,259,513	14,540,342	85,963,744	3,713,388	103,849,417	26,632,267	268,289,744	70,589,100

a) Unadjusted for prior overpayments or underpayments of charges.

CHARGE FOR EACH CONTRACTOR^(a)

(in dollars)

Sheet 4 of 4

CALENDAR YEAR	SOUTHERN CALIFORNIA AREA (continued)				FEATHER RIVER AREA				FUTURE CONTRACTOR	GRAND TOTAL
	San Geronimo 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	74,039
1963	0	636,693	0	717,042	0	0	0	0	55,437	1,513,041
1964	20,599	1,160,764	8,148	1,463,747	0	0	0	0	88,320	2,569,978
1965	21,041	2,029,334	15,879	2,508,096	0	0	383	383	150,551	4,437,022
1966	36,375	3,653,604	30,563	4,509,492	0	0	530	530	174,399	6,832,097
1967	68,067	7,252,989	63,743	8,903,428	0	0	526	526	233,242	11,871,603
1968	123,299	14,541,281	134,962	17,563,200	0	0	526	526	305,293	23,267,988
1969	189,135	21,933,294	203,400	26,430,600	0	0	2,960	2,960	375,286	33,508,082
1970	273,894	28,906,754	257,485	35,086,453	0	0	14,025	14,025	430,321	42,904,106
1971	393,180	38,426,465	328,702	46,889,076	0	0	15,038	15,038	464,138	56,040,460
1972	549,845	51,505,299	397,442	63,475,037	0	0	15,038	15,038	469,582	73,591,834
1973	598,674	56,234,802	407,121	69,040,905	0	0	15,038	15,038	474,654	79,541,091
1974	602,392	58,329,192	417,297	71,613,998	0	0	15,038	15,038	477,255	82,447,508
1975	612,265	59,287,561	418,598	72,889,600	0	0	15,038	15,038	479,974	83,826,895
1976	610,327	60,243,437	419,433	74,099,060	0	0	15,038	15,038	489,908	86,269,093
1977	625,235	59,681,898	420,010	73,460,777	0	0	15,038	15,038	489,780	86,121,275
1978	624,664	60,597,735	419,905	74,892,508	0	0	15,038	15,038	491,363	88,426,570
1979	622,089	60,008,343	420,075	74,443,864	0	0	15,038	15,038	491,881	89,570,747
1980	698,830	60,223,805	417,949	75,053,795	0	0	15,038	15,038	492,245	92,717,267
1981	718,941	61,563,015	422,884	76,843,256	0	0	15,038	15,038	492,803	95,263,995
1982	738,344	62,245,563	425,738	78,022,585	0	0	15,038	15,038	493,094	97,327,645
1983	728,379	62,623,143	429,389	78,283,868	0	0	15,038	15,038	492,547	98,422,556
1984	731,194	64,286,190	446,607	80,129,637	0	0	15,038	15,038	492,577	100,234,681
1985	759,086	66,306,097	463,865	82,939,140	0	0	15,038	15,038	492,862	103,741,967
1986	745,732	66,450,762	476,427	83,279,790	0	0	15,038	15,038	493,302	104,565,020
1987	764,328	68,396,300	497,464	85,662,286	0	0	15,038	15,038	493,309	107,748,635
1988	780,202	69,981,568	523,931	87,632,387	0	0	15,038	15,038	493,392	110,207,658
1989	793,390	70,938,652	558,384	88,963,116	0	0	15,038	15,038	493,392	111,818,501
1990	784,856	70,910,563	598,516	89,175,610	0	0	15,038	15,038	493,312	112,537,409
1991	795,662	71,429,147	597,310	89,959,068	0	0	15,038	15,038	493,312	113,332,194
1992	784,994	71,790,279	607,467	90,213,038	0	0	15,038	15,038	493,312	113,551,426
1993	794,258	71,581,176	598,964	90,089,234	0	0	15,038	15,038	493,312	113,299,944
1994	794,442	72,028,049	601,967	90,550,976	0	0	15,038	15,038	493,312	113,922,011
1995	783,411	71,774,881	599,492	90,167,180	0	0	15,038	15,038	493,399	113,656,500
1996	782,769	72,374,821	607,098	90,798,322	0	0	15,038	15,038	493,322	114,032,391
1997	792,774	72,616,103	604,654	91,173,324	0	0	15,038	15,038	493,322	114,355,910
1998	791,223	72,746,466	602,352	91,234,068	0	0	15,038	15,038	493,322	114,608,390
1999	808,726	74,746,229	618,343	93,466,963	0	0	15,038	15,038	493,402	117,070,807
2000	787,614	72,710,094	609,109	91,540,983	0	0	15,038	15,038	493,402	115,025,066
2001	799,696	74,302,553	614,300	92,962,644	0	0	15,038	15,038	493,322	116,370,543
2002	804,192	74,602,341	616,954	93,354,159	0	0	15,038	15,038	493,402	116,912,175
2003	802,635	74,781,721	617,030	93,525,378	0	0	15,038	15,038	493,322	116,906,037
2004	810,860	75,435,700	620,412	94,248,591	0	0	15,038	15,038	493,319	117,598,232
2005	808,624	75,382,012	618,847	94,265,140	0	0	15,038	15,038	493,402	117,762,096
2006	803,693	75,385,212	616,957	94,204,040	0	0	15,038	15,038	493,402	117,730,402
2007	802,943	75,738,244	618,082	94,527,926	0	0	15,038	15,038	493,322	118,033,670
2008	807,418	75,246,755	608,478	94,068,962	0	0	15,038	15,038	493,402	117,554,880
2009	808,867	76,576,782	621,089	95,370,373	0	0	15,038	15,038	493,319	118,850,503
2010	824,944	77,291,691	622,345	96,325,477	0	0	15,038	15,038	493,319	119,664,108
2011	810,976	76,751,839	621,277	95,669,926	0	0	15,038	15,038	493,319	118,942,958
2012	809,360	76,448,262	614,281	95,326,595	0	0	15,038	15,038	493,322	118,786,399
2013	797,897	76,279,104	618,457	94,954,707	0	0	15,038	15,038	450,554	117,864,918
2014	792,374	76,149,871	613,667	94,688,282	0	0	15,038	15,038	418,879	117,227,256
2015	786,021	75,094,267	601,967	93,476,974	0	0	14,654	14,654	371,425	115,479,678
2016	765,284	73,745,928	588,967	91,743,401	0	0	14,508	14,508	349,818	113,500,467
2017	741,146	70,737,643	558,839	88,024,384	0	0	14,511	14,511	307,473	109,295,108
2018	695,586	64,426,768	496,167	80,612,883	0	0	14,511	14,511	230,022	101,440,404
2019	633,608	57,618,142	431,290	72,398,278	0	0	12,078	12,078	166,497	92,899,054
2020	548,380	50,911,013	379,699	64,026,749	0	0	1,013	1,013	145,126	84,397,084
2021	443,402	42,997,792	323,833	54,214,819	0	0	200	200	139,498	74,536,636
2022	372,172	36,441,711	292,051	46,441,887	0	0	200	200	136,283	66,697,889
2023	350,765	33,442,984	283,585	43,067,685	0	0	200	200	135,102	63,300,719
2024	343,919	31,749,309	274,813	41,227,186	0	0	200	200	133,423	61,429,416
2025	336,728	31,381,031	273,325	40,764,652	0	0	200	200	130,379	60,950,043
2026	328,653	31,066,217	272,652	40,338,460	0	0	200	200	120,467	60,113,816
2027	326,548	30,963,242	272,206	40,200,482	0	0	200	200	120,168	59,851,479
2028	326,292	30,908,817	271,730	40,079,100	0	0	200	200	118,497	59,464,699
2029	325,868	30,858,312	271,258	39,980,556	0	0	200	200	118,005	58,253,075
2030	325,365	30,746,759	270,226	39,836,000	0	0	200	200	117,771	56,684,418
2031	324,366	30,573,507	268,590	39,631,548	0	0	200	200	117,717	56,213,404
2032	322,218	30,331,966	266,243	39,326,954	0	0	200	200	117,659	55,882,305
2033	319,254	30,007,458	263,077	38,917,327	0	0	200	200	117,556	55,459,888
2034	317,530	29,818,462	261,232	38,672,382	0	0	200	200	117,286	55,205,742
2035	316,232	29,675,532	259,836	38,257,593	0	0	200	200	117,079	54,775,400
TOTAL	42,664,052	3,966,021,295	31,494,435	4,967,897,009	0	0	754,897	754,897	26,714,492	6,296,288,305

TABLE B-20: CALCULATION OF DELTA WATER RATES

(values in millions of dollars (\$) or millions of acre-feet (AF)
discounted to 1971 at 4.143 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 original intent re Articles 22(e) and 22 (g)			
Commencing in 1972:			
Total costs of "initial conservation facilities" to be reimbursed, and project water entitlements to be delivered, during the project repayment period	\$824.71(b 69.73 AF	\$161.50 69.73 AF	\$986.21 69.73 AF
less, project power revenues to be realized during the project repayment period(c	\$391.71	\$ 36.99	\$428.70
less, Delta Water Charges paid, and project water entitlements, prior to 1972(d	\$ 5.57 1.23 AF	\$ 1.38 1.23 AF	\$ 6.95 1.23 AF
Subtotal	\$427.43 ÷ 68.50 AF	\$123.13 ÷ 68.50 AF	\$550.56 ÷ 68.50 AF
Rate applicable for remainder of the project repayment period	\$ 6.24 per acre-foot	\$ 1.80 per acre-foot	\$ 8.04 per acre-foot
Commencing in 1986:			
Additional costs to be reimbursed during the project repayment period for Dos Rios-Grindstone Tunnel	\$ 61.40	\$ 1.10	\$ 62.50
less, Delta Water Charges paid, and project water entitlements delivered, during the period 1972 thru 1985	\$120.87 19.37 AF	\$ 34.87 19.37 AF	\$155.74 19.37 AF
Cumulative Subtotal	\$367.96 ÷ 49.13 AF	\$ 89.36 ÷ 49.13 AF	\$457.32 ÷ 49.13 AF
Rate applicable for remainder of the project repayment period	\$ 7.49 per acre-foot	\$ 1.82 per acre-foot	\$ 9.31 per acre-foot
Commencing in 1995:			
Additional costs to be reimbursed during the project repayment period for Stoney Creek Conveyance Channel	\$ 1.40	\$ 0.47	\$ 1.87
less, Delta Water Charges paid, and project water entitlements delivered, during the period 1986 thru 1994	\$124.26 16.59 AF	\$ 30.19 16.59 AF	\$154.45 16.59 AF
Cumulative Subtotal	\$245.10 ÷ 32.54 AF	\$ 59.64 ÷ 32.54 AF	\$304.74 ÷ 32.54 AF
Rate applicable for remainder of the project repayment period	\$ 7.53 per acre-foot	\$ 1.83 per acre-foot	\$ 9.36 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 Dos Rios Reservoir storage	\$ 40.77	\$ 1.71	\$ 42.48
less, Delta Water Charges paid, and project water entitlements delivered, in 1995	\$ 12.05 1.60 AF	\$ 2.93 1.60 AF	\$ 14.98 1.60 AF
Cumulative Subtotal	\$273.82 ÷ 30.94 AF	\$ 58.42 ÷ 30.94 AF	\$332.24 ÷ 30.94 AF
Rate applicable for remainder of the project repayment period	\$ 8.85 per acre-foot	\$ 1.89 per acre-foot	\$ 10.74 per acre-foot
Commencing in 2004:			
Additional costs to be reimbursed during the project repayment period for payments to the Corps of Engineers for reserved block of Dos Rios Reservoir storage	\$ 17.06	\$ 0.71	\$ 17.77
less, Delta Water Charges paid, and project water entitlements delivered, during the period 1996-2003	\$ 94.52 10.68 AF	\$ 20.19 10.68 AF	\$114.71 10.68 AF
Cumulative Subtotal	\$196.36 ÷ 20.26 AF	\$ 38.94 ÷ 20.26 AF	\$235.30 ÷ 20.26 AF
Rate applicable for remainder of the project repayment period	\$ 9.69 per acre-foot	\$ 1.92 per acre-foot	\$ 11.61 per acre-foot
Calculation under present provisions of the Contract			
Commencing in 1972:			
Total costs of "initial" and "additional" project conservation facilities to be reimbursed, and project water entitlements to be delivered, during the project repayment period	\$945.34(b 69.73 AF	\$165.49 69.73 AF	\$1,110.83 69.73 AF
less, project power revenues to be realized during the project repayment period(c	\$391.71	\$ 36.99	\$ 428.70
less, Delta Water Charges paid, and project water entitlements delivered, prior to 1972(d	\$ 5.57 1.23 AF	\$ 1.38 1.23 AF	\$ 6.95 1.23 AF
TOTAL	\$548.06 ÷ 68.50 AF	\$127.12 ÷ 68.50 AF	\$ 675.18 ÷ 68.50 AF
Rate applicable for remainder of the project repayment period	\$ 8.00 per acre-foot	\$ 1.86 per acre-foot	\$ 9.86 per acre-foot

- Considering that all but a very minor portion of 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.
- Including net credits of \$4,850,000 for settlement as to the magnitude of project capital costs incurred prior to December 31, 1960, pursuant to Settlement Letter No. 1, and net credits of \$4,452,468 for settlement as to the magnitude of project capital costs for the 1961 thru 1967 period.
- Applying all conservation power revenues to reimbursement of capital costs, except that portion equal to specific operating costs of power facilities under the revenue bond resolution (\$1,500,000 annually).
- Applying all Delta Water Charges paid prior to 1970 to reimbursement of capital costs (the Charge is not divided into components until 1970), and applying payments of \$8,514 in 1970 (under a short term water supply contract with Mustang Water District) and payments of \$14,000 per year (1963 thru 1971, under a short term water supply contract with East Chance Creek Water District) to reimbursement of minimum OMP&R costs.

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	9.86	9.86
County of Butte	0	0	0	0	9.86	9.86
Plumas County Flood Control and Water Conservation District	12.11	.17	0	12.28	9.61	21.89
Feather River Area	.68	.01	0	.69	9.86	10.55
NORTH BAY AREA						
Napa County Flood Control and Water Conservation District	22.11	7.13	2.85	32.09	8.44	40.53
Solano County Flood Control and Water Conservation District	10.43	2.60	.37	13.40	9.86	23.26
North Bay Area	15.67	4.63	1.48	21.78	9.23	31.01
SOUTH BAY AREA						
Alameda County Flood Control and Water Conservation District, Zone 7	11.26	6.48	4.53	22.27	9.69	31.96
Alameda County Water District	12.11	5.77	5.03	22.91	9.65	32.56
Santa Clara County Flood Control and Water District	15.73	4.97	4.81	25.51	9.34	34.85
South Bay Area	14.18	5.41	4.80	24.39	9.47	33.86
SAN JOAQUIN VALLEY AREA						
County of Kings	3.27	1.14	1.68	6.09	9.81	15.96
Devil's Den Water District	7.41	3.85	3.07	14.33	8.84	23.17
Dudley Ridge Water District	4.00	1.39	1.70	7.09	8.88	15.97
Empire West Side Irrigation District	2.86	1.00	1.69	5.55	9.05	14.60
Hacienda Water District	3.79	1.32	1.66	6.77	8.24	15.01
Kern County Water Agency	6.96	2.55	2.20	11.71	9.61	21.32
Oak Flat Water District	1.49	0.66	1.12	3.27	8.87	12.14
Tulare Lake Basin Water Storage District	4.33	1.51	1.68	7.52	9.74	17.26
San Joaquin Valley Area	6.52	2.40	2.13	11.05	9.56	20.61
CENTRAL COASTAL AREA						
San Luis Obispo County Flood Control and Water Conservation District	50.93	10.00	8.03	68.96	9.86	78.82
Santa Barbara County Flood Control and Water Conservation District	57.85	10.64	8.01	76.50	9.86	86.36
Central Coastal Area	55.83	10.46	8.02	74.31	9.86	84.17
SOUTHERN CALIFORNIA AREA						
Antelope Valley-East Kern Water Agency	24.38	5.62	11.92	41.92	10.96	52.88
Castaic Lake Water Agency	30.87	5.74	6.92	43.53	9.99	53.52
Coachella Valley County Water District	31.23	9.47	14.45	55.15	10.14	65.29
Crestline-Lake Arrowhead Water Agency	36.93	9.95	14.46	61.34	9.86	71.20
Desert Water Agency	31.68	9.61	14.43	55.72	10.13	65.85
Littlerock Creek Irrigation District	21.22	5.71	11.98	38.91	9.86	48.77
Mojave Water Agency	35.38	11.12	14.08	60.58	13.00	73.58
Palmdale Irrigation District	23.46	6.17	11.73	41.36	12.10	53.46
San Bernardino Valley Municipal Water District	38.26	10.44	10.04	58.74	9.86	68.60
San Gabriel Valley Municipal Water District	36.81	10.51	10.03	57.35	10.06	67.41
San Geronimo Pass Water Agency	47.58	13.49	9.90	70.97	9.86	80.83
The Metropolitan Water District of Southern California	47.29	9.97	8.91	66.17	13.60	79.77
Ventura County Flood Control District	35.98	7.04	8.35	51.37	9.86	61.23
Southern California Area	43.74	9.63	9.47	62.84	12.87	75.71
ALL AREAS	26.66	6.38	6.07	39.11	11.23	50.34

a) Hypothetical rates, if received for all actual water delivered to date plus estimates of entitlement delivery during the project repayment period, will produce a sum at the end of the project repayment period equivalent to those total charges required under a water supply contract, with interest at the project interest rate; 4.143 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	8.34	2.06	.37	10.77	8.34	2.06	.37	10.77
2	1.79	.43	0	2.22	10.13	2.49	.37	12.99
3	13.80	5.02	2.50	21.32	23.93	7.51	2.87	34.31
SOUTH BAY AQUEDUCT								
1	4.35	3.20	3.46	11.01	5.42	3.83	4.58	13.83
2	.42	.34	0	.76	5.84	4.17	4.58	14.59
4	1.51	.63	0	2.14	7.35	4.80	4.58	16.73
5	3.70	1.01	0	4.71	11.05	5.81	4.58	21.44
6	.14	.03	0	.17	11.19	5.84	4.58	21.61
7	1.59	.08	0	1.67	12.78	5.92	4.58	23.28
8	2.42	.12	0	2.54	15.20	6.04	4.58	25.82
9	4.53	.43	0	4.96	19.73	6.47	4.58	30.78
CALIFORNIA AQUEDUCT								
1	1.07	.63	1.12	2.82	1.07	.63	1.12	2.82
2A	.85	.21	0	1.06	1.92	.84	1.12	3.88
2B	.42	.07	0	.49	2.34	.91	1.12	4.37
3	.35	.05	0	.40	2.69	.96	1.12	4.77
4	.68	.30	.54	1.52	3.37	1.26	1.66	6.29
5	.48	.11	0	.59	3.85	1.37	1.66	6.88
6	.19	.04	0	.23	4.04	1.41	1.66	7.11
7	.35	.08	0	.43	4.39	1.49	1.66	7.54
8C	0	0	0	0	4.39	1.49	1.66	7.54
8D	.28	.09	0	.37	4.67	1.58	1.66	7.91
9	.21	.10	0	.31	4.88	1.68	1.66	8.22
10A	.23	.11	0	.34	5.11	1.79	1.66	8.56
11B	.36	.07	0	.43	5.47	1.86	1.66	8.99
12D	.34	.12	0	.46	5.81	1.98	1.66	9.45
12E	.21	.08	0	.29	6.02	2.06	1.66	9.74
13B	.46	.12	0	.58	6.48	2.18	1.66	10.32
14A	1.68	.47	.74	2.89	8.16	2.65	2.40	13.21
14B	.31	.10	0	.41	8.47	2.75	2.40	13.62
14C	.30	.07	0	.37	8.77	2.82	2.40	13.99
15A	1.21	.40	.82	2.43	9.98	3.22	3.22	16.42
16A	1.99	.66	1.77	4.42	11.97	3.88	4.99	20.84
17E	7.07	1.13	6.82	15.02	19.04	5.01	11.81	35.86
17F	2.02	.02	0	2.04	21.06	5.03	11.81	37.90
18A	.49	.18	0	.67	21.55	5.21	11.81	38.57
19	1.31	.43	0	1.74	22.86	5.64	11.81	40.31
20A	.92	.47	0	1.39	23.78	6.11	11.81	41.70
20B	1.84	.41	0	2.25	25.62	6.52	11.81	43.95
21	.72	.32	0	1.04	26.34	6.84	11.81	44.99
22A	.50	.38	0	.88	26.84	7.22	11.81	45.87
22B	5.93	2.60	2.48	11.01	32.77	9.82	14.29	56.88
23	.36	.04	0	.40	33.13	9.86	14.29	57.28
24	4.22	.36	0	4.58	37.35	10.22	14.29	61.86
25	2.17	.13	0	2.30	39.52	10.35	14.29	64.16
26A	3.02	1.52	-4.52	.02	42.54	11.87	9.77	64.18
28G	5.68	.38	0	6.06	48.22	12.25	9.77	70.24
28H	6.36	.13	0	6.49	54.58	12.38	9.77	76.73
28J	10.83	1.36	0	12.19	65.41	13.74	9.77	88.92
WEST BRANCH								
29A	2.08	1.09	.80	3.97	23.14	6.12	12.61	41.87
29F	.87	.15	0	1.02	24.01	6.27	12.61	42.89
29G	.73	.14	0	.87	24.74	6.41	12.61	43.76
29H	2.87	.34	0	3.21	27.61	6.75	12.61	46.97
29J	5.69	.16	-4.27	1.58	33.30	6.91	8.34	48.55
30	8.71	.43	0	9.14	42.01	7.34	8.34	57.69
COASTAL BRANCH								
31A	5.04	3.26	1.28	9.58	9.71	4.84	2.94	17.49
33A	34.78	3.58	5.22	43.58	44.49	8.42	8.16	61.07
34	3.14	.24	0	3.38	47.63	8.66	8.16	64.45
35	8.55	.70	0	9.25	56.18	9.36	8.16	73.70

a) Applicable to Transportation only, does not include unit costs for Conservation which are applied thru the Delta Water Rate.

b) These rates, if received for all actual water delivered to date plus estimates of entitlement delivery during the project repayment period, will total a sum at the end of the project repayment period equivalent to all Transportation Charges, together with interest at the project interest rate; 4.143 percent per annum.

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PROJECT

6 POWERPLANTS

Name	Number of Units	Static Head (feet)	Total Design Flow (cubic feet per second)	Power Generation Output (kilowatts)	Estimated Annual Output (kilowatt-hours)
Edward Hyatt	6	622	14,550	644,250	2,475,000,000
Thermalito	4	96	16,900	115,100	383,000,000
San Luis					
Total	8	327	13,120	424,000	
State Share			6,872	222,100	156,000,000
Devil Canyon	2	1,413	1,200	119,700	879,000,000
Castaic					
Total	7	1,063	18,400	1,250,000	
State Share ^{1/}			3,092	214,000	1,441,000,000
San Luis Obispo	1	730	111	5,900	42,000,000
Total, State Share					5,376,000,000

22 PUMPING PLANTS

Name	Number of Units	Static Head (feet)	Total Design Flow (cubic feet per second)	Pump Motor Input (kilowatts)	Estimated Annual Energy Requirements (kilowatt-hours)
Edward Hyatt (pumped storage)	3	590	5,600	293,250	465,000,000
Thermalito (pumped storage)	3	98	9,000	92,400	91,000,000
Subtotal					556,000,000
North Bay Aqueduct:					
Calhoun	6	33	120	498	1,200,000
Travis	6	0	120	720	1,800,000
Cordelia	6	443	46	3,100	15,000,000
Subtotal					18,000,000
South Bay Aqueduct:					
South Bay	9	545	330	21,240	147,000,000
Del Valle	4	44	120	800	7,000,000
Subtotal					154,000,000
California Aqueduct (main line):					
Delta	11	244	10,303	256,720	1,265,000,000
San Luis					
Total	8	327	11,000	388,000	
State Share			5,762	213,400	94,000,000
Dos Amigos					
Total	6	120	13,100	177,000	
State Share			7,100	85,530	618,000,000
Buena Vista	102 ^{2/}	205	5,049	104,800	693,000,000
Wheeler Ridge	92 ^{2/}	233	4,598	107,800	738,000,000
Wind Gap	92 ^{2/}	518	4,410	236,600	1,604,000,000
A. D. Edmonston	142 ^{2/}	1,938	4,095	832,000	5,912,000,000
Pearblossom	6	542	1,380	87,000	574,000,000
Subtotal					11,498,000,000
California Aqueduct (branches):					
Oso	8	220	3,128	72,000	426,000,000
Las Perillas	6	55	450	3,000	16,000,000
Badger Hill	6	151	450	9,000	42,000,000
Devil's Den	4	409	126	5,800	48,000,000
Sawtooth	4	331	126	4,500	37,000,000
Polonio	4	810	126	12,000	99,000,000
Subtotal					668,000,000
Peripheral Canal					
Total	15	11	21,800	26,400	
State Share			10,700	13,000	48,000,000
Total, State Share					12,942,000,000

^{1/} 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.

^{2/} Includes one spare unit.

STATISTICS

AQUEDUCTS

Name	Length (miles)				Channel & Reservoir	Capacity (cubic feet per second)
	Total	Canal	Pipeline	Tunnel		
North Bay Aqueduct	26.5	20.0	6.5	0	0	115 to 46
South Bay Aqueduct	42.9	8.4	32.9	1.6	0	363 to 184
Peripheral Canal	43.0	42.0	1.0	0	0	21,800 to 18,300
Subtotal	112.4	70.4	40.4	1.6	0	
California Aqueduct (main line):						
North San Joaquin Division	68.4	67.0	0	0	1.4	10,300 to 10,000
San Luis Division	105.7	103.5	0	0	2.2	7,100 to 7,050 ^{1/}
South San Joaquin Division	120.9	120.9	0	0	0	8,100 to 4,400
Tehachapi Division	10.6	0.2	2.5	7.9	0	4,150
Mojave Division	104.2	93.4	7.9	0	2.9	1,643 to 1,193
Santa Ana Division	34.2	0	30.4	3.8	0	2,020 to 444
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	3,129 to 3,092
Coastal Branch	96.2	20.1	76.1	0	0	450 to 102
Subtotal, branch lines	128.1	29.2	82.5	7.2	9.2	
Totals	684.5	484.6	163.7	20.5	15.7	

21 DAMS AND RESERVOIRS

Name of Dam	Dams				Reservoirs		
	Structural Height (feet)	Crest Elevation ^{2/} (feet)	Crest Length (feet)	Volume (cubic yards)	Gross Capacity ^{3/} (acre-feet)	Surface Area (acres)	Shore-line (miles)
Frenchman	139	5,607	720	536,000	55,477	1,580	21
Antelope	120	5,025	1,320	380,000	22,566	931	15
Grizzly Valley	132	5,785	800	230,000	84,371	4,026	32
Abbey Bridge	117	5,475	1,150	500,000	45,000	1,950	21
Dixie Refuge	100	5,754	1,050	400,000	16,000	900	15
Groville	770	922	6,920	80,000,000	3,537,577	15,805	167
Thermalito Diversion	143	233	1,300	154,000	13,328	323	10
Thermalito Forebay	91	231	15,900	1,580,000	11,768	630	10
Thermalito Afterbay	39	142	41,600	5,038,000	57,041	4,302	26
Clifton Court Forebay	30	14	36,500	2,440,000	30,000	2,200	8
Bethany	121	250	3,240	1,040,000	4,804	173	5
Del Valle	235	773	880	4,200,000	77,106	1,060	16
San Luis	385	554	18,600	77,645,000	2,038,008	12,700	65
O'Neill Forebay	88	233	14,350	3,000,000	56,426	2,700	12
Los Banos Detention	167	384	1,370	2,100,000	34,562	623	12
Little Panoche							
Detention	152	676	1,440	1,210,000	13,236	354	10
Buttes	190	2,790	2,230	3,130,000	21,800	580	6
Cedar Springs	249	3,378	2,250	7,400,000	78,000	995	13
Perris	118	1,590	11,600	17,200,000	100,000	2,080	6
Pyramid	400	2,606	1,080	6,763,000	179,000	1,360	21
Castaic	425	1,535	5,200	43,000,000	350,000	2,232	34
Totals			169,500	257,946,000	6,826,070	57,504	525

^{1/} State share of the joint use canal.

^{2/} Above sea level.

^{3/} At maximum normal operating level.