STATE OF CALIFORNIA

The Resources Agency

Department of Water Resources

BULLETIN No. 132-72

THE CALIFORNIA STATE WATER PROJECT IN 1972

JUNE 1972

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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Bulletin No. 170 Series, "Abstracts of DWR Publications"

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FOREWORD

In 1972, the California State Water Project begins its second decade of operations. Since 1962, when water was first delivered to Plumas County from Frenchman Lake and to Alameda County from the South Bay Aqueduct, through 1971, the Project provided these direct benefits to Californians:

- Almost two million acre-feet of water delivered for agricultural, domestic, and industrial needs from Plumas County in the north to Kern County in the south.
- About eight and one-quarter million recreation days of use enjoyed by sportsmen, vacationists, and other users of the new lakes and aqueducts provided by the Project.
- Over nine billion kilowatt-hours of electric power produced, smog-free, in project powerplants at Oroville and San Luis.
- An estimated $30 million in flood damage prevented along the Feather River and Alameda Creek.

Substantial as they are, these benefits are only a foretaste of those now projected for the decade that lies ahead:

- Water deliveries will increase almost tenfold.
- Recreation use will increase several times as project reservoirs near Southern California metropolitan areas are filled.
- Power production will increase about three times, with operation of powerplants at Oroville and San Luis and those under construction at Devil Canyon and Castaic.

By no means will project benefits reach their full annual potential by the end of the 1970s. However, even though the partially completed Project has been in operation for ten years and the initial facilities are now nearing completion, construction of complementary facilities is mandatory if future generations are to realize full project benefits.

Although much work has already been accomplished, much more lies ahead if the Project is to be the viable, comprehensive water development envisioned by the citizens of California who approved its construction by popular vote in 1960.

William R. Gianelli

William R. Gianelli, Director
Department of Water Resources
The Resources Agency
State of California
June 27, 1972

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ABSTRACT

Bulletin 132-72, "The California State Water Project in 1972", is the tenth in a series of comprehensive annual reports on the Project: it documents management actions and summarizes construction and operations progress during 1971; it updates the Project's long-range financial projections as of the beginning of 1972; and it provides data and computations as contractually required to support charges to be assessed water supply contractors during 1973.

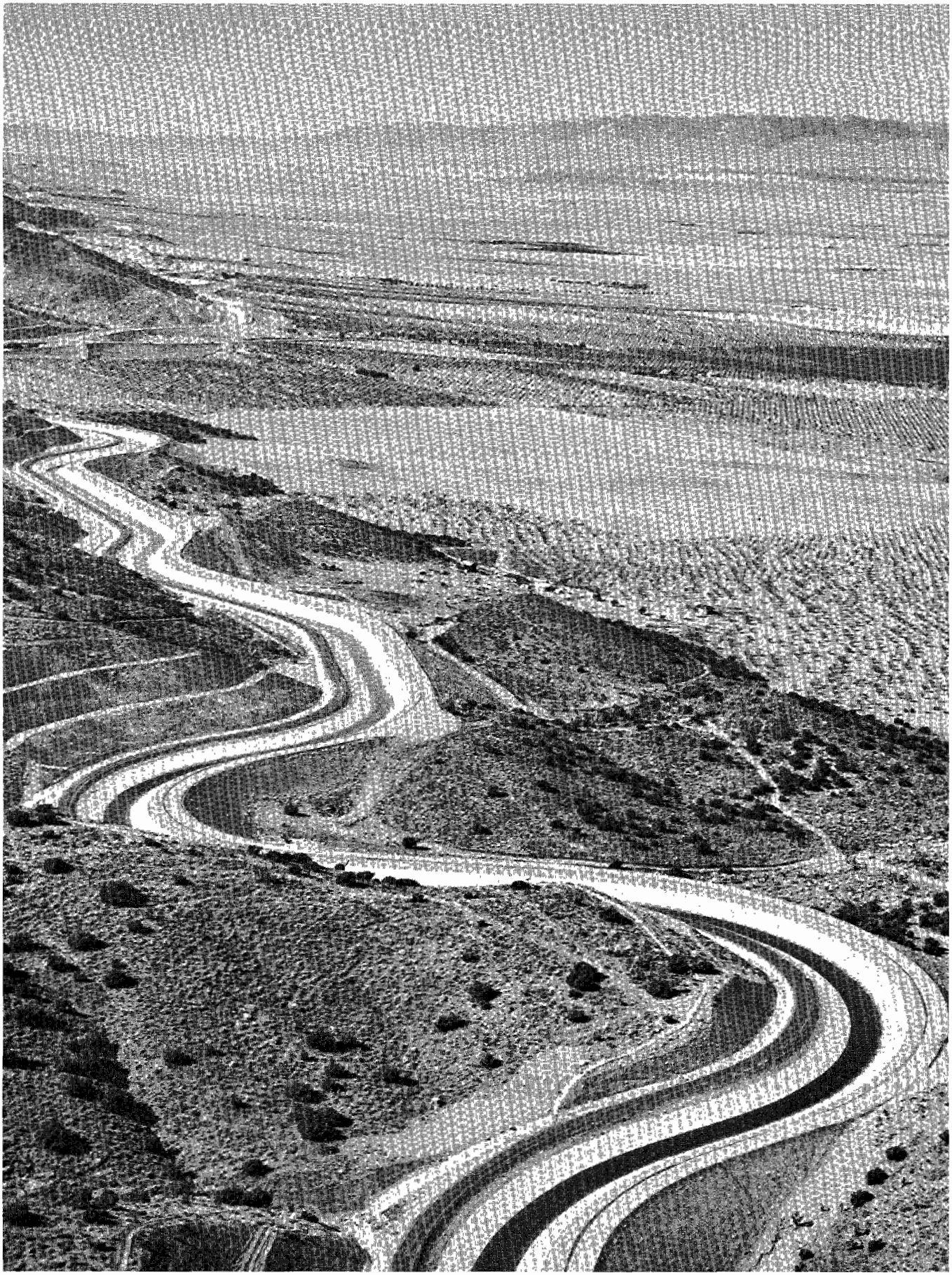
On October 7, 1971, water was first boosted by the A. D. Edmonston Pumping Plant through the Tehachapi Mountains into Southern California. This outstanding highlight of 1971 was the culmination of many years of planning, design, and construction effort.

Project construction continues on schedule. At the end of 1971, 99.7 percent of the facilities required to fulfill initial water delivery commitments were either completed or under construction. A contract for the construction of Pyramid Dam, the last major facility to be constructed in the southern part of the Project, was awarded in 1971.

Operations during 1971 included 697,478 acre-feet of water delivered from project facilities; 2,085,900 recreation days of use supported by project recreation developments; and 3,302,000,000 kilowatt-hours of electric energy generated at project powerplants.

As of the end of 1971, about $2,033 million in construction expenditures had been incurred for the entire Project since 1952. Estimates are that project construction will total $2,887 million through 1997. These estimates exclude future construction costs of the Piru Creek Project (to be financed by revenue bonds) and the San Joaquin Drainage Facilities (to be constructed once repayment of reimbursable costs is assured). Based upon analyses shown in the report, $218 million of supplemental construction funds are needed to complete the Project.

On the basis of projections and computations summarized in Bulletin 132-72, water charges to be assessed during 1973 will total about $81 million. Most of these charges will be paid by local agencies south of the Tehachapi Crossing who are receiving project water for the first time in 1972.



California Aqueduct in Antelope Valley

DWR 4207-18

CHAPTER I. CONTINUING HISTORY OF THE PROJECT

This chapter is a record of specific management actions during 1971 which concern either the State Water Project as a whole or component facilities of the Project.

Actions Concerning Project Management

During 1971, overall management actions were taken by the California Legislature 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.

In addition to positive actions during 1971, there were several notable lawsuits pending as of the end of the year which, depending on the final actions of the Courts, may or may not have a profound impact on the future management of the Project.

Actions by the California Legislature

The 1971 Regular Session was by far the longest legislative session in California history. It began on January 4 and did not complete its regular business until December 2, when it recessed for 30 days before returning to consider the Governor's vetoes as required by the California Constitution. Final adjournment was at 11:59 a.m. January 3, 1972 (just prior to the convening of the 1972 Regular Session at 12 noon).

Approval of Recreation and Fish and Wildlife Enhancement Expenditures. Enactment of SB 552 (California Statutes of 1971, Chapter 271) increases to $38,448,302 the approved amount of reimbursements to the Department for project funds expended for statewide recreation and fish and wildlife enhancement benefits. The legislation approves allocations of joint capital costs to recreation and fish and wildlife enhancement and expenditures for acquiring lands for recreation developments as reported in the Department's Bulletin 132-71, Appendix D, "Costs of Recreation and Fish and Wildlife Enhancement" (March 1971). The enactment adds $12,896,562 to the $25,551,740 previously approved (see page 1, Bulletin 132-71). Most of the increase was due to the reporting, for the first time, of allocated joint capital costs of the Oroville Division in the amount of $10,462,783. The effect of the approval is to provide for release to the Department of an equivalent amount of state tideland gas and oil revenues deposited in the Central Valley Water Project Construction Fund under a continuing $5 million annual appropriation, authorized in 1966 (see pages 11 and 12, Bulletin 132-66).

Revenue Bond Financing. Enactment of SB 617 (California Statutes of 1971, Chapter 750) increases the interest ceiling on revenue bonds issued under the Central Valley Project Act from 6½ percent to 7½ percent. (See page 1, Bulletin 132-70, concerning 1969 legislation which raised the interest ceiling from 5½ percent to 6½ percent and permitted the sale of Series B Oroville Division Revenue Bonds.) The Department is negotiating arrangements for the potential sale of revenue bonds under the Central Valley Project Act as a means of providing for required supplemental funds (see Chapter V). Financial consultants have advised that the higher interest ceiling is desirable in order to be certain such bonds can be sold in the future.

Financing of Emergency Repairs. Enactment of AB 1312 (California Statutes of 1971, Chapter 1068) authorizes the Department, with the concurrence of the Department of Finance, to issue short-term notes or renewal notes maturing within five years. The proceeds from the sale of such notes may be used only for making emergency repairs of damages to the State Water Project caused by natural disasters. Such notes must be repaid only with project revenues or with federal reimbursements under the National Disaster Act.

Use of short-term notes is an important addition to the options available to the Department for funding contingent repairs and could ease the financial impact of unforeseeable disasters on both the Project and the water supply contractors.

Financing of Contractor Distribution Systems. Previous bulletins have included references to legislation whereby the Department was authorized to make loan commitments with specified water supply contractors, and member units thereof (see pages 23–35, Bulletin 132-68; pages 28 and 29, Bulletin 132-69; and page 28, Bulletin 132-71). The purpose of such loan commitments is to help guarantee payment of bond service on general obligation bonds issued by the agencies for financing construction of distribution systems taking water from the State Water Project. As of the end of 1971, $7.3 million of funds were available for this purpose; however, no applications for loan commitments had been received by the Department.

Enactment of AB 1919 (California Statutes of 1971, Chapter 1078) modifies and expands the above program by authorizing the Department to make direct construction loans to the specified agencies in addition to loan commitments for bond service. The new authorization includes the following provisions regarding each such construction loan:

- The principal amount shall not exceed $2,500,000 or 25 percent of the distribution system cost, whichever is less.
- The term shall not exceed 40 years.
- Repayment of principal and interest may be deferred for up to 5 years (no interest to be charged on deferred interest) and shall be in equal annual amounts.
- The applicable rate of interest shall be equal to weighted average interest cost of bonds issued under the Burns-Porter Act.

Actions by the Department

During 1971, the Department's project management actions primarily centered on completing the construction of project facilities on schedule—permitting initiation of project water deliveries to Southern California in October.

Project Financing. The Director gave a financial status report on the Project before the California Water Commission on January 8, 1971. Essentially the same report was presented before a joint hearing of the legislative water committees on March 10, 1971.

In review, the Director referred to the Governor's Task Force appointed in 1967 to assess the financial status and schedule of the State Water Project (see pages 8–10, Bulletin 132-67). The report of the Task Force indicated that the Project was not adequately financed, pointing out that under certain conditions a funding deficiency of $300 million through 1972 and $600 million by 1985 could be experienced if construction proceeded as scheduled at that time.

Some four years later the Director was able to report that, under reasonable expectations, adequate funds will be available to complete project facilities necessary under water and power commitments and, in turn, to maintain the financial integrity of the Project. This notable improvement of the Project's financial outlook was the result of the following actions:

- Deferral of construction of certain project facilities not now essential for fulfilling current water and power contracts.
- Exercise of strict cost controls.
- Pursuit of legislation which resulted in an increase of available capital financing by $74.6 million through 1972, with an additional $14 million annually thereafter, from tideland oil revenues (see pages 1 and 2, Bulletin 132-69).
- Continuing pursuit of additional financing by development of revenue bonds associated with project power recovery plants in Southern California.

The approximate balance of capital demands and funds resulting from the foregoing actions has been accomplished despite escalation in construction costs in an unheard of level of almost 6 percent per year during the four-year period 1967 through 1970. The Director concluded his statement by pointing out that while the estimated margin between deficiency and surplus is extremely small, the once-predicted deficiency of $300 million through 1972 definitely has been averted.

Recreation and Fish and Wildlife. On October 28, 1971, a master agreement was executed between the Department and the Department of Parks and Recreation concerning the diversion of water ("recreation water") from project facilities for use in project-associated recreation developments. (Such use includes initial filling of and replacing evaporation and seepage losses from water bodies created solely for recreation use; watering of lawns, trees, and other vegetation of onshore developments; and satisfying personal needs of recreationists.) The agreement does not include specific provisions for water service other than up to 2,750 acre-feet annually (state share) for developments within the San Luis joint-use facilities. The two departments intend to enter into letter agreements providing for additional water service in accordance with the terms of the master agreement when construction of each future development nears completion:

Basic provisions of the agreement included the following:

- Deliveries of recreation water will be scheduled under the same procedures as provided for under water supply contracts.
- Delivery structures shall be constructed, operated, and maintained by Parks, subject to the Department's approval. Measuring devices shall be installed by Parks but shall be operated and maintained by the Department.
- Except for fishing access sites, which will be constructed by the Wildlife Conservation Board, Parks shall construct, operate, and maintain all recreation development in a manner that will not impair the efficient operation of the Project.
- If timely appropriations are not forthcoming from the Legislature in accordance with Davis-Dolwig Act procedures for the cost of water to be made available to Parks under the agreement, the Department may curtail deliveries on one year's notice.

Actions by the California Water Commission

The California Water Commission performs several management functions concerning the State Water Project, including the following:

- Approve the Department's finding on Davis-Grunsky loans and grants (see the section on "Local Projects", this chapter).
- Approve condemnation resolutions concerning the acquisition of rights-of-way (see the section on "Land Acquisitions", Chapter II).
- Review annually the progress of construction and operation of the Project and report its findings thereon to the Legislature and to the Department, together with whatever recommendations the Commission deems appropriate.
- Name all state-owned facilities of the Project.
- Hold public hearings on any additional facility proposed to be included in the Project.
- Provide a forum for detailed discussion and review of the Department's proposals concerning the annual budget for the Project (see the section on "1972–73 Budget Review", Chapter III).

The Commission also provides a forum to obtain expressions of opinions for advising the Director on

the development of water resources policy. During 1971, the Commission conducted hearings on April 19, 20, 26, and May 7 to receive comments on the Department's Bulletin 160-70 (see pages 16–20, Bulletin 132-71). The Bulletin, in part, constitutes one of the reports required periodically under the water supply contracts as to the need for additional project conservation facilities and supplemental conservation facilities. Notice of public hearings was distributed to more than 400 persons, agencies, firms, and associations throughout California. The hearings drew a total of sixty witnesses.

On December 3, 1971, the Commission transmitted its 1971 report on annual review of construction and operation progress of the State Water Project.

The Commission's inspection, conducted in September 1971, was limited to the southerly portion of the Project. The Commission found that the Project is operating normally; responsibility for completed facilities is being transferred to operations and maintenance personnel in a smooth and orderly manner; the Project is serving water needs in the upper Feather River area, Oroville area, North Bay area, South Bay area, and San Joaquin Valley; and project reservoirs and the California Aqueduct itself are fulfilling the need for additional recreational demands.

The Commission noted that Baldwin-Lima-Hamilton, which has contracted to manufacture and install seven pumps at the A. D. Edmonston Pumping Plant and a turbine of the Devil Canyon Powerplant, was discontinuing the manufacture of these products. The Commission recommended that the Department undertake such actions as are necessary to assure the availability of replacement and repair parts for pumps and turbines manufactured by Baldwin-Lima-Hamilton—and by other major manufacturers going out of business.

By January 12, 1971 letter, the Director advised the Commission of actions the Department was then taking in response to four specific recommendations included in the Commission's 1970 report (see page 5, Bulletin 132-71). One recommendation was that a presentation be made to the Commission on the control of tumbleweeds along the California Aqueduct.

The Department's presentation was given to the Commission on March 5, 1971, and indicated that while battles have been won, the war against the tumbleweed (*Salsola kali,* commonly known as Russian Thistle) has not. The Department reported that 1970 costs for weed control averaged about $1,900 per aqueduct mile, with the major portion being for control and disposal of Russian Thistle along the right-of-way and in the Aqueduct itself. This unit cost will reduce considerably in the future under the Department's vegetation management program and with intensive agricultural development of adjacent areas.

The Russian Thistle does not readily grow unless the soil surface has been disturbed in some manner. A single thistle plant can produce from 2,000 to 50,000 seeds. The seeds begin to sprout about April and plants reach maturity about October. During this period, the plants remain fairly well imbedded in the ground. At first frost, the plants generally die, break loose at the ground line, and start to roll with the wind—traveling up to 50 miles and scattering seeds as they roll. Their size varies from two feet to over six feet in diameter. Thistles rolling into the Aqueduct itself generally interfere with the free flow of water. They will float for about 10 days. For another two weeks, they float almost submerged, finally sinking to the bottom before decomposing in about 10 months.

Lawsuits Pending in the Courts

Several proceedings were pending as of December 31, 1971 which may affect future management of the Project, depending on final actions by the Courts.

Bowker v. Morton. This lawsuit (formerly *Bowker v. Hickel,* see pages 5–6, Bulletin 132-71) was initiated on June 16, 1970, in the United States District Court for the Northern District of California. The suit seeks a determination that the Federal Reclamation Laws, including the 160-acre limitation, are applicable to the State Water Project and that the National Environmental Policy Act of 1969 (Public Law 91-190) applies to ongoing federal participation in the Project. Named as defendants are the Secretary of the Interior, the Commissioner of Reclamation, the Chief of the Army Corps of Engineers, and the Director of the State Department of Water Resources.

The suit was instituted by small landowners and farmers in the Central Valley, three of whom allegedly secure irrigation water from Corps of Engineers' projects for which the Secretary of the Interior has acted as marketing agent under the Federal Reclamation Laws. The plaintiffs are complaining of competition from mammoth agri-business corporations in State Water Project Service areas and a lack of opportunity for developing local communities of farmers and works in such areas. They also complain of the deleterious effects of the State Water Project on the California environment, including inadequate provisions for drainage of irrigation water.

On March 11, 1971, the Sierra Club, the North Coast Rivers Association, and a landowner in the Trinity River area filed a motion to intervene because of their alleged concern for Northern California rivers, the environment and economy of Southern California urban areas, and the San Francisco Bay area.

The contention that the 160-acre limitation is applicable to the State Water Project rests chiefly on an interpretation of the San Luis Act—the basic authority for joint federal-state participation in constructing and operating the San Luis facilities (see page 44, Bulletin 132-63). In a 1961 opinion, the Solicitor of the Department of the Interior held valid the contract between the State and the United States which provided for construction and operation of those facilities and which did not contain an acreage limitation. The contract was validated subsequently in proceedings in the California Supreme Court initiated by The Metropolitan Water District of Southern California.

Hearings were held before Judge Carter in June 1971 on the motion to intervene and on motions to dismiss the complaint filed by the federal and state defendants. The latter motions rest principally on the grounds that the complaint does not state a claim upon which relief can be granted, that the plaintiffs lack standing to sue, and that the court lacks jurisdiction in that the action is really an action against the United States and the State of California to which they have not consented. As of December 31, 1971, no rulings have been made on any of these motions.

Sierra Club v. Morton. This lawsuit was initiated during 1971 and, as of December 31, 1971, was pending before Judge Weigel in the United States District Court for the Northern District of California. The action may be classed as an environmental lawsuit. The plaintiffs are the Sierra Club, Friends of the Earth, and three individuals allegedly having personal interests in the Delta and in the San Francisco Bay area. State defendants are the State of California, the Secretary of the Resources Agency, and the Director of the Department of Water Resources. Federal defendants include the Secretary of the Interior and the Secretary of the Army.

On March 16, 1971, the plaintiffs filed a complaint seeking an injunction restraining the defendants from constructing or continuing construction or operation of the Delta Pumping Plant, the Peripheral Canal, the San Luis Drain, the East Side Canal, and the Tracy Pumping Plant until certain federal approvals and authorizations have been obtained. Requirements of the Rivers and Harbors Act of 1899, the Fish and Wildlife Coordination Act, the National Environmental Policy Act of 1969, and other federal laws are involved.

In October 1971, Judge Weigel dismissed without prejudice motions to dismiss filed by the federal and state defendants.

The case has been moving at a very slow pace, and the trial probably will not be held soon. As of December 31, 1971, there was pending for court approval an order requiring the federal and state defendants to produce, for inspection and duplication, a vast amount of written materials on diverse subjects. Such subjects include the location, construction configuration, capacity, and operation of various facilities; the effects of water diversions from the Sacramento and San Joaquin Rivers and the Delta; and water quality studies.

Environmental Defense Fund, Inc. v. Morton. This lawsuit also was initiated during 1971 and originally was filed by the Environmental Defense Fund in the Federal Court of the District of Columbia. On November 19, 1971, that court granted the defendants' motion to transfer the case to the Federal District Court in Sacramento.

The suit is brought against the Secretary of the Interior and the Bureau of Reclamation to restrain the Bureau from entering into the proposed agreement with the State of California for coordinated operation of the federal Central Valley Project and the State Water Project. The principal basis of the action is that the defendants have not filed an environmental impact statement, under the National Environmental Policy Act of 1969, showing the effect of the proposed coordination agreement on the environment.

The plaintiff filed a motion for a preliminary injunction to prevent the Bureau from signing the agreement before trial of the action. Prior to a hearing on the motion, the Bureau filed an affidavit agreeing that it would file an environmental impact statement and would otherwise comply with all applicable federal laws before it enters into the coordination agreement with the State. The plaintiff then withdrew its motion. As of December 31, 1971, the Regional Office of the Bureau of Reclamation in Sacramento was preparing the environmental impact statement with assistance from the Department.

Suits Concerning D 1379. During 1971, the State Water Resources Control Board issued Decision 1379 relative to the rights to appropriate water in the Sacramento-San Joaquin Delta for operation of the State Water Project. As of the end of 1971, there were two lawsuits pending before the Superior Court of Sacramento County both seeking an order to set aside the Decision—*Central Valley East Side Project Association* v. *State Water Resources Control Board,* filed October 12, 1971, and *Kern County Water Agency* v. *State Water Resources Control Board,* filed October 15, 1971. (For a more detailed discussion of these actions, see the section on "Water Rights Management", Chapter III.)

Actions Affecting Individual Facilities

The remainder of this chapter describes significant actions and events during 1971 which pertain to individual facilities of the State Water Project.

Feather River Facilities

Last year's bulletin included a reference to actions whereby the Department would accept from the Plumas County Flood Control and Water Conservation District the Grizzly Valley Pipeline as part of the State Water Project and would formally transfer to the District the responsibility for the Pipeline's operation, maintenance, and replacement (see page 6, Bulletin 132–71). Those actions were completed with the Director's letter to the Chairman of the District's Board dated January 20, 1971, effective January 1, 1971.

Under the Joint Exercise of Powers Agreement, the District constructed the Grizzly Valley Pipeline (a project facility) and the related treatment plant (a district facility) with funds provided by a federal grant and by the State. Final cost accounting indicates that the capital outlay of State Water Project funds

under the Agreement (about $326,000) was at least $156,000 less than if the State itself had financed and constructed the Pipeline.

Moving downstream, to Lake Oroville, enactment of AB 2444 (California Statutes of 1971, Chapter 1018) authorized a supplemental appropriation of $92,000 from the Recreation and Fish and Wildlife Enhancement Fund to the Department of Parks and Recreation for development of the Lake Oroville State Recreation Area. Also, SCR 72 (California Statutes of 1971, Resolution Chapter 160) requests the Department of Fish and Game to prepare plans to improve salmon and steelhead production in and along the Feather River in conjunction with the development and operation of the Oroville-Thermalito Facilities.

North Bay Aqueduct

Plans have been previously referred to whereby right-of-way acquisitions would be initiated in advance of a possible rapid rise in land values in the Cordelia and Calhoun Cut-Denverton Slough areas of the North Bay Aqueduct (Phase II) alignment (see page 5, Bulletin 132–70).

Plans for right-of-way acquisitions in the Cordelia area are proceeding although no land parcels had been acquired as of December 31, 1971. During 1971, acquisitions in the Calhoun Cut-Denverton Slough area were delayed indefinitely due to (a) the lack of development and of attendant land value increase and (b) the current study of the proposed Montezuma Hills Unit of the federal Central Valley Project which includes a Denverton Channel overland facility to serve the Suisun Marsh.

South Bay Aqueduct

Previous references have been made to the review by the San Francisco District of the Army Corps of Engineers regarding the costs of Del Valle Dam and Lake Del Valle allocable to flood control and the share of such costs properly a reponsibility of the Federal Government (see pages 17–19, Bulletin 132-67, and page 34, Bulletin 132-68). (Actual construction cost of the Dam and Lake was about $28 million as compared with the 1959 estimate of $12.4 million. The low estimate was basic to the amount of federal contribution under the present federal-state agreement.)

By letter dated June 4, 1971, the District Engineer of the San Francisco District transmitted a draft of "Review Report on Cost Allocation for Del Valle Reservoir, Alameda Creek Project, Alameda County, California and Appendices", May 1971. A conclusion set forth in the draft report was that the federal contribution to the State toward costs of the Dam and Lake should be increased from the present $4,856,000 to $5,426,000—an increase of $570,000.

By November 2, 1971 letter to the District Engineer, the Director recommended that the draft report be completed and that a supplemental agreement be executed increasing the federal contribution by $570,000.

On January 22, 1971, an agreement was signed transferring from the Department to the Department of Parks and Recreation such interest in the real property generally comprising Lake Del Valle and its shore lands as is necessary to construct, operate, maintain, and administer a State Recreation Area of the California State Park System. Such use shall be subordinate to construction, operation, and maintenance of the Project. (As of December 31, 1971, completion of an agreement was pending whereby Parks will transfer its interests to the East Bay Regional Park District —for a period of 50 years.)

Delta Facilities

In rendering its Decision 1379, the State Water Resources Control Board recognized that some form of Cross-Delta transfer facility is essential for carrying out the objectives of the Decision.

The State has authority to construct the Peripheral Canal as part of the State Water Project (see page 21, Bulletin 132-71); however, the Bureau of Reclamation is not presently authorized to participate in construction of the proposed joint-use facility. The Bureau's feasibility report on the Peripheral Canal has been approved by the Secretary of the Interior (see page 5, Bulletin 132-70) and has been reviewed and favorably commented on by the State (see page 6, Bulletin 132-71). The report has not been submitted to Congress by the Secretary of the Interior pending the inclusion of an environmental impact statement—a requirement resulting from the National Environmental Policy Act of 1969.

On April 23, 1971, the Council on Environmental Quality established recommended guidelines for preparation of environmental impact statements (Federal Register, Volume 36, Part III). As of December 31, 1971, a draft of the impact statement for the Peripheral Canal was being prepared by the Regional Office of the Bureau in Sacramento.

On June 1, 1971, an amendment was executed to the agreement between the Department and the Department of Public Works concerning the use of borrow material from the prism of the Peripheral Canal for construction of the Interstate Highway 5 in San Joaquin County (see pages 34 and 35, Bulletin 132-68). Under the amendment, the amount of material to be borrowed was increased from 7 million cubic yards to 8 million cubic yards, and the completion date for borrow activities was extended from January 1, 1974 to August 15, 1975.

In September 1971, the Division of Highways released a draft of an environmental impact statement for Interstate Highway 5 in San Joaquin County between Hammer Lane and the Sacramento County line. This reach of freeway is the portion in San Joaquin County covered by the borrow agreement. The final impact statement is expected to be submitted to the Federal Highway Administration in Washington in early 1972.

California Aqueduct

A milestone in the history of the Project was reached on October 7, 1971, with formal dedication of the A. D. Edmonston Pumping Plant. The first pump unit was started by Governor Reagan as the highlight of the ceremony celebrating the initial delivery of project water south of the Tehachapi Mountains.

Castaic Dam was "topped out" on August 6, 1971, after four years of work on the 43-million-cubic-yard embankment. The seven-million-cubic-yard embankment of Cedar Springs Dam was "topped out" on March 5, 1971.

Lake Perris Final Capacity. Although the construction contract for Perris Dam was awarded in 1970, the final design capacity of the facility was established during 1971.

The required basic capacity of Lake Perris for multiple-purposes of the Project is 100,000 acre-feet. Under Amendments 4 and 5 to the water supply contract of The Metropolitan Water District of Southern California (see page 26, Bulletin 132-66, and page 27, Bulletin 132-67, respectively), the District was given the option, at any time or times during the term of the contract, of requiring the Department to increase the size of the Lake up to a total of 500,000 acre-feet.

The District agreed to advance funds to the Department to cover all costs over and above those necessary for construction of the basic 100,000 acre-foot Lake. The District did not choose to exercise the option prior to award of the construction contract for Perris Dam in October 1970. Therefore, the construction contract was for a 100,000 acre-foot facility designed so that it could be enlarged to a 500,000 acre-foot facility at some future time.

By letter from the General Manager to the Director, dated April 15, 1971, the District gave notice that:

1. The District requests the Department to construct the Lake so as to have a normal maximum water service elevation of 1,588 feet above sea level, with a capacity of 120,000 acre-feet, more or less.
2. In the event that (1) is granted, the District relinquishes any and all rights to request any subsequent enlargement of the Lake.

By April 19, 1971 letter, the Director notified the District's General Manager that the Department was implementing the above request and that the construction contractor had been advised to suspend all work which would be affected by the change.

The change caused only a minor delay concerning a small portion of dam construction on the left abutment. There will be no added construction costs in building the Dam itself to the higher elevation since the increased costs to the construction contractor's operations are estimated to be equal to the savings resulting from the modified embankment section designed without provisions for future enlargement. The change did require additional design costs ($112,000) and increased costs of shoreline shaping within the reservoir area (estimated to be in the order of $250,000). Financing for these costs will be advanced by Metropolitan. However, credit for the associated change in land investment (yet to be determined as of December 31, 1971) will be applied to the funds already advanced by Metropolitan.

By the end of 1971, construction of Perris Dam was 51 percent complete—well ahead of schedule.

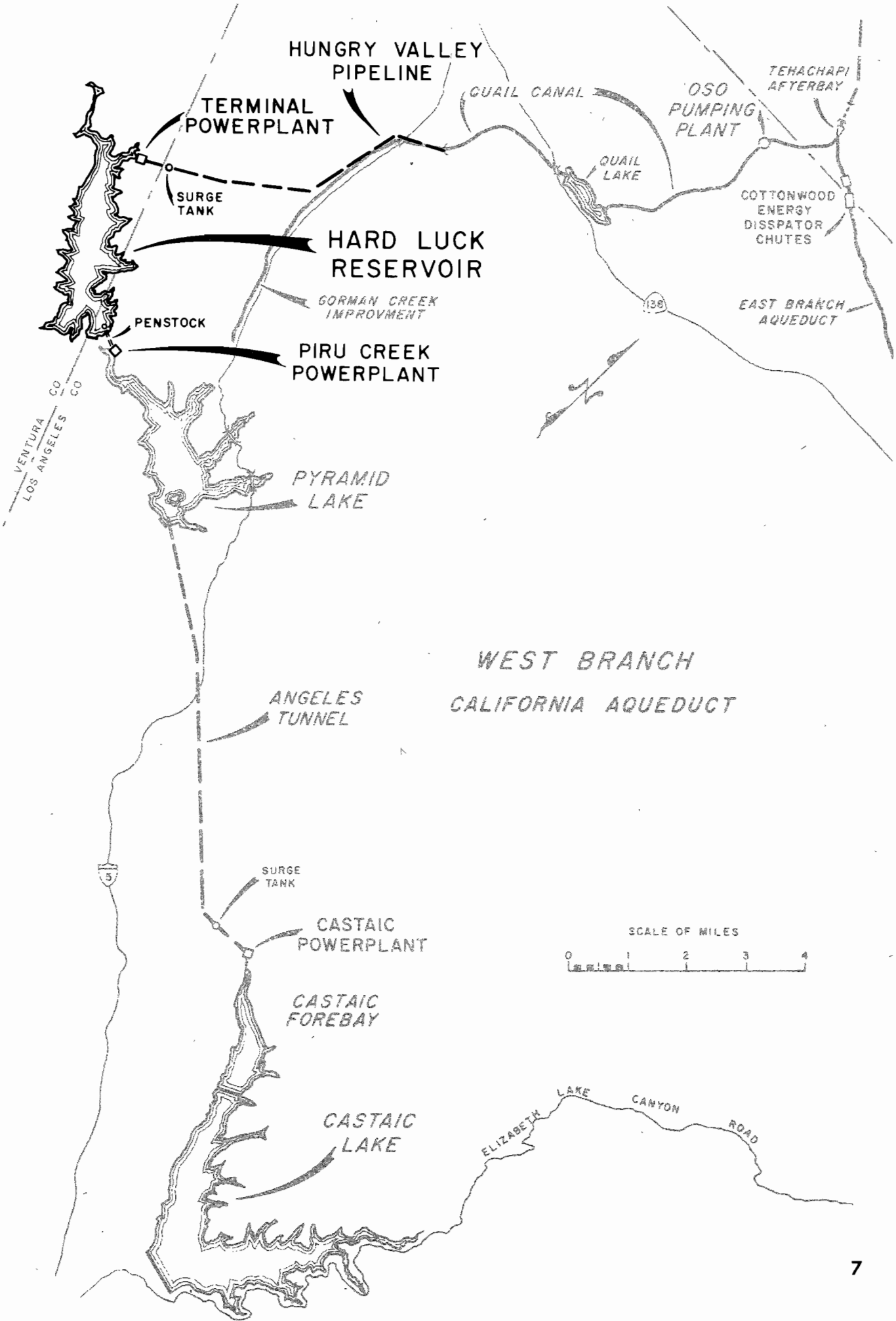
Federal Power Commission License. The Department has been seeking a license from the Federal Power Commission for the California Aqueduct. The Department's application for a preliminary permit was filed in 1963, and an application for license was filed in 1965. On August 12, 1966, the Commission granted the Department's request to proceed with pre-license construction of some works, and subsequently authorized pre-license construction of additional aqueduct facilities. The Commission made clear that the Department would assume the risk that the Commission might ultimately rule unfavorably on the application. No action had been taken on the Department's application as of December 31, 1971. (On January 14, 1972, presiding Examiner Ernest O. Eisenberg of the Commission issued an initial decision recommending issuance of a 50-year license; however, exceptions to the Examiner's decision have been filed with the Commission.)

Piru Creek Project. On May 26, 1971, an agreement was signed by the City of Los Angeles Department of Water and Power, Southern California Edison Company, and the Department which provides basic principles for negotiating necessary contracts for the Piru Creek Project and authorizes the expenditure of approximately $1.7 million for geological exploration and complementary engineering work required to confirm project feasibility.

The Piru Creek Project, as defined in the agreement, includes all facilities from and excluding Oso Pumping Plant to and including Pyramid Dam and Lake (see Figure 1). As presently envisioned, this project would provide (1) an economic and reliable source of peaking power to meet a portion of the continuing load growth of the City's and Edison's power systems beginning in about 1977 and (2) additional emergency water storage on the West Branch. The project would also enhance the recreation and fish and wildlife potential to help meet the rapidly growing needs of the area beyond that provided by Pyramid Lake, and would decrease the cost of water delivered from Pyramid and Castaic Lakes.

The Hungry Valley Pipeline would be constructed from the end of the Quail facilities to the Terminal Powerplant located at the upper end of the Hardluck Reservoir. The Pipeline would have a conveyance capacity of approximately 3,100 cubic feet per second, the same as the Oso Pumping Plant. The Terminal Powerplant would be a one-unit plant with an installed capacity of approximately 50 megawatts.

Figure 1
Proposed Piru Creek Project



Hardluck Reservoir would be formed by Hardluck Dam, which would rise approximately 500 feet above streambed. The exact location and type of construction for the Dam would be determined during the geologic-exploration and preliminary-design period. Hardluck Reservoir would have a storage capacity of approximately 220,000 acre-feet and a surface area of roughly 1,500 acres. Piru Creek Powerplant would be a pumped-storage plant with a total capacity of approximately 1,200 megawatts—the same capacity as the Castaic Powerplant.

The Piru Creek Project Agreement provides that the City would design and construct Piru Creek Powerplant. The State would design and construct all water conveyance and storage facilities. Responsibilities for the design and construction of Terminal Powerplant have not been specified.

The City would finance and own one-half of Piru Creek Powerplant and all of Terminal Powerplant. The State would finance and own one-half of Piru Creek Powerplant and all water conveyance and storage facilities.

The City would receive and use the power from Terminal Powerplant and from its share of Piru Creek Powerplant. The State would sell its share of the power from Piru Creek Powerplant to Edison.

The Agreement provides for the City to operate its half of Piru Creek Powerplant as an integral part of its power system. The State's half of the plant would be operated as an integral part of Edison's power system.

In order to optimize water storage and delivery, power generation, and recreation and fish and wildlife benefits, the Piru Creek Project Agreement provides for the City and State to enter into an operating agreement covering the coordinated operation of the West Branch from the Oso Pumping Plant Discharge through Castaic Powerplant. Edison would participate in the operating agreement.

The current schedule calls for completion of feasibility studies and the operating agreement in January 1973, with initial operation of the Piru Creek Project in 1978.

Enactment of SB 1163 (California Statutes of 1971, Chapter 758) authorizes the City to pay for power and falling water to be made available by the Piru Creek Project from service revenues received by its Department of Water and Power rather than from taxes.

Flood Control. During 1971, the Department examined the possibility of reserving a portion of Castaic Lake storage capacity for the purpose of flood control. Information provided by the Corps of Engineers, developed as part of its studies of the Santa Clara River and tributaries, indicated that an annual flood conrol benefit could be attributed to the Lake if it were operated in a manner to fully regulate a "Standard Project Flood".

Under the Department's normal plan of operation, Castaic Lake will provide incidental flood protection to downstream areas with benefits estimated to be $215,000 annually. Incidental benefits, however, would not justify a federal flood control contribution. Operating the Lake for flood control could increase these benefits by $100,000 for a total of $315,000 annually—and could support a flood control contribution of about $3 million.

The Department concluded that the planned operation of Castaic Lake should not be modified to incorporate a flood control reservation in view of (1) sizable incidental flood control benefits under the Department's normal plan of operation, (2) other flood control possibilities being considered by the Corps of Engineers for the Santa Clara River, and (3) adverse effects such a reservation would have on recreation and water supply benefits. The Corps of Engineers was so notified by the Director's letter, November 4, 1971.

In a January 1970 report, the Corps of Engineers made preliminary findings that construction of the Kern River-California Aqueduct Intertie is feasible—a proposed gravity connection between the Kern River and the California Aqueduct near State Highway 119. The Intertie would provide flood control benefits and could be constructed as a Small Flood Control Project under Section 205 of the Flood Control Act of 1948, as amended.

The total estimated cost of the project is about $1.3 million which exceeds the present federal cost limitation on small flood control projects of $1 million. It is anticipated that the Congress will consider a bill originally introduced last year to raise the limit to $2 million. In the event such legislation is not passed, the Corps could build the project if local interests paid the amount exceeding $1 million.

Diversion of flood flows into the California Aqueduct is essential to the Corps' findings. In order to protect the integrity of the Aqueduct, such flows would be diverted only in accordance with strict water quality and flow limitations. By the end of 1971, negotiations were under way between the Department and Kern River interests concerning water rights aspects of the proposal.

Recreation and Fish and Wildlife. Recreation development plans were released by the Department during 1971 for two water bodies associated with the California Aqueduct: Bethany Reservoir (Bulletin 117-12) and Los Banos Reservoir (Bulletin 117-11).

The fifth fishing access site along the Aqueduct in the San Joaquin Valley was opened October 18, 1971. The Three Rocks Fishing Access Site is located at the Clarkson Avenue Bridge, where State Highway 33 crosses Interstate Highway 5. The site, designed and constructed by the Department and funded by the Wildlife Conservation Board, will be maintained free and open to the public by the County of Fresno.

Enactment of AB 2328 (California Statutes of 1971, Chapter 1215) authorizes the Department of Parks and Recreation to lease lands in the area of Castaic Lake to the County of Los Angeles, or to an entity created pursuant to a joint exercise of powers agreement between the County and a public agency, for public parks or other recreational purposes.

Upper Eel River Development

During 1971, the Department continued studies of alternative developments that could divert Eel River water to the Sacramento Valley in order to assure a sufficient supply to meet future water delivery commitments under current contracts. The results of these studies would be reported in the Department's Bulletin 175, scheduled for July 1972 publication. The alternatives under consideration include dams on the Middle Fork Eel River which would not flood Round Valley, as well as the large Dos Rios Reservoir. Bulletin 175 would present the results of reexamining both easterly and southerly routes for diversion from the Eel River Basin, giving special attention to possible effects of southerly diversions on Clear Lake. Four appendices to the Bulletin would cover (1) environmental consequences of Eel River development, (2) engineering aspects, (3) impacts on Clear Lake water quality, and (4) recreation use at Clear Lake.

The Department's Bulletin 184, "Ten Counties Investigation", December 1971, provides an important input to further studies of possible Eel River developments, including routing studies. The Ten Counties Investigation was an outgrowth of an original Nine Counties Investigation undertaken in response to the first portion of SCR 76 of the 1968 Legislature, which requested the Department to "make additional studies of the water demand, and allocation of cost of water to meet these demands, in the North Bay area, including the Counties of Marin, Solano, Napa, Sonoma, Lake, Mendocino, Yolo, Colusa, and Glenn. . . ." (Humboldt County was included at the request of the Eel River Water Council, in November 1970). The investigation provides up-to-date projections of future water demands for municipal, industrial, and agricultural purposes within the counties involved and appraises the need for new water supplies.

San Joaquin Drainage Facilities

The "algae-stripping" and "denitrification" nitrogen-removal-treatment studies (see page 7, Bulletin 132-71) were concluded in mid-1971. Both the algal and bacterial systems can be utilized to lower nitrogen levels in agricultural waste waters to two parts per million or less. The bacterial denitrification system, however, is more reliable and less expensive. With completion of reports on these two systems, the Department, the Bureau of Reclamation, and the Environmental Protection Agency will dissolve the three-way partnership.

In July 1971, the Department and the Bureau of Reclamation started a two-year study of a "symbiotic" nitrogen-removal-treatment process—a system that utilizes both algae and bacteria. Such a system has a potential for reducing nitrogen-removal-treatment costs by 50 percent. The study is being conducted at the Interagency Agricultural Wastewater Treatment Center near Firebaugh. The Bureau of Reclamation is managing the study. The Department and the State Water Resources Control Board each provide one-tenth of the study funds.

In mid-1971, the Department, in cooperation with the University of California at Los Angeles, began an agricultural waste water desalting study at the Firebaugh Treatment Center. The study utilizes a UCLA-manufactured, tube-type reverse osmosis unit. The Department plans to significantly expand the agricultural waste water desalting program at Firebaugh in cooperation with the Federal Office of Saline Water. It is expected that two other types of reverse osmosis units will be in operation at the Firebaugh Treatment Center by mid-1972.

Local Projects

As of December 31, 1971, the Department and the California Water Commission had approved a total of $90,007,843 in grant and loan applications for 62 local agencies under the Davis-Grunsky Act Program. A total of $5,557,800 was approved in 1971. The location of local projects for which Davis-Grunsky Act loans and grants have been authorized are shown by circles in Figure 2. The solid circles indicate those for which loans and grants were authorized in 1971, and the open circles indicate those for which loans and grants were authorized in previous years.

The following $5,555,300 in loans were approved during 1971 for financing the construction of proposed municipal water supply and distribution systems (in cases which involve extreme hardship which may jeopardize the public health, safety, or welfare of the community):

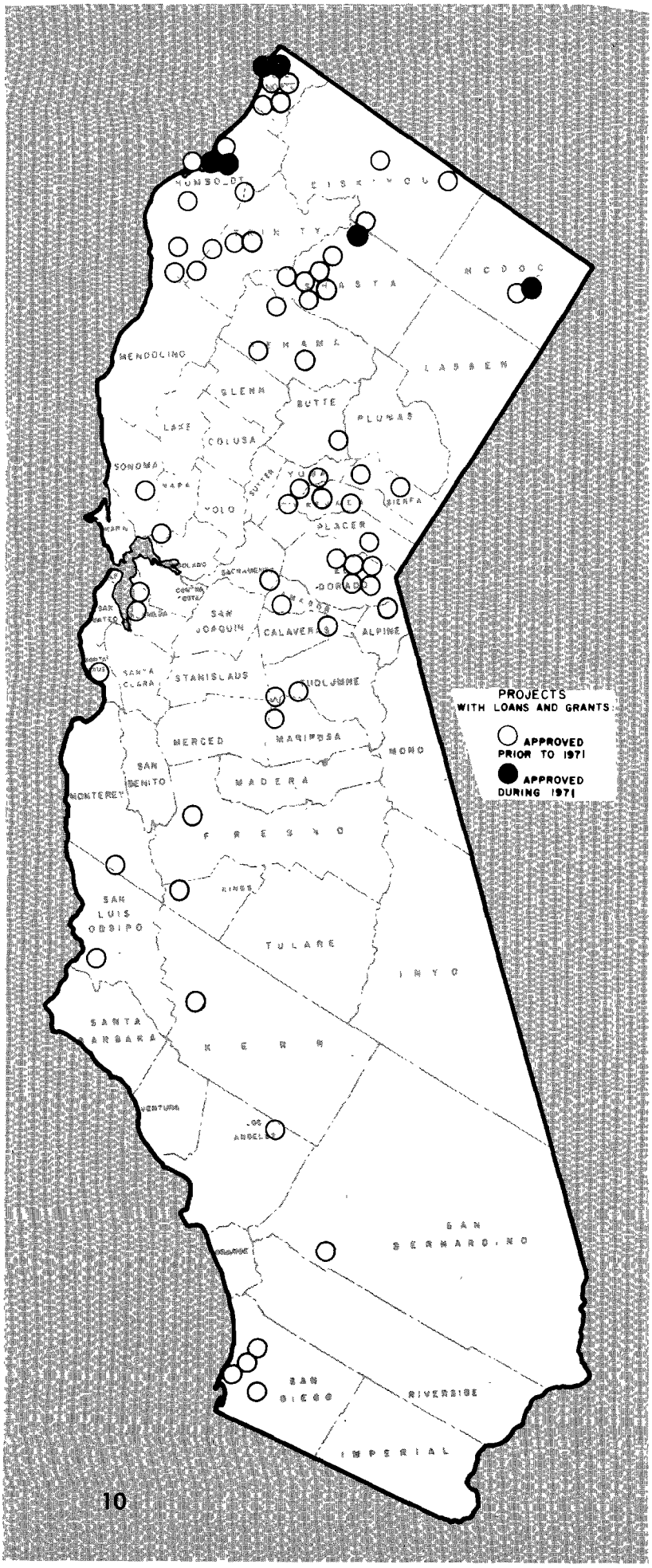
- $282,300 to the Cedarville County Water District, Modoc County.
- $529,000 to the Bertsch-Ocean View Community Services District, Del Norte County.
- $3,673,000 to the McKinleyville Community Services District, Humboldt County.
- $396,000 to the Smith River Community Services District, Del Norte County.
- $675,000 to the Fieldbrook Community Services District, Humboldt County.

In addition to the above, a $2,500 loan was approved for the preparation of a feasibility report by the Crag View Community Services District, Shasta County, concerning a proposed domestic water supply and distribution system.

No additional grants were approved during 1971. Grants are made under the Program for financing (1) the portions of construction costs of proposed water projects that are allocated to recreation and to enhancement of fisheries and wildlife habitat and (2) the construction costs of initial water supply and sanitary facilities at such projects.

Of the total approved applications as of December 31, 1971, $28,605,488 (31.8 percent) were for loans and

FIGURE 2: LOCAL PROJECTS UNDER THE DAVIS-GRUNSKY ACT PROGRAM



the remaining $61,402,355 (68.2 percent) were for grants.

During 1971, the Department of Water Resources and the California Water Commission jointly approved the following two policies to improve the effectiveness of the Davis-Grunsky Act Program:

- Projects for which grants are made shall be kept open to use by the general public. Long-term leases or permits to private parties which, by their terms, allow exclusion of the general public from project lands shall not be permitted, except where specifically approved by the Department and the Commission. (California Water Commission Resolution 76-1, April 2, 1971.)
- Applications for loans for domestic water projects which meet public health and safety needs will be given preferential consideration when reviewing applications for the remaining uncommitted Davis-Grunsky Act funds appropriated by the Burns-Porter Act. (California Water Commission Resolution 71-16, November 5, 1971.)

The adoption of the policy to give preferential consideration to applications for loans for domestic water projects which meet public health and safety needs recognizes that the $130 million authorized under the Burns-Porter Act for the Program soon will be exhausted. As of December 31, 1971, only about $34 million of the $130 million authorization remained uncommitted. Applications on hand for which findings were not complete totaled about $16 million as of the end of 1971. In addition, requests totaling $43 million for preliminary determination of eligibility were on file or under review.

Summarized below are selective statistics concerning the local projects which have been or will be financially assisted through the Davis-Grunsky Act Program:

	As of December 31, 1971	
	Completed	Approved, but not completed
New distribution system projects:		
Number	11	6
Loan amounts	$5 million	$9 million
Reconstructed distribution system projects:		
Number	8	10
Loan amounts	$5 million	$9 million
Storage projects:		
Number	18	14
Grant amounts	$22 million	$40 million
Total storage capacities	3.7 million acre-feet	2.1 million acre-feet
Recreation use (1970)	2.6 million visitor-days	----

CHAPTER II. PROJECT CONSTRUCTION

By the end of 1971, approximately 99.7 percent of the 1973 Project facilities were either completed or under construction. Project facilities were operational from Frenchman Dam, in Plumas County, to Cedar Springs Dam, in San Bernardino County, and Castaic Dam, in Los Angeles County. All facilities required for 1973 project water deliveries in Southern California were under contract.

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.

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. 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 locations of the 1973 Project facilities and of the facilities under the future construction program are shown on Figure 3, together with a delineation of construction divisions for the overall project.

Special Events

Several notable events during 1971 directly resulted from construction activities, including initial operation of the A. D. Edmonston Pumping Plant and first delivery of project water to Southern California on October 7; "topping out" of Cedar Springs Dam embankment on March 5 and Castaic Dam embankment on August 6; and initial operation of Pearblossom Pumping Plant to provide water as far south as Silverwood Lake on December 31. In addition, there were several special events relating to design and construction activities which are described in the following paragraphs.

Project Awards

On May 5, 1971, in its annual awards program for utility design, the American Public Power Association gave honors for consideration of esthetic factors to the Department and its engineers and architects. The Association's First Honor Award, the highest made, went to the Delta Pumping Plant and an Honor Award went to the Oroville-Thermalito power facilities. Individual awards were given to Arthur J. Bunas, retired Chief of the Structural Design Section; T. W. Troost, Chief of the Mechanical-Electrical Design Section; and Frank V. Lee, Chief of the Architectural Design Unit.

On November 3, 1971, the discharge lines at Wind Gap Pumping Plant were designated "Steel Pipeline of the Year" in the pump discharge line category by the Steel Pipe Fabrication Association. Awards were given to the Department, International Engineering Company (the designers), and American Bridge Division of the United States Steel Corporation (the fabricators).

(In conjunction with the 22nd National Engineers Week, February 20–26, 1972, the National Society of Professional Engineers announced that 1971's outstanding engineering achievements included the State Water Project. Also in February 1972, the Project was nominated as one of eight projects being considered by the American Society of Civil Engineers for selection of the outstanding civil engineering achievement of 1972.)

San Fernando Earthquake

On February 9, 1971, an earthquake registering 6.6 on the Richter scale occurred with an epicenter located near Sylmar in the San Fernando Valley, 17 miles from Castaic Dam. Considerable damage was done to residences and public works in the area—including project water transmission facilities of The Metropolitan Water District of Southern California. A detailed inspection of the Project revealed nothing significant that could be blamed on the earthquake, providing evidence of the merit of the Department's effort to design and build project facilities to resist earthquake damage. (See Chapter III, Bulletin 132-67, for a description of the Department's Earthquake Engineering Program, which was conducted during the design of project facilities.)

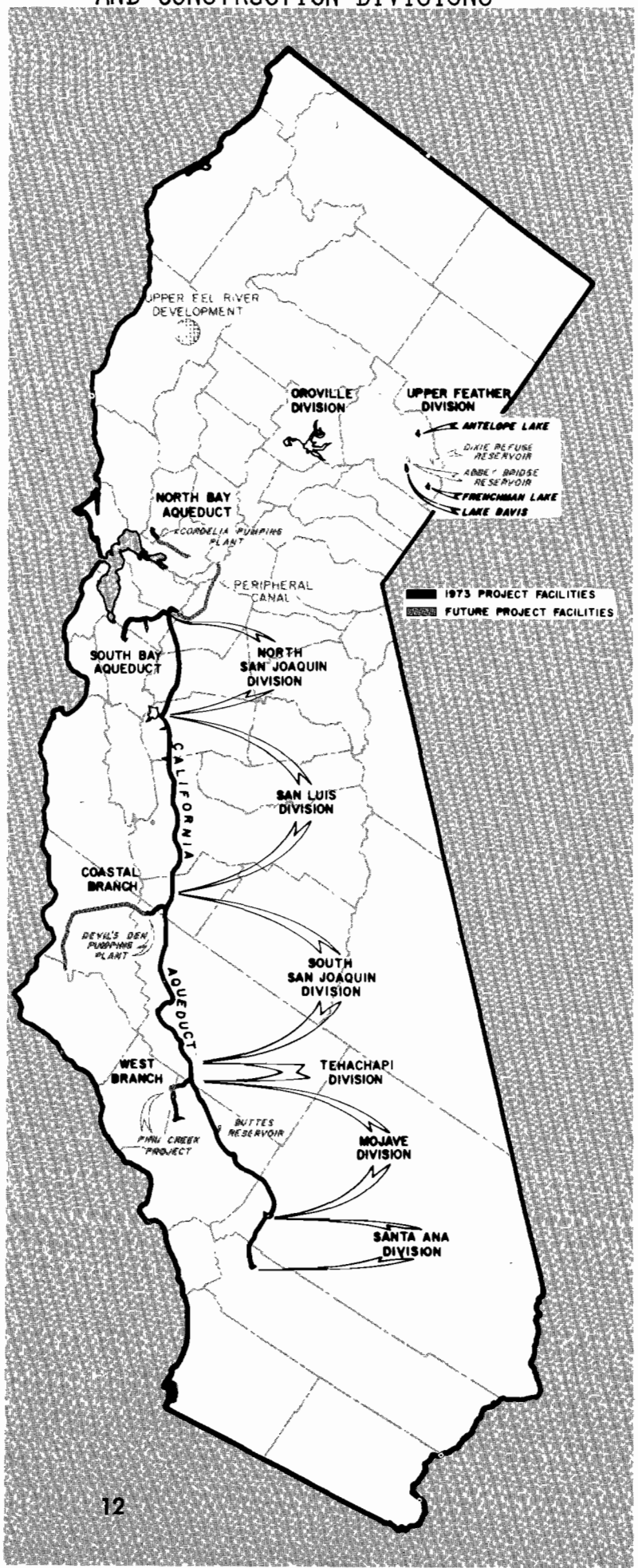
Aqueduct Break

On October 12, 1971, a break occurred in the Mojave Division of the California Aqueduct. The break was located in a four-mile reach of concrete-lined canal between Check Structures 47 and 48, which had been initially filled to a normal depth of approximately 12 feet the day before. The reach contained about 250 acre-feet of water, which flooded a largely undeveloped area one mile wide and eight to ten miles long.

The Department immediately contacted all residents in the flooded area to determine the extent of damages, if any, and to offer assistance in filing potential claims. Preliminary examination indicated no great water damage to property.

The Department conducted a comprehensive engineering investigation of the cause of the break. Earlier route selection studies were scrutinized. Conclusions

FIGURE 3: PROJECT FACILITIES AND CONSTRUCTION DIVISIONS



and recommendations by the board of consultants which reviewed these earlier studies were examined. Reports of preconstruction geologic explorations and investigations were reexamined for any observations or physical characteristics of foundation or embankment materials that were unusual or different from those used for design analysis. Construction procedures that were adopted to minimize settlement of structures and embankments were appraised. Recorded ground accelerations caused by the February 9 San Fernando Earthquake were studied.

Results of the investigation were inconclusive, and the actual cause of the break could only be postulated since the evidence was almost completely eliminated by the break itself. No indication of sabotage could be found. The San Fernando Earthquake probably was not of sufficient magnitude in the vicinity of the break to have weakened the canal section or to have been a contributing factor. Apparently the alluvium became saturated from water originating in the canal section itself, or from a ground water spring in the area, and such water caused a differential settlement and a "piping" of the embankment material which finally resulted in erosion and collapse of the canal section.

The canal section was reconstructed to original grade and restored to service. Water deliveries south to the Pearblossom Pumping Plant began on December 21, 1971.

Changes in Construction Management

With the nearing of completion of the 1973 Project facilities, there were several important changes during 1971 in the management of project construction activities.

In July 1971, Mr. Alfred R. Golzé left state service after 10 years as the top manager of technical design and construction of the State Water Project—since February 20, 1961, as the Department's Chief Engineer (see page 27, Bulletin 132-63) and, with change of state administration in 1967, as the Deputy Director in charge of project implementation.

Effective July 6, 1971, Mr. Robert B. Jansen, first Division Engineer of the Division of Operations and Maintenance (see page 9, Bulletin 132-68), was appointed as Deputy Director by Governor Reagan. Reflecting the growing importance of project operations and maintenance, the Director placed overall responsibility for these activities with Deputy Director Jansen, as well as for all project design, construction, and right-of-way activities.

Also reflecting the shift in emphasis from project construction to project operations and maintenance, Mr. Haywood G. Dewey, Division Engineer of the Division of Design and Construction since 1960, was reassigned as Division Engineer of the Division of Operations and Maintenance. Mr. Jeff A. Wineland, former Chief of the Design Branch, was promoted to fill the position left by Mr. Dewey.

Plans and Specifications

During 1971, the Department completed plans and specifications for 29 construction and procurement contracts, 27 of which were awarded by the year's end. Some of the more significant plans and specifications completed were those for:

- Aqueduct Control System, Southern California Area.
- Pyramid Dam.
- Aqueduct, Sugarloaf Mountain to Lake Perris.
- Completion of Angeles Tunnel Intake Works and Pyramid Dam Outlet Works.
- Perris Dam Inlet and Outlet Works.
- Ballast Fills, Interstate Highway 5.

Land Acquisitions

The current land acquisition program includes land and right-of-way required for the 1973 Project facilities, together with that required for Abbey Bridge Dam and Reservoir and for 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 a nearby portion of Interstate Highway 5).

During 1971, approximately $1.3 million was expended for land acquisitions in excess of credits for sales of surplus property and returns of condemnation security deposits. This brings the total net expenditures through 1971 to $106.3 million—approximately 95 percent of the $111.9 million estimated total under the current program.

Title was taken to some 174 parcels (1,700 acres) during 1971. To obtain land required for project construction, the Department presented to the California Water Commission seven condemnation resolutions covering 18 individual ownerships. In addition, condemnation proceedings were concluded on 43 parcels (610 acres). Seventeen parcels (463 acres) were sold, bringing the total of such excess lands sold through 1971 to 54 parcels (1,456 acres).

The Department executed 29 agreements covering 23 relocations during the past year. These and previous agreements involved capital outlay of $6.2 million and raised the total outlay under all such agreements through 1971 to $38.1 million—approximately 85 percent of the $44.7 million estimated total relocation cost under the current program. In addition, 147 land exchange agreements were concluded during the past year.

Facility or Construction Division	Current land acquisition program		
	Total parcels required	Parcels acquired in 1971	Total parcels acquired
Feather River Facilities			
Upper Feather Division[a]	29	0	22
Oroville Division	942	10	919
Delta Facilities[b]	41	3	9
North Bay Aqueduct			
Phase I	12	0	11
Phase II[c]	14	0	0
South Bay Aqueduct	206	0	203
California Aqueduct			
North San Joaquin	204	7	196
San Luis Division	22	0	21
South San Joaquin Division	568	9	551
Tehachapi Division	1	0	1
Mojave Division	1,638	38	1,564
Santa Ana Division	688	74	586
West Branch	270	33	199
Coastal Branch (Phase I)	48	0	47
TOTAL	4,683	174	4,329

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 (the additional seven parcels shown to be acquired for the Division).
[b] Certain reaches where excavation can be used for Interstate Highway 5 construction fill.
[c] Certain reaches of the North Bay Acqueduct where land values are expected to significantly escalate prior to commencement of Phase II construction in the late 1970s.

Construction Contracts

Construction of the 1973 Project facilities requires about 455 contracts; the total state payments under those contracts are estimated to be $1,619 million. As of December 31, 1971:

- $1,245 million had been expended under 384 contracts with final progress payments completed, whether or not settlements of contractor claims are pending.
- $369 million had been either expended or committed under 59 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.

Twenty-two construction contracts were awarded during 1971, including the last three major contracts for the 1973 Project facilities: for the Santa Ana Valley Pipeline between Sugarloaf Mountain and Lake Perris, in May; for Pyramid Dam, also in May; and for Perris Dam Inlet-Outlet Works, in October.

The largest of the three awards was for construction

of Pyramid Dam and was complicated by a court ruling which resulted in a readvertising of the contract.

When bids were opened on March 19 under the original advertising, it appeared that Shea-Healy, a joint venture, was low with a bid of $17.7 million and that Granite Construction Company was second low with a bid of $23.5 million. Shea-Healy's bid schedule included two unit prices and two extensions of the unit prices for one item; however, it was apparent from the total amount of the bid that the higher of the two unit prices was the one intended by the contractor. The Department was of the opinion that this interpretation eliminated the defect in the bid and the award was given to Shea-Healy. However, Granite Construction Company then petitioned the Sacramento County Superior Court seeking to enjoin the award to Shea-Healy and require an award to Granite. After hearings, the Court ruled that the Shea-Healy bid was invalid, but did not direct the Department to award to Granite. The Director elected to reject all bids and readvertise for bid opening March 13. The award was finally given to Shea-Healy for a little more than $22 million, which was more than $4 million greater than their original bid—but nearly $1.5 million lower than the only other bid received.

As of December 31, 1971, only about $5.1 million in 12 contracts were yet to be awarded for completion of the 1973 Project facilities. The more significant of these contracts, estimated to require slightly more than $3 million, include the following:

- Operating Roads and Slope Protection: Tehachapi, Mojave, and West Branch.
- Cedar Springs Dam completion.
- Castaic Dam completion.
- Perris Dam completion.

Construction status as of December 31, 1971, for each major facility or construction division of the 1973 Project facilities, is shown in the tabulation below. Construction plans for the immediate future are outlined on Figure 4—for the remainder of the 1973 Project facilities and for scheduled construction thereafter.

Facility or construction division [a]	Status as of December 31, 1971, in $1,000 unless otherwise noted				
	Actual cost of contracts completed	Estimated cost of contracts in progress	Estimated cost of future contracts [b]	Estimated total cost of all contracts [c]	Percent cost of contracts completed or in progress of total
Contracts Administered by the Department:					
Feather River Facilities:					
Upper Feather Division	8,228	0	0	8,228	100
Oroville Division	358,881	0	0	358,881	100
North Bay Aqueduct	1,562	0	0	1,562	100
South Bay Aqueduct	43,998	0	336	44,334	99
California Aqueduct:					
North San Joaquin Division	107,314	0	0	107,314	100
South San Joaquin Division	144,852	33,820	0	178,672	100
Tehachapi Division	173,417	39,845	0	213,262	100
Mojave Division	93,537	22,651	444	116,632	99
Santa Ana Division	36,699	86,651	1,516	124,866	99
West Branch	87,143	178,755	923	266,821	99
Coastal Branch	8,274	0	0	8,274	100
General Contracts	12,204	6,769	1,724	20,697	92
Subtotal	1,076,109	368,491	4,943	1,449,543	99.6
Contracts Administered by the Bureau of Reclamation:					
San Luis Division [d]	168,910	400	160	169,470	99.9
TOTAL, 1973 Project Facilities	1,245,019	368,891	5,103	1,619,013	99.7

[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 1972 and 3% per annum for 1973.
[c] Does not include additional capital costs for planning, design, right-of-way acquisition, construction supervision, or initial operations during the construction period. For complete estimates of capital costs of these facilities, and for facilities beyond the 1973 Project facilities, see the section on "Estimated Project Costs", Chapter V.
[d] Represents 55% of total cost of features jointly used by State Water Project and federal Central Valley Project.

Figure 4
GENERALIZED CONSTRUCTION SCHEDULE

FACILITY, CONSTRUCTION DIVISION OR FEATURE	CALENDAR YEAR 1972	1973	1974	1975	1976	1977	1978
UPPER FEATHER DIVISION							
FRENCHMAN DAM AND LAKE, ANTELOPE DAM AND LAKE, GRIZZLY VALLEY DAM AND LAKE DAVIS AND 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		(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		(COMPLETED)					
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)		(SCHEDULED FOR COMPLETION BY 1985)					
TUNNELS AND SIPHONS		(COMPLETED)					
MOJAVE DIVISION							
AQUEDUCT		(COMPLETED)					
BUTTES DAM AND RESERVOIR		(NOT YET SCHEDULED)					
PEARBLOSSOM PUMPING PLANT, 4 UNITS							
UNITS 1 & 2 (FINAL)							
CEDAR SPRINGS DAM AND SILVERWOOD LAKE		(COMPLETED)					
SANTA ANA DIVISION							
AQUEDUCT							
DEVIL CANYON POWERPLANT, UNIT 1							
UNIT 2							
PERRIS DAM AND LAKE PERRIS							
WEST BRANCH							
AQUEDUCT							
OSO PUMPING PLANT, ALL UNITS							
PIRU CREEK PROJECT		(NOT YET SCHEDULED)					
PYRAMID DAM AND LAKE							
CASTAIC DAM AND LAKE							
COASTAL BRANCH							
AQUEDUCT, CALIFORNIA AQUEDUCT TO DEVIL'S DEN PUMPING PLANT		(COMPLETED)					
LAS PERILLAS AND BADGER HILL PUMPING PLANTS, 3 UNITS EACH		(COMPLETED)					
UNIT 4, EACH PLANT		(COMPLETED* - TO BE PURCHASED OR REPLACED BY 1982)					
UNIT 5, EACH PLANT		(COMPLETED* - TO BE PURCHASED IN 1977)					
UNIT 6, EACH PLANT		(COMPLETED* - TO BE PURCHASED IN 1985)					
DEVIL'S DEN PUMPING PLANT THRU SANTA MARIA TERMINUS		(SCHEDULED FOR COMPLETION BY 1980)					
SAN JOAQUIN DRAINAGE FACILITIES		(NOT YET SCHEDULED)					

REMAINING CONSTRUCTION FOR THE "1973 PROJECT FACILITIES"

FUTURE SCHEDULED CONSTRUCTION

▽ INITIAL PROJECT WATER DELIVERY THROUGH THE PLANT

* INITIAL INSTALLATION BY BERRENDA MESA WATER DISTRICT

Construction Progress

During 1971, 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.

Feather River Facilities

During 1971, there was no construction activity by the Department in the Upper Feather Division. Work continued on the Oroville-Thermalito Control System, and relatively small contracts for modification work for the Oroville Division were completed.

North Bay Aqueduct

Phase I of the North Bay Aqueduct has been completed and is operational.

South Bay Aqueduct

All of the South Bay Aqueduct has been completed and is operational.

California Aqueduct

During 1971, construction was completed on the California Aqueduct Control System, Delta to Buena Vista Pumping Plant Intake and Coastal Branch, and contracts were awarded to extend the capability of remote aqueduct operations control and monitoring to Lake Perris and Castaic Lake.

North San Joaquin Division. All construction of the 1973 Project facilities portion of this division, including seven of the 11 units of the Delta Pumping Plant, is completed and all phases are operational.

San Luis Division. All features in this division are operational. The Bureau of Reclamation is administering a contract for construction of the Coalinga Operations and Maintenance Subcenter. A contract for construction of Romero Overlook (Phase II) at San Luis Reservoir will be advertised early in 1972.

Modifications to the three variable flow pumps at Dos Amigos Pumping Plant continued throughout 1971 and will be completed early in 1972. These modifications will allow flow selection for each pump ranging from 1,200 cubic feet per second through 2,200 cubic feet per second.

South San Joaquin Division. By the end of 1971, five pump units were operational at Buena Vista Pumping Plant, with the five remaining units scheduled to be operational in 1972; four pump units were operational at Wheeler Ridge Pumping Plant, with the five remaining units scheduled to be operational in 1972; and two pump units were operational at Wind Gap Pumping Plant, with the remaining seven units scheduled to be operational in 1972.

Tehachapi Division. Construction was completed on the A. D. Edmonston Discharge Lines, the Tehachapi Afterbay, Pastoria Siphon, and Beartrap Access Structure. Construction continued on the A. D. Edmonston Pumping Plant and by the end of 1971, two of the initial eleven units were operational.

Mojave Division. All aqueduct contracts in this division were essentially completed and operational. Cedar Springs Dam was completed in 1971. At Pearblossom Pumping Plant, Unit No. 3 was tested and became operational in 1971, with the three remaining initial units scheduled to become operational in 1972. Work is under way on the Pearblossom Operations and Maintenance Subcenter, operating roads and slope protection, and Pearblossom Pumping Plant Control System.

Santa Ana Division. Construction continued on the San Bernardino Tunnel and Intake Tower, Devil Canyon Powerplant, Santa Ana Valley Pipeline from Devil Canyon Powerplant to Sugarloaf Mountain, and Perris Dam. During 1971, construction was initiated on the last reach of the Aqueduct, from Sugarloaf Mountain to Lake Perris and on Perris Dam Inlet and Outlet Works.

West Branch. During 1971, construction was completed on Quail Canal, Castaic Dam, Gorman Creek Improvements, and the Southern California Operations and Maintenance Center at Castaic Lake. Construction continued on Oso Pumping Plant, Castaic Dam Outlet Works, and Angeles Tunnel. By the end of 1971, two of the eight units at Oso Pumping Plant were operational, with the remainder to be operational by March 1972. Modifications to the Oso Discharge Lines were completed. During the year, construction began on Pyramid Dam, completion of Angeles Tunnel Intake Works, and Pyramid Dam Outlet Works.

The City of Los Angeles, Department of Water and Power continued construction of the Castaic Powerplant. By the end of the year, the small 50-megawatt unit was essentially complete.

Coastal Branch. During 1971, installation of Units No. 5 and 6 at Las Perillas and Badger Hill Pumping Plants was completed by the Berrenda Mesa Water District in accordance with the Department's plans and specifications (see page 7, Bulletin 132-71 regarding the unique arrangements for these units). All six units at each of the two plants are now operational—three each installed by the Department and three each by the Berrenda Mesa Water District.

CHAPTER III. PROJECT UTILITY MANAGEMENT

This chapter is a progress report on management of the Project's water and power utility during 1971. These activities pertain to water rights, water supply contracts, and power purchase and supply contracts.

Water Rights Management

Concerning project water rights, the most significant event during 1971 was the rendering of State Water Resources Control Board's Decision 1379. The Decision was preceded by over two years of hearings, over 11,700 pages of recorded testimony, extensive legal briefs, and complex analyses. However, by the end of 1971, the application of the Decision, both as to the operation of the Project and as to state water quality policy, had been stayed by court order. The Department continues to operate the Project to meet the Delta Water Quality Criteria of the November 19, 1965 Agreement (see page 69, Bulletin 132-66) and to protect water quality at the Delta Pumping Plant.

In regard to the future acquisition of water rights for additional project facilities, a notable action during the 1971 legislative session was the enactment of AB 7 (California Statutes of 1971, Chapter 188). The Department has filed applications to appropriate water which "in its judgment is or may be required in the development and completion of the whole or any part of a general coordinated plan looking toward the development, utilization or conservation of the water resources of the State . . . ." (California Water Code Section 10500). Such applications are, in general, subject to the requirements and rules which govern applications by others, except that the Legislature has provided that they are not subject to the statutory requirements relating to diligence. The 1971 legislation amends Water Code Section 10500 to extend the exemption from diligence until the 61st day after adjournment of the 1975 Regular Session.

State Water Resources Control Board Decision 1379

Under Decision 1275 issued May 1, 1967 and Decision 1291 issued November 30, 1967 by the State Water Rights Board (now the State Water Resources Control Board), the Department was granted rights to appropriate water from the Feather River at Oroville and from the Sacramento-San Joaquin Delta for the operation of the State Water Project (see pages 62–64, Bulletin 132-68). In those decisions, the Board reserved jurisdiction to formulate terms and conditions of the State's water permits relative to control of salinity in the Sacramento-San Joaquin Delta, protection of the Delta's fish and wildlife resources, and coordination of the permits for the State Water Project and the federal Central Valley Project. The appeal concerning these decisions of the Contra Costa County Water Agency and the Jersey Island Reclamation District No. 830, filed December 29, 1967 (see page 64, Bulletin 132-68), is still pending.

Pursuant to such reserved jurisdiction, the Board issued Decision 1379 on July 28, 1971. The Decision requires the State and the United States to prevent Delta channel qualities from degrading beyond certain specified standards of water quality either by discontinuing pumping from the Delta or by releasing natural flow or stored water from upstream reservoirs. The Board will again hold hearings on these matters before July 1, 1978.

The Department believes that Decision 1379 in its present form will diminish the water yield of the State Water Project and will necessitate the construction of additional reservoirs and other works to augment the supply of water to the Delta.

On October 12, 1971, several public agencies which have executed, or hope to execute, contracts for a water supply from the Central Valley Project filed a petition for a writ of mandate against the Board in the Superior Court of Sacramento County (*Central Valley East Side Project Association* v. *State Water Resources Control Board*). On October 15, 1971, several public agencies which have contracted for a water supply from the State Water Project also filed a petition for writ of mandate against the Board in the same court (*Kern County Water Agency* v. *State Water Resources Control Board*).

The respective parties request that Decison 1379 be set aside because: (1) it requires the Department and the Bureau of Reclamation to release water from storage and to curtail direct diversions to prevent Delta channel salinities from exceeding the enumerated standards which are higher than would have been present in the absence of the state and federal projects; (2) these requirements are imposed without requiring payment for the benefits; (3) the requirements will seriously reduce the quantity and dependability of water which may be delivered to customers of both projects; and (4) the requirements will increase the cost of water to state and federal customers due to additional facilities which will be necessary to replace the water required to be released.

(Judge William Gallagher of the Superior Court of Sacramento County issued a preliminary injunction January 9, 1972, preventing the Board from implementing any part of Decision 1379. The preliminary injunction applies to both the above suits. Trial of the consolidated lawsuits on their merits is not expected to take place for as long as 18 months. The injunction stays submission of water quality standards by the State to the Federal Government, described below, and implementation of the extensive monitoring program required under the Decision.)

Water Quality Control Standards for the Delta and San Francisco Bay

On October 14, 1971, the State Water Resources Control Board held a hearing concerning the adoption of water quality standards and monitoring requirements of Decision 1379 as state water quality control

policy for the Sacramento-San Joaquin Delta and tidal waters within the San Francisco Bay. The adoption of these standards would amend the existing water quality control policies for the Delta and San Francisco Bay and would replace the interim salinity standards adopted by the Board's Resolution No. 68-17 on October 28, 1968 (see page 18, Bulletin 132-69). Presumably, the amended policy would be submitted to the Administrator of the Environmental Protection Agency under the Federal Water Pollution Control Act to satisfy federal exceptions to the interim chloride and total dissolved solids objectives previously submitted for the Delta. The Director's statement before the Board summarized the Department's position as follows:

"(1) The Federal Water Pollution Control Act provides no federal authority over the Delta, nor over natural salinity. Standards for the Sacramento-San Joaquin Delta need not and should not be submitted to the Federal Government.

"(2) Assumption of authority by the Federal Government based on the proposed policy would eliminate the flexibility inherent in Decision 1379 which is so essential to its intelligent administration.

"(3) State Policy for Water Quality Control must include consideration of waste discharges in formulating mineral standards.

"(4) State Policy for Water Quality Control must include consideration of all who use the waters tributary to the Delta, including other public works projects that affect the salinity of the Delta, not just the State Water Project and the Central Valley Project."

Department Activities

Water Rights management activities by the Department during 1971 included:

- Completion of certain agreements and continued negotiation of others to define the quantities which local water right holders are entitled to divert from flows in natural channels used by the Project.
- Administration of completed agreements and negotion 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.
- Preparation and filing of briefs with the State Water Resources Control Board urging that conditions be established in permits for state and federal projects that would both protect the Delta and provide sufficient water to meet the contractual commitments of the projects.
- Determination of the possible long-term effects of Decision 1379 on the value and timing of overland facilities for western Delta agriculture and the Suisun Marsh and for contractual agreements with western Delta municipal and industrial users.

Feather Riv r. During 1971, negotiations concerning Feather River water right entitlements were completed and agreements executed with one appropriative water user, the Oswald Water District, (bringing the total completed to five) and with five riparian water users (bringing the total completed to 20). Negotiations continue with the remaining five appropriative water users and 26 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. Both agencies had an above-average, offshore water supply during the 1971 water year as defined in the contracts: the District had an excess of 79 days of adequate supply as compared with average conditions, and the City had an excess of 112 days. These credits will be applied in the future to offset a corresponding number of days of deficient supply.

Negotiations with the Delta Water Agency were suspended in June 1971 pending a decision by the State Water Resources Control Board on Delta water quality standards. One formal meeting among the Department, the Bureau of Reclamation, and the Delta Water Agency was held after issuance of Decision 1379 in July. At this meeting, the Department and Bureau representatives stressed that under any contract negotiated with the Agency, payment would be required for any project water needed to meet the Agency's criteria for water quality. The Agency requested that further negotiations be delayed until its staff can answer several pending legal questions. An engineering committee has continued to meet in an attempt to define the quantity of project water required to meet the Agency's criteria so that negotiation of a repayment contract can proceed.

SCR 30 (California Statutes of 1971, Resolution Chapter 140) directs the Department to file within 60 days, and not later than the fifth calendar day of each regular session of the Legislature thereafter, a written report on the progress of negotiations with the Delta Water Agency. The Department's initial report was transmitted by the Director on November 24, 1971.

During late 1971, the Department, together with the Department of Fish and Game, prepared a joint letter rejecting a proposal by the Delta Water Agency that a Modified Folsom-South Canal be substituted for the Peripheral Canal. Under the Agency's proposal, Sacramento River water would be pumped at Hood to an enlarged Folsom South Canal. Canal releases would be made to the Consumnes, Mokelumne, Calaveras, and Stanislaus Rivers for Delta water quality control. State and federal export pumping would be limited to 6,500 cubic feet per second, considerably less than the capacity required for water service under executed contracts.

Under the Agency's proposal, flow reversals in Old and Middle Rivers would continue, and pumping of striped bass eggs, larvae, and their food supply from the Delta area would not be corrected. The intermixing of Sacramento River water with the waters of the Consumnes, Mokelumne, Calaveras, and Stanislaus Rivers would seriously confuse migrating salmon. The Department and the Department of Fish and Game are of the opinion that the Peripheral Canal would correct these problems and meet the needs of the Delta and the entire State at the same time.

Negotiations with the industrial water users in the western Delta were essentially at a standstill during 1971. The Department is interested in reaching agreement with the industries to provide them with a replacement water supply (via the Contra Costa Canal of the Central Valley Project) to compensate for any possible loss of offshore water of adequate quality due to operation of the State Water Project. The Bureau had been reluctant to agree to any responsibility due to the operation of the Central Valley Project. This was a major obstruction to the negotiations as the industries wanted a total solution to the reduced offshore water supply problem.

[SJR 13 (California Statutes of 1971, Resolution Chapter 214) requests the Bureau of Reclamation to advise the Secretary of the Interior and the Congress concerning its obligation in operating water projects that contribute to the loss of availability of usable quality water which accompanies a change in the regimen of freshwater outflow from the Sacramento-San Joaquin Delta.]

During late 1971, the Bureau agreed to negotiate and, if an acceptable proposal can be reached, to recommend to the Commissioner of Reclamation that an agreement be executed.

During 1971, the Contra Costa County Water District discontinued negotiations with the Department for the proposed "wheeling" of water through the State's Delta Pumping Plant to the proposed Modified Kellogg Unit of the Central Valley Project (see pages 15 and 16, Bulletin 132-71). The projected high unit cost of water from this proposed project caused municipal and industrial water users to greatly reduce their estimates of future water needs. On the basis of this reevaluation, the District abandoned the Modified Kellogg proposal for the foreseeable future.

Aqueduct Reservoirs. Effective May 1, 1971, Pleasanton Township County Water District assigned to Alameda County Flood Control and Water Conservation District, Zone 7, all its rights, title, and interest in, and all of its duties and obligations of performance under (1) Water Rights Permit 11319, granted to Pleasanton Township County Water District by Decision 988 of the State Water Rights Board, April 29, 1958; (2) all memoranda, letters of understanding, and agreements which presently exist between Alameda County Water District and Pleasanton Township County Water District; and (3) the "Contract Between the State of California Department of Water Resources, Alameda County Water District and Pleasanton Township County Water District for the Use of Lake Del Valle for Local Water Storage and for Other Purposes", November 13, 1969 (see page 19, Bulletin 132-70). This action was foreseen and was allowed for in the drafting of (3).

Local interests on Castaic Creek in Los Angeles County are continuing in their attempt to agree among themselves concerning whether or not local runoff should be conserved in Castaic Lake for their use and, if so, how much they should pay for such water.

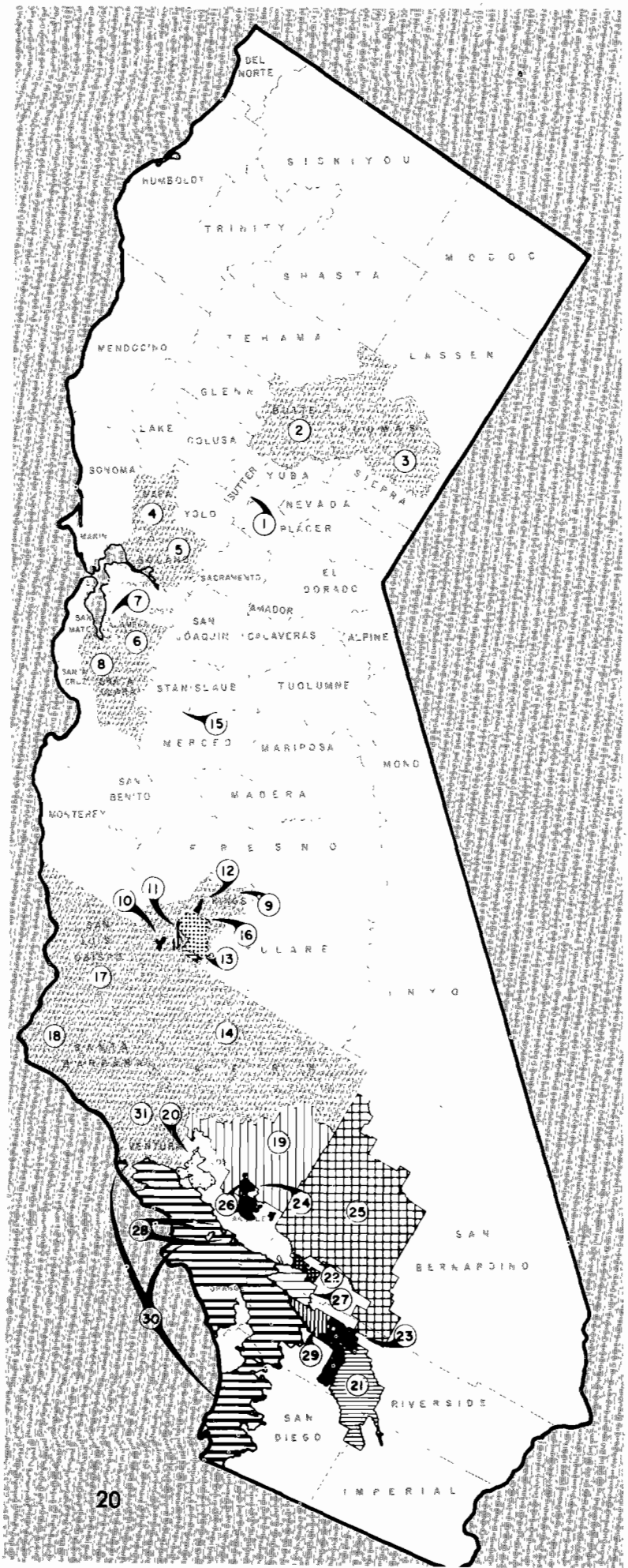
Water Contracts Management

The Department has executed long-term contracts for project water service with 31 local governmental agencies located throughout the State. The names and locations of these agencies, as well as certain general information concerning each, are shown on Figure 5.

Each contract contains a schedule of the annual amounts of water the agency is entitled to have delivered duing the term of the contract. In general, initial annual entitlements are relatively small and increase each year thereafter until the "maximum annual entitlement" is reached—in about 1990. Table 1 (Columns 1 through 7) presents a summary of annual entitlements of agencies within each major service area of the Project. Table B-4 of Appendix B shows the schedule of annual entitlements for each agency.

Annual entitlements generally reflect the projections of project water needs as estimated at the time the original contracts were signed. Current projections indicate that the actual project water needs of certain agencies will grow at a slower rate than indicated by original projections due to declining rates of anticipated population growth; however, current projections are slightly more accelerated than those shown in last year's bulletin. Current projections of firm project water needs are summarized in Table 1 (Column 8) and are shown for each agency by aqueduct reaches in Table B-5 of Appendix B. Reasons for differences between 1971 entitlements (Column 7) and actual entitlements delivered (Column 8) are explained in the next section. Corresponding sections of previous Bulletins 132 contain explanations for differences in years prior to 1971. For other agencies using water primarily for agricultural purposes, however, the expected use of project water is greater than their annual entitlements. Agricultural agencies have planned to use surplus project water to lower their overall water costs during early years of development and to help recharge depleted ground water basins. To

FIGURE 5: LONG-TERM WATER SUPPLY



Location No.	Contracting Agency	Total Deliveries through Dec. 31, 1971 (acre-feet)	Maximum Annual Entitlement (acre-feet)
	UPPER FEATHER AREA		
1	City of Yuba City	0	9,600
2	County of Butte	192	27,500
3	Plumas County Flood Control and Water Conservation District	134	2,700
	Subtotal	326	39,800
	NORTH BAY AREA		
4	Napa County Flood Control and Water Conservation District	10,040	25,000
5	Solano County Flood Control and Water Conservation District	0	42,000
	Subtotal	10,040	67,000
	SOUTH BAY AREA		
6	Alameda County Flood Control and Water Conservation District, Zone 7	48,823	46,000
7	Alameda County Water District	152,050	42,000
8	Santa Clara County Flood Control and Water District	388,939	100,000
	Subtotal	589,812	188,000
	SAN JOAQUIN VALLEY AREA		
9	County of Kings	4,700	4,000
10	Devil's Den Water District	41,581	12,700
11	Dudley Ridge Water District	139,195	57,700
12	Empire West Side Irrigation District	11,966	3,000
13	Hacienda Water District	19,079	8,500
14	Kern County Water Agency	833,434	1,153,400
15	Oak Flat Water District	19,223	5,700
16	Tulare Lake Basin Water Storage District	148,007	110,000
	Subtotal	1,217,185	1,355,000
	CENTRAL COASTAL AREA		
17	San Luis Obispo County Flood Control and Water Conservation District	0	25,000
18	Santa Barbara County Flood Control and Water Conservation District	0	57,700
	Subtotal	0	82,700
	SOUTHERN CALIFORNIA AREA		
19	Antelope Valley-East Kern Water Agency	0	138,400
20	Castaic Lake Water Agency	0	41,500
21	Coachella Valley County Water Agency	0	23,100
22	Crestline-Lake Arrowhead Water Agency	0	5,800
23	Desert Water Agency	0	38,100
24	Littlerock Creek Irrigation District	0	2,300
25	Mojave Water Agency	0	50,800
26	Palmdale Irrigation District	0	17,300
27	San Bernardino Valley Municipal Water District	0	102,600
28	San Gabriel Valley Municipal Water District	0	28,800
29	San Gorgonio Pass Water Agency	0	17,300
30	The Metropolitan Water District of Southern California	0	2,011,500
31	Ventura County Flood Control District	0	20,000
	Subtotal	0	2,497,500
	TOTAL STATE WATER PROJECT	1,817,363(g	4,230,000
	NET AREA TOTAL STATE WATER PROJECT	1,817,363(g	4,230,000
	TOTAL STATE OF CALIFORNIA		
	PERCENTAGE STATE WATER PROJECT		

a) Total for Plumas County, including Last Chance Creek Water District.
b) Total for Kings County, including Dudley Ridge Water District, Empire West Side Irrigation District, Hacienda Water District, most of Tulare Lake Basin Water Storage District, and about 40% of Devil's Den Water District.
c) Total for Kern County, including about 60% of Devil's Den Water District, and about 50% of Antelope Valley-East Kern Water Agency.
d) Total for Antelope Valley-East Kern Water Agency includes assessed valuation for California City of $41,672,000 as well as City's area and population reannexed June 30, 1971.

Total Payments through Dec. 31, 1971 (dollars)	Gross Area as of July 1, 1971 (acres)	Assessed Valuation 1971-1972 (dollars)	Estimated Population (July 1, 1971)	Location No.
0	2,500	30,700,000	14,500	1
162,000	1,067,600	263,638,800	105,700	2
175,000	1,644,000(a	90,860,200(a	12,200(a	3
337,000	2,714,100	385,199,000	132,400	
975,000	508,000	221,038,800	81,500	4
0	528,400	388,003,600	177,100	5
975,000	1,036,400	609,042,400	258,600	
3,067,000	272,000	246,528,300	85,100	6
4,469,000	61,700	385,000,000	140,000	7
15,096,000	832,300	2,991,892,800	1,101,000	8
22,632,000	1,166,000	3,623,421,100	1,326,100	
73,000	893,000	145,823,000(b	66,700	9
631,000	8,500	1,257,600	50	10
1,325,000	29,900	6,528,100	50	11
115,000	7,500	757,200	50	12
151,000	15,300	96,600	50	13
16,673,000	5,057,200(c	1,054,518,200(c	329,200(c	14
112,000	4,000	275,000	50	15
1,958,000	193,000	11,000,000	50	16
21,038,000	6,208,400	1,220,255,700	396,200	
514,000	2,131,300	328,729,200	107,500	17
1,215,000	1,756,900	724,295,800	267,800	18
1,729,000	3,888,200	1,053,025,000	375,300	
5,871,000	1,524,300	452,352,400(d	88,400	19
2,563,000	125,000	181,702,400	48,100	20
1,231,000	610,200	219,470,500	60,800	21
346,000	53,700	51,972,400	10,600	22
2,045,000	209,300	176,090,400	33,200	23
107,000	43,300	6,124,200	1,400	24
2,510,000	3,160,400	283,038,700	67,600	25
729,000	73,700	52,372,600	22,300	26
7,354,000	208,600	597,838,200	322,300	27
2,176,000	16,200	351,866,100	149,300	28
1,168,000	140,600	56,531,000	28,000	29
162,048,000	3,075,200	29,023,413,500	10,352,200	30
1,119,000	1,179,500(f	1,216,295,300	395,100(f	31
189,267,000	10,420,000	32,669,117,700	11,579,300	
235,978,000	25,433,100(e	39,560,060,900(e	14,067,900(e	
235,978,000	24,107,200(h	38,688,118,700(h	13,691,000(h	
	100,314,000	55,770,997,700	20,265,000	
	24.0	69.4	67.6	

e) Includes duplicate values for overlapping agency areas.
f) Total for Ventura County, including about 8,400 acres in Antelope Valley-East Kern Water Agency, 209,500 acres in The Metropolitan Water District of Southern California, and about 8,400 acres in Castaic Lake Water Agency.
g) Excludes 2,614 acre-feet delivered to Mustang Water District, and 109,938 acre-feet delivered to Last Chance Water District under one-year contracts. Also excludes 15,354 acre-feet of deliveries for repayment of water that was borrowed for aqueduct preconsolidation.
h) Excludes all overlapping areas.

date, surplus water has been served to the latter agencies under supplementary one-year contracts. Table 1 (Column 9) also shows actual and projected surplus project water deliveries to long-term contractors.

In addition to total project water deliveries (Column 10), Table 1 also presents the actual and projected annual quantities of project water required to (1) bring water surfaces in completed aqueduct facilities to operational levels (Column 11); (2) compensate for evaporation and seepage losses in operational aqueduct reaches and reservoirs (Column 12), as modified by annual changes in storage within such facilities; and (3) replace water consumed in recreation developments along the aqueduct facilities (Column 13). The total of these quantities (Column 14) represents the current projection of annual project water demands to be supplied from inflow to the Sacramento-San Joaquin Delta.

As compared with the theoretical projection referred to above, actual project water diversions from the Delta will be modified by annual changes in water conservation storage in San Luis Reservoir and by actual water supply conditions which may tend to limit the projected service of surplus water. On the other hand, project water demands will be increased for currently unscheduled commitments to deliver water as compensation for local water used in constructing project facilities, and for deliveries of surplus water to agencies other than the long-term contractors under future one-year contracts.

Project Water Service in 1971

Deliveries of water from project facilities to agencies having contracts with the State totaled 697,478 acre-feet during 1971—up 72 percent over 1970 deliveries. Monthly delivery amounts for each contractor are summarized in Table 2. In addition, 633,269 acre-feet of water was delivered to customers of the federal Central Valley Project from the joint-use San Luis Facilities and approximately 800,000 acre-feet of water was delivered solely to satisfy water rights which existed prior to the construction of project facilities.

Deliveries of "project water" (from a supply developed by project conservation facilities) were made to 13 long-term contractors and totaled 651,921 acre-feet, including:

- 357,340 acre-feet of entitlement water.
- 294,581 acre-feet of surplus water.

Deliveries of water other than that constituting "project water" to long-term contractors totaled 17,972 acre-feet, including:

- 2,521 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.
- 15,451 acre-feet of local water conserved in Lake Del Valle under contract with Alameda County Water District and Alameda County Flood Control and Water Conservation District, Zone 7.

TABLE 1: ANNUAL

(in acre-

Calendar Year	Annual Entitlements Under Long-Term Water Supply Contracts						
	Feather River Area	North Bay Area	South Bay Area	San Joaquin Valley Area	Central Coastal Area	Southern California Area	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1962	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0
1967	0	0	11,538	0	0	0	11,538
1968	550	0	109,900	81,050	0	0	191,500
1969	620	0	98,700	168,075	0	0	267,395
1970	700	0	114,200	207,700	0	0	322,600
1971	890	0	116,200	258,500	0	0	375,590
Subtotal, Actual for 10 years 1962-1971	2,760	0	450,538	715,325	0	0	1,168,623
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
4 years, 1972-1975	4,910	0	485,600	1,651,500	0	2,121,240	4,263,250
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

WATER REQUIREMENTS

feet)

Estimated Annual Water Demands							
Deliveries to Contracting Agencies							
Entitlement Water	Surplus and Non-project Water[a]	Total	Initial Fill	Operational Losses and Storage Changes	Recreation Water	Total	Calendar Year
(8)	(9)	(10)	(11)	(12)	(13)	(14)	
0	18,289	18,289	9	272	0	18,570	1962
0	22,456	22,456	71	185	0	22,712	1963
0	32,507	32,507	171	152	0	32,830	1964
0	44,105	44,105	93	729	0	44,927	1965
0	67,928	67,928	0	1,746	0	69,674	1966
11,538	53,605	65,143	8,328	4,212	0	77,683	1967
171,709	136,311	308,020	498,926	117,906	0	924,852	1968
193,020	91,226	284,246	510,614	72,196	0	867,056	1969
233,993	171,104	405,097	23,947	2,435	0	431,479	1970
357,340	340,138	697,478	7,853	5,806	14	711,151	1971
967,600	977,669	1,945,269	1,050,012	205,639	14	3,200,934	10 Years, 1962-1971
594,054	344,801	938,855	101,999	142,830	400	1,184,084	1972
837,980	434,830	1,272,810	308,900	87,617	10,600	1,679,927	1973
1,017,870	553,615	1,571,485	321,544	206,656	16,800	2,116,485	1974
1,161,000	570,936	1,731,936	26,615	282,031	23,325	2,063,907	1975
3,610,904	1,904,182	5,515,086	759,058	719,134	51,125	7,044,403	4 Years 1972-1975
1,322,230	577,443	1,899,673	9,513	168,378	27,525	2,105,089	1976
1,481,001	560,667	2,041,668	4,360	68,236	27,725	2,141,989	1977
1,614,827	548,465	2,163,292	4,685	98,827	27,925	2,294,729	1978
1,745,486	525,865	2,271,351	0	-14,820	28,115	2,284,646	1979
1,929,044	532,865	2,461,909	0	188,881	44,305	2,695,095	1980
2,064,995	496,900	2,561,895	0	317,483	44,415	2,923,793	1981
2,196,486	477,000	2,673,486	0	316,016	44,525	3,034,027	1982
2,334,797	449,500	2,784,297	0	174,688	44,645	3,003,630	1983
2,472,818	412,900	2,885,718	0	61,050	44,755	2,991,523	1984
2,613,329	389,500	3,002,829	0	352,498	44,875	3,400,202	1985
19,775,013	4,971,105	24,746,118	18,558	1,731,237	378,810	26,874,723	10 Years, 1976-1985
34,010,345	2,208,900	36,219,245	-	2,060,376	453,650	38,733,271	10 Years, 1986-1995
38,145,662	618,000	38,763,662	-	2,174,252	455,000	41,392,914	10 Years, 1996-2005
40,328,140	-	40,328,140	-	2,211,018	455,000	42,994,158	10 Years, 2006-2015
42,092,735	-	42,092,735	-	2,580,388	455,000	45,128,123	10 Years, 2016-2025
42,300,000	-	42,300,000	-	2,724,920	455,000	45,479,920	10 Years, 2026-2035

a) Includes regulated releases of local supply (152,675 acre-feet, 1962-1971), transportation of nonproject water (186,666 acre-feet, 1962-1971), and surplus water (622,974 acre-feet, 1968-1971). The amounts shown for 1972 thru 1977 are based on contractor requests for surplus water. Estimated amounts thereafter based on studies as to the availability and cost of surplus water.

TABLE 2: 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	57	4	57	21	7	13
Last Chance Creek Water District:							
Regulated Delivery of Local Supply	0	0	0	0	0	1,212	2,590
Plumas County Flood Control & Water Cons. District:							
Entitlement Water	0	0	0	0	0	0	18
AREA TOTAL	0	57	4	57	21	1,219	2,621
NORTH BAY SERVICE AREA							
Napa County Flood Control & Water Conservation District:							
Regulated Delivery of Local Supply	592	537	576	342	0	0	0
SOUTH BAY SERVICE AREA							
Alameda County Flood Control & Water Cons. Dist., Zone 7:							
Entitlement Water	376	443	551	920	977	1,183	288
Regulated Delivery of Local Supply	0	0	0	0	318	457	1,769
Agency Total	376	443	551	920	1,295	1,640	2,057
Alameda County Water District:							
Entitlement Water	0	0	0	0	0	0	202
Regulated Delivery of Local Supply	617	245	78	48	44	1,342	917
Agency Total	617	245	78	48	44	1,342	1,119
Pleasanton Township County Water District:							
Regulated Delivery of Local Supply	96	99	200	279	0	0	0
Santa Clara County Flood Control & Water District:							
Entitlement Water	5,964	5,655	7,147	7,110	7,865	8,853	10,118
AREA TOTAL	7,053	6,442	7,976	8,357	9,204	11,835	13,294
SAN JOAQUIN VALLEY SERVICE AREA							
Buena Vista Farms, Inc.:							
Repayment of Preconsolidation Water	0	58	919	1,607	416	0	0
Buena Vista Water Storage District:							
Repayment of Preconsolidation Water	0	0	0	0	0	0	1,154
County of Kings:							
Entitlement Water	0	143	13	0	0	163	163
Surplus Water	0	22	3	0	0	25	25
Agency Total	0	165	16	0	0	188	188
Devil's Den Water District:							
Entitlement Water	250	895	1,000	750	430	525	400
Surplus Water	6	0	378	323	442	364	532
Agency Total	256	895	1,378	1,073	872	889	932
Dudley Ridge Water District:							
Entitlement Water	669	1,375	1,500	1,000	1,600	3,500	3,500
Surplus Water	0	0	454	2,925	2,663	1,316	3,660
Agency Total	669	1,375	1,954	3,925	4,263	4,816	7,160
Empire West Side Irrigation District:							
Entitlement Water	0	0	0	627	540	384	0
Surplus Water	0	0	0	0	687	0	1,464
Agency Total	0	0	0	627	1,227	384	1,464
Hacienda Water District:							
Entitlement Water	0	0	604	436	307	852	101
Surplus Water	0	0	0	0	0	0	1,035
Agency Total	0	0	604	436	307	852	1,136
Kern County Water Agency:							
Entitlement Water	2,648	8,482	14,763	16,862	19,876	32,181	39,921
Surplus Water	2,330	6,863	22,653	12,059	693	14,096	38,330
Agency Total	4,978	15,345	37,416	28,921	20,569	46,277	78,251
Mustang Water District:							
Surplus Water	0	0	37	100	263	271	407
Oak Flat Water District:							
Entitlement Water	0	100	300	225	450	500	500
Surplus Water	0	21	145	1,161	272	524	1,259
Agency Total	0	121	445	1,386	722	1,024	1,759
Tulare Lake Basin Water Storage District:							
Entitlement Water	0	1,000	0	0	0	1,149	5,400
Surplus Water	278	571	2,393	4,353	297	0	3,416
Agency Total	278	1,571	2,393	4,353	297	1,149	8,816
AREA TOTAL	6,181	19,530	45,162	42,428	28,936	55,850	101,267
ALL AGENCIES:							
Entitlement Water	9,907	18,150	25,882	27,987	32,066	49,297	60,624
Surplus Water	2,614	7,477	26,063	20,921	5,317	16,596	50,128
Total--Project Water	12,521	25,627	51,945	48,908	37,383	65,893	110,752
Regulated Delivery of Local Supply	1,305	881	854	669	362	3,011	5,276
Repayment of Preconsolidation Water	0	58	919	1,607	416	0	1,154
TOTAL WATER	13,826	26,566	53,718	51,184	38,161	68,904	117,182

DELIVERIES IN 1971

feet)

Month						1971 Carry-over	Deferred Delivery Credit as of Dec. 31, 1971	Contracting Agency and Type of Service
Aug	Sep	Oct	Nov	Dec	Total			
								FEATHER RIVER SERVICE AREA
								County of Butte:
0	9	16	3	5	192			Entitlement Water
								Last Chance Creek Water District:
4,608	1,305	301	103	0	10,119			Regulated Delivery of Local Supply
								Plumas County Flood Control & Water Cons. District:
30	15	1	0	0	64			Entitlement Water
4,638	1,329	318	106	5	10,375			AREA TOTAL
								NORTH BAY SERVICE AREA
								Napa County Flood Control & Water Conservation District:
0	81	102	94	197	2,521			Regulated Delivery of Local Supply
								SOUTH BAY SERVICE AREA
								Alameda County Flood Control & Water Cons. Dist., Zone 7:
180	15	0	68	16	5,017	6,183	7,970	Entitlement Water
1,897	1,545	1,381	1,302	1,091	9,760			Regulated Delivery of Local Supply
2,077	1,560	1,381	1,370	1,107	14,777			Agency Total
								Alameda County Water District:
1,247	1,463	81	743	2,225	5,961	5,691	36,761	Entitlement Water
1,033	164	145	1,058	0	5,691			Regulated Delivery of Local Supply
2,280	1,627	226	1,801	2,225	11,652			Agency Total
								Pleasanton Township County Water District:
0	0	0	0	0	674			Regulated Delivery of Local Supply
								Santa Clara County Flood Control & Water District:
10,186	8,186	5,962	5,489	5,071	87,606	0	20,736	Entitlement Water
14,543	11,373	7,569	8,660	8,403	114,709	11,874	65,467	AREA TOTAL
								SAN JOAQUIN VALLEY SERVICE AREA
								Buena Vista Farms, Inc.:
2,847	789	477	0	0	7,113			Repayment of Preconsolidation Water
								Buena Vista Water Storage District:
7,080	7	0	0	0	8,241			Repayment of Preconsolidation Water
								County of Kings:
164	164	164	163	163	1,300			Entitlement Water
500	500	500	325	500	2,400			Surplus Water
664	664	664	488	663	3,700			Agency Total
								Devil's Den Water District:
375	250	650	510	665	6,700			Entitlement Water
409	527	959	1,226	624	5,790			Surplus Water
784	777	1,609	1,736	1,289	12,490			Agency Total
								Dudley Ridge Water District:
3,300	1,000	256	100	100	17,900			Entitlement Water
4,598	4,094	1,624	757	1,062	23,153			Surplus Water
7,898	5,094	1,880	857	1,162	41,053			Agency Total
								Empire West Side Irrigation District:
300	0	0	771	378	3,000			Entitlement Water
508	0	0	0	331	2,990			Surplus Water
808	0	0	771	709	5,990			Agency Total
								Hacienda Water District:
0	0	0	0	0	2,300			Entitlement Water
949	1,061	975	240	99	4,359			Surplus Water
949	1,061	975	240	99	6,659			Agency Total
								Kern County Water Agency:
39,226	14,856	1,391	94	0	190,300			Entitlement Water
31,095	17,205	13,123	6,341	5,063	169,851			Surplus Water
70,321	32,061	14,514	6,435	5,063	360,151			Agency Total
								Mustang Water District:
314	46	0	0	0	1,438			Surplus Water
								Oak Flat Water District:
500	125	100	0	0	2,800			Entitlement Water
752	246	9	23	0	4,412			Surplus Water
1,252	371	109	23	0	7,212			Agency Total
								Tulare Lake Basin Water Storage District:
6,100	6,200	5,351	3,000	6,000	34,200			Entitlement Water
15,174	18,964	17,224	12,324	6,632	81,626			Surplus Water
21,274	25,164	22,575	15,324	12,632	115,826			Agency Total
114,191	66,034	42,803	25,874	21,617	569,873			AREA TOTAL
								ALL AGENCIES:
61,608	32,283	13,972	10,941	14,623	357,340	11,874	65,467	Entitlement Water
54,299	42,643	34,414	21,236	14,311	296,019			Surplus Water
115,907	74,926	48,386	32,177	28,934	653,359			Total--Project Water
7,538	3,095	1,929	2,557	1,288	28,765			Regulated Delivery of Local Supply
9,927	796	477	0	0	15,354			Repayment of Preconsolidation Water
133,372	78,817	50,792	34,734	30,222	697,478	11,874	65,467	TOTAL WATER

Deliveries of water to agencies other than long-term contractors totaled 27,585 acre-feet, including:

- 10,119 acre-feet of regulated releases of a combination of project water and water rights entitlements from Frenchman Lake to Last Chance Creek Water District under the tenth in a series of one-year conracts.
- 1,438 acre-feet of surplus project water to Mustang Water District in Stanislaus and Merced Counties under the second one-year contract with the District.
- 7,113 acre-feet of project water to Buena Vista Farms, Inc., under a contract requiring delivery of 131,600 acre-feet prior to 1985 as partial payment for water furnished the State during construction of the California Aqueduct.
- 8,241 acre-feet of project water to Buena Vista Water Storage District under a contract requiring delivery of 108,000 acre-feet prior to 1985 as partial payment for water furnished the State during construction of the California Aqueduct.
- 674 acre-feet of local water conserved in Lake Del Valle to Pleasanton Township County Water District under a contract with Alameda County Water District and Pleasanton Township County Water District. (Pleasanton assigned all its rights, title and interest in said contract to Zone 7 of the Alameda County Flood Control and Water Conservation District, effective May 21, 1971.)

Entitlement Water Service in 1971. The annual entitlements of the 13 contractors receiving project water during 1971 totaled 375,590 acre-feet; all of which was scheduled for delivery (see page 21, Bulletin 132-71). However, 18,250 acre-feet less than the total amounts scheduled were actually delivered for the following reasons:

- 11,874 acre-feet because Alameda County Water District (5,691 acre-feet) and Alameda County Flood Control and Water Conservation District, Zone 7 (6,183 acre-feet), elected to meet a portion of their 1971 needs through use of rights to local water in Lake Del Valle.
- 394 acre-feet because of operational precautions taken at the request of Santa Clara County Flood Control and Water District.
- 5,982 acre-feet because user demands were less than anticipated for Butte County (258 acre-feet), Plumas County Flood Control and Water Conservation District (376 acre-feet), and Alameda County Flood Control and Water Conservation District, Zone 7 (5,348 acre-feet).

In each of the above cases, the scheduled amounts could have been delivered. In the first case above, the two contractors acquired rights to future delivery of the portion of 1971 entitlements not delivered under the "wet weather" provisions of their contracts.

Surplus Water Service in 1971. A total of 166,050 acre-feet of surplus water was originally scheduled for delivery in 1971 to eight long-term contractors (see page 21, Bulletin 132-71). Actual deliveries during the year totaled 296,019 acre-feet in accordance with subsequently approved changes of original schedules.

Because of above-average local water supplies during previous years, three San Joaquin Valley contractors who received surplus water in 1971 had accumulated "deferred delivery" rights to 77,444 acre-feet of entitlement water under the "wet weather" provisions of their contracts. (Note that this figure was incorrectly entered in Table 2, page 23, Bulletin 132-71 as 74,444 acre-feet.) Each of the three agreed to waive rights to future delivery of such water in an amount equal to either (1) the surplus water quantity received in 1971 or (2) the total deferred entitlement credit as of December 31, 1970, whichever amount was less (see page 24, Bulletin 132-71). As a result of these agreements, the "deferred delivery" rights of the three contractors were satisfied by the end of 1971.

Repayment Water Deliveries in 1971. In 1964, the Department entered into two contracts for acquiring a water supply to preconsolidate the soils along the aqueduct route; the first with Buena Vista Associates, Incorporated (now Buena Vista Farms, Incorporated) and the second with Buena Vista Water Storage District. Repayment provision of the contracts call for the delivery of a total of 239,600 acre-feet of project water to the agencies prior to 1985. For scheduling purposes, repayment water has a higher priority than surplus water but a lower priority than entitlement water. The contracts specify that the two agencies must submit requested monthly delivery schedules by October 1 for water desired during the following year and that the State will issue approved schedules by December 1.

No requests were received by October 1, 1970, for delivery of repayment water in 1971. However, in accordance with the agencies' later requests, 15,354 acre-feet of repayment water was delivered in 1971 (see Table 2) after a determination by the Department that scheduled deliveries to long-term contractors would not be adversely affected.

Project Water Service Plans

In September 1971, the Department requested the contractors to submit schedules of desired future deliveries for the six-year period 1972 through 1977, 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 in order to more accurately order the amount of power needed for pumping entitlement water.)

Based on schedules received on about October 1, 1971, requests for entitlement water service for 1977 total 1,480,251 acre-feet. These schedules total 187,070 acre-feet less than 1977 entitlements due to the requests of the following six contractors:

Contractor	(In acre-feet)		
	1977 entitlement	Request for 1977 delivery	reduction
Antelope Valley-East Kern Water Agency	50,000	29,020	20,980
Castaic Lake Water Agency	11,400	7,500	3,900
County of Butte	1,800	1,050	750
Mojave Water Agency	20,200	2,280	17,920
Palmdale Irrigation District	8,220	0	8,220
The Metropolitan Water District of Southern California	755,900	620,600	135,300
Total	847,520	660,450	187,070

Determination of 1977 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 31, 1971, as required under the EHV (Extra High Voltage) Intertie contract with the Companies. If the actual amounts of entitlement water eventually delivered in 1977 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.

Summarized in the tabulation below are the total annual amounts of entitlement water deliveries requested by the contractors during the next six years based on October 1, 1971 submittals and the corresponding amounts of previous requests.

As shown, delivery requests change from year to year. Preliminary analyses by the Department indicate that ordered amounts of onpeak electrical capacity will be sufficient to accommodate changes reflected in the latest requests.

Based on the requests received, monthly schedules were established on about December 1, 1971 for 911,465 acre-feet of entitlement and surplus water deliveries during 1972 to the following long-term contractors:

Contractor	(In acre-feet)	
	Entitlement water	Surplus water
County of Butte	500	--
Plumas County Flood Control and Water Conservation District	470	--
Alameda County Flood Control and Water Conservation District, Zone 7	12,400	--
Alameda County Water District	17,900	12,100
Santa Clara County Flood Control and Water District	88,000	--
County of Kings	1,400	--
Devil's Den Water District	7,700	6,300
Dudley Ridge Water District	20,000	29,000
Empire West Side Irrigation District	3,000	3,000
Hacienda Water District	2,600	2,100
Kern County Water Agency	270,700	149,546
Oak Flat Water District	2,900	2,800
Tulare Lake Basin Water Storage District	36,700	112,400
Crestline-Lake Arrowhead Water Agency	492	--
Littlerock Creek Irrigation District	170	165
San Bernardino Valley Municipal Water District	19,122	--
The Metropolitan Water District of Southern California	110,000	--
Total	594,054	317,411

Contractor requests submitted on October 1:	For delivery of entitlements[a] during:					
	1972	1973	1974	1975	1976	1977
1971	594,054	837,980	1,017,870	1,160,750	1,321,730	1,480,251
1970	618,020	805,180	916,950	1,019,630	1,128,815	
1969	728,440	930,220	992,490	1,112,320		
1968	822,740	986,700	[b]			
1967	839,040	[b]				

[a] Corresponding total entitlements set forth in contracts: 820,640, 984,700, 1,146,650, 1,311,260, 1,488,870, 1,667,321.
[b] Only 5-year requests were submitted prior to October 1, 1969.

In addition, schedules were than established for delivery of 27,390 acre-feet of preconsolidation repayment water during 1972: 17,390 acre-feet to Buena Vista Farms, Inc., and 10,000 acre-feet to Buena Vista Water Storage District.

(Because of below-average local water supply conditions in the central and southern portions of the State during early 1972, and based on supplemental requests received after December 1, 1971, it is anticipated that project deliveries during 1972 will approach one and one-quarter million acre-feet.)

Entitlement Water Service in 1972. Approved schedules of entitlement water deliveries during 1972 cover amounts that are 226,586 acre-feet less than the total 820,640 acre-feet of all 1972 entitlements of 24 contractors. (Entitlements of the remaining seven agencies do not commence until 1980 under present contracts.)

Thirteen of the 24 contractors are located north of the Tehachapi Mountains and all of these are scheduled to receive their full 1972 entitlements. Eleven are located in the Southern California area. Of the 11, only Littlerock Creek Irrigation District and Crestline-Lake Arrowhead Water Agency requested delivery of full 1972 entitlements, two requested deliveries less than 1972 entitlements, and seven requested no delivery of 1972 entitlements.

Four contractors requested extra delivery service in 1972 involving peaking rates in excess of the limits set forth in their respective contracts. Under interim policy guidelines adopted in 1970, the Department will not be obligated to provide excess peaking in cases where additional costs would be incurred thereby unless the respective contractors agree, in advance, to pay such additional costs. The Department determined that three of the four requests could be met without incurring additional costs—the fourth contractor agreed to pay the probable additional costs involved.

Surplus Water Service in 1972. The Department has been serving surplus water under annual extensions of one-year contracts, originally executed in 1968 (see pages 74 and 75, Bulletin 132-68), under the authority of both Article 21 and the special "agricultural and ground water replenishment" provisions of the water supply contracts. Charges for such service are based on the same unit variable charges (to repay essentially power costs on a per acre-foot of pumpage basis) as the service of entitlement water—provided that the amount of surplus water service does not cause such unit variable charges to be increased.

Department studies indicate that with the power scheduled six years previously, together with project recovery power, unit power costs for the delivery of scheduled entitlement and surplus water during 1972 will not exceed the unit power costs for the delivery of scheduled entitlement water only. Surplus water service in 1972 will therefore be provided under an additional one-year extension of the 1968 surplus water contracts, as agreed to by the affected contractors. (The Littlerock Creek Irrigation District, to receive project water for the first time in 1972, will sign a surplus water contract essentially of the same form as the 1968 contracts.)

On October 4, 1971, the Department adopted procedures for expediting the completion of surplus water contracts with customers, other than the 31 long-term contractors, requiring small amounts of water (not more than 100 acre-feet) for construction purposes within a limited period (not to exceed one year). The provisions of such contracts will be in accordance with the principles adopted in October 1970 (see page 24, Bulletin 132-71). In addition to the charges specified in the October 1970 principles, there shall be a charge of $100 for such minor service to cover the cost of negotiation and administration of the contract and the total charge shall be collected in advance.

Deferred Entitlement Deliveries in 1972. Three contractors had accumulated rights to the deferred delivery of entitlement water totaling 69,627 acre-feet as of December 31, 1971 (see Table 2). Two of these contractors, Alameda County Flood Control and Water Conservation District, Zone 7, and Santa Clara County Flood Control and Water District, intend to take no water in excess of 1972 entitlements. The third, Alameda County Water District, is scheduled to receive 12,100 acre-feet of surplus water. The latter District agreed to waive its rights to deferred delivery of entitlement water by an amount equal to the quantity of surplus water to be received in 1972.

Contract Amendments

During 1971, 31 amendments were executed to 25 long-term water supply contracts:

- An amendment to the contract with the Kern County Water Agency (No. 7) provides that (1) the delivery point of 50,000 acre-feet of the Agency's maximum annual entitlement will be transferred from the main line of the California Aqueduct to the Coastal Branch; (2) the Agency will submit a schedule of annual entitlements to be delivered from the Coastal Branch with monthly peaking at 11 percent; and (3) the Agency will pay an extra service charge equal to the State's estimate of any increased costs otherwise allocated to other contractors by result of the shift of entitlements to the Coastal Branch.
- An amendment to 25 contracts defers inclusion in Delta Water Charge determinations of projected construction and operation costs of "additional project conservation facilities" and "supplemental conservation facilities" until the State first incurs major construction costs for such facilities (see the following section of "1972 Delta Water Charge"): Plumas County Flood Control and Water Conservation District (No. 6); Napa County Flood Control and Water Conservation District (No. 5); Alameda County Flood Control and Water Conservation District, Zone 7 (No. 9); Alameda County Water District (No. 7); Santa Clara County Flood Control

and Water District (No. 10); Devil's Den Water District (No. 8); Dudley Ridge Water District (No. 9); Empire West Side Irrigation District (No. 7); Hacienda Water District (No. 7); Kern County Water Agency (No. 8); Oak Flat Water District (No. 6); Tulare Lake Basin Water Storage District (No. 7); San Luis Obispo County Flood Control and Water Conservation District (No. 5); Antelope Valley-East Kern Water Agency (No. 7); Castaic Lake Water Agency (No. 6); Coachella Valley County Water District (No. 5); Crestline-Lake Arrowhead Water Agency (No. 7); Desert Water Agency (No. 5); Littlerock Creek Irrigation District (No. 5); Mojave Water Agency (No. 6); Palmdale Irrigation District (No. 5); San Bernardino Valley Municipal Water District (No. 6); San Gabriel Valley Municipal Water District (No. 6); San Gorgonio Pass Water Agency (No. 6); and The Metropolitan Water District of Southern California (No. 11).

- An amendment to five contracts provides that the power credit, surcharge and surcharge credit provisions shall not apply to project water deliveries made during 1971: Devil's Den Water District (No. 11); Dudley Ridge Water District (No. 10); Empire West Side Irrigation District (No. 8); Kern County Water Agency (No. 9); and Oak Flat Water District (No. 7).

Figure 6 presents a summary of all 187 amendments to the 31 long-term contracts which had been executed as of December 31, 1971. Sixteen amendments had been distributed but not yet executed as of that date:

- The amendment to six contracts concerning the Delta Water Charge: County of Kings, Santa Barbara County Flood Control and Water Conservation District, Ventura County Flood Control District, Solano County Flood Control and Water Conservation District, County of Butte, and City of Yuba City (the latter two also including the change in calculation of the project interest rate, see page 28, Bulletin 132-69).
- Amendments to eight contracts providing that the surcharge and surcharge credit provisions shall not apply to 1971 project water deliveries: County of Butte; Plumas County Flood Control and Water Conservation District; Alameda County Flood Control and Water Conservation District, Zone 7; Alameda County Water District; Santa Clara County Flood Control and Water District; County of Kings; Hacienda Water District; and Tulare Lake Basin Water Storage District.
- An amendment to the contract with Alameda County Water District establishing the maximum rate of delivery from the aqueduct reach, Vallecitos turnout to Alameda-Bayside turnout, at 16 cubic feet per second and the maximum annual delivery capability from that reach at 8,775 acre-feet.
- An amendment to the contract with Santa Clara County Flood Control and Water District establishing the storage capacity in Lake Del Valle associated with service to the District at 9,536 acre-feet.

1972 Delta Water Charge. By July 12, 1971 letter, the Director again notified the legislative water committees of a proposed amendment to Articles 22(e) and (g) of long-term contracts. (See pages 26 and 27, Bulletin 132-69 for a description of the original proposal.) The proposal would exclude from calculations of the Delta Water Charge, commencing in 1972, the projected construction and operation costs of authorized "additional project conservation facilities" and "supplemental conservation facilities" until the year the State first incurs major construction costs for such facilities. The immediate effect of the proposal is to reduce the 1972 Delta Water Charge from about $9.86 per acre-foot to about $8.04 per acre-foot (see page 156, Bulletin 132-71).

The committees did not comment on the proposed amendment within the 90-day period specified in SCR 157 of the 1969 Legislature (see page 1, Bulletin 132-70). Amendments were therefore distributed to the contractors for signature in late November and early December of 1971. As noted previously, amendments to 25 of the 31 long-term contracts had been executed by December 31, 1971.

Previous amendments established the 1970 and the 1971 Delta Water Charges at per-acre-foot amounts which would have resulted had the above-described amendment been in effect (see page 28, Bulletin 132-70, and page 26, Bulletin 132-71).

Surplus Water and Deferred Entitlements. Previous bulletins have reported efforts to negotiate a form of amendment which would realign and simplify the existing dual surplus water provisions of long-term contracts (see page 25, Bulletin 132-71). This proposal has been considered in conjunction with another proposed amendment—the so-called "deferred entitlements" amendment. The latter would replace the special "wet weather" provisions presently contained in eight contracts to provide, generally, rights to future delivery of all entitlement water paid for but not delivered due to any reason.

Little progress was made in negotiating the above amendments during 1971. Certain contractors contend that mutually agreed-to procedures for allocating power costs must first be developed before these amendments are completed. A task force of Department and contractor representatives continued to work toward this end during 1971. Several studies were made and analyzed; however, no study had produced results from which members of the task force felt they could base firm conclusions and procedures as of December 31, 1971.

Surcharge Moratorium. The surcharge and surcharge credit provisions of the long-term contracts have been inoperative to date as a result of moratoriums established by amendments to the contracts of those agencies receiving project water. The first moratorium pertained to project water deliveries through

1969 of 13 contractors (see pages 26 and 27, Bulletin 132-69); the second, to 1970 project water deliveries of nine contractors (see pages 25 and 26, Bulletin 132-71). Amendments to the contracts of the 13 agencies which received project water in 1971 will extend the moratorium to include 1971 deliveries (in the process of being executed as of December 31, 1971).

Negotiation of Water Charge Settlements

During the past six years, a task force made up of representatives of the Department, the State Water Contractors' Audit Committee, and The Metropolitan Water District of Southern California has met regularly to develop mutually agreeable solutions on problems concerning the computation of charges. The task force has considered several such problems, some of which have been resolved and others of which are still under consideration. Problem areas considered by the task force during 1971 included the following:

- **Allocation of Power Costs Among Contractors and Between Water Conservation and Water Transportation Functions.** As previously pointed out, the task force did not reach agreement on power-cost allocation procedures during 1971.
- **One-Shot Adjustment Procedure.** The contracts do not specify how payments of retroactive adjustments of prior charges resulting from increases in the project interest rate are to be made. Adjustments of prior charges paid in a single year (the one-shot procedure) would increase certain years' charges substantially and possibly create a financial hardship for some contractors. As of December 31, 1971, the task force had not reached full agreement on how such adjustments should be charged.
- **1968 Capital Costs Settlement.** The task force reached substantial agreement on contested 1968 capital costs which have been charged the contractors. In October 1971, the Director notified the legislative water committees of the proposed settlement. As of December 31, 1971, no comments had been received from the Committees.

There are many issues regarding water charge computations which are still not resolved. On December 7, 1971, the contractors were notified that, with certain exceptions, the time for filing notices of contest of charges, and for protesting payments on all prior statements of charges, had been extended to December 21, 1972. The exceptions include the following items covered by five settlement letters (reflecting task force solutions) and one concurrence letter (reflecting a department determination when the task force could not reach a mutually agreeable solution):

(1) The "prior capital costs" settlement letter sent to all contractors on August 23, 1966, covering certain capital costs incurred prior to December 31, 1960.

(2) 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.

(3) 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.

(4) The "reaches 1 through 7" concurrence letter sent to all contractors on March 25, 1969, covering the allocation of costs 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 were acknowledged in Water Service Contractors Council Memo No. 527, dated December 22, 1969, wherein the right to protest such inaccuracies was extended and which right was thereby further extended until such inaccuracies have been corrected.

(5) The "capital costs 1961–1966" settlement letter sent to all contractors on March 31, 1970, covering certain capital costs incurred during the calendar years 1961 through 1966.

(6) The "capital costs 1967" settlement letter sent to all contractors on November 2, 1970, covering certain capital costs incurred during calendar year 1967.

1972–73 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 pages 27 and 28, Bulletin 132-69).

Review of the Department's proposed 1972–73 project budget, the third annual budget review under the formal procedure, was conducted on the following schedule:

August 6, 1971—Program statements sent for review to members of the "Budget Review Subcommittee" of the Audit Committee.

August 25 and September 16, 1971—Subcommittee members met with the Department's staff for preliminary review and comments.

October 5, 1971—Subcommittee transmitted its comments to the Commission. (The Metropolitan Water District of Southern California transmitted its own comments to the Commission by October 1, 1971 letter.)

October 6, 1971—The Budget Review Committee of the Commission met to consider the water contractors' comments.

November 5, 1971—The Commission transmitted to the Department its final report summarizing its comments, along with those of the water contractors.

After considering the written and oral expressions of the water contractors, the Commission submitted

FIGURE 6: LONG-TERM WATER SUPPLY CONTRACT AMENDMENTS AS OF DECEMBER 31, 1971

CONTRACTING AGENCY	AMENDMENT NUMBER OF RESPECTIVE CONTRACTS										
	1	2	3	4	5	6	7	8	9	10	11
FEATHER RIVER AREA											
City of Yuba City	9/28/64 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	1/ 8/71 M	12/31/70 D	12/27/71 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	12/ 7/71 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 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	1/25/71 M	12/31/70 D	12/27/71 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	pending a	11/11/71 D'				
Santa Clara County Flood Control and Water District	12/16/63 ABIEsw	9/28/64 C S y	2/24/69 T	11/26/68 A	4/ 8/69 m	12/31/69 d	12/28/70 M	12/31/70 D	pending a	12/27/71 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	1/25/71 M	12/31/70 D	12/27/71 D'	12/22/71 M'		
Dudley Ridge Water District	9/28/64 A E S y	7/29/68 A	9/ 4/68 A	11/26/68 A	12/23/68 m	12/31/69 d	12/10/70 M	12/31/70 D	11/11/71 D'	12/ 9/71 M'	
Empire West Side Irrigation District	9/28/64 S y	11/14/68 A	4/ 7/69 m	1/25/70 d	1/ 1/71 M	12/31/70 D	11/17/71 D'	12/22/71 M'			
Hacienda Water District	9/28/64 S y	8/19/68 A	12/19/68 m	12/31/69 d	1/12/71 M	12/31/70 D	12/27/71 D'				
Kern County Water Agency	9/28/64 A E S y	10/10/66 A	12/31/68 m	12/31/69 d	12/22/70 M	12/31/70 D	7/ 6/71 I	12/27/71 D'	12/22/71 M'		
Oak Flat Water District	8/10/67 T	12/19/68 m	12/31/69 d	12/22/70 M	12/31/70 D	11/ 2/71 D'	12/22/71 M'				
Tulare Lake Basin Water Storage District	12/30/63 A E	9/28/64 S y	10/21/68 A	12/19/68 m	12/31/69 d	12/31/70 D	11/ 2/71 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	12/ 6/71 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	12/27/71 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	12/27/71 D'					
Coachella 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	12/27/71 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	11/ 4/71 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	12/27/71 D'						
Littlerock Creek Irrigation District	11/15/63 c s	9/28/64 A C E S y	12/31/69 d	12/31/70 D	11/12/71 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	12/27/71 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	12/27/71 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	12/27/71 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	11/10/71 D'					
San Gorgonio Pass Water Agency	11/15/63 c s	1/19/65 ACIEPSy	1/12/70 I	12/31/69 d	12/31/70 D	12/27/71 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	12/27/71 D'
Ventura County Flood Control District	9/28/64 C S y	12/31/69 d	12/31/70 D								

DATE OF AMENDMENT

DESCRIPTION CODE

DESCRIPTION CODE

A. Annual Entitlements, Table A quantities changed.
a. Allocation of South Bay Aqueduct costs.
B. Bureau water, service provisions changed.
c. Surcharge-Surcharge credit, initial provisions.
C. Surcharge-Surcharge credit, revised provisions.
d. 1970 Delta Water Charge Amendment.
D. 1971 Delta Water Charge Amendment.
D'. 1972 Delta Water Charge Amendment.
e. Maximum Annual Entitlement decreased.
E. Maximum Annual Entitlement increased.
I. Individual special provisions.
m. Moratorium on Surcharge thru 12/31/69.
M. Moratorium on Surcharge for calendar year 1970.
M'. Moratorium on Surcharge for calendar year 1971.
p. Peaking service decreased.
P. Peaking service increased.
s. Surplus water, initial (A & R) provisions.
S. Surplus water, revised (A & R) provisions.
T. Turnouts, construction by agency authorized.
w. Wet Weather initial provisions.
X. Excess capacity.
y. Minimum Project Yield increased.

comments in the following areas of the Department's proposed 1972–73 project budget:

- **Overhead costs.** In view of the contractors' continuing concern as to the level of such costs, and the possibility that some confusion may exist in the contractors' minds as to the types of activities covered by such costs, it might be desirable for the Department to discuss this subject with some existing committee or task force of the water contractors. (In this regard, a meeting was held with contractor representatives on January 19, 1972.)
- **Pro rata charges of the Legislature.** While the contractors' concern was noted as to the propriety of such charges allocated to the Project and the level of such charges (see pages 29 and 30, Bulletin 132-70), the Commission concluded that there was no appropriate action the Commission itself could undertake.
- **Property management and right-of-way.** The Commission could not determine whether the Department's costs of managing and disposing of excess lands were excessive—a concern again expressed by the contractors—and suggested that the Department discuss this matter further with the contractors.
- **Recreation planning and implementation.** The Commission suggested that the Department review the "Implementation Activities" item of the budget to determine whether it is necessary or merely an overlapping expansion of "Administration and Management of Programs".
- **Spare parts acquisition.** The Commission concluded that some other committee should pursue the need, expressed by the contractors, for accounting policy guidelines concerning costs incurred in purchasing initial inventories of spare parts, the annual replenishment thereof as operations and maintenance expense, and costs which might be properly charged against replacement reserves.
- **Middle Fork Eel River Planning.** The Commission recommended that the Department should not delay or reduce the level of its project studies in the North Coast—in view of Decision 1379 of the State Water Resources Control Board.
- **Electric power.** The Commission again noted the contractors' concern that the Department maintain a sufficient and competent staff to carry out all the varied tasks related to power operations, power use optimization, and power supply negotiations.

By the Director's March 11, 1971 letter to the Commission, and by his March 17, 1971 letter to the Chairman of the State Water Contractors' Audit Committee, the Department responded, in detail, to the comments received as the result of the review of the 1971–72 budget (see page 28, Bulletin 132-71).

Implementation of Additional Service

By the end of 1971, the following additional aqueduct reaches were ready to deliver project water:

- Reaches of the main line of the California Aqueduct from and including Wind Gap Pumping Plant to and including Silverwood Lake.
- Reaches of the West Branch of the California Aqueduct to and including Castaic Lake.

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.

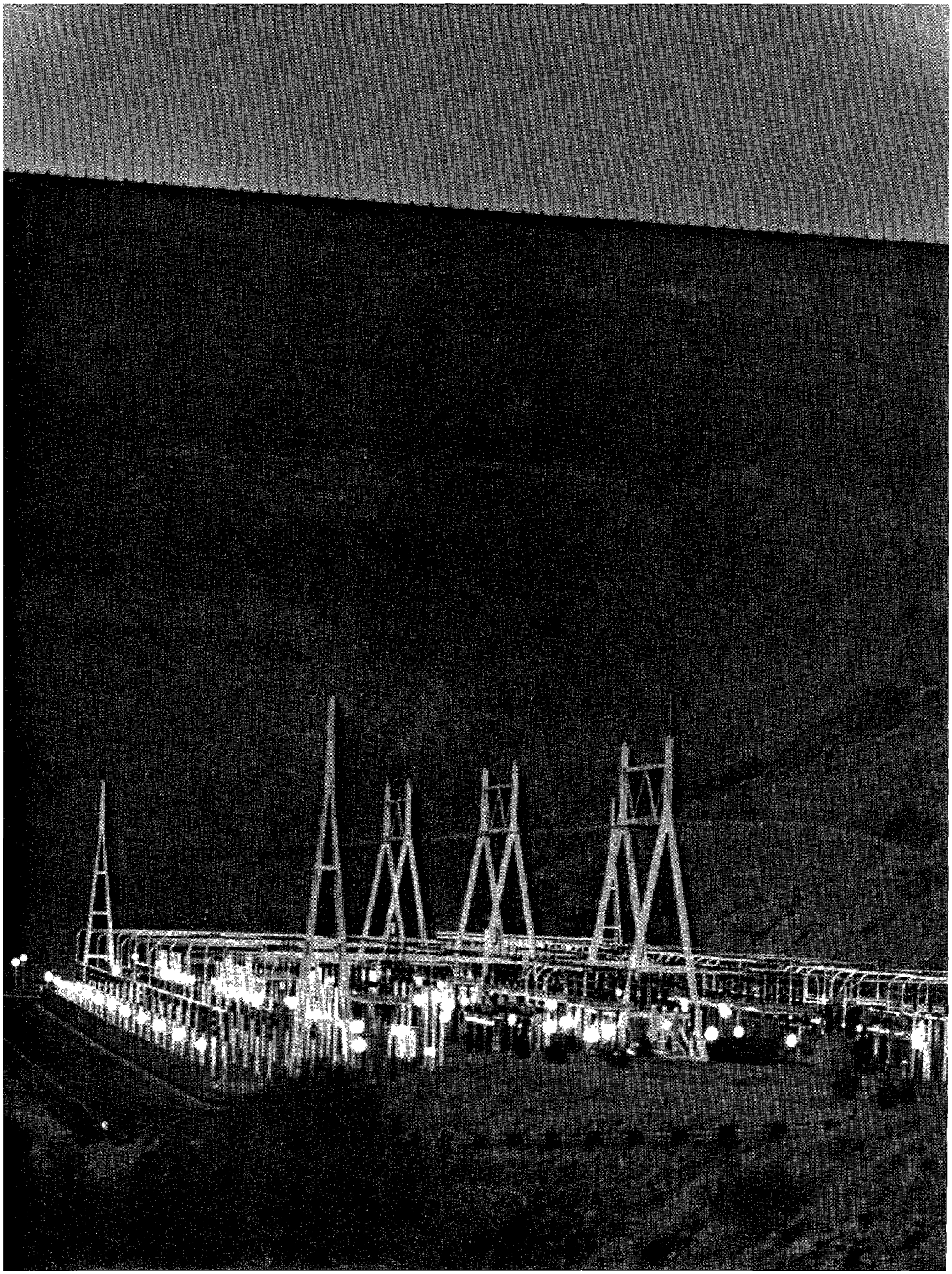
Power Contracts Management

During 1971, the power contracts program for the State Water Project was continued with the objective of minimizing the cost of water deliveries to water contractors.

Negotiation of the following agreements was completed during 1971:

- The Piru Creek Project Agreement with the City of Los Angeles, Department of Water and Power, and the Southern California Edison Company (see the section on "California Aqueduct", Chapter I).
- Amendment No. 3 to the Contract for Cooperative Development, West Branch (Castaic), with the City of Los Angeles, Department of Water and Power. This amendment changes the "initial operating date" of the Contract to the date when project water is available on a firm schedule for delivery through the Angeles Tunnel.
- Three agreements relating to the Oroville-Thermalito Power Sale Contract with the California Power Pool Companies. These agreements involve the determination of the reduction of generating capability under Article 29 of the contract, the amount of energy to be credited to the energy adjustment account for the Pacific Gas and Electric Company, and the settlement of the avoidable off-peak energy issue for April and May 1969.

In addition, a draft of contract was prepared for the sale of 40,000 kilowatts of Canadian Entitlement Power in 1974 to the City of Los Angeles, Department of Water and Power, and the Southern California Edison Company. Such power, originally scheduled for project use, became available for sale due to changes in project operations plans as a result of changing delivery requests by the contractors (see the section on "Water Service Plans", this chapter).



Oroville Switchyard and Oroville Dam

DWR 4183-4

TABLE 3: ANNUAL PROJECT ENERGY

(in millions of Energy

Calendar Year	North Bay Aqueduct Pumping Plants: Calhoun and Travis	North Bay Aqueduct Pumping Plants: Cordelia (a	Peripheral Canal Pumping Plant	South Bay Aqueduct Pumping Plants (b	California Aqueduct: Delta	San Luis	Dos Amigos	Buena Vista	Wheeler Ridge	Wind Gap	A. D. Edmonston
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Subtotal, Actual for 10 Years, 1962-1971	0	5	0	456	860	420	180	32	5	5	12
1972(d)	0	2	0	119	331	112	145	110	86	189	632
1973	0	2	0	111	387	132	163	206	212	465	1,582
1974	0	2	0	113	482	179	190	239	253	565	1,933
1975	0	2	0	114	464	185	171	192	199	439	1,498
4 Years, 1972-1975	0	8	0	457	1,664	608	669	747	750	1,658	5,645
1976	0	2	0	116	475	135	192	221	229	507	1,730
1977	0	2	0	118	492	143	212	244	253	560	1,915
1978	0	3	0	119	542	101	233	274	284	628	2,127
1979	0	4	0	121	545	89	248	292	301	666	2,253
1980	1	5	18	124	667	173	276	326	336	744	2,522
1981	1	6	29	126	756	213	287	334	342	756	2,558
1982	1	6	30	129	758	154	311	365	375	831	2,800
1983	1	6	32	132	782	225	327	384	393	868	2,921
1984	1	7	36	134	771	224	343	400	409	905	3,028
1985	1	7	39	137	934	306	364	427	437	966	3,232
10 Years, 1976-1985	6	48	184	1,256	6,722	1,763	2,793	3,267	3,359	7,431	25,086
10 Years, 1986-1995	26	100	468	1,555	10,987	2,625	4,620	5,597	5,784	12,847	42,834
10 Years, 1996-2005	30	142	480	1,680	12,258	2,956	5,161	6,429	6,714	14,960	50,041
10 Years, 2006-2015	30	144	480	1,680	12,956	3,121	5,463	6,961	7,309	16,322	54,759
10 Years, 2016-2025	30	144	480	1,680	13,541	3,193	5,702	7,403	7,808	17,468	58,765
10 Years, 2026-2035	30	144	480	1,680	13,550	3,130	5,730	7,460	7,870	17,606	59,160

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

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

REQUIREMENTS FOR PUMPING

kilowatt-hours)

Requirements					Energy Generation					Net Energy Requirements Col (16) minus Col (21)	Calendar Year
Pumping Plants					California Aqueduct Powerplants						
Pear-blossom	Oso	Las Per-illas and Badger Hill	Devil's Den, Saw-tooth, and Polonio	Total	San Luis	Devil Canyon	Castaic (c	San Luis Obispo	Total		
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	
0	1	92	0	2,068	84	0	0	0	84	1,984	10 Years, 1962-1971
86	38	40	0	1,890	118	95	91	0	304	1,586	1972(d)
203	103	24	0	3,590	113	328	162	0	603	2,987	1973
249	127	24	0	4,356	123	380	413	0	916	3,440	1974
248	68	26	0	3,606	109	422	226	0	757	2,849	1975
786	336	114	0	13,442	463	1,225	892	0	2,580	10,862	4 Years, 1972-1975
311	68	28	0	4,014	101	534	224	0	858	3,156	1976
338	78	30	0	4,385	122	580	260	0	962	3,423	1977
401	77	32	0	4,821	93	703	256	0	1,052	3,769	1978
412	86	34	0	5,051	103	727	291	0	1,120	3,931	1979
478	87	39	26	5,822	111	814	292	5	1,222	4,600	1980
476	91	42	29	6,046	97	831	305	6	1,238	4,808	1981
499	108	44	34	6,445	106	872	366	7	1,352	5,093	1982
511	116	47	40	6,785	139	880	392	8	1,419	5,366	1983
509	127	49	46	6,989	159	829	432	9	1,430	5,559	1984
522	144	52	56	7,624	137	842	489	11	1,480	6,144	1985
4,457	982	397	231	57,982	1,168	7,612	3,307	46	12,133	45,849	10 Years, 1976-1985
5,540	2,447	639	1,087	97,156	1,455	8,562	8,396	213	18,626	78,530	10 Years, 1986-1995
5,690	3,207	728	1,694	112,170	1,676	8,698	10,987	352	21,713	90,457	10 Years 1996-2005
5,717	3,765	760	1,930	121,397	1,793	8,756	12,847	410	23,806	97,591	10 Years, 2006-2015
5,713	4,242	736	1,930	128,835	1,736	8,751	14,415	410	25,312	103,523	10 Years, 2016-2025
5,730	4,290	760	1,930	129,550	1,700	8,770	14,570	410	25,450	104,100	10 Years, 2026-2035

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

d) 1972 Entitlement and Surplus; 1973 and thereafter - Entitlement only.

Table 3 shows the amounts of energy utilized by project pumping plants and the energy generated by the San Luis Pumping-Generating Plant during the 1962 through 1971 period. The table also shows the estimated amounts of energy which will be required by pumping plants and generated by recovery plants for the 1972 through 2035 period. Energy quantities for the 1972 through 1977 period are based on the water delivery schedules submitted by the water contractors about October 1, 1971. Projected quantities beyond 1977 reflect the anticipated buildup in water deliveries as estimated by the water contractors.

Column 16 of Table 3 indicates that the total annual energy requirement will be about 13 billion kilowatt-hours when project water deliveries reach a maximum. Part of the energy requirements can be obtained from project generating plants as shown in Columns 17 through 21. The remaining energy quantities must be obtained from other sources.

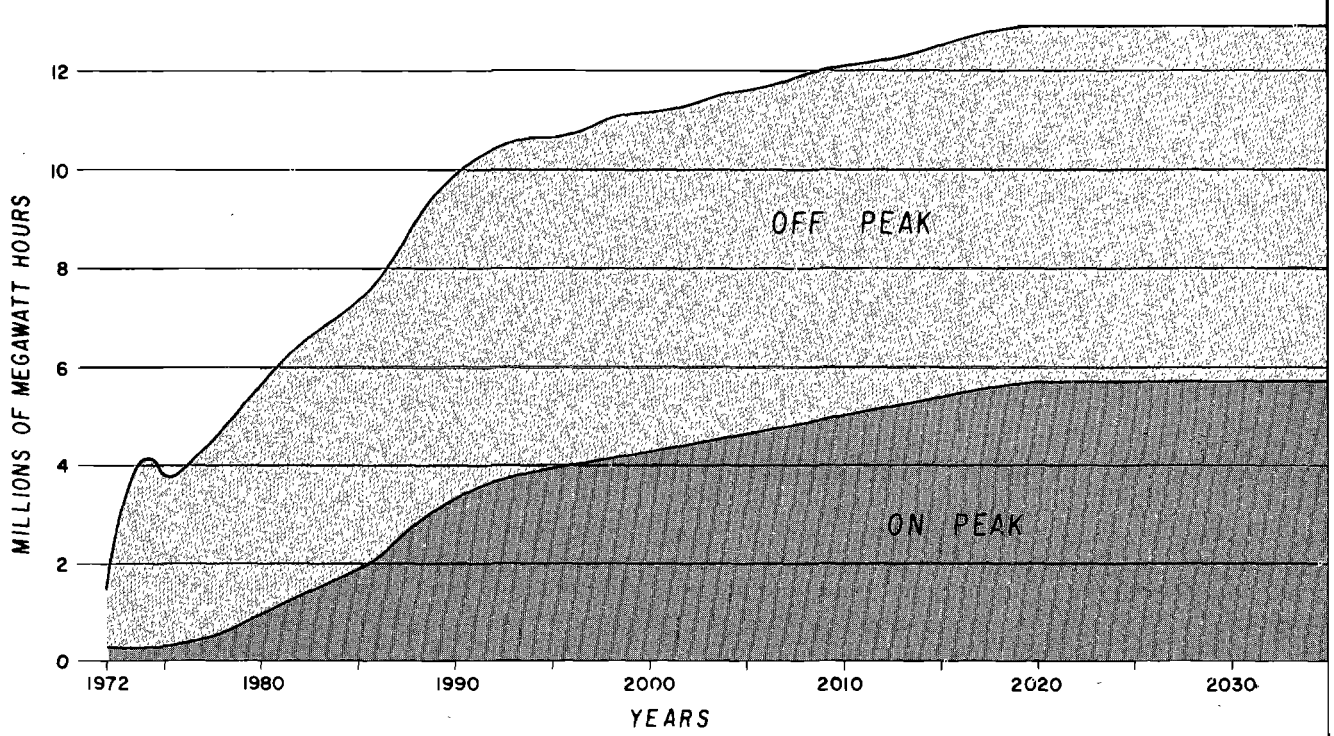
Figure 7 illustrates graphically the annual amounts of onpeak and offpeak energy required by project pumping plants. Onpeak energy is utilized between 7 a.m. and 10 p.m. on weekdays, and from 1 to 10 p.m. on Saturdays, while offpeak energy is used during the remainder of the time. Since purchased onpeak power is considerably more expensive than offpeak power, Project facilities are operated so as to minimize the amount of power required during onpeak periods and to maximize the amount of generation during onpeak periods.

Canadian Entitlement Power is the lowest cost source of purchased onpeak energy and will be available until April 1, 1983. The available amount of Canadian Entitlement Power is sufficient to meet Project onpeak power requirements until 1978. Onpeak and offpeak energy is also available from the California Suppliers at unit rates which will be in effect until April 1, 1983.

As the values in Table 3 indicate, the annual energy requirements of the Project begin to increase rapidly about the time when Canadian Entitlement Power will no longer be available. The Department has started a long-range program to assure that future electrical energy requirements of the Project will be met in the most economical manner. Several potential power sources will be investigated as well as the possibility of cooperative development of generating plants with one or more electric utilities. The Department must anticipate project power requirements several years in advance because of the lead time required for negotiating arrangements with electric utilities, obtaining necessary approvals from governmental agencies, and constructing generating plants.

The Department has continued its participation in the Western Systems Coordinating Council. This activity provides information of the coordinated operation of over 40 electric utility systems in the western part of the United States and Canada. Information is also obtained concerning the utilities' long-range construction programs in order to meet future electrical load growth in their service areas. This information should be useful in negotiating for possible state participation in construction of generating plants.

FIGURE 7: PROJECTED PUMPING ENERGY REQUIREMENTS



CHAPTER IV. PROJECT OPERATIONS

The State Water Project has completed its first decade of operations since Frenchman Lake and the South Bay Aqueduct started service in 1962, and its fourth year of major operations since the California Aqueduct started service in 1968. As compared with 1968 and 1969, which were unusually dry and wet years, respectively, 1971 was a "better than normal" water supply year. Although there were no large peaks of inflow to Lake Oroville such as occurred in 1970, early snowpack and sustained high melt resulted in a maximum 1971 storage 14 percent larger than in the previous year. Operational highlights during 1971 included the following:

General Highlights During 1971

During 1971, four major pumping plants and 160 miles of the California Aqueduct were declared operational (about 128 miles of the main line and 32 miles of the West Branch). More miles of aqueduct were made ready for service during 1971 than in the three previous years combined:

Year declared operational	Miles of California Aqueduct		
	Main line	Branches	Total
1967	172	--	172
1968	45	15	60
1969	32	--	32
1970	30	--	30
1971	128	32	160
Total through 1971	407	47	454

Available for service on December 31, 1971 were all pumping plants and 93 percent of the 490 miles of California Aqueduct included in the 1973 Project facilities (i.e., those facilities required to meet initial water delivery commitments):

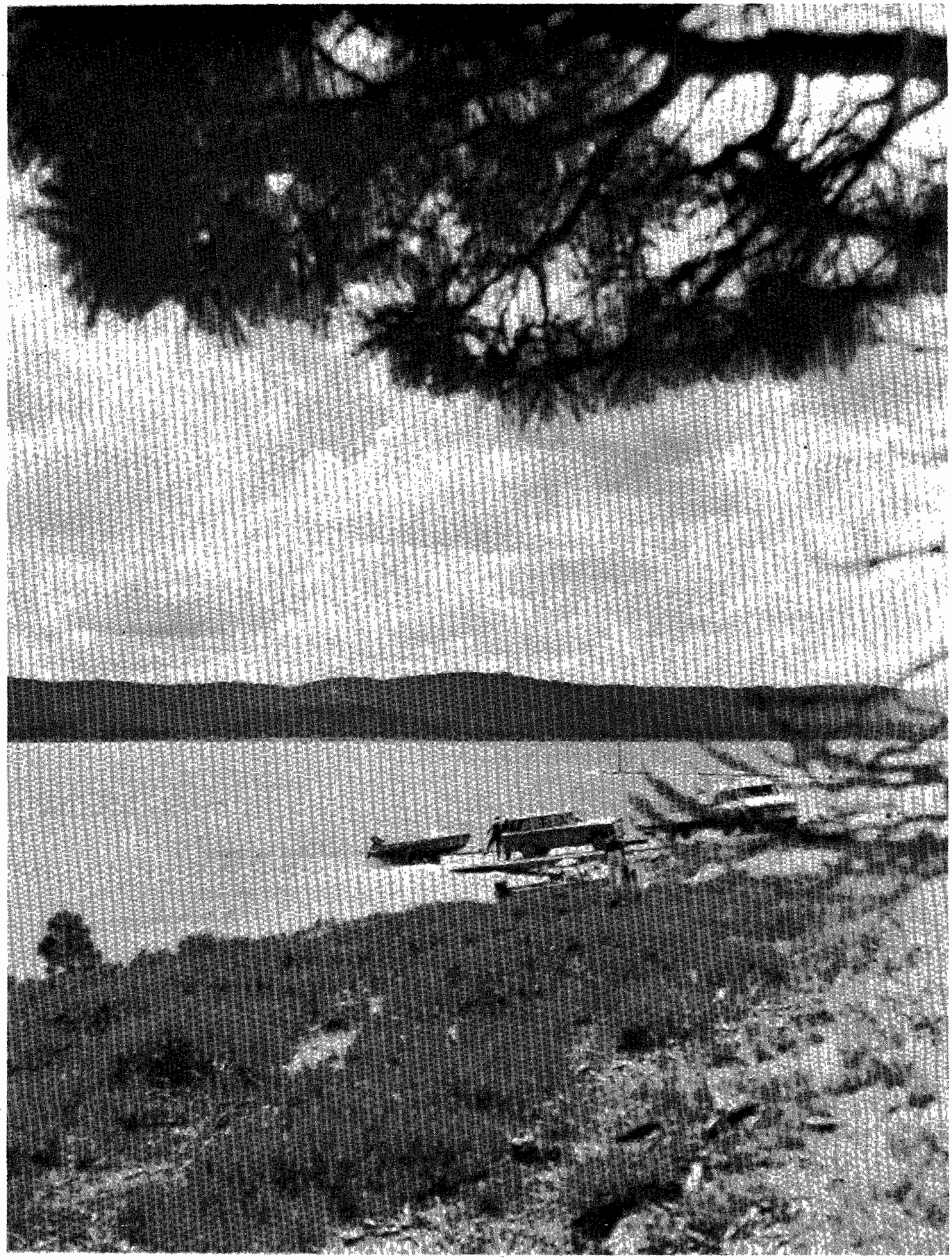
- In August, Wind Gap Pumping Plant became operational, allowing water to flow through the remaining 13 aqueduct miles in the San Joaquin Valley to the A. D. Edmonston Pumping Plant.
- In October, water was first boosted by the A. D. Edmonston Pumping Plant through the Tehachapi Mountains into Southern California. This outstanding highlight of 1971 was the culmination of many years of planning, design, and construction effort.
- In December, Pearblossom Pumping Plant (the last pumping lift required for project water to flow to the southern terminus of the Aqueduct) and Oso Pumping Plant were declared operational.
- The Sacramento Project Operational Control Center attained the "backup" capability to remotely monitor and control the operations of all aqueduct facilities from the Delta to the A. D. Edmonston Pumping Plant.

The quantitative results of the first decade of project operations, through 1971, 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	331,600	--
1965	17,642	26,463	499,800	--
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
1971	103,550	593,928	2,085,900	3,302,000,000
Total through 1971 [c]	352,068	1,593,201	8,246,900	9,223,000,000

[a] An acre-foot of water (325,851 gallons) will cover one acre of land to a depth of one foot.
[b] A recreation day is the visit of one person to a recreation area for any part of one day.
[c] In addition, dams of the State Water Project have prevented millions of dollars worth of flood damage, the most notable to date being an estimated $30,000,000 in probable damage prevented by operation of partially completed Oroville Dam during the storm of December 1964 and January 1965.

Water operations during each month of 1971 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 1971 are summarized in Table 7.



Lake Davis

DWR 4159-2

TABLE 4: UPPER FEATHER LAKES MONTHLY WATER OPERATIONS IN 1971

(in acre-feet unless otherwise indicated)

Month	Reservoir Storage			Outflow							Inflow
				Regulated Releases							
	Water Surface Elevation (in feet)	End-of-Month Storage	Monthly Storage Change	Stream Flow Maintenance (a	Water Supply Contract	Water Right Entitlement	Total	Spill	Estimated Evaporation and Seepage	Total Gross Outflow	Computed or Estimated
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
FRENCHMAN LAKE											
January	5,581.38	45,624	2,506	129	0	0	129	0	96	225	2,731
February	5,583.16	48,158	2,534	118	0	0	118	0	100	218	2,752
March	5,587.43	54,580	6,422	118	0	0	118	0	177	295	6,717
April	5,588.94	56,975	2,395	119	0	0	119	7,545	321	7,985	10,380
May	5,589.24	57,458	483	123	0	0	123	14,000	534	14,657	15,140
June	5,588.03	55,524	-1,934	81	1,212	0	1,293	6,993	769	9,055	7,121
July	5,586.46	53,077	-2,447	0	2,590	0	2,590	0	971	3,561	1,114
August	5,582.77	47,596	-5,481	0	4,608	0	4,608	0	981	5,589	108
September	5,581.51	45,806	-1,790	0	1,305	0	1,305	0	665	1,970	180
October	5,581.26	45,456	-350	0	301	0	301	0	336	637	287
November	5,581.43	45,694	238	77	103	0	180	0	224	404	642
December	5,582.15	46,710	1,016	123	0	0	123	0	155	278	1,294
Total			3,592	888	10,119(b	0	11,007	28,538	5,329	44,874	48,466
ANTELOPE LAKE											
January	5,002.55	23,081	291	615	0	0	615	2,590	66	3,271	3,562
February	5,002.46	22,997	-84	555	0	0	555	3,223	75	3,853	3,769
March	5,003.05	23,555	558	615	0	0	615	5,613	113	6,341	6,899
April	5,003.32	23,814	259	595	0	0	595	13,040	191	13,826	14,085
May	5,003.68	24,160	346	615	0	0	615	24,030	310	24,955	25,301
June	5,002.74	23,261	-899	809	0	0	809	12,426	478	13,713	12,814
July	4,996.00	17,371	-5,890	7,188	0	0	7,188	966	551	8,705	2,815
August	4,983.84	9,257	-8,114	7,908	0	0	7,908	0	310	8,218	104
September	4,964.40	2,125	-7,132	7,079	0	0	7,079	0	131	7,210	78
October	4,956.80	905	-1,220	1,668	0	0	1,668	0	27	1,695	475
November	4,963.85	2,014	1,109	0	0	0	0	0	25	25	1,134
December	4,969.26	3,317	1,303	0	0	0	0	0	26	26	1,329
Total			-19,473	27,647	0	0	27,647	61,888	2,303	91,838	72,365
LAKE DAVIS											
January	5,771.79	71,976	-4,969	7,946	0	0	7,946	0	267	8,213	3,244
February	5,771.83	72,124	148	1,995	0	0	1,995	0	257	2,252	2,400
March	5,773.40	78,061	5,937	881	0	0	881	0	450	1,331	7,268
April	5,774.21	81,223	3,162	9,450	0	0	9,450	0	788	10,238	13,400
May	5,774.97	84,250	3,027	1,345	0	0	11,345	0	1,316	12,661	15,688
June	5,774.81	83,608	-642	3,829	0	257	4,086	0	1,923	6,009	5,367
July	5,774.45	82,172	-1,436	492	18	88	598	0	2,471	3,069	1,633
August	5,773.62	78,913	-3,259	492	30	390	912	0	2,589	3,501	242
September	5,773.06	76,754	-2,159	476	15	123	614	0	1,810	2,424	265
October	5,772.70	75,383	-1,371	492	1	1	494	0	915	1,409	38
November	5,772.77	75,648	265	413	0	0	413	0	606	1,019	1,284
December	5,773.36	77,907	2,259	490	0	0	490	0	420	910	3,169
Total			962	28,301	64	859	39,224	0	13,812	53,036	53,998

a) Required specifically to maintain fish and wildlife habitats.
b) Includes water right entitlement releases delivered to Last Chance Creek Water District under interim contract.

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)	849.83	870.40	881.07	882,29	899.20	898.50
End-of-Month Storage	2,806,070	3,091,485	3,247,332	3,265,504	3,524,950	3,513,927
Monthly Storage Change	10,577	285,415	155,847	18,172	259,446	-11,023
Released						
Palermo Canal	315	275	313	394	982	1,309
EDWARD HYATT POWERPLANT						
Water Released Thru Plant for:						
Generation	449,354	89,756	594,438	627,989	496,675	498,599
Pumpback	0	0	0	0	0	0
Net	449,354	89,756	594,438	627,989	496,675	498,599
THERMALITO DIVERSION DAM POOL						
Reservoir Storage						
Water Surface Elevation (feet)	223.86	221.81	224.74	222.44	222.95	223.09
End-of-Month Storage	12,962	12,316	13,244	12,513	12,673	12,742
Monthly Storage Change	305	-646	928	-731	160	69
FISH BARRIER DAM AND FISH HATCHERY						
Released to River						
Hatchery	5,070	3,765	4,358	3,671	3,907	4,717
Fish Barrier Dam	19,940	19,820	78,270	20,580	20,820	19,710
THERMALITO FOREBAY AND POWER CANAL						
Released From Canal						
Thermalito Irrigation District	0	0	0	0	0	0
County of Butte	0	57	4	57	21	7
Storage						
Water Surface Elevation (feet)	223.83	221.78	221.06	222.50	222.94	222.97
End-of-Month Storage	11,040	9,806	9,385	10,233	10,497	10,515
Monthly Storage Change	627	-1,234	-421	848	264	18
THERMALITO POWERPLANT						
Water Released Thru Plant for:						
Generation	459,372	95,706	623,522	640,675	503,997	504,865
Pumpback	0	0	0	0	0	0
Net	459,372	95,706	623,522	640,675	503,997	504,865
THERMALITO AFTERBAY						
Reservoir Storage						
Water Surface Elevation (feet)	128.44	130.98	133.50	133.51	129.34	135.48
End-of-Month Storage	27,165	35,485	44,763	44,802	29,992	52,724
Monthly Storage Change	-6,634	8,320	9,278	39	-14,810	22,732
Released						
Sutter Butte Canal	0	0	20,110	49,330	80,810	75,850
PG&E Lateral	0	0	0	363	729	639
Richvale Canal	0	0	0	8,235	19,080	13,490
Western Canal	0	0	0	13,390	36,340	31,010
Outlet to River	466,200	83,510	605,800	579,800	382,500	363,500
Total	466,200	83,510	625,910	651,118	519,459	484,489

IONTHLY WATER OPERATIONS IN 1971

›therwise indicated)

Month							Operation
ſuly	August	September	October	November	December	Total	
							LAKE OROVILLE
							Reservoir Storage
888.07	866.43	844.13	844.16	840.33	834.13	--	Water Surface Elevation (feet)
52,592	3,034,873	2,730,383	2,730,778	2,680,728	2,601,020	--	End-of-Month Storage
61,335	-317,719	-304,490	395	-50,050	-79,708	-194,473	Monthly Storage Change
							Released
1,309	1,275	1,186	928	408	286	8,980	Palermo Canal
							EDWARD HYATT POWERPLANT
							Water Released Thru Plant for:
87,979	508,268	449,622	205,466	229,390	289,777	4,827,313	Generation
0	0	0	0	64	19	83	Pumpback
87,979	508,268	449,622	205,466	229,326	289,758	4,827,230	Net
							THERMALITO DIVERSION DAM POOL
							Reservoir Storage
223.53	224.05	222.52	222.73	223.75	223.61	--	Water Surface Elevation (feet)
12,881	13,047	12,563	12,629	12,951	12,907	--	End-of-Month Storage
139	166	-484	66	322	-44	250	Monthly Storage Change
							FISH BARRIER DAM AND FISH HATCHERY
							Released to River
5,046	5,714	6,147	6,133	5,952	6,133	60,613	Hatchery
19,980	19,370	18,140	18,790	18,380	19,310	293,110	Fish Barrier Dam
							THERMALITO FOREBAY AND POWER CANAL
							Released From Canal
0	0	0	0	0	0	0	Thermalito Irrigation District
13	0	9	16	3	5	192	County of Butte
							Storage
223.76	222.94	222.70	222.86	223.79	223.60	--	Water Surface Elevation (feet)
10,997	10,497	10,353	10,449	11,015	10,898	--	End-of-Month Storage
482	-500	-144	96	566	-117	485	Monthly Storage Change
							THERMALITO POWERPLANT
							Water Released Thru Plant for:
27,640	521,162	459,243	208,954	238,257	302,593	4,955,986	Generation
0	0	0	0	0	0	0	Pumpback
27,640	521,162	459,243	208,954	238,257	302,593	4,955,986	Net
							THERMALITO AFTERBAY
							Reservoir Storage
131.52	132.88	130.30	130.52	130.92	130.76	--	Water Surface Elevation (feet)
37,389	42,390	33,155	33,901	35,277	34,723	--	End-of-Month Storage
5,335	5,001	-9,235	746	1,376	-554	924	Monthly Storage Change
							Released
39,300	85,190	47,690	25,120	3,096	0	476,496	Sutter Butte Canal
704	655	130	0	0	0	3,220	PG&E Lateral
5,240	14,230	6,504	0	0	0	76,779	Richvale Canal
33,170	31,280	13,380	16,460	13,690	6,730	195,450	Western Canal
36,600	367,500	396,100	158,800	212,900	287,000	4,160,210	Outlet to River
35,014	498,855	463,804	200,380	229,686	293,730	4,912,155	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.	592	537	576	335	0	0
Storage Change	0	0	0	-7	0	0
Operational Losses	0	0	0	0	0	0
Delivered to Napa County FC&WCD	592	537	576	342	0	0
California Aqueduct						
Pumped at Delta Pumping Plant a/	111,758	42,318	50,790	60,219	44,791	68,250
Aqueduct Storage Change	32	-68	159	37	9	24
Operational Losses	188	288	153	366	542	878
South Bay Aqueduct Diversion	5,228	6,338	7,805	14,919	12,679	11,883
Delivered to Contracting Agencies	0	121	482	1,486	985	1,295
Outflow to San Luis Field Division at Check 12 a/	106,310	35,639	42,191	43,411	30,576	54,170
South Bay Aqueduct						
Pumped at South Bay Pumping Plant	5,228	6,338	7,805	14,919	12,679	11,883
Storage Change	0	0	0	0	0	0
Operational Losses	28	57	41	32	26	48
Delivered to Contracting Agencies	6,340	6,098	7,698	8,030	8,842	10,036
Lake Del Valle						
Water Surface Elevation (in feet)	686.21	686.80	688.02	698.67	703.21	702.74
End of Month Storage	29,156	29,495	30,204	36,923	40,062	39,729
Monthly Storage Change	1,333	339	709	6,719	3,139	-333
Monthly Storage Change (Project Share b/	-727	177	157	6,465	3,232	1,533
Operational Losses (Project Share)	-413	6	-91	392	579	266
SAN LUIS FIELD DIVISION						
California Aqueduct						
Inflow from Delta Field Division at Check 12 a/	106,310	35,639	42,191	43,411	30,576	54,170
Inflow from CVP (Federal O'Neill P.P.)	184	59,434	95,379	70,046	48,798	42,038
Total Inflow State and Federal	106,494	95,073	137,570	113,457	79,374	96,208
O'Neill Forebay						
Water Surface Elevation (in feet)	222.35	219.24	222.50	222.53	221.55	221.85
End-of-Month Storage	49,317	41,197	49,716	49,795	47,204	47,993
Monthly Storage Change	-3,097	-8,120	8,519	79	-2,591	789
Delivered to Federal Contracting Agencies	7	77	643	861	695	788
Operational Losses	-5,040	-2,001	-146	-1,759	1,512	3,113
Released thru O'Neill Pumping Plant	12,603	11,211	0	0	0	0
Pumped at Dos Amigos Pumping Plant	36,575	74,206	107,726	82,675	77,951	138,831
San Luis Reservoir						
Water Surface Elevation (in feet)	534.54	535.76	537.16	539.24	539.44	534.87
End-of-Month Storage	1,921,312	1,936,552	1,954,091	1,980,251	1,977,728	1,925,428
Monthly Storage Change	62,386	15,240	17,539	26,160	-2,523	-52,300
Inflow from San Luis P-G Plant	103,484	19,700	23,860	32,539	1,807	95
Outflow thru San Luis P-G Plant	38,038	0	3,032	938	0	47,408
Operational Losses	3,060	4,460	3,289	5,441	4,330	4,987
Dos Amigos P.P. to Kettleman City						
Delivered to Federal Contracting Agencies	29,794	53,026	66,878	44,113	51,370	84,446
Monthly Storage Change	-385	2,029	-605	-364	741	113
Operational Losses	-29	-2,041	-2,676	-1,426	-2,433	-1,630
Outflow to San Joaquin Field Division at Check 21	7,195	21,192	44,129	40,352	28,273	55,902

a/ Includes water pumped at Delta Pumping Plant for USBR: 69,670 acre-feet in January and 11,825 acre-feet in February

b/ Includes exchange of nonproject local supplies for deliveries from the aqueduct.

/ATER OPERATIONS IN 1971

therwise indicated)

Month							Operation
uly	August	September	October	November	December	Total	
							DELTA FIELD DIVISION
							North Bay Aqueduct
0	0	89	106	92	198	2,525	Pumped at Interim (Cordelia) P.P.
0	0	8	4	-2	1	4	Storage Change
0	0	0	0	0	0	0	Operational Losses
0	0	81	102	94	197	2,521	Delivered to Napa County FC&WCD
							California Aqueduct
1,590	123,348	50,719	52,325	34,309	23,204	763,621	Pumped at Delta Pumping Plant[a]
-15	5	10	-232	-42	153	72	Aqueduct Storage Change
1,282	831	1,428	600	46	81	6,683	Operational Losses
3,441	14,806	7,353	973	5,531	8,297	109,253	South Bay Aqueduct Diversion
2,166	1,566	417	109	23	0	8,650	Delivered to Contracting Agencies
4,716	106,140	41,511	50,875	28,751	14,673	638,963	Outflow to San Luis Field Division at Check 12[a]
							South Bay Aqueduct
3,441	14,806	7,353	973	5,531	8,297	109,253	Pumped at South Bay Pumping Plant
0	0	0	0	0	0	0	Storage Change
147	297	60	10	-31	-106	609	Operational Losses
0,608	11,613	9,664	6,043	6,300	7,312	98,584	Delivered to Contracting Agencies
							Lake Del Valle
02.13	701.43	694.74	683.92	678.47	679.49	--	Water Surface Elevation (in feet)
9,300	38,812	34,335	27,867	25,012	25,524	--	End of Month Storage
-429	-488	-4,477	-6,468	-2,855	512	-2,299	Monthly Storage Change
2,405	2,559	-2,682	-4,895	-495	1,125	8,854	Monthly Storage Change (Project Share[b]
281	337	311	-185	-243	-34	1,206	Operational Losses (Project Share)
							SAN LUIS FIELD DIVISION
							California Aqueduct
4,716	106,140	41,511	50,875	28,751	14,673	638,963	Inflow from Delta Field Division at Check 12[a]
2,191	32,334	34,793	93,680	103,832	113,807	716,516	Inflow from CVP (Federal O'Neill P.P.)
6,907	138,474	76,304	144,555	132,583	128,480	1,355,479	Total Inflow State and Federal
							O'Neill Forebay
18.65	223.06	220.99	223.00	221.29	220.95	--	Water Surface Elevation (in feet)
9,701	51,205	45,732	51,044	46,520	45,628	--	End-of-Month Storage
8,292	11,504	-5,473	5,312	-4,524	-892	-6,786	Monthly Storage Change
1,261	866	248	116	62	62	5,686	Delivered to Federal Contracting Agencies
3,933	3,945	3,081	4,642	1,239	-5,505	7,014	Operational Losses
0	0	0	0	0	0	23,814	Released thru O'Neill Pumping Plant
8,105	193,219	91,793	71,021	50,343	53,724	1,176,169	Pumped at Dos Amigos Pumping Plant
							San Luis Reservoir
27.37	521.04	519.43	524.34	531.04	536.78	--	Water Surface Elevation (in feet)
2,610	1,755,565	1,736,156	1,795,586	1,877,822	1,949,325	--	End-of-Month Storage
2,818	-77,045	-19,409	59,430	82,236	71,503	90,399	Monthly Storage Change
0	0	1,103	78,120	85,463	105,923	452,094	Inflow from San Luis P-G Plant
8,100	71,060	14,448	14,656	0	24,832	302,512	Outflow thru San Luis P-G Plant
4,718	5,985	6,064	4,034	3,227	9,588	59,183	Operational Losses
							Dos Amigos P.P. to Kettleman City
3,713	83,836	29,182	26,787	24,913	29,525	627,583	Delivered to Federal Contracting Agencies
1,156	858	-501	418	-278	835	1,705	Monthly Storage Change
4,095	-5,294	-1,530	-66	626	91	-20,503	Operational Losses
9,643	113,819	64,642	43,882	25,082	23,273	567,384	Outflow to San Joaquin Field Division at Check 21

TABLE 6: AQUEDUCT MONTHLY

(in acre-feet unless

Operation	Month					
	January	February	March	April	May	June
SAN JOAQUIN FIELD DIVISION						
California Aqueduct						
Inflow from San Luis Field Division at Check 21	7,195	21,192	44,129	40,352	28,273	55,902
Storage Change	-209	111	203	-152	519	-284
Operational Losses	1,084	1,463	-1,206	-515	307	962
Delivered to Contracting Agencies	4,016	13,640	33,639	29,669	20,774	43,716
Repayment of Preconsolidation Water	0	58	919	1,607	416	0
Coastal Branch Diversion	2,304	5,920	10,574	9,743	6,257	11,508
Outflow to Southern Field Division at A. D. Edmonston Pumping Plant	--	--	--	--	--	--
Coastal Branch						
Diverted from Main Aqueduct	2,304	5,920	10,574	9,743	6,257	11,508
Storage Change	-1	0	-27	21	5	2
Operational Losses	140	209	479	56	-509	667
Delivered to Contracting Agencies	2,165	5,711	10,122	9,666	6,761	10,839
SOUTHERN FIELD DIVISION						
California Aqueduct - A. D. Edmonston P.P. thru Tehachapi Afterbay						
Pumped at A. D. Edmonston P. P.	--	--	--	--	--	--
Storage Change	--	--	--	--	--	--
Operational Losses	--	--	--	--	--	--
East Branch						
Inflow from Tehachapi Afterbay	--	--	--	--	--	--
Storage Change	--	--	--	--	--	--
Operational Losses	--	--	--	--	--	--
Delivered to Contracting Agencies	--	--	--	--	--	--
West Branch						
Inflow from Tehachapi Afterbay	--	--	--	--	--	--
Storage Change	--	--	--	--	--	--
Operational Losses	--	--	--	--	--	--
Delivered to Contracting Agencies	--	--	--	--	--	--

WATER OPERATIONS IN 1971

otherwise indicated)

Month							
July	August	September	October	November	December	Total	Operation
							SAN JOAQUIN FIELD DIVISION
							California Aqueduct
99,643	113,819	64,642	43,882	25,082	23,273	567,384	Inflow from San Luis Field Division at Check 21
156	2,733	-586	-460	95	134	2,260	Storage Change
-549	-2,583	-826	-922	-767	-1,456	-5,008	Operational Losses
77,290	79,200	51,822	37,029	23,859	20,244	434,898	Delivered to Contracting Agencies
1,154	9,927	796	477	0	0	15,354	Repayment of Preconsolidation Water
21,592	24,542	13,436	5,034	1,895	1,621	114,426	Coastal Branch Diversion
--	--	--	2,724	0	2,730	5,454	Outflow to Southern Field Division at A. D. Edmonston Pumping Plant
							Coastal Branch
21,592	24,542	13,436	5,034	1,895	1,621	114,426	Diverted from Main Aqueduct
1	17	-17	3	-110	120	14	Storage Change
934	1,027	454	-157	13	128	3,441	Operational Losses
20,657	23,498	12,999	5,188	1,992	1,373	110,971	Delivered to Contracting Agencies
							SOUTHERN FIELD DIVISION
							California Aqueduct - A. D. Edmonston P.P. thru Tehachapi Afterbay
--	--	--	2,724	0	2,730	5,454	Pumped at A. D. Edmonston P. P.
--	--	--	330	-1	-3	326	Storage Change
--	--	--	6	1	2	9	Operational Losses
							East Branch
--	--	--	2,175	0	165	2,340	Inflow from Tehachapi Afterbay
--	--	--	1,454	-210	-23	1,221	Storage Change
--	--	--	721	210	188	1,119	Operational Losses
--	--	--	0	0	0	0	Delivered to Contracting Agencies
							West Branch
--	--	--	213	0	2,566	2,779	Inflow from Tehachapi Afterbay
--	--	--	194	-6	2,446	2,634	Storage Change
--	--	--	19	6	120	145	Operational Losses
--	--	--	0	0	0	0	Delivered to Contracting Agencies

TABLE 7: MONTHLY POWER

(in millions of

Operations	Month					
	January	February	March	April	May	June
ENERGY GENERATED BY EDWARD HYATT & THERMALITO POWERPLANTS (a						
Gross Generation	296.91	59.44	406.52	431.45	342.62	347.78
Powerplant Use and Pumpback Requirements	0.35	0.77	0.30	0.14	0.28	0.28
Delivered to California Power Pool Companies	296.56	58.67	406.22	431.31	342.34	347.50
ENERGY USED BY PROJECT PUMPING PLANTS						
Interim (Cordelia)	0.29	0.28	0.27	0.17	-	-
South Bay	4.28	5.16	6.12	12.20	10.12	9.67
Del Valle	0.03	0.02	0.03	0.53	0.30	0.01
Delta	13.19	9.61	15.66	18.51	13.95	21.01
San Luis (State Share)	20.01	3.38	8.08	4.22	1.21	0.26
Dos Amigos (State Share)	1.07	3.12	5.93	5.67	4.29	7.81
Las Perillas	0.19	0.44	0.76	0.74	0.50	0.85
Badger Hill	0.45	1.13	2.07	1.95	1.30	2.28
Buena Vista	0.80	2.57	4.26	2.85	2.19	3.75
Wheeler Ridge	0.05	0.06	0.16	0.14	0.23	0.23
Wind Gap	-	-	-	-	-	-
A.D. Edmonston	-	-	-	-	-	-
Oso (West Branch)	-	-	-	-	-	-
Pearblossom	-	-	-	-	-	-
Transmission Losses	0.33	0.87	1.25	1.11	1.20	1.20
Total	40.69	26.64	44.59	48.09	35.29	47.07
SOURCES OF ENERGY FOR PROJECT PUMPING PLANTS						
San Luis Pumping-Generating Plant (State's Share)	10.23	-	0.61	0.24	-	0.78
Canadian Entitlement Power	5.78	13.88	15.34	14.87	15.39	14.89
Bonneville Power Administration	-	4.58	10.14	8.91	10.33	10.01
California "Suppliers"	25.54	7.32	18.53	24.23	9.74	21.04
Canadian Entitlement Power-San Luis Energy Banked (b	(0.86)	-	(0.03)	(0.16)	(0.17)	-
Canadian Entitlement Power-San Luis Energy Withdrawn (b	-	0.86	-	-	-	0.35
Total	40.69	26.64	44.59	48.09	35.29	47.07

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

OPERATIONS IN 1971

kilowatt-hours)

Month							
July	August	September	October	November	December	Total	Operations
							ENERGY GENERATED BY EDWARD HYATT & THERMALITO POWERPLANTS (a
268.60	346.76	298.38	133.70	149.39	186.54	3,268.09	Gross Generation
0.30	0.14	0.18	0.50	0.53	0.58	4.35	Powerplant Use and Pumpback Requirements
268.30	346.62	298.20	133.20	148.86	185.96	3,263.74	Delivered to California Power Pool Companies
							ENERGY USED BY PROJECT PUMPING PLANTS
-	-	0.05	0.06	0.05	0.10	1.27	Interim (Cordelia)
11.07	12.32	5.99	0.86	4.72	6.82	89.33	South Bay
0.01	0.01	0.01	0.01	0.01	0.02	0.99	Del Valle
30.56	36.98	15.51	16.26	10.79	7.29	209.32	Delta
0.10	0.15	0.66	4.24	0.40	14.50	57.21	San Luis (State Share)
13.48	15.75	9.07	6.22	4.04	3.20	79.65	Dos Amigos (State Share)
1.58	1.78	0.99	0.40	0.17	0.15	8.55	Las Perillas
4.28	4.91	2.64	0.10	0.38	0.32	21.81	Badger Hill
4.47	4.13	1.00	1.26	0.61	1.65	29.54	Buena Vista
0.32	0.78	0.40	0.93	0.23	1.00	4.53	Wheeler Ridge
0.02	1.13	0.30	1.66	0.04	1.87	5.02	Wind Gap
-	-	-	5.83	-	5.73	11.56	A.D. Edmonston
-	-	-	-	0.03	0.78	0.81	Oso (West Branch)
-	-	-	-	-	0.04	0.04	Pearblossom
1.27	1.05	0.74	1.60	0.70	0.72	12.04	Transmission Losses
67.16	78.99	37.36	39.43	22.17	44.19	531.67	Total
							SOURCES OF ENERGY FOR PROJECT PUMPING PLANTS
1.53	5.74	3.67	3.84	-	6.94	33.58	San Luis Pumping-Generating Plant (State's Share)
15.39	15.39	14.89	15.41	14.89	15.39	171.51	Canadian Entitlement Power
10.30	7.09	0.20	-	-	-	61.56	Bonneville Power Administration
39.94	50.77	18.69	20.09	7.32	22.08	265.29	California "Suppliers"
-	-	(0.09)	-	(0.04)	(0.22)	(1.57)	Canadian Entitlement Power-San Luis Energy Banked (b
-	-	-	0.09	-	-	1.30	Canadian Entitlement Power-San Luis Energy Withdrawn (b
67.16	78.99	37.36	39.43	22.17	44.19	531.67	Total

b) 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.

Shown below is a summary of mineral analyses from monthly water samples collected during 1971 at various points along the Project. Also shown are the corresponding monthly average objectives for maximum concentrations of constituents in water deliveries from the Project, as set forth in long-term water supply contracts. (Note that the mineral analyses are based on one analysis each month, while the "objectives" are in terms of average conditions within a month.)

Water Operations Highlights

- All requests for water from the Project were satisfied: 697,478 acre-feet were delivered (an increase of about 72 percent over the 405,097 acre-feet delivered in 1970) to 18 local public agencies in Plumas, Butte, Napa, Santa Clara, Alameda, Stanislaus, Merced, Kings, and Kern Counties (see Table 2 for detailed monthly amounts for each agency).
- Under coordinated operations, the Department and the Bureau of Reclamation made sufficient releases from upstream storage reservoirs during the critical summer months of June, July, and August to maintain high quality of water in channels of the Sacramento-San Joaquin Delta.
- On June 2, water storage in Lake Oroville was filled to the maximum design capacity of 3,537,577 acre-feet for the first time. Other maximum water storage obtained during the year included: Lake Del Valle, 40,183 acre-feet on May 15, and San Luis Reservoir,
1,981,890 acre-feet on May 6.

Recreation and Fish and Wildlife Highlights

- Recreation developments associated with project facilities received 2,085,900 visitor days of use—an increase of about 16 percent over the 1,804,800 visitor days received during 1970.
- One additional fishing access site was opened along the California Aqueduct—Three Rocks, in Fresno County.
- Antelope Lake, in the Upper Feather Area, was drained to kill undesirable "rough" fish.

Selective Station	Monthly samples	Concentrations (in parts per million unless otherwise noted)					
		Total dissolved solids	Total hardness	Chlorides	Sulfates	Sodium (%)	Boron
Thermalito Afterbay (Outlet to Feather River)	Minimum	40	30	0.0	0.0	13	0.0
	Average	56	34	0.8	1.7	16	0.0
	Maximum	74	36	1.5	3.8	18	0.1
Sacramento-San Joaquin Delta (Delta Pumping Plant)	Minimum	106	55	15	13	32	0.0
	Average	185	82	38	32	42	0.2
	Maximum	324	129	80	74	51	0.3
South Bay Aqueduct (Santa Clara Terminal Facilities)	Minimum	110	57	15	15	23	0.0
	Average	201	96	40	37	40	0.2
	Maximum	333	162	80	74	51	0.5
California Aqueduct (Entrance to O'Neill Forebay)	Minimum	106	55	12	13	32	0.0
	Average	190	84	39	34	42	0.2
	Maximum	372	137	83	81	52	0.3
(Outlet from O'Neill Forebay)	Minimum	160	71	22	22	40	0.0
	Average	235	100	55	41	46	0.2
	Maximum	346	137	86	71	51	0.3
(Near Kettleman City)	Minimum	146	70	29	21	37	0.1
	Average	221	96	51	39	45	0.2
	Maximum	343	129	81	74	51	0.3
(Coastal Branch near Devil's Den)	Minimum	156	78	31	22	39	0.1
	Average	236	104	55	42	46	0.2
	Maximum	340	139	84	69	52	0.3
(Near Buena Vista Pumping Plant)	Minimum	151	80	32	22	39	0.1
	Average	232	106	53	41	45	0.2
	Maximum	369	163	84	78	53	0.3
Monthly average quality objectives	----	440	180	110	110	50	0.6

FIGURE 8, OPERATIONS AND MAINTENANCE FIELD DIVISIONS, CENTERS, AND SUBCENTERS

- Nearly 3,700 salmon returned from the Pacific Ocean to the Feather River Fish Hatchery and were spawned—well above the 1970 figure—including 480 spring run salmon, more than twice the number for 1970.

Power Operations Highlights

- Project powerplants, Edward Hyatt, Thermalito, and San Luis (State share), generated 3,301,670,000 kilowatt-hours of electric energy.
- Project pumping plants used 531,670,000 kilowatt-hours of electric energy—Bonneville surplus and Canadian Entitlement Power supplied 233,070,000 kilowatt-hours; California Suppliers, 265,020,000 kilowatt-hours; and project generation, 33,580,000 kilowatt-hours.

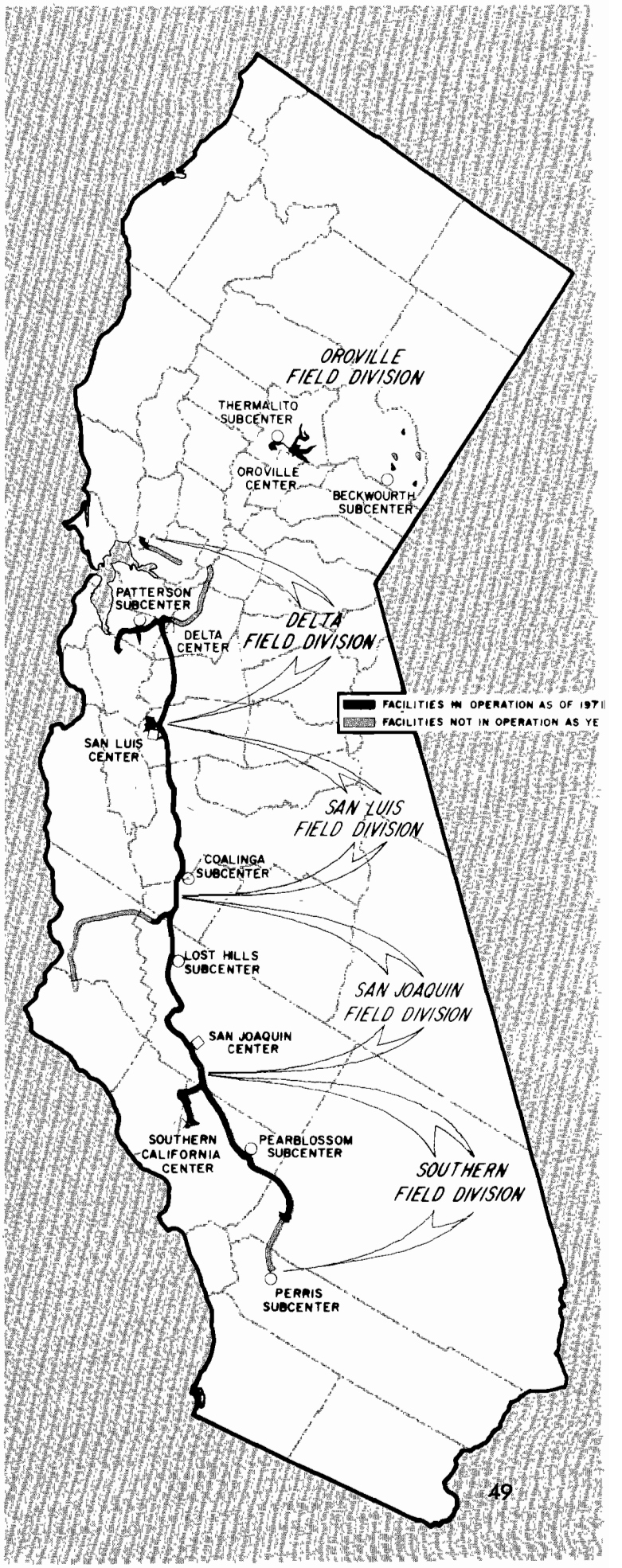
A task force consisting of water supply contractor representatives meet with the Department's staff on a regular basis for the purposes of becoming familiar with the Project's operations and maintenance activities and of sharing the benefits of experience gained in operating their respective water systems. (See page 30, Bulletin 132-70 concerning the formation of the Operations and Maintenance Task Force by the State Water Service Contractors Audit Committee.) During 1971, this task force, including representatives of the Metropolitan Water District of Southern California, met five times: on January 20, March 17, May 19, September 15, and November 17.

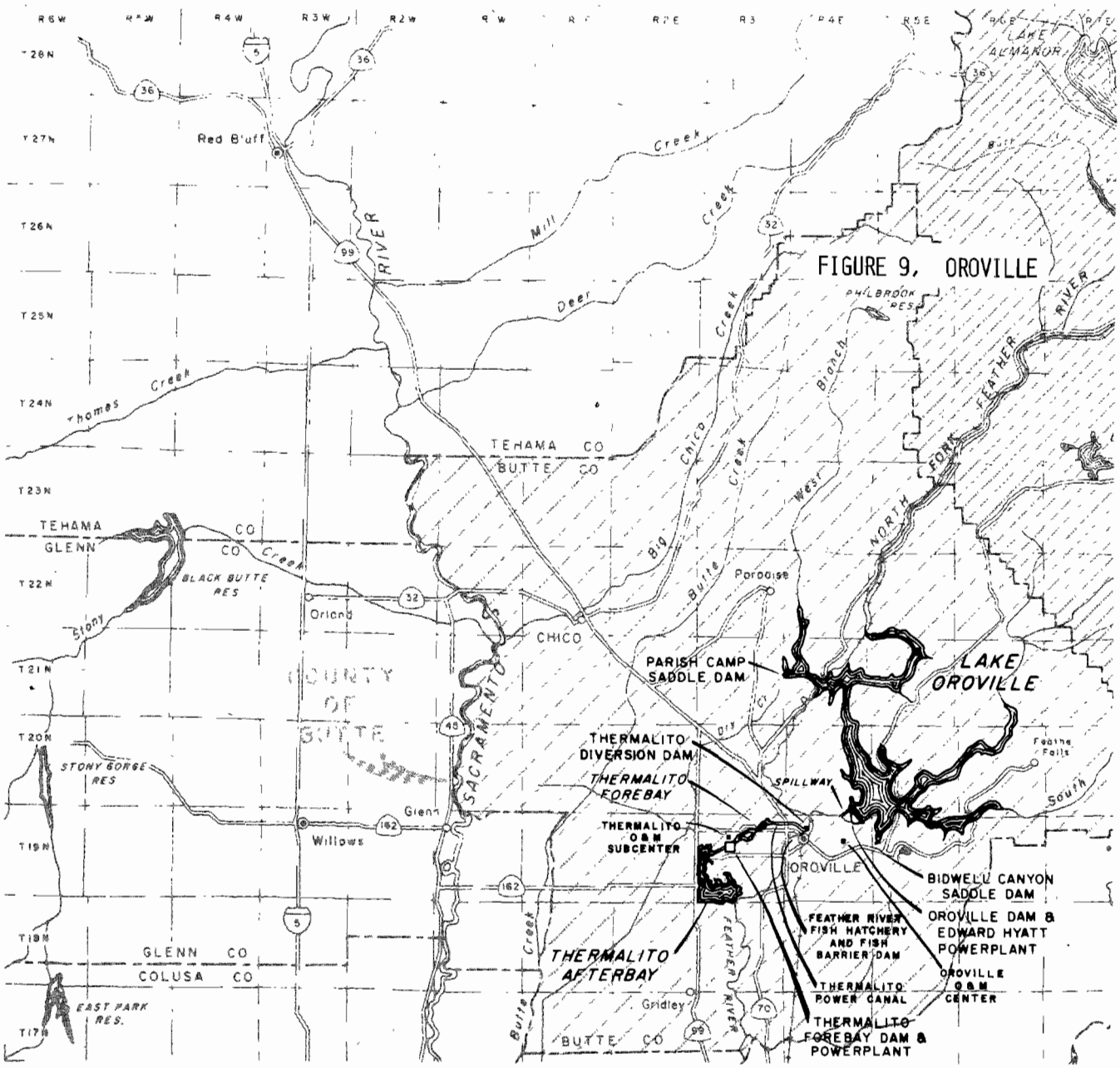
Operations and Maintenance Field Divisions

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 8 shows the area extent of each field division. The following sections describe 1971 operations of features included in each field division.





Oroville Field Division

The location of facilities within the Oroville Field Division is shown on Figure 9.

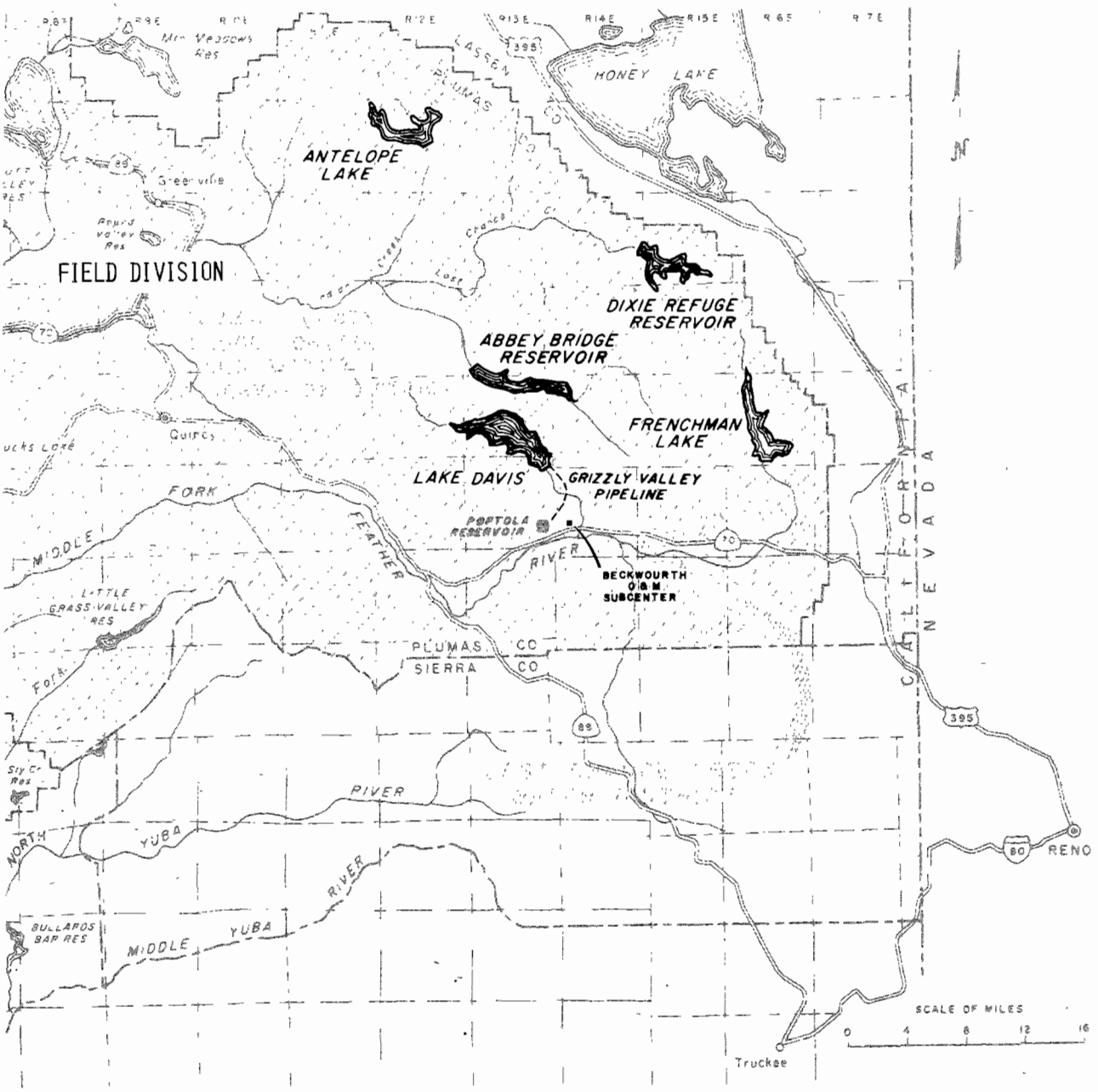
Frenchman Lake, with a gross storage capacity of 55,477 acre-feet, is operated to supply irrigation water to the Last Chance Creek Water District and to enhance recreational opportunities in the vicinity of the Lake and along the downstream channel of Little Last Chance Creek.

Antelope Lake, with gross storage capacity of 22,566 acre-feet, is operated to enhance recreational opportunities in both 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.

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 of 678,750 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 opportunites 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 about 13,300 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 of 119,600 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 and Power Operations

During 1971, deliveries from project facilities included 10,119 acre-feet from Frenchman Lake to Last Chance Creek Water District; 64 acre-feet from Lake Davis to Plumas County Flood Control and Water Conservation District through the Grizzly Valley Pipeline; and 192 acre-feet to County of Butte from the Thermalito Facilities. Deliveries to Last Chance Creek Water District were under an annual contract providing for service of a combination of new yield developed by the Lake and of water to which the District is entitled to under prior rights. Project service to Plumas and Butte was under terms of respective long-term water supply contracts.

Lake Oroville storage reached its maximum capacity for the first time on June 2. Relatively cold air temperatures during the spring resulted in a prolonged period of snowmelt and of near maximum storage in the Lake. Minimum storage during the year was 2,587,306 acre-feet on December 23. The maximum rate of inflow was 64,200 cubic feet per second on March 26. Water flowed over Oroville Spillway for the third consecutive year; the maximum rate of release was only 9,000 cubic feet per second and total spill was 81,820 acre-feet.

Releases under prior rights to Sutter Butte Canal, PG&E Lateral, Western Canal, Richvale Canal, and Palermo Canal totaled about 751,875 acre-feet. (The peak irrigation release reached 2,975 cubic feet per second on May 2.) Releases to the Feather River from Thermalito Diversion Dam totaled 293,110 acre-feet; from Feather River Fish Hatchery, 60,613 acre-feet; and from Thermalito Afterbay, 4,160,210 acre-feet, for a total of 4,513,933 acre-feet. (The maximum rate of river release was 25,279 cubic feet per second on March 26.) Combined irrigation and river releases from the Oroville-Thermalito Facilities totaled 5,265,808 acre-feet.

Water temperatures of releases met requirements of the Feather River Fish Hatchery and downstream irrigation but were lower than normal during the spring months, in spite of the fact that the maximum possible number of shutters were placed in the Oroville Intake Structure to skim off the warmest water. Although the spring temperatures were cool, the surface water warmed to a record high of 81° F. by August 12. The corresponding maximum rate of evaporation from Lake Oroville was estimated to be 500 acre-feet per day.

The remote manual control system for the Oroville Spillway and Thermalito Diversion Dam was successfully used for the first time during 1971.

Gross generation by the Edward Hyatt and Thermalito Powerplants was 2,881,660,000 kilowatt-hours and 386,430,000 kilowatt-hours, respectively. Peak complex load was 943 megawatts on January 21. Pump-back operations were minimum and were for test purposes only.

Recreation and Fish and Wildlife Operations

The past year marked the completion of the first decade of recreation and fish and wildlife operations in the Oroville Field Division. As indicated on the following page, recreation use through 1971 totalled 7,031,000 recreation days—with Frenchman Lake the only facility in operation all of that period. A total of 1,512,500 recreation days was recorded during 1971—with Lake Davis receiving slightly more recreation use than the Oroville-Thermalito Facilities.

Calendar Year	(In recreation days)				
	Frenchman Lake	Antelope Lake	Lake Davis	Oroville-Thermalito	Total
1962	30,000	---	---	---	30,000
1963	105,000	---	---	---	105,000
1964	320,000	11,600	---	---	331,600
1965	474,000	25,800	---	---	499,800
1966	360,000	105,000	---	---	465,000
1967	306,900	95,100	---	---	402,000
1968	312,000	54,300	210,000	288,000	864,300
1969	394,500	99,300	439,300	516,400	1,449,500
1970	396,800	76,400	419,700	483,400	1,376,300
1971	344,400	71,400	549,800	546,900	1,512,500
Total thru 1971	3,043,600	538,900	1,618,800	1,834,700	7,036,000

At Lake Oroville, concessions by the Southern California Financial Corporation, under contract with the Department of Parks and Recreation, will be opened to the public during the early spring of 1972 (primarily at Bidwell Canyon). The development will feature:

- A kiosk (pay station).
- Six boat-launching lanes, with parking for more than 250 cars.
- A marina, with 200 parking spaces and 100 boat slips.
- Seven boat storage buildings.
- Two fish cleaning facilities.
- Eighty-two trailer hookups.
- Camper store and snack bar.
- Three restroom buildings.

During 1971, the Department of Fish and Game planted 79,400 subcatchable and 100,800 fingerling Rainbow trout in Frenchman Lake; 134,000 subcatchable and 980,100 fingerling Rainbow trout in Lake Davis; and 5,000 catchable Rainbow trout in Antelope Lake. Oroville Lake was planted with 20,500 catchable Brown trout: 24,200 catchable Eagle Lake trout; and 16,500 catchable Silver salmon.

In October, the Department of Fish and Game, with cooperation of the Department, United States Forest Service, and local sportsmen groups, treated Antelope Lake to eliminate undesirable fish. The majority of the fish eliminated (90 percent) were catfish and golden shiners which were introduced into the Lake by unknown parties and had grown over the years to such large numbers that they were competing for the food supporting the trout population. A similar treatment of the Lake will probably be necessary about once every 10 years.

Between July 6 and October 14, the Department gradually drew the water stored in the Antelope Lake down from about 22,566 acre-feet to 400 acre-feet. (The drawdown had little effect on the annual recreation use since it occurred after the peak of the recreation season.) On October 14 and 15, crews from the Department of Fish and Game introduced a fish toxin (harmless to animals) into the Lake. A helicopter was used to treat the meadows and the pools in the drainage adjacent to the Lake to eliminate fish populations holeing up in these areas.

Downstream from the Lake, potassium permanganate was introduced into the stream channel at the dam outlet structure to neutralize much of the effects of the fish toxin. In addition, major pools in the downstream channel were electroshocked to permit removal of live trout to nearby lakes. Considerable numbers of large Rainbow and Brown trout were moved, indicating that the 10 cubic-feet-per-second release for fisheries enhancement from the Lake is supporting large numbers of trout or that many trout from the Lake moved into the outlet stream during drawdown.

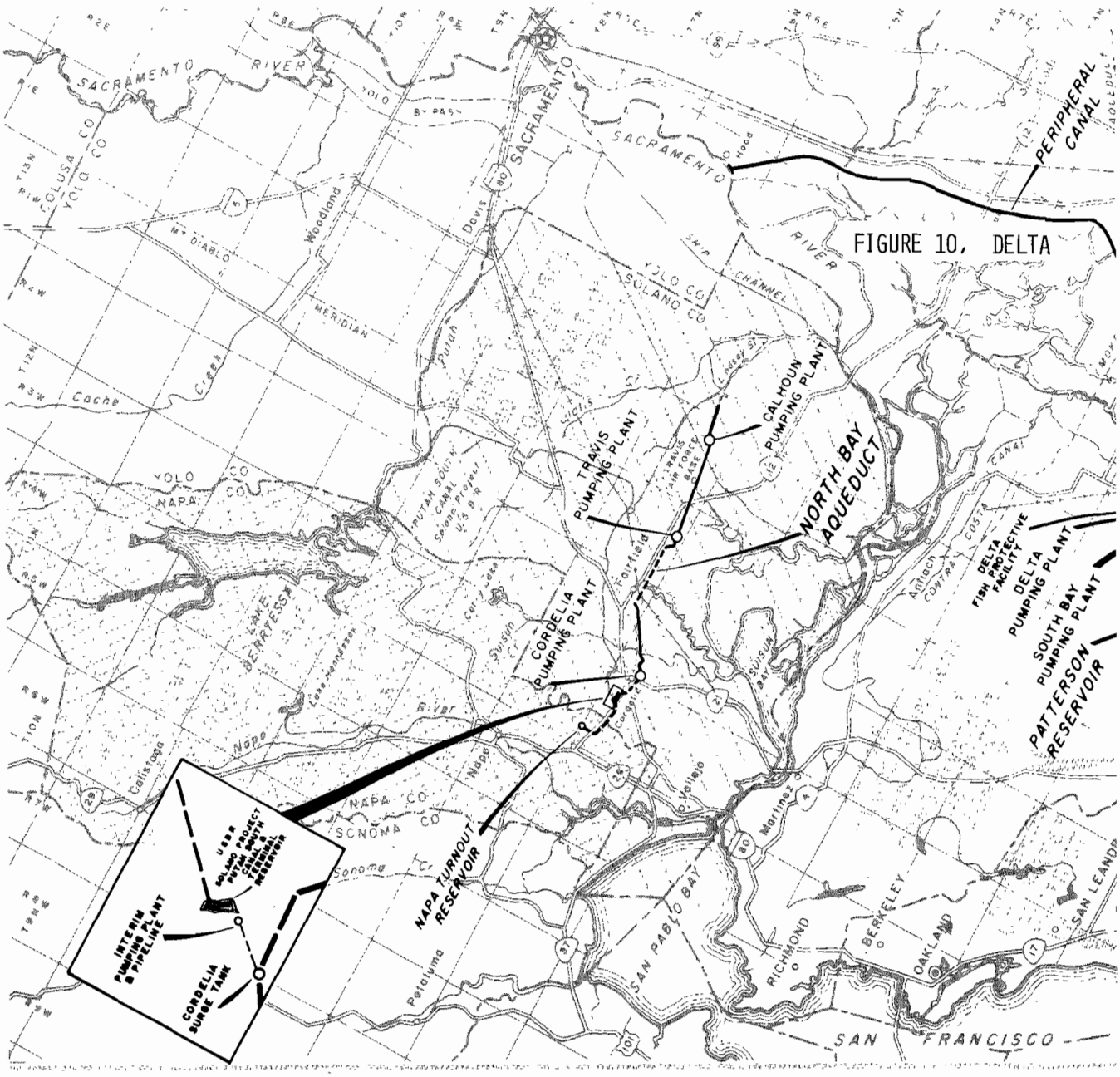
The Feather River Fish Hatchery is one of the most advanced hatchery and spawning facilities in the world. Young fish are reared with a minimum of handling, thereby reducing operating costs and increasing survival rates. The Hatchery, built to care for fish that were cut off from their spawning and nursery areas by Oroville Dam, contributes more yearling King salmon to the Pacific Ocean catch than any other hatchery in California.

The sports take of salmon for 1971 was one of the best on record—at least as good as and probably better than the 184,000 salmon taken in 1970—the third best year in history. The total ocean catch off California, including 5.5 million pounds of King salmon and 1.5 million pounds of Silver salmon, is close to the 20-year average for the fishery in spite of declining salmon-steelhead populations and habitat.

About 9.3 million slamon eggs and 3.3 million steelhead eggs were taken by the Hatchery in 1971. In terms of spring run salmon eggs taken, the 1971 yield was twice that for 1970, and the mortality of spring-run females was cut from about 50 percent to less than one-half of one percent. Total production during 1971 was, for salmon, 8,947,000 small fingerlings (90 per pound) and 824 yearlings for a total weight of 191,000 pounds and, for steelhead, 1,026,000 fingerlings and yearlings for a total weight of 40,300 pounds.

After two seasons of operations whereby relatively warm well water is mixed with river water to produce a constant supply of 58° F. water in the rearing ponds, the Department and the Department of Fish and Game are convinced that the problem of the cold water virus has been solved. The salmon fry are kept in the 58° F. water for 27 days—until they reach weights of about 20 to the ounce and are less susceptible to the virus.

The problem of Ceratomyxa, an internal protozoan parasite affecting steelhead, also appears to be solved. At the Department of Fish and Game's request, the Department constructed highly intricate banks of ultraviolet-light tubes through which water to the steelhead rearing ponds is channeled. The treated water has effectively killed the protozoan and has saved fish worth many times over the $150,000 expenditure for the installation.



Delta Field Division

The location of facilities within the Delta Field Division is shown on Figure 10.

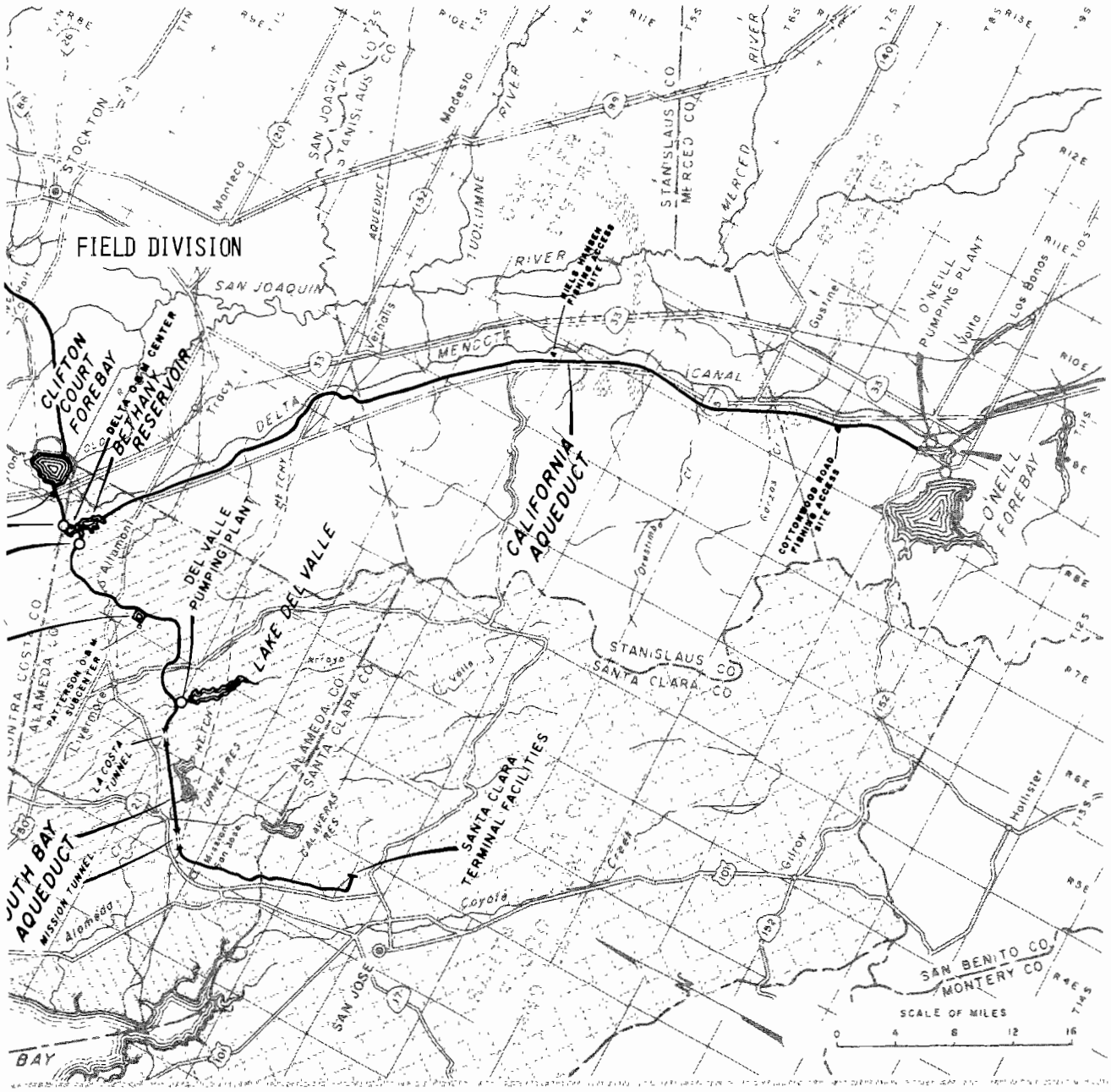
The North Bay Aqueduct, Phase I, delivers water from the federal Solano Project terminal reservoir, near Cordelia, to Napa County for municipal and industrial use. Phase II, scheduled to be operational by 1980, will convey water from the Delta for municipal and industrial use in Solano and Napa Counties.

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 and Power Operations

During 1971, 2,521 acre-feet of federal Solano Project water was delivered from Phase I of the North Bay Aqueduct to Napa County Flood Control and Water Conservation District.



The California Aqueduct, from the Delta to O'Neill Forebay, supplied 109,253 acre-feet to the South Bay Aqueduct; 7,212 acre-feet to Oak Flat Water District; 1,438 acre-feet to Mustang Water District (under the second, one-year surplus water contract); and 638,960 acre-feet to O'Neill Forebay.

Water deliveries from the South Bay Aqueduct and Lake Del Valle included 10,012 acre-feet to Alameda County Flood Control and Water Conservation District (Zone 7); 17,091 acre-feet to Alameda County Water District; and 87,606 acre-feet to Santa Clara County Flood Control and Water District.

Water storage in Lake Del Valle on January 1, 1971, was 27,823 acre-feet. Local inflow, supplemented by water pumped from the South Bay Aqueduct, raised the storage level to a maximum of 40,183 acre-feet on May 15 for summer recreation. During the fall, water deliveries from the Lake reduced the storage to a minimum of 25,012 acre-feet on December 1. Local inflow raised the storage level to 25,524 acre-feet by December 31.

Data from the monitoring programs conducted by the Bureau of Reclamation and the Department indicated that the quality of water in the Sacramento-San Joaquin Delta was better than that required under the "November 19, 1965 Criteria".

During 1971, a total of 300,910,000 kilowatt-hours of electric energy were used for pumping water in the Delta Field Division; 209,320,000 kilowatt-hours at the Delta Pumping Plant; 89,330,000 kilowatt-hours at the

South Bay Pumping Plant; 990,000 kilowatt-hours at the Del Valle Pumping Plant; and 1,270,000 kilowatt-hours at the Cordelia (interim) Pumping Plant.

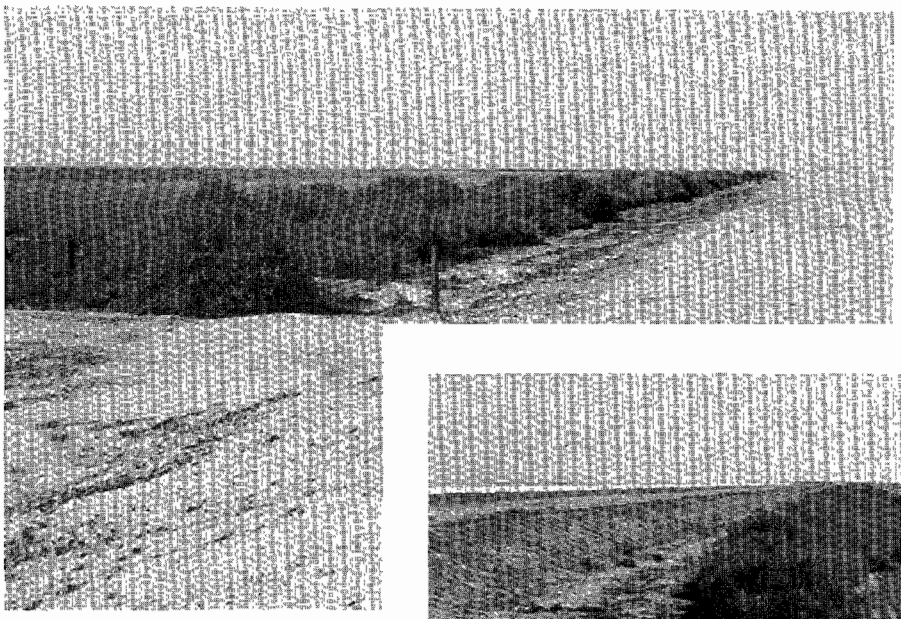
Recreation and Fish and Wildlife Operations

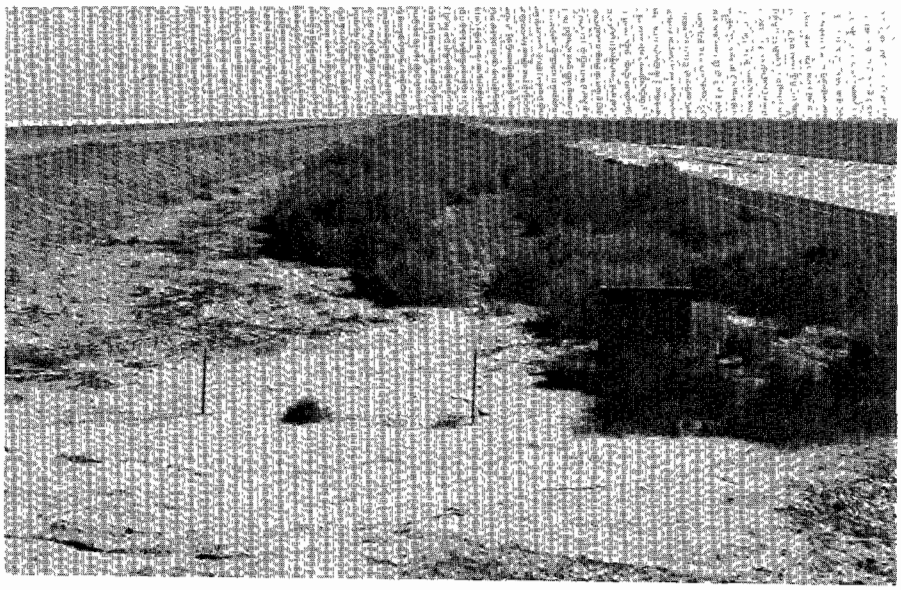
During 1971, a total of 218,800 recreation days of use were received by developments in the Delta Field Division; 211,000 recreation days at Lake Del Valle; 2,700 recreation days at Clifton Court Forebay; 2,500 recreation days at Cottonwood Road Fishing Access Site; and 2,600 recreation days at Niels Hansen Road Fishing Access Site.

During 1971, the Department of Fish and Game planted approximately 200,000 fingerling and 90,000 catchable size Rainbow trout in Lake Del Valle. In addition, plantings of warm water game species were made. The Delta Fish Protective Facility captured about 19,300,000 fish from the Delta Pumping Plant intake channel. These fish were transported and released at various sites in the Delta. The evaluation program at the Facility (see page 46, Bulletin 132-71) was completed in October 1971 and the results will be presented in a report which was in draft form as of December 31, 1971. The investigation was conducted by a team of Department of Fish and Game biologists with engineering support from the Department of Water Resources.

Lake Del Valle

DWR 4156-16





Planted Wildlife Habitat Areas Along the Aqueduct

DWR 3868-8 DWR 3868-7

San Luis Field Division

The location of facilities within the San Luis Field Division is shown in Figure 11.

O'Neill Forebay and the Aqueduct between the Forebay and Dos Amigos Pumping Plant regulate flows (1) pumped from the federal Delta-Mendota Canal through the federal O'Neill Pumping Plant, (2) delivered from the Delta Field Division through the California Aqueduct, and (3) released from San Luis Reservoir through the San Luis Pumping-Generating Plant. Flows so regulated are (1) 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 (2) released to the Delta-Mendota Canal.

San Luis Reservoir, with a gross storage capacity of 2,038,008 acre-feet, regulates aqueduct flow from year to year and from month-to-month within a particular year. During the winter and spring, when the water supply from the north is greater than water demands to the south, the excess water is pumped into San Luis Reservoir. In the summer and fall, when water demands to the south exceed the water supply from the north, 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 use. 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 damage by flood flows.

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

Water and Power Operations

During 1971, the San Luis Field Division continued to be operated by the Department under an extended interim agreement with the Bureau of Reclamation.

(On January 12, 1972, there was executed the "Supplemental Agreement Between the United States of America and the State of California for the Operation of the San Luis Unit". This agreement supplements the agreement of December 30, 1961, concerning the construction and operation of the San Luis joint-use facilities, and covers the day-to-day operations in greater detail. The draft of the supplement was completed June 10, 1969. The San Luis Division has been operated under interim letter agreements since 1968 under the same terms of the June 10, 1969 draft.)

Inflow to the O'Neill Forebay, including the Aqueduct between the Forebay and Dos Amigos Pumping Plant, totaled 1,657,991 acre-feet during 1971: 638,963 acre-feet from the California Aqueduct; 716,516 acre-feet through O'Neill Pumping Plant from the Delta-Mendota Canal; and 302,512 acre-feet through releases from the San Luis Reservoir storage. During 1971,

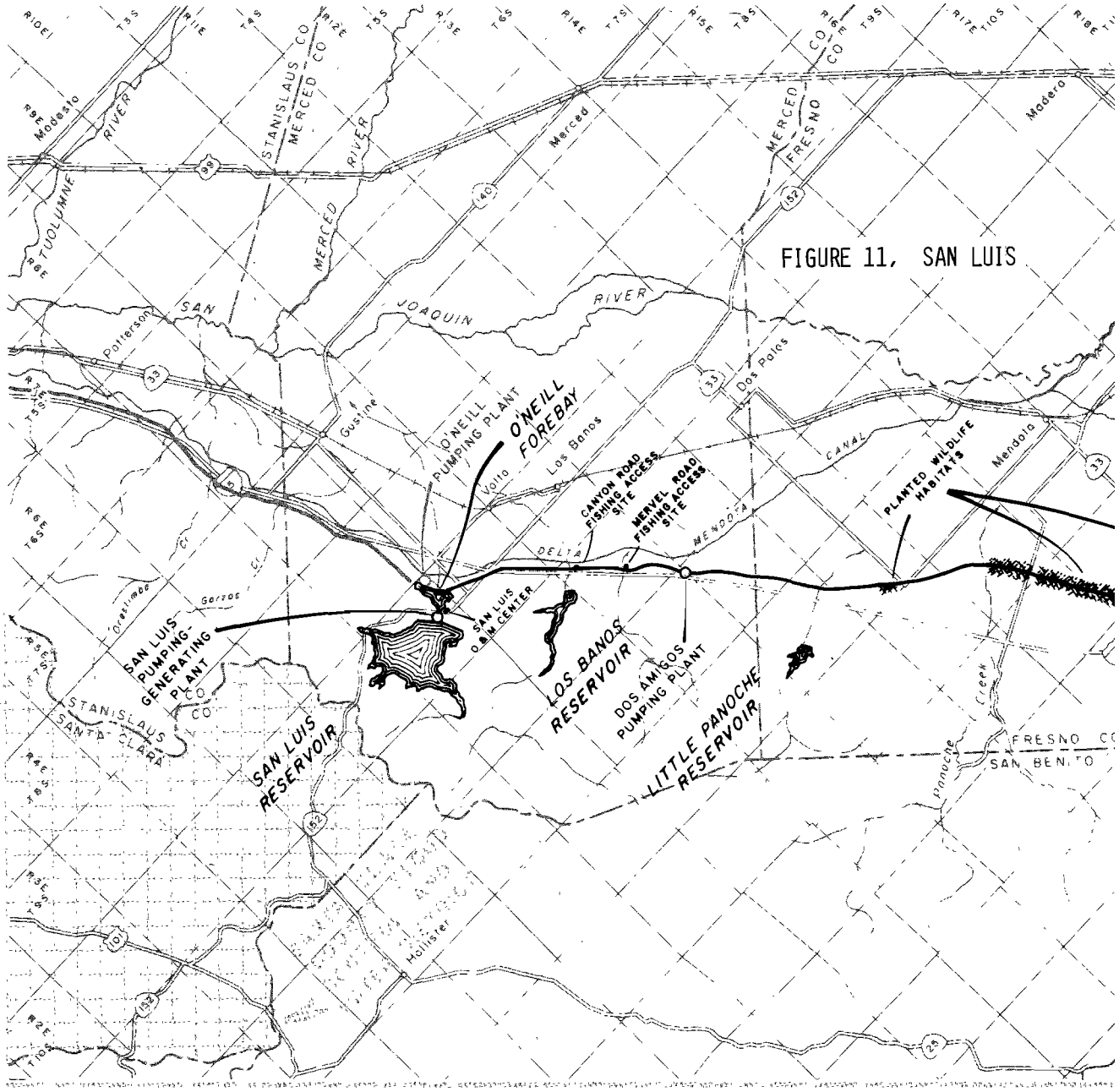


FIGURE 11. SAN LUIS

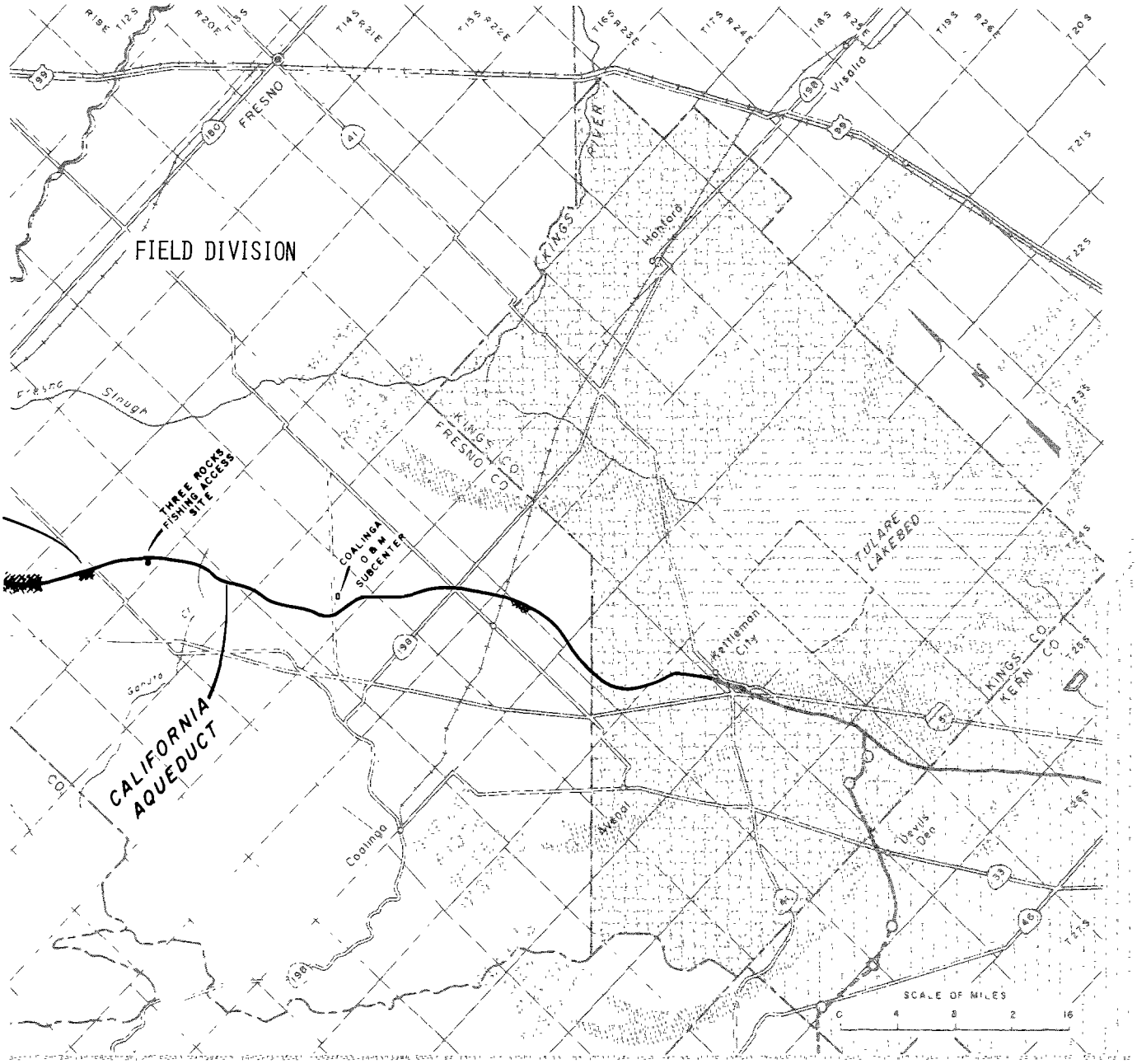
outflow from the Forebay totaled 1,657,763 acre-feet: 1,176,169 acre-feet pumped through Dos Amigos Pumping Plant; 23,814 acre-feet released to the Delta-Mendota Canal through O'Neill Pumping Plant; 5,686 acre-feet delivered through 10 temporary turnouts to customers of the federal Central Valley Project; and 452,094 acre-feet pumped into San Luis Reservoir through San Luis Pumping-Generating Plant.

Storage in San Luis Reservoir on January 1, was 1,858,926 acre-feet. Water pumped into the Reservoir totaled 452,094 acre-feet; water released to the Forebay amounted to 302,512 acre-feet. Evaporation, seepage, and other losses totaled 59,165 acre-feet. Storage in the Reservoir on December 31 was 1,949,325 acre-feet, of which 997,675 acre-feet was project water and the remainder, water of the federal Central Valley Project.

On January 1, storage in Los Banos and Little Panoche Reservoirs was 19,833 and 332 acre-feet respectively. On December 31, storage was 18,866 and 332 acre-feet respectively.

During 1971, California Aqueduct reaches from Dos Amigos Pumping Plant to Kettleman City received 1,176,169 acre-feet of water through Dos Amigos Pumping Plant. By the end of 1971, 164 turnouts on this reach for customers of the Central Valley Project were active; 22 of these are permanent, and 142 are temporary. Deliveries through these turnouts totaled 627,583 acre-feet. Water released from the San Luis Field Division, at Kettleman City, totaled 567,384 acre-feet in 1971.

During 1971, a total of 136,860,000 kilowatt-hours of electric energy were used for pumping State Water



Project water in the San Luis Field Division: 57,210,000 kilowatt-hours at Dos Amigos Pumping Plant. The Project's share of electric energy generated by water released from San Luis Reservoir through the Pumping-Generating Plant was 33,580,000 kilowatt-hours.

Recreation and Fish and Wildlife Operations

Recreational use of facilities within the San Luis Field Division totaled 354,600 recreation days during 1971: 143,500 recreation days at San Luis Reservoir (Basalt area); 184,400 recreation days at O'Neill Forebay; 18,700 recreation days at Los Banos Reservoir; and 8,000 recreation days at Canyon Road, Mervel Road, and Three Rocks Fishing Access Sites.

Under a 1970 agreement with the Department, the Department of Fish and Game continued the development and mangement of five canalside wildlife habitat areas along the California Aqueduct between Little Panoche Creek and the Fresno-Kings County line (the southernmost area is actually located below Kettleman City in the San Joaquin Field Division). Three areas were developed in 1970. The two remaining areas, a one-mile-long right-of-way segment in Kings County and a 15-mile-long segment in Fresno County, were both planted with wildlife forage and cover during 1971. Both of these sites are now successfully established and have provided highly important winter habitat for wildlife species including pheasants, rabbits, doves, and songbirds.

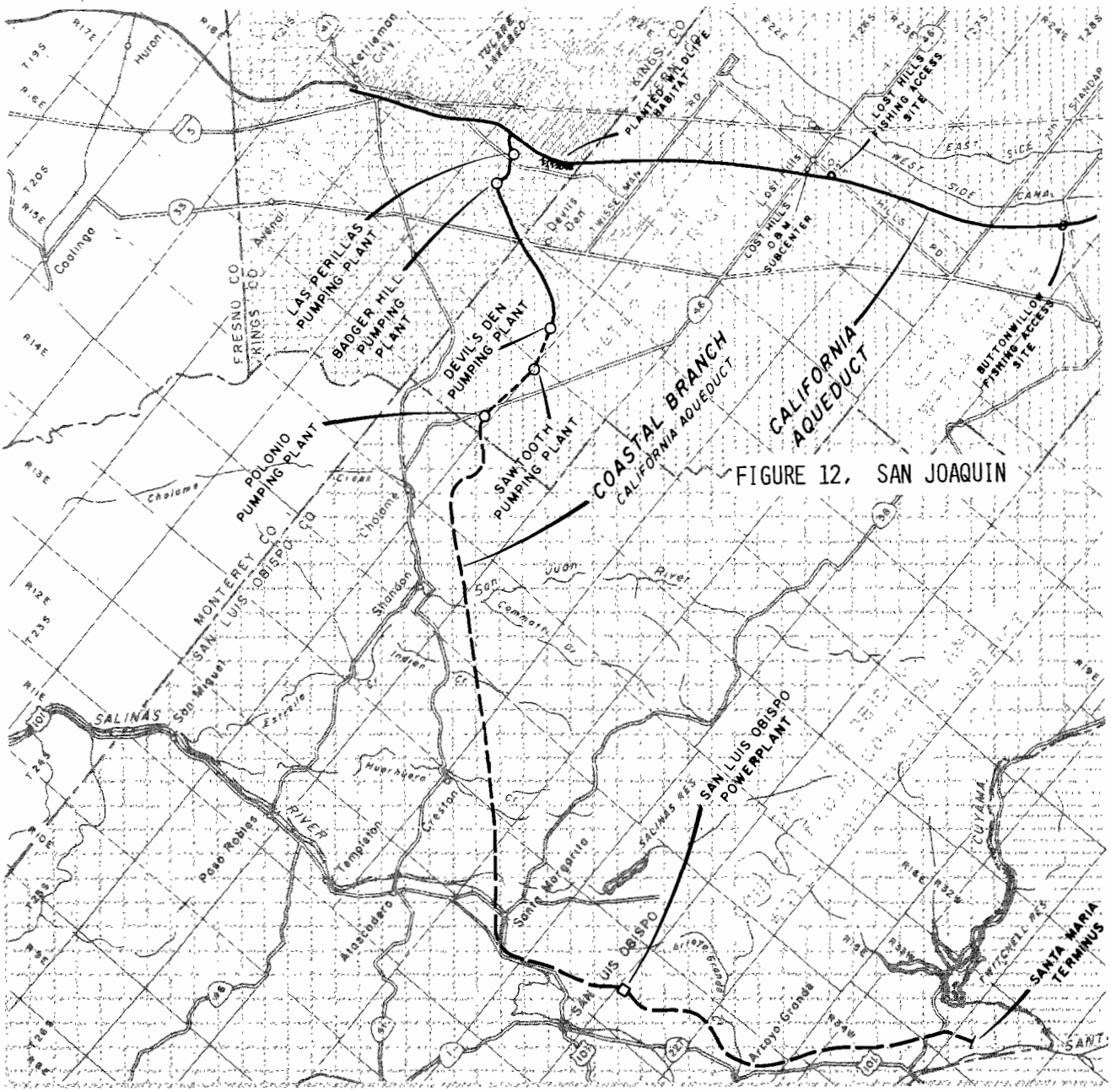


FIGURE 12. SAN JOAQUIN

San Joaquin Field Division

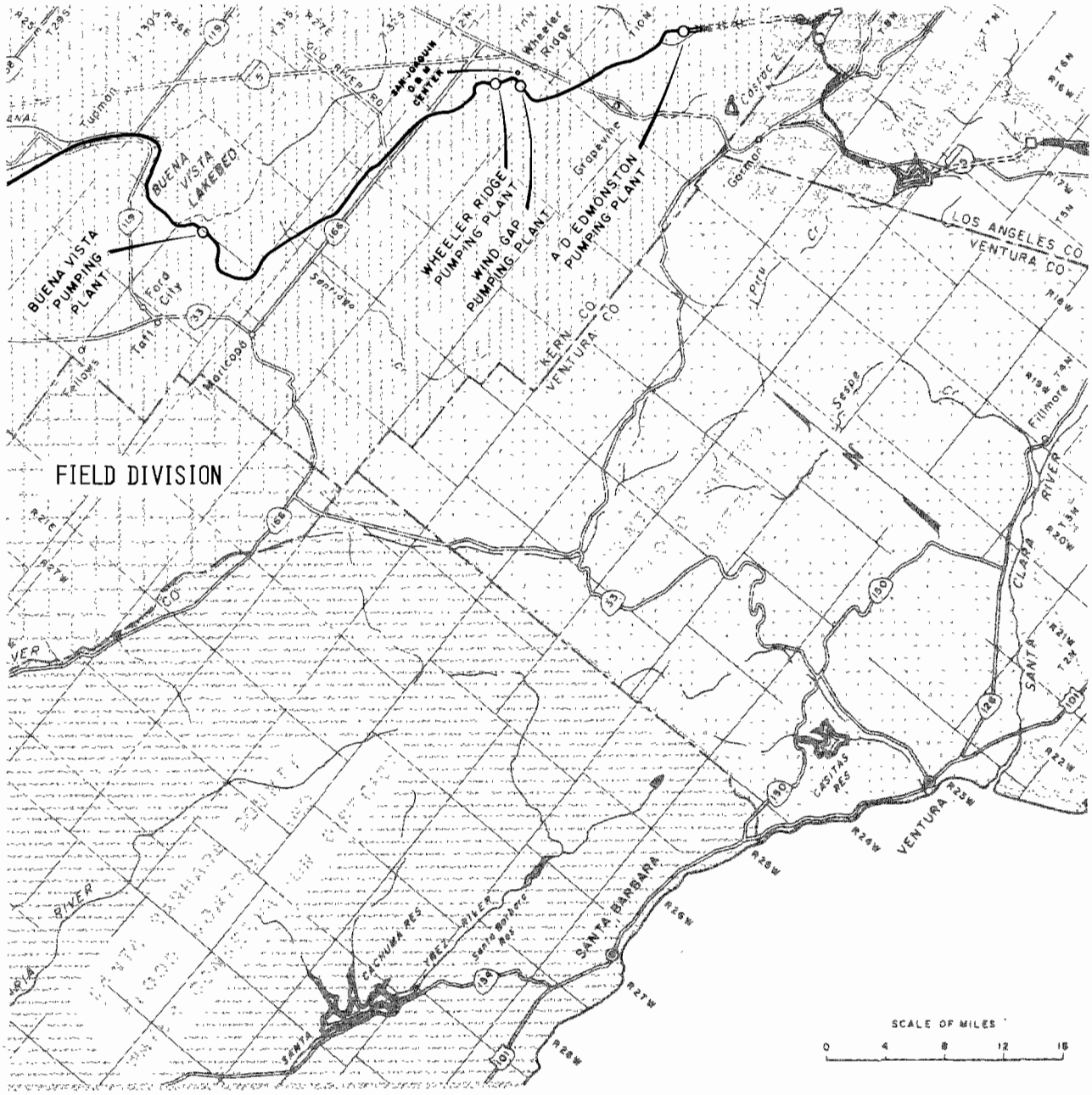
The location of facilities within the San Joaquin Field Division is shown on Figure 12.

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 Southern California and 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 and Power Operations

During 1971, the following amounts of project water were delivered from the 567,384 acre-feet conveyed past Kettleman City: 41,053 acre-feet to Dudley Ridge Water District; 5,990 acre-feet to Empire West Side Irrigation District; 6,659 acre-feet to Hacienda Water District; 115,826 acre-feet to Tulare Lake Basin Water

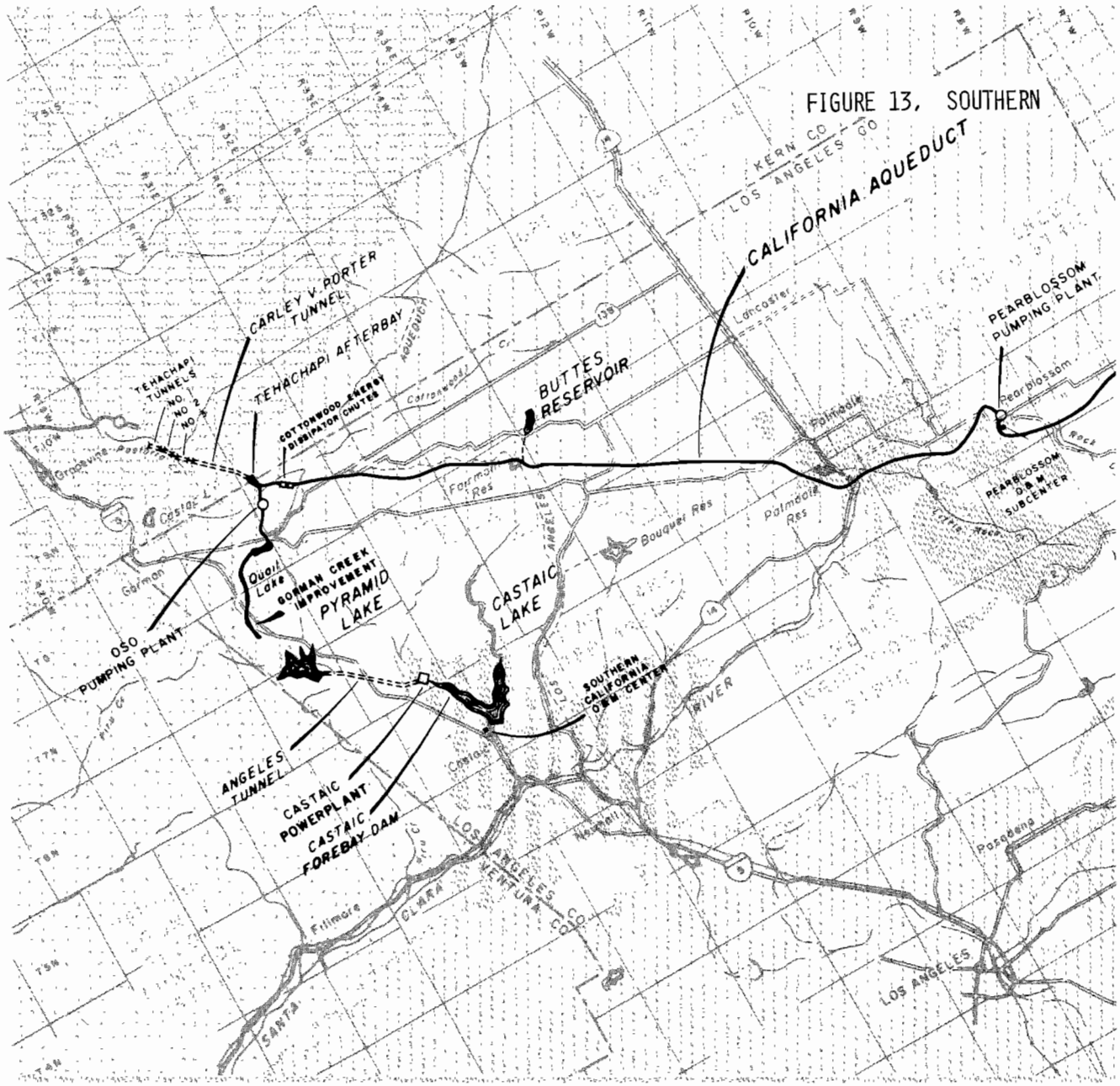


Storage District; 3,700 acre-feet to Kings County; 360,151 acre-feet to Kern County Water Agency; and 12,490 to Devil's Den Water District. In addition, 7,113 acre-feet was delivered to Buena Vista Farms, Incorporated, and 8,241 acre-feet was delivered to Buena Vista Water Storage District for partial repayment of water used by the Department to preconsolidate soils during aqueduct construction. A total of 5,454 acre-feet was pumped through A. D. Edmonston Pumping Plant to the intake of Tehachapi Tunnel No. 1.

Pumping plants in the San Joaquin Field Division used a total of 81,010,000 kilowatt-hours of electric energy during 1971: 8,550,000 kilowatt-hours at Las Perillas; 21,810,000 kilowatt-hours at Badger Hill; 29,540,000 kilowatt-hours at Buena Vista; 4,530,000 kilowatt-hours at Wheeler Ridge; 5,020,000 kilowatt-hours at Wind Gap; and 11,560,000 kilowatt-hours at A. D. Edmonston.

Recreation and Fish and Wildlife Operations

During 1971, there were no project-associated recreation developments in operation in the San Joaquin Field Division. By the end of the year, construction of the Lost Hills and Buttonwillow Fishing Access Sites was nearing completion (opened to the public in January 1972).



Southern Field Division

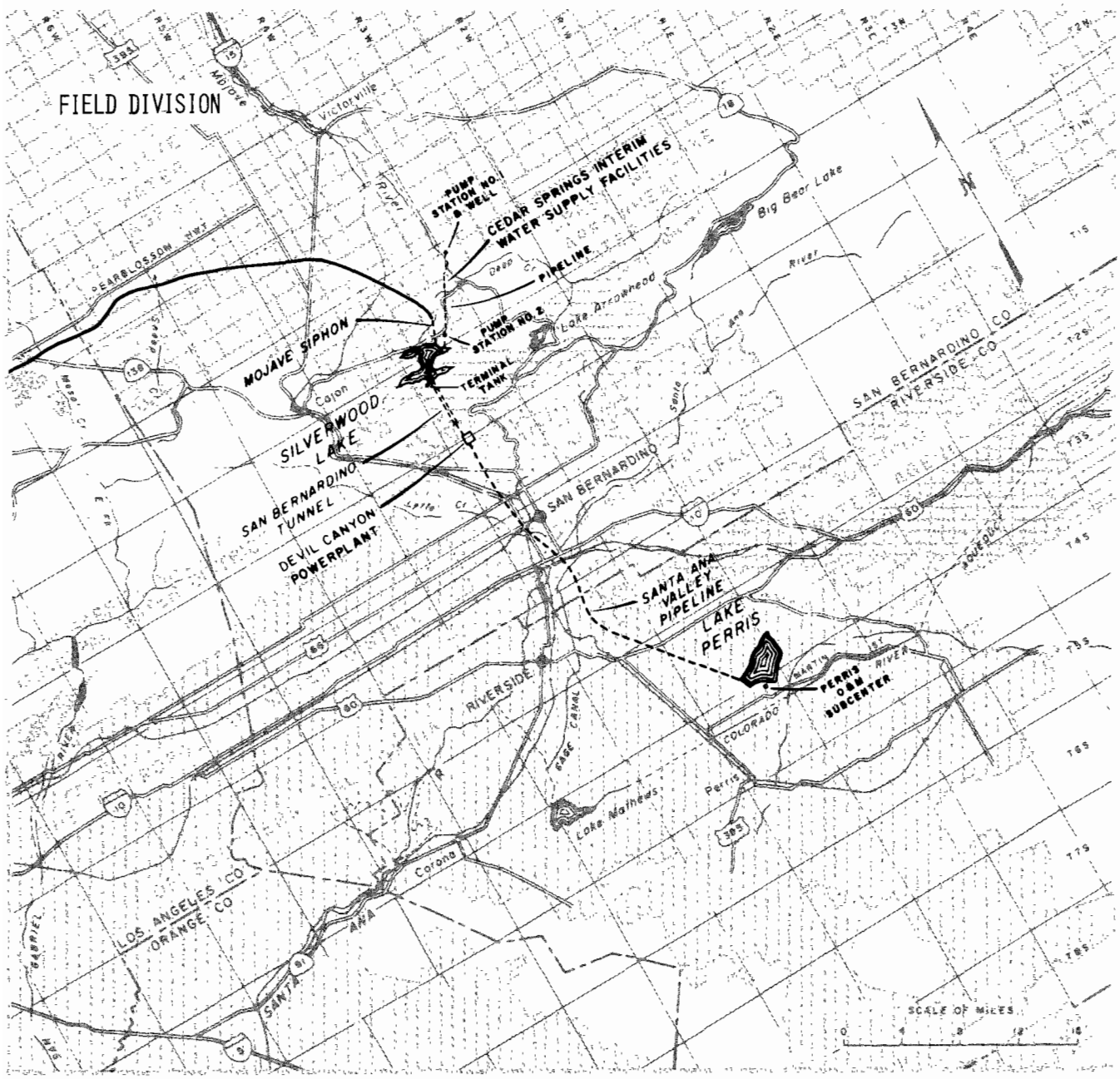
The following project facilities of this division were operational by the end of 1971:

- California Aqueduct, from the intake of Tehachapi Tunnel No. 1 through Silverwood Lake including Pearblossom Pumping Plant.
- West Branch of the California Aqueduct, including Oso Pumping Plant, Gorman Creek Improvement, Pyramid Dam-initial, Angeles Tunnel, and Castaic Lake.

The location of these facilities is shown on Figure 13.

Water and Power Operations

On October 7, 1971, the first project water into Southern California poured over stoplogs at South Portal of Carley V. Porter Tunnel. On December 15, 1971, first water was delivered to the West Branch of the Aqueduct. No deliveries were made from project facilities south of the Tehachapis in 1971 and all project water entering the Southern Field Division, excluding losses, was used to bring water surfaces to operational levels in aqueduct reaches upstream from Silverwood and Castaic Lakes. By the end of 1971, water storages in Silverwood and Castaic Lakes were



1,500 acre-feet and 14,700 acre-feet, respectively—all from local stream inflow derived primarily from rainfall occurring in late December.

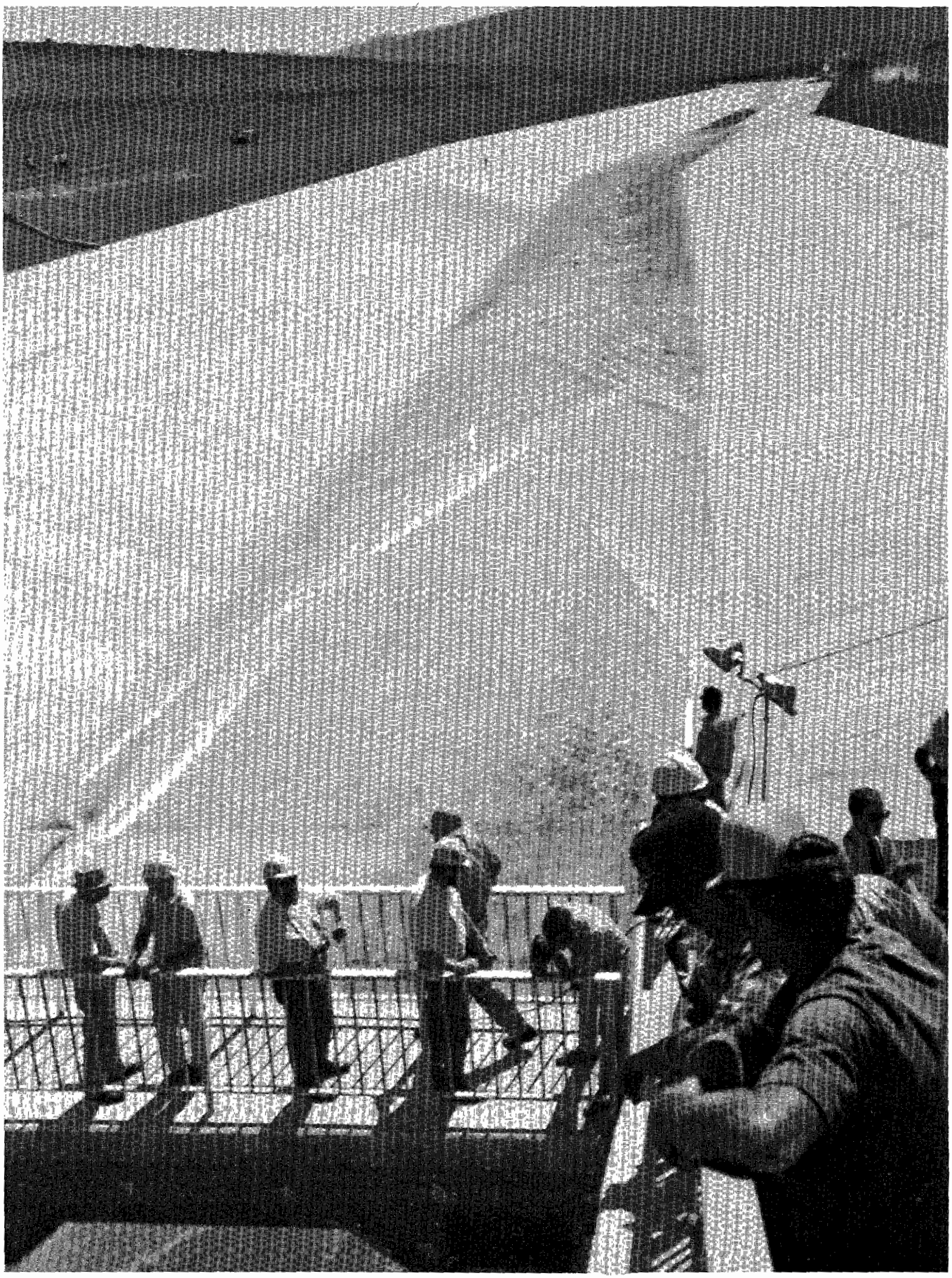
During 1971, a total of 850,000 kilowatt-hours of electric energy was used by project pumping plants in the Southern Field Division: 810,000 kilowatt-hours by Oso Pumping Plant and 40,000 kilowatt-hours by Pearblossom Pumping Plant.

Recreation and Fish and Wildlife Operations

After the A. D. Edmonston Pumping Plant began operations, three species, totaling five fish, were found in the Aqueduct south of the Tehachapis: Bluegill, Green sunfish, and Threadfin shad. All five fish were small—less than 3 inches in length—and presumably survived the 1,900-foot Tehachapi lift.

During 1971, Castaic and Silverwood Lakes were initially planted with warmwater gamefish: about 200 Largemouth bass and 49 Channel catfish at Castaic and 50 Largemouth bass and 45 Channel catfish at Silverwood. Data collected in the fall indicated that the bass had spawned successfully, with young fish ranging from 3 inches to 10 inches at Castaic and between 2 and 5 inches at Silverwood. No evidence of Channel catfish spawning was found at either lake.

At the time this bulletin was being prepared, both Castaic and Silverwood Lakes were expected to be opened for recreation use in May 1972.



First Water Pumped Over the Tehachapi Mountains

DWR 4190-5

CHAPTER V. PROJECT FINANCING

As of December 31, 1971, $2.033 billion had been expended by the Department for constructing facilities of the State Water Project. These construction expenditures include the costs of planning, design, financing, relocation, land acquisition, and operations during the construction period of each facility.

While initial project facilities are nearing completion, continued construction will be required to meet growing demands for project services. Under the Department's current assumptions concerning future facilities, construction expenditures for the Project eventually would total $2.887 billion through 1997. This estimate does not include future costs of (1) the San Joaquin Drainage Facilities, which probably would not be constructed before 1980 even if beneficiaries provide prerequisite repayment guarantees, and (2) proposed facilities of the Piru Creek Project, which would be financed under a power revenue bond arrangement.

There are capital requirements other than expenditures for constructing project facilities. These include (1) disbursements under the Davis-Grunsky Act Program, (2) special capital requirements associated with revenue bond financing, and, under current assumptions, (3) annual principal and interest payments for additional water conservation storage capacity to be constructed by the United States. (Such additional storage would be required to satisfy water delivery commitments after 1995.)

This chapter presents in detail how future capital expenditures of the State Water Project could be financed and how these funds would be more than repaid with anticipated revenues from project customers. This financial analysis is shown in Table 8, in two spreads. Actual and projected capital expenditures and sources of financing are shown in Spread 1. (Corresponding information for annual construction expenditures is shown graphically on Figure 14.) Actual and anticipated revenues and the application thereof to pay project operating expenses and to repay financing are shown in Spread 2 (and, graphically, on Figure 15). The analysis portrays a financially viable project which would generate substantial funds through 2035 for financing construction of future additions to the long-range State Water Resources Development System.

Future conditions undoubtedly will cause changes in the financial forecast set forth in the analysis. For this reason, assumptions basic to the analysis will be comprehensively reviewed, annually, and financial forecasts updated. Notable contingencies include (1) possible construction of the Peripheral Canal (or some alternative in lieu thereof solely by the State instead of jointly with the United States as currently anticipated, (2) delay of acquiring required supplemental financing beyond mid-1973, (3) reduction of annual state tideland oil and gas revenues to be available to the Project below amounts now provided for by statutes, (4) reduction of state reimbursements for operating costs allocable to statewide recreation benefits, (5) need for San Joaquin Drainage Facilities in a time sequence not now assumed, (6) development of alternative sources of additional water not included in present plans, and (7) need to expand the present system to include service to areas not now contemplated. Furthermore, the outcome of lawsuits now pending before the courts (see Chapter I) could impose requirements noticeably affecting projected capital expenditures and/or anticipated project revenues.

The financial analysis is based on the major assumption that the Department would sell revenue bonds in connection with certain facilities of the California Aqueduct in Southern California, with proceeds sufficient to fulfill the currently estimated need for supplemental financing. (Supplemental financing refers to funds in excess of those anticipated under current agreements, legislative enactments, and authorized bond issues.) The analysis indicates that the need for such supplemental financing totals $128 million for construction expenditures, with annual requirements as tabulated below:

	(in millions)
1973	$ 4.5
1974	3.1
1975	14.8
1976	13.9
1977	12.3
1978	43.2
1979	36.2
Total	$128.0

Special capital requirements associated with revenue bond financing, estimated to be in the order of $15 million, would increase the total principal amount of required future revenue bond sales to about $143 million.

The Department is currently conducting two sets of negotiations to provide a basis for future revenue bond sales. The first of these, concerning the Devil Canyon-Castaic Facilities, is with the six water contractors whose deliveries will be conveyed through Devil Canyon and Castaic Powerplants; and the second, concerning the Piru Creek Project, is with two Southern California power utilities (see section entitled "Piru Creek Project", Chapter I).

Sale of Devil Canyon-Castaic Revenue Bonds is currently scheduled for the summer of 1972. Proceeds from the sale, which could yield an estimated $123 million, would be applied to the State's construction costs of the Devil Canyon-Castaic Facilities allocable to power generation. Such an allocation would include a portion of the costs of Cedar Springs Dam and Silverwood Lake, San Bernardino Tunnel, Devil Canyon Powerplant, Pyramid Dam and Lake, and Angeles Tunnel. (Castaic Powerplant itself and certain associated works are being financed by the City of Los Angeles under a 1966 agreement for cooperative development of the West Branch.) Because construction of the Facilities has already begun with financing pro-

vided by other project funds, a major portion of the proceeds would be used to reimburse these other funds, and the remaining portion applied to complete the Facilities.

Feasibility studies are well under way on the proposed Piru Creek Project. If this project is determined to be feasible and if contractual arrangements are consummated, sale of Piru Revenue Bonds could be scheduled for as soon as 1973 (although such sale probably would occur somewhat later). Proceeds from the sale would finance the costs allocable to power generation of a group of West Branch facilities designated as the Piru Creek Project. In addition to power generation, the proposed facilities of this project would also provide water storage capacity, opportunities for recreation development, and a permanent means of conveying water through the portion of the West Branch now served by interim Gorman Creek Improvement. As shown on Figure 1, this project extends from the discharge of Oso Pumping Plant—through existing Quail facilities and a proposed system of pipeline, powerplants, and reservoir—to and including Pyramid Dam and Lake, now under construction. Only the costs of Quail facilities and Pyramid Dam and Lake (together with interim Gorman Creek Improvement) are included in the estimated construction expenditures shown in the financial analysis. The construction costs excluded from this analysis for proposed facilities of the Piru Creek Project would be more than offset by the value of power generated and the sale of Piru Revenue Bonds supported thereby—also excluded from this analysis. The Department estimates that, in addition to financing the costs of proposed facilities, about $25 million of the costs included in this analysis for Quail facilities and Pyramid Dam and Lake also could be reimbursed by proceeds from Piru Revenue Bonds.

The estimated $123 million yield of proposed Devil Canyon-Castaic Revenue Bonds, together with the effective (in terms of the estimated costs shown in this analysis) $25 million yield of proposed Piru Revenue Bonds would be sufficient to meet the $128 million need for supplemental funds under current assumptions. As previously indicated, these assumptions will be reevaluated annually and will result, periodically, in updated financial analyses.

The following sections describe the line items shown in Table 8 and current assumptions pertinent thereto.

FIGURE 14: FINANCING OF CONSTRUCTION EXPENDITURES 1952-1985

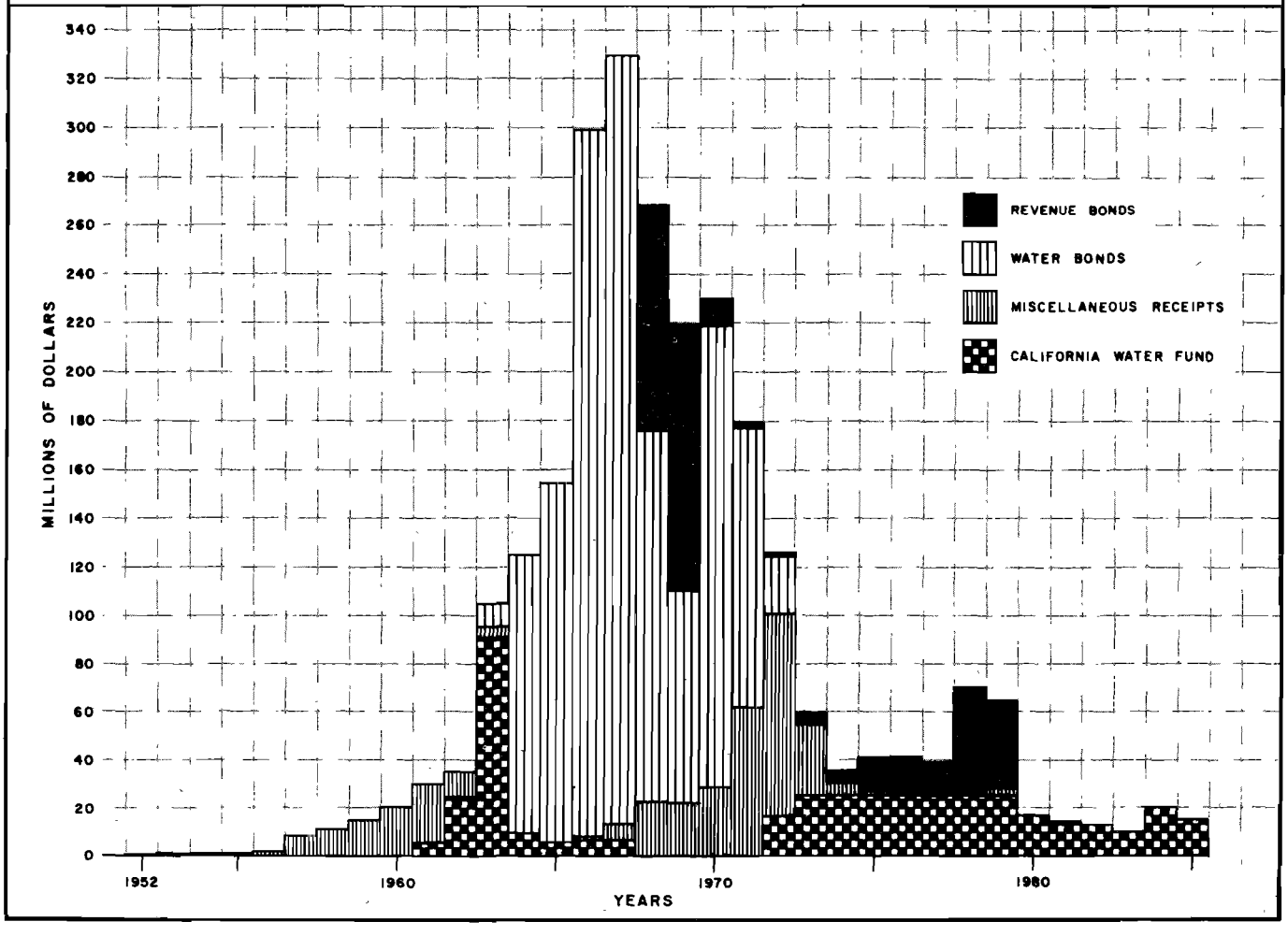
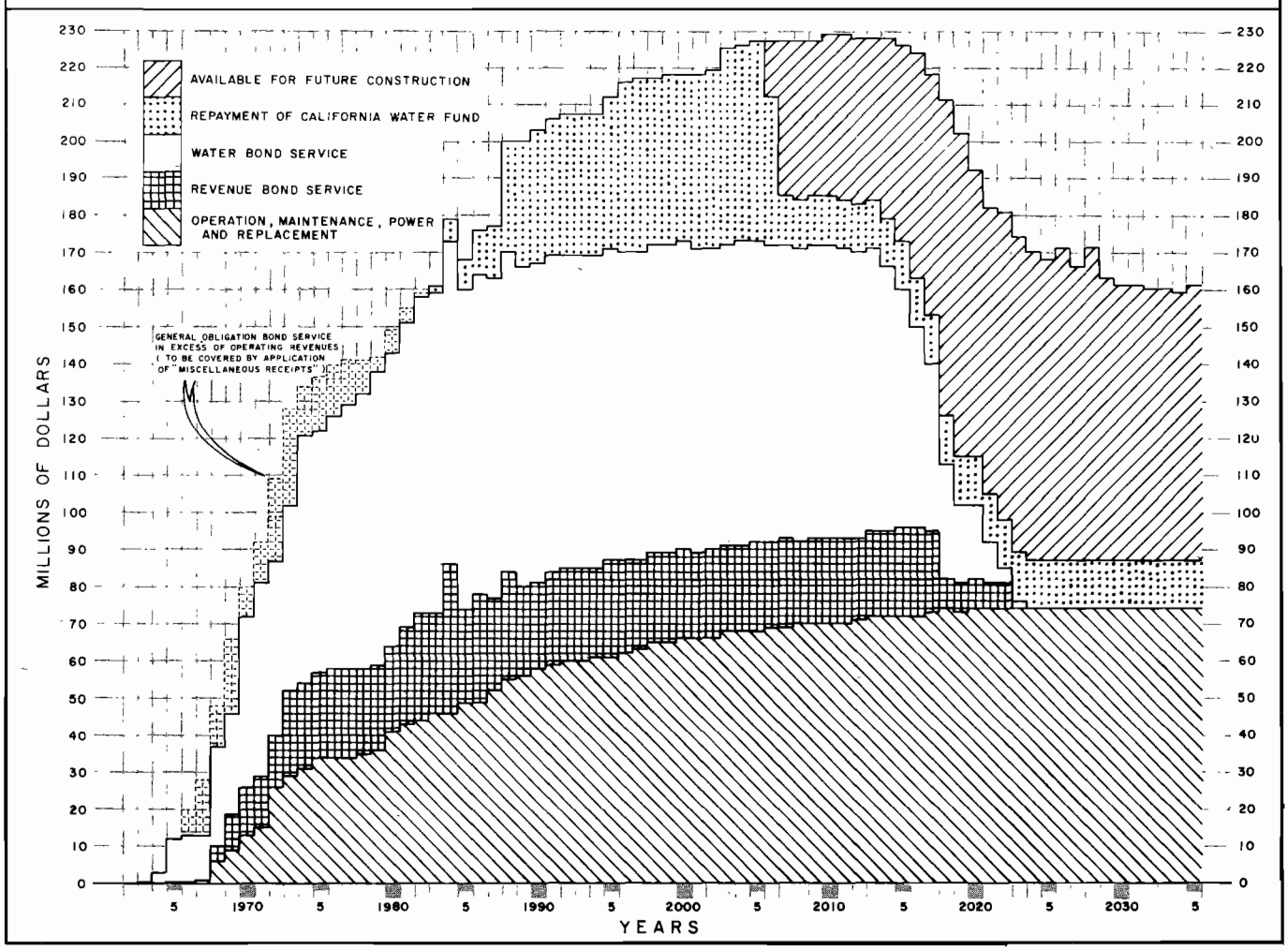


FIGURE 15: APPLICATION OF PROJECT OPERATING REVENUES



Project Construction Expenditures

The year ending December 31, 1971 was the 15th 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 would end in 1973 with the completion of Pyramid Dam in Los Angeles County and Perris Dam in Riverside County. The current construction program, known as the "1973 Project facilities", permits fulfillment of initial project water delivery commitments. As of the end of 1971, 99.7 percent of the 1973 Project facilities were either completed or under construction (see Chapter II).

However, a construction program beyond the 1973 Project facilities is required to complete the State Water Project—to permit fulfillment of the continuing growth in water delivery commitments under executed contracts, provide additional opportunities for water-oriented recreation, and increase the Project's power production potential. The future program has already begun with continuing fabrication and installation of additional pump and power generation units in plants of the California Aqueduct. Under current assumptions, the future program would end in 1997 with completion of works necessary for diverting Eel River water to maintain the project water supply at the Sacramento-San Joaquin Delta.

Estimates of future construction expenditures are based on prices and salaries prevailing on December 31, 1971, with the following percentages applied to allow for inflation:

	Percent increase per annum	
Year	*State salaries*	*Construction prices*
1972	5	6
1973	5	3
1974	4	3
1975	3	3
after 1975 [a]	0	0

[a] To be reevaluated as this time approaches

TABLE 8: PROJECT FINANCIAL

(in thousands

LINE NO.	LINE ITEM	1952-1971	1972	1973	1974	1975	1976	1977	1978
									CALENDAR
									CAPITAL
	PROJECT CONSTRUCTION EXPENDITURES								
	UNDER CURRENT PROGRAM								
1.	The 1973 Project Facilities	2,033,403	122,354	50,702	5,423	623	0	0	0
	UNDER FUTURE PROGRAM								
2.	Abbey Bridge and Dixie Refuge Dams and Reservoirs	0	4	535	132	355	377	2,478	3,824
3.	Phase II of the North Bay Aqueduct	0	52	70	121	237	580	1,125	3,294
4.	Delta Facilities	0	181	4,795	17,680	28,130	33,721	24,576	23,752
	California Aqueduct:								
5.	Final Four Units at Delta Pumping Plant	0	0	24	36	230	538	844	2,784
6.	San Luis Canal Modifications	0	0	0	0	0	0	0	0
7.	Final Three Units at A. D. Edmonston Pumping Plant	0	0	0	0	0	0	0	10
8.	Staged Units and Pipelines South of A. D. Edmonston P.P.	0	342	2,234	5,851	6,954	1,544	70	154
9.	Buttes Dam and Reservoir	0	0	0	0	0	129	1,638	1,191
10.	Final Three Units at Both Las Perillas and Badger Hill P.Ps.	0	0	0	0	0	0	784	12
11.	Phase II of the Coastal Branch	0	0	0	0	1,229	2,454	6,242	32,873
12.	General Costs	0	1,071	1,049	5,737	2,453	2,284	683	1,026
13.	Subtotal, California Aqueduct	0	1,413	3,307	11,624	10,866	6,949	10,261	38,050
14.	Miscellaneous Project Costs	0	32	46	638	979	417	437	231
15.	Upper Eel River Development, Trans-Basin Diversion Works	(6,698)	(395)	(354)	320	329	334	333	331
16.	Total Future Construction Program	0	1,682	8,753	30,515	40,896	42,378	39,210	69,482
17.	TOTAL PROJECT CONSTRUCTION EXPENDITURES	2,033,403	124,036	59,455	35,938	41,519	42,378	39,210	69,482
	OTHER CAPITAL REQUIREMENTS								
18.	Davis-Grunsky Act Program	67,704	12,953	7,842	10,378	10,423	10,377	10,284	39
19.	Upper Eel River Development, Eel River Storage	0	0	0	0	0	0	0	0
20.	Special Capital Requirements under Revenue Bond Financing	27,019	3,000	12,000	0	0	0	0	0
21.	TOTAL, OTHER CAPITAL REQUIREMENTS	94,723	15,953	19,842	10,378	10,423	10,377	10,284	39
22.	TOTAL CAPITAL EXPENDITURES	2,128,126	139,989	79,297	46,316	51,942	52,755	49,494	69,521
									FINANCING OF
23.	APPLICATION OF CALIFORNIA WATER FUND MONEYS (a	176,331	17,313	25,750	25,750	25,750	25,750	25,750	25,750
	APPLICATION OF PROCEEDS FROM SALE OF BONDS								
24.	C.V.P. Revenue Bonds, Oroville Division	243,360	1,635	0	0	0	0	0	0
25.	C.V.P. Revenue Bonds, Aqueduct Facilities	0	3,000	16,444	3,113	14,796	13,905	12,261	43,243
26.	Water Bonds Reserved for Davis-Grunsky Act Program	67,704	12,953	7,842	10,378	10,423	10,377	10,284	39
27.	Water Bonds Reserved for "Additional Facilities" (Upper Eel River Development) (a	6,698	395	354	320	329	334	333	331
28.	Water Bonds for the 1973 Project Facilities	1,420,904	22,766	0	0	0	0	0	0
29.	Total Application of Proceeds from Sale of Bonds	1,738,666	40,749	24,640	13,811	25,548	24,616	22,878	43,613
30.	APPLICATION OF MISCELLANEOUS RECEIPTS	213,129	81,927	28,907	6,755	644	2,389	866	158
31.	TOTAL FINANCING OF CAPITAL EXPENDITURES	2,128,126	139,989	79,297	46,316	51,942	52,755	49,494	69,521

Note: Values shown in parentheses are accounted for in Line 1 as part of the current program.

a) May be modified upon reevaluation of Additional Facilities.

ANALYSIS, DECEMBER 31, 1971

of dollars)

YEARS 1979	1980	1981	1982	1983	1984	1985	1986-1995	1996-2005	2006-2015	2016-2025	2026-2035	TOTAL 1952-2035	LINE NO.
EXPENDITURES													
0	0	0	0	0	0	0	0	0	0	0	0	2,212,505	1.
819	2,902	2,023	0	0	0	0	0	0	0	0	0	13,449	2.
7,660	1,911	54	13	12	0	0	0	0	0	0	0	15,129	3.
20,795	38	12	12	12	0	0	0	0	0	0	0	153,704	4.
2,412	1,045	530	814	2,794	2,407	851	0	0	0	0	0	15,309	5.
501	1,501	2,951	2,501	1,142	5,601	4,382	0	0	0	0	0	18,579	6.
192	1,452	4,891	7,268	4,886	2,141	40	0	0	0	0	0	20,880	7.
1,599	3,169	1,817	1,181	257	0	0	0	0	0	0	0	25,172	8.
490	0	94	130	172	5,927	5,478	0	0	0	0	0	15,249	9.
36	449	384	48	0	0	383	0	0	0	0	0	2,096	10.
27,924	2,817	315	131	0	0	0	0	0	0	0	0	73,985	11.
1,877	1,095	480	356	323	148	57	0	0	0	0	0	18,639	12.
35,031	11,528	11,462	12,429	9,574	16,224	11,191	0	0	0	0	0	189,909	13.
198	68	61	56	56	57	56	0	0	0	0	0	3,332	14.
332	333	500	752	751	3,496	3,255	240,392	47,948	0	0	0	299,406	15.
64,835	16,780	14,112	13,262	10,405	19,777	14,502	240,392	47,948	0	0	0	674,929	16.
64,835	16,780	14,112	13,262	10,405	19,777	14,502	240,392	47,948	0	0	0	2,887,434	17.
0	0	0	0	0	0	0	0	0	0	0	0	130,000	18.
0	0	0	0	0	0	0	0	90,554	127,500	127,500	127,500	473,054	19.
0	0	0	0	0	0	0	0	0	0	0	0	42,019	20.
0	0	0	0	0	0	0	0	90,554	127,500	127,500	127,500	645,073	21.
64,835	16,780	14,112	13,262	10,405	19,777	14,502	240,392	138,502	127,500	127,500	127,500	3,532,507	22.
CAPITAL EXPENDITURES													
25,750	16,780	14,112	13,262	10,405	19,777	14,502	240,392	138,502	127,500	127,500	127,500	1,224,126	23.
0	0	0	0	0	0	0	0	0	0	0	0	244,995	24.
36,238	0	0	0	0	0	0	0	0	0	0	0	143,000	25.
0	0	0	0	0	0	0	0	0	0	0	0	130,000	26.
332	0	0	0	0	0	0	0	0	0	0	0	9,426	27.
0	0	0	0	0	0	0	0	0	0	0	0	1,443,670	28.
36,570	0	0	0	0	0	0	0	0	0	0	0	1,971,091	29.
2,515	0	0	0	0	0	0	0	0	0	0	0	337,290	30.
64,835	16,780	14,112	13,262	10,405	19,777	14,502	240,392	138,502	127,500	127,500	127,500	3,532,507	31.

TABLE 8: PROJECT FINANCIAL

(in thousands

LINE NO.	LINE ITEM	1952 - 1971	1972	1973	1974	1975	1976	1977	1978
		CALENDAR							
		MISCELLANEOUS RECEIPTS AND							
	MISCELLANEOUS RECEIPTS								
32.	Federal Payments for "Open Space" and for Project Costs Allocated to Flood Control	74,636	985	10	0	0	0	0	0
33.	Special Appropriations Made Prior to the Burns-Porter Act	98,975	0	0	0	0	0	0	0
34.	Continuing Appropriations for Construction Costs Allocated to Recreation and Fish and Wildlife Enhancement	25,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
35.	Special Appropriations Under SB 261 (1968)	72,729	9,932	0	0	0	0	0	0
36.	City of Los Angeles Payments for Cooperative (Castaic) Power Development	0	33,134	4,320	0	0	0	0	0
37.	Water Supply Contractor Advances for State Construction of Requested Works	48,612	20,068	1,864	0	0	0	0	0
38.	Carryover (-) and Application (+) of Miscellaneous Receipts Held Temporarily in Reserve	-58,340	22,432	35,908	0	0	0	0	0
39.	Investment Earnings on Unexpended Miscellaneous Receipts	27,423	3,000	6,100	6,500	6,800	6,300	5,400	4,100
40.	TOTAL MISCELLANEOUS RECEIPTS	289,035	94,551	53,202	11,500	11,800	11,300	10,400	9,100
	PROJECT OPERATING REVENUES								
41.	Payments by the Power Pool Companies under Oroville-Thermalito Power Sale Contract (extended)	41,537	16,150	16,150	16,150	16,150	16,430	16,492	16,150
42.	Assumed Payments by Contractors for Aqueduct Facilities	0	0	9,505	9,505	9,505	9,505	9,505	9,505
43.	Payments by Water Supply Contractors	186,078	76,300	69,922	87,214	91,917	95,411	98,628	101,727
44.	Federal Payments for Joint Operating Costs of the San Luis Facilities	4,799	1,977	1,750	1,772	1,787	1,778	1,759	1,763
45.	State Appropriations for Operating Costs Allocated to Recreation	1,471	1,802	0	4,019	1,673	1,669	1,643	1,655
46.	Local Agency Payments Under Davis-Grunsky Loan Repayment Contracts	709	242	185	348	517	702	1,010	1,257
47.	Miscellaneous Revenues	66,130	1,426	12,020	4,910	715	815	315	15
48.	TOTAL PROJECT OPERATING REVENUES	300,724	96,897	109,532	123,918	122,264	126,310	129,352	132,072
49.	TOTAL MISCELLANEOUS RECEIPTS AND PROJECT OPERATING REVENUES	589,759	191,448	162,734	135,418	134,064	137,610	139,752	141,172
		APPLICATION OF MISCELLANEOUS RECEIPTS							
50.	PROJECT OPERATING COSTS	46,429	25,722	28,833	30,865	33,786	33,570	34,327	34,788
51.	Deposits to Special Reserves under Revenue Bond Financing	27,573	279	10,413	281	282	563	631	289
	PAYMENT OF BOND SERVICE								
	Central Valley Project Revenue Bonds, Oroville Division:								
52.	Interest Payments	40,614	13,112	13,042	12,969	12,893	12,811	12,727	12,637
53.	Principal Repayments	0	1,260	1,330	1,400	1,475	1,555	1,635	1,725
	Central Valley Project Revenue Bonds, Aqueduct Facilities:								
54.	Interest Payments	0	0	8,705	8,705	8,705	8,705	8,705	8,705
55.	Principal Repayments	0	0	0	0	0	0	0	0
	Water Bonds:								
56.	Interest Payments	262,014	69,148	70,304	71,443	71,279	71,017	70,661	70,170
57.	Principal Repayments	0	0	1,200	3,000	5,000	7,000	10,200	12,700
	TOTAL BOND SERVICE:								
58.	TOTAL INTEREST PAYMENTS	302,628	82,260	92,051	93,117	92,877	92,533	92,093	91,512
59.	TOTAL PRINCIPAL REPAYMENTS	0	1,260	2,530	4,400	6,475	8,555	11,835	14,425
60.	REPAYMENT OF THE CALIFORNIA WATER FUND	0	0	0	0	0	0	0	0
61.	APPLICATION OF MISCELLANEOUS RECEIPTS TO CONSTRUCTION EXPENDITURES	213,129	81,927	28,907	6,755	644	2,389	866	158
62.	RESERVATION FOR FUTURE CONSTRUCTION	0	0	0	0	0	0	0	0
63.	TOTAL PROJECT OPERATING COSTS AND MISCELLANEOUS RECEIPTS	589,759	191,448	162,734	135,418	134,064	137,610	139,752	141,172

ANALYSIS, DECEMBER 31, 1971

of dollars)

YEARS													
1979	1980	1981	1982	1983	1984	1985	1986 - 1995	1996 - 2005	2006 - 2015	2016 - 2025	2026 - 2035	TOTAL 1952 - 2035	LINE NO.
PROJECT OPERATING REVENUES													
0	0	0	0	0	0	0	0	0	0	0	0	75,631	32.
0	0	0	0	0	0	0	0	0	0	0	0	98,975	33.
5,000	5,000	5,000	5,000	5,000	5,000	5,000	50,000	50,000	50,000	10,000	0	255,000	34.
0	0	0	0	0	0	0	0	0	0	0	0	82,661	35.
0	0	0	0	0	0	0	0	0	0	0	0	37,454	36.
0	0	0	0	0	0	0	0	0	0	0	0	70,544	37.
0	0	0	0	0	0	0	0	0	0	0	0	0	38.
2,200	700	0	0	0	0	0	0	0	0	0	0	68,523	39.
7,200	5,700	5,000	5,000	5,000	5,000	5,000	50,000	50,000	50,000	10,000	0	688,788	40.
16,150	16,150	18,528	20,354	18,222	31,817	16,150	174,297	162,365	161,500	173,417	174,297	1,138,456	41.
9,505	9,505	9,505	10,935	10,835	10,878	10,768	105,804	99,181	90,588	56,465	0	480,999	42.
107,669	114,002	118,118	121,610	126,107	129,979	134,837	1,653,055	1,880,500	1,967,689	1,642,047	1,417,560	10,220,370	43.
1,764	1,754	1,757	1,758	1,764	1,760	1,759	17,516	17,460	17,450	17,450	17,450	117,027	44.
1,616	2,046	2,039	2,117	2,116	2,044	2,135	21,095	20,909	20,805	21,138	21,380	132,372	45.
1,282	1,367	1,389	1,534	1,716	2,143	2,144	20,910	20,187	16,867	11,122	2,707	88,338	46.
15	15	15	15	15	15	15	150	150	150	150	150	87,201	47.
138,001	144,839	151,351	158,323	160,775	178,636	167,808	1,992,827	2,200,752	2,275,049	1,921,789	1,633,544	12,264,763	48.
145,201	150,539	156,351	163,323	165,775	183,636	172,808	2,042,827	2,250,752	2,325,049	1,931,789	1,633,544	12,953,551	49.
AND PROJECT OPERATING REVENUES													
36,136	40,731	42,650	44,490	45,653	46,051	48,807	571,436	657,280	704,624	737,465	741,950	3,985,593	50.
294	294	2,674	4,503	2,375	15,970	303	16,076	4,758	4,949	1,784	0	94,291	51.
12,540	12,441	12,334	12,221	12,101	11,982	11,862	110,312	87,736	48,607	3,250	0	466,191	52.
1,815	1,915	2,020	2,130	2,245	2,365	2,485	32,910	54,870	92,945	38,915	0	244,995	53.
8,705	8,705	8,705	8,705	8,605	8,505	8,395	76,783	60,436	38,687	9,538	0	297,999	54.
0	0	0	1,430	1,430	1,573	1,573	21,021	30,745	43,901	41,327	0	143,000	55.
69,546	68,825	67,964	67,014	65,996	64,916	63,773	567,475	415,971	207,313	20,271	0	2,435,100	56.
13,650	16,050	18,050	19,250	20,530	21,770	22,563	282,100	404,944	557,030	168,059	0	1,583,096	57.
90,791	89,971	89,003	87,940	86,702	85,403	84,030	754,570	564,143	294,607	33,059	0	3,199,290	58.
15,465	17,965	20,070	22,810	24,205	25,708	26,621	336,031	490,559	693,804	248,373	0	1,971,091	59.
0	0	0	0	1,840	5,504	8,047	314,714	484,012	155,009	127,500	127,500	1,224,126	60.
2,515	0	0	0	0	0	0	0	0	0	0	0	337,290	61.
0	1,578	1,954	3,580	5,000	5,000	5,000	50,000	50,000	472,056	783,608	764,094	2,141,870	62.
145,201	150,539	156,351	163,323	165,775	183,636	172,808	2,042,827	2,250,752	2,325,049	1,931,789	1,633,544	12,953,551	63.

$3,532,507
TOTAL FINANCING
OF CAPITAL
EXPENDITURES

Estimated construction expenditures for each construction division, including those under the current 1973 Project facilities program and those under the future program, are summarized in Table 9—together with a preliminary allocation of such expenditures among project purposes.

Line 1: The 1973 Project Facilities. The December 31, 1971 status is described below for each facility of the current construction program:

- Three dams and reservoirs of five planned for the Upper Feather Division—Frenchman and Antelope Dams and Lakes and Grizzly Valley Dam and Lake Davis—and 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 main line of the California Aqueduct (essentially completed for the first 407 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 (completed), and Perris Dam and Lake Perris (under construction).
- The West Branch of the California Aqueduct, including Castaic Dam and Lake and Gorman Creek Improvement (completed) and Pyramid Dam and Lake (under construction).
- Phase I of the Coastal Branch of the California Aqueduct (completed).

In addition, the current construction program includes all investigation, planning, and allocated general costs through 1973 for all Project facilities—including the Peripheral Canal, Upper Eel River Development, and the San Joaquin Drainage Facilities.

Because the 1973 Project facilities are nearing completion, associated costs are shown as one line item in Table 8. Facilities of the future construction program are shown by individual line items, however, and pertinent assumptions for each are described in the following paragraphs:

Line 2: Abbey Bridge and Dixie Refuge Dams and Reservoirs. These facilities have been scheduled for completion in 1979 and 1981, respectively, for water-oriented recreation in the Upper Feather area.

Line 3: Phase II of the North Bay Aqueduct. The Aqueduct between the Delta and the Napa Pipeline, which would replace the interim connection with the federal Solano Project, would be needed by 1980 for delivery of project water to Solano and Napa Counties. This date could be accelerated if mutually agreed to by the Counties and the Department.

Line 4: Delta Facilities. Construction of the Peripheral Canal would be completed by 1980 to protect the environment of the Sacramento-San Joaquin Delta (particluarly the striped bass and salmon fishery) and to facilitate transfer of project water across the Delta to Clifton Court Forebay of the California Aqueduct. The Peripheral Canal would be a joint federal-state facility with costs generally 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. This schedule and/or estimated expenditures may have to be modified (1) to conform to the timing of federal authorization and funding or (2) to permit the State to proceed without federal participation.

Line 5: California Aqueduct, Final Four Units at Delta Pumping Plant. These 1,067 cubic-foot-per-second units would be operational in January and March 1980, and in January and March 1985, respectively. This schedule could be accelerated or deferred depending on future changes of projected annual entitlement water deliveries in the south San Francisco Bay, San Joaquin Valley, Central Coastal, and Southern California areas.

Line 6: California Aqueduct, San Luis Canal Modifications. These modifications would be required to maintain and, eventually, to augment the present conveyance capacity between Dos Amigos Pumping Plant and Kettleman City. Measures to compensate for subsidence along the Canal would cost about $8 million (state share) during the period 1979 through 1983. About $11 million would be expended during the period 1983 through 1985 for raising the Canal lining to increase the State's capacity by about 1,000 cubic feet per second.

Line 7: California Aqueduct, Final Three Units at A. D. Edmonston Pumping Plant. These 315-cubic-foot-per-second units would be operational in June 1983, October 1983, and February 1984, respectively. This schedule could be accelerated or deferred depending on future changes of projected annual entitlement water deliveries in Southern California.

Line 8: California Aqueduct, Staged Units and Pipelines South of A. D. Edmonston Pumping Plant. Certain aqueduct features were initially constructed to a fraction of the required ultimate capacity in order to defer project expenditures. Additional capacity would be installed as needed to convey increased project water deliveries. These features include Pastoria Creek Siphon (to be completed in 1983) and Antelope Siphon (to be completed in 1975); the final two pumping units and discharge line at Pearblossom Pumping Plant and the final generating unit and penstock at Devil Canyon Powerplant (to be operational in 1975); and Castaic Dam Outlet Works, Second Stage (to be completed in 1980).

TABLE 9: PROJECT CONSTRUCTION EXPENDITURES

(in thousands of dollars)

FACILITIES AND CONSTRUCTION DIVISIONS	CURRENT PROGRAM -- THE "1973 PROJECT FACILITIES"			FUTURE CONSTRUCTION PROGRAM	TOTAL	PRELIMINARY ALLOCATIONS AMONG PROJECT PURPOSES			
	Incurred thru 1971	To be Incurred	Subtotal			Water Supply and Power Generation	Flood Control	Recreation and Fish and Wildlife Enhancement	Other(a
Feather River Facilities:									
Upper Feather Division	14,361	8	14,369	13,465	27,834	1,296	0	26,538	0
Oroville Division	499,728	4,935	504,663	912	505,575	425,319	68,604	11,652	0
North Bay Aqueduct	4,033	84	4,117	15,129	19,246	19,241	0	1	4
Delta Facilities (State share)	15,863	3,215	19,078	153,704	172,782	148,609	0	24,173	0
South Bay Aqueduct	67,577	362	67,939	1,043	68,982	49,470	5,586	13,900	26
California Aqueduct:									
North San Joaquin Division	154,734	739	155,473	16,907	172,380	166,423	0	5,957	0
San Luis Division	176,648	2,651	179,299	18,907	198,206	191,297	0	6,687	222
South San Joaquin Division	246,262	9,876	256,138	1,279	257,417	249,467	0	7,950	0
Tehachapi Division	239,407	17,865	257,272	28,594	285,866	277,298	0	8,568	0
Mojave Division	184,761	15,133	199,894	27,896	227,790	220,446	0	7,344	0
Santa Ana Division	118,970	60,811	179,781	9,381	189,162	183,724	0	5,438	0
West Branch	279,238	60,969	340,207	8,242	348,449	335,823	0	12,626	0
Coastal Branch	13,854	252	14,106	78,692	92,798	92,694	0	0	104
Subtotal	1,413,874	168,296	1,582,170	189,898	1,772,068	1,717,172	0	54,570	326
Upper Eel River Development	6,698	749	7,447	299,406	306,853	303,548	0	0	3,305
San Joaquin Drainage Facilities	6,077	0	6,077	0	6,077	0	0	0	6,077
Unassigned	5,192	1,453	6,645	1,372	8,017	0	0	0	8,017
TOTAL	2,033,403	179,102	2,212,505	674,929	2,887,434	2,664,655	74,190	130,834	17,755

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

Line 9: California Aqueduct, Buttes Dam and Reservoir. This off-aqueduct reservoir would be needed by 1985 to regulate project water deliveries to Antelope Valley-East Kern Water Agency. Under the Agency's water supply contract, construction of this facility by the State is conditioned on engineering and financial feasibility.

Line 10: California Aqueduct, Final Three Units at Both Las Perillas and Badger Hill Pumping Plants. These 112 cubic-foot-per-second units have already been installed by the Berrenda Mesa Water District, at the District's expense, under special agreements with the Department. This analysis is based on the assumption that the Department would replace Units No. 4 by December 1981 and would purchase, at depreciated values, Units No. 5 (together with the second discharge line at Badger Hill Pumping Plant, also constructed by the District) in January 1977 and Units No. 6 in January 1985. The date for purchase of Units No. 6 could be modified depending on future deliveries from the Coastal Branch.

Line 11: California Aqueduct, Phase II of the Coastal Branch. The Coastal Branch, from and including the Devil's Den Pumping Plant to Santa Maria Terminus, would be operational in 1980 to permit delivery of project water to San Luis Obispo and Santa Barbara Counties. Under the Counties' water supply contracts, construction of Phase II could be accelerated, deferred, or eliminated entirely—depending on the exercise of options available to the Coun-

Line 12: California Aqueduct, General Costs. These expenditures cover such items as general design and construction costs, the completion of aqueduct monitor and control systems and operation and maintenance facilities, and other costs associated with aqueduct operations as a whole. Portions of these costs would be allocated to the aqueduct units described in the preceding paragraphs.

Line 13: Subtotal, California Aqueduct.

Line 14: Miscellaneous Project Costs. These expenditures cover such items as the completion of monitor and control systems and other completion activities for facilities other than the California Aqueduct.

Line 15: Upper Eel River Development, Trans-Basin Diversion Works. The project water yield supplied by Oroville, San Luis, and the Peripheral Canal would have to be supplemented by 1996 to satisfy water service obligations under executed contracts. Additional Delta outflow requirements could advance this date. Under current assumptions, state-constructed works which would convey Eel River water to the Sacramento River Basin, together with reservoir storage constructed on the Eel River by the United States Corps of Engineers, would supply the required additional yield of 700,000 acre-feet annually at the Sacramento-San Joaquin Delta. (See "Other Capital Requirements" concerning state payments for principal and interest costs to the Corps of Engineers for constructing reservoir storage on the Eel River.)

Lines 16–17: Total Future Construction Program and Total Project Construction Expenditures.

Other Capital Requirements

Demands on capital funds other than the State's expenditures for constructing project facilities generally exclude "interest costs during construction"—conventionally, a capital requirement—since Burns-Porter funds legally cannot be applied to such costs. Furthermore, these demands also exclude the use of certain construction funds, other than Burns-Porter funds, for paying a portion of Burns-Porter bond service during the project construction period which could also be associated with capital expenditures. An estimated $166 million of such funds may be used through 1982. After 1982, growing revenues from project customers are expected to exceed annual operating costs and all bond service requirements. As presented in this chapter, the use of certain construction funds for Burns-Porter Bond service is more conveniently associated with the application of annual revenues because (1) such use is of a higher priority than the use of these funds for construction under the Department's management of the Project, (2) the particular construction funds so used will accrue throughout most of the project repayment period, similar to the accrual of revenues, and (3) payment of bond service is primarily borne by revenues.

Line 18: Davis-Grunsky Act Program. This state financial assistance program, for water developments by local public agencies, is associated with the State Water Project to the extent of $130 million in capital expenditures. Capital expenditures for the Program include disbursements under approved loans and grants and the Department's administrative costs while the respective developments are under construction.

Line 19: Upper Eel River Development, Eel River Storage. The Department assumes that principal and interest payments for reservoir storage constructed on the Eel River by the Corps of Engineers would be made under a federal Water Supply Act of 1958 contract. As has been permitted under such repayment contracts, storage could be divided into several blocks with the capital costs of each block being repaid in 50 equal annual installments of principal and interest commencing in the year the block was first used. For this analysis, the Department assumes that required Eel River storage would be divided into two blocks, with repayment of the capital costs of the first block commencing in 1996 and of the second block, in 2003. The applicable federal interest rate is assumed to be 4 percent per annum. These assumptions will be reevaluated periodically.

Line 20: Special Capital Requirements under Revenue Bond Financing. Under revenue bond financing, the principal amounts of bond sales must include proceeds for requirements other than for application to construction expenditures. These special requirements and the principal amounts of sales are indicated below for actual and assumed revenue bond issues:

Revenue Bond Sales	*(in millions) Oroville Aqueduct Division Facilities (actual)*	*(assumed)*
Proceeds available for application to project construction expenditures	$218.0	$128.0
Plus, Other capital requirements:		
Reimbursement of General Fund	$ 2.6	$ 0.0
Bond interest through one year following completion of construction	19.9	11.6
Operating costs for one year following completion of construction	1.5	0.8
Bond discount	3.0	2.6
Subtotal	$ 27.0	$ 15.0
Total, Principal amount of bonds	$245.0	$143.0

These special requirements are not involved under general obligation bond financing. Under the Burns-Porter Act, such financing cannot be applied to bond interest (whether incurred during the construction period or thereafter) or to annual operating costs. By law, general obligation bonds cannot be sold at a discount.

Lines 21–22: Total, Other Capital Requirements and Total Capital Expenditures.

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

- *Burns-Porter financing,* derived from the sale of *California Water Resources Development Bonds* (general obligation bonds) and a portion of the State's tideland oil and gas revenues that are deposited in the *California Water Fund* as authorized by the Burns-Porter Act (California Water Code Sections 12930–12944), approved by the Electorate in 1960.
- *Revenue Bond financing,* derived from the sale of revenue bonds as authorized by the Central Valley Project Act (California Water Code Sections 11100–11925). The Department's authority to issue revenue bonds was confirmed by a decision of the Supreme Court of California in 1963 (*Warne* v. *Harkness,* 60 Cal. 2d 579).
- *Miscellaneous Receipts,* derived from payments and appropriations (including certain additional tideland oil and gas revenues) as authorized by a variety of special contracts, cost-sharing agreements, and legislative actions concerning the State Water Project.

California Water Resources Development Bonds, hereafter called "Water Bonds", have financed most of the construction costs of the Project. The Burns-Porter Act authorizes an issue of $1.75 billion of Water Bonds, supported by the credit of the State. This authorization includes a reservation of $130 million specifically for the Davis-Grunsky Act Program. Proceeds from the sale of Water Bonds are deposited in the *California Water Resources Development Bond Fund-Bond Proceeds Account,* from which moneys may be expended only for the construction of project facilities (or costs in lieu thereof) and for the Davis-Grunsky Act Program.

Moneys deposited in the California Water Fund, so named by the Legislature in 1959 (formerly, the Investment Fund, established in 1956), are appropriated for purposes of the Burns-Porter Act. Such deposits are derived from a portion of State's tideland oil and gas revenues under a continuing authorization. In the past, the Legislature has acted both to decrease and increase the level of deposits. Money may be expended from the Fund only in the manner described above for the California Water Resources Development Bond Fund-Bond Proceeds Account.

Almost $245 million in revenue bonds had been sold by the Department as of December 31, 1971. Additional issues of revenue bonds are planned to supplement project financing. Proceeds from the sale of revenue bonds are deposited in the *Central Valley Water Project Construction Fund* from which money is expended only for purposes specified in the resolution authorizing such sale. These purposes include the payment of (1) bond interest during the construction period, and for one year following completion of construction, and (2) operating costs during one year after completion of construction.

Miscellaneous receipts are also deposited in the *Central Valley Water Project Construction Fund* and expended for (1) bond interest during the construction, and (2) operating costs during one year after completion of construction. Under the Department's financial management of the Project, the first call on miscellaneous receipts is coverage of any Water Bond service during the overall project construction period which exceeds available annual revenues—to avoid withdrawals from the State General Fund for that purpose.

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

Line 23: Application of California Water Fund Moneys. The Burns-Porter Act provides that any available money in the California Water Fund shall be applied in lieu of the proceeds from the sale of Water Bonds. When the Act became effective in late 1960, approximately $97 million had been accumulated in the Fund. This balance, together with continuing annual appropriations to the Fund through June 28, 1968, financed a total of $176 million of project construction costs. On June 28, 1968, SB 261 became effective (California Statutes of 1968, Chapter 411) which transferred the remaining balance to the Central Valley Water Project Construction Fund and eliminated accruals to the California Water Fund until July 1, 1972. On that date, appropriations will again be made to the California Water Fund up to $25 million annually.

The projected use of appropriations to the California Water Fund is shown in the financial analysis only to the extent required under current estimates of construction expenditures. However, the Department assumes that appropriations to the Fund would continue indefinitely in the full annual amounts now provided for by law. The Department also assumes that repayments to the California Water Fund, to be derived from project revenues in excess of operating costs and bond service, could be available for expenditure—such as for principal and interest payments now associated with water conservation storage on the Eel River.

As shown in Line 23, use of the full annual appropriations of tideland revenues to the Fund (and short-term interest earnings thereon, amounting to $0.75 million maximum annually) would be required for financing construction expenditures through 1979. While the Department assumes that full annual appropriations would continue to be available to the Fund, the financial analysis indicates that required expenditures from the Fund would be less than $25 million annually after 1979. Commencing in 1982, increasing annual project repayments to the Fund (see Line 60, Spread 2) could be used in lieu of annual appropriations so that all financing required after about 1990 could be provided by such repayments.

Line 24: Application of Proceeds from Sale of Central Valley Project Revenue Bonds, Oroville Division. All original proceeds from sale of Oroville Revenue Bonds had been applied as of December 31, 1971, except $1.6 million which is reserved for future construction expenditures under the bond resolution.

Line 25: Application of Proceeds from Sale of Central Valley Project Revenue Bonds, Aqueduct Facilities. As previously indicated, proceeds from the sale of proposed revenue bonds are currently assumed to provide $128 million for application to the construction expenditures shown in this analysis (which exclude the costs of proposed facilities of the Piru Creek Project). Since the aqueduct facilities (other than proposed facilities of the Piru Creek Project) are well under construction, a major part of the proceeds would reimburse those project funds used to initially finance such construction and would be used in lieu of those funds in the future construction program beyond the 1973 Project facilities.

Line 26: Application of Proceeds from Sale of Water Bonds Reserved for Davis-Grunsky Act Program. For simplification, the $130 million of capital expenditures authorized for the Davis-Grunsky Act Program under the Burns-Porter Act are shown to be funded solely by proceeds from the sale of Water Bonds. Actually, other project funds were used for a portion of these expenditures in lieu of bond proceeds. This simplification does not in any way affect the validity of the analysis.

Line 27: Application of Proceeds from Sale of Water Bonds Reserved for "Additional Facilities" (Upper Eel River Development). The Burns-Porter Act provides that to the extent California Water Fund moneys are expended, an equal amount of proceeds from the sale of Water Bonds is reserved ("offset") for financing the construction of certain additional project facilities (now consisting of the proposed Upper Eel River Development). The maximum reservation of "offset" bonds is effectively limited to $176 million—equal to the amount of California Water Fund moneys already expended for the Project. By the time when appropriations can again accrue to the Fund, July 1, 1972, all Water Bond proceeds will have been either expended or reserved for additional facilities and the Davis-Grunsky Act Program. Under assumptions basic to the cost projections shown in this analysis, $167 million of the $176 million reservation would not be required for financing the Upper Eel River Development—if Eel River storage would, in fact, be constructed by the United States and capital provided by the Congress. The remaining costs of the Development could be financed by other available funds. However, the timing required for such construction or use of some alternative development in lieu of the one assumed would have a direct bearing on the projected use of "offset" bonds.

Line 28: Application of Proceeds from Sale of Water Bonds for the 1973 Project Facilities. This application is limited to $1.444 billion of the total $1.75 billion Burns-Porter authorization—after deducting the $130 million reservation for the Davis-Grunsky Act Program and the $176 million "offset" reservation for additional facilities. The total application is expected to be complete by July 1, 1972.

Line 29: Total Application of Proceeds from Sale of Bonds. See Table 10 for a summary of actual and projected bond sales, together with information concerning interest costs and principal maturities. For purposes of simplifying the financial analysis, Table 10 indicates the sale of $43 million of Water Bonds during January 1973 for financing the remainder of the Davis-Grunsky Act Program and for planning costs through 1980 for the Upper Eel River Development. These bonds probably would be sold in relatively small blocks of from $10 million to $15 million as the need arises. This simplification does not affect the overall validity of the analysis.

Line 30: Application of Miscellaneous Receipts. Because the first call on miscellaneous receipts is coverage of any Water Bond service which exceeds available operating revenues, the portion of receipts remaining for application to construction expenditures depends on an analysis of total available receipts and project operating revenues in relation to operating costs and bond service requirements—shown on Spread 2 of Table 8.

Line 31: Total Financing of Capital Expenditures. This line corresponds with Line 17 and illustrates that all capital expenditures would be funded under the analysis.

Miscellaneous Receipts

Described below are the sources of miscellaneous receipts available for application to (1) Water Bond service and (2) project construction expenditures.

Line 32: Federal Payments for "Open Space" and for Project Costs Allocated to Flood Control. About $1.5 million in federal contributions had been received through December 31, 1971, for the costs of project and recreation development lands reserved for "open space"—about the total expected. Federal contributions received through December 31, 1971, for project costs allocated to flood control totalled $73.1 million—$68.2 million for Lake Oroville and $4.9 million for Lake Del Valle. Additional contributions in the amount of $1.0 million are expected for Lake Oroville. Contributions for Lake Del Valle are complete under the present agreement; however, there is a possibility of a supplemental agreement under which the contributions would be increased by about $0.6 million (see section entitled "South Bay Aqueduct", Chapter I).

TABLE 10: BOND SALES AND PROJECT INTEREST RATES

Bond Sales	Dollar-years (a	Interest Cost (b	Percent Interest Cost (c	Project Interest Rate (d
	(1)	(2)	(3)	(4)
Actual Issues				
$50,000,000 Bond Anticipation Notes, date of sale 11/21/63	26,944	531	1.970	1.970
$100,000,000 Series "A" Bonds, date of sale 2/18/64	3,402,000	119,750	3.520	3.508
$50,000,000 Series "B" Bonds, date of sale 5/5/64	1,726,000	60,986	3.533	3.516
$100,000,000 Series "C" Bonds, date of sale 10/7/64	3,452,000	123,764	3.585	3.544
$100,000,000 Series "D" Bonds, date of sale 2/16/65	3,497,900	122,403	3.499	3.531
$100,000,000 Series "E" Bonds, date of sale 11/23/65	3,497,900	130,029	3.717	3.573
$100,000,000 Series "F" Bonds, date of sale 6/8/66	3,497,900	137,359	3.927	3.638
$100,000,000 Series "G" Bonds, date of sale 11/22/66	3,497,900	143,788	4.111	3.711
$100,000,000 Series "H" Bonds, date of sale 3/21/67	3,497,900	129,261	3.695	3.709
$100,000,000 Series "J" Bonds, date of sale 7/18/67	3,497,900	143,199	4.094	3.754
$100,000,000 Series "K" Bonds, date of sale 11/14/67	3,497,900	163,887	4.685	3.853
$150,000,000 Revenue Bonds, Oroville Division, Series "A", date of sale 4/3/68	5,228,700	270,289	5.197	-
$100,000,000 Series "L" Bonds, date of sale 7/11/68	3,497,900	166,918	4.772	3.941
$100,000,000 Series "M" Bonds, date of sale 10/22/68	3,497,900	169,989	4.860	4.021
$94,995,000 Revenue Bond, Oroville Division, Series "B" date of sale 4/1/69	3,423,460	195,902	5.767	-
$46,761,000 Cumulative 1970 General Fund Borrowing; repaid 7/10/70	4,938	346	7.007	4.021
$200,000,000 Series "N" and "P" Bond Anticipation Notes, date of sale 6/16/70	200,000	11,660	5.830	4.030
$100,000,000 Series "N" Bonds, date of sale 2/2/71	3,447,900	190,292	5.519	4.148
$100,000,000 Series "Q" Bond Anticipation Notes, date of sale 3/10/71	100,000	2,349	2.350	4.143
$100,000,000 Series "P" Bonds, date of sale 4/21/71	3,397,900	193,377	5.691	4.255
$150,000,000 Series "Q" and "R" Bonds, date of sale 11/9/71	5,171,850	265,734	5.138	4.342
Projected Issues				
$40,000,000 Series "S" Bonds, date of sale 3/28/72	1,399,160	76,509	5.468	4.371
$143,000,000 Revenue Bond, Aqueduct Power Facilities, date of sale 7/1/72	4,568,257	274,095	6.0	4.499
$43,096,000 Series "T" Bonds, date of sale 3/1/73	1,507,985	82,970	5.5	4.524

a) A unit equivalent to one dollar of principal amount outstanding for one year.
b) In thousands of dollars.
c) The total interest cost (without regard to premiums received) divided by the total dollar-years, expressed as a percent.
d) Determined by dividing cumulative interest costs by cumulative dollar-years, expressed as a percent. Exluding Central Valley Project Revenue Bonds, Oroville Division, which do not affect the calculation of the "project interest rate".

Line 33: Special Appropriations Made Prior to the Burns-Porter Act. Special legislative appropriations financed all construction expenditures prior to the effective date of the Burns-Porter Act, November 4, 1960. Expenditures under these prior appropriations substantially ended in 1963 and totalled about $11 million from the General Fund and $88 million from the Investment Fund (succeeded by the California Water Fund in 1959). These amounts exclude over $1 million from the Local Projects Assistance Fund which financed the Davis-Grunsky Act Program prior to $130 million authorization of the Burns-Porter Act. While these special appropriations do not fit the general definition of "miscellaneous receipts" in that they were not deposited in the Central Valley Water Project Construction Fund, they are so classified for simplifying the presentation of the financial analysis.

Line 34: Continuing Appropriations for Construction Costs Allocated to Recreation and Fish and Wildlife Enhancement. By enactment of AB 12 (California Statutes of 1966, First Extraordinary Session, Chapter 27), $5 million of the State's tideland oil and gas revenues is deposited annually in the Central Valley Water Project Construction Fund for repayment of (1) project costs (construction expenditures) allocated to recreation and fish and wildlife enhancement and (2) costs of acquiring lands for recreation developments associated with the Project. As indicated in Table 9, such costs would total about $131 million. Assuming that two-thirds of such expenditures would be financed by the proceeds from the sale of Water Bonds bearing an average interest cost of 4.4 percent, the $5 million annual appropriation would extend through 2017 in order to reimburse the Project, with interest.

Line 35: Special Appropriations Under SB 261 (1968). By enactment of SB 261, the June 28, 1968 balance of moneys in the California Water Fund was transferred to the Central Valley Water Project Construction Fund, together with appropriations of tideland oil and gas revenues in the annual amounts of $11 million through June 30, 1970, and $25 million thereafter until June 30, 1972.

Line 36: City of Los Angeles Payments for Cooperative (Castaic) Power Development. Under a 70-year contract executed September 2, 1966, the State constructed the Angeles Tunnel with a 30-foot diameter instead of with a 17-foot diameter as originally planned. In return, the City is constructing and will operate and maintain a 1,250-megawatt Castaic Powerplant and will supply the State, without charge, power equivalent in value to that which the State would have produced in its originally planned 220-megawatt powerplant. The value of this supply is accounted for in a subsequent section as a credit to project operating costs in the same manner as other aqueduct power credits. In addition, the City is making certain payments, shown in Line 36, to ensure that the benefits of joint development are equally realized by both the State and the City. Neither the payments shown in Line 36 nor the estimated construction expenditures for the Project include those for the Castaic Surge Chamber—constructed by the State but directly financed by the City.

Line 37: Water Supply Contractor Advances for State Construction of Requested Works. Water supply contractors are required to finance, in advance, the construction costs of delivery structures (turnouts) and of any excess capacity the Department is requested to construct in project facilities. (Excess capacity may be requested for the purpose of increasing instantaneous delivery rates over limiting rates set forth in the contracts. The costs of requested excess capacity do not include those of constructing tunnel linings and siphons of the Tehachapi Crossing so as to accommodate a future 1,260 cubic foot per second increase in capacity—or of constructing East Branch canals so as to accommodate a future 700 cubic foot per second increase in capacity. By agreement with water supply contractors, these costs are classified as basic project costs—see pages 22–23, Bulletin 132-67.)

Advance payments for State construction costs of works requested by the respective contractors are summarized below:

Requested excess capacity:	*(in millions)*
• The Metropolitan Water District of Southern California:	
(a) for 188 cubic foot per second excess capacity in reaches from Kettleman City to the Junction of the West Branch	$19.4
(b) for enlargement of Lake Perris above a basic capacity of 100,000 acre-feet	13.9
(c) for 787 cubic foot per second excess capacity in the San Bernardino Tunnel	12.0
• San Gabriel Valley Municipal Water District, for 21 cubic foot per second excess capacity in the San Bernardino Tunnel	0.3
• Antelope Valley-East Kern Water Agency, for 19 cubic foot per second excess capacity in the reaches of the West Branch from the Junction through the Quail facilities	0.3
Subtotal	$45.9
Required advance payment of water charges by The Metropolitan Water District of Southern California for originally requested excess capacity in the West Branch, now classified as basic project capacity	$16.3
Requested delivery structures constructed or to be constructed by the State	$ 8.3
Total water supply contractor advances for state construction of requested works	$70.5

Advance payments for requested excess capacity are determined by contract formula so as to assure more than sufficient funds to cover the additional construction costs involved. For purposes of the financial analysis, the Department assumes that such advance payments would exceed the additional construction costs involved, with interest, by $30.6 million. Credits for these assumed overpayments have been applied to reduce estimated project operating revenues which otherwise would be derived from water charges, described in a subsequent section.

Line 38: Carryover (−) and Application (+) of Miscellaneous Receipts Held Temporarily in Reserve. Generally, the only carryover of miscellaneous receipts from year-to-year concerns a temporary reserve to ensure that future annual service on Water Bonds will be met. Portions of annual miscellaneous receipts accruing after 1979 and all such receipts accruing after 1982—too late to be applied to either bond service or construction expenditures under this analysis—are included in Line 62 as being available for financing future construction of the State Water Resources Development System.

Line 39: Investment Earnings on Unexpended Miscellaneous Receipts. The Department assumes that future balances remaining in the Central Valley Water Project Construction Fund, including unexpended revenue bond proceeds, would realize short-term interest income at 5.5 percent per annum. This line also includes income from certain right-of-way sales in the amount of $1.5 million.

Line 40: Total Miscellaneous Receipts.

Project Operating Revenues

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

Line 41: Payments by the Power Pool Companies under Oroville-Thermalito Power Sale Contract (extended). The Oroville-Thermalito Power Sale Contract will terminate on April 24, 2018, or when Central Valley Project Revenue Bonds, Oroville Division, are retired—whichever date is later. The Companies are obligated to pay almost $8.1 million semiannually to the Department until contract termination. These firm payments are based on an estimated annual net energy generation of 2.1 billion kilowatt-hours. The contract provides for an energy adjustment account which can be periodically cleared through supplemental payments by the Companies or through payments by the Department in the event actual annual net energy generation is more or less than 2.1 billion kilowatt-hours, respectively.

For the financial analysis, the Department assumes that revenues from the sale or other disposal of Oroville-Thermalito power would continue to be available to the Project after termination of the present contract—under payment terms similar to the present contract.

Line 42: Assumed Payments by Contractors for Construction of Aqueduct Facilities. These revenues would pay annual operating costs and annual debt service on revenue bonds which would be issued to provide funds for construction of certain Southern California aqueduct facilities allocable to power generation. Such payments would be deducted from the charges otherwise payable by water supply contractors receiving water deliveries below the facilities, since the costs of the facilities would not be reimbursable under the water supply contracts.

Line 43: Payments by Water Supply Contractors. Water supply contracts provide for payments of two charges: (1) a Delta Water Charge and (2) a Transportation Charge.

The Delta Water Charge is a charge for each acre-foot of water the contractors are entitled to receive; it is computed so as to return to the State during the contract term all "reimbursable" costs of the "project conservation facilities", together with interest thereon. Project conservation facilities are defined as those facilities which conserve water, including Lake Oroville, Delta Facilities, Upper Eel River Development, San Luis Reservoir and a portion of the California Aqueduct leading thereto from the Delta. The State determines which costs are reimbursable. Both the costs and revenues of the Oroville power facilities are included in the determination of the Delta Water Charge.

The Transportation Charge is computed so as to return to the State during the contract term the reimbursable costs of the aqueducts necessary to deliver water to the respective contractors, together with interest thereon. (As assumed herein, costs of certain facilities in Southern California allocated to power generation would not be reimbursable under the water supply contracts but would be reimbursable under an aqueduct facilities contract.) Each year's costs of each aqueduct reach are allocated among those contractors receiving water through that reach. For contractors with predominately municipal and industrial water use, the allocated amount of each year's construction expenditures is required to be repaid, together with interest, in 50 equal annual installments. For contractors with predominately agricultural water use, allocated construction costs are repaid by a uniform charge per acre-foot of water entitlement, computed so as to return to the State during the contract term such costs with interest.

Capital cost components of the Transportation Charge and all components of the Delta Water Charge are to be repaid with interest at the "project interest rate". The project interest rate is determined as the weighted average of the rates paid on securities issued to finance the project facilities, excluding Central Valley Project Revenue Bonds, Oroville Division. Under original contract provisions, the basis for determining the project interest rate was the weighted average of the rates paid on Water Bond sales only. Under contract amendments executed in 1969, after issuance of

Oroville Revenue Bonds, the basis was expanded to include the rates on all other securities sold thereafter for financing the project facilities. Table 10 presents a derivation of actual and projected project interest rates.

Operating cost components of the Transportation Charge are paid currently.

Table 11 presents a summary of actual and projected water charges by major categories. A reconciliation of these charges with reimbursable project costs is shown below:

A detailed development of water charges for each contractor is presented in Appendix B, which supports the Department's determination of 1973 water charges. However, there are significant differences between the bases for the financial analysis and for the determination of water charges, as follows:

- The future capital costs shown in Appendix B are based on state salaries and construction prices prevailing on December 31, 1971. The future capital costs shown in the financial analyses include allowances for price escalation.

- The calculations basic to Appendix B use the project interest rate which prevailed when this report was prepared (4.342 percent). The calculations basic to the financial analysis use projected rates shown in Table 10.

- 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 1971 and those to be paid in 1972 under outstanding statements with "one-shot" adjustments for any apparent overpayments or underpayments added to 1973 charges.

- The future charges developed in Appendix B are unadjusted. The future charges shown in the financial analysis include credits due to prepayments of the capital cost component which will result under various contract amendments involving excess aqueduct capacity.

- The calculations summarized in Appendix B are based on current criteria whereby the costs of aqueduct power facilities are reimbursable; the financial analysis considers such costs to be reimbursable, instead, under an aqueduct facilities contract.

- 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.)

Line 44: Federal Payments for Joint Operating Costs of the San Luis Facilities. Under the December 30, 1961 Agreement between the State and the United States, the Department operates and maintains the joint-use San Luis Facilities. Under the January 12, 1972 Supplement to the Agreement, the United States pays 45 percent of the costs incurred by the Department for these activities (excluding power costs), subject to review in 1975. The Department assumes that this percent federal share would continue indefinitely.

Line 45: State Appropriations for Operating Costs Allocated to Recreation. Under the Davis-Dolwig Act, the Legislature declared its intent that, except as funds are provided pursuant to AB 12 (1966), the Department's budget shall include appropriations from the General Fund of moneys necessary for enhancement of fish and wildlife and for recreation in connection with state water projects. Since the Department assumes that the $5 million annual appropriation under AB 12 is for repayment of construction costs, annual operating costs allocated to recreation and fish and wildlife enhancement would be reimbursed by General Fund appropriations. Such General Fund appropriations have been made in the total amount of $2,273,000—beginning in fiscal year 1962–63 and extending through fiscal year 1971–72. Although the 1972–73 appropriation was deleted from the Governor's Budget, the Department assumes that future appropriations will be made from the General Fund in annual amounts equal to those multiple-purpose operating costs of the Project that are allocable to recreation and fish and wildlife enhancement.

Line 46: Local Agency Payments Under Davis-Grunsky Loan Repayment Contracts. Reference was previously made to new policy for preferential consideration of loan applications for domestic water projects meeting public health and safety needs (see section entitled "Local Projects", Chapter I). This policy causes projected loan repayments to increase as compared with previous estimates. The amounts shown in Line 46 are based on the assumption that $20,200,000 in future loan contracts would be approved—with a five-year deferment and a 45-year repayment for each.

Line 47: Miscellaneous Revenues. Miscellaneous revenues include annual payments by the City of Los Angeles for a share of the maintenance costs of the Angeles Tunnel, interest earnings on unexpended proceeds from sale of Water Bonds, and other short-term investment earnings.

Lines 48–49: Total Project Operating Revenues and Total Miscellaneous Receipts and Project Operating Revenues.

Application of Revenues and Miscellaneous Receipts

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

(1) Project operating costs.

(2) Water Bond service.

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

(4) Deposits to a reserve for future construction of the State Water Resources Development System.

Line 50: Project Operating Costs. Actual and estimated project operating costs are presented in Table 11 under three bases: (1) by project facilities; (2) by type of component cost; and (3) by project purpose. Allowances for future price escalation are not included in these estimates.

The largest single component of project operating costs is electric power for the operation of pumps.

The power requirements of project pumping plants are met by project recovery generation and by purchased power. Sources of recovery generation are or will be San Luis Pumping-Generating Plant and Devil Canyon, Castaic, and San Luis Obispo Powerplants. Sources of purchased power are Canadian Entitlement, Bonneville Power Administration, and the California Suppliers.

The power purchase contracts entered into by the State establish firm rates until March 31, 1983. In projecting rates beyond March 1983 for the analyses shown in previous Bulletins 132, the Department assumed that the State would share in the future costs of a large nuclear power development and would realize anticipated economies from such cooperative development as compared with the rates established through March 1983. Estimated costs were based on conditions prevailing in 1967.

In light of recent cost trends, previously estimated costs of nuclear power development were clearly understated. Recent literature on nuclear generating plants scheduled for commercial operation in the late 1970's indicate that construction and operating costs are expected to increase substantially over estimates prepared in 1967. As reported on page 66 of Bulletin 132-71, higher construction costs for power development can be expected due to (1) the increased concern for environmental issues resulting in long construction delays, (2) more stringent licensing and safety requirements, and (3) escalation of labor costs. Nuclear fuel costs are also expected to increase due to the higher costs of uranium ore exploration and development and fuel element fabrication.

In view of forecasted increases in construction and operating costs of nuclear power developments, projected post-1983 power costs shown in future Bulletins 132 will be updated to reflect more realistic rates. Beginning with Bulletin 132-72, this updating will be accomplished in three stages so that Bulletin 132-74 will reflect power costs at current price levels. Estimated annual power costs of $58 million indicated in Table 11 under full operating conditions represents the first stage of updated power costs—the corresponding figure shown in Bulletin 132-71 was $40 million.

Line 51: Deposits to Special Reserves Under Revenue Bond Financing. Only those deposits derived from project operating revenues and miscellaneous receipts are shown in this line. In regard to Central Valley Project Revenue Bonds, Oroville Division, such deposits include the following:

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

In regard to future Aqueduct Facilities Revenue Bonds, such deposits would consist of $10.1 million to provide a reserve equal to the estimated maximum annual bond service. The general effect of these reserves, together with interest earnings thereon, would be to accelerate the last year that operating revenues would be applied to revenue bond service. For simplicity, the operation of these reserves is ignored in the financial analysis.

Lines 52–53: Payment of Service on Central Valley Project Revenue Bonds, Oroville Division. The annual service on Series A and B Oroville Revenue Bonds is shown in Table 12.

Lines 54–55: Payment of Service on Central Valley Project Revenue Bonds, Aqueduct Facilities. Assumptions concerning the service on future revenue bonds for the purposes of this analysis are as follows:

- All bonds would be sold in mid-1972.
- The net interest cost on sales would average 6.0 percent.
- The service pattern would 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.

TABLE 11: PROJECT

(in thousands

FEATURE	CALENDAR 1962 1971	1972	1973	1974	1975	1976	1977	1978
BY PROJECT FACILITY:								
Feather River Facilities	9,083	4,271	4,540	4,685	4,768	4,810	4,833	4,885
North Bay Aqueduct	270	67	67	67	67	69	73	81
Delta Facilities (State share)	0	0	0	0	0	0	0	0
South Bay Aqueduct	6,415	1,364	1,314	1,306	1,313	1,311	1,312	1,284
California Aqueduct:								
Main Line - Delta to A. D. Edmonston	28,446	11,890	12,713	13,033	16,119	15,419	15,990	16,800
Main Line - A. D. Edmonston to Lake Perris	0	5,916	8,539	9,779	10,334	11,167	11,310	11,413
West Branch	0	1,352	852	1,108	351	-58	-55	-527
Coastal Branch	2,215	825	764	768	772	779	781	757
Upper Eel River Development:								
Trans-Basin Diversion Works	0	0	0	0	0	0	0	0
Payments to Corps for Operating Costs	0	0	0	0	0	0	0	0
San Joaquin Drainage Facilities (waste water monitoring)	0	0	0	0	0	0	0	0
Davis-Grunsky Act Program (continuing administrative costs)	0	37	44	119	62	73	83	95
TOTAL OPERATING COSTS	46,429	25,722	28,833	30,865	33,786	33,570	34,327	34,788
BY COMPOSITION:								
Salaries and Expenses of Headquarters Personnel	50,364	6,318	6,600	6,887	6,931	6,957	6,903	6,912
Salaries and Expenses of Field Personnel:								
Operations	39,399	5,337	5,844	5,928	5,953	5,936	5,963	5,987
Plant Maintenance	(a	3,642	4,151	4,268	4,289	4,308	4,324	4,339
Civil Maintenance	(a	5,477	5,863	6,013	6,047	6,035	6,049	6,064
Pumping Power:								
Used by Pumping Plants	10,260	7,226	13,348	14,039	14,259	14,694	16,083	17,024
Produced by Recovery Plants	-578	-1,183	-4,107	-4,549	-4,547	-5,266	-5,853	-6,333
Deposits to Replacement Reserves	1,363	696	856	862	864	900	900	900
Other Costs(b	(c	459	477	460	428	392	389	391
Less, Portion of Costs Incurred During Construction	-54,379	-2,250	-4,199	-3,043	-438	-386	-431	-496
TOTAL OPERATING COSTS	46,429	25,722	28,833	30,865	33,786	33,570	34,327	34,788
BY PROJECT PURPOSE:								
Water Supply and Power Generation	39,282	22,707	25,530	27,353	30,221	30,008	30,800	31,235
Recreation and Fish and Wildlife Enhancement	2,020	1,228	1,466	1,578	1,673	1,669	1,643	1,655
Flood Control	57	31	31	30	31	30	30	30
Miscellaneous Purposes:								
Federal Share, San Luis Facilities	5,070	1,706	1,750	1,772	1,787	1,778	1,759	1,763
Other (Davis-Grunsky, Drainage, City of L.A.)	0	50	56	132	74	85	95	105
TOTAL OPERATING COSTS	46,429	25,722	28,833	30,865	33,786	33,570	34,327	34,788

a) These costs are included in the $39,399,000 shown for Operations.
b) Includes other costs such as annual bond issuance expenses, Oroville-Thermalito insurance premiums, and payments to Corps for operating costs, Upper Eel River Development.
c) These costs are included in the $50,490,000 shown for Salaries and Expenses of Headquarters Personnel.

OPERATING COSTS

of dollars)

YEAR	YEARS											TOTAL, 1962-2035
1979	1980	1981	1982	1983	1984	1985	1986 - 1995	1996 - 2005	2006 - 2015	2016 - 2025	2026 - 2035	
4,976	5,030	5,044	5,095	5,091	5,059	5,066	50,609	50,506	50,489	50,489	50,489	329,818
84	309	289	291	303	300	301	3,417	3,687	3,666	3,650	3,641	20,699
0	2,181	1,936	1,944	1,996	1,993	1,999	18,205	15,686	15,621	15,582	15,559	92,702
1,319	1,399	1,380	1,389	1,500	1,472	1,470	14,969	15,492	15,282	15,153	15,096	101,540
16,757	17,944	19,965	20,416	20.739	20,554	22,703	269,577	297,061	317,451	333,536	339,694	1.826,807
12,554	13,380	13,506	14,756	15,522	16,329	16,811	214,340	249,838	277,332	298,240	298,486	1,509,552
-429	-1,087	-990	-943	-1,172	-1,323	-1,242	-18,718	-22,693	-30,510	-34,246	-35,976	-146,306
775	1,396	1,341	1,363	1,495	1,488	1,520	17,247	19,306	19,409	19,177	19,077	111,255
0	0	0	0	0	0	0	0	16,307	19,594	19,594	19,594	75,089
0	0	0	0	0	0	0	0	10,300	14,500	14,500	14,500	53,800
0	79	79	79	79	79	79	790	790	790	790	790	4,424
100	100	100	100	100	100	100	1,000	1,000	1,000	1,000	1,000	6,213
36,136	40,731	42,650	44,490	45,653	46,051	48,807	571,436	657,280	704,624	737,465	741,950	3,985,593
6,934	8,409	8,137	8,137	8,137	8,137	8,137	79,310	76,620	76,620	76,620	76,620	539,690
6,045	6,270	6,270	6,270	6,270	6,270	6,270	62,750	67,342	68,493	68,493	68,493	459,583
4,356	4,765	4,765	4,765	4,765	4,765	4,765	47,920	51,368	52,228	52,228	52,228	318,239
6,078	6,419	6,419	6,419	6,419	6,419	6,419	64,340	69,060	70,239	70,239	70,239	430,257
19,916	21,790	24,126	26,420	27,485	28,475	30,917	403,391	477,335	536,053	573,161	576,470	2,852,472
-8,068	-8,142	-8,292	-8,794	-8,693	-9,133	-8,859	-97,215	-108,510	-127,354	-131,510	-130,330	-687,316
900	935	935	935	935	980	993	9,933	9,933	9,933	9,933	9,933	63,619
423	390	388	389	387	388	411	3,985	14,132	18,412	18,301	18,297	78,899
-448	-105	-98	-51	-52	-250	-246	-2,978	0	0	0	0	-69,850
36,136	40,731	42,650	44,490	45,653	46,051	48,807	571,436	657,280	704,624	737,465	741,950	3,985,593
32,614	36,655	38,580	40,341	41,498	41,975	44,638	530,086	615,514	662,940	695,447	699,690	3,717,114
1,616	2,046	2,039	2,117	2,116	2,044	2,135	21,095	20,909	20,805	21,138	21,380	132,372
30	31	31	31	31	31	31	306	305	305	303	303	2,008
1,764	1,754	1,757	1,758	1,764	1,760	1,759	17,516	17,460	17,450	17,450	17,450	117,027
112	245	243	243	244	241	244	2,433	3,092	3,124	3,127	3,127	17,072
36,136	40,731	42,650	44,490	45,653	46,051	48,807	571,436	657,280	704,624	737,465	741,950	3,985,593

Lines 56–57: Payment of Water Bond Service. Service on each series of Water Bonds sold through Series R is shown in Table 13, together with service on all remaining Water Bond sales as projected in this analysis. Assumptions concerning the characteristics of projected sales are summarized below:

- The net interest cost would average 5.5 percent.
- The service pattern would be the same as described above for future revenue bonds.

Line 56 also includes over $0.3 million in interest payments to the General Fund for the temporary loan of $46.8 million in 1970, repaid by proceeds from sale of Series N Water Bonds.

Lines 58–59: Total Payments of Bond Service.

Line 60: Repayment of the California Water Fund. The Burns-Porter Act does not require the repayment of expenditures from the California Water Fund with interest. Under the financial analysis, expenditures from the California Water Fund would be substantially repaid by 2010. The continuing annual repayments shown thereafter represent the replacement, with operating revenues, of expenditures from the Fund for annual principal and interest payments to the Corps of Engineers for water conservation storage on the Eel River.

Line 61: Application of Miscellaneous Receipts to Construction Expenditures. All projected annual accruals of miscellaneous receipts would be totally applied to Water Bond service and construction expenditures through 1979 under the financial analysis. After 1979, all financing for future construction could be provided from the California Water Fund. After 1979, the portions of annual receipts not applied to Water Bond service would be reserved for financing future construction—shown in line 62. The actual and projected application of miscellaneous receipts to Water Bond service is as follows:

	(*in millions*)
Actual through 1971	$ 72.7
Projected:	
1972	$ 12.6
1973	24.3
1974	4.7
1975	11.2
1976	8.9
1977	9.5
1978	9.0
1979	4.7
1980	4.1
1981	3.0
1982	1.4
Total	$166.1

California Aqueduct Near Patterson

DWR 3882-1

TABLE 12: ANNUAL BOND SERVICE ON CENTRAL VALLEY PROJECT REVENUE BONDS, OROVILLE DIVISION

(in thousands of dollars)

CALENDAR YEAR	CVP REVENUE BONDS SERIES A, OROVILLE MATURING APRIL 1		CVP REVENUE BONDS SERIES B, OROVILLE MATURING APRIL 1		GRAND TOTAL	
	PRINCIPAL	INTEREST	PRINCIPAL	INTEREST	PRINCIPAL	INTEREST
1968		3,876				3,876
1969		7,751		2,697		10,448
1970		7,752		5,393		13,145
1971		7,751		5,394		13,145
1972	900	7,727	360	5,385	1,260	13,112
1973	900	7,678	430	5,364	1,330	13,042
1974	900	7,627	500	5,342	1,400	12,969
1975	1,000	7,576	475	5,317	1,475	12,893
1976	1,000	7,520	555	5,291	1,555	12,811
1977	1,000	7,466	635	5,261	1,635	12,727
1978	1,000	7,411	725	5,226	1,725	12,637
1979	1,100	7,352	715	5,188	1,815	12,540
1980	1,200	7,290	715	5,151	1,915	12,441
1981	1,600	7,212	420	5,122	2,020	12,334
1982	1,600	7,125	530	5,096	2,130	12,221
1983	1,700	7,034	545	5,067	2,245	12,101
1984	1,700	6,946	665	5,036	2,365	11,982
1985	1,800	6,864	685	4,998	2,485	11,862
1986	1,800	6,778	805	4,959	2,605	11,737
1987	1,900	6,688	835	4,914	2,735	11,602
1988	1,900	6,598	970	4,866	2,870	11,464
1989	2,100	6,500	915	4,814	3,015	11,314
1990	2,200	6,392	975	4,760	3,175	11,152
1991	2,300	6,279	1,035	4,704	3,335	10,983
1992	2,400	6,162	1,110	4,644	3,510	10,806
1993	2,500	6,040	1,195	4,578	3,695	10,618
1994	2,700	5,909	1,185	4,512	3,885	10,421
1995	2,800	5,772	1,285	4,443	4,085	10,215
1996	2,900	5,630	1,400	4,366	4,300	9,996
1997	3,000	5,482	1,525	4,285	4,525	9,767
1998	3,100	5,329	1,660	4,195	4,760	9,524
1999	3,100	5,171	1,905	4,094	5,005	9,265
2000	3,250	5,007	2,030	3,980	5,280	8,987
2001	3,400	4,833	2,165	3,860	5,565	8,693
2002	3,550	4,653	2,315	3,731	5,865	8,384
2003	3,700	4,464	2,480	3,593	6,180	8,057
2004	3,900	4,267	2,620	3,447	6,520	7,714
2005	4,100	4,058	2,770	3,291	6,870	7,349
2006	4,300	3,840	2,945	3,128	7,245	6,968
2007	4,500	3,612	3,135	2,952	7,635	6,564
2008	4,750	3,371	3,300	2,767	8,050	6,138
2009	5,000	3,117	3,490	2,573	8,490	5,690
2010	5,250	2,851	3,700	2,365	8,950	5,216
2011	5,500	2,571	3,935	2,146	9,435	4,717
2012	5,750	2,279	4,195	1,913	9,945	4,192
2013	6,050	1,972	4,435	1,664	10,485	3,636
2014	6,350	1,650	4,705	1,401	11,055	3,051
2015	6,650	1,312	5,005	1,123	11,655	2,435
2016	6,950	958	5,340	824	12,290	1,782
2017	7,300	588	5,660	509	12,960	1,097
2018	7,650	198	6,015	173	13,665	371
2019						
2020						
TOTAL	150,000	270,289	94,995	195,902	244,995	466,191
DOLLAR-YEARS		5,228,700		3,423,460		8,652,160
PERCENT INT. COST		5.197 1/		5.767 2/		5.423 1,2/

1/ Affected by discount of $1,470,000

2/ Affected by discount of $1,512,000

TABLE 13: ANNUAL BOND

(in thousands

CALENDAR YEAR	SERIES A WATER BONDS MATURING SEPTEMBER 1		SERIES B WATER BONDS MATURING MAY 1		SERIES C WATER BONDS MATURING NOVEMBER 1		SERIES D WATER BONDS MATURING MARCH 1	
	PRINCIPAL	INTEREST	PRINCIPAL	INTEREST	PRINCIPAL	INTEREST	PRINCIPAL	INTEREST
1964		2,398		935				
1965		3,735		1,870		3,702		1,807
1966		3,735		1,871		3,702		3,613
1967		3,735		1,870		3,702		3,613
1968		3,735		1,870		3,701		3,614
1969		3,735		1,870		3,702		3,613
1970		3,735		1,871		3,702		3,613
1971		3,735		1,870		3,702		3,613
1972		3,735		1,870		3,702		3,614
1973	1,200	3,735		1,870		3,702		3,613
1974	1,200	3,675	600	1,855	1,200	3,702		3,613
1975	1,200	3,615	600	1,826	1,200	3,647	1,000	3,591
1976	1,200	3,555	600	1,795	1,200	3,594	1,000	3,546
1977	1,200	3,495	600	1,765	1,200	3,540	1,100	3,499
1978	1,500	3,435	600	1,735	1,200	3,486	1,100	3,449
1979	1,500	3,360	750	1,702	1,500	3,432	1,200	3,397
1980	1,500	3,285	750	1,664	1,500	3,364	1,200	3,343
1981	1,500	3,210	750	1,626	1,500	3,297	1,300	3,287
1982	1,500	3,135	750	1,589	1,500	3,229	1,400	3,227
1983	1,700	3,060	750	1,552	1,500	3,162	1,400	3,163
1984	1,700	2,975	850	1,511	1,700	3,095	1,500	3,098
1985	1,700	2,890	850	1,469	1,700	3,017	1,600	3,028
1986	1,700	2,805	850	1,427	1,700	2,942	1,600	2,956
1987	1,700	2,720	850	1,384	1,700	2,865	1,700	2,883
1988	2,000	2,635	850	1,342	1,700	2,788	1,800	2,803
1989	2,000	2,555	1,000	1,306	2,000	2,725	1,800	2,733
1990	2,000	2,487	1,000	1,271	2,000	2,656	1,900	2,672
1991	2,000	2,419	1,000	1,237	2,000	2,589	2,000	2,606
1992	2,000	2,351	1,000	1,202	2,000	2,518	2,000	2,538
1993	2,400	2,283	1,000	1,167	2,000	2,449	2,100	2,468
1994	2,400	2,199	1,200	1,128	2,400	2,379	2,200	2,395
1995	2,400	2,115	1,200	1,086	2,400	2,294	2,300	2,318
1996	2,400	2,031	1,200	1,045	2,400	2,210	2,300	2,240
1997	2,400	1,947	1,200	1,002	2,400	2,124	2,400	2,161
1998	2,900	1,863	1,200	960	2,400	2,039	2,500	2,075
1999	2,900	1,762	1,450	914	2,900	1,954	2,600	1,987
2000	2,900	1,660	1,450	863	2,900	1,850	2,700	1,894
2001	2,900	1,558	1,450	810	2,900	1,747	2,800	1,797
2002	2,900	1,457	1,450	758	2,900	1,642	2,900	1,698
2003	3,500	1,356	1,450	706	2,900	1,538	3,000	1,594
2004	3,500	1,233	1,750	649	3,500	1,433	3,100	1,488
2005	3,500	1,107	1,750	585	3,500	1,306	3,200	1,378
2006	3,500	981	1,750	522	3,500	1,180	3,300	1,263
2007	3,500	855	1,750	459	3,500	1,052	3,500	1,145
2008	4,000	729	1,750	395	3,500	926	3,600	1,021
2009	4,000	584	2,000	327	4,000	798	3,700	892
2010	4,000	439	2,000	255	4,000	652	3,900	758
2011	4,000	294	2,000	182	4,000	506	4,000	616
2012	4,000	149	2,000	110	4,000	360	4,100	470
2013	4,000	4	2,000	37	4,000	240	4,300	331
2014			2,000	1	4,000	120	4,400	201
2015							4,500	68
2016								
2017								
2018								
2019								
2020								
2021								
2022								
2023								
2024								
2025								
TOTAL	100,000	120,281	50,000	60,986	100,000	123,764	100,000	122,403
DOLLAR-YEARS		3,428,944		1,726,000		3,452,000		3,497,900
PERCENT INT. COST		3.508		3.533		3.585		3.499

SERVICE ON WATER BONDS

of dollars)

SERIES E WATER BONDS MATURING DECEMBER 1		SERIES F WATER BONDS MATURING JULY 1		SERIES G WATER BONDS MATURING DECEMBER 1		SERIES H WATER BONDS MATURING APRIL 1		SERIES J WATER BONDS MATURING AUGUST 1	
PRINCIPAL	INTEREST	PRINCIPAL	INTEREST	PRINCIPAL	INTEREST	PRINCIPAL	INTEREST	PRINCIPAL	INTEREST
	3,822		2,021						
	3,821		4,043		4,225		1,902		
	3,822		4,043		4,225		3,805		4,192
	3,821		4,043		4,225		3,805		4,191
	3,822		4,042		4,225		3,805		4,192
	3,821		4,043		4,225		3,805		4,192
	3,822		4,043		4,224		3,805		4,192
	3,821		4,043		4,225		3,805		4,191
	3,822		4,043		4,225		3,805		4,192
1,000	3,821		4,042		4,225		3,805		4,192
1,000	3,777	1,000	4,018	1,000	4,225		3,805		4,191
1,100	3,731	1,000	3,968	1,000	4,175	1,000	3,783	1,000	4,192
1,100	3,682	1,100	3,915	1,100	4,125	1,000	3,737	1,000	4,142
1,200	3,633	1,100	3,860	1,100	4,070	1,100	3,690	1,100	4,091
1,200	3,578	1,200	3,803	1,200	4,015	1,100	3,641	1,100	4,037
1,300	3,525	1,200	3,743	1,200	3,955	1,200	3,589	1,200	3,982
1,400	3,466	1,300	3,680	1,300	3,894	1,200	3,535	1,200	3,922
1,400	3,403	1,400	3,613	1,400	3,830	1,300	3,479	1,300	3,861
1,500	3,340	1,400	3,543	1,400	3,760	1,400	3,418	1,400	3,797
1,600	3,272	1,500	3,470	1,500	3,690	1,400	3,355	1,400	3,727
1,600	3,201	1,600	3,393	1,600	3,615	1,500	3,290	1,500	3,656
1,700	3,129	1,600	3,313	1,600	3,535	1,600	3,219	1,600	3,582
1,800	3,052	1,700	3,230	1,700	3,455	1,600	3,148	1,600	3,502
1,800	2,971	1,800	3,150	1,800	3,370	1,700	3,074	1,700	3,428
1,900	2,890	1,800	3,078	1,800	3,280	1,800	2,995	1,800	3,357
2,000	2,804	1,900	3,007	1,900	3,190	1,800	2,914	1,800	3,283
2,000	2,733	2,000	2,932	2,000	3,100	1,900	2,835	1,900	3,208
2,100	2,660	2,000	2,855	2,000	3,021	2,000	2,758	2,000	3,130
2,200	2,585	2,100	2,776	2,100	2,940	2,000	2,683	2,000	3,046
2,300	2,505	2,200	2,694	2,200	2,857	2,100	2,606	2,100	2,963
2,300	2,422	2,300	2,606	2,300	2,769	2,200	2,526	2,200	2,875
2,400	2,338	2,300	2,518	2,300	2,676	2,300	2,442	2,300	2,783
2,500	2,252	2,400	2,426	2,400	2,585	2,300	2,359	2,300	2,686
2,600	2,161	2,500	2,332	2,500	2,487	2,400	2,275	2,400	2,590
2,700	2,066	2,600	2,232	2,600	2,386	2,500	2,185	2,500	2,490
2,800	1,967	2,700	2,130	2,700	2,281	2,600	2,092	2,600	2,386
2,900	1,863	2,800	2,022	2,800	2,172	2,700	1,993	2,700	2,281
3,000	1,756	2,900	1,911	2,900	2,058	2,800	1,893	2,800	2,171
3,100	1,643	3,000	1,796	3,000	1,939	2,900	1,787	2,900	2,058
3,200	1,527	3,100	1,677	3,100	1,816	3,000	1,679	3,000	1,939
3,300	1,407	3,200	1,555	3,200	1,689	3,100	1,568	3,100	1,817
3,500	1,283	3,300	1,427	3,300	1,558	3,200	1,451	3,200	1,689
3,600	1,152	3,500	1,295	3,500	1,423	3,300	1,331	3,300	1,558
3,700	1,017	3,600	1,157	3,600	1,279	3,500	1,205	3,500	1,422
3,900	878	3,700	1,014	3,700	1,131	3,600	1,073	3,600	1,279
4,000	732	3,900	864	3,900	980	3,700	939	3,700	1,132
4,100	582	4,000	706	4,000	820	3,900	798	3,900	980
4,300	429	4,100	544	4,100	656	4,000	652	4,000	819
4,400	267	4,300	387	4,300	488	4,100	502	4,100	656
4,500	135	4,400	234	4,400	311	4,300	346	4,300	488
		4,500	79	4,500	158	4,400	201	4,400	312
						4,500	68	4,500	157
100,000	130,029	100,000	137,359	100,000	143,788	100,000	129,261	100,000	143,199
	3,497,900		3,497,900		3,497,900		3,497,900		3,497,900
	3.717		3 927		4 111		3.695		4.094

TABLE 13: ANNUAL BOND

(in thousands

CALENDAR YEAR	SERIES K WATER BONDS MATURING NOVEMBER 1		SERIES L WATER BONDS MATURING AUGUST 1		SERIES M WATER BONDS MATURING OCTOBER 1		SERIES N WATER BONDS MATURING JUNE 1	
	PRINCIPAL	INTEREST	PRINCIPAL	INTEREST	PRINCIPAL	INTEREST	PRINCIPAL	INTEREST
1964								
1965								
1966								
1967								
1968		4,754						
1969		4,754		4,811		4,890		
1970		4,753		4,810		4,890		2,915
1971		4,754		4,811		4,890		8,580
1972		4,754		4,810		4,890		5,664
1973		4,754		4,811		4,890		5,665
1974		4,753		4,810		4,890		5,665
1975		4,754		4,811		4,890		5,665
1976		4,754		4,810		4,890		5,664
1977	1,000	4,754		4,811		4,890		5,665
1978	1,000	4,704	1,000	4,810	1,000	4,890		5,665
1979	1,100	4,653	1,000	4,761	1,000	4,840		5,664
1980	1,100	4,599	1,100	4,711	1,100	4,790	1,000	5,633
1981	1,200	4,544	1,100	4,655	1,100	4,735	1,000	5,567
1982	1,200	4,484	1,200	4,601	1,200	4,680	1,100	5,499
1983	1,300	4,423	1,200	4,540	1,200	4,620	1,100	5,427
1984	1,400	4,359	1,300	4,481	1,300	4,560	1,200	5,353
1985	1,400	4,289	1,400	4,415	1,400	4,495	1,200	5,275
1986	1,500	4,219	1,400	4,346	1,400	4,425	1,300	5,193
1987	1,600	4,143	1,500	4,275	1,500	4,355	1,400	5,106
1988	1,600	4,064	1,600	4,201	1,600	4,279	1,400	5,014
1989	1,700	3,984	1,600	4,121	1,600	4,200	1,500	4,921
1990	1,800	3,899	1,700	4,040	1,700	4,120	1,600	4,820
1991	1,800	3,809	1,800	3,956	1,800	4,035	1,600	4,715
1992	1,900	3,718	1,800	3,865	1,800	3,945	1,700	4,609
1993	2,000	3,624	1,900	3,776	1,900	3,855	1,800	4,494
1994	2,000	3,524	2,000	3,680	2,000	3,760	1,800	4,378
1995	2,100	3,424	2,000	3,585	2,000	3,660	1,900	4,258
1996	2,200	3,318	2,100	3,488	2,100	3,560	2,000	4,130
1997	2,300	3,209	2,200	3,387	2,200	3,457	2,000	4,011
1998	2,300	3,096	2,300	3,280	2,300	3,350	2,100	3,899
1999	2,400	2,987	2,300	3,169	2,300	3,236	2,200	3,783
2000	2,500	2,873	2,400	3,056	2,400	3,122	2,300	3,661
2001	2,600	2,754	2,500	2,939	2,500	3,001	2,300	3,536
2002	2,700	2,631	2,600	2,818	2,600	2,877	2,400	3,407
2003	2,800	2,501	2,700	2,690	2,700	2,752	2,500	3,272
2004	2,900	2,366	2,800	2,563	2,800	2,616	2,600	3,132
2005	3,000	2,228	2,900	2,429	2,900	2,477	2,700	2,986
2006	3,100	2,083	3,000	2,292	3,000	2,336	2,800	2,833
2007	3,200	1,932	3,100	2,149	3,100	2,191	2,900	2,674
2008	3,300	1,776	3,200	2,001	3,200	2,039	3,000	2,509
2009	3,500	1,616	3,300	1,846	3,300	1,884	3,100	2,338
2010	3,600	1,445	3,500	1,689	3,500	1,723	3,200	2,163
2011	3,700	1,273	3,600	1,520	3,600	1,552	3,300	1,984
2012	3,900	1,098	3,700	1,348	3,700	1,375	3,500	1,797
2013	4,000	913	3,900	1,170	3,900	1,195	3,600	1,602
2014	4,100	723	4,000	983	4,000	1,003	3,700	1,401
2015	4,300	528	4,100	790	4,100	807	3,900	1,193
2016	4,400	356	4,300	594	4,300	606	4,000	975
2017	4,500	180	4,400	401	4,400	396	4,100	762
2018			4,500	202	4,500	180	4,300	553
2019							4,400	335
2020							4,500	112
2021								
2022								
2023								
2024								
2025								
TOTAL	100,000	163,887	100,000	166,918	100,000	169,989	100,000	196,122
DOLLAR-YEARS		3,497,900		3,497,900		3,497,900		3,547,900
PERCENT INT. COST		4.685		4 772		4 860		5.528

SERVICE ON WATER BONDS

of dollars)

SERIES P WATER BONDS MATURING JUNE 1		SERIES QR WATER BONDS MATURING MARCH 1		SUBTOTAL		PROJECTED BOND ISSUES		GRAND TOTAL	
PRINCIPAL	INTEREST	PRINCIPAL	INTEREST	PRINCIPAL	INTEREST	PRINCIPAL	INTEREST	PRINCIPAL	INTEREST
					3,333				3,333
					11,114				11,114
					18,764				18,764
					26,911				26,911
					37,761				37,761
					47,460				47,460
	2,915				53,290				53,290
	5,820		1,174		63,035				63,035
	5,811		9,098		68,034		1,114		69,148
	5,810		7,924	1,200	66,859		3,445	1,200	70,304
	5,810		7,924	3,000	66,784		4,659	3,000	71,443
	5,811		7,924	5,000	66,619		4,660	5,000	71,279
	5,810		7,924	7,000	66,358		4,659	7,000	71,017
	5,810		7,923	10,200	66,001		4,660	10,200	70,661
	5,811		7,924	12,700	65,510		4,660	12,700	70,170
	5,810		7,924	13,650	64,887		4,659	13,650	69,546
1,000	5,778		7,924	16,050	64,165		4,660	16,050	68,825
1,000	5,713	1,500	7,877	18,050	63,305		4,659	18,050	67,964
1,100	5,644	1,500	7,783	18,850	62,368	400	4,646	19,250	67,014
1,100	5,573	1,650	7,685	19,700	61,391	830	4,605	20,530	65,996
1,200	5,499	1,650	7,581	20,900	60,370	870	4,546	21,770	64,916
1,200	5,420	1,800	7,474	21,650	59,286	913	4,487	22,563	63,773
1,300	5,339	1,800	7,362	22,350	58,169	953	4,425	23,303	62,594
1,400	5,252	1,950	7,244	23,400	57,005	996	4,357	24,396	61,362
1,400	5,160	2,100	7,117	24,450	55,790	1,036	4,290	25,486	60,080
1,500	5,066	2,100	6,987	25,600	54,591	1,119	4,217	26,719	58,808
1,600	4,965	2,250	6,850	26,650	53,380	1,162	4,140	27,812	57,520
1,600	4,862	2,400	6,705	27,400	52,131	1,202	4,060	28,602	56,191
1,700	4,754	2,400	6,555	28,100	50,863	1,285	3,976	29,385	54,839
1,800	4,640	2,550	6,401	29,550	49,581	1,328	3,893	30,878	53,474
1,800	4,523	2,700	6,236	30,900	48,232	1,368	3,812	32,268	52,044
1,900	4,404	2,700	6,067	31,800	46,836	1,451	3,727	33,251	50,563
2,000	4,276	2,850	5,902	32,850	45,398	1,494	3,638	34,344	49,036
2,000	4,156	3,000	5,744	33,700	43,955	1,534	3,554	35,234	47,509
2,100	4,044	3,000	5,594	35,000	42,508	1,617	3,470	36,617	45,978
2,200	3,925	3,150	5,441	36,800	41,003	1,660	3,381	38,460	44,384
2,300	3,800	3,300	5,279	38,050	39,417	1,700	3,292	39,750	42,709
2,300	3,671	3,450	5,111	39,100	37,780	1,783	3,198	40,883	40,978
2,400	3,540	3,450	4,938	40,200	36,097	1,866	3,099	42,066	39,196
2,500	3,403	3,600	4,757	42,050	34,358	1,909	2,999	43,959	37,357
2,600	3,260	3,750	4,567	44,200	32,530	1,949	2,892	46,149	35,422
2,700	3,109	3,900	4,373	45,450	30,616	2,032	2,786	47,482	33,402
2,800	2,954	4,050	4,169	46,700	28,649	2,115	2,675	48,815	31,324
2,900	2,791	4,200	3,959	48,150	26,615	2,198	2,557	50,348	29,172
3,000	2,623	4,350	3,741	50,100	24,519	2,281	2,435	52,381	26,954
3,100	2,447	4,500	3,515	52,400	22,327	2,364	2,308	54,764	24,635
3,200	2,265	4,650	3,282	54,050	20,046	2,459	2,177	56,509	22,223
3,300	2,078	4,800	3,039	55,500	17,691	2,542	2,039	58,042	19,730
3,500	1,881	4,950	2,785	57,250	15,259	2,625	1,897	59,875	17,156
3,600	1,675	5,250	2,520	59,050	12,787	2,708	1,750	61,758	14,537
3,700	1,464	5,400	2,243	56,500	10,439	2,831	1,598	59,331	12,037
3,900	1,243	5,550	1,964	52,250	8,107	2,957	1,438	55,207	9,545
4,000	1,013	5,850	1,679	44,650	5,973	3,040	1,274	47,690	7,247
4,100	779	6,000	1,382	36,500	4,125	3,163	1,103	39,663	5,228
4,300	553	6,150	1,087	23,750	2,575	3,277	930	27,027	3,505
4,400	335	6,450	787	15,250	1,457	3,360	756	18,610	2,213
4,500	112	6,600	478	15,600	702	3,483	577	19,083	1,279
		6,750	160	6,750	160	3,609	390	10,359	550
						3,692	198	3,692	198
						1,935	51	1,935	51
100,000	199,207	150,000	268,083	1,500,000	2,275,276	83,096	159,478	1,583,096	2,434,754
	3,497,900		5,271,850		52,405,694		2,907,145		55,312,839
	5.695		5.085		4.342		5 486		4.402

Line 62. Reservation for Future Construction. In accordance with the Burns-Porter Act, all project revenues in excess of project operating costs, Water Bond service, and California Water Fund repayment shall be deposited in a reserve account for financing future construction of additions to the State Water Resources Development System. Also included in the amounts shown in Line 62 are those miscellaneous receipts (primiarily reimbursements of construction costs allocated to recreation and fish and wildlife enhancement) which accrue too late to be applied to construction expenditures under the analysis.

Within the constraints of timing, accruals to the reserve could be available for financing the San Joaquin Drainage Facilities and all or a portion of other additional project costs in the event contingencies, such as those referred to at the beginning of this chapter, occur. However, if such additional costs were to be incurred in annual amounts preceding and/or exceeding the annual amounts shown in Line 62, the required use of full appropriations to the California Water Fund could extend well beyond 1979 (the last year of such full use as indicated in the analysis) and the eventual need for supplemental construction funds could exceed the $128 million projected herein.

Line 63: Total Project Operating Costs and Miscellaneous Receipts. This summary of the application of revenues and receipts matches the total accrual of such moneys as shown in Line 49. The sum of the totals for Lines 59, 60, and 61 directly relates to the total financing of capital expenditures shown on Line 31 and demonstrates that all such expenditures would be covered under the assumptions of this analysis.

Reconciliation with Last Year's Financial Analysis

Both the financial analysis presented in Bulletin 132-71 and the one described herein indicate the required use of all available financial resources through 1979 and, in addition, the need for supplemental funds for financing estimated construction expenditures during the period 1973 through 1979. However, the estimated magnitude of the need for supplemental funds increased from $88 million to $128 million as outlined below:

Item	(in millions, through 1979) Bulletin 132-71 Analysis	Current Analysis	Change to Current Analysis
Construction expenditures	$2,506	$2,510	+$ 4
Less, Application of available funds:			
Oroville Revenue Bonds	$ 213	$ 218	+$ 5
Water Bonds reserved for "additional facilities"	8	8	0
Water Bonds for "1973 Project facilities"	1,445	1,444	− 1
California Water Fund:			
Tideland appropriations to Fund	373	374	+ 1
Project repayments to Fund	9	0	− 9
Miscellaneous receipts	370	338	− 32
Subtotal	$2,418	$2,382	−$36
Remainder, Need for supplemental funds	$ 88	$ 128	+$40

For the most part, the $40 million estimated increase in need for supplemental funds is caused by an estimated $41 million decrease in availability of (1) project repayments to the California Water Fund and (2) miscellaneous receipts. Overall, the increase in total construction expenditures is not significant, being the aggregate of both estimated cost increases and estimated cost decreases for respective project facilities. The expenditure increase is more than offset by increased use of certain reserved proceeds from the sale of Oroville Revenue Bonds as shown in the analysis. The minor decrease in use of Water Bonds for the 1973 Project facilities and the offsetting increase in use of tideland appropriations to the California Water Fund are due to accounting adjustments.

Both project repayments to the California Water Fund (derived from operating revenues) and miscellaneous receipts available for financing construction expenditures depend on total operating revenues and miscellaneous receipts themselves as well as the portions thereof which must be applied to higher priority uses (funding of project operating costs and bond service). The primary reasons for changes in these factors from the Bulletin 132-71 analysis to the current analysis are described below:

	(in millions, through 1979)
Changes of project operating revenues and miscellaneous receipts due to the following:	
• Water contract amendments executed in 1971 which remove estimates of projected construction and operating costs of "additional conservation facilities" from calculations of the Delta Water Charge until actual construction begins	−$ 25
• Increased allowance for credits due to overpayment of advances by water contractors for excess capacity	− 11
• Estimated reimbursable project costs (net)	+ 7
• Short-term interest earnings on unexpended revenues and receipts and Water Bond proceeds, including expended supplemental funds	+ 26
Subtotal	−$ 3
Less, Changes of operating costs and bond service:	
• Estimated project operating costs	+$ 7
• Deposits to special reserves under supplemental revenue bond financing	+ 10
• Estimated bond service on supplemental funds	+ 21
Subtotal	+$ 38
Remainder, Project repayments of California Water Fund and miscellaneous receipts available for application to construction expenditures	−$ 41

APPENDIX B

DATA AND COMPUTATIONS USED IN
DETERMINING WATER CHARGES FOR 1973

APPENDIX B - DATA AND COMPUTATIONS USED IN DETERMINING WATER CHARGES FOR 1973

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APPENDIX B

DATA AND COMPUTATIONS USED IN DETERMINING WATER CHARGES FOR 1973

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 1973 based on all aspects of the State Water Project as known on April 1, 1972.

The redetermined Transportation Charges that are derived herein for prior years, through 1971, do not equal those amounts actually paid by contractors under statements previously furnished by the State. The indicated overpayments or underpayments (the differences between the redetermined amounts and those under statements previously furnished) are accumulated, with appropriate interest credits or debits, and are deducted from or added to the redetermined amounts of the Transportation Charge to be paid by the respective contractors during 1973. These adjustment computations are shown in the attachments accompanying the statement of charges furnished to each contractor and are reflected in the revised copies of Tables C through G of the contract, also furnished with the statement of charges.

Under the formula for computing the Delta Water Rate, Article 22(f) provides that all adjustments for prior overpayments or underpayments of the Charge are accounted for in the redetermination of the Rate to be applied to future entitlements of all contractors. Thus, adjustments for prior charges are, in effect, amortized during the remainder of the project repayment period. This appendix includes a determination of the Delta Water Rate for 1973. However, projected annual Delta Water Charges are not shown herein since such a projection is not required by the contracts.

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

- Advances of funds, pursuant to Article 24(d) of the Standard Provisions, for excess capacity constructed by the State at the request of contractors. (Information on required advances is included herein because these charges are covered in the July 1 statements. However, any advances which are projected to exceed the additional capital costs for such excess capacity in completed aqueduct reaches have not been credited to future capital cost components of the Transportation Charges as shown herein. 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 project water applied to "excess lands". (Initial payments of the surcharge are due to the State in 1973, based on project water applied to "excess lands" in 1972 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 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, and 1971 include charges associated with surplus water deliveries since surplus water was marketed to contractors during those 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 of such water are based on prices greater than the estimated costs of service involved. Net revenues resulting from service are applied in the manner described on page 24, Bulletin 132-71. Such prices are generally based on the unit rates shown in the last table of this appendix.

The computational procedure and relationships among tabulations of 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 related narrative sections of this appendix.

Bases for Allocating Reimbursable Costs Among Contractors

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

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

- 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 last described in Bulletin 132-70. (See pages 103–106 for a description of the computational procedure; pages 116–117 for a summary of aqueduct reaches, reach delivery quantities, and reach capacities; and pages 118–173 for a detailed derivation of factors for each contractor and for each aqueduct reach.) Those derivations are still valid—except for reaches of the South Bay Aqueduct. The following two amendments were executed in March 1972 which affect the maximum use of two South Bay contractors:

- Amendment 6 to the contract with Alameda County Water District which established the maximum rate of delivery from the aqueduct reach, Vallecitos turnout to Alameda Bayside turnout, at 16 cubic feet per second and the maximum annual delivery capability from that reach at 8,775 acre-feet.
- Amendment 9 to the contract with Santa Clara County Flood Control and Water District which established the storage capacity in Lake Del Valle associated with service to the District at 9,536 acre-feet.

A redetermination of reach ratios for the South Bay Aqueduct is shown in Table B-1, together with a summary of all other reach ratios applicable to reimbursable capital costs. Table B-2 presents a summary of reach ratios applicable to reimbursable minimum OMP&R costs.

Proportionate Annual Use of Facilities

Article 26(a) of the Contract provides that the variable OMP&R component of the Transportation Charge shall return to the State those costs which are incurred in an amount which depends upon and varies with the amount of project water delivered to the contractor. The 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 operating costs of project pumping and power recovery plants. However, these costs are incurred in amounts which generally vary with the total conveyance through the plants—not with the portion thereof enroute directly to contractor turnouts. In addition to direct deliveries, conveyance may include the following:

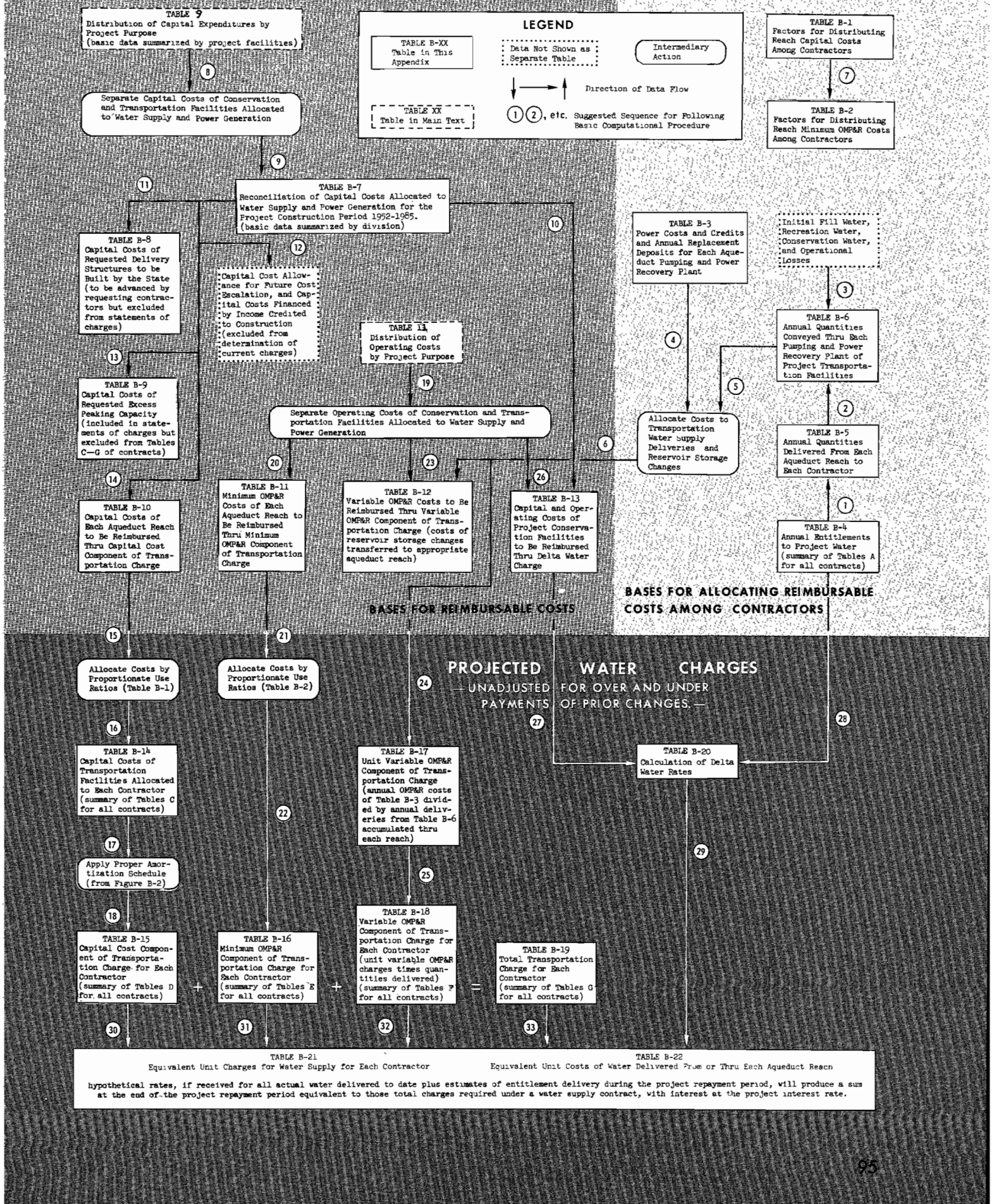
(a) Water applied to down-aqueduct onshore recreation developments;
(b) Water stored in the initial fill of down-aqueduct reservoirs;
(c) Water lost through evaporation and seepage from down-aqueduct reaches and reservoirs; and
(d) Water stored during a year in excess of storage withdrawals, subsequent to initial fill, in down-aqueduct reservoirs.

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

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

Concerning (d), 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 assumed to be equivalent to the unit cost of conveying water to the storage site during years when such storage is released.)

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



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

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

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

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

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 at down-aqueduct delivery structures ("Deliveries, Water Supply").
- Required to initially fill down-aqueduct reaches and reservoirs to operational levels ("Initial Fill Water").
- Consumed in down-aqueduct project-associated recreation developments ("Deliveries, Recreation").
- Lost through evaporation and seepage from all down-aqueduct reaches ("Operational Losses").
- Placed in down-aqueduct reservoir storage subsequent to the initial fill of such storage ("Reservoir Storage Changes").

In addition, Table B-6 summarizes the estimated net annual 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 Delta Pumping Plant is a joint project transportation facility-project conservation facility. Under the State's procedure, power and replacement costs of the Delta Pumping Plant which are apportioned to the conveyance of annual "conservation water" quantities are transferred to the capital costs of San Luis Reservoir (during initial fill) or to the minimum OMP&R costs of San Luis Reservoir (subsequent to initial fill).

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

Bases for Reimbursable Costs

Tables 9 and 11 (Chapter V) summarize the capital and OMP&R costs of all project facilities, respectively, and the allocation of these costs among the various project purposes. Allocation percentages are shown for each project facility in the tabulation below. For the most part, these percentages are preliminary and subject to future revision and are applicable to the State's costs of the respective facilities.

Project facilities	(In percent)					
	Water supply and power generation		Flood control		Recreation and fish and wildlife enhancement	
	Capital costs	Minimum OMP&R costs	Capital costs	Minimum OMP&R costs	Capital costs	Minimum OMP&R costs
Conservation Facilities						
Frenchman Dam and Lake	23.3	0.5	0	0	76.7	99.5
Antelope Dam and Lake	0	0	0	0	100.0	100.0
Grizzly Valley Dam and Lake Davis	5.1	8.8	0	0	94.9	91.2
Abbey Bridge Dam and Reservoir	0	0	0	0	100.0	100.0
Dixie Refuge Dam and Reservoir	0	0	0	0	100.0	100.0
Oroville Division [a]	97.1	99.0	0	0	2.9	1.0
California Aqueduct	96.5	94.1	0	0	3.5	5.9
Delta Facilities	86.0	86.0	0	0	14.0	14.0
Middle Fork Eel River Development	90.0 [b]	90.0 [b]	4.0	4.0	6.0	6.0
Transportation Facilities						
California Aqueduct, excluding Coastal Branch	97.0	92.9	0	0	3.0	7.1
South Bay Aqueduct:						
Del Valle Dam and Lake Del Valle	27.5	34.9	21.5	25.6	51.0	39.5
North Bay Aqueduct	100.0	100.0	0	0	0	0

[a] Percentages shown are applicable to the total costs of the Division excluding specific power costs of Edward Hyatt and Thermalito Powerplants and Switchyards and federal reimbursements for flood control benefits.
[b] Includes 17.5 percent allocable to supplemental water supplies.

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

Capital Costs

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

Costs of Delivery Structures. Costs of delivery structures constructed by the State are paid directly by each contractor requesting such structures (see pages 88 and 89, Bulletin 132-71, for a description of the method of payment for the capital costs of a delivery structure constructed by the State). 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 1971:

Project facility	Number of delivery structures					
		Under construction		Completed		
	Requested by agencies	By state	By agencies	By state	By agencies	Stub only [a]
Oroville Area	6	0	0	0	5	1
North Bay Aqueduct (Phase I)	2	0	0	1	0	1
South Bay Aqueduct	19	0	0	8	6	5
California Aqueduct						
North San Joaquin Division	4	0	0	0	4	0
San Luis Division (served by the federal Central Valley Project)						
South San Joaquin Division	39	0	3	8	11	17
Tehachapi Division	1	0	0	0	0	1
Mojave Division	15	0	0	0	0	15
Santa Ana Division	11	9	2	0	0	0
West Branch	5	3	2	0	0	0
Coastal Branch (Phase I)	2	0	0	1	1	0
Total	104	12	7	18	27	40

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

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

- Additional costs 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 contractors' accounts (generally, to the contractors' next installment of the capital cost component of the Transportation Charge).

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 certain prepayments of the District's capital cost component of the Transportation Charge, in lieu of advances of funds for the originally requested capacity.

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

Amendment 5 of the contract with The Metropolitan Water District of Southern California includes a provision whereby the additional costs to be incurred because of modifications to the Santa Ana Valley Pipeline, required to allow for future enlargement of Lake Perris, will be allocated to the District and will be 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	$6,699,000

Annual Operating Costs

Allowances for future price escalation are not included in those projected annual operating costs that are summarized in Table 11. 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 11 shows as allocable to water supply and power generation will be returned to the State through payments of the minimum and variable OMP&R components of Delta Water and Transportation Charges and through a portion of the revenues from electric power sales.

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

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

Minimum Operating Costs. The following types of operating costs are considered to be incurred in annual amounts that do not vary with the quantities 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.

Concerning the allocation of "general operating costs" among facilities and reaches, this redetermination accounts for certain procedural refinements described on 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.

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 capital costs for the period 1952 through 1968. These credits are as follows:

Year	Credit	Year	Credit
Through 1960	$4,850,000	1965	$763,541
1961	431,527	1966	748,649
1962	479,280	1967	806,910
1963	478,743	1968	428,888
1964	751,330		
		Total through 1968	$9,738,868

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 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.)

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

Table B-15 summarizes the capital cost components of the Transportation Charge for each contractor for each year of the project repayment period. These estimated components, subsequently adjusted for prior overpayments and/or underpayments, are to be set forth in Table D of the respective contracts. (Credits for the portion of advance payment for excess capacity that exceed the actual additional costs of such capacity are applied to reduce the payment amounts set forth in Table D, but are ignored in Table B-15.)

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

FIGURE B-2: CRITERIA FOR AMORTIZATION SCHEDULES

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

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

The future Delta Water Charges applicable after December 31, 1972 are herein calculated on the following two 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 provisions of Articles 22(e) and 22(g) of the contracts with Butte County, Yuba City, and Solano and Santa Barbara County Flood Control and Water Conservation Districts—whereby all such costs will be included in the calculation of the Charge.
- In accordance with the amended provisions of all other contracts, 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 facilities.

The calculation of the Delta Water Charge under the two bases is summarized in Table B-20.

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 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.

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	
Grizzly Valley Pipeline								
1	1 00000000							1.00000000
North Bay Aqueduct								
1		.39808876	60191124					1 00000000
2		39808861	60191139					1 00000000
3		1 00000000						1 00000000
South Bay Aqueduct								
1				22599621	20663014	49237700	07499665	1 00000000
2				22599657	20663057	49237791	07499495	1 00000000
4				19504791	21450021	51113252	07931936	1 00000000
5				14436367	12972254	33715573	38875806	1 00000000
6				14599918	21144710	50574745	13680627	1 00000000
7					25176680	60218448	14604872	1 00000000
8					06294980	72065355	21639665	1 00000000
9						1 00000000		1 00000000
California Aqueduct								
1				00954802	00872976	02080260	00342519	—

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
California Aqueduct								
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				02736564				
29F				02736563				
29G				02736564				
29H				02646380				
29J				02736563				
30				02637131				
31A	10522767	24566277						
33A	29988697	70011303						
34	20553239	79446761						
35	14771038	85228962						

a) Determination of factors for the 8 reaches of the South Bay Aqueduct and Reach 1 of the California Aqueduct are shown after Table B-2.

REACH CAPITAL COSTS AMONG CONTRACTORS[a]

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	03253706
2A	00394038	01781205	00092491	00262393	02864590	31948963	00094755	00174305	03393294
2B	00395099	01786013	00092740	00263102	02869073	32034362	00094904		03402458
3	00395208	01786513	00092766	00263176	02868919	32043064	00094900		03403409
4	00395323	01787039	00092794	00263254	02868758	32052214	00094893		03404410
5	00395466	01787693	00092828	00263352	02868559	32063639	00094886		03405659
6	00395684	01788685	00092879	00263498	02868255	32080926	00094875		03407550
7	00395753	01789003	00092896	00263544	02868158	32086471	00094872		03408157
8C	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			

REACH	CALIFORNIA AREA							
	Mojave Water Agency	Palmdale Irrigation District	San Bernardino Valley Municipal Water District	San Gabriel Valley Municipal Water District	San Gorgonio Pass Water Agency	The Metropolitan Water District of Southern California	Ventura County Flood Control District	Total
	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	
Grizzly Valley Pipeline								
1	1 00000000							1 00000000
North Bay Aqueduct								
1		39808876	60191124					1 00000000
2		39808861	60191139					1 00000000
3		1 00000000						1 00000000
South Bay Aqueduct								
1				22599621	20663034	49237700	07499665	1 00000000
2				22599657	20663057	49237791	07499495	1 00000000
4				19504791	21450021	51113252	07931936	1 00000000
5				14436367	12972254	33715573	38875806	1 00000000
6				14599918	21144710	50574745	13680627	1 00000000
7					25176680	60218448	14604872	1 00000000
8					06294980	72065355	21639665	1 00000000
9						00000000		1 00000000
California Aqueduct								
1				00954802	00872976	02080260	00342519	—

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
California Aqueduct								
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			01181870		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						

a) Determination of factors for the 8 reaches of the South Bay Aqueduct and Reach 1 of the California Aqueduct are shown after Table B-2.

MINIMUM OMP&R-COSTS AMONG CONTRACTORS[a]

REACH	SAN JOAQUIN VALLEY AREA								
					Kern County Water Agency				
	Devil's Den Water District	Dudley Ridge Water District	Empire West Side Irrigation District	Hacienda Water District	Municipal and Industrial	Agricultural	County of Kings	Oak Flat Water District	Tulare Lake Basin Water Storage District
California Aqueduct									
1	00377824	01707931	00088687	00251598	02742075	30633444	00090702	00167139	03253706
2A	00394038	01781205	00092491	00262393	02864590	31948963	00094755	00174305	03393294
2B	00395099	01786013	00092740	00263102	02869073	32034362	00094904		03402458
3	00395208	01786513	00092766	00263176	02868919	32043064	00094900		03403409
4	00395323	01787039	00092794	00263254	02868758	32052214	00094893		03404410
5	00395466	01787693	00092828	00263352	02868559	32063639	00094886		03405659
6	00395684	01788685	00092879	00263498	02868255	32080926	00094875		03407550
7	00395753	01789003	00092896	00263544	02868158	32086471	00094872		03408157
8C	00390372	01764649	00091632	00259956	02836376	31651560	00093819		03361753
8D	00398843	01802948		00265599	02895222	32337797			01529539
9					03173493	32315570			
10A					03225002	31237849			
11B					03555316	24304304			
12D					03738966	20458362			
12E					03744664	20348854			
13B					01437747	16288986			
14A					00610657	13050491			
14B					00621833	11497394			
14C					00640883	08842321			
15A					00651639	07347673			
16A					00676126	03933051			
17E					00208231				
31A	07364766					57546190			

REACH	CALIFORNIA AREA							Total
	Mojave Water Agency	Palmdale Irrigation District	San Bernardino Valley Municipal Water District	San Gabriel Valley Municipal Water District	San Gorgonio Pass Water Agency	The Metropolitan Water District of Southern California	Ventura County Flood Control District	
California Aqueduct								
1	01101303	00369180	02363192	00650450	00398446	43940274	00429334	1 00000000
2A	01151300	00385943	02469456	00679800	00416362	45932582	00448829	1 00000000
2B	01152575	00386368	02472869	00680672	00416938	45985090	00449324	1 00000000
3	01152359	00386296	02472604	00680580	00416893	45976953	00449238	1 00000000
4	01152131	00386218	02472327	00680482	00416846	45968397	00449149	1 00000000
5	01151846	00386122	02471980	00680361	00416788	45957712	00449037	1 00000000
6	01151416	00385978	02471455	00680178	00416698	45941544	00448869	1 00000000
7	01151278	00385931	02471286	00680118	00416671	45936361	00448816	1 00000000
8C	01139703	00382056	02444913	00673013	00412224	46619410	00444309	1 00000000
8D	01162908	00389834	02495260	00686817	00420714	47575203	00453354	1 00000000
9	01273174	00426793	02733801	00752279	00460932	52108733	00496332	1 00000000
10A	01293209	00433508	02777635	00764260	00468324	52938182	00504140	1 00000000
11B	01422367	00476795	03059311	00841338	00515814	58274744	00554474	1 00000000
12D	01493906	00500769	03215687	00884093	00542180	61234745	00582351	1 00000000
12E	01495830	00501413	03220286	00885312	00542956	61318897	00583099	1 00000000
13B	01620441	00543178	03491750	00959625	00588725	66464178	00631662	1 00000000
14A	01699773	00569765	03665478	01007092	00618017	69750337	00662575	1 00000000
14B	01729729	00579803	03731574	01025102	00629159	70996969	00674247	1 00000000
14C	01781020	00596992	03844447	01055888	00648190	73127981	00694231	1 00000000
15A	01809845	00606653	03908064	01073222	00658915	74327706	00705461	1 00000000
16A	01875830	00628766	04053195	01112817	00683383	77068316	00731170	1 00000000
17E	01961383	00657438	04241764	01164221	00715176	80626315	00764506	1 00000000
31A	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
								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
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						95944608	01318829	1 00000000
						96499830	00863039	1 00000000
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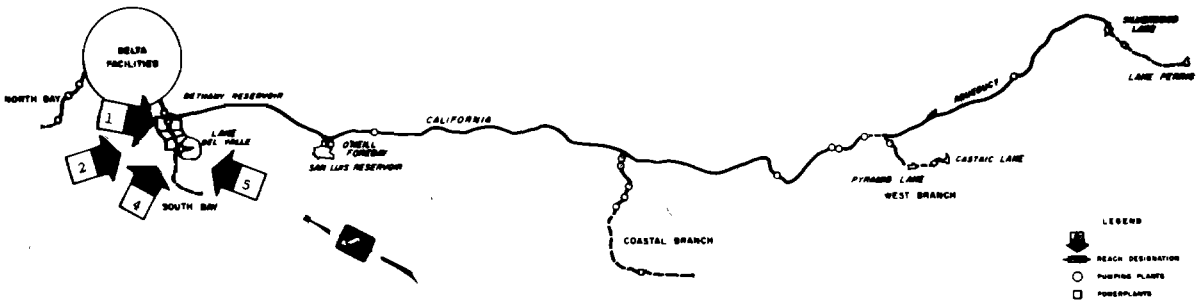
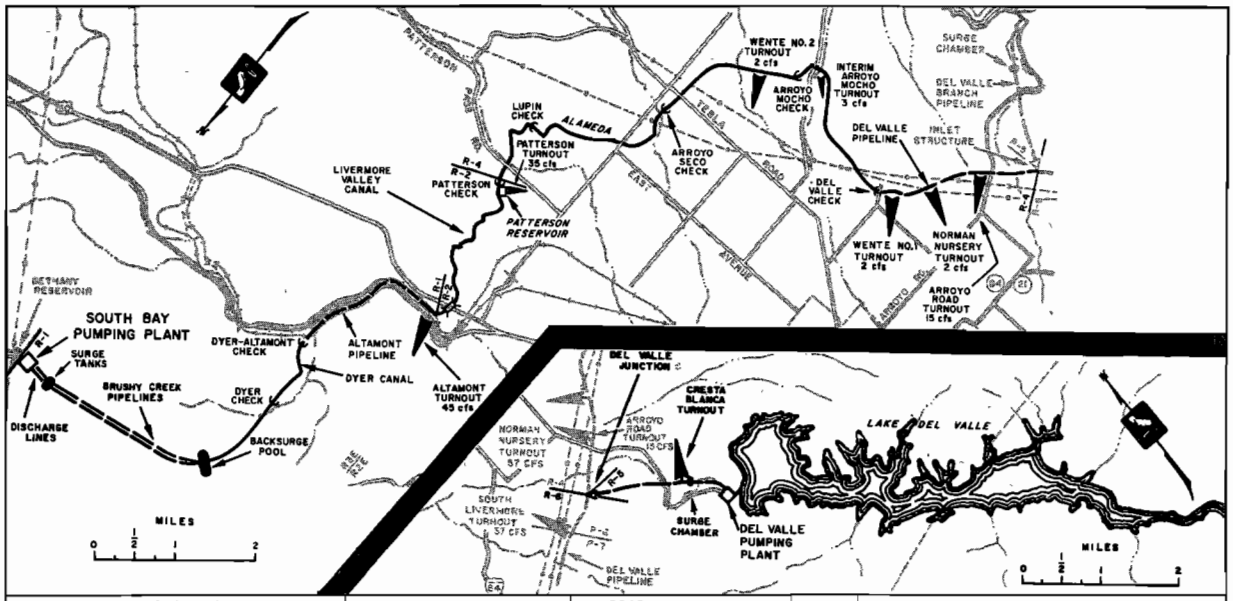
DETERMINATION OF PROPORTIONATE USE OF EACH AQUEDUCT REACH

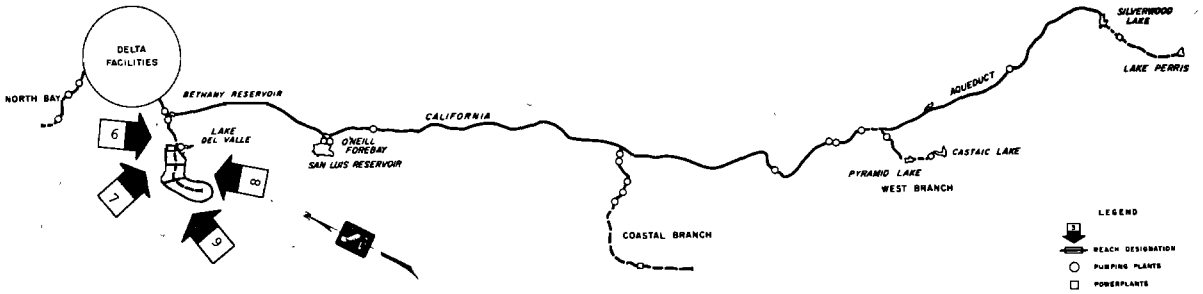
(in units as shown)



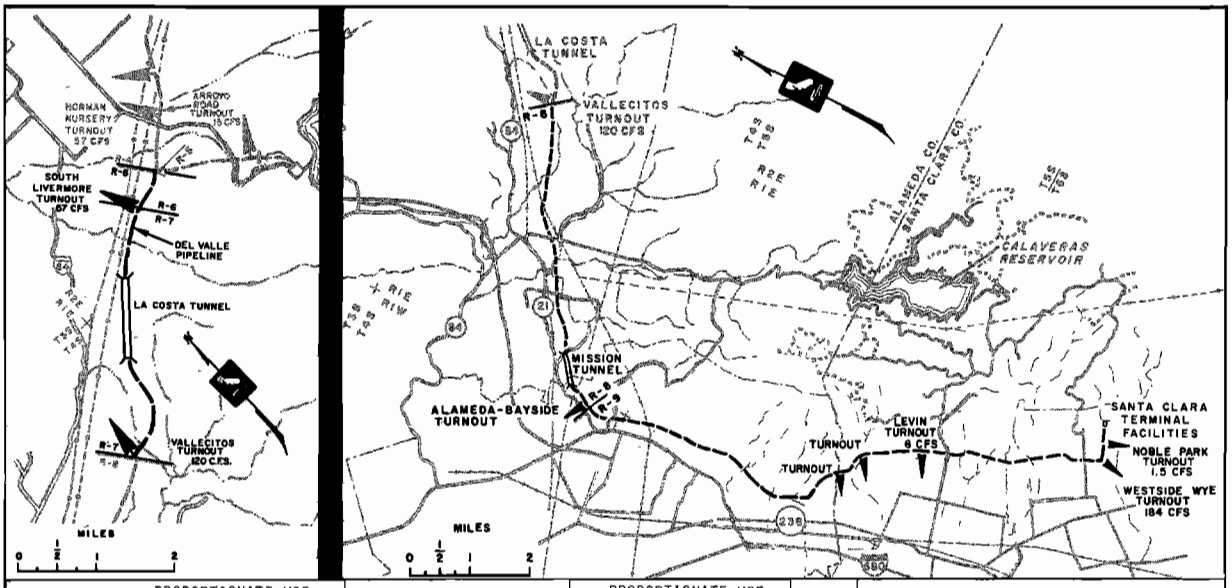
WATER SUPPLY CONTRACTOR	MEASURE OF USE	MAXIMUM ANNUAL ENTITLEMENTS DELIVERED FROM REACH	ESTIMATED OPERATIONAL LOSSES WITHIN REACH	CAPACITY PROVIDED IN REACH: FOR DELIVERY OF ENTITLEMENTS	FOR COMPENSATION OF: OPERATIONAL LOSSES	SCHEDULED OUTAGES	DOWNSTREAM REGULATION	SUBTOTAL
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
REACH 1 - BETHANY RESERVOIR THRU ALTAMONT TURNOUT								
SANTA CLARA COUNTY FLOOD CONTROL AND WATER DISTRICT	Q AF	0	85 3	100000 0	1796.2	0	0	101796 2
	C CFS	0	11782	149 02297	2 48105	1 70237	0	153 20639
ALAMEDA COUNTY WATER DISTRICT	Q AF	0	35 8	42000 0	712 5	0	0	42712 5
	C CFS	0	04945	62 60515	98417	71499	0	64 30431
ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7	Q AF	0	39 2	46000 0	718 3	0	0	46718 3
	C CFS	0	05415	68 55218	99217	78308	0	70 32743
FUTURE CONTRACTOR - SOUTH BAY	Q AF	0	19 7	22000 0	1503 0	0	0	23503 0
	C CFS	0	02721	9 71128	2 07607	37452	0	12 16187
TOTALS	Q AF	0	180 0	210000 0	4730 0	0	0	214730 0
	C CFS	0	24863	289 89158	6 53346	3 57496	0	300 00000
REACH 2 - ALTAMONT TURNOUT THRU PATTERSON RESERVOIR								
SANTA CLARA COUNTY FLOOD CONTROL AND WATER DISTRICT	Q AF	0	113 8	100000 0	1710 9	0	0	101710 9
	C CFS	0	15719	149 02297	2 36323	1 80551	01518	153 20689
ALAMEDA COUNTY WATER DISTRICT	Q AF	0	47 7	42000 0	676 7	0	0	42676 7
	C CFS	0	06589	62 60515	93472	75832	00637	64 30456
ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7	Q AF	17000 0	52 2	46000 0	679 1	0	0	46679 1
	C CFS	23 48174	07210	68 55218	93802	83053	00697	70 32770
FUTURE CONTRACTOR - SOUTH BAY	Q AF	0	26 3	22000 0	1483 3	0	0	23483 3
	C CFS	0	03633	9 71128	2 04886	39721	00350	12 16085
TOTALS	Q AF	17000 0	240 0	210000 0	4550 0	0	0	214550 0
	C CFS	23 48174	33151	289 89158	6 28483	3 79157	03202	300 00000
REACH 4 - PATTERSON RESERVOIR TO DEL VALLE JUNCTION								
SANTA CLARA COUNTY FLOOD CONTROL AND WATER DISTRICT	Q AF	0	417 1	100000 0	1597.1	0	0	101597 1
	C CFS	0	57613	149 02297	2 20604	2 11419	03542	153 37862
ALAMEDA COUNTY WATER DISTRICT	Q AF	0	175 0	42000.0	629 0	0	0	42629 0
	C CFS	0	24173	62 60515	86883	88796	01486	64 37680
ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7	Q AF	0	121 6	29000 0	626 9	0	1509 0	31135 9
	C CFS	0	16796	45 07044	86592	61311	23 49800	70 04747
FUTURE CONTRACTOR - SOUTH BAY	Q AF	-17174 0	96.3	22000 0	1457.0	0	0	23457 0
	C CFS	-23 72208	13302	9 71128	2 01253	46512	00818	12 19711
TOTALS	Q AF	-17174 0	810 0	193000.0	4310 0	0	1509 0	198819 0
	C CFS	-23 72208	1 11884	266 40984	5 95332	4 08038	23 55646	300 00000
REACH 5 - DEL VALLE JUNCTION THRU LAKE DEL VALLE								
SANTA CLARA COUNTY FLOOD CONTROL AND WATER DISTRICT	Q AF	0	1180 0	100000 0	1180 0			
	C AF	9536 0	343 0	9536 0	343 0	0		9879 0
ALAMEDA COUNTY WATER DISTRICT	Q AF	0	454 0	42000 0	454 0			
	C AF	3669 0	132 0	3669 0	132 0	0		3801 0
ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT ZONE 7	Q AF	0	505 3	29000 0	505 3			
	C AF	4083 0	147 0	4083 0	147 0	0		4230 0
FUTURE CONTRACTOR - SOUTH BAY	Q AF	12000 0	1360 7	39174 0	1360 7			
	C AF	10996 0	395 0	10996 0	395 0	0		11391 0
TOTALS	Q AF	12000 0	3500 0	210174 0	3500 0			
	C AF	28284 0	1017 0	28284 0	1017 0	0		29301 0



PROPORTIONATE USE FOR ALLOCATION OF CAPITAL COSTS		CAPACITY PROVIDED IN REACH		PROPORTIONATE USE FOR ALLOCATION OF MINIMUM OMP&R COSTS		MEASURE OF USE	WATER SUPPLY CONTRACTOR
RATIOS OF TOTAL REACH USE	AVERAGE OF RATIOS	FOR REQUESTED EXCESS PEAKING	TOTAL FOR WATER SUPPLY CONTRACTORS	RATIOS OF TOTAL REACH USE	AVERAGE OF RATIOS		
(9)	(10)	(11)	(12)	(13)	(14)	(15)	
							BETHANY RESERVOIR THRU ALTAMONT TURNOUT - REACH 1
47406604 51068796	49237700	0	101796 2 153 20639	47406604 51068796	49237700	Q AF C AF	SANTA CLARA COUNTY FLOOD CONTROL AND WATER DISTRICT
19891259 21434770	20663014	0	42712 5 64 30431	19891259 21434770	20663014	Q AF C AF	ALAMEDA COUNTY WATER DISTRICT
21756764 23442477	22599621	0	46718 3 70 32743	21756764 23442477	22599621	Q AF C AF	ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7
10945373 04053957	07499665	0	23503 0 12 16187	10945373 04053957	07499665	Q AF C AF	FUTURE CONTRACTOR - SOUTH BAY
1 00000000 1 00000000	1 00000000	0	214730 0 300 00000	1 00000000 1 00000000	1 00000000	Q AF C AF	TOTALS
							ALTAMONT TURNOUT THRU PATTERSON RESERVOIR - REACH 2
47406618 51068963	49237791	0	101710 9 153 20689	47406618 51068963	49237791	Q AF C CFS	SANTA CLARA COUNTY FLOOD CONTROL AND WATER DISTRICT
19891261 21434853	20663057	0	42676 7 64 30456	19891261 21434853	20663057	Q AF C CFS	ALAMEDA COUNTY WATER DISTRICT
21756747 23442567	22599657	0	46679 1 70 32770	21756747 23442567	22599657	Q AF C CFS	ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7
10945374 04053617	07499495	0	23483 3 12 16085	10945374 04053617	07499495	Q AF C CFS	FUTURE CONTRACTOR - SOUTH BAY
1.00000000 1 00000000	1 00000000	0	214550 0 300 00000	1 00000000 1 00000000	1 00000000	Q AF C CFS	TOTALS
							PATTERSON RESERVOIR TO DEL VALLE JUNCTION - REACH 4
51100297 51126207	51113252	0	101597 1 153 37862	51100297 51126207	51113252	Q AF C CFS	SANTA CLARA COUNTY FLOOD CONTROL AND WATER DISTRICT
21441110 21458933	21450021	0	42629 0 64 37680	21441110 21458933	21450021	Q AF C CFS	ALAMEDA COUNTY WATER DISTRICT
15660425 23349157	19504791	0	31135 9 70 04747	15660425 23349157	19504791	Q AF C CFS	ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7
11798168 04065703	07931936	0	23457 0 12 19711	11798168 04065703	07931936	Q AF C CFS	FUTURE CONTRACTOR - SOUTH BAY
1 00000000 1 00000000	1.00000000	0	198819 0 300 00000	1 00000000 1 00000000	1 00000000	Q AF C CFS	TOTALS
							DEL VALLE JUNCTION THRU LAKE DEL VALLE - REACH 5
33715573	33715573		9879 0	33715573	33715573	Q AF C CFS	SANTA CLARA COUNTY FLOOD CONTROL AND WATER DISTRICT
12972254	12972254		3801 0	12972254	12972254	Q AF C CFS	ALAMEDA COUNTY WATER DISTRICT
14436367	14436367		4230 0	14436367	14436367	Q AF C CFS	ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7
38875806	38875806		11391 0	38875806	38875806	Q AF C CFS	FUTURE CONTRACTOR - SOUTH BAY
1 00000000	1 00000000		29301 0	1 00000000	1 00000000	Q AF C CFS	TOTALS



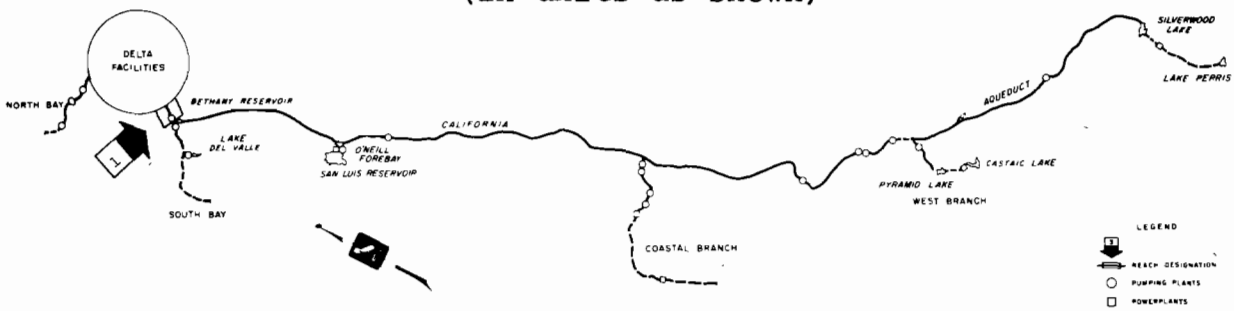
WATER SUPPLY CONTRACTOR	MEASURE OF USE	MAXIMUM ANNUAL ENTITLEMENTS DELIVERED FROM REACH	ESTIMATED OPERATIONAL LOSSES WITHIN REACH	CAPACITY PROVIDED IN REACH: FOR DELIVERY OF ENTITLEMENTS	FOR COMPENSATION OF: OPERATIONAL LOSSES	SCHEDULED OUTAGES	DOWNSTREAM REGULATION	SUBTOTAL
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
REACH 6 - DEL VALLE JUNCTION THRU SOUTH LIVERMORE TURNOUT								
SANTA CLARA COUNTY FLOOD CONTROL AND WATER DISTRICT	Q AF	0	0	100000 0	0	0	0	100000 0
	C CFS	0	0	184 00000	0	0	0	184 00000
ALAMEDA COUNTY WATER DISTRICT	Q AF	0	0	42000 0	0	0	0	42000 0
	C CFS	0	0	76 57808	0	0	0	76 57808
ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7	Q AF	29000.0	0	29000 0	0	0	0	29000 0
	C CFS	52 87534	0	52 87534	0	0	0	52 87534
FUTURE CONTRACTOR - SOUTH BAY	Q AF	2810 0	0	27174 0	0	0	0	27174 0
	C CFS	5 12344	0	49 54602	0	0	0	49 54602
TOTALS	Q AF	31810 0	0	198174.0	0	0	0	198174 0
	C CFS	57 99878	0	362 99944	0	0	0	362 99944
REACH 7 - SOUTH LIVERMORE TURNOUT THRU VALLECITOS TURNOUT								
SANTA CLARA COUNTY FLOOD CONTROL AND WATER DISTRICT	Q AF	0	0	100000 0	0	0	0	100000 0
	C CFS	0	0	184 00000	0	0	0	184 00000
ALAMEDA COUNTY WATER DISTRICT	Q AF	33225 0	0	42000 0	0	0	0	42000 0
	C CFS	60 57873	0	76 57808	0	0	0	76 57808
FUTURE CONTRACTOR - SOUTH BAY	Q AF	-5801 0	0	24364 0	0	0	0	24364 0
	C CFS	-10 57689	0	44 42258	0	0	0	44 42258
TOTALS	Q AF	27424 0	0	166364 0	0	0	0	166364 0
	C CFS	50 00184	0	305 00066	0	0	0	305 00066
REACH 8 - VALLECITOS TURNOUT THRU ALAMEDA-BAYSIDE TURNOUT								
SANTA CLARA COUNTY FLOOD CONTROL AND WATER DISTRICT	Q AF	0	0	100000 0	0	0	0	100000 0
	C CFS	0	0	184 00000	0	0	0	184 00000
ALAMEDA COUNTY WATER DISTRICT	Q AF	8775 0	0	8775 0	0	0	0	8775 0
	C CFS	15 99935	0	15 99935	0	0	0	15 99935
FUTURE CONTRACTOR - SOUTH BAY	Q AF	30165 0	0	30165 0	0	0	0	30165 0
	C CFS	54 99947	0	54 99947	0	0	0	54 99947
TOTALS	Q AF	38940 0	0	138940 0	0	0	0	138940 0
	C CFS	70 99882	0	254 99882	0	0	0	254 99882
REACH 9 - ALAMEDA-BAYSIDE TURNOUT THRU SANTA CLARA TERMINAL FACILITIES								
SANTA CLARA COUNTY FLOOD CONTROL AND WATER DISTRICT	Q AF	100000 0	0	100000 0	0	0	0	100000 0
	C CFS	184 00000	0	184 00000	0	0	0	184 00000
TOTALS	Q AF	100000.0	0	100000.0	0	0	0	100000 0
	C CFS	184.00000	0	184.00000	0	0	0	184 00000



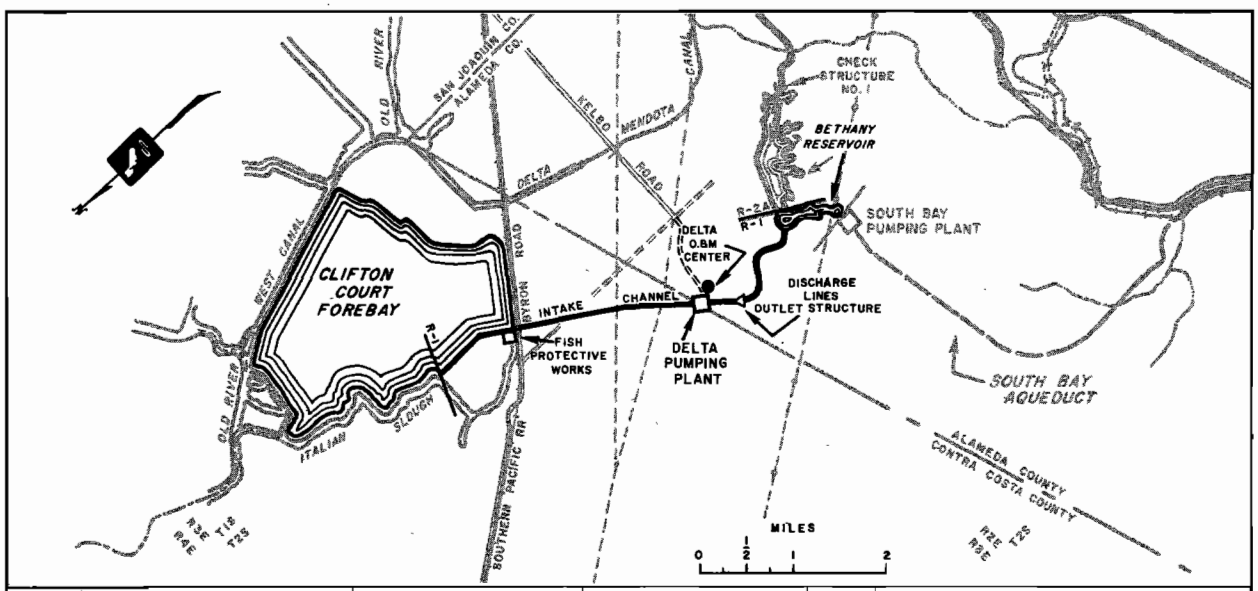
PROPORTIONATE USE FOR ALLOCATION OF CAPITAL COSTS		CAPACITY PROVIDED IN REACH		PROPORTIONATE USE FOR ALLOCATION OF MINIMUM OMP&R COSTS		MEASURE OF USE	WATER SUPPLY CONTRACTOR
RATIOS OF TOTAL REACH USE	AVERAGE OF RATIOS	FOR REQUESTED EXCESS PEAKING	TOTAL FOR WATER SUPPLY CONTRACTORS	RATIOS OF TOTAL REACH USE	AVERAGE OF RATIOS		
(9)	(10)	(11)	(12)	(13)	(14)	(15)	
							DEL VALLE JUNCTION THRU SOUTH LIVERMORE TURNOUT - REACH 6
50460706 50688784	50574745	0	100000 0 184 00000	50460706 50688784	50574745	Q AF C CFS	SANTA CLARA COUNTY FLOOD CONTROL AND WATER DISTRICT
21193497 21095922	21144710	0	42000 0 76 57808	21193497 21095922	21144710	Q AF C CFS	ALAMEDA COUNTY WATER DISTRICT
14633605 14566232	14599918	0	29000 0 52.87534	14633605 14566232	14599918	Q AF C CFS	ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7
13712192 13649062	13680627	0	27174 0 49 54602	13712192 13649062	13680627	Q AF C CFS	FUTURE CONTRACTOR – SOUTH BAY
1 00000000 1 00000000	1 00000000	0	198174 0 362 99944	1 00000000 1 00000000	1 00000000	Q AF C CFS	TOTALS
							SOUTH LIVERMORE TURNOUT THRU VALLECITOS TURNOUT - REACH 7
60109158 60327738	60218448	0	100000 0 184 00000	60109158 60327738	60218448	Q AF C CFS	SANTA CLARA COUNTY FLOOD CONTROL AND WATER DISTRICT
25245847 25107513	25176680	0	42000 0 76 57808	25245847 25107513	25176680	Q AF C CFS	ALAMEDA COUNTY WATER DISTRICT
14644995 14564749	14604872	0	24364 0 44 42258	14644995 14564749	14604872	Q AF C CFS	FUTURE CONTRACTOR – SOUTH BAY
1 00000000 1.00000000	1 00000000	0	166364 0 305 00066	1 00000000 1.00000000	1 00000000	Q AF C CFS	TOTALS
							VALLECITOS TURNOUT THRU ALAMEDA-BAYSIDE TURNOUT - REACH 8
71973514 72157197	72065355	0	100000 0 184 00000	71973514 72157197	72065355	Q AF C CRS	SANTA CLARA COUNTY FLOOD CONTROL AND WATER DISTRICT
06315676 06274284	06294980	0	8775 0 15 99935	06315676 06274284	06294980	Q AF C CFS	ALAMEDA COUNTY WATER DISTRICT
21710810 21568519	21639665	0	30165 0 54.99947	21710810 21568519	21639665	Q AF C CFS	FUTURE CONTRACTOR – SOUTH BAY
1 00000000 1.00000000	1 00000000	0	138940 0 254 99882	1 00000000 1 00000000	1.00000000	Q AF C CFS	TOTALS
							ALAMEDA-BAYSIDE TURNOUT THRU SANTA CLARA TERMINAL FACILITIES - REACH 9
1 00000000 1 00000000	1 00000000	0	100000 0 184 00000	1 00000000 1 00000000	1 00000000	Q AF C CFS	SANTA CLARA COUNTY FLOOD CONTROL AND WATER DISTRICT
1 00000000 1 00000000	1.00000000	0	100000 0 184 00000	1 00000000 1 00000000	1 00000000	Q AF C CFS	TOTALS

DETERMINATION OF PROPORTIONATE USE OF EACH AQUEDUCT REACH

(in units as shown)



WATER SUPPLY CONTRACTOR	MEASURE OF USE		MAXIMUM ANNUAL ENTITLEMENTS DELIVERED FROM REACH	ESTIMATED OPERATIONAL LOSSES WITHIN REACH	CAPACITY PROVIDED IN REACH: FOR DELIVERY OF ENTITLEMENTS	FOR COMPENSATION OF: OPERATIONAL LOSSES	SCHEDULED OUTAGES	DOWNSTREAM REGULATION	SUBTOTAL
	(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)
REACH 1 - DELTA THRU BETHANY RESERVOIR									
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA	Q	AF	0	284 2	2011500 0	130540 2	0	0	2142040 2
	C	CFS	0	46777	2863 14267	205 17212	184 59464	0	3252 90943
SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT	Q	AF	0	14 6	102600 0	7392 9	0	0	109992 9
	C	CFS	0	02403	172 33413	11 96853	73805	0	185 04071
SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT	Q	AF	0	4 1	28800 0	2075 2	0	0	30875 2
	C	CFS	0	00675	45 15128	3 35961	1 25674	0	49 76763
SAN GORGONIO PASS WATER AGENCY	Q	AF	0	2 5	17300 0	1246 7	0	0	18546 7
	C	CFS	0	00412	29 05110	2 01831	12679	0	31 19620
CRESTLINE-LAKE ARROWHEAD WATER AGENCY	Q	AF	0	8	5800 0	417 9	0	0	6217 9
	C	CFS	0	00132	9 75185	67657	03854	0	10 46696
MOJAVE WATER AGENCY	Q	AF	0	7 2	50800 0	3262 9	0	0	54062 9
	C	CFS	0	01185	70 16895	5 37049	5 26267	0	80 80211
DESERT WATER AGENCY	Q	AF	0	5 4	38100 0	2447 0	0	0	40547 0
	C	CFS	0	00889	63 98093	4 02762	24977	0	68 25832
COACHELLA VALLEY COUNTY WATER DISTRICT	Q	AF	0	3 3	23100 0	1483 8	0	0	24583 8
	C	CFS	0	00543	38 80295	2 44221	14775	0	41 39291
ANTELOPE VALLEY-EAST KERN WATER AGENCY	Q	AF	0	19 2	138400 0	6026 3	0	0	144426 3
	C	CFS	0	03160	191 16896	9 91886	14 33768	0	215 42550
LITTLEROCK CREEK IRRIGATION DISTRICT	Q	AF	0	3	2300 0	116 0	0	0	2416 0
	C	CFS	0	00049	3 17694	19092	23827	0	3 60613
PALMDALE IRRIGATION DISTRICT	Q	AF	0	2 4	17300 0	835 2	0	0	18135 2
	C	CFS	0	00395	23 89612	1 37470	1 79221	0	27 06303
VENTURA COUNTY FLOOD CONTROL DISTRICT	Q	AF	0	2 8	20000 0	1098 8	0	0	21098 8
	C	CFS	0	00461	27 62557	1 72616	2 10417	0	31 45590
CASTAIC LAKE WATER AGENCY	Q	AF	0	5 8	41500 0	2279 9	0	0	43779 9
	C	CFS	0	00955	57 32306	3 58165	4 36613	0	65 27084
KERN COUNTY WATER AGENCY MUNICIPAL AND INDUSTRIAL	Q	AF	0	16 3	119600 0	3403 1	0	0	123003 1
	C	CFS	0	02683	218 06521	5 60127	0	0	223 66648
KERN COUNTY WATER AGENCY AGRICULTURE	Q	AF	0	140 9	1033800 0	27659 0	0	0	1061459 0
	C	CFS	0	23191	3058 92860	45 52481	0	0	3104 45341
SANTA BARBARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	Q	AF	0	8 1	57700 0	3250.6	0	0	60950 6
	C	CFS	0	01333	79 69977	5 01957	6 10693	0	90 82627
SAN LUIS OBISPO COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	Q	AF	0	3 5	25000 0	1107 7	0	0	26107 7
	C	CFS	0	00576	34.53197	1 75692	2 61585	0	38 90474
DEVIL S DEN WATER DISTRICT	Q	AF	0	1 7	12700 0	322 9	0	0	13022 9
	C	CFS	0	00280	37 89123	53147	0	0	38 42270
DUDLEY RIDGE WATER DISTRICT	Q	AF	0	7 8	57700 0	1060.9	0	0	58760 9
	C	CFS	0	01284	172 15151	1 74617	0	0	173 89768
TULARE LAKE BASIN WATER STORAGE DISTRICT	Q	AF	0	14 8	110000 0	1913 7	0	0	111913 7
	C	CFS	0	02436	328 19179	3 14982	0	0	331 34161
HACIENDA WATER DISTRICT	Q	AF	0	1 1	8500 0	156 1	0	0	8656 1
	C	CFS	0	00181	25 36027	25693	0	0	25 61720
EMPIRE WEST SIDE IRRIGATION DISTRICT	Q	AF	0	4	3000 0	49 8	0	0	3049 8
	C	CFS	0	00066	8 95069	08198	0	0	9 03267
KINGS COUNTY	Q	AF	0	5	4000 0	66 5	0	0	4066 5
	C	CFS	0	00082	7 29315	10944	0	0	7 40259
OAK FLAT WATER DISTRICT	Q	AF	0	8	5700 0	30 4	0	0	5730 4
	C	CFS	0	00132	17 00630	05004	0	0	17 05634
SANTA CLARA COUNTY FLOOD CONTROL AND WATER DISTRICT	Q	AF	0	13 5	100000 0	1809 7	0	0	101809 7
	C	CFS	0	02222	149 02297	2 50327	1 70237	0	153 22861
ALAMEDA COUNTY WATER DISTRICT	Q	AF	0	5 7	42000 0	718 2	0	0	42718 2
	C	CFS	0	00938	62 60515	99355	71499	0	64 31369
ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7	Q	AF	0	6 2	46000 0	724 5	0	0	46724 5
	C	CFS	0	01020	68 55218	1 00237	78308	0	70 33763
FUTURE CONTRACTOR - SOUTH BAY	Q	AF	0	3 1	22000 0	1506 1	0	0	23506 1
	C	CFS	0	00510	9 71128	2 08117	37452	0	12 16697
TOTALS	Q	AF	0	577 0	4145200 0	203002 0	0	0	4348202 0
	C	CFS	0	94970	7873 53658	322 23653	227 55115	0	8423 32426



PROPORTIONATE USE FOR ALLOCATION OF CAPITAL COSTS		CAPACITY PROVIDED IN REACH		PROPORTIONATE USE FOR ALLOCATION OF MINIMUM OMP&R COSTS		MEASURE OF USE	WATER SUPPLY CONTRACTOR
RATIOS OF TOTAL REACH USE	AVERAGE OF RATIOS	FOR REQUESTED EXCESS PEAKING	TOTAL FOR WATER SUPPLY CONTRACTORS	RATIOS OF TOTAL REACH USE	AVERAGE OF RATIOS		
(9)	(10)	(11)	(12)	(13)	(14)	(15)	
							DELTA THRU BETHANY RESERVOIR - REACH 1
49262665 38617882	43940274	0	2142040 2 3252 90943	49262665 38617882	43940274	Q AF C CFS	THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
02529618 02196766	02363192	0	109992 9 185 04071	02529618 02196766	02363192	Q AF C CFS	SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT
00710068 00590831	00650450	0	30875 2 49 76763	00710068 00590831	00650450	Q AF C CFS	SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT
00426537 00370355	00398446	0	18546 7 31 19620	00426537 00370355	00398446	Q AF C CFS	SAN GORGONIO PASS WATER AGENCY
00142999 00124262	00133630	0	6217 9 10 46696	00142999 00124262	00133630	Q AF C CFS	CRESTLINE-LAKE ARROWHEAD WATER AGENCY
01243339 00959266	01101303	0	54062 9 80 80211	01243339 00959266	01101303	Q AF C CFS	MOJAVE WATER AGENCY
00932500 00810349	00871425	0	40547.0 68 25832	00932500 00810349	00871425	Q AF C CFS	DESERT WATER AGENCY
00565378 00491408	00528393	0	24583 8 41 39291	00565378 00491408	00528393	Q AF C CFS	COACHELLA VALLEY COUNTY WATER DISTRICT
03321518 02557488	02939503	0	144426 3 215 42550	03321518 02557488	02939503	Q AF C CFS	ANTELOPE VALLEY-EAST KERN WATER AGENCY
00055563 00042811	00049187	0	2416.0 3 60613	00055563 00042811	00049187	Q AF C CFS	LITTLEROCK CREEK IRRIGATION DISTRICT
00417074 00321287	00369180	0	18135 2 27 06303	00417074 00321287	00369180	Q AF C CFS	PALMDALE IRRIGATION DISTRICT
00485230 00373438	00429334	0	21098 8 31 45590	00485230 00373438	00429334	Q AF C CFS	VENTURA COUNTY FLOOD CONTROL DISTRICT
01006851 00774882	00890866	0	43779 9 65 27084	01006851 00774882	00890866	Q AF C CFS	CASTAIC LAKE WATER AGENCY
02828827 02655323	02742075	0	123003 1 223 66648	02828827 02655323	02742075	Q AF C CFS	KERN COUNTY WATER AGENCY MUNICIPAL AND INDUSTRIAL
24411446 36855442	30633444	0	1061459 0 3104 45341	24411446 36855442	30633444	Q AF C CFS	KERN COUNTY WATER AGENCY AGRICULTURE
01401743 01078271	01240007	0	60950 6 90 82627	01401743 01078271	01240007	Q AF C CFS	SANTA BARBARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
00600425 00461869	00531147	0	26107 7 38 90474	00600425 00461869	00531147	Q AF C CFS	SAN LUIS OBISPO COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
00299501 00456147	00377824	0	13022 9 38 42270	00299501 00456147	00377824	Q AF C CFS	DEVIL'S DEN WATER DISTRICT
01351384 02064478	01707931	0	58760 9 173 89768	01351384 02064478	01707931	Q AF C CFS	DUDLEY RIDGE WATER DISTRICT
02573793 03933621	03253706	0	111913 7 331 34161	02573793 03933621	03253706	Q AF C CFS	TULARE LAKE BASIN WATER STORAGE DISTRICT
00199073 00304122	00251598	0	8656 1 25 61720	00199073 00304122	00251598	Q AF C CFS	HACIENDA WATER DISTRICT
00070139 00107234	00088687	0	3049 8 9 03267	00070139 00107234	00088687	Q AF C CFS	EMPIRE WEST SIDE IRRIGATION DISTRICT
00093521 00087882	00090702	0	4066 5 7 40259	00093521 00087882	00090702	Q AF C CFS	KINGS COUNTY
00131788 00202490	00167139	0	5730 4 17 05634	00131788 00202490	00167139	Q AF C CFS	OAK FLAT WATER DISTRICT
02341421 01819099	02080260	0	101809 7 153 22861	02341421 01819099	02080260	Q AF C CFS	SANTA CLARA COUNTY FLOOD CONTROL AND WATER DISTRICT
00982434 00763519	00872976	0	42718 2 64 31369	00982434 00763519	00872976	Q AF C CFS	ALAMEDA COUNTY WATER DISTRICT
01074571 00835034	00954802	0	46724 5 70 33763	01074571 00835034	00954802	Q AF C CFS	ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7
00540594 00144444	00342519	0	23506 1 12 16697	00540594 00144444	00342519	Q AF C CFS	FUTURE CONTRACTOR - SOUTH BAY
1 00000000 1 00000000	1 00000000	0	4348202 0 8423 32426	1 00000000 1 00000000	1 00000000	Q AF C CFS	TOTALS

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

(in

CALENDAR YEAR	NORTH BAY AQUEDUCT		SOUTH BAY AQUEDUCT	CALIFORNIA				
	Reach 1 Calhoun and Travis Pumping Plants	Reach 3 Cordelia Pumping Plant	Reach 1 South Bay and Del Valle Pumping Plants (b	Reach 1 Delta Pumping Plant	Reach 4 Dos Amigos Pumping Plant	Reach 14A Buena Vista Pumping Plant	Reach 15A Wheeler Ridge Pumping Plant	Reach 16A 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	198,643	0	0	0	0	0
1967	0	0	229,080	26,911	0	0	0	0
1968	0	7,292	344,971	1,343,224	256,137	0	0	0
1969	0	8,701	281,709	871,844	158,998	0	0	0
1970	0	13,842	503,401	451,148	245,803	20,101	16,681	22,722
1971	0	10,774	424,273	614,695	239,672	165,384	31,467	25,618
1972	0	15,000	610,400	1,028,000	549,100	417,800	267,300	548,700
1973	0	14,000	533,400	1,465,000	585,100	739,800	703,300	1,516,400
1974	0	14,000	543,400	1,195,000	650,100	741,800	790,300	1,729,400
1975	0	14,000	543,400	2,510,000	655,100	688,800	651,300	1,414,400
1976	0	14,000	550,400	1,825,000	656,100	788,800	760,300	1,653,400
1977	0	12,000	550,400	1,930,000	713,100	820,800	858,300	1,871,400
1978	0	11,000	525,400	2,356,000	750,100	915,800	896,300	1,955,400
1979	0	15,000	558,400	2,488,000	900,100	1,050,800	1,102,300	2,410,400
1980	5,000	32,200	644,400	2,423,200	1,025,100	1,205,800	1,178,300	2,574,400
1981	5,000	31,200	621,400	3,612,200	1,105,100	1,261,800	1,241,300	2,714,400
1982	5,000	33,200	629,400	3,781,200	1,222,100	1,405,800	1,400,300	3,067,400
1983	10,000	40,200	739,400	4,101,200	1,347,100	1,435,800	1,392,300	3,043,400
1984	9,000	40,200	716,400	3,970,200	1,388,100	1,543,800	1,525,300	3,334,400
1985	10,000	40,200	713,400	5,424,400	1,487,100	1,699,800	1,559,300	3,409,400
1986	10,000	53,200	712,400	4,565,400	1,626,100	1,714,800	1,716,300	3,756,400
1987	15,000	54,200	706,400	5,181,400	1,783,100	1,860,800	1,884,300	4,125,400
1988	17,000	55,200	711,400	6,208,400	1,986,100	2,046,800	1,946,300	4,263,400
1989	24,000	53,200	697,400	6,322,400	2,028,100	2,172,800	2,101,300	4,609,400
1990	40,000	60,200	771,400	4,727,400	2,497,100	2,398,800	2,317,300	5,086,400
1991	38,000	58,200	734,400	6,119,400	2,437,100	2,426,800	2,381,300	5,228,400
1992	38,000	59,200	750,400	6,773,400	2,477,100	2,464,800	2,417,300	5,309,400
1993	38,000	73,200	748,400	6,472,400	2,451,100	2,439,800	2,396,300	5,261,400
1994	38,000	74,200	795,400	6,674,400	2,455,100	2,447,800	2,404,300	5,620,400
1995	38,000	74,200	781,400	7,234,400	2,428,100	2,420,800	2,380,300	5,561,400
1996	41,000	78,200	814,400	6,129,400	2,538,100	2,654,800	2,631,300	5,781,400
1997	41,000	79,200	816,400	6,396,400	2,627,100	2,669,800	2,648,300	5,818,400
1998	40,000	77,200	788,400	6,239,400	2,541,100	2,595,800	2,578,300	5,665,400
1999	41,000	79,200	797,400	6,400,400	2,583,100	2,627,800	2,608,300	5,733,400
2000	41,000	78,200	794,400	6,865,400	2,576,100	2,627,800	2,609,300	5,735,400
2001	41,000	79,200	803,400	6,306,400	2,622,100	2,665,800	2,809,300	6,175,400
2002	40,000	76,200	773,400	6,561,400	2,612,100	2,708,800	2,717,300	5,973,400
2003	40,000	77,200	782,400	6,723,400	2,565,100	2,615,800	2,758,300	6,063,400
2004	41,000	79,200	800,400	6,738,400	2,735,100	2,811,800	2,818,300	6,554,400
2005	40,000	77,200	779,400	6,846,400	2,675,100	2,758,800	2,927,300	6,435,400
2006	40,000	76,200	772,400	7,382,400	2,672,100	2,865,800	2,897,300	6,369,400
2007	40,000	77,200	779,400	7,600,400	2,723,100	2,904,800	2,937,300	6,809,400
2008	40,000	77,200	779,400	7,512,400	2,731,100	2,907,800	2,940,300	6,818,400
2009	40,000	77,200	775,400	7,469,400	2,722,100	2,905,800	2,940,300	6,816,400
2010	40,000	77,200	777,400	6,940,400	2,770,100	2,921,800	3,117,300	6,855,400
2011	40,000	76,200	769,400	7,406,400	2,769,100	2,900,800	3,095,300	6,808,400
2012	39,000	75,200	758,400	7,401,400	2,731,100	2,856,800	3,047,300	6,703,400
2013	40,000	77,200	778,400	7,576,400	2,865,100	3,082,800	3,142,300	7,269,400
2014	40,000	77,200	772,400	7,581,400	2,793,100	2,930,800	3,129,300	7,233,400
2015	40,000	77,200	773,400	7,632,400	2,831,100	3,072,800	3,234,300	7,246,400
2016	40,000	77,200	774,400	7,163,400	2,864,100	3,088,800	3,313,300	7,289,400
2017	39,000	75,200	758,400	7,446,400	2,786,100	3,027,800	3,247,300	7,143,400
2018	40,000	77,200	771,400	7,593,400	2,886,100	3,107,800	3,335,300	7,340,400
2019	40,000	77,200	774,400	7,145,400	2,936,100	3,111,800	3,339,300	7,706,400
2020(c	39,000	75,200	755,400	7,430,400	2,877,100	3,045,800	3,267,300	7,535,400

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								
Reach 17E A. D. Edmonston Pumping Plant	Reach 22B Pear-blossom Pumping Plant	Reach 26 A Devil Canyon Powerplant	Reach 29A Oso Pumping Plant	Reach 29J Castaic Powerplant	Reach 31A Las Perillas and Badger Hill Pumping Plants	Reach 33A Devil's Den Sawtooth and Polonio PP's and San Luis Obispo Pwp	GRAND TOTAL	CALENDAR YEAR
(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	198,643	1966
0	0	0	0	0	122	0	256,113	1967
0	0	0	0	0	125,001	0	2,076,625	1968
0	0	0	0	0	84,019	0	1,405,271	1969
0	0	0	0	0	142,808	0	1,416,506	1970
43,538	68,259	0	4,715	0	175,695	0	1,814,099	1971
1,795,300	348,100	-236,000	159,000	-361,000	257,700	0	5,399,400	1972
5,176,600	948,100	-1,360,500	390,800	-1,449,000	146,700	0	9,409,700	1973
5,924,600	981,100	-1,291,500	437,800	-2,220,000	148,700	0	9,644,700	1974
4,825,600	971,100	-1,745,500	258,800	-1,977,000	152,700	0	8,962,700	1975
5,653,600	1,294,900	-2,274,100	218,800	-2,118,000	162,700	0	9,185,900	1976
6,404,600	1,382,900	-2,547,100	264,800	-2,478,000	165,700	0	9,948,900	1977
6,623,600	1,492,900	-3,167,100	254,800	-2,611,000	143,700	0	10,146,900	1978
8,191,600	1,855,900	-3,579,100	294,800	-2,943,000	155,700	0	12,500,900	1979
8,751,600	2,138,900	-4,062,100	269,800	-3,297,000	210,500	123,800	13,223,900	1980
9,218,600	2,100,900	-4,138,100	319,800	-3,257,000	207,500	124,800	15,168,900	1981
10,393,600	2,270,900	-4,358,100	341,800	-3,421,000	225,500	134,800	17,131,900	1982
10,349,600	2,663,900	-4,136,100	296,800	-3,335,000	273,500	219,800	18,441,900	1983
11,374,400	2,377,900	-3,911,100	336,800	-3,495,000	269,500	223,800	19,703,700	1984
11,623,400	2,571,900	-3,800,100	340,800	-3,649,000	291,500	230,800	21,952,900	1985
12,805,400	2,346,900	-3,870,100	382,800	-3,674,000	294,500	258,800	22,698,900	1986
14,079,400	2,536,900	-3,765,100	378,800	-3,962,000	295,500	324,800	25,498,900	1987
14,540,400	2,489,900	-3,554,100	583,800	-3,884,000	300,500	344,800	28,055,900	1988
15,724,400	2,466,900	-4,120,100	669,800	-4,425,000	295,500	396,800	29,016,900	1989
17,374,400	2,675,900	-3,884,100	825,800	-4,568,000	330,500	466,800	31,119,900	1990
17,872,400	2,560,900	-4,282,100	866,800	-5,124,000	311,500	424,800	32,053,900	1991
18,159,400	2,599,900	-4,171,100	737,800	-4,950,000	315,500	462,800	33,443,900	1992
17,988,400	2,537,900	-3,814,100	818,800	-4,708,000	314,500	465,800	33,483,900	1993
18,058,400	2,565,900	-4,041,100	814,800	-5,167,000	315,500	528,800	33,584,900	1994
17,883,400	2,509,900	-4,032,100	961,800	-5,247,000	311,500	520,800	33,826,900	1995
18,569,400	2,572,900	-3,864,100	1,012,800	-5,630,000	325,500	545,800	34,200,900	1996
18,691,400	2,665,900	-4,208,100	838,800	-5,037,000	326,500	548,800	34,922,900	1997
19,405,400	2,490,900	-4,084,100	1,009,800	-4,910,000	317,500	530,800	35,285,900	1998
19,646,400	2,578,900	-3,674,100	1,069,800	-5,160,000	322,500	649,800	36,303,900	1999
19,656,400	2,545,900	-3,728,100	1,229,800	-5,161,000	322,500	637,800	36,830,900	2000
19,951,400	2,580,900	-4,186,100	1,175,800	-5,446,000	326,500	655,800	36,560,900	2001
20,487,400	2,484,900	-4,197,100	1,286,800	-5,670,000	315,500	619,800	36,789,900	2002
20,802,400	2,502,900	-3,860,100	1,314,800	-5,490,000	321,500	641,800	37,858,900	2003
21,266,400	2,570,900	-4,153,100	1,263,800	-6,497,000	328,500	655,800	38,013,900	2004
22,109,400	2,492,900	-4,000,100	1,185,800	-5,966,000	321,500	645,800	39,328,900	2005
21,879,400	2,499,900	-4,099,100	1,232,800	-5,697,000	318,500	632,800	39,842,900	2006
22,195,400	2,487,900	-4,107,100	1,343,800	-6,533,000	321,500	633,800	40,213,900	2007
22,222,400	2,494,900	-4,123,100	1,270,800	-6,699,000	321,500	634,800	39,928,900	2008
22,224,400	2,479,900	-4,253,100	1,424,800	-6,679,000	319,500	624,800	39,887,900	2009
23,578,400	2,496,900	-3,922,100	1,431,800	-6,198,000	319,500	634,800	41,840,900	2010
23,416,400	2,472,900	-3,975,100	1,427,800	-6,504,000	317,500	620,800	41,641,900	2011
23,048,400	2,436,900	-4,237,100	1,405,800	-6,575,000	311,500	607,800	40,610,900	2012
23,780,400	2,483,900	-4,149,100	1,458,800	-6,709,000	319,500	630,800	42,646,900	2013
23,678,400	2,487,900	-4,220,100	1,450,800	-6,741,000	318,500	629,800	42,161,900	2014
23,718,400	2,472,900	-4,124,100	1,605,800	-7,033,000	318,500	624,800	42,490,900	2015
25,099,400	2,466,900	-3,926,100	1,549,800	-6,549,000	318,500	633,800	44,203,900	2016
24,591,400	2,439,900	-3,982,100	1,442,800	-7,066,000	311,500	607,800	42,868,900	2017
25,275,400	2,474,900	-4,214,100	1,644,800	-6,941,000	317,500	619,800	44,328,900	2018
25,306,400	2,472,900	-4,085,100	1,645,800	-7,079,000	318,500	625,800	44,335,900	2019
24,759,400	2,421,900	-3,820,100	1,614,800	-7,142,000	310,500	602,800	43,772,900	2020[c]

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

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

TABLE B-4: ANNUAL ENTITLE-

(in acre-feet)

CALENDAR YEAR	NORTH BAY AREA			SOUTH BAY AREA (b				CENTRAL COASTAL AREA		
	Napa County FC & WCD (c	Solano County FC & WCD	Total	Alameda County FC & WCD, Zone 7	Alameda County Water District	Santa Clara 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, 1971.

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

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

MENTS TO PROJECT WATER[a]

(in acre-feet)

CALENDAR YEAR	SAN JOAQUIN VALLEY AREA								
	Devil's Den Water District	Dudley Ridge Water District	Empire West Side Irrigation District	Hacienda Water District	Kern County Water Agency	County of Kings	Oak Flat Water District	Tulare Lake Basin Water Storage District	Total
	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
1962	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0
1968	3,700	14,300	1,000	0	46,600	900	2,300	12,250	81,050
1969	5,000	14,325	3,000	2,400	95,700	1,200	2,500	43,950	168,075
1970	5,700	15,700	3,000	2,500	145,100	1,300	2,600	31,800	207,700
1971	6,700	17,900	3,000	2,300	190,300	1,300	2,800	34,200	258,500
1972	7,700	20,000	3,000	2,600	270,700	1,400	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)

CALENDAR YEAR	SOUTHERN CALIFORNIA AREA (continued)				FEATHER RIVER AREA				TOTAL STATE WATER PROJECT
	San Gorgonio Pass Water Agency	The Metropolitan Water District of Southern California	Ventura County Flood Control District	Total	City of Yuba City	County of Butte	Plumas County FC & WCD	Total	
	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)
1962	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	11,538
1968	0	0	0	0	0	300	250	550	191,500
1969	0	0	0	0	0	350	270	620	267,395
1970	0	0	0	0	0	400	300	700	322,600
1971	0	0	0	0	0	450	440	890	375,590
1972	0	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)

Calendar Year	Grizzly Valley Pipeline PC FC&WCD	NORTH BAY AQUEDUCT Reach 2 SC FC&WCD	NORTH BAY AQUEDUCT Reach 3 NC FC&WCD(a	TOTAL NORTH BAY AQUEDUCT (a	SOUTH BAY AQUEDUCT Reach 1 ACWD	SOUTH BAY AQUEDUCT Reach 1 AC FC&WCD	SOUTH BAY AQUEDUCT Reach 2 AC FC&WCD	SOUTH BAY AQUEDUCT Reach 4 AC FC&WCD	SOUTH BAY AQUEDUCT Reach 5 AC FC&WCD	SOUTH BAY AQUEDUCT Reach 6 AC FC&WCD	SOUTH BAY AQUEDUCT Reach 7 ACWD
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1962	0	0	0	0	8,412	141	353	0	0	0	0
1963	0	0	0	0	10,914	814	917	0	0	0	0
1964	0	0	0	0	19,238	248	1,425	0	0	0	0
1965	0	0	0	0	15,280	637	1,830	138	0	0	1,127
1966	0	0	0	0	0	2,475	2,537	499	0	0	14,864
1967	0	0	0	0	0	1,527	2,391	862	0	0	12,882
1968	0	0	1,214	1,214	0	1,608	3,799	721	5	0	24,817
1969	0	0	2,687	2,687	0	1,165	3,459	1,851	160	0	813
1970	70	0	3,618	3,618	0	1,345	4,558	3,182	164	0	0
1971	64	0	2,521	2,521	0	546	1,908	2,403	160	0	5,961
1972	470	0	3,857	3,857	0	1,355	5,365	5,520	160	0	30,000
1973	500	0	3,927	3,927	0	1,315	6,046	6,029	160	50	18,800
1974	530	0	3,998	3,998	0	1,315	4,317	527	0	8,641	19,600
1975	560	0	4,094	4,094	0	1,315	4,845	138	0	9,702	20,500
1976	590	0	4,162	4,162	0	1,134	5,355	0	0	10,711	21,300
1977	620	0	4,266	4,266	0	734	5,889	0	0	11,777	17,200
1978	650	0	5,200	5,200	0	0	7,400	0	0	12,600	18,100
1979	680	0	6,800	6,800	0	0	8,200	0	0	13,900	18,900
1980	710	6,750	8,500	15,250	0	0	8,900	0	0	15,100	19,800
1981	740	8,000	9,300	17,300	0	0	9,500	0	0	16,300	21,000
1982	770	9,400	10,100	19,500	0	0	10,200	0	0	17,400	22,200
1983	800	10,330	10,700	21,030	0	0	10,900	0	0	18,700	23,400
1984	830	11,160	11,300	22,460	0	0	11,700	0	0	19,800	24,600
1985	860	12,870	12,000	24,870	0	0	12,400	0	0	21,100	25,800
1986	890	15,240	13,200	28,440	0	0	13,100	0	0	22,300	27,100
1987	920	18,320	14,000	32,320	0	0	13,800	0	0	23,500	28,300
1988	960	24,900	14,600	39,500	0	0	14,500	0	0	24,700	29,500
1989	1,000	31,350	15,000	46,350	0	0	15,200	0	0	25,900	30,700
1990	1,040	37,800 (b	15,500	53,300	0	0	15,900	0	0	27,100	31,900
1991	1,080	37,800	17,000	54,800	0	0	16,500	0	0	28,000	33,400
1992	1,120	37,800	18,000	55,800	0	0	17,000	0	0	29,000	34,900
1993	1,160	37,800	19,000	56,800	0	0	17,000	0	0	29,000	36,400
1994	1,200	37,800	20,000	57,800	0	0	17,000	0	0	29,000	37,000
1995	1,250	37,800	21,000	58,800	0	0	17,000	0	0	29,000	37,000
1996	1,300	37,800	22,000	59,800	0	0	17,000	0	0	29,000	37,000
1997	1,350	37,800	22,700	60,500	0	0	17,000	0	0	29,000	37,000
1998	1,400	37,800	23,500	61,300	0	0	17,000	0	0	29,000	37,000
1999	1,450	37,800	24,200	62,000	0	0	17,000	0	0	29,000	37,000
2000	1,510	37,800	25,000	62,800	0	0	17,000	0	0	29,000	37,000
2001	1,570	37,800	25,000	62,800	0	0	17,000	0	0	29,000	37,000
2002	1,630	37,800	25,000	62,800	0	0	17,000	0	0	29,000	37,000
2003	1,690	37,800	25,000	62,800	0	0	17,000	0	0	29,000	37,000
2004	1,750	37,800	25,000	62,800	0	0	17,000	0	0	29,000	37,000
2005	1,810	37,800	25,000	62,800	0	0	17,000	0	0	29,000	37,000
2006	1,880	37,800	25,000	62,800	0	0	17,000	0	0	29,000	37,000
2007	1,950	37,800	25,000	62,800	0	0	17,000	0	0	29,000	37,000
2008	2,020	37,800	25,000	62,800	0	0	17,000	0	0	29,000	37,000
2009	2,090	37,800	25,000	62,800	0	0	17,000	0	0	29,000	37,000
2010	2,160	37,800	25,000	62,800	0	0	17,000	0	0	29,000	37,000
2011	2,240	37,800	25,000	62,800	0	0	17,000	0	0	29,000	37,000
2012	2,320	37,800	25,000	62,800	0	0	17,000	0	0	29,000	37,000
2013	2,410	37,800	25,000	62,800	0	0	17,000	0	0	29,000	37,000
2014	2,500	37,800	25,000	62,800	0	0	17,000	0	0	29,000	37,000
2015	2,600	37,800	25,000	62,800	0	0	17,000	0	0	29,000	37,000
2016	2,700	37,800	25,000	62,800	0	0	17,000	0	0	29,000	37,000
2017	2,700	37,800	25,000	62,800	0	0	17,000	0	0	29,000	37,000
2018	2,700	37,800	25,000	62,800	0	0	17,000	0	0	29,000	37,000
2019	2,700	37,800	25,000	62,800	0	0	17,000	0	0	29,000	37,000
2020 (c	2,700	37,800	25,000	62,800	0	0	17,000	0	0	29,000	37,000

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

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

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

FROM EACH AQUEDUCT REACH TO EACH CONTRACTOR

(in acre-feet)

Calendar Year	SOUTH BAY AQUEDUCT (continued)		TOTAL SOUTH BAY AQUEDUCT	CALIFORNIA AQUEDUCT						
				NORTH SAN JOAQUIN DIVISION	SOUTH SAN JOAQUIN DIVISION					
	Reach 8	Reach 9		Reach 2A	Reach 8C			Reach 8D		
	ACWD	SCC FC&WCD		OFWD	TLBWSD	EWSID	KC	DRWD	HWD	TLBWSD
	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
1962	0	0	8,906	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	3,084	25,100	1,978	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	87,606	98,584	7,212	80,906	5,990	3,700	41,053	6,659	34,920
1972	0	88,000	130,400	5,700	91,100	6,000	1,400	49,000	4,700	58,000
1973	0	88,000	120,400	3,100	22,300	3,000	1,500	22,000	2,900	16,800
1974	0	88,000	122,400	3,200	24,500	3,000	1,500	24,100	3,300	18,500
1975	0	88,000	124,500	3,400	26,700	3,000	1,600	26,200	3,600	20,200
1976	0	88,000	126,500	3,500	28,900	3,000	1,600	28,300	3,900	21,900
1977	5,000	88,000	128,600	3,700	31,200	3,000	1,700	30,400	4,200	23,600
1978	5,000	88,000	131,100	3,900	33,400	3,000	1,900	32,500	4,600	25,300
1979	5,000	88,000	134,000	4,000	35,600	3,000	2,000	34,600	4,900	27,000
1980	5,000	88,000	136,800	4,200	37,800	3,000	2,200	36,700	5,200	28,700
1981	5,000	88,000	139,800	4,300	40,000	3,000	2,300	38,800	5,600	30,400
1982	5,000	88,000	142,800	4,500	42,200	3,000	2,500	41,000	5,900	32,100
1983	5,000	88,000	146,000	4,600	44,400	3,000	2,800	42,900	6,200	33,800
1984	5,000	88,000	149,100	4,800	46,600	3,000	3,100	45,100	6,500	35,500
1985	5,000	88,000	152,300	4,900	48,800	3,000	3,400	47,200	6,900	37,200
1986	5,000	88,000	155,500	5,100	51,100	3,000	3,700	49,300	7,200	38,900
1987	5,000	88,000	158,600	5,200	53,300	3,000	4,000	51,400	7,500	40,600
1988	5,000	88,000	161,700	5,400	55,500	3,000	4,000	53,500	7,800	42,300
1989	5,000	90,000	166,800	5,600	57,700	3,000	4,000	55,600	8,200	44,000
1990	5,000	92,000	171,900	5,700	62,400	3,000	4,000	57,700	8,500	47,600
1991	5,000	94,000	176,900	5,700	62,400	3,000	4,000	57,700	8,500	47,600
1992	5,000	96,000	181,900	5,700	62,400	3,000	4,000	57,700	8,500	47,600
1993	5,000	98,000	185,400	5,700	62,400	3,000	4,000	57,700	8,500	47,600
1994 (C	5,000	100,000	188,000	5,700	62,400	3,000	4,000	57,700	8,500	47,600

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.)
	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)
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	0	4,891
1971	58,356	0	9,973	0	63,773	0	0	28,056	0	0
1972	64,200	0	6,000	0	85,000	0	0	14,000	0	6,300
1973	52,591	0	18,615	0	70,182	0	0	3,800	0	13,300
1974	64,200	0	15,300	0	83,562	0	31,400	16,127	0	12,400
1975	69,596	0	18,504	0	90,760	0	35,000	19,312	0	12,800
1976	75,632	0	32,168	0	97,376	0	37,300	22,000	0	13,600
1977	80,753	0	40,726	0	104,164	0	40,800	28,964	0	14,427
1978	82,700	0	55,700	0	104,600	2,400	43,100	14,600	3,600	23,800
1979	82,700	0	69,700	0	111,600	2,400	45,400	17,000	3,600	27,800
1980	82,700	0	84,000	0	118,000	2,400	47,700	19,500	3,600	32,200
1981	82,700	0	100,600	0	124,700	2,400	50,200	22,500	3,600	36,900
1982	82,700	0	116,200	0	130,800	2,400	53,600	25,400	3,600	41,500
1983	82,700	0	133,300	0	135,600	2,400	56,000	29,100	3,600	47,600
1984	84,100	0	148,100	0	141,300	2,400	59,400	32,100	3,600	52,400
1985	86,500	0	161,500	0	145,400	2,400	62,900	35,500	3,600	57,900
1986	89,100	0	174,500	0	150,000	2,400	65,300	38,600	3,600	63,100
1987	91,100	0	188,600	0	153,300	2,400	68,800	42,200	3,600	68,500
1988	92,500	0	202,000	0	155,800	2,400	71,200	45,800	3,600	73,900
1989	93,200	0	212,000	0	157,200	2,400	74,000	48,300	3,600	78,100
1990 (C	93,600	0	224,600	0	157,800	2,400	91,100	51,200	3,600	82,200

TABLE B-5: ANNUAL QUANTITIES DELIVERED

(in acre-feet)

Calendar Year	CALIFORNIA AQUEDUCT (continued)									
	SOUTH SAN JOAQUIN DIVISION (continued)							TEHACHAPI DIVISION	MOJAVE DIVISION	
	Reach 14A		Reach 14B	Reach 14C	Reach 15A	Reach 16A		Reach 17E	Reach 18A	Reach 19
	KCWA (M&I)	KCWA (Ag.)	KCWA (Ag.)	KCWA (Ag.)	KCWA (Ag.)	KCWA (M&I)	KCWA (Ag.)	KCWA (M&I)	AVEKWA	AVEKWA
	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)
1970	0	0	3	0	0	0	0	0	0	0
1971	0	23,844	49,929	24,187	3,552	0	0	0	0	0
1972	0	24,900	61,500	32,500	4,100	0	3,000	500	0	0
1973	0	11,234	29,244	14,463	24,286	2,490	2,804	600	0	0
1974	0	8,764	19,827	9,375	15,955	2,430	1,348	700	0	0
1975	0	11,609	23,618	10,289	17,260	2,470	1,610	800	0	0
1976	0	12,731	27,347	11,754	19,365	2,520	1,703	1,000	0	0
1977	0	14,794	31,782	13,660	22,506	2,600	1,948	1,500	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	19,200	35,400	71,100	28,700	48,700	10,700	44,900	1,800	11,000	40,000
1988	19,900	37,200	78,600	30,100	51,200	12,300	47,400	1,900	14,000	45,000
1989	20,100	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

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
	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)
1972	0	0	335	0	0	0	0	0	0
1973	0	0	290	0	0	14,800-	5,800	9,000	0
1974	0	0	400	0	0	16,400-	6,400	10,000	1,560
1975	20,000	0	520	300	2,700	18,000-	7,000	11,000	1,800
1976	22,000	0	640	500	3,500	19,600-	7,600	12,000	2,040
1977	24,000	0	730	700	4,300	21,421-	8,421	13,000	2,280
1978	25,000	1,060	920	1,466	4,700	23,242-	9,242	14,000	4,000
1979	26,000	1,740	1,040	1,233	5,100	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	14,500	1,840	5,500	6,000	0	18,210	29,000	24,000
1987	25,000	15,200	1,960	5,500	6,500	0	19,431	31,500	30,000
1988	25,000	15,900	2,070	5,500	6,500	0	20,652	34,000	36,000
1989	25,000	16,600	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

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 47 provides for compliance with the repayment of the Agreement.

FROM EACH AQUEDUCT REACH TO EACH CONTRACTOR

(in acre-feet)

Calendar Year	CALIFORNIA AQUEDUCT (continued)								
	SANTA ANA DIVISION								
	Reach 24	Reach 26A				Reach 28G		Reach 28H	Reach 28J
	CLAWA	MWD-SC	SBVMWD	SGVMWD	SGPWA	MWD-SC	SBVMWD	MWD-SC	MWD-SC
	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)
1972	492	60,000	18,099	0	0	0	1,023	0	0
1973	870	100,000	45,420	11,500	0	10,000	2,580	0	0
1974	1,160	109,000	47,300	12,300	0	10,000	2,700	0	85,000
1975	1,450	159,200	49,680	13,100	0	10,000	2,820	0	90,800
1976	1,740	233,100	52,060	14,000	0	10,000	2,940	0	96,900
1977	2,030	302,921	54,440	14,800	0	10,000	3,060	0	104,100
1978	2,320	307,242	56,820	15,083	0	10,000	3,346	0	145,900
1979	2,610	309,063	59,200	15,367	0	10,000	3,633	0	195,700
1980	2,900	311,884	61,580	15,650	6,800	10,000	3,920	25,000	215,500
1981	3,190	315,105	63,960	15,990	7,800	10,000	4,740	27,000	243,500
1982	3,480	318,326	66,340	16,330	8,800	10,000	5,560	29,000	233,500
1983	3,770	321,547	68,720	16,670	9,800	10,000	6,380	31,000	231,500
1984	4,060	284,000	71,100	17,010	10,800	10,000	7,200	33,000	229,500
1985	4,350	284,000	73,480	17,350	11,800	10,000	8,020	35,000	227,500
1986	4,640	284,000	75,860	17,680	12,900	10,000	9,640	37,000	225,500
1987	4,930	284,000	78,240	18,010	14,000	10,000	11,260	39,000	223,500
1988	5,220	284,000	80,620	18,340	15,100	10,000	12,880	41,000	221,500
1989	5,510	284,000	83,000	18,670	16,200	10,000	14,500	43,000	219,500
1990	5,800	284,000	85,300	19,000	17,300	10,000	16,200	45,000	217,500
1991	5,800	284,000	86,400	19,327	17,300	10,000	16,200	47,000	215,500
1992	5,800	284,000	86,400	19,653	17,300	10,000	16,200	50,000	212,500
1993	5,800	284,000	86,400	19,980	17,300	10,000	16,200	50,000	212,500
1994	5,800	284,000	86,400	20,306	17,300	10,000	16,200	50,000	212,500
1995	5,800	284,000	86,400	20,633	17,300	10,000	16,200	50,000	212,500
1996	5,800	284,000	86,400	20,960	17,300	10,000	16,200	50,000	212,500
1997	5,800	284,000	86,400	21,286	17,300	10,000	16,200	50,000	212,500
1998	5,800	284,000	86,400	21,613	17,300	10,000	16,200	50,000	212,500
1999	5,800	284,000	86,400	21,940	17,300	10,000	16,200	50,000	212,500
2000	5,800	284,000	86,400	22,267	17,300	10,000	16,200	50,000	212,500
2001	5,800	284,000	86,400	22,594	17,300	10,000	16,200	50,000	212,500
2002	5,800	284,000	86,400	22,920	17,300	10,000	16,200	50,000	212,500
2003	5,800	284,000	86,400	23,247	17,300	10,000	16,200	50,000	212,500
2004	5,800	284,000	86,400	23,574	17,300	10,000	16,200	50,000	212,500
2005	5,800	284,000	86,400	23,900	17,300	10,000	16,200	50,000	212,500
2006	5,800	284,000	86,400	24,227	17,300	10,000	16,200	50,000	212,500
2007	5,800	284,000	86,400	24,554	17,300	10,000	16,200	50,000	212,500
2008	5,800	284,000	86,400	24,880	17,300	10,000	16,200	50,000	212,500
2009	5,800	284,000	86,400	25,207	17,300	10,000	16,200	50,000	212,500
2010	5,800	284,000	86,400	25,534	17,300	10,000	16,200	50,000	212,500
2011	5,800	284,000	86,400	25,860	17,300	10,000	16,200	50,000	212,500
2012	5,800	284,000	86,400	26,187	17,300	10,000	16,200	50,000	212,500
2013	5,800	284,000	86,400	26,514	17,300	10,000	16,200	50,000	212,500
2014	5,800	284,000	86,400	26,840	17,300	10,000	16,500	50,000	212,500
2015	5,800	284,000	86,400	27,167	17,300	10,000	16,200	50,000	212,500
2016	5,800	284,000	86,400	27,494	17,300	10,000	16,200	50,000	212,500
2017	5,800	284,000	86,400	27,820	17,300	10,000	16,200	50,000	212,500
2018	5,800	284,000	86,400	28,147	17,300	10,000	16,200	50,000	212,500
2019	5,800	284,000	86,400	28,474	17,300	10,000	16,200	50,000	212,500
2020 (C	5,800	284,000	86,400	28,800	17,300	10,000	16,200	50,000	212,500

TABLE B-5: ANNUAL QUANTITIES DELIVERED FROM EACH AQUEDUCT REACH TO EACH CONTRACTOR

(in acre-feet)

Calendar Year	CALIFORNIA AQUEDUCT (continued)										Total California Aqueduct
	WEST BRANCH, CALIFORNIA AQUEDUCT				COASTAL BRANCH, CALIFORNIA AQUEDUCT						
	Reach 29F	Reach 30			Reach 31A		Reach 33A	Reach 34	Reach 35		
	AVEKWA	MWD-SC	VCFCD	CLWA	KCWA (Ag.)	DDWD	SLOC FC&WCD	SLOC FC&WCD	SLOC FC&WCD	SBC FC&WCD	
	(60)	(61)	(62)	(63)	(64)	(65)	(66)	(67)	(68)	(69)	(70)
1968	0	0	0	0	71,657	7,382	0	0	0	0	192,188
1969	0	0	0	0	52,094	9,970	0	0	0	0	195,705
1970	0	0	0	0	71,910	11,739	0	0	0	0	276,211
1971	0	0	0	0	98,481	12,490	0	0	0	0	553,081
1972	20	50,000	0	0	118,246	14,000	0	0	0	0	780,115
1973	20	155,000	0	0	66,891	8,700	0	0	0	0	716,480
1974	20	190,000	0	0	65,612	9,700	0	0	0	0	894,240
1975	20	200,000	0	1,600	71,872	10,700	0	0	0	0	1,034,890
1976	20	215,000	0	3,700	78,304	11,700	0	0	0	0	1,193,740
1977	20	225,000	0	7,500	84,976	12,700	0	0	0	0	1,349,981
1978	20	240,500	0	10,900	91,800	12,700	0	0	0	0	1,480,877
1979	20	250,500	0	14,300	98,200	12,700	0	0	0	0	1,608,206
1980	1,500	265,500	1,000	17,700	104,500	12,700	400	200	400	8,000	1,768,284
1981	2,000	275,500	2,000	20,100	111,400	12,700	400	200	400	9,400	1,893,055
1982	3,000	323,500	3,000	22,100	117,200	12,700	800	400	800	10,800	2,017,016
1983	3,500	363,500	4,000	24,600	123,600	12,700	1,200	600	1,200	12,200	2,147,547
1984	4,000	403,500	5,000	26,900	129,400	12,700	1,800	900	1,800	13,600	2,277,988
1985	5,000	443,500	6,000	29,100	134,600	12,700	3,000	1,500	3,000	15,000	2,409,219
1986	5,500	523,500	8,000	30,900	139,600	12,700	4,000	2,000	4,000	16,600	2,578,970
1987	6,000	603,500	10,000	32,900	144,500	12,700	5,000	2,500	5,000	18,200	2,753,331
1988	7,000	683,500	13,000	35,300	148,800	12,700	6,200	3,100	6,200	19,800	2,926,182
1989	8,000	763,500	16,000	37,400	151,700	12,700	8,000	4,000	8,000	21,400	3,087,943
1990	8,500	843,500	20,000	39,300	155,100	12,700	10,000	5,000	10,000	23,000	3,259,700
1991	9,000	863,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	25,313	3,301,840
1992	9,000	884,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	27,627	3,325,480
1993	9,000	904,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	29,940	3,348,120
1994	9,000	925,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	32,253	3,371,759
1995	9,000	945,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	34,567	3,394,400
1996	9,000	965,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	36,880	3,417,040
1997	9,000	986,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	39,193	3,440,679
1998	9,000	1,006,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	41,507	3,463,320
1999	9,000	1,026,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	43,820	3,485,960
2000	9,000	1,047,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	46,133	3,509,600
2001	9,000	1,067,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	48,447	3,532,241
2002	9,000	1,088,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	50,760	3,555,880
2003	9,000	1,108,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	53,074	3,578,521
2004	9,000	1,128,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	55,387	3,601,161
2005	9,000	1,149,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	57,700	3,624,800
2006	9,000	1,169,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	57,700	3,645,127
2007	9,000	1,190,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	57,700	3,666,454
2008	9,000	1,210,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	57,700	3,686,780
2009	9,000	1,230,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	57,700	3,707,107
2010	9,000	1,251,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	57,700	3,728,434
2011	9,000	1,271,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	57,700	3,748,760
2012	9,000	1,291,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	57,700	3,769,087
2013	9,000	1,312,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	57,700	3,790,414
2014	9,000	1,332,500	20,000	41,500	155,100	12,700	10,000	5,000	10,500	57,700	3,810,740
2015	9,000	1,353,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	57,700	3,832,067
2016	9,000	1,373,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	57,700	3,852,394
2017	9,000	1,393,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	57,700	3,872,720
2018	9,000	1,414,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	57,700	3,894,047
2019	9,000	1,434,500	20,000	41,500	155,100	12,700	10,000	5,000	10,000	57,700	3,914,374
2020 (C	9,000	1,455,000	20,000	41,500	155,100	12,700	10,000	5,000	10,000	57,700	3,935,200

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

(in acre-feet)

Calendar Year	NORTH BAY AQUEDUCT							SOUTH BAY AQUEDUCT					
	CALHOUN AND TRAVIS PUMPING PLANTS			CORDELIA PUMPING PLANT				SOUTH BAY PUMPING PLANT					
											Deliveries		
	Operational Losses	Water Supply Delivery	Total	Initial Fill Water	Operational Losses	Water Supply Delivery (a	Total	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Water Supply	Recreation	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1962	0	0	0	0	0	0	0	9	272	0	8,906	0	9,187
1963	0	0	0	0	0	0	0	71	185	0	12,645	0	12,901
1964	0	0	0	0	0	0	0	171	152	0	20,911	0	21,234
1965	0	0	0	0	0	0	0	93	729	0	34,026	0	34,848
1966	0	0	0	0	0	0	0	0	1,746	0	54,913	0	56,659
1967	0	0	0	0	0	0	0	0	1,677	0	56,763	0	58,440
1968	0	0	0	24	-10	1,214	1,228	0	1,847	0	101,055	0	102,902
1969	0	0	0	0	2	2,687	2,689	3,449	2,668	-15,953	69,712	0	59,876
1970	0	0	0	0	18	3,618	3,636	16,279	1,086	-5,355	89,560	0	101,570
1971	0	0	0	0	4	2,521	2,525	0	1,815	8,854	98,584	0	109,253
1972	0	0	0	0	0	3,857	3,857	0	4,730	0	130,400	60	135,190
1973	0	0	0	0	0	3,927	3,927	0	4,730	0	120,400	90	125,220
1974	0	0	0	0	0	3,998	3,998	0	4,730	0	122,400	120	127,250
1975	0	0	0	0	0	4,094	4,094	0	4,730	0	124,500	150	129,380
1976	0	0	0	0	0	4,162	4,162	0	4,730	0	126,500	180	131,410
1977	0	0	0	0	0	4,266	4,266	0	4,730	0	128,600	210	133,540
1978	0	0	0	0	0	5,200	5,200	0	4,730	0	131,100	240	136,070
1979	0	0	0	0	0	6,800	6,800	0	4,730	0	134,000	260	138,990
1980	1,400	15,250	16,650	0	0	8,500	8,500	0	4,730	0	136,800	280	141,810
1981	1,400	17,300	18,700	0	0	9,300	9,300	0	4,730	0	139,800	290	144,820
1982	1,400	19,500	20,900	0	0	10,100	10,100	0	4,730	0	142,800	300	147,830
1983	1,400	21,030	22,430	0	0	10,700	10,700	0	4,730	0	146,000	320	151,050
1984	1,400	22,460	23,860	0	0	11,300	11,300	0	4,730	0	149,100	330	154,160
1985	1,400	24,870	26,270	0	0	12,000	12,000	0	4,730	0	152,300	350	157,380
1986	1,400	28,440	29,840	0	0	13,200	13,200	0	4,730	0	155,500	360	160,590
1987	1,400	32,320	33,720	0	0	14,000	14,000	0	4,730	0	158,600	380	163,710
1988	1,400	39,500	40,900	0	0	14,600	14,600	0	4,730	0	161,700	400	166,830
1989	1,400	46,350	47,750	0	0	15,000	15,000	0	4,730	0	166,800	410	171,940
1990	1,400	53,300	54,700	0	0	15,500	15,500	0	4,730	0	171,900	425	177,055
1991	1,400	54,800	56,200	0	0	17,000	17,000	0	4,730	0	176,900	425	182,055
1992	1,400	55,800	57,200	0	0	18,000	18,000	0	4,730	0	181,900	425	187,055
1993	1,400	56,800	58,200	0	0	19,000	19,000	0	4,730	0	185,400	425	190,555
1994	1,400	57,800	59,200	0	0	20,000	20,000	0	4,730	0	188,000	425	193,155
1995	1,400	58,800	60,200	0	0	21,000	21,000	0	4,730	0	188,000	425	193,155
1996	1,400	59,800	61,200	0	0	22,000	22,000	0	4,730	0	188,000	425	193,155
1997	1,400	60,500	61,900	0	0	22,700	22,700	0	4,730	0	188,000	425	193,155
1998	1,400	61,300	62,700	0	0	23,500	23,500	0	4,730	0	188,000	425	193,155
1999	1,400	62,000	63,400	0	0	24,200	24,200	0	4,730	0	188,000	425	193,155
2000(b	1,400	62,800	64,200	0	0	25,000	25,000	0	4,730	0	188,000	425	193,155

lote: "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.

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

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

TABLE B-6: ANNUAL QUANTITIES CONVEYED THRU EACH PUMPING

(in acre-feet)

Calendar Year	CALIFORNIA AQUEDUCT													
	NORTH SAN JOAQUIN DIVISION								SAN LUIS DIVISION					
	DELTA PUMPING PLANT								DOS AMIGOS PUMPING PLANT					
	Transportation Water													
				Deliveries								Deliveries		
	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Water Supply	Recreation	Total	Conservation Water	Total	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Water Supply	Recreation	Total
	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
1967	5,746	1,183	0	11,538	0	18,467	2,957	21,424	0	0	0	0	0	0
1968	11,079	74,464	0	293,243	0	378,786	531,275	910,061	11,079	25,126	0	189,104	0	225,309
1969	7,336	44,287	-174,300	265,417	0	142,740	531,185	673,925	3,887	9,922	-100,513	192,689	0	105,985
1970	23,947	20,767	-5,355	365,771	0	405,130	-12,995	392,135	7,668	1,901	0	270,300	0	279,869
1971	23,207	-10,754	8,854	651,665	14	672,986	7,702	680,688	23,207	-12,030	0	545,869	0	557,046
1972	129,389	148,922	-16,941	910,515	400	1,172,285	10,849	1,183,134	129,389	115,235	-16,941	774,415	0	1,002,098
1973	308,900	157,999	-723	836,880	10,600	1,313,656	-69,659	1,243,997	308,900	124,312	-723	713,380	10,000	1,155,869
1974	321,544	176,544	-8,685	1,016,640	16,800	1,522,843	38,797	1,561,640	321,544	142,857	-8,685	891,040	16,000	1,362,756
1975	26,615	180,430	-13,060	1,159,390	23,325	1,376,700	114,661	1,491,361	26,615	146,743	-13,060	1,031,490	22,325	1,214,113
1976	9,513	180,988	-5,520	1,320,240	27,525	1,532,746	-7,090	1,525,656	9,513	147,301	-5,520	1,190,240	26,325	1,367,859
1977	4,360	180,175	-18,076	1,478,581	27,725	1,672,765	-93,863	1,578,902	4,360	146,488	-18,076	1,346,281	26,325	1,505,378
1978	4,685	179,850	2,385	1,611,977	27,925	1,826,822	-83,408	1,743,414	4,685	146,163	2,385	1,476,977	26,325	1,656,535
1979	0	179,802	-9,346	1,742,206	28,115	1,940,777	-185,276	1,755,501	0	146,115	-9,346	1,604,206	26,325	1,767,300
1980	0	181,656	14,587	1,905,084	44,305	2,145,632	5,652	2,151,284	0	147,969	14,587	1,764,084	42,325	1,968,965
1981	0	181,225	-29,375	2,032,855	44,415	2,229,120	211,750	2,440,870	0	147,538	-29,375	1,888,755	42,325	2,049,243
1982	0	181,707	15,186	2,159,816	44,525	2,401,234	47,859	2,449,093	0	148,020	15,186	2,012,516	42,325	2,218,047
1983	0	181,954	6,032	2,293,547	44,645	2,526,178	-471	2,525,707	0	148,267	6,032	2,142,947	42,325	2,339,571
1984	0	181,344	-11,839	2,427,088	44,755	2,641,348	-149,801	2,491,547	0	147,657	-11,839	2,273,188	42,325	2,451,331
1985	0	182,073	10,588	2,561,519	44,875	2,799,055	220,897	3,019,952	0	148,386	10,588	2,404,319	42,325	2,605,618
1986	0	181,605	-27,788	2,734,470	44,985	2,933,272	-185,191	2,748,081	0	147,918	-27,788	2,573,870	42,325	2,736,325
1987	0	181,051	-13,676	2,911,931	45,105	3,124,411	-8,964	3,115,447	0	147,364	-13,676	2,748,131	42,325	2,924,144
1988	0	180,997	13,109	3,087,882	45,225	3,327,213	251,224	3,578,437	0	147,310	13,109	2,920,782	42,325	3,123,526
1989	0	181,093	1,453	3,254,743	45,335	3,482,624	-79,713	3,402,911	0	147,406	1,453	3,082,343	42,325	3,273,527
1990	0	180,802	-44,919	3,431,600	45,500	3,612,983	177,336	3,790,319	0	147,115	-44,919	3,254,000	42,325	3,398,521
1991	0	180,049	-6,537	3,478,740	45,500	3,697,752	-118,790	3,578,962	0	146,362	-6,537	3,296,140	42,325	3,478,290
1992	0	180,657	19,874	3,507,380	45,500	3,753,411	22,151	3,775,562	0	146,970	19,874	3,319,780	42,325	3,528,949
1993	0	180,872	-4,115	3,533,520	45,500	3,755,777	203,789	3,959,566	0	147,185	-4,115	3,342,420	42,325	3,527,815
1994	0	180,511	6,863	3,559,759	45,500	3,792,633	-41	3,792,592	0	146,824	6,863	3,366,059	42,325	3,562,071
1995	0	180,534	-15,116	3,582,400	45,500	3,793,318	28,880	3,822,198	0	146,847	-15,116	3,388,700	42,325	3,562,756
1996	0	180,206	-1,375	3,605,040	45,500	3,829,371	-88,933	3,740,438	0	146,519	-1,375	3,411,340	42,325	3,598,809
1997	0	180,350	-625	3,628,679	45,500	3,853,904	84,212	3,938,116	0	146,663	-625	3,434,979	42,325	3,623,342
1998	0	180,598	21,628	3,651,320	45,500	3,899,046	81,265	3,980,311	0	146,911	21,628	3,457,620	42,325	3,668,484
1999	0	180,822	-7,116	3,673,960	45,500	3,893,166	71,669	3,964,835	0	147,135	-7,116	3,480,260	42,325	3,662,604
2000	0	180,931	-10,628	3,697,600	45,500	3,913,403	185,794	4,099,197	0	147,244	-10,628	3,503,900	42,325	3,682,841
2001	0	180,692	880	3,720,241	45,500	3,947,313	18,543	3,965,856	0	147,005	880	3,526,541	42,325	3,716,751
2002	0	180,519	-8,639	3,743,880	45,500	3,961,260	-23,588	3,937,672	0	146,832	-8,639	3,550,180	42,325	3,730,698
2003	0	180,856	1,876	3,766,521	45,500	3,994,753	104,396	4,099,149	0	147,169	1,876	3,572,821	42,325	3,764,191
2004	0	180,786	131	3,789,161	45,500	4,015,578	159,418	4,174,996	0	147,099	131	3,595,461	42,325	3,785,016
2005	0	180,691	5,832	3,812,800	45,500	4,044,823	-251,203	3,793,620	0	147,004	5,832	3,619,100	42,325	3,814,261
2006	0	180,731	-19,421	3,833,127	45,500	4,039,937	121,020	4,160,957	0	147,044	-19,421	3,639,427	42,325	3,809,375
2007	0	180,575	-10,426	3,854,454	45,500	4,070,103	166,766	4,236,869	0	146,888	-10,426	3,660,754	42,325	3,839,541
2008	0	180,369	11,068	3,874,780	45,500	4,111,717	24,546	4,136,263	0	146,682	11,068	3,681,080	42,325	3,881,155
2009	0	180,599	6,313	3,895,107	45,500	4,127,519	-92,626	4,034,893	0	146,912	6,313	3,701,407	42,325	3,896,957
2010	0	180,583	-3,694	3,916,434	45,500	4,138,823	-1,860	4,136,963	0	146,896	-3,694	3,722,734	42,325	3,908,261
2011	0	180,310	-3,436	3,936,760	45,500	4,159,134	-53,986	4,105,148	0	146,623	-3,436	3,743,060	42,325	3,928,572
2012	0	180,415	14,817	3,957,087	45,500	4,197,819	60,546	4,258,365	0	146,728	14,817	3,763,387	42,325	3,967,257
2013	0	180,632	-10,689	3,978,414	45,500	4,193,857	325,239	4,519,096	0	146,945	-10,689	3,784,714	42,325	3,963,295
2014	0	180,619	16,565	3,998,740	45,500	4,241,424	-197,705	4,043,719	0	146,932	16,565	3,805,040	42,325	4,010,862
2015	0	180,567	-7,746	4,020,067	45,500	4,238,388	107,928	4,346,316	0	146,880	-7,746	3,826,367	42,325	4,007,826
2016	0	180,552	-3,730	4,040,394	45,500	4,262,716	50,070	4,312,786	0	146,865	-3,730	3,846,694	42,325	4,032,154
2017	0	180,576	-3,012	4,060,720	45,500	4,283,784	215,956	4,499,740	0	146,889	-3,012	3,867,020	42,325	4,053,222
2018	0	180,608	15,398	4,082,047	45,500	4,323,553	32,003	4,355,556	0	146,921	15,398	3,888,347	42,325	4,092,991
2019	0	180,531	-9,008	4,102,374	45,500	4,319,397	44,107	4,363,504	0	146,844	-9,008	3,908,674	42,325	4,088,835
2020(b)	0	180,514	-8,058	4,123,200	45,500	4,341,156	41,148	4,382,304	0	146,827	-8,058	3,929,500	42,325	4,110,594

(in acre-feet)

Calendar Year	CALIFORNIA AQUEDUCT (Continued)											
	SOUTH SAN JOAQUIN DIVISION											
	BUENA VISTA PUMPING PLANT						WHEELER RIDGE PUMPING PLANT					
	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries: Water Supply	Deliveries: Recreation	Total	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries: Water Supply	Deliveries: Recreation	Total
	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
1970	4,779	1,012	0	3	0	5,794	198	2	0	0	0	200
1971	7,853	8,399	0	101,512	0	117,764	7,533	-112	0	3,552	0	10,973
1972	101,999	56,294	-16,941	256,469	0	397,821	101,999	43,494	-16,941	137,569	0	266,121
1973	308,900	65,371	-723	410,801	10,000	794,349	308,900	52,571	-723	355,860	10,000	726,608
1974	321,544	83,916	-8,685	517,839	16,000	930,614	321,544	71,116	-8,685	479,873	16,000	879,848
1975	26,615	87,802	-13,060	621,646	16,000	739,003	26,615	75,002	-13,060	576,130	16,000	680,687
1976	9,513	88,360	-5,520	734,560	20,000	846,913	9,513	75,560	-5,520	682,728	20,000	782,281
1977	4,360	87,547	-18,076	844,671	20,000	938,502	4,360	74,747	-18,076	784,435	20,000	865,466
1978	4,685	87,222	2,385	941,277	20,000	1,055,569	4,685	74,422	2,385	869,177	20,000	970,669
1979	0	87,174	-9,346	1,026,006	20,000	1,123,834	0	74,374	-9,346	946,506	20,000	1,031,534
1980	0	86,828	14,587	1,134,184	20,000	1,255,599	0	74,028	14,587	1,044,684	20,000	1,153,299
1981	0	86,397	-29,375	1,210,555	20,000	1,287,577	0	73,597	-29,375	1,109,955	20,000	1,174,177
1982	0	86,879	15,186	1,286,916	20,000	1,408,981	0	74,079	15,186	1,179,416	20,000	1,288,681
1983	0	87,126	6,032	1,368,047	20,000	1,481,205	0	74,326	6,032	1,247,947	20,000	1,348,305
1984	0	86,516	-11,839	1,449,788	20,000	1,544,465	0	73,716	-11,839	1,323,988	20,000	1,405,865
1985	0	87,245	10,588	1,532,319	20,000	1,650,152	0	74,445	10,588	1,396,319	20,000	1,501,352
1986	0	86,777	-27,788	1,655,170	20,000	1,734,159	0	73,977	-27,788	1,511,070	20,000	1,577,259
1987	0	86,223	-13,676	1,781,931	20,000	1,874,478	0	73,423	-13,676	1,627,531	20,000	1,707,278
1988	0	86,169	13,109	1,910,682	20,000	2,029,960	0	73,369	13,109	1,744,882	20,000	1,851,360
1989	0	86,265	1,453	2,035,243	20,000	2,142,961	0	73,465	1,453	1,863,943	20,000	1,958,861
1990	0	85,974	-44,919	2,148,500	20,000	2,209,555	0	73,174	-44,919	1,983,900	20,000	2,032,155
1991	0	85,221	-6,537	2,188,327	20,000	2,287,011	0	72,421	-6,537	2,023,727	20,000	2,109,611
1992	0	85,829	19,874	2,209,653	20,000	2,335,356	0	73,029	19,874	2,045,053	20,000	2,157,956
1993	0	86,044	-4,115	2,229,980	20,000	2,331,909	0	73,244	-4,115	2,065,380	20,000	2,154,509
1994	0	85,683	6,863	2,251,306	20,000	2,363,852	0	72,883	6,863	2,086,706	20,000	2,186,452
1995	0	85,706	-15,116	2,271,633	20,000	2,362,223	0	72,906	-15,116	2,107,033	20,000	2,184,823
1996	0	85,378	-1,375	2,291,960	20,000	2,395,963	0	72,578	-1,375	2,127,360	20,000	2,218,563
1997	0	85,522	-625	2,313,286	20,000	2,418,183	0	72,722	-625	2,148,686	20,000	2,240,783
1998	0	85,770	21,628	2,333,613	20,000	2,461,011	0	72,970	21,628	2,169,013	20,000	2,283,611
1999	0	85,994	-7,116	2,353,940	20,000	2,452,818	0	73,194	-7,116	2,189,340	20,000	2,275,418
2000	0	86,103	-10,628	2,375,267	20,000	2,470,742	0	73,303	-10,628	2,210,667	20,000	2,293,342
2001	0	85,864	880	2,395,594	20,000	2,502,338	0	73,064	880	2,230,994	20,000	2,324,938
2002	0	85,691	-8,639	2,416,920	20,000	2,513,972	0	72,891	-8,639	2,252,320	20,000	2,336,572
2003	0	86,028	1,876	2,437,247	20,000	2,545,151	0	73,228	1,876	2,272,647	20,000	2,367,751
2004	0	85,958	131	2,457,574	20,000	2,563,663	0	73,158	131	2,292,974	20,000	2,386,263
2005	0	85,863	5,832	2,478,900	20,000	2,590,595	0	73,063	5,832	2,314,300	20,000	2,413,195
2006	0	85,903	-19,421	2,499,227	20,000	2,585,709	0	73,103	-19,421	2,334,627	20,000	2,408,309
2007	0	85,747	-10,426	2,520,554	20,000	2,615,875	0	72,947	-10,426	2,355,954	20,000	2,438,475
2008	0	85,541	11,068	2,540,880	20,000	2,657,489	0	72,741	11,068	2,376,280	20,000	2,480,089
2009	0	85,771	6,313	2,561,207	20,000	2,673,291	0	72,971	6,313	2,396,607	20,000	2,495,891
2010	0	85,755	-3,694	2,582,534	20,000	2,684,595	0	72,955	-3,694	2,417,934	20,000	2,507,195
2011	0	85,482	-3,436	2,602,860	20,000	2,704,906	0	72,682	-3,436	2,438,260	20,000	2,527,506
2012	0	85,587	14,817	2,623,187	20,000	2,743,591	0	72,787	14,817	2,458,587	20,000	2,566,191
2013	0	85,804	-10,689	2,644,514	20,000	2,739,629	0	73,004	-10,689	2,479,914	20,000	2,562,229
2014	0	85,791	16,565	2,664,840	20,000	2,787,196	0	72,991	16,565	2,500,240	20,000	2,609,796
2015	0	85,739	-7,746	2,686,167	20,000	2,784,160	0	72,939	-7,746	2,521,567	20,000	2,606,760
2016	0	85,724	-3,730	2,706,494	20,000	2,808,488	0	72,924	-3,730	2,541,894	20,000	2,631,088
2017	0	85,748	-3,012	2,726,820	20,000	2,829,556	0	72,948	-3,012	2,562,220	20,000	2,652,156
2018	0	85,780	15,398	2,748,147	20,000	2,869,325	0	72,980	15,398	2,583,547	20,000	2,691,925
2019	0	85,703	-9,008	2,768,474	20,000	2,865,169	0	72,903	-9,008	2,603,874	20,000	2,687,769
2020(b)	0	85,686	-8,058	2,789,300	20,000	2,886,928	0	72,886	-8,058	2,624,700	20,000	2,709,528

TABLE B-6: ANNUAL QUANTITIES CONVEYED THRU EACH PUMPING

(in acre-feet)

Calendar Year	CALIFORNIA AQUEDUCT (Continued)											
	SOUTH SAN JOAQUIN DIVISION (Continued)						TEHACHAPI DIVISION					
	WIND GAP PUMPING PLANT						A. D. EDMONSTON PUMPING PLANT					
	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries: Water Supply	Deliveries: Recreation	Total	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries: Water Supply	Deliveries: Recreation	Total
	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	48)	(49)	(50)	(51)
1971	7,366	-159	0	0	0	7,207	5,446	8	0	0	0	5,454
1972	101,999	42,694	-16,941	133,469	0	261,221	101,999	37,394	-16,941	130,469	0	252,921
1973	308,900	51,771	-723	331,574	10,000	701,522	308,900	46,471	-723	326,280	10,000	690,928
1974	321,544	70,316	-8,685	463,918	16,000	863,093	321,544	65,016	-8,685	460,140	16,000	854,015
1975	26,615	74,202	-13,060	558,870	16,000	662,627	26,615	68,902	-13,060	554,790	16,000	653,247
1976	9,513	74,760	-5,520	663,363	20,000	762,116	9,513	69,460	-5,520	659,140	20,000	752,593
1977	4,360	73,947	-18,076	761,929	20,000	842,160	4,360	68,647	-18,076	757,381	20,000	832,312
1978	4,685	73,622	2,385	845,177	20,000	945,869	4,685	68,322	2,385	830,177	20,000	925,569
1979	0	73,574	-9,346	918,006	20,000	1,002,234	0	68,274	-9,346	901,506	20,000	980,434
1980	0	73,228	14,587	1,013,484	20,000	1,121,299	0	67,928	14,587	995,384	20,000	1,097,899
1981	0	72,797	-29,375	1,075,555	20,000	1,138,977	0	67,497	-29,375	1,055,355	20,000	1,113,477
1982	0	73,279	15,186	1,143,716	20,000	1,252,181	0	67,979	15,186	1,116,316	20,000	1,219,481
1983	0	73,526	6,032	1,208,647	20,000	1,308,205	0	68,226	6,032	1,178,247	20,000	1,272,505
1984	0	72,916	-11,839	1,282,888	20,000	1,363,965	0	67,616	-11,839	1,243,488	20,000	1,319,265
1985	0	73,645	10,588	1,352,419	20,000	1,456,652	0	68,345	10,588	1,309,219	20,000	1,408,152
1986	0	73,177	-27,788	1,465,370	20,000	1,530,759	0	67,877	-27,788	1,414,870	20,000	1,474,959
1987	0	72,623	-13,676	1,578,831	20,000	1,657,778	0	67,323	-13,676	1,523,231	20,000	1,596,878
1988	0	72,569	13,109	1,693,682	20,000	1,799,360	0	67,269	13,109	1,633,982	20,000	1,734,360
1989	0	72,665	1,453	1,811,143	20,000	1,905,261	0	67,365	1,453	1,745,343	20,000	1,834,161
1990	0	72,374	-44,919	1,928,900	20,000	1,976,355	0	67,074	-44,919	1,858,700	20,000	1,900,855
1991	0	71,621	-6,537	1,968,727	20,000	2,053,811	0	66,321	-6,537	1,898,527	20,000	1,978,311
1992	0	72,229	19,874	1,990,053	20,000	2,102,156	0	66,929	19,874	1,919,853	20,000	2,026,656
1993	0	72,444	-4,115	2,010,380	20,000	2,098,709	0	67,144	-4,115	1,940,180	20,000	2,023,209
1994	0	72,083	6,863	2,031,706	20,000	2,130,652	0	66,783	6,863	1,961,506	20,000	2,055,152
1995	0	72,106	-15,116	2,052,033	20,000	2,129,023	0	66,806	-15,116	1,981,833	20,000	2,053,523
1996	0	71,778	-1,375	2,072,360	20,000	2,162,763	0	66,478	-1,375	2,002,160	20,000	2,087,263
1997	0	71,922	-625	2,093,686	20,000	2,184,983	0	66,622	-625	2,023,486	20,000	2,109,483
1998	0	72,170	21,628	2,114,013	20,000	2,227,811	0	66,870	21,628	2,043,813	20,000	2,152,311
1999	0	72,394	-7,116	2,134,340	20,000	2,219,618	0	67,094	-7,116	2,064,140	20,000	2,144,118
2000	0	72,503	-10,628	2,155,667	20,000	2,237,542	0	67,203	-10,628	2,085,467	20,000	2,162,042
2001	0	72,264	880	2,175,994	20,000	2,269,138	0	66,964	880	2,105,794	20,000	2,193,638
2002	0	72,091	-8,639	2,197,320	20,000	2,280,772	0	66,791	-8,639	2,127,120	20,000	2,205,272
2003	0	72,428	1,876	2,217,647	20,000	2,311,951	0	67,128	1,876	2,147,447	20,000	2,236,451
2004	0	72,358	131	2,237,974	20,000	2,330,463	0	67,058	131	2,167,774	20,000	2,254,963
2005	0	72,263	5,832	2,259,300	20,000	2,357,395	0	66,963	5,832	2,189,100	20,000	2,281,895
2006	0	72,303	-19,421	2,279,627	20,000	2,352,509	0	67,003	-19,421	2,209,427	20,000	2,277,009
2007	0	72,147	-10,426	2,300,954	20,000	2,382,675	0	66,847	-10,426	2,230,754	20,000	2,307,175
2008	0	71,941	11,068	2,321,280	20,000	2,424,289	0	66,641	11,068	2,251,080	20,000	2,348,789
2009	0	72,171	6,313	2,341,607	20,000	2,440,091	0	66,871	6,313	2,271,407	20,000	2,364,591
2010	0	72,155	-3,694	2,362,934	20,000	2,451,395	0	66,855	-3,694	2,292,734	20,000	2,375,895
2011	0	71,882	-3,436	2,383,260	20,000	2,471,706	0	66,582	-3,436	2,313,060	20,000	2,396,206
2012	0	71,987	14,817	2,403,587	20,000	2,510,391	0	66,687	14,817	2,333,387	20,000	2,434,891
2013	0	72,204	-10,689	2,424,914	20,000	2,506,429	0	66,904	-10,689	2,354,714	20,000	2,430,929
2014	0	72,191	16,565	2,445,240	20,000	2,553,996	0	66,891	16,565	2,375,040	20,000	2,478,496
2015	0	72,139	-7,746	2,466,567	20,000	2,550,960	0	66,839	-7,746	2,396,367	20,000	2,475,460
2016	0	72,124	-3,730	2,486,894	20,000	2,575,288	0	66,824	-3,730	2,416,694	20,000	2,499,788
2017	0	72,148	-3,012	2,507,220	20,000	2,596,356	0	66,848	-3,012	2,437,020	20,000	2,520,856
2018	0	72,180	15,398	2,528,547	20,000	2,636,125	0	66,880	15,398	2,458,347	20,000	2,560,625
2019	0	72,103	-9,008	2,548,874	20,000	2,631,969	0	66,803	-9,008	2,478,674	20,000	2,556,469
2020(b)	0	72,086	-8,058	2,569,700	20,000	2,653,728	0	66,786	-8,058	2,499,500	20,000	2,578,228

(in acre-feet)

Calendar Year	CALIFORNIA AQUEDUCT (Continued)											
	MOJAVE DIVISION						SANTA ANA DIVISION					
	PEARBLOSSOM PUMPING PLANT						DEVIL CANYON POWERPLANT					
	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries: Water Supply	Deliveries: Recreation	Total	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries: Water Supply	Deliveries: Recreation	Total
	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
1971	21	0	0	0	0	21	0	0	0	0	0	0
1972	38,248	13,965	-3,941	79,614	0	127,886	168	0	0	79,122	0	79,290
1973	109,847	18,451	141	170,370	5,000	303,809	98,909	4,171	0	169,500	0	272,580
1974	71,423	29,260	-8,699	269,020	11,000	372,004	36,277	13,422	-7,746	266,300	6,000	314,253
1975	10,406	28,978	-9,641	328,850	11,000	369,593	10,406	12,774	-5,920	325,600	6,000	348,860
1976	4,189	29,662	8,727	412,780	11,000	466,358	4,189	13,668	7,801	409,000	6,000	440,658
1977	0	28,981	-27,388	493,631	11,000	506,224	0	12,955	-29,175	489,321	6,000	479,101
1978	323	28,822	16,288	544,711	11,000	601,144	323	12,873	22,509	538,391	6,000	580,096
1979	0	28,576	-21,672	600,573	11,000	618,477	0	12,809	-12,378	592,963	6,000	599,394
1980	0	28,286	20,169	659,234	11,000	718,689	0	12,190	2,909	650,334	6,000	671,433
1981	0	28,006	-23,568	699,285	11,000	714,723	0	12,019	-20,949	688,095	6,000	685,165
1982	0	28,494	9,396	701,336	11,000	750,226	0	12,389	13,063	687,856	6,000	719,308
1983	0	28,880	17,369	711,387	11,000	768,636	0	12,691	11,258	695,617	6,000	725,566
1984	0	28,370	1,582	723,438	11,000	764,390	0	12,381	2,417	662,610	6,000	683,408
1985	0	29,099	8,619	735,489	11,000	784,207	0	13,048	8,325	667,150	6,000	694,523
1986	0	28,756	-9,892	748,430	11,000	778,294	0	12,694	-10,134	672,580	6,000	681,140
1987	0	28,616	-3,990	763,871	11,000	799,497	0	12,708	-1,609	678,010	6,000	695,109
1988	0	28,361	1,668	779,312	11,000	820,341	0	12,428	-286	683,440	6,000	701,582
1989	0	28,369	4,171	794,753	11,000	838,293	0	12,211	3,757	688,870	6,000	710,838
1990	0	28,169	-10,351	809,300	11,000	838,118	0	12,241	-10,761	694,300	6,000	701,780
1991	0	27,803	-21,882	813,527	11,000	830,448	0	11,955	-10,627	695,727	6,000	703,055
1992	0	28,399	14,382	813,853	11,000	867,634	0	12,584	15,688	696,053	6,000	730,325
1993	0	28,532	892	814,180	11,000	854,604	0	12,610	1,391	696,380	6,000	716,381
1994	0	28,113	7,880	814,506	11,000	861,499	0	12,308	387	696,706	6,000	715,401
1995	0	28,432	-11,340	814,833	11,000	842,925	0	12,540	-12,108	697,033	6,000	703,465
1996	0	28,131	-7,866	815,160	11,000	846,425	0	12,073	-1,362	697,360	6,000	714,071
1997	0	28,543	22,387	815,486	11,000	877,416	0	12,388	12,391	697,686	6,000	728,465
1998	0	28,273	-36,113	815,813	11,000	818,973	0	12,264	-11,110	698,013	6,000	705,167
1999	0	28,411	13,893	816,140	11,000	869,444	0	12,493	392	698,340	6,000	717,225
2000	0	28,384	14,380	816,467	11,000	870,231	0	12,712	14,388	698,667	6,000	731,767
2001	0	28,384	249	816,794	11,000	856,427	0	12,473	-9,108	698,994	6,000	708,359
2002	0	28,315	2,263	817,120	11,000	858,698	0	12,396	2,486	699,320	6,000	720,202
2003	0	28,596	-115	817,447	11,000	856,928	0	12,605	4,885	699,647	6,000	723,137
2004	0	28,528	-9,360	817,774	11,000	847,942	0	12,647	-1,360	699,974	6,000	717,261
2005	0	28,138	-2,865	818,100	11,000	854,373	0	12,339	-11,365	700,300	6,000	707,274
2006	0	28,696	14,136	818,427	11,000	872,259	0	12,766	9,136	700,627	6,000	728,529
2007	0	28,424	-11,611	818,754	11,000	846,567	0	12,468	-11,611	700,954	6,000	707,811
2008	0	28,513	877	819,080	11,000	859,470	0	12,712	10,877	701,280	6,000	730,869
2009	0	28,713	1,371	819,407	11,000	860,491	0	12,755	2,371	701,607	6,000	722,733
2010	0	28,593	373	819,734	11,000	859,700	0	12,765	-11,127	701,934	6,000	709,572
2011	0	28,451	4,873	820,060	11,000	864,384	0	12,365	4,373	702,260	6,000	724,998
2012	0	28,325	-4,627	820,387	11,000	855,085	0	12,657	4,873	702,587	6,000	726,117
2013	0	28,607	-6,627	820,714	11,000	853,694	0	12,819	373	702,914	6,000	722,106
2014	0	28,572	15,122	821,040	11,000	875,734	0	12,812	4,122	703,240	6,000	726,174
2015	0	28,548	-11,180	821,367	11,000	849,735	0	12,643	320	703,567	6,000	722,530
2016	0	28,356	-5,170	821,694	11,000	855,880	0	12,366	-16,170	703,894	6,000	706,090
2017	0	28,309	4,545	822,020	11,000	865,874	0	12,570	6,045	704,220	6,000	728,835
2018	0	28,278	-10,043	822,347	11,000	851,582	0	12,561	-4,543	704,547	6,000	718,565
2019	0	28,238	-4,199	822,674	11,000	857,713	0	12,578	801	704,874	6,000	724,253
2020(b	0	28,374	1,753	823,000	11,000	864,127	0	12,571	-8,747	705,200	6,000	715,024

TABLE B-6: ANNUAL QUANTITIES CONVEYED THRU EACH PUMPING

(in acre-feet)

Calendar Year	CALIFORNIA AQUEDUCT (Continued)											
	WEST BRANCH, CALIFORNIA AQUEDUCT											
	OSO PUMPING PLANT						CASTAIC POWERPLANT					
	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries: Water Supply	Deliveries: Recreation	Total	Initial Fill Water	Operational Losses	Reservoir Storage Changes	Deliveries: Water Supply	Deliveries: Recreation	Total
	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)
1971	2,444	133	0	0	0	2,577	0	0	0	0	0	0
1972	63,751	9,429	-13,000	50,020	0	110,200	63,751	4,684	-13,000	50,000	0	105,435
1973	199,053	14,020	-864	155,020	5,000	372,229	38,233	6,470	-14	155,000	5,000	204,689
1974	250,121	21,756	14	190,020	5,000	466,911	227,121	9,300	14	190,000	5,000	431,435
1975	16,209	25,924	-3,419	201,620	5,000	245,334	13,317	13,457	-3,419	201,600	5,000	229,955
1976	5,324	25,798	-14,247	218,720	5,000	240,595	4,360	13,331	-14,247	218,700	5,000	227,144
1977	4,360	25,666	9,312	232,520	5,000	276,858	4,360	13,199	9,312	232,500	5,000	264,371
1978	4,362	25,500	-13,903	251,420	5,000	272,379	4,362	13,033	-13,903	251,400	5,000	259,892
1979	0	25,698	12,326	264,820	5,000	307,844	0	13,231	12,326	264,800	5,000	295,357
1980	0	25,642	-5,582	285,700	5,000	310,760	0	13,175	-5,582	284,200	5,000	296,793
1981	0	25,491	-5,807	299,600	5,000	324,284	0	13,024	-5,807	297,600	5,000	309,817
1982	0	25,485	5,790	351,600	5,000	387,875	0	13,018	5,790	348,600	5,000	372,408
1983	0	25,346	-11,337	395,600	5,000	414,609	0	12,879	-11,337	392,100	5,000	398,642
1984	0	25,246	-13,421	439,400	5,000	456,225	0	12,779	-13,421	435,400	5,000	439,758
1985	0	25,246	1,969	483,600	5,000	515,815	0	12,779	1,969	478,600	5,000	498,348
1986	0	25,121	-17,896	567,900	5,000	580,125	0	12,654	-17,896	562,400	5,000	562,158
1987	0	24,707	-9,686	652,400	5,000	672,421	0	12,240	-9,686	646,400	5,000	653,954
1988	0	24,908	11,441	738,800	5,000	780,149	0	12,441	11,441	731,800	5,000	760,682
1989	0	24,996	-2,718	824,900	5,000	852,178	0	12,529	-2,718	816,900	5,000	831,711
1990	0	24,905	-34,568	911,300	5,000	906,637	0	12,438	-34,568	902,800	5,000	885,670
1991	0	24,518	15,345	934,000	5,000	978,863	0	12,051	15,345	925,000	5,000	957,396
1992	0	24,530	5,492	955,000	5,000	990,022	0	12,063	5,492	946,000	5,000	968,555
1993	0	24,612	-5,007	975,000	5,000	999,605	0	12,145	-5,007	966,000	5,000	978,138
1994	0	24,670	-1,017	996,000	5,000	1,024,653	0	12,203	-1,017	987,000	5,000	1,003,186
1995	0	24,374	-3,776	1,016,000	5,000	1,041,598	0	11,907	-3,776	1,007,000	5,000	1,020,131
1996	0	24,347	6,491	1,036,000	5,000	1,071,838	0	11,880	6,491	1,027,000	5,000	1,050,371
1997	0	24,079	-23,012	1,057,000	5,000	1,063,067	0	11,612	-23,012	1,048,000	5,000	1,041,600
1998	0	24,597	57,741	1,077,000	5,000	1,164,338	0	12,130	57,741	1,068,000	5,000	1,142,871
1999	0	24,683	-21,009	1,097,000	5,000	1,105,674	0	12,216	-21,009	1,088,000	5,000	1,084,207
2000	0	24,819	-25,008	1,118,000	5,000	1,122,811	0	12,352	-25,008	1,109,000	5,000	1,101,344
2001	0	24,580	631	1,138,000	5,000	1,168,211	0	12,113	631	1,129,000	5,000	1,146,744
2002	0	24,476	-10,902	1,159,000	5,000	1,177,574	0	12,009	-10,902	1,150,000	5,000	1,156,107
2003	0	24,532	1,991	1,179,000	5,000	1,210,523	0	12,065	1,991	1,170,000	5,000	1,189,056
2004	0	24,530	9,491	1,199,000	5,000	1,238,021	0	12,063	9,491	1,190,000	5,000	1,216,554
2005	0	24,825	8,697	1,220,000	5,000	1,258,522	0	12,358	8,697	1,211,000	5,000	1,237,055
2006	0	24,307	-33,557	1,240,000	5,000	1,235,750	0	11,840	-33,557	1,231,000	5,000	1,214,283
2007	0	24,423	1,185	1,261,000	5,000	1,291,608	0	11,956	1,185	1,252,000	5,000	1,270,141
2008	0	24,128	10,191	1,281,000	5,000	1,320,319	0	11,661	10,191	1,272,000	5,000	1,298,852
2009	0	24,158	4,942	1,301,000	5,000	1,335,100	0	11,691	4,942	1,292,000	5,000	1,313,633
2010	0	24,262	-4,067	1,322,000	5,000	1,347,195	0	11,795	-4,067	1,313,000	5,000	1,325,728
2011	0	24,131	-8,309	1,342,000	5,000	1,362,822	0	11,664	-8,309	1,333,000	5,000	1,341,355
2012	0	24,362	19,444	1,362,000	5,000	1,410,806	0	11,895	19,444	1,353,000	5,000	1,389,339
2013	0	24,297	-4,062	1,383,000	5,000	1,408,235	0	11,830	-4,062	1,374,000	5,000	1,386,768
2014	0	24,319	1,443	1,403,000	5,000	1,433,762	0	11,852	1,443	1,394,000	5,000	1,412,295
2015	0	24,291	3,434	1,424,000	5,000	1,456,725	0	11,824	3,434	1,415,000	5,000	1,435,258
2016	0	24,468	1,440	1,444,000	5,000	1,474,908	0	12,001	1,440	1,435,000	5,000	1,453,441
2017	0	24,539	-7,557	1,464,000	5,000	1,485,982	0	12,072	-7,557	1,455,000	5,000	1,464,515
2018	0	24,602	25,441	1,485,000	5,000	1,540,043	0	12,135	25,441	1,476,000	5,000	1,518,576
2019	0	24,565	-4,809	1,505,000	5,000	1,529,756	0	12,098	-4,809	1,496,000	5,000	1,508,289
2020(b	0	24,412	-9,811	1,525,500	5,000	1,545,101	0	11,945	-9,811	1,516,500	5,000	1,523,634

AND 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	Operational Losses	Water Supply Delivery	Total	Operational Losses	Water Supply Delivery	Total
	(76)	(77)	(78)	(79)	(80)	(81)	(82)
1968	210	873	79,039	80,122	0	0	0
1969	0	1,042	62,064	63,106	0	0	0
1970	0	638	83,649	84,287	0	0	0
1971	0	3,455	110,971	114,426	0	0	0
1972	0	2,027	132,246	134,273	0	0	0
1973	0	2,027	75,591	77,618	0	0	0
1974	0	2,027	75,312	77,339	0	0	0
1975	0	2,027	82,572	84,599	0	0	0
1976	0	2,027	90,004	92,031	0	0	0
1977	0	2,027	97,676	99,703	0	0	0
1978	0	2,027	104,500	106,527	0	0	0
1979	0	2,027	110,900	112,927	0	0	0
1980	0	4,227	126,200	130,427	2,200	9,000	11,200
1981	0	4,227	134,500	138,727	2,200	10,400	12,600
1982	0	4,227	142,700	146,927	2,200	12,800	15,000
1983	0	4,227	151,500	155,727	2,200	15,200	17,400
1984	0	4,227	160,200	164,427	2,200	18,100	20,300
1985	0	4,227	169,800	174,027	2,200	22,500	24,700
1986	0	4,227	178,900	183,127	2,200	26,600	28,800
1987	0	4,227	187,900	192,127	2,200	30,700	32,900
1988	0	4,227	196,800	201,027	2,200	35,300	37,500
1989	0	4,227	205,800	210,027	2,200	41,400	43,600
1990	0	4,227	215,800	220,027	2,200	48,000	50,200
1991	0	4,227	218,113	222,340	2,200	50,313	52,513
1992	0	4,227	220,427	224,654	2,200	52,627	54,827
1993	0	4,227	222,740	226,967	2,200	54,940	57,140
1994	0	4,227	225,053	229,280	2,200	57,253	59,453
1995	0	4,227	227,367	231,594	2,200	59,567	61,767
1996	0	4,227	229,680	233,907	2,200	61,880	64,080
1997	0	4,227	231,993	236,220	2,200	64,193	66,393
1998	0	4,227	234,307	238,534	2,200	66,507	68,707
1999	0	4,227	236,620	240,847	2,200	68,820	71,020
2000	0	4,227	238,933	243,160	2,200	71,133	73,333
2001	0	4,227	241,247	245,474	2,200	73,447	75,647
2002	0	4,227	243,560	247,787	2,200	75,760	77,960
2003	0	4,227	245,874	250,101	2,200	78,074	80,274
2004	0	4,227	248,187	252,414	2,200	80,387	82,587
2005 (b	0	4,227	250,500	254,727	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		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
CONSERVATION FACILITIES									
Upper Feather Division									
Frenchman Dam and Lake	172	1	0	0	539	0	712	2,571	3,283
Grizzly Valley Dam and Lake Davis	29	0	0	0	213	0	242	4,729	4,971
Antelope Dam and Lake	0	0	0	0	0	0	0	4,992	4,992
Abbey Bridge Dam and Res.	0	0	0	0	0	0	0	8,181	8,181
Dixie Refuge Dam and Res.	0	0	0	0	0	0	0	6,065	6,065
Total, Upper Feather Division	201	1	0	0	752	0	954	26,538	27,492
Oroville Division									
Multipurpose Facilities	3,160	125	150	0	315,075	0	318,510	80,256	398,766
Specific Power Facilities	6	64	0	0	106,739	0	106,809	0	106,809
Total, Oroville Division	3,166	189	150	0	421,814	0	425,319	80,256	505,575
California Aqueduct									
North San Joaquin Div.	100	773	0	0	50,536	0	51,409	2,031	53,440
San Luis Division	199	67	0	0	87,288	0	87,554	3,518	91,072
Total, California Aqueduct	299	840	0	0	137,824	0	138,963	5,549	144,512
Delta Facilities	308	16,907	0	0	131,394	0	148,609	24,173	172,782
Upper Eel River Development	0	1,062	0	0	14,682	0	15,744	2,771	18,515
TOTAL, CONSERVATION FAC.	3,974	18,999	150	0	706,466	0	729,589	139,287	868,876
TRANSPORTATION FACILITIES									
Upper Feather Division, Grizzly Valley Pipeline	0	0	0	0	0	342	342	0	342
North Bay Aqueduct	17	1,922	3	0	0	17,299	19,241	5	19,246
South Bay Aqueduct	1,606	50	277	0	0	47,537	49,470	19,512	68,982
California Aqueduct									
North San Joaquin Div.	388	1,564	13	0	0	113,049	115,014	3,926	118,940
San Luis Division	6	1,432	0	0	0	102,305	103,743	3,391	107,134
South San Joaquin Div.	319	127	2,270	3,244	0	243,507	249,467	7,950	257,417
Tehachapi Division	70	3,869	4	6,991	0	266,364	277,298	8,568	285,866
Mojave Division	573	2,760	184	0	0	216,929	220,446	7,344	227,790
Santa Ana Division	409	710	2,569	21,184	0	158,852	183,724	5,438	189,162
West Branch	36,429	1,024	2,713	106	0	295,551	335,823	12,626	348,449
Coastal Branch	12	10,368	83	0	0	82,231	92,694	104	92,798
Total, California Aqueduct	38,206	21,854	7,836	31,525	0	1,478,788	1,578,209	49,347	1,627,556
TOTAL, TRANSPORTATION FAC.	39,829	23,826	8,116	31,525	0	1,543,966	1,647,262	68,864	1,716,126
SAN JOAQUIN DRAINAGE FACILITIES	0	0	0	0	0	0	0	6,077	6,077
UNASSIGNED & DAVIS-GRUNSKY	0	0	0	0	0	0	0	138,017	138,017
TOTAL, 1952-1985	43,803	42,825	8,266	31,525	706,466	1,543,966	2,376,851	352,245	2,729,096

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, 1971.

c) See Table B-8.

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

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

f) See Table B-10.

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

(in dollars)

Project Area and Water Supply Contractor	Calendar Year 1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
FEATHER RIVER AREA																	
County of Butte	0	0	0	0	0	0	1,873	4,641	45,706	52,115	394	195	0	0	0	0	104,924
Thermalito Irrigation District (b	0	0	0	0	0	0	1,360	2,502	14,686	25,142	252	0	0	0	0	0	43,942
Subtotals	0	0	0	0	0	0	3,233	7,143	60,392	77,257	646	195	0	0	0	0	148,866
NORTH BAY AREA																	
Napa County Flood Control and Water Conservation District	0	0	0	0	0	0	0	0	687	2,249	-345	287	0	0	0	0	2,878
SOUTH BAY AREA																	
Alameda County Flood Control and Water Conservation District, Zone 7	2,810	3,993	1,661	40,624	26,172	7,044	6,843	891	8,451	561	12,846	11,943	112	1,500	0	0	125,451
Alameda County Water District	1,351	1,919	694	19,739	21,100	11,050	82,949	-4,400	5,224	0	0	0	0	0	0	0	139,626
Santa Clara County Flood Control and Water District	0	0	0	0	175	66	255	4,908	7,298	-19	105	0	0	0	0	0	12,788
Subtotals	4,161	5,912	2,355	60,363	47,447	18,160	90,047	1,399	20,973	542	12,951	11,943	112	1,500	0	0	277,865
SAN JOAQUIN VALLEY																	
Devil's Den Water District	0	0	0	0	0	0	0	871	5,301	42,678	27,904	-640	269	0	0	0	76,383
Dudley Ridge Water District	0	0	0	0	0	0	0	1,793	58,875	124,834	101,757	-2,553	15	0	0	0	284,721
Empire West Side Irrigation District	0	0	0	0	0	0	0	185	1,590	2,766	1,685	-33	0	0	0	0	6,193
Hacienda Water District	0	0	0	0	0	0	0	211	4,816	8,126	5,044	-201	0	0	0	0	17,996
Kern County Water Agency	0	0	0	0	0	-1	-2	27,186	282,527	288,045	321,740	513,715	243,567	42,263	0	0	1,719,040
Oak Flat Water District	0	0	0	0	0	0	-3,341	3,374	336	10,879	2,082	0	0	0	0	0	13,330
Tulare Lake Basin Water Storage District	0	0	0	0	0	0	0	2,938	62,079	116,149	71,818	-866	0	0	0	0	252,118
Subtotals	0	0	0	0	0	-1	-3,343	36,558	415,524	593,477	532,030	509,422	243,851	42,263	0	0	2,369,781
SOUTHERN CALIFORNIA AREA																	
Antelope Valley-East Kern Water Agency	0	0	0	0	0	0	453	-453	1,905	17,669	31,605	44,406	31,684	40,655	0	0	167,924
Castaic Lake Water Agency	0	0	0	59	372	288	1,037	2,200	2,740	16,511	24,396	12,285	10,494	255,090	2,700	0	328,172
Coachella Valley County Water District	0	0	0	0	0	0	0	4	0	35	130	2,556	853	2,297	0	0	5,875
Crestline-Lake Arrowhead Water Agency	0	0	0	0	0	0	916	189	-14	99	6,995	41	76	691	0	0	8,993
Desert Water Agency	0	0	0	0	0	0	0	0	0	58	214	4,217	1,407	1,858	0	0	7,754
Littlerock Creek Irrigation District	0	0	0	0	0	0	0	0	-1	165	485	9,132	4,817	242	0	0	14,840
Mojave Water Agency	0	0	0	0	0	0	0	0	365	302	558	8,358	1,712	4,306	0	0	15,601
Palmdale Irrigation District	0	0	0	0	0	0	0	61	-7	1,524	974	9,905	4,533	128	0	0	17,118
San Bernardino Valley Municipal Water District	0	0	0	0	0	0	373	758	786	3,410	22,300	12,860	23,230	462,128	2,000	0	527,845
San Gabriel Valley Municipal Water District	0	0	0	0	0	0	0	0	0	557	1,734	10,530	2,766	30,451	0	0	46,038
San Gorgonio Pass Water Agency	0	0	0	0	0	0	0	0	0	277	2,814	3	3,312	18,389	300	0	25,095
The Metropolitan Water District of Southern California	0	0	0	748	4,735	3,664	13,742	28,021	35,482	217,158	347,215	139,904	333,682	2,484,655	425,200	174,000	4,208,206
Ventura County Flood Control District	0	0	0	30	191	148	532	1,268	1,402	8,456	12,496	5,463	3,635	57,904	800	0	92,325
Subtotals	0	0	0	837	5,298	4,100	17,053	32,048	42,658	266,221	451,916	259,660	422,201	3,358,794	431,000	174,000	5,465,786
TOTALS	4,161	5,912	2,355	61,200	52,745	22,259	106,990	77,148	540,234	939,746	997,198	781,507	666,164	3,402,557	431,000	174,000	8,265,176

a) Approximate only; not to be construed as invoice amounts.

b) Not a project water supply contractor. A delivery structure was constructed on the Thermalito Power Canal at the District's expense as a part of a water exchange agreement.

TABLE B-9: CAPITAL COSTS OF

(in dollars unless otherwise indicated)

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
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
				THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA						
8C	1968	188.00000	8,257.54768	0.02276705	597,582	13,605	2,000	11,605	1,667	13,272
8D	1968	188.00000	8,058.99281	0.02332798	13,942,413	325,248	113,000	212,248	30,109	242,357
9	1968	188.00000	7,268.54004	0.02586489	9,162,227	236,980	71,000	165,980	32,640	198,620
10A	1968	188.00000	7,117.74784	0.02641285	9,710,336	256,478	92,000	164,478	32,106	196,584
11B	1968	188.00000	6,313.19561	0.02977890	13,692,127	407,736	108,000	299,736	60,463	360,199
12D	1969	188.00000	5,929.95263	0.03170346	11,888,004	376,891	156,000	220,891	46,967	267,858
12E	1969	188.00000	5,907.22734	0.03182542	7,484,322	238,192	118,000	120,192	24,967	145,159
13B	1969	188.00000	5,341.25081	0.03519775	16,313,712	574,206	139,000	435,206	75,150	510,356
14A	1970	188.00000	5,008.96939	0.03753267	55,742,657	2,092,171	559,000	1,533,171	381,330	1,914,501
14B	1970	188.00000	4,888.19779	0.03845998	10,081,251	387,725	175,000	212,725	55,369	268,094
14C	1970	188.00000	4,700.84105	0.03999284	9,083,502	363,275	223,000	140,275	36,501	176,776
15A	1970	188.00000	4,597.94994	0.04088779	38,646,108	1,580,154	593,000	987,154	200,521	1,187,675
16A	1971	188.00000	4,387.78387	0.04284623	62,627,071	2,683,334	995,000	1,688,334	448,974	2,137,308
17E	1971	188.00000	4,136.09906	0.04545346	224,099,973	10,186,119	5,811,000	4,375,119	1,264,021	5,639,140
17F	1971	188.00000	4,126.98262	0.04555386	58,567,574	2,667,979	1,396,000	1,271,979	444,423	1,716,402
25	1971	787.00000	2,019.63064	0.38967521	30,989,289	12,075,758	6,823,844	5,251,914	1,368,192	6,620,106
28J	1973	-	-	-	-	14,505,818	14,505,818	0	0	0
				SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT						
25	1971	21.00000	2,019.63064	0.01039794	31,022,106	322,566	182,156	140,410	36,579	176,989
				ANTELOPE VALLEY-EAST KERN WATER AGENCY						
29A	1971	19.00000	3,128.83908	0.00607254	29,976,119	182,032	85,000	97,032	22,045	119,077
29F	1971	19.00000	3,128.01611	0.00607414	13,582,587	82,503	24,000	58,503	15,039	73,542

a) Column 1 divided by Column 2.

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

Reaches	Period	Year costs compounded to
8C thru 17F	1952 - 1965	1965
25 and 28J (for MWD)	1952 - 1966	1966
25 (for SGVMWD)	1952 - 1967	1967
29A and 29F	1952 - 1967	1967

c) Column 3 multiplied by Column 4.

d) As shown in Table B-7, except, prior Incremental Costs for Reach 28J have been brought forward with interest 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 1972 with 1973 adjusted to reflect overpayments and underpayments without interest for prior years.

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

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

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

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

REQUESTED EXCESS PEAKING CAPACITY

(in dollars)

ANNUAL REQUIRED ADVANCE OF FUNDS

Reach Number	Item	Estimated Costs and Advance Payments by Calendar Year									Reach Totals(j
		1965	1966	1967	1968	1969	1970	1971	1972	1973	
		(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		6,803	6,802		-13,272					333
8D	1. Incremental Costs	4,000	45,000	64,000							113,000
	2. Advance Payments	11,513	129,524	184,211		-242,357					82,891
9	1. Incremental Costs	4,000	24,000	35,000	8,000						71,000
	2. Advance Payments	13,351	80,106	116,821	26,702		-198,260				38,360
10A	1. Incremental Costs	5,000	30,000	46,000	11,000						92,000
	2. Advance Payments	13,939	83,634	128,239	30,666		-196,584				59,894
11B	1. Incremental Costs	7,000	42,000	48,000	11,000						108,000
	2. Advance Payments	26,427	158,564	181,216	41,529		-360,199				47,537
12D	1. Incremental Costs	16,000	20,000	18,000	84,000	18,000					156,000
	2. Advance Payments	38,655	48,319	43,487	202,941	43,489		-267,858			109,033
12E	1. Incremental Costs	10,000	14,000	14,000	66,000	14,000					118,000
	2. Advance Payments	20,186	28,260	28,260	133,226	28,260		-145,159			93,033
13B	1. Incremental Costs	1,000	2,000	14,000	96,000	26,000					139,000
	2. Advance Payments	4,131	8,262	57,834	396,574	107,405		-510,356			63,850
14A	1. Incremental Costs	51,000	65,000	39,000	194,000	150,000	60,000				559,000
	2. Advance Payments	190,878	243,276	145,965	726,084	561,405	224,563		-1,914,501		177,670
14B	1. Incremental Costs	31,000	14,000	10,000	45,000	63,000	12,000				175,000
	2. Advance Payments	68,683	31,018	22,156	99,701	139,581	26,586		-268,094		119,631
14C	1. Incremental Costs	39,000	18,000	13,000	58,000	80,000	15,000				223,000
	2. Advance Payments	63,532	29,323	21,177	94,484	130,323	24,436		-176,776		186,499
15A	1. Incremental Costs	4,000	10,000	46,000	243,000	162,000	128,000				593,000
	2. Advance Payments	10,659	26,647	122,575	647,517	431,678	341,078		-1,187,675		392,479
16A	1. Incremental Costs	14,000	12,000	56,000	387,000	357,000	119,000	50,000			995,000
	2. Advance Payments	37,755	32,362	151,022	1,043,669	962,764	320,921	134,841		-2,137,308	546,026
17E	1. Incremental Costs	30,000	259,000	1,159,000	1,971,000	1,565,000	551,000	276,000			5,811,000
	2. Advance Payments	52,587	454,002	2,031,615	3,454,972	2,743,293	965,850	483,800		-5,639,140	4,546,979
17F	1. Incremental Costs	78,000	203,000	468,000	349,000	276,000	15,000	7,000			1,396,000
	2. Advance Payments	149,070	387,965	894,423	666,995	527,480	28,667	13,379		-1,716,402	951,577
25	1. Incremental Costs			932,118	2,289,874	1,910,988	1,211,656	479,208			6,823,844
	2. Advance Payments			1,649,515	4,052,256	3,381,764	2,144,197	848,026		-6,620,106	5,455,652
28J	1. Incremental Costs		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	701,366	2,879,840	5,893,547	16,258,697	9,038,200	3,993,941	2,779,673	254,954	-14,422,956	27,377,262
Current Adjustments	1. Advance Payments and Adjustments - Amendment 2(g	0	8,056,000	9,094,963	1,523,252	8,310,651	3,426,736	1,086,045	-4,244,807	-14,381,396(k	12,871,444
	2. Interest Credits-Amendment 2(h									-1,532,433(k	-1,532,433
	3. Advance Payments and Adjustments - Amendment 5(g	0	1,240,000	1,483,180	2,469,325	-927,035	1,729,160	3,215,258	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	-14,223,829	25,206,374
		SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT									
25	1. Incremental Costs	0	0	24,882	61,126	51,012	32,344	12,792			182,156
	2. Advance Payments	0	0	44,062	108,243	90,333	57,275	22,653		-176,989	145,577
Totals Unadjusted for past payments	1. Incremental Costs	0	0	24,882	61,126	51,012	32,344	12,792			182,156
	2. Advance Payments	0	0	44,062	108,243	90,333	57,275	22,653		-176,989	145,577
Current Adjustments	1. Advance Payments and Adjustments(g	0	0	0	184,422	49,052	44,911	61,588	-20,263	-174,133	145,577
	2. Interest Credit									- 6,332	- 6,332
	3. Net Required Advance of Funds	0	0	0	184,422	49,052	44,911	61,588	-20,263(k	-180,465(k	139,245
		ANTELOPE VALLEY-EAST KERN WATER AGENCY									
29A	1. Incremental Costs	0	0	8,000	14,000	26,000	26,000	11,000			85,000
	2. Advance Payments	0	0	17,132	29,982	55,680	55,680	23,558		-119,077	64,955
29F	1. Incremental Costs	0	0	3,000	4,000	14,000	2,000	1,000			24,000
	2. Advance Payments	0	0	10,313	13,751	48,127	6,875	3,437		- 73,542	8,961
Totals Unadjusted for past payments	1. Incremental Costs	0	0	11,000	18,000	40,000	28,000	12,000			109,000
	2. Advance Payments	0	0	27,445	43,733	103,807	62,555	26,995		-192,619	73,916
Current Adjustments	1. Advance Payments and Adjustments(g				85,495	52,625	101,648	34,062	-12,794	-189,120	71,916
	2. Interest Credit	0	0	0						- 16,234	-16,234
	3. Net Required Advance of Funds	0	0	0	85,495	52,625	101,648	34,062	-12,794	-205,354(k	55,682

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

(in dollars)

Calendar Year	UPPER FEATHER DIVISION	NORTH BAY AQUEDUCT				SOUTH BAY AQUEDUCT			
		Reach 1	Reach 2	Reach 3	Total	Reach 1	Reach 2	Reach 4	Reach 5
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1952	0	0	0	0	0	97	34	30	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	7,378	2,050	18,392	27,820	496,101	148,740	25,080	17,815
1960	0	8,379	3,875	7,244	19,498	1,134,009	68,712	71,554	70,713
1961	4	2,031	10,330	3,607	15,968	3,238,334	229,498	306,946	80,873
1962	270	511	1,411-	1,317	417	1,512,524	238,757	695,292	38,438
1963	54	3,973	347-	3,008	6,634	477,715	68,206	2,284,425	221,154
1964	7,790	36,843	18,016	28,606	83,465	2,508,952	13,150	175,995	280,399
1965	3,135	72,037	25,804	191,662	289,503	735,995	144,354	76,226	489,256
1966	-49	69,342	19,250	467,385	555,977	739,899	139,786	117,068	1,828,622
1967	49	60,353	21,904	1,573,560	1,655,817	299,205	11,569	245,113	3,734,397
1968	51,562	72,792	25,118	853,106	951,016	811,124	4,270-	63,981	3,028,322
1969	234,400	66,151	27,227	50,778	144,156	421,216	5,214	1,683-	945,946
1970	17,250	66,436	46,331	12,641	125,408	55,971	3,684	10,899	162,673
1971	27,225	17,065	27,639	9,821	54,525	21,762	4,318	4,934	23,415
1972	0	22,022	32,732	66,300	121,054	65,000	5,000	10,000	91,313
1973	0	45,043	23,868	14,400	83,311	25,000	2,000	4,000	55,000
1974	0	64,174	50,101	4,400	118,675	6,000	0	1,000	24,000
1975	0	120,794	97,005	3,400	221,199	1,000	0	0	509,000
1976	0	293,529	203,333	26,000	522,862	2,000	0	1,000	127,000
1977	0	591,335	343,090	92,000	1,026,425	26,000	8,000	29,000	61,000
1978	0	1,745,093	633,157	485,000	2,863,250	3,000	1,000	4,000	9,000
1979	0	4,381,802	858,131	1,369,000	6,608,933	0	0	0	1,000
1980	0	1,143,000	226,000	283,000	1,652,000	0	0	0	1,000
1981	0	31,000	17,000	1,000	49,000	0	0	0	1,000
1982	0	13,000	0	0	13,000	0	0	0	1,000
1983	0	12,000	0	0	12,000	0	0	0	1,000
1984	0	0	0	0	0	0	0	0	1,000
1985	0	0	0	0	0	0	0	0	1,000
TOTAL	341,690	8,978,570	2,718,603	5,601,469	17,298,642	12,844,630	1,192,227	4,151,081	11,879,760

Calendar Year	SOUTH BAY AQUEDUCT (continued)					CALIFORNIA AQUEDUCT NORTH SAN JOAQUIN DIVISION			
	Reach 6	Reach 7	Reach 8	Reach 9	Total	Reach 1	Reach 2A	Reach 2B	Subtotal
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1952	8	66	72	132	499	3,973	3,303	1,505	8,781
1953	38	327	336	641	2,444	10,459	8,653	3,979	23,091
1954	123	1,005	1,003	1,954	7,509	13,690	11,243	5,199	30,132
1955	160	1,293	1,149	2,454	9,570	7,326	5,990	2,771	16,087
1956	1,559	11,959	11,043	28,372	96,575	9,242	5,177	2,403	16,822
1957	3,659	28,676	27,385	563,114	731,066	11,212	5,637	2,615	19,464
1958	2,244	17,888	17,400	560,921	906,325	18,516	15,696	7,283	41,495
1959	363	3,414	3,777	150,248	845,538	121,949	99,130	44,810	265,889
1960	958	3,777	4,358	360,499	1,714,580	187,516	103,664	49,133	340,313
1961	4,401	20,028	21,573	180-	3,901,473	164,176	215,333	44,441	423,950
1962	13,790	163,381	177,061	208,840	3,048,083	622,510	495,283	170,821	1,288,614
1963	237,154	1,275,517	941,980	129,790	5,635,941	2,014,267	1,535,634	692,572	4,242,473
1964	29,239	1,787,474	2,328,083	2,938,318	10,061,610	4,725,453	2,378,234	730,492	7,834,179
1965	15,425	395,496	598,663	1,912,669	4,368,084	6,001,760	6,901,296	3,148,243	16,051,299
1966	19,177	33,127	180,275	758,698	3,816,652	8,695,445	14,023,639	5,886,349	28,605,433
1967	45,356-	136,754	142,375	343,034	4,867,091	9,845,676	10,761,749	6,739,767	27,347,192
1968	83,691	2,127-	61,272	237,157	4,279,150	6,427,313	878,869	1,307,174	8,613,356
1969	4,016	9,160	163,470	25,887	1,573,226	3,550,543	772,853	445,883	4,769,279
1970	2,444	4,422	22,149	17,216-	245,026	2,245,419	144,233	110,529	2,500,181
1971	4,209	7,298	17,882	38,934	122,752	85,494	206,452	72,393	364,339
1972	1,000	13,000	8,000	71,000	264,313	249,008	33,041	36,933	318,982
1973	0	1,000	4,000	17,000	108,000	101,063	50,197	22,756	174,016
1974	0	0	0	8,000	39,000	60,237	36,142	14,724	111,103
1975	0	0	0	3,000	513,000	141,891	23,424	8,031	173,346
1976	0	1,000	1,000	4,000	136,000	329,964	8,033	3,347	341,344
1977	2,000	10,000	21,000	44,000	201,000	534,102	4,685	2,008	540,795
1978	0	1,000	3,000	7,000	28,000	1,752,896	669	669	1,754,234
1979	0	0	0	1,000	2,000	1,819,157	669	669	1,820,495
1980	0	0	0	1,000	2,000	726,190	669	669	727,528
1981	0	0	0	1,000	2,000	309,217	669	669	310,555
1982	0	0	0	1,000	2,000	473,864	669	669	475,202
1983	0	0	0	1,000	2,000	1,617,029	669	669	1,618,367
1984	0	0	0	1,000	2,000	1,386,121	669	669	1,387,459
1985	0	0	0	1,000	2,000	491,935	669	669	493,273
TOTAL	380,302	3,924,935	4,758,306	8,405,266	47,536,507	54,754,613	38,732,942	19,561,513	113,049,068

BURSED THRU CAPITAL COST COMPONENT OF TRANSPORTATION CHARGE

(in dollars)

Calendar Year	CALIFORNIA AQUEDUCT (continued)								
	SAN LUIS DIVISION						SOUTH SAN JOAQUIN DIVISION		
	Reach 3	Reach 4	Reach 5	Reach 6	Reach 7	Subtotal	Reach 8C	Reach 8D	Reach 9
	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
1952	2,556	3,641	4,131	1,050	1,296	12,674	14	717	1,165
1953	7,164	10,410	11,380	2,945	3,631	35,530	51	2,666	4,370
1954	8,895	12,875	14,176	3,655	4,508	44,109	52	2,708	4,215
1955	4,362	6,215	7,048	1,793	2,210	21,628	18	876	1,166
1956	3,959	5,640	6,400	1,627	2,007	19,633	70	3,628	4,809
1957	4,317	6,149	6,978	1,773	2,188	21,405	204	10,524	13,947
1958	15,032	24,950	28,494	7,134	9,151	84,761	349	17,843	23,652
1959	34,589	57,268	64,462	16,157	20,751	193,227	371	18,737	24,648
1960	40,141	64,577	68,730	21,758	38,835	234,041	1,064	44,733	28,235
1961	177,370	295,709	180,522	42,543	73,840	769,984	1,861	78,137	36,582
1962	576,501	564,993	263,968	24,853	28,966	1,459,281	4,149	162,579	65,466
1963	2,262,418	2,098,979	2,575,008	71,538	36,119	7,044,062	4,216	167,803	85,210
1964	4,360,314	5,079,704	1,098,064	171,792	268,025	10,977,899	2,298	98,872	125,756
1965	3,793,431	5,860,949	2,979,274	1,113,298	699,669	14,446,621	10,232	531,576	600,479
1966	2,525,632	8,795,233	5,981,194	4,368,870	7,938,267	29,609,196	129,997	5,423,499	2,637,794
1967	302,675	3,138,979	5,839,143	978,351	5,979,916	16,239,064	133,813	5,153,728	3,534,784
1968	177,523	730,730	1,027,403	239,992	547,799	2,723,447	47,844	643,323	1,015,595
1969	3,115-	137,823	111,454	109,522	160,929	516,613	57,524	123,710	94,845
1970	50,515	21,058	130,175	53,575	198,092	453,415	13,651	123,521	117,591
1971	90,638	63,830-	249,340	75,612	354,597	706,357	5,532	36,298	30,101
1972	36,529	289,112	284,292	18,461	194,081	822,475	8,730	42,721	50,363
1973	26,199	90,210	159,080	12,610	109,610	397,709	7,760	34,920	33,950
1974	14,162	42,680	88,270	5,820	62,080	213,012	2,910	28,130	25,220
1975	2,124	9,700	12,610	970	9,700	35,104	970	11,640	10,670
1976	2,124	11,640	32,980	1,940	23,280	71,964	970	970	970
1977	3,540	14,550	23,280	1,940	15,520	58,830	970	1,940	1,940
1978	0	0	0	0	970	970	970	0	0
1979	9,913	52,380	193,030	4,850	131,920	392,093	970	0	0
1980	30,448	158,110	579,090	13,580	392,850	1,174,078	970	0	0
1981	59,480	311,370	1,138,780	27,160	772,120	2,308,910	970	0	0
1982	50,275	263,840	965,150	23,280	654,750	1,957,295	970	0	0
1983	12,746	175,570	412,250	66,930	247,350	914,846	970	0	0
1984	0	1,202,800	1,888,590	675,120	914,710	4,681,220	970	0	0
1985	0	940,900	1,478,280	528,650	715,860	3,663,690	970	0	0
TOTAL	14,682,457	30,414,914	27,903,026	8,689,149	20,615,597	102,305,143	443,380	12,765,799	8,573,523

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	68,291
1961	74,554	56,664	82,657	46,830	51,593	215,713	76,205	60,628	152,818
1962	59,215	58,422	72,230	41,637	45,974	192,105	71,653	56,415	132,921
1963	54,293	99,085	180,242	85,141	61,054	401,425	119,825	103,059	87,733
1964	118,913	380,518	297,299	166,683	73,857	1,071,744	686,149	644,744	474,478
1965	629,154	1,343,979	1,398,207	935,325	191,556	3,328,435	1,687,554	1,532,962	412,979
1966	2,813,184	3,933,086	653,878	422,471	397,384	4,829,581	1,018,447	703,107	1,862,182
1967	3,678,211	4,839,051	2,039,741	1,221,352	1,203,053	2,674,579	588,914	509,950	1,651,297
1968	1,061,977	1,389,272	5,026,448	3,020,589	8,330,365	9,776,374	1,580,988	1,963,574	7,393,586
1969	160,331	241,289	816,673	528,229	3,753,795	14,451,932	1,794,301	1,552,703	9,612,903
1970	116,534	97,665	118,430	91,122	301,122	10,840,529	1,306,993	1,018,990	8,848,691
1971	25,127	47,479	58,388	46,327	344,446	2,980,478	201,675	49,442	3,336,901
1972	49,116	32,980	48,500	56,423	100,073	1,905,505	91,180	91,180	1,734,690
1973	32,980	24,250	34,920	27,160	47,530	135,800	36,860	32,010	468,510
1974	26,190	19,400	26,190	18,430	31,040	95,060	25,220	21,340	80,510
1975	11,640	6,790	10,670	6,790	12,610	36,860	9,700	6,790	27,160
1976	970	0	970	0	0	1,940	0	0	970
1977	1,940	970	970	970	970	4,850	970	970	2,910
1978	0	0	0	0	0	0	0	0	0
1979	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	0	0	0	0
1981	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0	0
1985	0	0	0	0	0	0	0	0	0
TOTAL	9,038,980	12,790,467	11,190,283	6,876,499	15,208,687	53,127,319	9,355,148	8,407,904	36,534,467

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

(in dollars)

Calendar Year	CALIFORNIA AQUEDUCT (continued)								
	SOUTH SAN JOAQUIN DIVISION (continued)		TEHACHAPI DIVISION			MOJAVE DIVISION			
	Reach 16A	Subtotal	Reach 17E	Reach 17F	Subtotal	Reach 18A	Reach 19	Reach 19C	Reach 20A
	(37)	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)
1952	4,547	16,245	9,352	4,202	13,554	4,208	1,563	0	2,634
1953	16,933	60,396	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	775,111	143,373	60,013	203,386	42,059	24,209	0	24,570
1960	208,235	778,241	173,508	45,916	219,424	30,306	27,674	1,163	43,169
1961	237,833	1,172,075	388,128	86,522	474,650	38,248	38,398	1,635	36,201
1962	173,211	1,135,977	360,355	84,449	444,804	70,072	274,125	1,280	11,089
1963	481,059	1,930,145	1,208,961	127,521	1,336,482	27,401	425,135	2,821	23,076
1964	1,825,330	5,966,641	1,902,975	797,232	2,700,207	96,874	729,438	5,865	54,890
1965	1,234,576	13,837,014	2,577,478	2,377,083	4,954,561	127,372	769,452	6,237	150,363
1966	2,965,706	27,790,316	5,409,903	9,642,049	15,051,952	388,661	1,730,537	10,589	214,665
1967	3,437,856	30,666,329	26,201,833	12,554,585	38,756,418	1,354,995	930,576	19,951	671,021
1968	7,505,332	48,755,267	32,812,476	7,539,715	40,352,191	149,959	7,355,725	68,587	2,036,989
1969	13,310,113	46,498,348	40,729,224	7,065,413	47,794,637	226,441	2,532,022	5,303	6,230,278
1970	14,215,977	37,210,816	37,066,028	7,185,388	44,251,416	2,169,326	1,180,389	5,127	3,863,401
1971	8,111,324	15,273,518	20,948,522	7,047,649	27,996,171	1,578,085	355,068	12,546	1,259,464
1972	3,659,877	7,871,338	12,582,202	91,180	12,673,382	76,630	479,180	25,195	739,140
1973	1,110,650	2,027,300	4,351,420	62,080	4,413,500	35,890	240,560	5,116	188,180
1974	144,530	544,170	428,740	15,520	444,260	19,400	96,030	0	69,840
1975	60,140	212,430	331,740	72,750	404,490	13,580	26,190	0	21,340
1976	1,940	9,700	323,980	209,520	533,500	970	27,160	125,653	9,700
1977	4,850	25,220	38,800	0	38,800	1,940	5,820	1,631,098	6,790
1978	0	970	140,650	0	140,650	0	970	1,184,099	2,910
1979	0	970	446,200	0	446,200	0	970	485,465	2,910
1980	0	970	2,652,950	0	2,652,950	0	970	0	2,910
1981	0	970	5,770,530	0	5,770,530	0	970	85,629	2,910
1982	0	970	7,284,700	0	7,284,700	0	970	117,879	2,910
1983	0	970	4,485,280	0	4,485,280	0	970	155,204	2,910
1984	0	970	1,872,100	0	1,872,100	0	970	5,139,492	2,910
1985	0	970	39,770	0	39,770	0	970	4,751,067	2,910
TOTAL	59,194,750	243,507,206	211,105,485	55,258,131	266,363,616	6,556,776	17,295,788	13,847,001	15,727,608

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	36,400	28,882	13,726	210,667	10,525	355,114	769,796	27,939	60,268
1962	10,907	9,502	4,273	165,257	4,561	276,105	827,171	11,041	38,131
1963	23,661	20,995	9,723	177,804	7,563	269,376	987,555	32,290	119,141
1964	55,213	38,811	22,120	288,452	8,340	240,861	1,540,864	75,927	224,587
1965	263,696	101,876	58,712	941,025	15,589	537,535	2,971,857	307,863	242,528
1966	1,093,447	158,916	113,793	1,983,139	36,973	1,055,666	6,786,386	451,467	431,353
1967	1,911,509	533,617	397,241	3,212,827	61,847	2,404,791	11,498,375	3,319,223	712,555
1968	2,290,929	1,198,743	1,454,178	4,432,255	108,562	2,769,005	21,864,932	7,872,191	1,766,333
1969	5,070,842	2,813,246	1,947,840	7,790,245	267,485	11,112,312	37,996,014	6,533,518	2,028,994
1970	4,420,435	3,884,971	2,536,747	23,868,065	1,269,676	17,060,771	60,258,908	1,714,257	7,990,638
1971	1,011,861	987,508	515,117	17,319,252	1,985,849	5,662,954	30,687,704	1,004,416	9,342,836
1972	666,390	718,770	429,710	4,844,916	62,080	3,499,046	11,541,057	1,523,636	6,338,831
1973	164,900	114,460	71,780	2,093,260	22,310	674,071	3,610,527	48,500	2,560,800
1974	60,140	41,710	27,160	2,672,350	17,460	572,476	3,576,566	14,550	4,631,750
1975	14,550	9,700	6,790	5,042,060	3,880	37,830	5,175,920	4,850	2,012,750
1976	4,850	1,940	1,940	1,719,810	970	13,580	1,906,573	3,880	421,950
1977	3,880	1,940	1,940	18,430	0	8,730	1,680,568	2,910	5,820
1978	0	0	0	0	0	0	1,187,979	970	0
1979	0	0	0	0	0	0	489,345	970	0
1980	0	0	0	0	0	0	3,880	970	0
1981	0	0	0	0	0	0	89,509	970	0
1982	0	0	0	0	0	0	121,759	970	0
1983	0	0	0	0	0	0	159,084	970	0
1984	0	0	0	0	0	0	5,143,372	970	0
1985	0	0	0	0	0	0	4,754,947	970	0
TOTAL	17,201,420	10,943,304	7,626,776	76,977,487	3,982,107	46,770,418	216,928,685	23,152,322	39,240,508

BURSED THRU CAPITAL COST COMPONENT OF TRANSPORTATION CHARGE

(in dollars)

Calendar Year	CALIFORNIA AQUEDUCT (continued)								
	SANTA ANA DIVISION (continued)				WEST BRANCH				
	Reach 28G[a]	Reach 28H	Reach 28J	Subtotal	Reach 29A	Reach 29 F	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	42,395	243,352	6,553	8,396	15,582	16,436	31,103
1960	71,430	71,696	99,224	409,783	15,593	10,316	15,558	21,295	50,358
1961	35,494	38,581	725,230	887,512	19,942	7,841	6,741	18,200	38,493
1962	21,693	22,729	38,244	131,838	45,304	25,670	21,272	61,951	135,911
1963	42,826	41,535	1,843,464	2,079,256	92,358	52,564	37,330	113,166	256,407
1964	98,484	55,885	77,084	531,967	160,250	61,495	78,255	157,782	337,533
1965	124,006	113,049	122,869	910,315	371,285	69,029	333,508	156,733	611,156
1966	212,393	370,221	580,925	2,046,359	490,837	239,953	1,180,109	350,177	3,260,760
1967	232,315	295,763	1,147,022	5,706,878	1,520,637	974,709	1,052,598	915,553	31,562,698
1968	386,692	305,186	618,937	10,949,339	3,985,508	395,628	338,857	1,131,943	36,676,516
1969	1,057,932	1,528,684	959,182	12,108,310	6,724,720	334,433	665,149	1,203,072	8,628,584
1970	1,842,418	1,061,039	3,496,616	16,104,968	8,079,491	6,194,434	2,649,188	3,042,800	8,041,486
1971	16,463,873	6,603,716	11,417,334	44,832,175	4,333,743	3,856,097	1,326,896	8,427,237	5,766,476
1972	2,333,012	11,143,784	17,111,538	38,450,801	2,628,967	477,240	1,195,040	17,656,910	24,534,416-
1973	221,160	3,126,904	8,637,300	14,594,664	274,510	126,100	276,450	15,780,547	2,216,450-
1974	88,270	96,030	498,100	5,328,700	91,180	42,680	207,580	2,317,112	387,030
1975	41,710	37,830	278,529	2,375,669	24,250	45,590	92,150	83,881	38,800
1976	26,190	28,130	63,596	543,746	4,850	70,810	38,800	14,220	11,640
1977	22,310	12,610	9,700	53,350	5,820	970	970	970	10,670
1978	0	0	3,085	4,055	970	0	0	0	10,670
1979	0	0	0	970	970	0	0	0	10,670
1980	0	0	0	970	970	0	0	0	5,820
1981	0	0	0	970	970	0	0	0	970
1982	0	0	0	970	970	0	0	0	970
1983	0	0	0	970	970	0	0	0	970
1984	0	0	0	970	970	0	0	0	970
1985	0	0	0	970	970	0	0	0	970
TOTAL	23,490,557	25,117,478	47,850,842	158,851,707	28,910,108	13,004,198	9,550,559	51,491,357	69,162,875

Calendar Year	CALIFORNIA AQUEDUCT (continued)								GRAND TOTAL
	WEST BRANCH (continued)		COASTAL BRANCH					TOTAL	
	Reach 30	Subtotal	Reach 31A	Reach 33A	Reach 34	Reach 35	Subtotal		
	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)
1952	1,448	5,815	0	0	0	0	0	100,452	100,951
1953	4,470	17,953	0	0	0	0	0	315,038	317,482
1954	5,909	23,736	0	0	0	0	0	402,234	409,743
1955	1,999	8,028	0	0	0	0	0	162,641	172,211
1956	2,136	8,582	0	0	0	0	0	250,796	347,371
1957	7,907	31,765	0	0	0	0	0	714,840	1,472,540
1958	13,517	54,308	0	0	0	0	0	1,365,992	2,322,412
1959	37,997	116,067	28,105	46,896	7,381	7,380	89,762	2,156,136	3,029,494
1960	56,929	170,049	33,953	61,680	8,179	11,057	114,869	2,727,796	4,461,874
1961	112,928	204,145	11,715	17,502	1,535	3,766	34,518	4,736,630	8,654,075
1962	369,791	659,899	6,740	7,779	625	1,581	16,725	5,964,309	9,013,079
1963	463,801	1,015,626	16,219	14,589	1,038	2,617	34,463	18,670,062	24,312,691
1964	1,435,535	2,230,850	309,921	26,978	1,940	4,878	343,717	32,126,324	42,279,189
1965	3,403,533	4,945,244	734,015	38,023	2,720	6,855	781,613	58,898,524	63,559,246
1966	9,677,262	15,199,098	2,240,824	44,231	2,924	7,408	2,295,387	127,384,127	131,756,707
1967	18,517,888	54,544,083	6,275,107	49,158	3,349	8,464	6,336,078	191,094,417	197,617,374
1968	17,038,665	59,567,117	2,656,284	37,868	2,400	6,107	2,702,659	195,528,308	200,810,036
1969	17,810,194	35,366,152	396,817	36,071	2,083	5,305	440,276	185,489,629	187,441,411
1970	23,047,582	51,054,981	232,917	32,335	1,877	4,772	271,901	212,106,586	212,494,270
1971	16,704,416	40,414,865	139,604	43,475	2,678	6,755	192,512	160,467,641	160,672,143
1972	7,531,050	4,954,791	103,314	7,378	0	1,048	111,740	76,744,566	77,129,933
1973	1,744,618	15,985,775	124,000	6,347	0	2,116	132,463	41,335,954	41,527,265
1974	1,908,166	4,953,748	124,000	2,146	0	0	126,146	15,297,705	15,455,380
1975	154,339	439,010	59,000	758,599	89,937	296,241	1,203,777	10,019,746	10,753,945
1976	46,682	187,002	2,000	1,594,896	164,435	550,884	2,312,215	5,906,044	6,564,906
1977	82,521	101,921	795,000	4,476,929	386,511	779,085	6,437,525	8,937,009	10,164,434
1978	103,960	115,600	53,000	20,493,433	2,224,909	6,183,286	28,954,628	32,159,086	35,050,336
1979	1,295,920	1,307,560	95,000	18,966,342	799,153	5,015,014	24,875,509	29,333,142	35,944,075
1980	1,688,770	1,695,560	406,000	1,663,000	257,000	777,000	3,103,000	9,358,936	11,012,936
1981	158,110	160,050	343,000	254,000	18,000	46,000	661,000	9,302,494	9,353,494
1982	970	2,910	47,000	141,000	7,000	19,000	214,000	10,057,806	10,072,806
1983	970	2,910	0	62,000	0	0	62,000	7,244,427	7,258,427
1984	970	2,910	0	0	0	0	0	13,089,001	13,091,001
1985	970	2,910	383,000	0	0	0	383,000	9,339,530	9,341,530
TOTAL	123,431 923	295,551,020	15,616,535	48,882,655	3,985,674	13,746,619	82,231,483	1,478,787,928	1.543,964,767

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

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

(in dollars)

Calendar Year	UPPER FEATHER DIVISION	NORTH BAY AQUEDUCT				SOUTH BAY AQUEDUCT			
		Reach 1	Reach 2	Reach 3	Total	Reach 1	Reach 2	Reach 4	Reach 5
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1962	0	0	0	0	0	37,320	5,483	0	0
1963	0	0	0	0	0	146,652	20,461	0	0
1964	0	0	0	0	0	148,699	15,373	19,943	0
1965	0	0	0	0	0	257,897	45,348	47,220	0
1966	0	0	0	0	0	264,524	22,747	64,546	0
1967	0	0	0	0	0	421,554	29,900	110,103	0
1968	0	0	0	274	274	355,782	36,283	63,771	481
1969	0	0	0	93,907	93,907	443,830	41,817	72,212	485
1970	0	0	0	96,887	96,887	358,402	40,451	70,519	109,526
1971	72	0	0	39,000	39,000	327,258	28,799	52,382	47,905
1972	218	0	0	51,645	51,645	394,758	40,715	67,998	142,930
1973	232	0	0	53,207	53,207	408,258	41,820	69,984	152,620
1974	253	0	0	53,224	53,224	398,549	41,252	68,488	149,248
1975	250	0	0	53,204	53,204	398,085	41,336	69,043	154,218
1976	246	0	0	55,224	55,224	397,421	41,069	68,576	148,356
1977	243	0	0	61,420	61,420	397,935	41,253	68,650	147,949
1978	236	0	0	70,471	70,471	395,665	41,023	68,301	147,087
1979	239	0	0	68,943	68,943	397,035	41,120	68,487	147,389
1980	243	159,574	33,669	79,276	272,519	395,093	40,855	68,376	146,874
1981	248	146,621	31,588	74,878	253,087	396,087	40,987	68,631	147,378
1982	249	146,598	31,467	74,874	252,939	396,380	41,028	68,707	147,527
1983	248	146,590	31,518	74,808	252,916	397,222	41,167	69,237	148,291
1984	234	145,331	31,247	74,286	250,864	394,921	40,850	68,610	147,072
1985	238	145,593	31,302	74,405	251,300	394,451	40,930	68,774	147,382
1986	239	145,632	31,304	74,445	251,381	394,583	40,893	68,617	147,101
1987	240	145,833	31,369	74,487	251,689	394,744	40,884	68,553	147,028
1988	230	144,903	31,159	74,068	250,130	392,934	40,688	68,247	146,352
1989	230	144,990	31,194	74,068	250,252	392,918	40,668	68,178	146,247
1990	230	145,218	31,286	74,068	250,572	393,863	40,594	67,927	145,869
1991	230	145,163	31,264	74,068	250,495	392,888	40,627	68,041	146,039
1992	240	146,052	31,457	74,487	251,996	394,713	40,843	68,413	146,818
1993	245	146,399	31,530	74,655	252,584	395,391	40,864	68,345	146,798
1994	245	146,388	31,526	74,655	252,569	395,448	40,939	68,601	147,184
1995	245	146,377	31,522	74,655	252,554	395,459	40,954	68,650	147,258
1996	242	145,680	31,376	74,312	251,368	393,960	40,772	68,316	146,584
1997	242	145,672	31,373	74,312	251,357	393,959	40,771	68,314	146,579
1998	246	145,333	31,293	74,164	250,790	393,290	40,651	68,039	146,085
1999	246	145,341	31,297	74,164	250,802	393,307	40,673	68,115	146,200
2000	246	145,334	31,293	74,164	250,791	393,314	40,684	68,151	146,255
2001	246	145,334	31,293	74,164	250,791	393,308	40,675	68,120	146,208
2002	246	145,318	31,287	74,164	250,769	393,294	40,656	68,056	146,110
2003	246	145,318	31,287	74,164	250,769	393,297	40,661	68,073	146,136
2004	246	145,334	31,293	74,164	250,791	393,310	40,677	68,126	146,218
2005	246	145,318	31,287	74,164	250,769	393,324	40,696	68,193	146,319
2006	246	145,318	31,287	74,164	250,769	393,312	40,681	68,139	146,237
2007	246	145,318	31,287	74,164	250,769	393,322	40,694	68,184	146,306
2008	246	145,318	31,287	74,164	250,769	393,326	40,699	68,202	146,333
2009	246	145,318	31,287	74,164	250,769	393,329	40,702	68,214	146,349
2010	246	145,318	31,287	74,164	250,769	393,299	40,664	68,082	146,152
2011	246	145,318	31,287	74,164	250,769	393,315	40,684	68,150	146,255
2012	246	145,302	31,281	74,164	250,747	393,293	40,654	68,051	146,105
2013	246	145,318	31,287	74,164	250,769	393,300	40,664	68,085	146,156
2014	246	145,318	31,287	74,164	250,769	393,330	40,705	68,221	146,360
2015	246	145,318	31,287	74,164	250,769	393,310	40,677	68,128	146,220
2016	246	145,318	31,287	74,164	250,769	393,294	40,656	68,056	146,111
2017	246	145,302	31,281	74,164	250,747	393,278	40,634	67,983	146,003
2018	246	145,318	31,287	74,164	250,769	393,306	40,671	68,110	146,194
2019	246	145,318	31,287	74,164	250,769	393,290	40,650	68,037	146,082
2020(a	246	145,302	31,281	74,164	250,747	393,282	40,641	68,004	146,033

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

REIMBURSED THRU MINIMUM OMP&R COMPONENT OF TRANSPORTATION CHARGE

(in dollars)

Calendar Year	SOUTH BAY AQUEDUCT (continued)					CALIFORNIA AQUEDUCT NORTH SAN JOAQUIN DIVISION			
	Reach 6	Reach 7	Reach 8	Reach 9	Total	Reach 1	Reach 2A	Reach 2B	Subtotal
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1962	0	0	0	0	42,803	0	0	0	0
1963	0	0	0	0	167,113	0	0	0	0
1964	0	0	0	0	184,015	0	0	0	0
1965	2,182	7,464	5,434	13,340	378,885	0	0	0	0
1966	4,042	12,508	11,389	26,736	406,492	0	0	0	0
1967	2,051	10,911	15,525	34,162	624,206	0	129-	20-	149-
1968	1,481	10,593	14,931	34,486	517,808	1,037,167	295,603	124,380	1,457,150
1969	1,743	7,796	11,908	33,892	613,683	981,491	348,186	200,771	1,530,448
1970	1,689	6,234	9,172	26,786	622,779	994,806	326,882	156,393	1,478,081
1971	1,159	5,384	10,881	28,006	501,774	1,108,759	273,963	119,559	1,502,281
1972	3,169	7,018	8,045	30,879	695,512	1,212,491	319,623	130,264	1,662,378
1973	3,248	7,202	8,109	30,981	722,222	1,273,821	341,259	138,952	1,754,032
1974	3,184	7,021	7,761	30,313	705,816	1,298,309	340,214	139,138	1,777,661
1975	3,182	7,017	7,759	29,825	710,465	1,306,611	355,160	143,803	1,805,574
1976	3,170	7,059	7,800	29,779	703,230	1,313,769	345,778	140,644	1,800,191
1977	3,164	7,043	7,848	29,814	703,656	1,305,522	345,012	140,288	1,790,822
1978	3,152	6,955	7,853	29,574	699,610	1,299,299	345,646	140,365	1,785,310
1979	3,157	6,962	7,798	29,549	701,497	1,300,185	347,170	140,889	1,788,244
1980	3,157	6,960	7,697	29,444	698,456	1,314,614	342,152	139,307	1,796,073
1981	3,165	6,980	7,717	29,528	700,473	1,325,750	349,117	141,623	1,816,490
1982	3,167	6,986	7,724	29,553	701,072	1,321,512	350,499	142,091	1,814,102
1983	3,165	6,980	7,717	29,529	703,308	1,323,267	351,525	142,387	1,817,179
1984	3,144	6,934	7,670	29,335	698,536	1,308,582	348,592	141,223	1,798,397
1985	3,148	6,945	7,681	29,380	698,691	1,318,916	352,539	142,533	1,813,988
1986	3,150	6,948	7,685	29,331	698,308	1,315,081	350,425	141,852	1,807,358
1987	3,153	6,952	7,688	29,347	698,349	1,315,783	350,655	141,941	1,808,379
1988	3,136	6,915	7,649	29,199	695,120	1,308,094	349,907	141,521	1,799,522
1989	3,136	6,915	7,649	29,199	694,910	1,307,508	351,966	142,176	1,801,650
1990	3,136	6,915	7,649	29,199	695,152	1,308,517	341,748	138,927	1,789,192
1991	3,136	6,915	7,649	29,199	694,494	1,308,084	349,486	141,387	1,798,957
1992	3,153	6,952	7,688	29,347	697,927	1,315,842	352,844	142,638	1,811,324
1993	3,159	6,967	7,704	29,405	698,633	1,318,846	350,956	142,110	1,811,912
1994	3,159	6,967	7,704	29,405	699,407	1,318,902	353,050	142,776	1,814,728
1995	3,159	6,967	7,704	29,405	699,556	1,318,321	355,274	143,483	1,817,078
1996	3,145	6,938	7,672	29,283	696,670	1,311,894	349,429	141,474	1,802,797
1997	3,145	6,938	7,672	29,283	696,661	1,311,888	349,187	141,397	1,802,472
1998	3,140	6,924	7,659	29,232	695,020	1,309,157	347,556	140,815	1,797,528
1999	3,140	6,924	7,659	29,232	695,250	1,309,179	348,338	141,065	1,798,582
2000	3,140	6,924	7,659	29,232	695,359	1,309,204	349,350	141,386	1,799,940
2001	3,140	6,924	7,659	29,232	695,266	1,309,167	347,935	140,937	1,798,039
2002	3,140	6,924	7,659	29,232	695,071	1,309,202	349,208	141,341	1,799,751
2003	3,140	6,924	7,659	29,232	695,122	1,309,190	348,771	141,202	1,799,163
2004	3,140	6,924	7,659	29,232	695,286	1,309,179	348,333	141,064	1,798,576
2005	3,140	6,924	7,659	29,232	695,487	1,309,264	351,524	142,079	1,802,867
2006	3,140	6,924	7,659	29,232	695,324	1,309,250	351,014	141,915	1,802,179
2007	3,140	6,924	7,659	29,232	695,461	1,309,259	351,342	142,020	1,802,621
2008	3,140	6,924	7,659	29,232	695,515	1,309,269	351,717	142,138	1,803,124
2009	3,140	6,924	7,659	29,232	695,549	1,309,284	352,301	142,325	1,803,910
2010	3,140	6,924	7,659	29,232	695,152	1,309,206	349,398	141,402	1,800,006
2011	3,140	6,924	7,659	29,232	695,359	1,309,263	351,514	142,076	1,802,853
2012	3,140	6,924	7,659	29,232	695,058	1,309,234	350,409	141,723	1,801,366
2013	3,140	6,924	7,659	29,232	695,160	1,309,206	349,379	141,397	1,799,982
2014	3,140	6,924	7,659	29,232	695,571	1,309,296	352,697	142,452	1,804,445
2015	3,140	6,924	7,659	29,232	695,290	1,309,241	350,710	141,818	1,801,769
2016	3,140	6,924	7,659	29,232	695,072	1,309,198	349,119	141,313	1,799,630
2017	3,140	6,924	7,659	29,232	694,853	1,309,196	349,015	141,280	1,799,491
2018	3,140	6,924	7,659	29,232	695,236	1,309,236	350,498	141,751	1,801,485
2019	3,140	6,924	7,659	29,232	695,014	1,309,189	348,726	141,189	1,799,104
2020 (a	3,140	6,924	7,659	29,232	694,915	1,309,215	349,697	141,496	1,800,408

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

(in dollars)

Calendar Year	CALIFORNIA AQUEDUCT (continued)								
	SAN LUIS DIVISION						SOUTH SAN JOAQUIN DIVISION		
	Reach 3	Reach 4	Reach 5	Reach 6	Reach 7	Subtotal	Reach 8C	Reach 8D	Reach 9
	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
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	97,313	241,370	93,852	36,825	67,274	536,634	0	0	0
1969	105,013	469,865	214,430	63,875	272,696	1,125,879	10,827	139,619	113,307
1970	99,541	474,527	246,363	77,043	203,614	1,101,088	12,163	160,600	158,671
1971	104,847	520,599	188,183	72,463	167,216	1,053,308	24,844	184,831	131,151
1972	84,211	574,634	225,837	49,142	160,967	1,094,791	29,370	202,860	175,064
1973	88,985	590,721	234,038	52,081	166,269	1,132,094	26,447	217,431	191,185
1974	89,241	601,404	236,669	52,708	169,263	1,149,285	27,110	219,219	173,394
1975	93,638	609,476	244,398	55,012	172,899	1,175,423	27,206	224,443	179,171
1976	90,786	603,164	239,277	53,521	170,216	1,156,964	27,044	219,673	175,010
1977	89,712	596,142	236,275	52,692	167,936	1,142,757	26,893	218,759	174,294
1978	90,083	594,654	236,562	52,762	167,928	1,141,989	26,696	218,378	174,151
1979	90,551	597,120	237,764	53,129	168,570	1,147,134	26,742	219,423	175,092
1980	88,918	596,851	235,217	52,365	167,269	1,140,620	26,502	215,873	171,866
1981	90,898	599,899	238,565	53,390	168,986	1,151,738	26,621	218,911	174,622
1982	91,305	600,932	239,343	53,628	169,408	1,154,616	26,653	219,586	175,227
1983	91,531	610,058	248,612	56,928	173,774	1,180,903	26,638	220,085	175,729
1984	90,419	604,592	247,941	56,893	172,806	1,172,651	26,439	218,402	174,390
1985	91,536	604,324	247,489	56,662	172,591	1,172,602	26,503	220,073	175,911
1986	91,020	598,814	238,336	53,387	168,262	1,149,819	26,448	219,459	175,311
1987	91,108	599,346	238,643	53,476	168,454	1,151,027	26,465	219,687	175,508
1988	90,639	594,255	237,281	53,116	167,231	1,142,522	26,324	219,178	175,227
1989	91,179	593,762	237,937	53,326	167,496	1,143,700	26,335	219,872	175,880
1990	88,492	595,452	234,887	52,351	166,268	1,137,450	26,288	216,649	172,843
1991	90,528	594,417	237,525	53,194	167,329	1,142,993	26,328	219,436	175,470
1992	91,684	600,259	240,017	53,914	169,007	1,154,881	26,485	221,138	176,874
1993	91,297	600,466	239,773	53,804	169,179	1,154,519	26,530	220,513	176,205
1994	91,848	600,956	240,510	54,039	169,476	1,156,829	26,543	221,290	176,938
1995	92,433	601,468	241,280	54,286	169,786	1,159,253	26,554	222,104	177,706
1996	90,727	597,125	238,399	53,425	168,122	1,147,798	26,410	219,668	175,573
1997	90,664	597,148	238,433	53,435	168,134	1,147,814	26,410	219,703	175,606
1998	90,287	596,042	237,564	53,169	167,674	1,144,736	26,349	218,724	174,752
1999	90,492	596,285	237,929	53,286	167,821	1,145,813	26,355	219,109	175,116
2000	90,760	596,508	238,267	53,394	167,957	1,146,886	26,359	219,465	175,452
2001	90,386	596,187	237,783	53,239	167,762	1,145,357	26,353	218,953	174,969
2002	90,722	596,476	238,218	53,378	167,937	1,146,731	26,359	219,414	175,404
2003	90,605	596,293	237,942	53,290	167,826	1,145,956	26,354	219,122	175,129
2004	90,490	596,355	238,034	53,318	167,863	1,146,060	26,356	219,220	175,220
2005	91,330	597,047	239,078	53,653	168,283	1,149,391	26,371	220,321	176,259
2006	91,196	596,923	238,890	53,593	168,208	1,148,810	26,368	220,123	176,074
2007	91,282	597,035	239,060	53,646	168,276	1,149,299	26,371	220,302	176,242
2008	91,381	597,103	239,163	53,680	168,318	1,149,645	26,373	220,412	176,344
2009	91,534	597,225	239,347	53,739	168,392	1,150,237	26,376	220,606	176,528
2010	90,771	596,559	238,341	53,417	167,987	1,147,075	26,361	219,544	175,527
2011	91,328	597,058	239,096	53,659	168,291	1,149,432	26,371	220,341	176,279
2012	91,037	596,722	238,588	53,496	168,087	1,147,930	26,365	219,805	175,772
2013	90,765	596,611	238,421	53,443	168,019	1,147,259	26,362	219,629	175,605
2014	91,640	597,312	239,480	53,781	168,445	1,150,658	26,378	220,746	176,659
2015	91,117	596,868	238,810	53,567	168,175	1,148,537	26,369	220,038	175,992
2016	90,697	596,495	238,248	53,387	167,948	1,146,775	26,359	219,445	175,433
2017	90,672	596,376	238,069	53,331	167,878	1,146,326	26,356	219,257	175,256
2018	91,060	596,812	238,724	53,539	168,140	1,148,275	26,367	219,949	175,907
2019	90,595	596,432	238,151	53,357	167,911	1,146,446	26,358	219,344	175,338
2020 (a	90,850	596,594	238,397	53,435	168,009	1,147,285	26,362	219,602	175,582

REIMBURSED THRU MINIMUM OMP&R COMPONENT OF TRANSPORTATION CHARGE

(in dollars)

Calendar Year	CALIFORNIA AQUEDUCT (continued)								
	SOUTH SAN JOAQUIN DIVISION (continued)								
	Reach 10A	Reach 11B	Reach 12D	Reach 12E	Reach 13B	Reach 14A	Reach 14B	Reach 14C	Reach 15A
	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)
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	118,441	74,362	0	0	0	0	0	0	0
1970	158,200	102,104	140,874	138,785	148,850	658-	704-	287-	63-
1971	145,929	87,565	113,303	97,733	166,068	649,064	160,109	113,854	491,302
1972	161,439	104,284	133,549	105,224	189,451	692,254	202,122	149,879	568,840
1973	175,302	113,707	143,096	115,085	203,914	755,186	217,532	159,976	623,422
1974	162,740	108,011	132,138	106,496	190,502	758,802	214,830	157,025	617,525
1975	168,900	111,366	138,138	109,303	195,744	765,283	218,807	160,667	619,065
1976	164,577	108,607	133,873	106,950	191,423	747,823	202,609	145,287	608,965
1977	163,982	108,255	133,383	106,588	190,663	744,731	201,487	144,477	606,531
1978	163,915	108,219	133,497	106,500	190,557	742,013	201,087	144,172	604,236
1979	164,892	108,877	134,542	106,994	191,463	743,815	201,986	144,966	605,178
1980	161,772	106,899	131,728	105,278	188,376	736,822	199,360	142,833	600,218
1981	164,637	108,548	134,540	106,713	191,013	740,649	201,304	144,535	602,013
1982	165,259	108,911	135,144	107,032	191,599	741,667	201,797	144,962	602,540
1983	165,810	109,203	135,729	107,266	192,037	741,500	201,903	145,102	602,123
1984	164,525	108,366	134,644	106,463	190,591	737,160	200,574	144,168	598,746
1985	166,105	109,275	136,199	107,254	192,042	739,332	201,710	145,169	599,668
1986	165,461	108,925	135,526	106,966	191,505	737,967	201,272	144,726	598,923
1987	165,657	109,043	135,709	107,073	191,705	738,424	201,450	144,871	599,228
1988	165,470	108,842	135,692	106,828	191,276	735,533	200,811	144,525	596,529
1989	166,164	109,228	136,396	107,156	191,879	736,096	201,207	144,901	596,627
1990	162,941	107,434	133,128	105,637	189,072	733,971	199,711	143,483	596,363
1991	165,728	108,986	135,955	106,949	191,500	735,996	201,138	144,834	596,656
1992	167,108	109,853	137,180	107,758	192,968	739,857	202,460	145,827	599,452
1993	166,355	109,471	136,346	107,465	192,415	740,355	202,257	145,529	600,412
1994	167,132	109,904	137,136	107,833	193,094	740,901	202,640	145,892	600,482
1995	167,946	110,358	137,960	108,216	193,803	741,475	203,044	146,275	600,560
1996	165,774	109,068	135,900	107,064	191,693	737,908	201,673	145,191	598,276
1997	165,809	109,086	135,934	107,080	191,724	737,915	201,677	145,196	598,273
1998	164,940	108,570	135,115	106,615	190,874	736,008	200,825	144,477	597,171
1999	165,325	108,786	135,505	106,796	191,211	736,388	201,093	144,731	597,239
2000	165,681	108,983	135,866	106,964	191,521	736,624	201,259	144,888	597,269
2001	165,169	108,699	135,347	106,723	191,074	736,239	200,989	144,633	597,264
2002	165,630	108,956	135,815	106,941	191,477	736,655	201,280	144,910	597,291
2003	165,338	108,793	135,519	106,803	191,223	736,181	200,947	144,593	597,223
2004	165,436	108,847	135,618	106,849	191,307	736,602	201,244	144,872	597,297
2005	166,537	109,460	136,735	107,368	192,267	737,292	201,730	145,335	597,423
2006	166,339	109,351	136,535	107,275	192,096	737,358	201,776	145,378	597,425
2007	166,518	109,450	136,716	107,359	192,251	737,505	201,880	145,476	597,449
2008	166,628	109,510	136,826	107,410	192,345	737,509	201,882	145,477	597,435
2009	166,822	109,619	137,024	107,501	192,514	737,621	201,963	145,553	597,446
2010	165,760	109,027	135,946	107,001	191,590	736,809	201,389	145,013	597,375
2011	166,557	109,471	136,756	107,377	192,285	737,345	201,766	145,370	597,440
2012	166,021	109,173	136,211	107,125	191,816	736,775	201,365	144,989	597,328
2013	165,845	109,074	136,033	107,042	191,664	737,060	201,566	145,178	597,398
2014	166,962	109,697	137,165	107,568	192,637	737,551	201,911	145,506	597,450
2015	166,254	109,303	136,448	107,234	192,020	737,269	201,711	145,317	597,440
2016	165,661	108,972	135,847	106,955	191,504	736,791	201,376	144,998	597,385
2017	165,473	108,868	135,655	106,865	191,339	736,496	201,169	144,803	597,314
2018	166,165	109,252	136,356	107,192	191,942	737,096	201,592	145,201	597,414
2019	165,560	108,915	135,743	106,907	191,415	736,645	201,273	144,900	597,348
2020 (a	165,818	109,060	136,005	107,029	191,642	736,689	201,304	144,931	597,328

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

(in dollars)

Calendar Year	CALIFORNIA AQUEDUCT (continued)								
	SOUTH SAN JOAQUIN DIVISION (continued)		TEHACHAPI DIVISION			MOJAVE DIVISION			
	Reach 16A	Subtotal	Reach 17E	Reach 17F	Subtotal	Reach 18A	Reach 19	Reach 19C	Reach 20A
	(37)	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)
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	456,556	0	0	0	0	0	0	0
1970	0	1,018,535	0	0	0	0	0	0	0
1971	0	2,365,753	0	0	0	0	0	0	0
1972	986,816	3,701,152	1,608,873	29,419	1,638,292	79,167	446,648	0	337,577
1973	1,083,622	4,025,905	1,730,889	33,860	1,764,749	90,225	511,379	0	379,199
1974	1,074,208	3,942,000	1,733,570	36,358	1,769,928	97,465	555,218	0	409,362
1975	1,081,906	3,999,999	1,752,266	37,927	1,790,193	99,196	560,107	0	413,989
1976	1,075,649	3,907,490	1,738,768	37,721	1,776,489	97,476	555,230	0	409,206
1977	1,070,574	3,890,617	1,719,639	35,706	1,755,345	97,489	553,376	0	408,864
1978	1,064,890	3,878,311	1,718,091	35,537	1,753,628	96,510	548,623	0	404,876
1979	1,070,218	3,894,188	1,732,923	35,748	1,768,671	98,020	555,932	0	411,645
1980	1,061,899	3,849,426	1,753,963	35,666	1,789,629	97,404	552,979	0	408,891
1981	1,065,958	3,880,064	1,762,005	35,831	1,797,836	98,320	557,638	0	412,912
1982	1,067,616	3,887,993	1,759,796	35,901	1,795,697	98,729	559,683	0	414,735
1983	1,068,257	3,891,382	1,754,705	35,826	1,790,531	98,277	557,434	0	412,720
1984	1,062,453	3,866,921	1,721,609	35,678	1,757,287	98,061	555,682	0	411,962
1985	1,064,176	3,883,417	1,706,501	35,701	1,742,202	98,011	555,620	0	411,695
1986	1,064,663	3,877,152	1,703,819	35,757	1,739,576	98,392	557,137	34,914	413,205
1987	1,064,548	3,879,368	1,703,571	35,792	1,739,363	98,602	558,193	30,602	414,131
1988	1,060,628	3,866,863	1,696,844	35,580	1,732,424	97,676	553,210	30,405	410,151
1989	1,060,603	3,872,344	1,695,915	35,614	1,731,529	97,951	554,526	30,405	411,401
1990	1,060,539	3,848,059	1,699,631	35,648	1,735,279	98,224	555,816	30,405	412,621
1991	1,062,333	3,871,309	1,696,844	35,672	1,732,516	98,417	556,729	30,405	413,485
1992	1,067,147	3,894,107	1,704,500	35,837	1,740,337	98,961	559,901	30,602	415,746
1993	1,067,968	3,891,821	1,706,250	35,880	1,742,130	98,987	560,235	30,680	415,770
1994	1,069,086	3,898,871	1,706,250	35,894	1,742,144	99,076	560,668	30,680	416,181
1995	1,069,473	3,905,474	1,705,321	35,891	1,741,212	99,077	560,669	30,680	416,182
1996	1,065,796	3,879,994	1,699,821	35,775	1,735,596	98,762	558,714	30,519	414,935
1997	1,065,730	3,880,143	1,699,821	35,768	1,735,589	98,725	558,540	30,519	414,770
1998	1,062,600	3,867,020	1,697,465	35,696	1,733,161	98,412	556,852	30,450	413,431
1999	1,063,258	3,870,912	1,697,465	35,722	1,733,187	98,618	557,842	30,450	414,369
2000	1,063,349	3,873,680	1,697,465	35,715	1,733,180	98,581	557,655	30,450	414,192
2001	1,064,097	3,870,509	1,697,465	35,732	1,733,197	98,695	558,206	30,450	414,712
2002	1,063,778	3,873,910	1,697,465	35,743	1,733,208	98,791	558,662	30,450	415,149
2003	1,063,340	3,870,565	1,697,465	35,735	1,733,200	98,735	558,390	30,450	414,888
2004	1,064,768	3,873,636	1,697,465	35,775	1,733,240	99,046	559,871	30,450	416,288
2005	1,065,195	3,882,293	1,697,465	35,805	1,733,270	99,303	561,090	30,450	417,446
2006	1,065,099	3,881,197	1,697,465	35,797	1,733,262	99,228	560,739	30,450	417,112
2007	1,065,994	3,883,513	1,697,465	35,815	1,733,280	99,373	561,418	30,450	417,756
2008	1,065,679	3,883,830	1,697,465	35,795	1,733,260	99,207	560,632	30,450	417,010
2009	1,065,660	3,885,233	1,697,465	35,789	1,733,254	99,157	560,399	30,450	416,790
2010	1,065,200	3,876,542	1,697,465	35,829	1,733,294	99,478	561,921	30,450	418,233
2011	1,065,425	3,882,783	1,697,465	35,816	1,733,281	99,401	561,548	30,450	417,880
2012	1,064,268	3,877,013	1,697,465	35,771	1,733,236	98,997	559,636	30,450	416,068
2013	1,065,873	3,878,329	1,697,465	35,829	1,733,294	99,473	561,904	30,450	418,217
2014	1,065,885	3,886,115	1,697,465	35,807	1,733,272	99,305	561,103	30,450	417,459
2015	1,065,852	3,881,247	1,697,465	35,810	1,733,275	99,323	561,179	30,450	417,531
2016	1,065,427	3,876,153	1,697,465	35,844	1,733,309	99,600	562,494	30,450	418,776
2017	1,064,574	3,873,425	1,697,465	35,800	1,733,265	99,259	560,879	30,450	417,246
2018	1,065,398	3,879,831	1,697,465	35,827	1,733,292	99,470	561,878	30,450	418,188
2019	1,065,678	3,875,424	1,697,465	35,836	1,733,301	99,531	562,176	30,450	418,474
2020(a	1,065,107	3,876,459	1,697,465	35,798	1,733,263	99,227	560,722	30,450	417,097

REIMBURSED THRU MINIMUM OMP&R COMPONENT OF TRANSPORTATION CHARGE

(in dollars)

Calendar Year	CALIFORNIA AQUEDUCT (continued)								
	MOJAVE DIVISION (continued)							SANTA ANA DIVISION	
	Reach 20B	Reach 21	Reach 22A	Reach 22B	Reach 23	Reach 24	Subtotal	Reach 25	Reach 26A
	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)
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	324,368	189,606	116,905	1,284,922	17,969	217,581	3,014,743	0	0
1973	369,027	215,969	133,438	1,443,229	20,017	316,623	3,479,106	2,745	605,375
1974	399,210	233,402	145,279	1,549,388	22,039	338,866	3,750,229	2,200	667,710
1975	403,334	235,451	145,902	1,562,847	21,683	308,302	3,750,811	1,851	650,935
1976	398,858	232,651	144,336	1,520,652	21,422	370,454	3,750,285	1,767	641,377
1977	398,582	232,513	144,152	1,503,921	21,309	383,989	3,744,195	1,694	635,802
1978	394,875	230,410	143,030	1,487,921	21,219	261,031	3,588,495	1,561	622,766
1979	400,937	233,830	144,438	1,513,439	21,249	206,636	3,586,126	1,566	623,331
1980	398,468	232,441	143,878	1,507,089	21,242	630,845	3,993,237	1,568	622,375
1981	402,155	234,542	144,881	1,517,996	21,316	320,717	3,710,477	1,576	623,788
1982	403,808	235,480	145,304	1,524,250	21,337	306,771	3,710,097	1,578	624,207
1983	401,983	234,446	144,845	1,524,345	21,316	472,469	3,867,835	1,575	623,790
1984	401,055	233,855	144,189	1,516,274	21,145	351,303	3,733,526	1,557	619,598
1985	400,875	233,770	144,253	1,517,485	21,185	371,554	3,754,448	1,561	620,344
1986	402,117	234,354	144,620	1,518,886	20,921	371,710	3,796,256	1,504	621,522
1987	402,964	234,834	144,844	1,523,182	20,935	325,295	3,753,582	1,504	621,788
1988	399,202	232,665	143,653	1,509,139	20,798	395,465	3,792,364	1,497	619,159
1989	400,310	233,288	143,898	1,510,897	20,798	374,841	3,778,315	1,497	619,159
1990	401,395	233,900	144,133	1,518,642	20,798	374,273	3,790,207	1,497	618,230
1991	402,164	234,330	144,300	1,519,145	20,798	164,917	3,584,690	1,497	619,159
1992	404,399	235,640	145,157	1,526,113	20,935	343,686	3,781,140	1,504	621,788
1993	404,510	235,725	145,325	1,526,456	20,988	359,221	3,797,897	1,506	622,835
1994	404,879	235,930	145,407	1,527,715	20,988	498,760	3,940,284	1,506	622,835
1995	404,878	235,932	145,406	1,526,782	20,988	381,667	3,822,261	1,506	622,835
1996	403,585	235,159	144,826	1,522,714	20,876	254,725	3,684,815	1,501	620,686
1997	403,437	235,077	144,793	1,522,234	20,876	550,751	3,979,722	1,501	620,686
1998	402,167	234,346	144,387	1,517,964	20,828	73,908	3,344,929	1,499	619,766
1999	403,000	234,814	144,570	1,519,922	20,828	609,353	4,033,766	1,499	619,766
2000	402,841	234,726	144,533	1,519,029	20,828	362,907	3,785,742	1,499	619,766
2001	403,307	234,987	144,637	1,521,359	20,828	537,207	3,964,388	1,499	619,766
2002	403,692	235,201	144,718	1,521,459	20,828	364,751	3,793,701	1,499	619,766
2003	403,461	235,074	144,669	1,520,975	20,828	279,879	3,707,349	1,499	619,766
2004	404,708	235,776	144,943	1,526,052	20,828	222,756	3,660,718	1,499	619,766
2005	405,735	236,350	145,165	1,528,260	20,828	529,123	3,973,750	1,499	619,766
2006	405,439	236,184	145,101	1,526,811	20,828	464,656	3,906,548	1,499	619,766
2007	406,011	236,508	145,228	1,529,354	20,828	373,775	3,820,701	1,499	619,766
2008	405,348	236,136	145,084	1,526,877	20,828	183,962	3,625,534	1,499	619,766
2009	405,150	236,024	145,039	1,526,042	20,828	353,515	3,793,394	1,499	619,766
2010	406,435	236,747	145,321	1,530,387	20,828	589,257	4,039,057	1,499	619,766
2011	406,120	236,569	145,251	1,528,961	20,828	385,375	3,832,383	1,499	619,766
2012	404,510	235,663	144,900	1,523,675	20,828	192,055	3,626,782	1,499	619,766
2013	406,419	236,738	145,318	1,530,390	20,828	238,875	3,688,612	1,499	619,766
2014	405,748	236,359	145,168	1,527,570	20,828	574,019	4,018,009	1,499	619,766
2015	405,811	236,396	145,184	1,528,438	20,828	157,161	3,602,301	1,499	619,766
2016	406,920	237,019	145,424	1,531,734	20,828	585,054	4,038,299	1,499	619,766
2017	405,558	236,250	145,128	1,526,732	20,828	340,496	3,782,826	1,499	619,766
2018	406,397	236,725	145,311	1,530,285	20,828	265,884	3,715,416	1,499	619,766
2019	406,651	236,867	145,367	1,530,877	20,828	274,273	3,725,494	1,499	619,766
2020 (a	405,426	236,179	145,101	1,526,164	20,828	563,329	4,004,523	1,499	619,766

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

(in dollars)

Calendar Year	CALIFORNIA AQUEDUCT (continued)								
	SANTA ANA DIVISION (continued)				WEST BRANCH				
	Reach 28G	Reach 28H	Reach 28J	Subtotal	Reach 29A	Reach 29F	Reach 29G	Reach 29H	Reach 29J
	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
1962	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0
1968	0	0	0	0	0	0	0	0	0
1969	0	0	0	0	0	0	0	0	0
1970	0	0	0	0	0	0	0	0	0
1971	0	0	0	0	0	0	0	0	0
1972	0	0	0	0	551,208	256,874	110,793	118,871	55,821
1973	25,443	0	0	633,563	612,445	291,627	90,513	167,965	55,028
1974	25,448	36,271	99,175	830,804	665,297	312,383	94,334	159,311	50,533
1975	24,144	34,067	113,238	824,235	667,049	317,796	95,506	155,193	31,801
1976	24,110	34,017	257,962	959,233	664,252	315,060	94,212	148,315	31,124
1977	23,743	33,377	123,865-	570,751	662,458	314,238	94,191	150,249	30,880
1978	22,930	32,383	362,253	1,041,893	659,740	311,631	93,044	144,876	28,868
1979	22,955	32,416	43,454	723,722	661,315	316,351	95,419	159,291	29,853
1980	22,949	32,316	190,389	869,597	664,101	315,345	94,613	152,671	28,824
1981	23,007	32,397	57,718-	623,050	666,276	318,326	95,966	159,920	27,678
1982	23,024	32,421	325,276	1,006,506	666,940	319,324	96,430	162,445	30,492
1983	23,008	32,397	315,145	995,915	667,054	317,567	95,571	157,433	32,323
1984	22,872	32,212	213,016	889,255	662,426	317,285	95,878	162,267	33,046
1985	22,904	32,252	293,419	970,480	663,175	316,876	95,560	159,613	34,952
1986	22,915	32,267	68,961	747,169	663,629	318,031	96,130	162,949	35,837
1987	22,926	32,282	177,018	855,518	664,007	318,435	96,301	163,803	40,499
1988	22,817	32,133	186,704	862,310	660,640	316,241	95,526	161,264	43,127
1989	22,817	32,133	226,791	902,397	660,833	317,196	96,022	164,381	43,127
1990	22,817	32,133	57,023	731,700	661,061	318,335	96,612	168,102	44,985
1991	22,817	32,133	54,602	730,208	661,168	318,876	96,893	169,869	46,843
1992	22,926	32,282	391,604	1,070,104	664,316	319,981	97,104	168,847	47,931
1993	22,969	32,341	214,605	894,256	665,507	320,115	97,025	167,431	48,922
1994	22,969	32,341	195,919	875,570	665,555	320,344	97,147	168,186	47,064
1995	22,969	32,341	43,928	723,579	665,613	320,642	97,300	169,160	47,993
1996	22,880	32,220	176,131	853,418	663,080	319,937	97,235	170,652	50,652
1997	22,880	32,220	347,391	1,024,678	662,984	319,463	96,987	169,098	50,652
1998	22,841	32,167	52,604	728,877	661,820	318,766	96,752	168,434	50,596
1999	22,841	32,167	207,492	883,765	661,997	319,647	97,213	171,323	50,596
2000	22,841	32,167	392,403	1,068,676	662,032	319,821	97,301	171,890	50,596
2001	22,841	32,167	80,560	756,833	662,062	319,977	97,382	172,396	50,596
2002	22,841	32,167	226,173	902,446	662,162	320,479	97,645	174,039	50,596
2003	22,841	32,167	266,219	942,492	662,124	320,282	97,542	173,399	50,596
2004	22,841	32,167	186,242	862,515	662,286	321,106	97,969	176,085	50,596
2005	22,841	32,167	51,483	727,756	662,412	321,726	98,292	178,109	50,596
2006	22,841	32,167	330,226	1,006,499	662,392	321,621	98,238	177,771	50,596
2007	22,841	32,167	49,880	726,153	662,500	322,168	98,523	179,562	50,596
2008	22,841	32,167	352,535	1,028,808	662,361	321,471	98,159	177,280	50,596
2009	22,841	32,167	235,181	911,454	662,377	321,559	98,207	177,571	50,596
2010	22,841	32,167	60,942	737,215	662,576	322,550	98,722	180,811	50,596
2011	22,841	32,167	267,147	943,420	662,520	322,271	98,576	179,894	50,596
2012	22,841	32,167	263,225	939,498	662,246	320,895	97,861	175,396	50,596
2013	22,841	32,167	217,298	893,571	662,561	322,477	98,682	180,571	50,596
2014	22,841	32,167	262,370	938,643	662,445	321,895	98,382	178,672	50,596
2015	22,841	32,167	212,183	888,456	662,498	322,157	98,517	179,521	50,596
2016	22,841	32,167	14,339-	661,934	662,647	322,902	98,904	181,957	50,596
2017	22,841	32,167	289,106	965,379	662,398	321,651	98,255	177,873	50,596
2018	22,841	32,167	146,160	822,433	662,574	322,534	98,713	180,754	50,596
2019	22,841	32,167	221,766	898,039	662,617	322,749	98,826	181,460	50,596
2020(a	22,841	32,167	90,108	766,381	662,413	321,723	98,293	178,100	50,596

REIMBURSED THRU MINIMUM OMP&R COMPONENT OF TRANSPORTATION CHARGE

(in dollars)

Calendar Year	CALIFORNIA AQUEDUCT (continued)								GRAND TOTAL
	WEST BRANCH (continued)		COASTAL BRANCH					TOTAL	
	Reach 30	Subtotal	Reach 31A	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	42,803
1963	0	0	0	0	0	0	0	0	167,113
1964	0	0	0	0	0	0	0	0	184,015
1965	0	0	0	0	0	0	0	0	378,885
1966	0	0	0	0	0	0	0	0	406,492
1967	0	0	0	0	0	0	0	149-	624,057
1968	0	0	0	0	0	0	0	1,993,784	2,511,866
1969	0	0	490,875	0	0	0	490,875	3,603,758	4,311,348
1970	0	0	563,996	0	0	0	563,996	4,161,700	4,881,366
1971	0	0	642,188	0	0	0	642,188	5,563,530	6,104,376
1972	242,202	1,335,769	571,514	0	0	0	571,514	13,018,639	13,766,014
1973	396,954	1,614,532	621,517	0	0	0	621,517	15,025,498	15,801,159
1974	442,526	1,724,384	623,186	0	0	0	623,186	15,567,477	16,326,770
1975	431,163	1,698,508	623,430	0	0	0	623,430	15,668,173	16,432,092
1976	368,389	1,621,352	620,087	0	0	0	620,087	15,592,091	16,350,791
1977	479,409	1,731,425	618,497	0	0	0	618,497	15,244,409	16,009,728
1978	370,567	1,608,726	615,857	0	0	0	615,857	15,414,209	16,184,526
1979	516,152	1,778,381	622,081	0	0	0	622,081	15,308,547	16,079,226
1980	407,637	1,663,191	577,177	428,665	22,760	63,793	1,092,395	16,194,168	17,165,386
1981	407,483	1,675,649	574,153	390,175	18,000	54,606	1,036,934	15,692,238	16,646,046
1982	491,181	1,766,812	570,143	388,199	17,398	53,423	1,029,163	16,164,986	17,119,246
1983	381,281	1,651,229	571,206	389,440	19,303	57,070	1,037,019	16,231,993	17,188,465
1984	363,971	1,634,873	567,366	385,362	18,342	55,012	1,026,082	15,878,992	16,828,626
1985	484,024	1,754,200	568,666	384,926	17,639	53,643	1,024,874	16,116,211	17,066,440
1986	322,768	1,599,344	568,574	384,742	17,380	53,127	1,023,823	15,740,497	16,690,425
1987	393,837	1,676,882	568,754	385,528	17,804	53,985	1,026,071	15,890,190	16,840,468
1988	607,922	1,884,720	566,028	383,088	17,428	53,126	1,019,670	16,100,395	17,045,875
1989	468,195	1,749,754	566,066	383,038	17,391	53,050	1,019,545	15,999,234	16,944,626
1990	127,711	1,416,806	565,254	382,894	17,290	52,847	1,018,285	15,466,978	16,412,932
1991	665,857	1,959,506	565,918	382,278	16,849	51,965	1,017,010	15,837,189	16,782,408
1992	561,995	1,860,174	568,936	384,588	17,132	52,643	1,023,299	16,335,366	17,285,529
1993	449,318	1,748,318	569,689	385,054	16,920	52,263	1,023,926	16,064,779	17,016,241
1994	491,562	1,789,858	569,912	385,651	17,347	53,117	1,026,027	16,244,311	17,196,532
1995	459,516	1,760,224	570,103	385,393	17,162	52,749	1,025,407	15,954,488	16,906,843
1996	570,127	1,871,683	567,412	383,687	17,062	52,454	1,020,615	15,996,716	16,944,996
1997	240,596	1,539,780	567,403	383,509	16,934	52,199	1,020,045	16,130,243	17,078,503
1998	1,184,378	2,480,746	566,125	382,330	16,570	51,437	1,016,462	16,113,459	17,059,515
1999	266,144	1,566,920	566,262	383,374	17,317	52,927	1,019,880	16,052,825	16,999,123
2000	219,571	1,521,211	566,347	383,086	17,111	52,518	1,019,062	15,948,377	16,894,773
2001	517,866	1,820,279	566,195	383,014	17,060	52,414	1,018,683	16,107,285	17,053,588
2002	381,248	1,686,169	566,224	382,520	16,707	51,710	1,017,161	15,953,077	16,899,163
2003	536,730	1,840,673	566,158	382,530	16,714	51,720	1,017,122	16,056,520	17,002,657
2004	619,244	1,927,286	566,221	382,514	16,701	51,699	1,017,135	16,019,166	16,965,489
2005	628,773	1,939,908	566,484	382,370	16,599	51,496	1,016,949	16,226,184	17,172,686
2006	97,648	1,408,266	566,398	382,234	16,502	51,299	1,016,433	15,903,194	16,849,533
2007	529,245	1,842,594	566,478	382,269	16,528	51,351	1,016,626	15,974,787	16,921,263
2008	629,617	1,939,484	566,511	382,289	16,541	51,380	1,016,721	16,180,406	17,126,936
2009	568,902	1,879,212	566,557	382,222	16,494	51,283	1,016,556	16,173,250	17,119,814
2010	467,445	1,782,700	566,227	382,190	16,470	51,238	1,016,125	16,132,014	17,078,181
2011	410,357	1,724,214	566,459	382,156	16,445	51,187	1,016,247	16,084,613	17,030,987
2012	748,279	2,055,273	566,243	381,974	16,316	50,928	1,015,461	16,196,559	17,142,610
2013	466,555	1,781,442	566,252	382,167	16,453	51,204	1,016,076	15,938,565	16,884,740
2014	534,258	1,846,248	566,592	382,275	16,531	51,360	1,016,758	16,394,148	17,340,734
2015	558,563	1,871,852	566,372	382,157	16,448	51,192	1,016,169	15,943,606	16,889,911
2016	544,824	1,861,830	566,187	382,169	16,455	51,207	1,016,018	16,133,948	17,080,035
2017	423,924	1,734,697	566,072	381,914	16,274	50,844	1,015,104	16,050,513	16,996,359
2018	854,216	2,169,387	566,336	382,105	16,410	51,115	1,015,966	16,286,085	17,232,336
2019	462,259	1,778,507	566,155	382,092	16,400	51,098	1,015,745	15,972,060	16,918,089
2020 (a	394,857	1,705,982	566,173	381,908	16,270	50,835	1,015,186	16,049,487	16,995,395

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

(in dollars)

CALENDAR YEAR	NORTH BAY AQUEDUCT			SOUTH BAY AQUEDUCT		CALIFORNIA AQUEDUCT						
	Reach 1 Calhoun and Travis Pumping Plants	Reach 3 Cordelia Pumping Plant	Total	Reach 1 South Bay and Del Valle Pumping Plants (a	Total	Reach 1 Delta Pumping Plant	Reach 4 Dos Amigos Pumping Plant	Reach 14A Buena Vista Pumping Plant	Reach 15A Wheeler Ridge Pumping Plant	Reach 16A Wind Gap Pumping Plant	Reach 17E A. D. Edmonston Pumping Plant	Reach 22B Pear-blossom Pumping Plant
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1961	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	36,964	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	192,522	192,522	0	0	0	0	0	0	0
1967	0	0	0	222,507	222,507	13,843	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	8,695	8,695	258,984	258,984	272,808	148,365	0	0	0	0	0
1970	0	13,773	13,773	397,218	397,218	361,734	228,847	11	0	0	0	0
1971	0	10,757	10,757	382,842	382,842	587,153	244,662	142,560	10,186	0	0	0
1972	0	15,000	15,000	606,151	606,151	759,028	415,059	251,558	121,162	244,769	805,852	205,978
1973	0	14,000	14,000	536,422	536,422	960,986	360,675	381,787	343,609	714,858	2,438,097	531,675
1974	0	14,000	14,000	537,994	537,994	755,991	420,919	405,840	423,219	912,133	3,131,803	686,554
1975	0	14,000	14,000	556,565	556,565	1,895,643	549,515	567,243	538,761	1,165,050	4,001,813	838,717
1976	0	14,000	14,000	553,758	553,758	1,538,315	564,070	670,886	649,698	1,408,247	4,844,541	1,146,134
1977	0	12,000	12,000	554,486	554,486	1,747,261	623,916	713,221	749,007	1,628,284	5,603,509	1,268,798
1978	0	11,000	11,000	506,209	506,209	2,151,186	659,682	799,182	784,001	1,705,637	5,796,939	1,337,303
1979	0	15,000	15,000	538,352	538,352	2,438,444	805,997	939,066	988,280	2,155,707	7,351,079	1,737,142
1980	4,580	32,200	36,780	621,634	621,634	2,139,593	915,527	1,083,840	1,061,627	2,314,051	7,889,934	1,961,955
1981	4,626	31,200	35,826	599,860	599,860	2,964,914	1,002,712	1,157,533	1,142,353	2,493,247	8,494,203	1,986,243
1982	4,665	33,200	37,865	607,985	607,985	3,328,918	1,106,836	1,280,352	1,277,587	2,792,716	9,483,074	2,111,813
1983	9,376	40,200	49,576	714,680	714,680	3,705,812	1,227,359	1,315,121	1,276,960	2,785,414	9,490,770	2,465,490
1984	8,472	40,200	48,672	692,885	692,885	3,844,768	1,279,152	1,434,914	1,421,000	3,101,345	10,598,157	2,247,907
1985	9,467	40,200	49,667	690,372	690,372	4,600,966	1,372,213	1,578,422	1,450,213	3,165,436	10,806,771	2,412,123
1986	9,531	53,200	62,731	689,820	689,820	4,496,224	1,512,902	1,608,975	1,613,775	3,527,155	12,040,363	2,226,288
1987	14,377	54,200	68,577	684,350	684,350	4,820,180	1,667,431	1,755,352	1,781,190	3,894,907	13,309,488	2,411,194
1988	16,418	55,200	71,618	689,524	689,524	5,356,817	1,857,003	1,926,244	1,834,061	4,012,329	13,696,460	2,364,501
1989	23,296	53,200	76,496	676,552	676,552	6,042,064	1,907,969	2,060,827	1,996,565	4,375,125	14,939,654	2,338,772
1990	38,976	60,200	99,176	748,940	748,940	4,223,459	2,357,605	2,283,304	2,210,585	4,847,608	16,574,769	2,549,534
1991	37,053	58,200	95,253	713,605	713,605	5,910,625	2,294,143	2,298,865	2,259,655	4,956,096	16,953,932	2,441,241
1992	37,070	59,200	96,270	729,720	729,720	6,289,933	2,329,360	2,330,751	2,289,365	5,022,964	17,190,713	2,434,830
1993	37,086	73,200	110,286	728,154	728,154	5,766,976	2,318,463	2,327,395	2,291,044	5,026,159	17,201,234	2,416,372
1994	37,101	74,200	111,301	774,172	774,172	6,262,856	2,319,301	2,330,204	2,293,497	5,356,709	17,226,606	2,425,935
1995	37,116	74,200	111,316	760,546	760,546	6,750,462	2,298,652	2,311,686	2,278,245	5,318,796	17,120,749	2,390,200
1996	40,062	78,200	118,262	792,665	792,665	5,894,637	2,400,338	2,530,845	2,513,800	5,518,712	17,742,298	2,453,952
1997	40,073	79,200	119,273	794,612	794,612	5,856,429	2,473,842	2,528,582	2,512,257	5,514,006	17,725,509	2,477,735
1998	39,107	77,200	116,307	767,359	767,359	5,667,078	2,370,023	2,423,334	2,408,140	5,284,171	18,101,576	2,371,452
1999	40,095	79,200	119,295	776,118	776,118	5,896,927	2,439,683	2,499,360	2,485,547	5,458,855	18,721,063	2,420,792
2000	40,106	78,200	118,306	773,199	773,199	6,150,903	2,433,434	2,499,650	2,486,773	5,461,411	18,732,776	2,388,588
2001	40,106	79,200	119,306	781,958	781,958	5,901,347	2,481,484	2,542,381	2,684,779	5,897,124	19,069,610	2,434,016
2002	39,128	76,200	115,328	752,759	752,759	6,219,947	2,477,919	2,592,239	2,606,382	5,725,700	19,657,999	2,363,936
2003	39,128	77,200	116,328	761,519	761,519	6,169,624	2,431,284	2,499,762	2,641,684	5,802,962	19,928,020	2,372,980
2004	40,106	79,200	119,306	779,039	779,039	6,100,559	2,591,361	2,685,176	2,697,066	6,267,951	20,355,853	2,451,054
2005	39,128	77,200	116,328	758,599	758,599	6,860,504	2,530,255	2,627,749	2,793,550	6,136,587	21,100,188	2,353,901
2006	39,128	76,200	115,328	751,785	751,785	6,741,223	2,529,351	2,732,759	2,768,287	6,081,217	20,907,572	2,345,617
2007	39,128	77,200	116,328	758,599	758,599	6,893,570	2,588,065	2,786,057	2,823,912	6,542,668	21,348,518	2,372,040
2008	39,128	77,200	116,328	758,599	758,599	7,019,324	2,583,274	2,769,265	2,805,373	6,500,558	21,203,342	2,348,626
2009	39,128	77,200	116,328	754,706	754,706	7,208,778	2,584,806	2,782,881	2,822,160	6,538,491	21,339,180	2,358,615
2010	39,128	77,200	116,328	756,652	756,652	6,544,940	2,627,833	2,794,185	2,987,427	6,565,525	22,602,324	2,348,506
2011	39,128	76,200	115,328	748,866	748,866	7,087,609	2,632,483	2,782,453	2,975,830	6,541,885	22,522,676	2,346,094
2012	38,150	75,200	113,350	738,159	738,159	6,861,239	2,584,214	2,721,536	2,908,241	6,392,838	21,997,649	2,310,940
2013	39,128	77,200	116,328	757,625	757,625	6,651,384	2,728,006	2,963,323	3,027,783	7,000,899	22,926,618	2,367,575
2014	39,128	77,200	116,328	751,785	751,785	7,497,074	2,649,769	2,802,140	2,997,936	6,925,382	22,690,029	2,332,518
2015	39,128	77,200	116,328	752,759	752,759	7,039,293	2,694,795	2,951,956	3,114,329	6,974,001	22,850,391	2,356,876
2016	39,128	77,200	116,328	753,732	753,732	6,684,111	2,720,879	2,958,842	3,180,616	6,993,430	24,102,729	2,321,759
2017	38,150	75,200	113,350	738,159	738,159	6,704,899	2,651,883	2,908,175	3,126,093	6,873,240	23,685,212	2,312,100
2018	39,128	77,200	116,328	750,813	750,813	7,099,063	2,734,717	2,965,673	3,188,576	7,012,879	24,166,702	2,360,748
2019	39,128	77,200	116,328	753,732	753,732	6,701,729	2,799,686	2,996,128	3,222,882	7,434,377	24,439,211	2,357,463
2020(b	38,150	75,200	113,350	735,240	735,240	6,959,613	2,737,359	2,923,220	3,142,632	7,244,102	23,825,137	2,282,117

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.

(in dollars)

CALENDAR YEAR	CALIFORNIA AQUEDUCT (continued)										GRAND TOTAL
	Reach 24 Silver-wood Lake (c	Reach 26 A Devil Canyon Powerplant	Reach 28J Lake Perris (c	Reach 29A Oso Pumping Plant	Reach 29H Pyramid Lake (c	Reach 29J Castaic Powerplant	Reach 30 Castaic Lake (c	Reach 31A Las Perillas and Badger Hill Pumping Plants	Reach 33A Devil's Den Sawtooth and Polonio PP's and San Luis Obispo Pwp	Total	
	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
1961	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	36,964
1963	0	0	0	0	0	0	0	0	0	0	57,703
1964	0	0	0	0	0	0	0	0	0	0	74,094
1965	0	0	0	0	0	0	0	0	0	0	142,540
1966	0	0	0	0	0	0	0	0	0	0	192,522
1967	0	0	0	0	0	0	0	0	0	13,843	236,350
1968	0	0	0	0	0	0	0	123,311	0	771,110	1,117,038
1969	0	0	0	0	0	0	0	82,631	0	503,804	771,483
1970	0	0	0	0	0	0	0	141,727	0	732,319	1 143,310
1971	0	0	0	0	0	0	0	169,657	0	1,154,218	1,547,817
1972	60,659	-235,500	0	53,414	0	-126,684	138,959	253,810	0	2,948,064	3,569,215
1973	0	-846,008	0	161,848	12,143	-1,097,151	101	142,869	0	4,105,489	4,655,911
1974	13,834	-1,062,592	80,607	178,173	0	-977,668	0	144,803	0	5,113,616	5,665,610
1975	60,506	-1,599,500	66,643	209,080	0	-1,703,828	20,824	149,041	0	6,759,508	7,330,073
1976	0	-2,110,723	0	185,950	0	-1,906,418	69,037	159,117	0	7,218,854	7,786,612
1977	0	-2,446,328	317,857	222,393	0	-2,179,267	0	162,331	0	8,410,982	8,977,468
1978	95,194	-2,939,407	0	222,188	0	-2,386,009	51,548	140,966	0	8,418,410	8,935,619
1979	164,421	-3,466,788	145,068	253,599	0	-2,638,524	0	152,905	0	11,026,396	11,579,748
1980	0	-3,934,454	0	243,197	0	-3,095,098	20,406	203,678	99,482	10,903,738	11,562,152
1981	46,247	-4,029,273	243,396	289,730	0	-3,067,520	30,152	201,177	103,010	13,058,124	13,693,810
1982	66,663	-4,167,541	0	309,834	0	-3,202,296	0	219,013	115,029	14,721,998	15,367,848
1983	0	-3,965,375	0	275,077	0	-3,185,426	79,486	266,076	192,009	15,928,773	16,693,029
1984	15,383	-3,792,074	0	314,472	0	-3,353,700	108,728	262,572	199,546	17,682,170	18,423,727
1985	0	-3,650,328	0	319,515	0	-3,504,401	0	284,420	210,243	19,045,593	19,785,632
1986	0	-3,763,884	129,735	362,925	0	-3,558,621	171,672	287,702	239,031	20,894,242	21,646,793
1987	44,877	-3,663,767	21,611	362,065	0	-3,857,551	98,597	288,999	303,081	23,237,654	23,990,581
1988	0	-3,460,747	3,762	552,857	0	-3,736,530	0	294,181	324,572	25,025,510	25,786,652
1989	0	-3,992,771	0	646,223	0	-4,331,739	29,959	289,553	376,778	26,678,979	27,432,027
1990	0	-3,783,142	146,135	798,562	0	-4,478,061	403,582	324,151	446,343	28,904,434	29,752,550
1991	216,817	-4,172,742	139,993	827,073	0	-4,950,616	0	305,578	407,003	29,887,663	30,696,521
1992	25,015	-3,975,362	0	711,701	0	-4,834,728	0	309,564	444,230	30,568,336	31,394,326
1993	9,410	-3,707,612	0	794,544	0	-4,625,477	59,542	308,643	447,866	30,634,559	31,472,999
1994	0	-3,935,497	0	791,207	0	-5,078,394	11,852	309,683	509,232	30,823,191	31,708,664
1995	0	-3,925,833	160,493	934,676	0	-5,160,040	44,517	305,815	502,250	31,330,668	32,202,530
1996	125,185	-3,766,301	18,845	978,936	0	-5,504,731	0	319,618	527,062	31,753,196	32,664,123
1997	0	-4,030,300	0	815,856	0	-4,956,667	278,720	320,657	530,615	32,047,241	32,961,126
1998	476,173	-3,978,321	147,241	934,054	0	-4,588,339	0	311,874	513,804	32,442,260	33,325,926
1999	0	-3,577,359	0	1,041,080	0	-5,078,065	262,434	316,840	629,671	33,516,828	34,412,241
2000	154	-3,559,467	0	1,197,140	0	-5,079,687	316,093	316,894	618,666	33,963,328	34,854,833
2001	0	-4,076,933	122,866	1,145,393	0	-5,361,732	0	320,878	636,728	33,797,941	34,699,205
2002	4,328	-4,075,407	0	1,254,590	0	-5,586,581	138,504	310,118	602,309	34,291,983	35,160,070
2003	96,797	-3,734,711	0	1,280,561	0	-5,402,016	0	316,066	624,211	35,027,224	35,905,071
2004	159,117	-4,045,130	19,175	1,223,967	0	-6,355,189	0	322,999	638,330	35,112,289	36,010,634
2005	0	-3,896,381	164,396	1,149,504	0	-5,840,343	0	316,165	629,065	36,925,140	37,800,067
2006	0	-3,942,108	0	1,203,563	0	-5,617,993	449,977	313,215	616,402	37,129,082	37,996,195
2007	0	-3,999,939	167,576	1,311,955	0	-6,439,691	0	316,165	617,376	37,328,272	38,203,199
2008	199,762	-3,956,178	0	1,232,956	0	-6,560,507	0	316,165	618,351	37,080,311	37,955,238
2009	19,890	-4,128,779	0	1,388,409	0	-6,569,010	0	314,198	608,610	37,268,229	38,139,263
2010	0	-3,818,379	164,853	1,400,700	0	-6,119,480	56,231	314,198	618,351	39,087,214	39,960,194
2011	0	-3,850,430	0	1,397,280	0	-6,423,199	112,436	312,231	604,713	39,042,061	39,906,255
2012	186,592	-4,099,795	0	1,357,167	0	-6,403,027	0	306,331	592,050	37,715,975	38,567,484
2013	142,404	-4,038,826	0	1,428,451	0	-6,627,579	55,373	314,198	614,454	39,554,063	40,428,016
2014	0	-4,086,820	0	1,419,673	0	-6,653,677	0	313,215	613,480	39,500,719	40,368,832
2015	231,600	-4,015,862	0	1,569,726	0	-6,933,732	0	313,215	608,610	39,755,198	40,624,285
2016	0	-3,823,979	241,313	1,517,322	0	-6,465,908	0	313,215	617,376	41,361,705	42,231,765
2017	29,942	-3,847,612	0	1,414,119	0	-6,983,631	100,428	306,331	592,050	39,873,229	40,724,738
2018	111,827	-4,105,247	65,726	1,586,013	0	-6,746,396	0	312,231	603,739	41,356,251	42,223,392
2019	101,971	-3,975,794	0	1,613,993	0	-6,998,752	66,814	313,215	609,584	41,682,507	42,552,567
2020(b	0	-3,720,882	127,350	1,584,061	0	-7,062,571	132,026	305,347	587,180	41,066,691	41,915,281

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 (Portions of Upper Feather Lakes, Oroville-Thermalito Facilities, Delta Facilities and California Aqueduct)			ADDITIONAL PROJECT CONSERVATION FACILITIES (Upper Eel River Development)							Total (e
					Trans-Basin Diversion Works		Eel River Storage				
							Initial Storage		Reserved Storage		
	Capital Costs (a	Operating Costs (b	Project Power Revenues	Planning and Preoperating Costs (a & (c	Capital Costs (a	Operating Costs (d	Capital Costs (a	Operating Costs (d	Capital Costs (a	Operating Costs (d	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1952	171,318	0	0	0	0	0	0	0	0	0	171,318
1953	312,174	0	0	0	0	0	0	0	0	0	312,174
1954	308,609	0	0	0	0	0	0	0	0	0	308,609
1955	194,637	0	0	0	0	0	0	0	0	0	194,637
1956	1,362,881	0	0	0	0	0	0	0	0	0	1,362,881
1957	6,224,346	0	0	0	0	0	0	0	0	0	6,224,346
1958	9,529,062	0	0	0	0	0	0	0	0	0	9,529,062
1959	11,356,224	0	0	0	0	0	0	0	0	0	11,356,224
1960	14,759,566	0	0	0	0	0	0	0	0	0	14,759,566
1961	18,685,761	0	0	0	0	0	0	0	0	0	18,685,761
1962	9,040,665	80	0	0	0	0	0	0	0	0	9,040,745
1963	73,535,214	177	0	0	0	0	0	0	0	0	73,535,391
1964	62,481,990	61	0	135,720	0	0	0	0	0	0	62,617,771
1965	71,020,875	146	0	676,686	0	0	0	0	0	0	71,697,707
1966	131,324,163	192	0	1,271,282	0	0	0	0	0	0	132,595,637
1967	95,923,683	2,826	0	1,337,995	0	0	0	0	0	0	97,264,504
1968	39,920,795	1,328,708	2,016,000	870,520	0	0	0	0	0	0	40,104,023
1969	5,861,222	2,519,431	13,050,000	749,991	0	0	0	0	0	0	- 3,919,356
1970	4,542,864	5,021,436	17,264,000	563,845	0	0	0	0	0	0	- 7,135,855
1971	4,652,139	5,400,084	19,580,000	476,290	0	0	0	0	0	0	- 9,051,487
1972	5,414,746	5,372,466	13,135,000	280,204	0	0	0	0	0	0	- 2,067,584
1973	6,359,777	5,073,362	19,820,000	242,420	0	0	0	0	0	0	- 8,144,441
1974	14,158,751	5,359,782	15,044,000	208,084	0	0	0	0	0	0	4,682,617
1975	21,352,967	6,458,953	15,231,000	207,692	0	0	0	0	0	0	12,788,612
1976	25,213,936	5,869,963	15,640,000	207,099	0	0	0	0	0	0	15,650,998
1977	18,791,531	5,812,871	15,513,000	206,503	0	0	0	0	0	0	9,297,905
1978	18,693,000	6,113,950	14,819,000	205,431	0	0	0	0	0	0	10,193,381
1979	16,610,157	4,954,547	13,990,000	205,872	0	0	0	0	0	0	7,780,576
1980	681,130	7,927,591	15,676,000	206,506	0	0	0	0	0	0	- 6,860,773
1981	744,491	8,239,600	19,452,000	310,406	0	0	0	0	0	0	- 10,157,503
1982	733,636	7,853,515	22,376,000	466,156	0	0	0	0	0	0	- 13,322,693
1983	893,989	7,617,122	18,590,000	465,612	0	0	0	0	0	0	- 9,613,277
1984	663,833	6,721,569	17,023,000	593,068	2,175,000	0	0	0	0	0	- 6,869,530
1985	264,168	7,786,432	13,749,000	444,986	2,175,000	0	0	0	0	0	- 3,078,414
Subtotal 1952-1985	691,784,300	105,434,864	281,968,000	10,332,368	4,350,000	0	0	0	0	0	529,933,532
1986	0	7,038,099	21,983,000	338,985	5,800,000	0	0	0	0	0	- 8,805,916
1987	0	7,443,694	15,891,000	187,068	5,800,000	0	0	0	0	0	- 2,460,238
1988	0	7,969,411	20,675,000	287,288	26,100,000	0	0	0	0	0	13,681,699
1989	0	7,496,319	14,827,000	287,288	26,100,000	0	0	0	0	0	19,056,607
1990	0	7,640,682	14,658,000	287,288	26,100,000	0	0	0	0	0	19,369,970
1991	0	7,481,844	13,608,000	287,288	26,100,000	0	0	0	0	0	20,261,132
1992	0	7,251,283	15,651,000	187,068	23,925,000	0	0	0	0	0	15,712,351
1993	0	7,687,397	19,333,000	147,145	20,300,000	0	0	0	0	0	8,801,542
1994	0	7,558,858	14,011,000	147,145	20,300,000	0	0	0	0	0	13,995,003
1995	0	7,311,239	19,087,000	147,145	20,300,000	0	0	0	0	0	8,671,384
1996	0	7,205,538	13,633,000	0	20,300,000	142,345	5,834,000(f	920,140	0	49,511	20,818,534
1997	0	7,635,978	17,823,000	0	20,300,000	142,345	5,834,000	920,140	0	49,511	17,058,974
1998	0	7,533,012	15,870,000	0	0	1,776,817	5,834,000	916,606	0	47,017	237,452
1999	0	6,934,501	13,363,000	0	0	1,776,817	5,834,000	916,606	0	47,017	2,145,941
2000	0	7,487,396	14,179,000	0	0	1,776,817	5,834,000	916,606	0	47,017	1,882,836
2001	0	7,394,210	13,102,000	0	0	1,776,817	5,834,000	916,606	0	47,017	2,866,650
2002	0	7,278,694	13,482,000	0	0	1,776,817	5,834,000	916,606	0	47,017	2,371,134
2003	0	7,094,438	13,065,000	0	0	1,776,817	5,834,000	916,606	4,121,000(f	647,017	7,324,878
2004	0	7,632,107	12,881,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	8,046,547
2005	0	5,504,546	14,262,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	4,537,986
2006	0	6,268,939	16,539,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	3,025,379
2007	0	6,745,260	14,176,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	5,864,700
2008	0	6,899,982	23,519,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	- 3,323,578
2009	0	7,139,030	13,708,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	6,726,470
2010	0	5,594,153	17,404,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	1,485,593
2011	0	6,064,635	20,579,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	- 1,218,925
2012	0	7,833,776	20,087,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	1,042,216
2013	0	7,016,294	19,820,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	491,734
2014	0	6,395,533	15,044,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	4,646,973
2015	0	7,045,949	15,231,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	5,110,389
2016	0	5,478,682	15,640,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	3,134,122
2017	0	7,862,998	15,513,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	5,645,438
2018	0	6,580,404	14,819,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	5,056,844
2019	0	6,390,569	13,990,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	5,696,009
2020	0	7,718,536	15,676,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	5,337,976
2021	0	7,718,536	19,452,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	1,561,976
2022	0	7,718,536	22,376,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	- 1,362,024
2023	0	7,718,536	18,590,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	2,423,976
2024	0	7,718,536	17,023,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	3,990,976
2025	0	7,718,536	13,749,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	7,264,976
2026	0	7,718,536	21,983,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	- 969,024
2027	0	7,718,536	15,891,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	5,122,976
2028	0	7,718,536	20,675,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	338,976
2029	0	7,718,536	14,827,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	6,186,976
2030	0	7,718,536	14,658,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	6,355,976
2031	0	7,718,536	13,608,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	7,405,976
2032	0	7,718,536	15,651,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	5,362,976
2033	0	7,718,536	19,333,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	1,680,976
2034	0	7,718,536	14,011,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	7,002,976
2035	0	7,718,536	19,087,000	0	0	1,776,817	5,834,000	916,606	4,121,000	647,017	1,926,976
Subtotal 1986-2035	0	363,392,026	824,043,000	2,303,708	241,425,000	67,803,736	233,360,000	36,671,308	135,993,000	21,685,668	278,591,446
TOTAL 1952-2035	691,784,300	468,826,890	1,106,011,000	12,636,076	245,775,000	67,803,736	233,360,000	36,671,308	135,993,000	21,685,668	808,524,978

a) Reimbursed thru payments of the capital cost component of the Delta Water Charge, except for a portion of the costs of the Initial Project Conservation Facilities that will be reimbursed thru project power revenues.

b) Reimbursed thru payments of the minimum OMP&R component of the Delta Water Charge, except for $1,500,000 annually from 1970 thru 2035 that will be reimbursed thru project power revenues.

c) Under the proposed long-term amendment of Articles 22(e) and 22(g), those planning and preoperating costs of Additional Project Conservation Facilities which are incurred thru the current year will be included in current calculations of the Delta Water Charge.

d) Reimbursed thru minimum OMP&R component of Delta Water Charge.

e) Total of all columns, treating the values shown in Column 3 as negative costs.

f) Initial repayments of capital costs at 3-1/2 percent interest under a federal Water Supply Act of 1958 contract.

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

(in dollars)

CALENDAR YEAR	NORTH BAY AREA			SOUTH BAY AREA				CENTRAL COASTAL AREA		
	Napa County FC & WCD	Solano County FC & WCD	Total	Alameda County FC & WCD Zone 7	Alameda County Water District	Santa Clara 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	100	409	593	121	286	407
1953	0	0	0	325	407	1,814	2,546	338	791	1,129
1954	0	0	0	826	1,095	5,166	7,087	424	991	1,415
1955	0	0	0	986	1,330	6,320	8,636	212	498	710
1956	0	0	0	8,940	12,156	64,038	85,134	221	516	737
1957	16,594	10,040	26,634	21,845	29,568	650,256	701,669	286	665	951
1958	35,525	14,570	50,095	67,948	68,124	733,880	869,952	800	1,869	2,669
1959	22,145	5,675	27,820	154,413	143,174	494,075	791,662	22,255	58,029	80,284
1960	12,123	7,375	19,498	297,905	276,104	1,022,907	1,596,916	28,789	75,394	104,183
1961	8,528	7,440	15,968	857,472	801,653	1,924,707	3,583,832	14,399	36,010	50,409
1962	958	-541	417	544,904	576,623	1,685,387	2,806,914	19,462	46,436	65,898
1963	4,452	2,182	6,634	654,731	1,079,662	3,249,577	4,983,970	69,872	164,775	234,647
1964	50,445	33,020	83,465	694,180	1,239,281	7,231,859	9,165,320	145,762	343,378	489,140
1965	230,611	58,892	289,503	344,012	454,640	3,352,291	4,150,943	261,249	614,241	875,490
1966	502,652	53,325	555,977	571,450	543,745	2,208,654	3,323,849	603,458	1,413,501	2,016,959
1967	1,606,306	49,511	1,655,817	744,539	720,980	2,247,242	3,712,761	946,654	2,215,395	3,162,049
1968	892,083	58,933	951,016	705,592	650,413	1,907,058	3,263,063	357,590	838,679	1,196,269
1969	87,951	56,205	144,156	267,090	254,903	753,137	1,275,130	83,304	197,826	281,130
1970	57,532	67,876	125,408	60,888	58,392	139,146	258,426	51,933	124,252	176,185
1971	27,617	26,908	54,525	11,667	14,083	83,380	109,130	35,438	87,004	122,442
1972	88,097	32,957	121,054	33,476	34,616	160,644	228,736	19,809	46,777	66,586
1973	41,833	41,478	83,311	15,787	14,958	56,468	87,213	18,657	44,628	63,285
1974	49,892	68,783	118,675	5,591	5,094	20,810	31,495	15,653	36,544	52,197
1975	90,104	131,095	221,199	75,062	67,475	178,056	320,593	297,140	872,325	1,169,465
1976	223,796	299,066	522,862	22,132	20,299	56,502	98,933	595,894	1,722,448	2,318,342
1977	463,984	562,441	1,026,425	27,538	30,085	129,409	187,032	1,623,966	4,308,246	5,932,212
1978	1,431,755	1,431,495	2,863,250	19,720	18,596	53,277	91,593	7,531,246	21,420,087	28,951,333
1979	3,454,958	3,153,975	6,608,933	17,513	16,011	39,180	72,704	6,614,630	18,238,739	24,853,369
1980	827,983	824,017	1,652,000	7,078	6,469	16,444	29,991	719,418	2,154,694	2,874,112
1981	20,109	28,891	49,000	3,096	2,829	7,770	13,695	137,239	349,402	486,641
1982	5,175	7,825	13,000	4,668	4,267	11,195	20,130	64,876	163,305	228,181
1983	4,777	7,223	12,000	15,583	14,246	34,975	64,804	32,277	75,353	107,630
1984	0	0	0	13,379	12,231	30,172	55,782	33,377	77,924	111,301
1985	0	0	0	4,841	4,424	11,571	20,836	63,279	147,731	211,010
TOTAL	10,257,985	7,040,657	17,298,642	6,275,261	7,178,033	28,567,776	42,021,070	20,410,028	55,878,739	76,288,767

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	394	19	59	958	9,401	19	13	735	11,684
1953	241	1,089	55	160	2,954	28,241	55	32	2,022	34,849
1954	302	1,366	67	201	3,450	33,366	68	43	2,551	41,414
1955	153	684	36	100	1,532	15,157	37	22	1,286	19,007
1956	156	711	34	104	2,789	24,725	34	24	1,285	29,862
1957	203	917	37	135	6,242	51,363	38	29	1,544	60,508
1958	569	2,574	117	380	14,345	121,853	120	58	4,558	144,574
1959	3,940	8,452	421	1,246	27,645	273,271	431	377	15,741	331,524
1960	4,922	10,948	526	1,613	31,491	323,675	538	494	19,991	394,198
1961	5,874	22,658	1,104	3,338	53,431	562,941	1,127	649	41,655	692,777
1962	11,918	51,631	2,526	7,604	98,929	1,072,395	2,584	1,903	95,217	1,344,707
1963	46,135	203,155	10,389	29,927	355,713	3,891,666	10,627	6,044	383,781	4,937,437
1964	96,741	334,136	17,257	49,222	612,056	6,846,225	17,651	12,043	634,637	8,619,968
1965	175,677	549,762	28,044	80,987	1,121,101	12,395,454	28,690	22,060	1,037,059	15,438,834
1966	415,965	1,134,334	53,751	167,104	2,272,032	25,749,522	54,978	38,977	2,056,154	31,942,817
1967	653,996	867,242	40,138	127,756	2,056,842	24,310,536	41,058	35,214	1,552,542	29,685,324
1968	242,105	210,085	10,298	30,948	1,137,887	11,910,774	10,533	12,275	387,795	13,952,700
1969	50,220	94,900	4,810	13,981	630,244	6,527,904	4,921	7,281	178,399	7,512,660
1970	28,991	53,503	2,662	7,881	428,387	4,227,203	2,723	4,004	99,542	4,854,896
1971	14,667	19,824	994	2,922	187,629	1,551,864	1,018	503	37,069	1,816,490
1972	12,286	21,143	1,057	3,114	120,606	1,070,449	1,081	474	39,453	1,269,663
1973	11,548	10,915	534	1,607	45,010	421,339	547	256	20,119	511,875
1974	10,529	6,311	301	930	17,989	249,968	309	164	11,477	297,978
1975	5,194	3,840	189	567	9,626	128,656	193	278	7,094	155,637
1976	1,731	7,161	372	1,056	12,318	130,818	379	565	13,621	168,021
1977	60,839	10,345	536	1,523	17,036	646,383	547	901	19,671	757,781
1978	10,540	29,996	1,559	4,420	48,460	568,522	1,594	2,931	57,146	725,168
1979	15,430	38,122	1,981	5,617	62,149	738,418	2,025	3,042	72,624	939,408
1980	37,299	33,436	1,738	4,926	59,324	833,354	1,776	1,215	63,700	1,036,768
1981	35,571	46,606	2,420	6,868	87,098	1,033,300	2,474	518	88,787	1,303,642
1982	13,003	43,130	2,241	6,355	84,761	800,640	2,290	793	82,168	1,035,381
1983	9,738	44,017	2,287	6,485	80,227	789,469	2,338	2,704	83,854	1,021,119
1984	23,762	107,412	5,578	15,824	176,351	1,926,514	5,702	2,318	204,626	2,468,087
1985	44,567	73,947	3,840	10,895	118,732	1,546,697	3,926	823	140,874	1,944,301
TOTAL	2,044,898	4,044,746	197,918	595,855	9,985,344	110,812,063	202,431	159,027	7,458,777	135,501,059

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

(in dollars)

CALENDAR YEAR	SOUTHERN CALIFORNIA AREA									
	Antelope Valley-East Kern Water Agency	Castaic Lake Water Agency	Coachella Valley County Water District	Crestline-Lake Arrowhead Water Agency	Desert Water Agency	Littlerock Creek Irrigation District	Mojave Water Agency	Palmdale 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	3,198	790	866	257	1,430	70	1,725	424	6,214	1,582
1953	10,189	2,552	2,721	818	4,489	228	5,423	1,349	19,501	4,965
1954	12,963	3,221	3,535	1,055	5,835	294	7,051	1,721	25,193	6,436
1955	5,498	1,438	1,400	411	2,312	120	2,808	728	9,439	2,429
1956	9,473	2,626	2,152	603	3,550	187	4,362	1,227	13,041	3,407
1957	26,429	7,106	6,410	1,839	10,573	547	12,895	3,470	41,302	10,694
1958	50,649	13,805	11,945	3,393	19,698	1,024	24,097	6,619	75,019	19,496
1959	72,004	21,199	16,511	4,841	27,233	1,408	32,975	9,393	103,541	26,741
1960	77,597	23,798	21,542	6,661	35,526	1,538	42,218	10,391	146,614	37,206
1961	130,074	40,053	35,188	12,499	58,030	2,332	65,277	16,938	236,442	58,057
1962	204,408	65,002	44,919	14,133	74,082	3,456	87,272	25,753	258,710	65,834
1963	566,901	179,204	111,108	30,825	183,238	9,563	225,021	71,360	570,294	151,227
1964	1,116,245	360,971	214,476	56,692	353,718	18,843	440,068	140,697	1,052,807	283,363
1965	1,944,584	677,401	393,805	105,042	649,462	33,388	805,907	248,636	1,946,795	523,161
1966	4,044,673	1,530,036	829,511	220,531	1,368,035	70,400	1,698,759	525,362	4,043,905	1,088,640
1967	5,052,654	2,874,632	1,100,890	302,731	1,815,595	90,153	2,229,307	666,476	5,970,752	1,589,680
1968	6,008,959	3,039,590	1,375,064	376,025	2,267,761	109,053	2,784,774	795,630	8,113,254	2,162,484
1969	5,943,634	2,446,997	1,726,445	548,862	2,847,307	123,440	3,331,661	872,820	11,052,403	2,813,168
1970	5,204,629	2,665,799	2,105,314	711,088	3,472,174	108,980	3,981,113	743,827	14,120,158	3,542,707
1971	2,692,804	1,774,584	1,116,516	353,182	1,841,382	50,567	2,173,860	360,695	8,324,746	2,029,169
1972	1,284,094	444,873	454,265	150,064	749,194	24,848	864,276	172,791	3,945,315	981,822
1973	414,286	528,301	151,158	45,081	249,291	7,659	297,951	55,310	1,199,315	311,371
1974	81,039	149,247	100,140	31,134	165,154	1,653	194,718	11,617	1,250,255	326,893
1975	44,841	23,143	152,109	38,872	250,851	824	313,473	6,020	991,152	268,611
1976	171,477	17,562	57,400	14,660	94,663	793	118,338	5,912	324,222	87,919
1977	1,653,631	9,037	4,944	1,339	8,153	398	10,089	2,947	26,099	6,697
1978	1,243,586	20,990	10,745	2,717	17,721	997	22,368	7,499	48,203	13,263
1979	575,288	61,616	16,227	4,104	26,761	1,505	33,733	11,308	72,716	19,996
1980	199,913	105,207	36,219	9,159	59,732	3,347	74,988	25,137	162,124	44,518
1981	475,127	122,166	70,584	17,850	116,408	6,520	146,026	48,949	315,813	86,695
1982	582,498	140,788	84,227	21,300	138,905	7,778	174,176	58,383	376,820	103,425
1983	471,463	95,825	57,301	14,491	94,499	5,294	118,583	39,749	256,404	70,394
1984	5,424,801	86,447	51,501	13,024	84,936	4,777	106,979	35,860	230,475	63,360
1985	4,880,682	39,262	23,345	5,903	38,502	2,172	48,643	16,307	104,556	28,777
TOTAL	50,680,291	17,575,268	10,390,483	3,121,186	17,136,200	694,156	20,480,914	5,001,305	65,433,599	16,834,187

CALENDAR YEAR	SOUTHERN CALIFORNIA AREA (Continued)				FEATHER RIVER AREA				FUTURE CONTRACTOR	GRAND TOTAL
	San Gorgonio Pass Water Agency	The Metropolitan Water District of Southern California	Ventura County Flood Control District	Total	City of Yuba City	County of Butte	Plumas County FC & WCD	Total	South Bay	
	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)
1952	982	70,280	323	88,191	0	0	0	0	76	100,951
1953	3,079	222,099	1,202	278,615	0	0	0	0	343	317,482
1954	3,999	286,001	1,518	358,822	0	0	0	0	1,005	409,743
1955	1,505	113,842	683	142,613	0	0	0	0	1,245	172,211
1956	2,109	175,815	1,252	219,804	0	0	0	0	11,834	347,371
1957	6,627	521,640	3,373	652,905	0	0	0	0	29,873	1,472,540
1958	12,073	973,576	6,568	1,217,962	0	0	0	0	37,160	2,322,412
1959	16,578	1,396,721	9,999	1,739,144	0	0	0	0	59,060	3,029,494
1960	23,144	1,784,052	11,158	2,221,445	0	0	0	0	125,634	4,461,874
1961	36,338	3,276,463	18,775	3,986,466	0	0	4	4	324,619	8,654,075
1962	40,928	3,613,156	29,591	4,527,244	0	0	270	270	267,629	9,013,079
1963	93,346	11,136,218	84,056	13,412,361	0	0	54	54	737,588	24,312,691
1964	174,476	18,436,478	167,523	22,816,357	0	0	7,790	7,790	1,097,149	42,279,189
1965	322,293	34,366,619	311,999	42,329,092	0	0	3,135	3,135	472,249	63,559,246
1966	670,412	76,267,872	696,610	93,054,746	0	0	-49	-49	862,408	131,756,707
1967	982,887	133,846,324	1,306,467	157,828,548	0	0	49	49	1,572,826	197,617,374
1968	1,339,490	150,342,859	1,391,199	180,106,142	0	0	51,562	51,562	1,289,284	200,810,036
1969	1,753,583	142,982,400	1,102,201	177,544,921	0	0	234,400	234,400	449,014	187,441,411
1970	2,213,227	166,931,541	1,179,505	206,980,062	0	0	17,250	17,250	82,043	212,494,270
1971	1,263,523	135,788,021	756,027	158,525,076	0	0	27,225	27,225	17,255	160,672,143
1972	614,516	65,593,072	118,602	75,397,732	0	0	0	0	46,162	77,129,933
1973	194,188	37,113,263	189,325	40,756,499	0	0	0	0	25,082	41,527,265
1974	204,852	12,372,664	55,604	14,944,970	0	0	0	0	10,065	15,455,380
1975	166,412	6,422,089	10,215	8,688,612	0	0	0	0	198,439	10,753,945
1976	54,317	2,450,171	8,221	3,405,655	0	0	0	0	51,093	6,564,906
1977	4,127	492,836	4,016	2,224,313	0	0	0	0	36,671	10,164,434
1978	8,128	1,002,169	9,691	2,408,077	0	0	0	0	10,915	35,050,336
1979	12,261	2,603,117	24,409	3,463,041	0	0	0	0	6,620	35,944,075
1980	27,336	4,625,695	43,814	5,417,189	0	0	0	0	2,876	11,012,936
1981	53,247	5,981,452	58,231	7,499,068	0	0	0	0	1,448	9,353,494
1982	63,535	6,954,423	67,844	8,774,102	0	0	0	0	2,012	10,072,806
1983	43,232	4,733,536	46,175	6,046,946	0	0	0	0	5,928	7,258,427
1984	38,859	4,268,020	41,655	10,450,694	0	0	0	0	5,137	13,091,001
1985	17,629	1,938,614	18,917	7,163,309	0	0	0	0	2,074	9,341,530
TOTAL	10,463,238	1,039,083,098	7,776,798	1,264,670,723	0	0	341,690	341,690	7,842,816	1,543,964,767

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

(in dollars)

CALENDAR YEAR	NORTH BAY AREA			SOUTH BAY AREA				CENTRAL COASTAL AREA		
	Napa County FC & WCD	Solano County FC & WCD	Total	Alameda County FC & WCD, Zone 7	Alameda County Water District	Santa Clara 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	100,570	98,222	349,561	548,353	0	0	0
1964	0	0	0	116,166	150,892	508,088	775,146	7,653	18,930	26,583
1965	0	0	0	145,987	211,349	860,886	1,218,222	13,173	31,967	45,140
1966	20,197	0	20,197	160,765	233,529	1,024,424	1,418,718	22,149	53,136	75,285
1967	44,718	0	44,718	185,314	260,055	1,132,171	1,577,540	40,085	95,237	135,322
1968	123,080	0	123,080	217,298	295,227	1,241,801	1,754,326	54,054	128,109	182,163
1969	166,600	0	166,600	247,610	326,957	1,334,834	1,909,401	57,863	137,189	195,052
1970	170,890	0	170,890	259,084	339,392	1,371,575	1,970,051	59,890	142,085	201,975
1971	173,697	0	173,697	261,699	342,240	1,378,363	1,982,302	61,228	145,355	206,583
1972	175,044	0	175,044	311,397	342,927	1,382,431	2,036,755	62,240	147,926	210,166
1973	179,342	29,572	208,914	313,031	344,616	1,390,268	2,047,915	62,676	148,970	211,646
1974	181,383	31,595	212,978	313,801	345,346	1,393,023	2,052,170	62,949	149,661	212,610
1975	183,817	34,951	218,768	314,073	345,594	1,394,038	2,053,705	63,077	149,958	213,035
1976	188,212	41,346	229,558	317,735	348,886	1,402,724	2,069,345	174,197	418,092	592,289
1977	199,130	55,936	255,066	318,815	349,876	1,405,481	2,074,172	203,267	502,120	705,387
1978	221,765	83,374	305,139	320,158	351,344	1,411,794	2,083,296	282,491	712,293	994,784
1979	291,612	153,208	444,820	321,120	352,251	1,414,393	2,087,764	649,895	1,757,250	2,407,145
1980	460,158	307,071	767,229	321,975	353,032	1,416,304	2,091,311	972,583	2,647,008	3,619,591
1981	500,550	347,270	847,820	322,320	353,348	1,417,106	2,092,774	1,007,679	2,752,122	3,759,801
1982	501,531	348,679	850,210	322,471	353,486	1,417,485	2,093,442	1,014,374	2,769,167	3,783,541
1983	501,784	349,061	850,845	322,699	353,694	1,418,031	2,094,424	1,017,539	2,777,134	3,794,673
1984	502,017	349,413	851,430	323,459	354,389	1,419,738	2,097,586	1,019,113	2,780,810	3,799,923
1985	502,017	349,413	851,430	324,112	354,986	1,421,210	2,100,308	1,020,741	2,784,611	3,805,352
1986	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
1987	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
1988	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
1989	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
1990	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
1991	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
1992	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
1993	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
1994	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
1995	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
1996	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
1997	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
1998	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
1999	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
2000	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
2001	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
2002	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
2003	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
2004	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
2005	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
2006	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
2007	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
2008	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
2009	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
2010	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
2011	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
2012	502,017	349,413	851,430	324,348	355,201	1,421,774	2,101,323	1,023,828	2,791,818	3,815,646
2013	502,017	349,413	851,430	217,626	256,979	1,072,214	1,546,819	1,023,828	2,791,818	3,815,646
2014	502,017	349,413	851,430	183,829	204,309	913,686	1,301,824	1,016,176	2,772,888	3,789,064
2015	502,017	349,413	851,430	148,295	143,852	560,888	853,035	1,010,656	2,759,851	3,770,507
2016	481,820	349,413	831,233	130,824	121,673	397,350	649,847	1,001,679	2,738,683	3,740,362
2017	457,298	349,413	806,711	102,022	95,147	289,603	486,772	983,743	2,696,581	3,680,324
2018	378,936	349,413	728,349	64,764	59,975	179,973	304,712	969,774	2,663,709	3,633,483
2019	335,417	349,413	684,830	29,696	28,245	86,940	144,881	965,966	2,654,629	3,620,595
2020	331,127	349,413	680,540	16,507	15,810	50,199	82,516	963,939	2,649,734	3,613,673
2021	328,320	349,413	677,733	13,520	12,961	43,411	69,892	962,601	2,646,464	3,609,065
2022	326,973	349,413	676,386	12,950	12,274	39,343	64,567	961,589	2,643,892	3,605,481
2023	322,675	319,842	642,517	11,317	10,585	31,506	53,408	961,153	2,642,848	3,604,001
2024	320,634	317,818	638,452	10,547	9,856	28,751	49,154	960,879	2,642,157	3,603,036
2025	318,200	314,463	632,663	10,274	9,607	27,736	47,617	960,752	2,641,861	3,602,613
2026	313,805	308,067	621,872	6,613	6,315	19,050	31,978	849,631	2,373,726	3,223,357
2027	302,887	293,478	596,365	5,533	5,325	16,293	27,151	820,561	2,289,698	3,110,259
2028	280,252	266,040	546,292	4,189	3,857	9,980	18,026	741,338	2,079,525	2,820,863
2029	210,405	196,206	406,611	3,227	2,950	7,381	13,558	373,934	1,034,568	1,408,502
2030	41,859	42,342	84,201	2,373	2,169	5,470	10,012	51,246	144,811	196,057
2031	1,466	2,144	3,610	2,028	1,854	4,668	8,550	16,150	39,696	55,846
2032	485	734	1,219	1,877	1,716	4,289	7,882	9,455	22,651	32,106
2033	233	352	585	1,649	1,507	3,743	6,899	6,290	14,684	20,974
2034	0	0	0	889	812	2,036	3,737	4,715	11,008	15,723
2035	0	0	0	236	216	564	1,016	3,087	7,207	10,294
TOTAL	25,100,846	17,470,656	42,571,502	15,899,840	17,760,059	71,088,701	104,748,600	51,191,414	139,590,905	190,782,319

a) Unadjusted for prior overpayments or underpayments of charges.

TABLE B-15: CAPITAL COST COMPONENT OF

(in dollars)

CALENDAR YEAR	SAN JOAQUIN VALLEY AREA									
	Devil's Den Water District	Dudley Ridge Water District	Empire West Side Irrigation District	Hacienda Water District	Kern County Water Agency		County of Kings	Oak Flat Water District	Tulare Lake Basin Water Storage District	Total
					Municipal and Industrial	Agricultural				
	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1963	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	61,849	0	0	0	0	61,849
1966	0	0	0	0	116,540	0	0	0	0	116,540
1967	0	0	0	0	227,379	0	0	0	0	227,379
1968	30,314	65,242	3,064	0	327,720	357,176	8,239	3,754	55,056	850,565
1969	40,965	65,356	9,192	11,292	383,230	733,514	8,753	4,081	197,528	1,453,911
1970	46,700	71,629	9,192	11,762	413,976	892,174	8,993	4,244	142,921	1,601,591
1971	54,893	81,666	9,192	10,821	434,875	1,184,967	9,126	4,570	153,708	1,943,818
1972	63,086	91,247	9,192	12,233	444,028	1,774,384	9,176	4,733	164,944	2,573,023
1973	71,279	100,372	9,192	13,644	449,912	2,046,482	9,228	5,060	175,730	2,880,899
1974	79,472	109,953	9,192	15,526	452,107	2,291,754	9,255	5,223	193,259	3,165,741
1975	87,665	119,534	9,192	16,938	452,985	2,550,821	9,270	5,550	210,787	3,462,742
1976	95,857	129,115	9,192	18,349	453,455	2,887,303	9,279	5,713	228,315	3,836,578
1977	104,050	138,696	9,192	19,761	454,055	3,242,180	9,298	6,039	246,292	4,229,563
1978	104,050	148,277	9,192	21,643	454,887	3,603,955	9,325	6,366	263,820	4,621,515
1979	104,050	157,858	9,192	23,054	457,251	3,957,299	9,402	6,529	281,348	5,005,983
1980	104,050	167,439	9,192	24,466	460,282	4,318,308	9,501	6,855	298,877	5,398,970
1981	104,050	177,020	9,192	26,348	463,177	4,726,071	9,588	7,019	316,405	5,838,870
1982	104,050	187,057	9,192	27,759	467,426	5,102,409	9,708	7,345	333,933	6,248,879
1983	104,050	195,726	9,192	29,171	471,560	5,530,868	9,820	7,508	351,461	6,709,356
1984	104,050	205,763	9,192	30,582	475,474	5,917,170	9,934	7,835	368,989	7,128,989
1985	104,050	215,344	9,192	32,464	484,077	6,293,508	10,212	7,998	386,517	7,543,362
1986	104,050	224,925	9,192	33,876	489,870	6,666,780	10,404	8,324	404,495	7,951,916
1987	104,050	234,506	9,192	35,287	489,870	7,046,951	10,404	8,488	422,023	8,360,771
1988	104,050	244,087	9,192	36,699	489,870	7,401,828	10,404	8,814	439,551	8,744,495
1989	104,050	253,668	9,192	38,581	489,870	7,657,830	10,404	9,140	457,079	9,029,814
1990	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
1991	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
1992	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
1993	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
1994	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
1995	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
1996	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
1997	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
1998	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
1999	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
2000	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
2001	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
2002	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
2003	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
2004	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
2005	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
2006	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
2007	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
2008	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
2009	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
2010	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
2011	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
2012	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
2013	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
2014	104,050	263,249	9,192	39,992	489,870	7,923,796	10,404	9,304	494,382	9,344,239
2015	104,050	263,249	9,192	39,992	428,021	7,923,796	10,404	9,304	494,382	9,282,390
2016	104,050	263,249	9,192	39,992	373,329	7,923,796	10,404	9,304	494,382	9,227,698
2017	104,050	263,249	9,192	39,992	262,491	7,923,796	10,404	9,304	494,382	9,116,860
2018	104,050	263,249	9,192	39,992	162,150	7,923,796	2,165	9,304	494,382	9,008,280
2019	104,050	263,249	9,192	39,992	106,639	7,923,796	1,651	9,304	494,382	8,952,255
2020	104,050	263,249	9,192	39,992	75,893	7,923,796	1,411	9,304	494,382	8,921,269
2021	104,050	263,249	9,192	39,992	54,995	7,923,796	1,278	9,304	494,382	8,900,238
2022	104,050	263,249	9,192	39,992	45,842	7,923,796	1,228	9,304	494,382	8,891,035
2023	104,050	263,249	9,192	39,992	39,958	7,923,796	1,176	9,304	494,382	8,885,099
2024	104,050	263,249	9,192	39,992	37,762	7,923,796	1,149	9,304	494,382	8,882,876
2025	104,050	263,249	9,192	39,992	36,885	7,923,796	1,134	9,304	494,382	8,881,984
2026	104,050	263,249	9,192	39,992	36,415	7,923,796	1,125	9,304	494,382	8,881,505
2027	104,050	263,249	9,192	39,992	35,814	7,923,796	1,106	9,304	494,382	8,880,885
2028	104,050	263,249	9,192	39,992	34,983	7,923,796	1,079	9,304	494,382	8,880,027
2029	104,050	263,249	9,192	39,992	32,619	7,923,796	1,002	9,304	494,382	8,877,586
2030	104,050	263,249	9,192	39,992	29,587	7,923,796	903	9,304	494,382	8,874,455
2031	104,050	263,249	9,192	39,992	26,693	7,923,796	816	9,304	494,382	8,871,474
2032	104,050	263,249	9,192	39,992	22,444	7,923,796	695	9,304	494,382	8,867,104
2033	104,050	263,249	9,192	39,992	18,309	7,923,796	584	9,304	494,382	8,862,858
2034	104,050	263,249	9,192	39,992	14,395	7,923,796	470	9,304	494,382	8,858,830
2035	104,050	263,249	9,192	39,992	5,792	7,923,796	192	9,304	494,382	8,849,949
TOTAL	6,709,181	15,493,934	618,928	2 329,888	24,493,491	450,678,348	520,199	569,172	28,834,610	530,247,751

a) Unadjusted for prior overpayments or underpayments of charges.

TRANSPORTATION CHARGE FOR EACH CONTRACTOR[a]

(in dollars)

CALENDAR YEAR	SOUTHERN CALIFORNIA AREA									
	Antelope Valley-East Kern Water Agency	Castaic Lake Water Agency	Coachella Valley County Water District	Crestline Lake Arrowhead Water Agency	Desert Water Agency	Littlerock Creek Irrigation District	Mojave Water Agency	Palmdale 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	32,041	0	0	0	0	0	0	0	50,037	0
1964	59,697	18,757	13,609	4,081	35,389	1,093	26,921	7,816	77,859	33,300
1965	114,152	36,366	24,072	6,846	39,139	2,012	48,389	14,680	129,219	33,887
1966	209,016	69,413	43,283	11,971	70,822	3,641	87,705	26,809	224,191	59,409
1967	406,331	144,054	83,750	22,729	137,560	7,076	170,577	52,438	421,469	112,517
1968	652,820	284,290	137,456	37,498	226,132	11,474	279,331	84,952	712,746	190,068
1969	945,961	432,573	204,537	55,842	336,762	16,794	415,184	123,766	1,108,542	295,562
1970	1,235,915	551,947	288,760	82,617	475,665	22,816	577,715	166,345	1,647,722	432,800
1971	1,489,817	681,995	391,465	117,307	645,052	28,132	771,930	202,632	2,336,559	605,627
1972	1,621,183	768,566	445,933	134,537	734,882	30,599	877,979	220,228	2,742,673	704,618
1973	1,683,826	790,269	468,094	141,857	771,430	31,811	920,142	228,657	2,935,141	752,515
1974	1,704,036	816,042	475,468	144,057	783,592	32,185	934,677	231,356	2,993,648	767,705
1975	1,707,990	823,323	480,354	145,575	791,649	32,265	944,176	231,922	3,054,641	783,652
1976	1,710,177	824,452	487,774	147,472	803,886	32,306	959,469	232,216	3,102,993	796,756
1977	1,718,542	825,308	490,574	148,187	808,504	32,344	965,242	232,505	3,118,810	801,045
1978	1,799,213	825,749	490,815	148,252	808,902	32,364	965,734	232,648	3,120,083	801,372
1979	1,859,880	826,773	491,340	148,385	809,766	32,412	966,825	233,014	3,122,435	802,019
1980	1,887,945	829,779	492,131	148,585	811,072	32,486	968,471	233,566	3,125,982	802,994
1981	1,897,698	834,911	493,898	149,032	813,986	32,649	972,129	234,792	3,133,891	805,166
1982	1,920,876	840,871	497,342	149,903	819,665	32,967	979,253	237,180	3,149,298	809,395
1983	1,949,293	847,739	501,450	150,942	826,441	33,347	987,750	240,028	3,167,681	814,441
1984	1,972,292	852,414	504,246	151,649	831,051	33,605	993,535	241,967	3,180,189	817,875
1985	2,236,936	856,631	506,758	152,284	835,194	33,838	998,753	243,717	3,191,432	820,966
1986	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
1987	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
1988	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
1989	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
1990	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
1991	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
1992	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
1993	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
1994	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
1995	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
1996	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
1997	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
1998	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
1999	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
2000	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
2001	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
2002	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
2003	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
2004	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
2005	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
2006	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
2007	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
2008	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
2009	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
2010	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
2011	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
2012	2,475,035	858,547	507,897	152,572	837,073	33,944	1,001,126	244,512	3,196,533	822,370
2013	2,442,993	858,547	507,897	152,572	824,129	33,944	1,001,126	244,512	3,146,496	809,684
2014	2,415,338	839,790	494,288	148,491	815,190	32,851	974,205	236,696	3,118,674	802,306
2015	2,360,883	822,180	483,825	145,725	797,934	31,931	952,737	229,833	3,067,314	788,483
2016	2,266,018	789,134	464,614	140,601	766,251	30,303	913,422	217,703	2,972,342	762,961
2017	2,068,703	714,493	424,147	129,843	699,513	26,868	830,549	192,074	2,775,064	709,853
2018	1,822,215	574,257	370,441	115,074	610,941	22,470	721,795	159,561	2,483,787	632,302
2019	1,529,074	425,974	303,360	96,730	500,310	17,150	585,943	120,747	2,087,991	526,807
2020	1,239,120	306,600	219,137	69,955	361,407	11,128	423,411	78,167	1,548,811	389,570
2021	985,218	176,551	116,432	35,265	192,021	5,812	229,197	41,880	859,974	216,743
2022	853,852	89,980	61,964	18,035	102,191	3,345	123,147	24,284	453,860	117,752
2023	791,209	68,278	39,803	10,715	65,643	2,133	80,985	15,855	261,392	69,855
2024	770,998	42,505	32,429	8,515	53,481	1,759	66,449	13,156	202,885	54,665
2025	767,045	35,224	27,544	6,997	45,424	1,678	56,950	12,590	141,892	38,718
2026	764,858	34,095	20,123	5,100	33,187	1,638	41,658	12,296	93,540	25,614
2027	756,492	33,238	17,323	4,385	28,569	1,600	35,885	12,008	77,723	21,325
2028	675,822	32,797	17,082	4,320	28,171	1,580	35,393	11,864	76,450	20,998
2029	615,154	31,774	16,557	4,187	27,306	1,531	34,301	11,498	74,098	20,351
2030	587,090	28,768	15,766	3,987	26,001	1,458	32,656	10,946	70,551	19,375
2031	577,337	23,635	13,999	3,540	23,087	1,295	28,998	9,720	62,642	17,204
2032	554,159	17,675	10,556	2,669	17,408	977	21,874	7,332	47,235	12,974
2033	525,742	10,807	6,447	1,630	10,632	597	13,377	4,484	28,853	7,929
2034	502,742	6,133	3,651	923	6,022	339	7,592	2,545	16,344	4,495
2035	238,099	1,915	1,139	288	1,878	106	2,373	796	5,101	1,404
TOTAL	123,751,743	42,927,341	25,394,852	7,628,599	41,854,208	1,697,197	50,056,312	12,225,605	159,826,651	41,119,047

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

(in dollars)

CALENDAR YEAR	SOUTHERN CALIFORNIA AREA (continued)				FEATHER RIVER AREA				FUTURE CONTRACTOR	GRAND TOTAL
	San Gorgonio Pass Water Agency	The Metropolitan Water District of Southern California	Ventura County Flood Control District	Total	City of Yuba City	County of Butte	Plumas County FC & WCD	Total	South Bay	
	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)
1963	0	662,250	0	744,328	0	0	0	0	44,559	1,337,240
1964	20,679	1,205,519	8,766	1,513,486	0	0	0	0	80,542	2,395,757
1965	20,957	2,104,923	16,938	2,591,580	0	0	397	397	134,065	4,051,253
1966	36,680	3,781,463	32,159	4,656,562	0	0	550	550	157,103	6,444,955
1967	69,385	7,502,111	66,142	9,196,139	0	0	548	548	199,175	11,380,821
1968	117,334	14,031,663	129,877	16,895,641	0	0	550	550	275,903	20,082,228
1969	182,680	21,365,981	197,745	25,681,929	0	0	3,066	3,066	338,800	29,748,759
1970	268,226	28,341,228	251,514	34,343,270	0	0	14,501	14,501	360,704	38,662,982
1971	376,196	36,484,808	309,055	44,440,575	0	0	15,342	15,342	364,707	49,127,024
1972	437,836	43,109,084	345,937	52,174,055	0	0	16,670	16,670	365,549	57,551,262
1973	467,815	46,308,973	351,723	55,852,253	0	0	16,670	16,670	367,801	61,586,098
1974	477,288	48,119,504	360,959	57,840,517	0	0	16,670	16,670	369,024	63,869,710
1975	487,281	48,723,092	363,672	58,569,592	0	0	16,670	16,670	369,515	64,904,027
1976	495,400	49,036,387	364,170	58,993,458	0	0	16,670	16,670	379,196	66,117,094
1977	498,049	49,155,916	364,571	59,159,597	0	0	16,670	16,670	381,688	66,822,143
1978	498,251	49,179,958	364,767	59,268,108	0	0	16,670	16,670	383,477	67,672,989
1979	498,647	49,228,848	365,240	59,385,584	0	0	16,670	16,670	384,010	69,731,976
1980	499,245	49,355,838	366,431	59,554,525	0	0	16,670	16,670	384,333	71,832,629
1981	500,579	49,581,498	368,568	59,818,797	0	0	16,670	16,670	384,473	72,759,205
1982	503,176	49,873,297	371,409	60,184,632	0	0	16,670	16,670	384,544	73,561,918
1983	506,276	50,212,561	374,718	60,612,667	0	0	16,670	16,670	384,642	74,463,277
1984	508,385	50,443,481	376,971	60,907,660	0	0	16,670	16,670	384,931	75,187,189
1985	510,281	50,651,692	379,003	61,417,485	0	0	16,670	16,670	385,182	76,119,789
1986	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	76,889,210
1987	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	77,298,065
1988	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	77,681,789
1989	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	77,967,108
1990	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
1991	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
1992	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
1993	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
1994	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
1995	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
1996	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
1997	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
1998	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
1999	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
2000	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
2001	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
2002	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
2003	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
2004	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
2005	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
2006	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
2007	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
2008	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
2009	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
2010	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
2011	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
2012	511,141	50,746,266	379,926	61,766,942	0	0	16,670	16,670	385,283	78,281,533
2013	503,249	50,084,015	379,926	60,989,090	0	0	16,670	16,670	340,724	76,904,618
2014	498,695	49,540,747	371,160	60,288,431	0	0	16,670	16,670	304,741	75,896,399
2015	490,184	48,641,342	362,988	59,175,359	0	0	16,273	16,273	251,218	74,200,212
2016	474,461	46,964,803	347,768	57,110,381	0	0	16,120	16,120	228,180	71,803,821
2017	441,756	43,244,155	313,784	52,570,802	0	0	16,122	16,122	186,108	66,863,699
2018	393,807	36,714,603	250,050	44,871,303	0	0	16,120	16,120	109,379	58,671,626
2019	328,461	29,380,284	182,181	36,085,012	0	0	13,605	13,605	46,483	49,547,661
2020	242,914	22,405,038	128,412	27,423,670	0	0	2,170	2,170	24,578	40,748,416
2021	134,944	14,261,458	70,871	17,326,366	0	0	1,328	1,328	20,576	30,605,198
2022	73,305	7,637,182	33,989	9,592,886	0	0	0	0	19,734	22,850,089
2023	43,326	4,437,293	28,203	5,914,690	0	0	0	0	17,482	19,117,197
2024	33,853	2,626,761	18,967	3,926,423	0	0	0	0	16,259	17,116,200
2025	23,859	2,023,174	16,254	3,197,349	0	0	0	0	15,768	16,377,994
2026	15,741	1,709,879	15,756	2,773,485	0	0	0	0	6,087	15,538,284
2027	13,091	1,590,350	15,355	2,607,344	0	0	0	0	3,594	15,225,598
2028	12,890	1,566,308	15,159	2,498,834	0	0	0	0	1,805	14,765,847
2029	12,494	1,517,418	14,686	2,381,355	0	0	0	0	1,273	13,088,885
2030	11,895	1,390,427	13,495	2,212,415	0	0	0	0	950	11,378,090
2031	10,562	1,164,768	11,358	1,948,145	0	0	0	0	810	10,888,435
2032	7,964	872,969	8,517	1,582,309	0	0	0	0	739	10,491,359
2033	4,865	533,705	5,208	1,154,276	0	0	0	0	641	10,046,233
2034	2,756	302,784	2,955	859,281	0	0	0	0	352	9,737,923
2035	860	94,573	923	349,455	0	0	0	0	101	9,210,815
TOTAL	25,557,385	2,537,313,293	18,996,302	3,088,348,535	0	0	833,502	833,502	19,264,146	3,976,796,355

a) Unadjusted for prior overpayments or underpayments of charges.

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

(in dollars)

CALENDAR YEAR	NORTH BAY AREA			SOUTH BAY AREA				CENTRAL COASTAL AREA		
	Napa County FC & WCD	Solano County FC & WCD	Total	Alameda County FC & WCD Zone 7	Alameda County Water District	Santa Clara 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	9,673	8,844	0	18,517	0	0	0
1963	0	0	0	37,767	34,531	82,283	154,581	0	0	0
1964	0	0	0	40,969	38,181	90,978	170,128	0	0	0
1965	0	0	0	78,061	75,470	196,302	349,833	0	0	0
1966	0	0	0	78,102	77,925	218,956	374,983	0	0	0
1967	0	0	0	123,801	121,059	331,521	576,381	1-	2-	3-
1968	274	0	274	111,231	107,727	299,754	518,712	10,822	25,267	36,089
1969	93,907	0	93,907	133,534	127,552	344,661	605,747	63,674	148,652	212,326
1970	96,887	0	96,887	129,451	122,937	328,056	580,444	69,358	161,920	231,278
1971	39,000	0	39,000	108,355	102,987	280,981	492,323	69,073	161,257	230,330
1972	51,645	0	51,645	144,352	136,637	365,090	646,079	65,835	153,695	219,530
1973	53,207	0	53,207	150,035	141,939	378,141	670,115	69,024	161,143	230,167
1974	53,224	0	53,224	147,159	139,192	370,626	656,977	68,994	161,070	230,064
1975	53,204	0	53,204	147,979	139,947	372,079	660,005	69,347	161,896	231,243
1976	55,224	0	55,224	146,897	138,967	369,557	655,421	68,834	160,695	229,529
1977	61,420	0	61,420	146,930	138,999	369,688	655,617	75,317	175,829	251,146
1978	70,471	0	70,471	146,112	138,218	367,562	651,892	75,042	175,195	250,237
1979	68,943	0	68,943	146,532	138,608	368,441	653,581	75,665	176,643	252,308
1980	156,204	116,315	272,519	146,076	138,181	367,243	651,500	214,167	539,522	753,689
1981	145,821	107,266	253,087	146,559	138,637	368,448	653,644	200,199	500,756	700,955
1982	145,760	107,179	252,939	146,631	138,709	368,647	653,987	198,938	497,019	695,957
1983	145,711	107,205	252,916	147,085	139,136	369,661	655,882	200,557	503,256	703,813
1984	144,580	106,284	250,864	146,050	138,158	367,066	651,274	198,314	496,672	694,986
1985	144,825	106,475	251,300	146,138	138,246	367,340	651,724	204,472	510,132	714,604
1986	144,881	106,500	251,381	146,052	138,162	367,089	651,303	204,111	508,945	713,056
1987	145,029	106,660	251,689	146,071	138,179	367,144	651,394	204,593	510,641	715,234
1988	144,156	105,974	250,130	145,384	137,528	365,406	648,318	203,274	507,002	710,276
1989	144,205	106,047	250,252	145,342	137,488	365,303	648,133	203,265	506,933	710,198
1990	144,333	106,239	250,572	145,445	137,573	365,500	648,518	202,964	506,093	709,057
1991	144,302	106,193	250,495	145,275	137,423	365,140	647,838	202,729	504,959	707,688
1992	145,152	106,844	251,996	145,997	138,108	366,968	651,073	204,040	508,457	712,497
1993	145,487	107,097	252,584	146,168	138,267	367,413	651,848	204,159	508,466	712,625
1994	145,480	107,089	252,569	146,304	138,399	367,744	652,447	204,606	510,086	714,692
1995	145,475	107,079	252,554	146,324	138,420	367,794	652,538	204,489	509,562	714,051
1996	144,796	106,572	251,368	145,718	137,846	366,264	649,828	203,472	507,013	710,485
1997	144,791	106,566	251,357	145,718	137,844	366,258	649,820	203,353	506,565	709,918
1998	144,476	106,314	250,790	145,387	137,529	365,436	648,352	202,631	504,368	706,999
1999	144,482	106,320	250,802	145,428	137,567	365,534	648,529	203,344	507,030	710,374
2000	144,477	106,314	250,791	145,446	137,587	365,580	648,613	203,180	506,374	709,554
2001	144,477	106,314	250,791	145,430	137,570	365,541	648,541	203,093	506,106	709,199
2002	144,468	106,301	250,769	145,396	137,537	365,460	648,393	202,791	504,931	707,722
2003	144,468	106,301	250,769	145,405	137,546	365,480	648,431	202,783	504,914	707,697
2004	144,477	106,314	250,791	145,435	137,574	365,547	648,556	202,776	504,885	707,661
2005	144,468	106,301	250,769	145,470	137,609	365,635	648,714	202,759	504,710	707,469
2006	144,468	106,301	250,769	145,441	137,580	365,567	648,588	202,652	504,328	706,980
2007	144,468	106,301	250,769	145,465	137,604	365,625	648,694	202,687	504,452	707,139
2008	144,468	106,301	250,769	145,475	137,614	365,647	648,736	202,711	504,524	707,235
2009	144,468	106,301	250,769	145,481	137,620	365,663	648,764	202,679	504,388	707,067
2010	144,468	106,301	250,769	145,410	137,550	365,494	648,454	202,579	504,122	706,701
2011	144,468	106,301	250,769	145,448	137,588	365,580	648,616	202,615	504,169	706,784
2012	144,460	106,287	250,747	145,395	137,534	365,454	648,383	202,452	503,619	706,071
2013	144,468	106,301	250,769	145,412	137,552	365,497	648,461	202,567	504,071	706,638
2014	144,468	106,301	250,769	145,484	137,623	365,673	648,780	202,723	504,542	707,265
2015	144,468	106,301	250,769	145,436	137,574	365,552	648,562	202,594	504,123	706,717
2016	144,468	106,301	250,769	145,396	137,537	365,460	648,393	202,559	504,047	706,606
2017	144,460	106,287	250,747	145,358	137,499	365,368	648,225	202,373	503,376	705,749
2018	144,468	106,301	250,769	145,427	137,566	365,528	648,521	202,551	503,977	706,528
2019	144,468	106,301	250,769	145,386	137,528	365,434	648,348	202,496	503,837	706,333
2020	144,460	106,287	250,747	145,369	137,511	365,392	648,272	202,393	503,416	705,809
2021	144,460	106,287	250,747	145,369	137,511	365,392	648,272	202,393	503,416	705,809
2022	144,460	106,287	250,747	145,369	137,511	365,392	648,272	202,393	503,416	705,809
2023	144,460	106,287	250,747	145,369	137,511	365,392	648,272	202,393	503,416	705,809
2024	144,460	106,287	250,747	145,369	137,511	365,392	648,272	202,393	503,416	705,809
2025	144,460	106,287	250,747	145,369	137,511	365,392	648,272	202,393	503,416	705,809
2026	144,460	106,287	250,747	145,369	137,511	365,392	648,272	202,393	503,416	705,809
2027	144,460	106,287	250,747	145,369	137,511	365,392	648,272	202,393	503,416	705,809
2028	144,460	106,287	250,747	145,369	137,511	365,392	648,272	202,393	503,416	705,809
2029	144,460	106,287	250,747	145,369	137,511	365,392	648,272	202,393	503,416	705,809
2030	144,460	106,287	250,747	145,369	137,511	365,392	648,272	202,393	503,416	705,809
2031	144,460	106,287	250,747	145,369	137,511	365,392	648,272	202,393	503,416	705,809
2032	144,460	106,287	250,747	145,369	137,511	365,392	648,272	202,393	503,416	705,809
2033	144,460	106,287	250,747	145,369	137,511	365,392	648,272	202,393	503,416	705,809
2034	144,460	106,287	250,747	145,369	137,511	365,392	648,272	202,393	503,416	705,809
2035	144,460	106,287	250,747	145,369	137,511	365,392	648,272	202,393	503,416	705,809
TOTAL	8,808,083	5,968,841	14,776,924	10,180,592	9,642,688	25,629,131	45,452,411	12,140,569	30,120,888	42,261,457

a) Unadjusted for prior overpayments or underpayments of charges.

TABLE B-16: MINIMUM OMP&R COMPONENT OF

(in dollars)

CALENDAR YEAR	SAN JOAQUIN VALLEY AREA									
	Devil's Den Water District	Dudley Ridge Water District	Empire West Side Irrigation District	Hacienda Water District	Kern County Water Agency		County of Kings	Oak Flat Water District	Tulare Lake Basin Water Storage District	Total
					Municipal and Industrial	Agricultural				
	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1962	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0	0
1967	1-	2-	0	0	5-	47-	0	0	5-	60-
1968	7,697	34,793	1,805	5,124	55,871	624,044	1,848	2,249	66,282	799,713
1969	44,738	49,387	2,432	7,275	89,352	1,273,436	2,490	2,247	91,425	1,562,782
1970	48,714	48,400	2,362	7,131	104,071	1,419,624	2,415	2,233	89,143	1,724,093
1971	48,516	48,549	2,347	7,154	109,109	1,623,894	2,402	2,331	88,970	1,933,272
1972	46,263	52,473	2,536	7,731	130,553	1,732,300	2,594	2,584	96,100	2,073,134
1973	48,504	54,941	2,649	8,092	138,551	1,853,595	2,709	2,724	100,522	2,212,287
1974	48,485	55,692	2,687	8,204	137,556	1,851,730	2,749	2,763	101,921	2,211,787
1975	48,735	56,748	2,737	8,359	140,342	1,880,082	2,799	2,803	103,833	2,246,438
1976	48,375	56,228	2,714	8,282	138,386	1,856,919	2,775	2,799	102,931	2,219,409
1977	52,910	55,793	2,692	8,219	137,470	1,819,066	2,753	2,783	102,123	2,183,809
1978	52,719	55,676	2,687	8,201	137,194	1,814,362	2,746	2,774	101,904	2,178,263
1979	53,154	55,839	2,695	8,226	137,709	1,823,128	2,756	2,778	102,195	2,188,480
1980	50,246	55,784	2,693	8,218	137,012	1,787,877	2,755	2,793	102,158	2,149,536
1981	50,190	56,394	2,723	8,307	138,532	1,801,588	2,784	2,825	103,265	2,166,608
1982	49,929	56,420	2,724	8,310	138,689	1,800,646	2,787	2,820	103,298	2,165,623
1983	50,156	56,950	2,751	8,390	139,618	1,811,274	2,814	2,825	104,303	2,179,081
1984	49,789	56,447	2,727	8,316	138,429	1,796,898	2,789	2,795	103,373	2,161,563
1985	54,434	56,748	2,741	8,360	139,164	1,779,759	2,803	2,818	103,915	2,150,742
1986	54,309	56,213	2,713	8,281	138,190	1,769,044	2,776	2,809	102,907	2,137,242
1987	54,332	56,258	2,716	8,286	138,297	1,770,292	2,777	2,810	102,985	2,138,753
1988	54,061	55,942	2,698	8,240	137,668	1,761,900	2,761	2,796	102,393	2,128,459
1989	54,080	56,013	2,705	8,252	137,897	1,764,206	2,766	2,798	102,516	2,131,233
1990	53,935	55,619	2,685	8,194	136,757	1,752,228	2,748	2,783	101,831	2,116,780
1991	54,054	55,942	2,698	8,241	137,731	1,762,402	2,760	2,795	102,394	2,129,017
1992	54,378	56,405	2,721	8,308	138,790	1,775,290	2,783	2,814	103,238	2,144,727
1993	54,433	56,395	2,723	8,308	138,684	1,774,822	2,786	2,816	103,234	2,144,201
1994	54,473	56,502	2,726	8,323	138,985	1,777,971	2,789	2,819	103,421	2,148,009
1995	54,509	56,600	2,731	8,337	139,279	1,781,037	2,795	2,822	103,597	2,151,707
1996	54,200	56,101	2,706	8,265	138,055	1,766,788	2,770	2,802	102,690	2,134,377
1997	54,197	56,095	2,706	8,265	138,054	1,766,740	2,770	2,802	102,679	2,134,308
1998	54,067	55,936	2,700	8,240	137,605	1,761,450	2,761	2,794	102,395	2,127,948
1999	54,088	55,980	2,701	8,247	137,746	1,762,932	2,764	2,795	102,473	2,129,726
2000	54,105	56,030	2,704	8,255	137,883	1,764,369	2,765	2,797	102,561	2,131,469
2001	54,078	55,960	2,701	8,244	137,695	1,762,330	2,764	2,794	102,435	2,129,001
2002	54,094	56,023	2,703	8,254	137,869	1,764,140	2,765	2,797	102,549	2,131,194
2003	54,082	55,994	2,702	8,249	137,768	1,763,068	2,764	2,796	102,497	2,129,920
2004	54,086	55,987	2,702	8,247	137,787	1,763,276	2,764	2,795	102,483	2,130,127
2005	54,139	56,143	2,709	8,270	138,217	1,767,758	2,773	2,801	102,758	2,135,568
2006	54,129	56,117	2,709	8,266	138,146	1,767,015	2,772	2,800	102,713	2,134,667
2007	54,138	56,136	2,709	8,270	138,212	1,767,709	2,773	2,800	102,748	2,135,495
2008	54,144	56,154	2,709	8,272	138,253	1,768,153	2,773	2,801	102,778	2,136,037
2009	54,155	56,182	2,710	8,276	138,330	1,768,947	2,774	2,802	102,827	2,137,003
2010	54,098	56,035	2,704	8,256	137,921	1,764,634	2,765	2,797	102,569	2,131,779
2011	54,138	56,144	2,709	8,271	138,224	1,767,807	2,773	2,801	102,760	2,135,627
2012	54,110	56,081	2,705	8,262	138,024	1,765,702	2,768	2,799	102,649	2,133,100
2013	54,101	56,041	2,704	8,257	137,950	1,764,925	2,765	2,797	102,576	2,132,116
2014	54,161	56,200	2,710	8,279	138,385	1,769,477	2,774	2,803	102,863	2,137,652
2015	54,124	56,103	2,708	8,264	138,115	1,766,656	2,770	2,799	102,688	2,134,227
2016	54,090	56,023	2,704	8,254	137,884	1,764,249	2,765	2,797	102,545	2,131,311
2017	54,078	56,008	2,703	8,252	137,826	1,763,589	2,765	2,796	102,523	2,130,540
2018	54,117	56,093	2,706	8,264	138,077	1,766,258	2,770	2,799	102,666	2,133,750
2019	54,086	56,005	2,703	8,251	137,842	1,763,770	2,764	2,796	102,515	2,130,732
2020	54,096	56,048	2,704	8,258	137,948	1,764,848	2,765	2,798	102,592	2,132,057
2021	54,096	56,048	2,704	8,258	137,948	1,764,848	2,765	2,798	102,592	2,132,057
2022	54,096	56,048	2,704	8,258	137,948	1,764,848	2,765	2,798	102,592	2,132,057
2023	54,096	56,048	2,704	8,258	137,948	1,764,848	2,765	2,798	102,592	2,132,057
2024	54,096	56,048	2,704	8,258	137,948	1,764,848	2,765	2,798	102,592	2,132,057
2025	54,096	56,048	2,704	8,258	137,948	1,764,848	2,765	2,798	102,592	2,132,057
2026	54,096	56,048	2,704	8,258	137,948	1,764,848	2,765	2,798	102,592	2,132,057
2027	54,096	56,048	2,704	8,258	137,948	1,764,848	2,765	2,798	102,592	2,132,057
2028	54,096	56,048	2,704	8,258	137,948	1,764,848	2,765	2,798	102,592	2,132,057
2029	54,096	56,048	2,704	8,258	137,948	1,764,848	2,765	2,798	102,592	2,132,057
2030	54,096	56,048	2,704	8,258	137,948	1,764,848	2,765	2,798	102,592	2,132,057
2031	54,096	56,048	2,704	8,258	137,948	1,764,848	2,765	2,798	102,592	2,132,057
2032	54,096	56,048	2,704	8,258	137,948	1,764,848	2,765	2,798	102,592	2,132,057
2033	54,096	56,048	2,704	8,258	137,948	1,764,848	2,765	2,798	102,592	2,132,057
2034	54,096	56,048	2,704	8,258	137,948	1,764,848	2,765	2,798	102,592	2,132,057
2035	54,096	56,048	2,704	8,258	137,948	1,764,848	2,765	2,798	102,592	2,132,057
TOTAL	3,560,458	3,767,488	182,009	555,027	9,188,917	118,648,677	186,180	187,934	6,900,584	143,177,274

a) Unadjusted for prior overpayments or underpayments of charges.

TRANSPORTATION CHARGE FOR EACH CONTRACTOR[a]

(in dollars)

CALENDAR YEAR	SOUTHERN CALIFORNIA AREA									
	Antelope Valley-East Kern Water Agency	Castaic Lake Water Agency	Coachella Valley County Water District	Crestline Lake Arrowhead Water Agency	Desert Water Agency	Littlerock Creek Irrigation District	Mojave Water Agency	Palmdale 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	5-	1-	1-	0	1-	0	1-	0	3-	1-
1968	59,898	18,154	10,766	2,722	17,756	1,002	22,441	7,523	48,152	13,254
1969	95,765	29,025	17,218	4,355	28,395	1,602	35,879	12,028	77,003	21,193
1970	115,552	35,019	20,785	5,257	34,281	1,934	43,294	14,513	92,960	25,580
1971	177,966	53,935	32,073	8,112	52,891	2,980	66,678	22,352	143,430	39,444
1972	442,359	137,368	137,512	37,069	226,787	8,845	279,934	62,791	655,745	176,204
1973	482,539	152,417	152,846	41,945	252,073	9,715	309,544	68,795	834,195	222,454
1974	490,915	154,807	159,368	43,828	262,830	9,988	322,535	70,508	876,807	233,686
1975	497,385	155,655	160,815	43,889	265,218	10,116	326,192	71,420	875,231	233,829
1976	490,449	151,937	158,742	43,978	261,789	9,978	320,573	70,444	875,434	232,799
1977	487,579	154,058	157,865	43,893	260,357	9,927	318,485	70,080	873,058	231,915
1978	485,531	150,553	155,571	42,089	256,568	9,876	316,338	69,737	839,054	224,776
1979	489,144	155,563	156,729	41,845	258,480	9,967	319,894	70,332	834,728	224,549
1980	487,593	152,283	160,475	47,004	264,661	9,927	318,648	70,079	926,254	242,179
1981	491,421	153,419	158,509	43,427	261,415	10,009	321,153	70,645	862,906	230,268
1982	492,189	155,905	158,776	43,356	261,855	10,029	322,003	70,783	861,707	230,186
1983	492,375	153,086	160,404	45,412	264,543	10,024	321,861	70,763	898,188	237,276
1984	488,380	151,554	158,153	43,637	260,825	9,954	319,767	70,240	866,059	230,600
1985	488,699	154,807	158,445	43,912	261,304	9,956	319,943	70,278	871,054	231,611
1986	522,727	150,337	158,395	43,901	261,228	9,947	319,841	70,195	871,005	231,593
1987	518,830	152,435	158,168	43,380	260,844	9,960	320,347	70,267	861,813	229,893
1988	515,946	157,467	157,783	43,983	260,215	9,895	318,069	69,844	872,084	231,473
1989	516,560	153,991	157,794	43,779	260,232	9,911	318,532	69,948	868,494	230,855
1990	515,572	144,813	157,891	43,795	260,395	9,901	318,738	69,852	868,685	230,915
1991	517,061	159,507	156,072	41,260	257,391	9,928	319,416	70,055	823,714	222,268
1992	520,148	157,541	158,756	43,710	261,820	9,988	321,179	70,466	867,698	231,181
1993	520,319	154,602	158,950	43,917	262,139	9,990	321,247	70,481	871,479	231,944
1994	520,875	155,831	160,534	45,703	264,754	10,003	321,573	70,561	903,218	238,193
1995	521,236	155,162	159,375	44,248	262,838	10,007	321,655	70,602	877,345	233,158
1996	518,481	157,450	157,414	42,491	259,603	9,959	320,287	70,250	845,812	226,745
1997	518,427	148,697	160,415	46,190	264,559	9,956	320,222	70,239	911,519	239,554
1998	517,006	173,227	153,575	38,258	253,274	9,926	319,314	70,043	770,466	211,872
1999	517,496	149,195	160,763	46,858	265,138	9,937	319,707	70,125	923,291	241,753
2000	517,630	148,045	158,227	43,772	260,957	9,941	319,687	70,136	868,434	231,045
2001	517,553	155,866	160,096	45,968	264,029	9,940	319,849	70,137	907,551	238,705
2002	517,895	152,398	158,415	43,837	261,257	9,950	320,028	70,190	869,583	231,330
2003	517,646	156,416	157,473	42,754	259,702	9,944	319,877	70,155	850,378	227,559
2004	518,156	158,744	157,195	42,118	259,245	9,956	320,510	70,250	839,044	225,456
2005	519,051	159,251	160,613	46,025	264,887	9,979	321,094	70,386	908,451	239,098
2006	518,881	145,206	159,866	45,192	263,652	9,972	320,912	70,353	893,716	236,189
2007	519,193	156,701	159,093	44,098	262,377	9,982	321,242	70,408	874,213	232,441
2008	519,018	159,265	157,012	41,687	258,943	9,976	320,956	70,370	831,375	224,034
2009	519,049	157,705	158,719	43,801	261,764	9,975	320,896	70,372	868,961	231,359
2010	518,889	154,994	161,301	46,792	266,020	9,979	321,239	70,382	922,139	241,789
2011	519,196	153,571	159,212	44,243	262,569	9,983	321,233	70,411	876,774	232,942
2012	518,363	162,198	156,841	41,723	258,656	9,961	320,425	70,271	832,031	224,073
2013	518,967	154,984	157,725	42,411	260,119	9,982	321,264	70,389	844,267	226,603
2014	519,298	156,854	161,102	46,591	265,692	9,982	321,148	70,416	918,551	241,078
2015	518,987	157,431	156,801	41,366	258,596	9,977	321,093	70,378	825,704	222,952
2016	519,005	157,071	161,343	46,764	266,094	9,984	321,416	70,405	921,590	241,713
2017	518,449	153,671	158,521	43,623	261,433	9,966	320,759	70,302	865,766	230,712
2018	519,089	165,255	158,019	42,755	260,606	9,982	321,304	70,406	850,350	227,798
2019	518,869	154,854	158,097	42,858	260,735	9,978	321,283	70,385	852,180	228,150
2020	518,586	152,970	160,804	46,409	265,200	9,968	320,760	70,318	915,341	240,384
2021	518,586	152,970	160,804	46,409	265,200	9,968	320,760	70,318	915,341	240,384
2022	518,586	152,970	160,804	46,409	265,200	9,968	320,760	70,318	915,341	240,384
2023	518,586	152,970	160,804	46,409	265,200	9,968	320,760	70,318	915,341	240,384
2024	518,586	152,970	160,804	46,409	265,200	9,968	320,760	70,318	915,341	240,384
2025	518,586	152,970	160,804	46,409	265,200	9,968	320,760	70,318	915,341	240,384
2026	518,586	152,970	160,804	46,409	265,200	9,968	320,760	70,318	915,341	240,384
2027	518,586	152,970	160,804	46,409	265,200	9,968	320,760	70,318	915,341	240,384
2028	518,586	152,970	160,804	46,409	265,200	9,968	320,760	70,318	915,341	240,384
2029	518,586	152,970	160,804	46,409	265,200	9,968	320,760	70,318	915,341	240,384
2030	518,586	152,970	160,804	46,409	265,200	9,968	320,760	70,318	915,341	240,384
2031	518,586	152,970	160,804	46,409	265,200	9,968	320,760	70,318	915,341	240,384
2032	518,586	152,970	160,804	46,409	265,200	9,968	320,760	70,318	915,341	240,384
2033	518,586	152,970	160,804	46,409	265,200	9,968	320,760	70,318	915,341	240,384
2034	518,586	152,970	160,804	46,409	265,200	9,968	320,760	70,318	915,341	240,384
2035	518,586	152,970	160,804	46,409	265,200	9,968	320,760	70,318	915,341	240,384
TOTAL	33,186,978	10,007,799	10,239,471	2,858,125	16,886,990	644,014	20,633,663	4,547,829	56,515,099	14,994,369

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

(m dollars)

CALENDAR YEAR	SOUTHERN CALIFORNIA AREA (continued)				FEATHER RIVER AREA				FUTURE CONTRACTOR	GRAND TOTAL
	San Gorgonio Pass Water Agency	The Metropolitan Water District of Southern California	Ventura County Flood Control District	Total	City of Yuba City	County of Butte	Plumas County FC & WCD	Total	South Bay	
	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)
1962	0	0	0	0	0	0	0	0	0	18,517
1963	0	0	0	0	0	0	0	0	12,532	167,113
1964	0	0	0	0	0	0	0	0	13,887	184,015
1965	0	0	0	0	0	0	0	0	29,052	378,885
1966	0	0	0	0	0	0	0	0	31,509	406,492
1967	1-	71-	1-	86-	0	0	0	0	47,825	624,057
1968	8,119	895,362	8,748	1,113,897	0	0	0	0	43,181	2,511,866
1969	12,984	1,437,497	13,987	1,786,931	0	0	0	0	49,655	4,311,348
1970	15,675	1,742,318	16,877	2,164,045	0	0	0	0	84,619	4,881,366
1971	24,183	2,702,763	25,993	3,352,800	0	0	72	72	56,579	6,104,376
1972	108,587	8,336,461	64,775	10,674,437	0	0	218	218	100,971	13,766,014
1973	137,558	9,793,600	71,219	12,528,900	0	0	232	232	106,251	15,801,159
1974	144,543	10,228,414	72,212	13,070,441	0	0	253	253	104,024	16,326,770
1975	144,565	10,277,957	72,682	13,134,954	0	0	250	250	105,998	16,432,092
1976	144,035	10,255,978	71,174	13,087,310	0	0	246	246	103,652	16,350,791
1977	143,516	9,931,492	71,737	12,753,962	0	0	243	243	103,531	16,009,728
1978	138,904	10,170,974	70,510	12,930,481	0	0	236	236	102,946	16,184,526
1979	138,666	10,040,321	72,277	12,812,495	0	0	239	239	103,180	16,079,226
1980	150,252	10,334,546	71,164	13,235,065	0	0	243	243	102,834	17,165,386
1981	142,384	9,951,084	71,684	12,768,324	0	0	248	248	103,180	16,646,046
1982	142,308	10,425,605	72,533	13,247,235	0	0	249	249	103,256	17,119,246
1983	146,958	10,420,323	71,640	13,292,853	0	0	248	248	103,672	17,188,465
1984	142,640	10,154,058	70,954	12,966,821	0	0	234	234	102,884	16,828,626
1985	143,295	10,369,457	72,042	13,194,803	0	0	238	238	103,029	17,066,440
1986	143,284	9,981,311	70,538	12,834,302	0	0	239	239	102,902	16,690,425
1987	142,161	10,140,926	71,251	12,980,275	0	0	240	240	102,883	16,840,468
1988	143,255	10,353,233	72,812	13,206,059	0	0	230	230	102,403	17,045,875
1989	142,836	10,257,595	71,700	13,102,227	0	0	230	230	102,353	16,944,626
1990	142,873	9,753,443	68,648	12,585,521	0	0	230	230	102,254	16,412,932
1991	137,188	10,157,492	73,531	12,944,883	0	0	230	230	102,257	16,782,408
1992	142,984	10,563,730	73,010	13,422,211	0	0	240	240	102,785	17,285,529
1993	143,479	10,291,290	72,059	13,151,896	0	0	245	245	102,842	17,016,241
1994	147,565	10,414,263	72,476	13,325,549	0	0	245	245	103,021	17,196,532
1995	144,263	10,160,526	72,279	13,032,694	0	0	245	245	103,054	16,906,843
1996	140,099	10,274,576	72,924	13,096,091	0	0	242	242	102,605	16,944,996
1997	148,496	10,321,927	70,054	13,230,255	0	0	242	242	102,603	17,078,503
1998	130,379	10,497,493	78,032	13,222,865	0	0	246	246	102,315	17,059,515
1999	149,949	10,232,683	70,183	13,157,078	0	0	246	246	102,368	16,999,123
2000	142,933	10,211,080	69,819	13,051,706	0	0	246	246	102,394	16,894,773
2001	147,949	10,303,428	72,367	13,213,438	0	0	246	246	102,372	17,053,588
2002	143,109	10,209,271	71,250	13,058,513	0	0	246	246	102,326	16,899,163
2003	140,644	10,338,156	72,551	13,163,255	0	0	246	246	102,339	17,002,657
2004	139,247	10,312,481	73,329	13,125,731	0	0	246	246	102,377	16,965,489
2005	148,176	10,406,960	73,525	13,327,496	0	0	246	246	102,424	17,172,686
2006	146,274	10,126,757	68,927	13,005,897	0	0	246	246	102,386	16,849,533
2007	143,813	10,210,244	72,697	13,076,502	0	0	246	246	102,418	16,921,263
2008	138,310	10,477,003	73,534	13,281,483	0	0	246	246	102,430	17,126,936
2009	143,110	10,414,790	73,026	13,273,527	0	0	246	246	102,438	17,119,814
2010	149,937	10,302,304	72,121	13,237,886	0	0	246	246	102,346	17,078,181
2011	144,140	10,320,605	71,672	13,186,551	0	0	246	246	102,394	17,030,987
2012	138,347	10,494,382	74,468	13,301,739	0	0	246	246	102,324	17,142,610
2013	139,985	10,225,345	72,122	13,044,163	0	0	246	246	102,347	16,884,740
2014	149,470	10,560,643	72,753	13,493,578	0	0	246	246	102,444	17,340,734
2015	137,596	10,253,201	72,930	13,047,012	0	0	246	246	102,378	16,889,911
2016	149,882	10,302,311	72,805	13,240,383	0	0	246	246	102,327	17,080,035
2017	142,688	10,311,013	71,673	13,158,576	0	0	246	246	102,276	16,996,359
2018	140,766	10,548,337	75,490	13,390,157	0	0	246	246	102,365	17,232,336
2019	140,999	10,248,885	72,074	13,079,347	0	0	246	246	102,314	16,918,089
2020	149,029	10,234,750	71,454	13,155,973	0	0	246	246	102,291	16,995,395
2021	149,029	10,234,750	71,454	13,155,973	0	0	246	246	102,291	16,995,395
2022	149,029	10,234,750	71,454	13,155,973	0	0	246	246	102,291	16,995,395
2023	149,029	10,234,750	71,454	13,155,973	0	0	246	246	102,291	16,995,395
2024	149,029	10,234,750	71,454	13,155,973	0	0	246	246	102,291	16,995,395
2025	149,029	10,234,750	71,454	13,155,973	0	0	246	246	102,291	16,995,395
2026	149,029	10,234,750	71,454	13,155,973	0	0	246	246	102,291	16,995,395
2027	149,029	10,234,750	71,454	13,155,973	0	0	246	246	102,291	16,995,395
2028	149,029	10,234,750	71,454	13,155,973	0	0	246	246	102,291	16,995,395
2029	149,029	10,234,750	71,454	13,155,973	0	0	246	246	102,291	16,995,395
2030	149,029	10,234,750	71,454	13,155,973	0	0	246	246	102,291	16,995,395
2031	149,029	10,234,750	71,454	13,155,973	0	0	246	246	102,291	16,995,395
2032	149,029	10,234,750	71,454	13,155,973	0	0	246	246	102,291	16,995,395
2033	149,029	10,234,750	71,454	13,155,973	0	0	246	246	102,291	16,995,395
2034	149,029	10,234,750	71,454	13,155,973	0	0	246	246	102,291	16,995,395
2035	149,029	10,234,750	71,454	13,155,973	0	0	246	246	102,291	16,995,395
TOTAL	9,279,821	661,201,823	4,664,101	845,660,082	0	0	15,655	15,655	6,938,967	1,098,282,770

a) Unadjusted for prior overpayments or underpayments of charges.

TABLE B-17: UNIT VARIABLE OMP&R COMPONENT OF TRANSPORTATION CHARGE[a]

(in dollars per acre-foot)

Calendar Year	NORTH BAY AQUEDUCT				SOUTH BAY AQUEDUCT		CALIFORNIA AQUEDUCT			
	Reach 1		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 5059458	3 5059458	0	0	0	0
1967	0	0	0	0	3.9199302	5 1197049	1.1997747	1 1997747	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 2359509	3 2359509	3.7150562	4.7429029	1 0278467	1 0278467	.7699713	1 7978180
1970	0	0	3 8067993	3 8067993	4.4352166	5.4241796	9889630	.9889630	8466408	1 8356038
1971	0	0	4 2669576	4 2669576	3 8834091	4 7844135	9010044	9010044	4482064	1 3492108
1972	0	0	3.8890329	3 8890329	4.5151227	5 3840002	8688775	8688775	5479504	1 4168279
1973	0	0	3 5650624	3.5650624	4.2597093	5 4373644	1 1776551	1 1776551	5061987	1.6838538
1974	0	0	3.5017509	3 5017509	4.2703350	5 0355547	7652197	7652197	4770470	1.2422667
1975	0	0	3 4196385	3.4196385	4 2000321	5.8830594	1 6830273	1 6830273	5395709	2 2225982
1976	0	0	3.3637674	3 3637674	4 1884190	5 3846250	1 1962060	1 1962060	4796545	1 6758605
1977	0	0	2 8129395	2 8129395	4 1216096	5.3439782	1 2223686	1 2223686	4737013	1 6960699
1978	0	0	2.1153846	2 1153846	3 8612433	5 2126149	1 3513716	1 3513716	4528134	1.8041850
1979	0	0	2 2058824	2.2058824	4.0175522	5 4348123	1 4172601	1 4172601	5093074	1 9265675
1980	.3003279	3003279	3 7882353	4.0885632	4.5441082	5 6705053	1 1263971	1.1263971	.5206283	1 6470254
1981	2673988	2673988	3 3548387	3.6222375	4 2908441	5 7707263	1 4798822	1 4798822	5392722	2 0191544
1982	2392308	2392308	3 2871287	3 5263595	4 2575980	5 8015166	1 5439186	1 5439186	.5509805	2 0948991
1983	4458393	4458393	3.7570093	4.2028486	4.8950685	6 5188512	1 6237827	1 6237827	.5757893	2 1995720
1984	.3772039	.3772039	3 5575221	3.9347260	4 6471160	6.2405840	1 5934680	1 5934680	5662638	2 1597318
1985	3806594	3806594	3 3500000	3.7306594	4.5329744	6.3291617	1.7961873	1 7961873	5707283	2 3669156
1986	.3351266	.3351266	4.0303030	4 3654296	4 4361415	6 0974466	1 6613051	1.6613051	.5942643	2.2555694
1987	.4448329	4448329	3 8714286	4.3162615	4.3149433	5 9780751	1 6631318	1 6631318	.6097853	2.2729171
1988	.4156456	4156456	3.7808219	4.1964675	4.2642177	5 9991648	1 7349471	1 7349471	.6358523	2.3707994
1989	.5026106	.5026106	3.5466667	4 0492773	4 0560671	5.9140058	1 8579387	1 8579387	6195459	2 4774846
1990	.7312570	.7312570	3.8838710	4 6151280	4.3568354	5.6040653	1 2472299	1 2472299	7347609	1.9819908
1991	.6761496	6761496	3 4235294	4 0996790	4 0339457	5.7437711	1 7098254	1 7098254	.7006605	2 4104859
1992	.6643369	6643369	3.2888889	3.9532258	4.0116548	5.8056657	1 7940109	1 7940109	7019372	2.4959481
1993	.6529225	.6529225	3 8526316	4.5055541	3 9274757	5.5620995	1.6346238	1 6346238	6947930	2 3294168
1994	.6418858	.6418858	3.7100000	4.3518858	4 1179362	5.8777879	1 7598517	1.7598517	6892339	2 4490856
1995	6312245	.6312245	3 5333333	4 1645578	4 0454574	5 9381902	1.8927328	1.8927328	6815230	2 5742558
1996	6699331	6699331	3 5545455	4 2244786	4 2163032	5 8549885	1.6386853	1 6386853	.7052613	2 3439466
1997	.6623636	6623636	3 4889868	4.1513504	4 2266596	5.8508881	1.6242285	1 6242285	7250487	2.3492772
1998	.6379608	6379608	3 2851064	3.9230672	4 0816968	5 6492631	1 5675663	1 5675663	.6926840	2 2602503
1999	.6466935	6466935	3 2727273	3.9194208	4.1282872	5 7425791	1 6142919	1 6142919	.7052634	2 3195553
2000	6386306	6386306	3 1280000	3 7666306	4.1127606	5.7875767	1.6748161	1 6748161	6994874	2.3743035
2001	6386306	6386306	3.1680000	3 8066306	4 1593511	5 7495247	1 5901736	1.5901736	7054819	2 2956555
2002	.6230573	.6230573	3 0480000	3.6710573	4.0040372	5.6703521	1.6663149	1.6663149	7001639	2.3664788
2003	.6230573	6230573	3 0880000	3 7110573	4.0506330	5 6908272	1 6401942	1 6401942	6814478	2 3216420
2004	.6386306	.6386306	3.1680000	3.8066306	4 1438245	5 7578140	1 6139895	1 6139895	.7226125	2.3366020
2005	6230573	.6230573	3.0880000	3 7110573	4 0351011	5 8398155	1 8047144	1 8047144	.7013418	2.5060562
2006	.6230573	6230573	3 0480000	3.6710573	3 9988564	5.7730637	1.7742073	1 7742073	7014538	2.4756611
2007	.6230573	6230573	3 0880000	3 7110573	4 0351011	5.8289733	1.7938722	1 7938722	7092255	2 5030977
2008	.6230573	.6230573	3 0880000	3 7110573	4.0351011	5 8513302	1 8162291	1.8162291	7036823	2 5199114
2009	.6230573	6230573	3 0880000	3.7110573	4 0143936	5 8655951	1 8512015	1.8512015	6985195	2 5497210
2010	6230573	6230573	3 0880000	3.7110573	4.0247447	5 7024007	1 6776560	1.6776560	7087810	2 3864370
2011	.6230573	6230573	3 0480000	3 6710573	3 9833298	5 7875035	1 8041737	1.8041737	.7048621	2 5090358
2012	.6074841	.6074841	3 0080000	3.6154841	3 9263777	5 6644626	1.7380849	1 7380849	6884102	2.4264951
2013	.6230573	6230573	3.0880000	3.7110573	4.0299202	5 7064503	1.6765301	1.6765301	.7229083	2.3994384
2014	6230573	6230573	3.0880000	3 7110573	3 9988564	5 8737150	1 8748586	1.8748586	.6963843	2 5712429
2015	6230573	6230573	3 0880000	3.7110573	4.0040372	5 7600992	1.7560620	1 7560620	.7063930	2 4624550
2016	.6230573	6230573	3 0880000	3 7110573	4 0092128	5 6701808	1 6609680	1 6609680	.7103154	2.3712834
2017	6074841	6074841	3 0080000	3 6154841	3.9263777	5 5812288	1.6548511	1 6548511	6873794	2 3422305
2018	.6230573	.6230573	3 0880000	3 7110573	3 9936862	5 7370689	1 7433827	1 7433827	7051320	2 4485147
2019	6230573	.6230573	3 0880000	3 7110573	4.0092128	5 6467500	1 6375372	1 6375372	7180773	2 3556145
2020 (c	.6074841	.6074841	3 0080000	3 6154841	3.9108511	5 6063975	1 6955464	1 6955464	6999231	2 3954695

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)

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 6666667	5 5022705	0	0	0	0	0	0	0	0
1971	1 4043660	2 7535768	2 8676802	5 6212570	0	0	0	0	0	0
1972	1 0502244	2 4670523	1 0044269	3 4714792	2 1005177	5 5719969	7 0982609	12 6702578	2 7219459	15 3922037
1973	9313317	2 6151855	9679256	3 5831111	2 1615838	5 7446949	7 4922459	13 2369408	3 1207079	16 3576487
1974	7971088	2 0393755	8982231	2.9375986	2 0037248	4 9413234	6 9373473	11 8786707	2 6373355	14 5160062
1975	9320674	3 1546656	9568257	4 1114913	2.1345340	6 2460253	7 3870978	13 6331231	2 6274867	16 2606098
1976	9313807	2 6072412	9719024	3 5791436	2 1694849	5 7486285	7 5121628	13 2607913	2 7766244	16 0374157
1977	8745855	2 5706554	9917202	3 5623756	2 2221414	5 7845170	7 6949514	13 4794684	2 7317936	16 2112620
1978	8675873	2 6717723	9233838	3 5951561	2 0673066	5 6624627	7 1562462	12 8187089	2 4834307	15 3021396
1979	9350140	2 8615815	1 0686028	3 9301843	2 4050268	6 3352111	8.3550747	14 6902858	3 0007576	17 6910434
1980	9603389	2 6073643	1 0216774	3 6290417	2 2959090	5 9249507	7 9712252	13 8961759	2 9761132	16 8722891
1981	9799811	2 9991355	1 0571672	4.0563027	2 3831910	6 4394937	8 2791118	14 7186055	2 9394596	17 6580651
1982	9977419	3 0926410	1 0866157	4 1792567	2 4496457	6 6289024	8 5229702	15 1518726	3 0269557	18 1788283
1983	9693454	3 1689174	1 0326304	4 2015478	2 3263931	6 5279409	8 1332496	14 6611905	3 4657507	18 1269412
1984	9995696	3 1593014	1 0849547	4 2442561	2 4446366	6.6888927	8 6217704	15 3106631	3 1108471	18 4215102
1985	1 0300871	3 3970027	1 0385979	4 4356006	2 3405734	6 7761740	8 2543639	15 0305379	3.2796181	18 3101560
1986	9888368	3 2444062	1 0881541	4.3325603	2 4539461	6 7865064	8 6818690	15 4683754	3 0154403	18 4838157
1987	9927029	3 2656200	1 1036865	4.3693065	2 4885121	6 8578186	8 8168288	15 6746474	3 1731209	18 8477683
1988	1 0082955	3 3790949	1 0512814	4 4303763	2 3693982	6 7997745	8 3837264	15 1835009	3 0352016	18 2187025
1989	1 0139246	3 4914092	1 0727157	4 5641249	2 4193010	6 9834259	8 5730753	15 5565012	2 9427671	18 4992683
1990	1 0856486	3 0676394	1 1403160	4 2079554	2 5736264	6 7815818	9 1403077	15 9218895	3 1927481	19 1146376
1991	1 0611234	3 4716093	1 1287861	4 6003954	2 5457064	7 1461018	9 0341718	16 1802736	3 0837575	19 2640311
1992	1.0554277	3 5513758	1.1201803	4 6715561	2 5256930	7 1972491	8 9602772	16 1575263	2 9965387	19 1540650
1993	1 0462677	3 3756845	1.1122254	4 4879099	2 5069698	6 9948797	8 8910245	15 8859042	2 9696799	18 8555841
1994	1.0355132	3 4845988	1 0996345	4 5842333	2 6378777	7 2221110	8 7868923	16 0090033	2 9784127	18 9874160
1995	1 0247976	3 5990534	1 0894704	4 6885238	2 6121841	7 3007079	8 7086435	16 0093514	2 9776077	18 9869591
1996	1 1080307	3 4519773	1 1860376	4 6380149	2 6731548	7 3111697	8 8965307	16 2077004	3 0397247	19 2474251
1997	1 1040520	3 4533292	1 1818642	4 6351934	2 6629046	7 2980980	8 8606543	16 1587523	3 0383538	19 1971061
1998	1 0547696	3 3150199	1 1290458	4.4440657	2 5430340	6 9870997	9 0160763	16 0031760	3 0414924	19 0446684
1999	1 0713391	3 3908944	1 1462952	4 5371896	2 5830566	7 1202462	9 1629279	16 2831741	2 9661480	19 2493221
2000	1 0635676	3 4378711	1 1377720	4 5756431	2 5632595	7 1389026	9 0915900	16 2304926	2 9255438	19 1560364
2001	1 0653241	3 3609796	1 2083331	4 5693127	2 7214740	7 2907867	9 0951195	16 3859062	3 0135677	19 3994739
2002	1.0774978	3 4439766	1 1629427	4.6069193	2 6190254	7 2259447	9 2901924	16 5161371	2.8937990	19 4099361
2003	1 0277584	3 3494004	1 1649451	4 5143455	2 6226329	7 1369784	9 3015232	16 4385016	2.9207814	19 3592830
2004	1 0967898	3 4333918	1 1810518	4 6144436	2 8124884	7 4269320	9 4309305	16 8578625	3 0319281	19 8897906
2005	1 0649288	3 5709850	1 2130389	4 7840239	2 7298774	7 5139013	9 6890521	17 2029534	2 9178132	20 1207666
2006	1 1083227	3 5839838	1 2030436	4.7870274	2 7074921	7 4945195	9 6088334	17 1033529	2 8660064	19 9693593
2007	1 1104503	3 6135480	1 2045647	4 8181127	2 8578803	7 6759930	9 6201634	17 2961564	2 9388107	20 2349671
2008	1 0941906	3 6141020	1 1855627	4 7996647	2 8125353	7 6122000	9 4612159	17 0734159	2 9028349	19 9762508
2009	1 0869750	3 6366960	1 1780563	4 8147523	2 7935029	7.6082552	9 3988347	17 0070899	2 8819585	19 8890484
2010	1.0883578	3 4747948	1 2433420	4 7181368	2 7965297	7 5146665	9 9240073	17 4386738	2 9043861	20 3430599
2011	1.0724219	3.5814577	1 2246463	4 8061040	2 7545345	7.5606385	9 7722817	17 3329202	2 8608809	20 1938011
2012	1 0412632	3 4677583	1 1874796	4 6552379	2.6702612	7 3254991	9 4658854	16 7913845	2 8498916	19 6412761
2013	1 1252620	3 5247004	1 2263933	4 7510937	2.9003016	7.6513953	9 7824326	17 4338279	2 9095909	20 3434188
2014	1 05152'32	3 6227661	1 1990589	4 8218250	2 8321891	7 6540141	9 5535351	17 2075492	2 8409322	20 0484814
2015	1.1036723	3 5661273	1 2407352	4 8068625	2 8406563	7 6475188	9 5814109	17 2289297	2 9102021	20 1391318
2016	1 0998088	3 4710922	1 2592893	4 7303815	2.8305183	7 5608998	10 0406117	17 6015115	2 8822980	20 4838095
2017	1 0700615	3 4122920	1 2244003	4 6366923	2.7513178	7 3880101	9 7551785	17 1431886	2 8178475	19 9610361
2018	1 0831124	3 5316271	1 2390024	4 7706295	2 7845415	7 5551710	9 8707929	17 4259639	2 9062367	20 3322006
2019	1 0860788	3 4416933	1.2424061	4 6840994	2 9279984	7 6120978	9 8989661	17 5110639	2 8831335	20 3941974
2020 (C	1.0550314	3 4505009	1.2058563	4 6563572	2 8395529	7 4959101	9 6032631	17 0991732	2 8027132	19 9018864

PONENT OF TRANSPORTATION CHARGE[a]

(in dollars per acre-foot)

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 3313837	3 1292017	0	0
1970	0	0	0	0	0	0	1 6943060	3 5299098	0	0
1971	0	0	0	0	0	0	1 5288409	2 8780517	0	0
1972	-2 9764162	12 4157875	1 4428429	14 1131007	-3 4239000	10 6892007	1 9192263	3 3360542	0	0
1973	-4 9911976	11 3664511	1 0498968	14 2868376	-7 0790323	7 2078053	1 8900266	3 5738804	0	0
1974	-4 1097484	10 4062578	9376539	12 8163246	-5 1456211	7 6707035	1 9227082	3 1649749	0	0
1975	-5 0034398	11 2571700	1 0548904	14 6880135	-8 5973313	6 0906822	1 8049823	4 0275805	0	0
1976	-5 1606919	10 8767238	9094093	14 1702006	-9 3244810	4 8457196	1 7678881	3 4437486	0	0
1977	-5 3164160	10 8948460	9564511	14 4359195	-9 3731914	5 0627281	1 6619333	3 3580032	0	0
1978	-5 4596139	9 8425257	9354626	13 7541715	-10 0464797	3 7076918	1 3489569	3 1531419	0	0
1979	-5 9711972	11 7198462	9576278	15 6479136	-9 9642145	5 6836991	1 3787647	3 3053322	0	0
1980	-6 0498974	10 8223917	8681939	14 7643698	-11 1087509	3 6556189	1 6139303	3 2609557	11 0535556	14 3145113
1981	-6 0395672	11 6184979	9861716	15 7047771	-10 5126579	5 1921192	1 4957398	3 5148942	9 9048077	13 4197019
1982	-6 0587405	12 1200878	8812116	16 0330842	-9 1861618	6 8469224	1 5347793	3 6296784	8 9866406	12 6163190
1983	-5 7005162	12 4264250	7158569	15 3770474	-8 3659016	7 0111458	1 7562772	3 9558492	12 6321711	16 5880203
1984	-5 7229351	12 6985751	7382340	16 0488971	-7 9475517	8 1013454	1 6390262	3 7987580	11 0246409	14 8233989
1985	-5 4715266	12 8386294	6607010	15 6912389	-7 3221939	8 3690450	1 6750294	4 0419450	9 3441333	13 3860783
1986	-5 6817970	12 8020187	6598591	16 1282345	-6 5355281	9 5927064	1 6081722	3 8637416	8 9861278	12 8498694
1987	-5 4165602	13 4312081	5633369	16 2379843	-6 0585303	10 1794540	1 5380468	3 8109639	9 8723453	13 6833092
1988	-5 0658375	13 1528650	7483175	15 9318184	-5 1059442	10 8258742	1 4948222	3 8656216	9 1946742	13 0602958
1989	-5 7961168	12 7031515	7859850	16 3424862	-5 3203574	11 0221288	1 4069631	3 8844477	9 1009179	12 9853656
1990	-5 5346392	13 5799984	9108395	16 8327290	-5 1576783	11 6750507	1 5020899	3 4840807	9 2988125	12 7828932
1991	-6 0907051	13 1733260	8855171	17 0657907	-5 3520173	11 7137734	1 4010077	3 8114936	8 0894202	11 9009138
1992	-5 7112921	13 4427729	7452356	16 9027619	-5 1107061	11 7920558	1 4043833	3 9003314	8 4411044	12 3414358
1993	-5 3241219	13 5314622	8191231	16 7050273	-4 8132267	11 8918006	1 3856649	3 7150817	8 1519112	11 8669929
1994	-5 6487213	13 3386947	7951968	16 8042001	-5 1505897	11 6536104	1 3760448	3 8251304	8 8944160	12 7195464
1995	-5 7317702	13 2551889	9233888	16 9327402	-5 1434578	11 7892824	1 3450281	3 9192839	8 4316820	12 3509659
1996	-5 4113672	13 8360579	9449189	17 1526193	-5 3600107	11 7926086	1 3915796	3 7355262	8 5174855	12 2530117
1997	-5 7766674	13 4204387	7890378	16 9477901	-4 8358292	12 1119609	1 3821839	3 7314611	8 2659324	11 9973935
1998	-5 7916787	13 2529897	8672748	16 8704508	-4 2961976	12 5742532	1 3310486	3 5912989	7 7255627	11 3168616
1999	-5 1226609	14 1266612	9675542	17 2507283	-4 7592390	12 4914893	1 3390246	3 6585799	9 1495350	12 8081149
2000	-5 0946545	14 0613819	1 0952871	17 3257797	-4 6860929	12 6396868	1 3262881	3 7005916	8 6973135	12 3979051
2001	-5 9095743	13 4898996	1 0064965	17 3924027	-4 7490983	12 6433044	1 3300808	3 6257363	8 6692173	12 2949536
2002	-5 8276697	13 5822664	1 0927550	17 6088921	-4 9043904	12 7045017	1 2732715	3 6397503	7 9502244	11 5899747
2003	-5 3379933	14 0212897	1 0861416	17 5246432	-4 6171077	12 9075355	1 2854796	3 6071216	7 9951200	11 6022416
2004	-5 7902222	14 0995684	1 0208224	17 8786849	-5 3404950	12 5381899	1 3014340	3 6380360	7 9407118	11 5787478
2005	-5 6556590	14 4651076	9422164	18 1451698	-4 8227448	13 3224250	1 2621357	3 7681919	7 6065901	11 3747820
2006	-5 6265445	14 3428148	9976129	18 1009658	-4 6916580	13 4093078	1 2503593	3 7260204	7 4534704	11 1794908
2007	-5 8025377	14 4324294	1 0404084	18 3365648	-5 1435232	13 1930416	1 2621357	3 7652334	7 4652479	11 2304813
2008	-5 6413672	14 3348836	9624949	18 0359108	-5 1576321	12 8782787	1 2621357	3 7820471	7 4770375	11 2590846
2009	-5 8847460	14 0043024	1 0671860	18 0742759	-5 0843731	12 9899028	1 2542834	3 8040044	7 3592503	11 1632547
2010	-5 5274185	14 8156414	1 0628003	18 5014741	-4 6751668	13 8263073	1 2542834	3 6407204	7 4770375	11 1177579
2011	-5 4829123	14 7108888	1 0476788	18 3805990	-4 8488282	13 5317708	1 2464311	3 7554669	7 3121282	11 0675951
2012	-5 8352859	13 8059902	9964515	17 7878360	-4 7324664	13 0553696	1 2228782	3 6493733	7 1590085	10 8083818
2013	-5 7458323	14 5975865	1 0359067	18 4697346	-4 8378675	13 6318671	1 2542834	3 6537218	7 4299154	11 0836372
2014	-5 8114157	14 2370657	1 0118838	18 2194330	-4 7730818	13 4463512	1 2503593	3 8216022	7 4181378	11 2397400
2015	-5 7078601	14 4312717	1 1023357	18 3312654	-4 9001640	13 4311014	1 2503593	3 7128143	7 3592503	11 0720646
2016	-5 5603401	14 9234694	1 0507777	18 6522892	-4 5058592	14 1464300	1 2503593	3 6216427	7 4652479	11 0868906
2017	-5 4636506	14 4973855	9709399	18 1141285	-4 8248055	13 2893230	1 2228782	3 5651087	7 1590085	10 7241172
2018	-5 8646052	14 4675954	1 0680222	18 4939861	-4 5707290	13 9232571	1 2464311	3 6949458	7 3003507	10 9952965
2019	-5 6404322	14 7537652	1 0758585	18 5869224	-4 6933977	13 8935247	1 2503593	3 6059738	7 3710278	10 9770016
2020 (c	-5 3426177	14 5592687	1 0451098	18 1442830	-4 6874777	13 4568053	1 2189501	3 6144196	7 1001209	10 7145405

TABLE B-18: VARIABLE OMP&R COMPONENT OF

(in dollars)

CALENDAR YEAR	NORTH BAY AREA			SOUTH BAY AREA				CENTRAL COASTAL AREA		
	Napa County FC & WCD	Solano County FC & WCD	Total	Alameda County FC & WCD, Zone 7	Alameda County Water District	Santa Clara 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	19,321	52,112	121,089	192,522	0	0	0
1967	0	0	0	19,345	56,793	160,212	236,350	0	0	0
1968	7,149	0	7,149	29,612	119,826	338,495	487,933	0	0	0
1969	8,695	0	8,695	31,469	3,856	295,313	330,638	0	0	0
1970	13,773	0	13,773	50,168	0	435,622	485,790	0	0	0
1971	10,757	0	10,757	24,003	28,520	419,143	471,666	0	0	0
1972	15,000	0	15,000	66,762	161,520	473,791	702,073	0	0	0
1973	14,000	0	14,000	73,948	102,223	478,488	654,659	0	0	0
1974	14,000	0	14,000	74,526	98,697	443,128	616,351	0	0	0
1975	14,000	0	14,000	94,129	120,603	517,708	732,440	0	0	0
1976	14,000	0	14,000	92,616	114,692	473,847	681,155	0	0	0
1977	12,000	0	12,000	98,330	118,637	470,269	687,236	0	0	0
1978	11,000	0	11,000	104,252	120,412	458,710	683,374	0	0	0
1979	15,000	0	15,000	120,109	129,892	478,264	728,265	0	0	0
1980	34,753	2,027	36,780	136,093	140,629	499,004	775,726	14,315	114,515	128,830
1981	33,687	2,139	35,826	148,885	150,039	507,824	806,748	13,420	126,145	139,565
1982	35,616	2,249	37,865	160,122	157,802	510,533	828,457	25,233	136,257	161,490
1983	44,970	4,606	49,576	192,958	185,135	573,659	951,752	49,764	202,374	252,138
1984	44,462	4,210	48,672	196,578	184,722	549,171	930,471	66,706	201,598	268,304
1985	44,768	4,899	49,667	212,027	194,939	556,965	963,931	100,395	200,791	301,186
1986	57,624	5,107	62,731	215,849	195,728	536,576	948,153	128,499	213,309	341,808
1987	60,428	8,149	68,577	222,982	199,070	526,071	948,123	171,041	249,036	420,077
1988	61,268	10,350	71,618	235,167	206,972	527,926	970,065	202,435	258,594	461,029
1989	60,739	15,757	76,496	243,065	211,130	532,260	986,455	259,707	277,887	537,594
1990	71,534	27,642	99,176	240,975	206,790	515,574	963,339	319,572	294,007	613,579
1991	69,695	25,558	95,253	255,598	220,561	539,914	1,016,073	297,524	301,248	598,772
1992	71,158	25,112	96,270	267,061	231,646	557,344	1,056,051	308,536	340,956	649,492
1993	85,606	24,680	110,286	255,857	230,270	545,086	1,031,213	296,676	355,298	651,974
1994	87,038	24,263	111,301	270,378	246,867	587,779	1,105,024	317,988	410,244	728,232
1995	87,456	23,860	111,316	273,157	249,404	593,819	1,116,380	308,774	426,936	735,710
1996	92,939	25,323	118,262	269,330	245,910	585,499	1,100,739	306,325	451,891	758,216
1997	94,236	25,037	119,273	269,141	245,738	585,089	1,099,968	299,935	470,214	770,149
1998	92,192	24,115	116,307	259,866	237,269	564,927	1,062,062	282,921	469,729	752,650
1999	94,850	24,445	119,295	264,158	241,188	574,258	1,079,604	320,203	561,252	881,455
2000	94,166	24,140	118,306	266,229	243,078	578,758	1,088,065	309,947	571,952	881,899
2001	95,166	24,140	119,306	264,478	241,480	574,952	1,080,910	307,373	595,653	903,026
2002	91,776	23,552	115,328	260,836	238,155	567,034	1,066,025	289,750	588,306	878,056
2003	92,776	23,552	116,328	261,778	239,015	569,082	1,069,875	290,056	615,778	905,834
2004	95,166	24,140	119,306	264,860	241,829	575,781	1,082,470	289,469	641,312	930,781
2005	92,776	23,552	116,328	268,632	245,272	583,981	1,097,885	284,370	656,324	940,694
2006	91,776	23,552	115,328	265,561	242,469	577,307	1,085,337	279,487	645,057	924,544
2007	92,776	23,552	116,328	268,133	244,817	582,897	1,095,847	280,762	647,998	928,760
2008	92,776	23,552	116,328	269,162	245,756	585,133	1,100,051	281,477	649,648	931,125
2009	92,776	23,552	116,328	269,817	246,355	586,559	1,102,731	279,081	644,120	923,201
2010	92,776	23,552	116,328	262,310	239,501	570,241	1,072,052	277,944	641,495	919,439
2011	91,776	23,552	115,328	266,225	243,075	578,750	1,088,050	276,690	638,601	915,291
2012	90,387	22,963	113,350	260,565	237,908	566,446	1,064,919	270,209	623,643	893,852
2013	92,776	23,552	116,328	262,496	239,671	570,645	1,072,812	277,091	639,526	916,617
2014	92,776	23,552	116,328	270,190	246,696	587,372	1,104,258	280,993	648,533	929,526
2015	92,776	23,552	116,328	264,965	241,925	576,009	1,082,899	276,802	638,859	915,661
2016	92,776	23,552	116,328	260,829	238,148	567,018	1,065,995	277,172	639,714	916,886
2017	90,387	22,963	113,350	256,736	234,412	558,123	1,049,271	268,102	618,782	886,884
2018	92,776	23,552	116,328	263,906	240,957	573,706	1,078,569	274,883	634,428	909,311
2019	92,776	23,552	116,328	259,751	237,164	564,675	1,061,590	274,425	633,373	907,798
2020	90,387	22,963	113,350	257,894	235,469	560,640	1,054,003	267,864	618,229	886,093
2021	90,387	22,963	113,350	257,894	235,469	560,640	1,054,003	267,864	618,229	886,093
2022	90,387	22,963	113,350	257,894	235,469	560,640	1,054,003	267,864	618,229	886,093
2023	90,387	22,963	113,350	257,894	235,469	560,640	1,054,003	267,864	618,229	886,093
2024	90,387	22,963	113,350	257,894	235,469	560,640	1,054,003	267,864	618,229	886,093
2025	90,387	22,963	113,350	257,894	235,469	560,640	1,054,003	267,864	618,229	886,093
2026	90,387	22,963	113,350	257,894	235,469	560,640	1,054,003	267,864	618,229	886,093
2027	90,387	22,963	113,350	257,894	235,469	560,640	1,054,003	267,864	618,229	886,093
2028	90,387	22,963	113,350	257,894	235,469	560,640	1,054,003	267,864	618,229	886,093
2029	90,387	22,963	113,350	257,894	235,469	560,640	1,054,003	267,864	618,229	886,093
2030	90,387	22,963	113,350	257,894	235,469	560,640	1,054,003	267,864	618,229	886,093
2031	90,387	22,963	113,350	257,894	235,469	560,640	1,054,003	267,864	618,229	886,093
2032	90,387	22,963	113,350	257,894	235,469	560,640	1,054,003	267,864	618,229	886,093
2033	90,387	22,963	113,350	257,894	235,469	560,640	1,054,003	267,864	618,229	886,093
2034	90,387	22,963	113,350	257,894	235,469	560,640	1,054,003	267,864	618,229	886,093
2035	90,387	22,963	113,350	257,894	235,469	560,640	1,054,003	267,864	618,229	886,093
TOTAL	4,774,497	1,148,562	5,923,059	14,928,390	14,226,394	37,060,962	66,215,746	14,021,876	28,567,047	42,588,923

a) Unadjusted for prior overpayments or underpayments of charges.

TRANSPORTATION CHARGE FOR EACH CONTRACTOR[a]

(in dollars)

CALENDAR YEAR	SAN JOAQUIN VALLEY AREA									
	Devil's Den Water District	Dudley Ridge Water District	Empire West Side Irrigation District	Hacienda Water District	Kern County Water Agency		County of Kings	Oak Flat Water District	Tulare Lake Basin Water Storage District	Total
					Municipal and Industrial	Agricultural				
	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1962	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0
1966	0	0	0	0	0	0	0	0	0	0
1967	0	0	0	0	0	0	0	0	0	0
1968	30,805	68,874	5,168	0	0	444,625	2,351	4,552	65,581	621,956
1969	31,199	56,407	101	5,109	0	323,324	180	3,100	12,730	432,150
1970	41,437	74,171	7,235	17,581	0	497,477	0	5,846	0	643,747
1971	35,947	55,389	8,082	8,985	0	789,227	4,992	6,498	156,274	1,065,394
1972	46,704	69,425	8,501	6,659	6,334	967,410	1,983	4,953	211,249	1,323,218
1973	31,093	37,044	5,052	4,883	22,246	752,740	2,525	3,651	65,838	925,072
1974	30,700	29,939	3,727	4,099	59,329	576,622	1,864	2,449	53,417	762,146
1975	43,094	58,232	6,668	8,001	104,125	982,985	3,556	5,722	104,240	1,316,623
1976	40,292	47,427	5,028	6,536	90,256	887,406	2,681	4,187	85,133	1,168,946
1977	42,647	51,561	5,088	7,124	104,458	987,940	2,883	4,523	92,945	1,299,169
1978	40,045	58,636	5,412	8,299	152,139	1,108,996	3,428	5,270	105,906	1,488,131
1979	41,977	66,659	5,780	9,441	174,739	1,302,520	3,854	5,669	120,603	1,731,242
1980	41,414	60,446	4,941	8,564	164,461	1,287,928	3,623	4,731	109,527	1,685,635
1981	44,640	78,343	6,058	11,307	203,566	1,632,296	4,644	6,363	142,149	2,129,366
1982	46,097	85,891	6,285	12,360	224,937	1,839,141	5,237	6,948	155,651	2,382,547
1983	50,240	94,361	6,598	13,637	244,082	2,087,993	6,159	7,469	172,007	2,682,546
1984	48,245	97,403	6,479	14,039	260,581	2,219,768	6,695	7,649	177,314	2,838,173
1985	51,333	111,718	7,101	16,332	296,800	2,536,034	8,047	8,801	203,555	3,239,721
1986	49,070	111,199	6,767	16,240	305,196	2,591,831	8,346	8,473	203,001	3,300,123
1987	48,399	116,828	6,818	17,046	328,852	2,754,137	9,092	8,648	213,427	3,503,247
1988	49,093	126,838	7,113	18,493	357,065	2,974,404	9,483	9,369	231,864	3,783,722
1989	49,332	137,748	7,433	20,315	386,963	3,187,382	9,910	10,404	251,960	4,061,447
1990	44,248	114,361	5,946	16,846	343,656	2,841,284	7,928	7,109	218,019	3,599,397
1991	48,406	139,085	7,231	20,490	393,167	3,259,468	9,642	9,746	265,154	4,152,389
1992	49,535	144,016	7,488	21,215	402,566	3,344,817	9,984	10,226	274,554	4,264,401
1993	47,182	134,408	6,988	19,800	381,932	3,165,294	9,317	9,317	256,236	4,030,474
1994	48,579	141,312	7,348	20,817	397,716	3,290,550	9,796	10,031	269,400	4,195,549
1995	49,775	148,535	7,723	21,881	411,584	3,409,809	10,297	10,789	283,169	4,353,562
1996	47,441	135,246	7,032	19,924	389,255	3,215,070	9,376	9,341	257,834	4,090,519
1997	47,390	135,553	7,048	19,969	389,474	3,217,035	9,397	9,258	258,420	4,093,544
1998	45,609	130,417	6,781	19,212	375,058	3,091,396	9,041	8,935	248,627	3,935,076
1999	46,465	133,839	6,959	19,716	383,786	3,162,520	9,278	9,201	255,151	4,026,915
2000	46,997	136,997	7,122	20,182	389,487	3,213,065	9,497	9,546	261,174	4,094,067
2001	46,047	132,459	6,887	19,513	384,067	3,149,280	9,183	9,064	252,522	4,009,022
2002	46,225	136,545	7,099	20,115	390,667	3,206,327	9,466	9,498	260,313	4,086,255
2003	45,810	133,959	6,965	19,734	384,242	3,148,955	9,287	9,349	255,380	4,013,681
2004	46,203	134,822	7,010	19,861	391,460	3,197,625	9,346	9,200	257,026	4,072,553
2005	47,856	144,599	7,518	21,301	410,507	3,357,257	10,024	10,287	275,667	4,285,016
2006	47,320	142,846	7,427	21,043	407,233	3,333,259	9,903	10,113	272,323	4,251,467
2007	47,818	144,428	7,510	21,276	413,155	3,372,505	10,012	10,225	275,341	4,302,270
2008	48,032	145,398	7,560	21,419	413,348	3,380,951	10,080	10,353	277,190	4,314,331
2009	48,310	147,119	7,650	21,672	416,145	3,406,761	10,199	10,552	280,469	4,348,877
2010	46,237	137,698	7,159	20,285	398,959	3,245,590	9,546	9,563	262,508	4,137,545
2011	47,695	144,772	7,528	21,326	411,827	3,362,546	10,036	10,284	275,994	4,292,008
2012	46,348	140,008	7,279	20,625	398,569	3,256,431	9,706	9,907	266,914	4,155,787
2013	46,402	138,448	7,199	20,396	402,596	3,272,773	9,598	9,556	263,938	4,170,906
2014	48,535	148,360	7,714	21,855	419,168	3,423,379	10,285	10,687	282,836	4,372,819
2015	47,153	142,084	7,387	20,931	408,397	3,329,859	9,850	10,010	270,870	4,246,541
2016	45,995	136,823	7,114	20,156	398,516	3,236,003	9,485	9,468	260,841	4,124,401
2017	45,278	135,147	7,027	19,909	391,824	3,185,514	9,369	9,433	257,646	4,061,147
2018	46,926	141,279	7,345	20,813	405,836	3,306,043	9,795	9,937	269,337	4,217,311
2019	45,797	135,919	7,067	20,023	397,405	3,219,642	9,422	9,334	259,118	4,103,727
2020	45,903	138,219	7,187	20,361	398,677	3,238,782	9,582	9,665	263,502	4,131,878
2021	45,903	138,219	7,187	20,361	398,677	3,238,782	9,582	9,665	263,502	4,131,878
2022	45,903	138,219	7,187	20,361	398,677	3,238,782	9,582	9,665	263,502	4,131,878
2023	45,903	138,219	7,187	20,361	398,677	3,238,782	9,582	9,665	263,502	4,131,878
2024	45,903	138,219	7,187	20,361	398,677	3,238,782	9,582	9,665	263,502	4,131,878
2025	45,903	138,219	7,187	20,361	398,677	3,238,782	9,582	9,665	263,502	4,131,878
2026	45,903	138,219	7,187	20,361	398,677	3,238,782	9,582	9,665	263,502	4,131,878
2027	45,903	138,219	7,187	20,361	398,677	3,238,782	9,582	9,665	263,502	4,131,878
2028	45,903	138,219	7,187	20,361	398,677	3,238,782	9,582	9,665	263,502	4,131,878
2029	45,903	138,219	7,187	20,361	398,677	3,238,782	9,582	9,665	263,502	4,131,878
2030	45,903	138,219	7,187	20,361	398,677	3,238,782	9,582	9,665	263,502	4,131,878
2031	45,903	138,219	7,187	20,361	398,677	3,238,782	9,582	9,665	263,502	4,131,878
2032	45,903	138,219	7,187	20,361	398,677	3,238,782	9,582	9,665	263,502	4,131,878
2033	45,903	138,219	7,187	20,361	398,677	3,238,782	9,582	9,665	263,502	4,131,878
2034	45,903	138,219	7,187	20,361	398,677	3,238,782	9,582	9,665	263,502	4,131,878
2035	45,903	138,219	7,187	20,361	398,677	3,238,782	9,582	9,665	263,502	4,131,878
TOTAL	3,079,865	8,062,525	462,538	1,173,131	21,766,563	182,153,706	542,990	580,234	15,074,374	232,895,926

TABLE B-18: VARIABLE OMP&R COMPONENT OF

(in dollars)

CALENDAR YEAR	SOUTHERN CALIFORNIA AREA									
	Antelope Valley-East Kern Water Agency	Castaic Lake Water Agency	Coachella Valley County Water District	Crestline Lake Arrowhead Water Agency	Desert Water Agency	Littlerock Creek Irrigation District	Mojave Water Agency	Palmdale 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	282	0	0	7,572	0	4,245	0	0	237,415	0
1973	286	0	94,874	14,231	147,218	3,840	0	0	545,590	130,713
1974	257	0	92,902	16,838	145,158	4,751	22,644	0	520,312	127,996
1975	313,855	9,744	113,824	23,576	178,866	7,090	29,268	0	591,001	147,468
1976	345,064	17,929	121,882	27,905	192,449	8,487	32,716	0	598,220	152,274
1977	391,193	37,970	136,515	32,909	210,746	9,839	36,960	0	626,454	161,244
1978	399,784	40,415	141,422	35,501	214,228	11,794	61,208	13,588	592,186	148,456
1979	475,296	81,278	178,025	46,173	265,365	15,277	88,455	25,561	736,394	180,099
1980	654,424	64,705	183,639	48,931	286,830	15,980	101,233	37,520	708,866	169,370
1981	767,340	104,362	213,752	56,328	335,504	18,693	141,265	58,875	798,191	185,779
1982	881,452	151,318	242,250	63,262	381,756	20,911	181,788	86,366	871,436	197,921
1983	940,821	172,474	263,692	68,339	416,919	21,993	217,523	115,236	933,225	207,147
1984	1,090,010	217,925	290,471	74,790	460,538	24,650	294,743	161,372	994,298	216,003
1985	1,175,687	243,539	311,070	79,648	494,374	26,002	366,203	207,421	1,046,349	222,750
1986	1,333,909	296,415	336,590	85,764	536,030	28,461	443,612	224,291	1,094,573	226,341
1987	1,476,797	334,904	366,231	92,918	593,704	30,722	565,434	238,255	1,202,093	241,896
1988	1,569,139	382,155	376,253	95,101	619,437	31,429	655,873	241,417	1,229,793	241,226
1989	1,764,173	412,229	404,635	101,932	675,222	34,068	776,969	258,237	1,238,559	237,167
1990	1,997,978	458,829	441,547	110,866	728,267	36,621	917,503	275,448	1,378,369	258,019
1991	2,247,319	486,122	444,999	111,732	733,959	37,216	978,613	279,918	1,351,583	254,601
1992	2,242,908	489,369	442,459	111,093	729,771	37,161	973,026	279,525	1,379,228	264,190
1993	2,205,981	493,510	435,565	109,362	718,399	36,537	957,863	274,826	1,388,327	270,358
1994	2,222,802	483,626	438,609	110,128	723,421	36,821	964,559	276,955	1,368,550	270,857
1995	2,224,004	489,256	438,599	110,125	723,403	36,822	964,537	276,962	1,359,982	273,494
1996	2,251,650	489,393	444,617	111,635	733,327	37,277	977,769	280,393	1,419,580	290,003
1997	2,243,473	502,646	443,454	111,344	731,409	37,166	975,213	279,545	1,376,937	285,667
1998	2,222,644	521,831	439,931	110,460	725,603	36,807	967,469	276,854	1,359,755	286,437
1999	2,262,298	518,398	444,660	111,648	733,400	37,451	977,865	281,699	1,449,395	309,939
2000	2,256,159	524,547	442,504	111,105	729,844	37,330	973,128	280,787	1,442,696	313,103
2001	2,276,868	524,697	448,127	112,518	739,120	37,687	985,492	283,476	1,384,063	304,791
2002	2,295,669	527,237	448,369	112,577	739,519	37,987	986,024	285,729	1,393,541	311,306
2003	2,284,863	535,662	447,198	112,284	737,588	37,808	983,452	284,386	1,438,584	325,953
2004	2,342,316	520,335	459,453	115,359	757,801	38,773	1,010,401	291,640	1,446,615	332,384
2005	2,389,369	552,882	464,789	116,701	766,602	39,567	1,022,134	297,612	1,484,121	345,717
2006	2,376,083	556,486	461,292	115,821	760,832	39,337	1,014,445	295,889	1,471,573	347,483
2007	2,403,153	547,512	467,427	117,363	770,952	39,780	1,027,937	299,224	1,480,768	354,373
2008	2,371,623	534,449	461,451	115,861	761,095	39,269	1,014,794	295,370	1,470,760	356,653
2009	2,363,386	539,081	459,437	115,355	757,774	39,117	1,010,363	294,223	1,436,841	353,006
2010	2,423,079	573,792	469,925	117,988	775,071	40,109	1,033,429	301,689	1,520,086	378,303
2011	2,408,306	561,570	466,476	117,123	769,384	39,866	1,025,845	299,858	1,509,336	380,423
2012	2,332,896	541,798	453,713	113,919	748,332	38,621	997,776	290,491	1,416,496	361,537
2013	2,422,166	565,722	469,934	117,993	775,084	40,099	1,033,446	301,605	1,497,713	387,041
2014	2,390,632	558,024	463,120	116,282	763,847	39,578	1,018,462	297,690	1,460,723	382,124
2015	2,394,405	557,391	465,215	116,806	767,302	39,627	1,023,068	298,061	1,480,649	392,054
2016	2,445,508	587,077	473,176	118,807	780,434	40,483	1,040,577	304,507	1,531,147	410,306
2017	2,381,355	551,508	461,099	115,775	760,515	39,429	1,014,021	296,578	1,487,430	403,318
2018	2,421,366	577,815	469,674	117,927	774,658	40,080	1,032,876	301,471	1,484,376	407,218
2019	2,433,214	576,581	471,106	118,286	777,020	40,276	1,036,024	302,941	1,513,738	420,098
2020	2,375,932	558,457	459,733	115,431	758,261	39,329	1,011,016	295,815	1,493,780	419,308
2021	2,375,932	558,457	459,733	115,431	758,261	39,329	1,011,016	295,815	1,493,780	419,308
2022	2,375,932	558,457	459,733	115,431	758,261	39,329	1,011,016	295,815	1,493,780	419,308
2023	2,375,932	558,457	459,733	115,431	758,261	39,329	1,011,016	295,815	1,493,780	419,308
2024	2,375,932	558,457	459,733	115,431	758,261	39,329	1,011,016	295,815	1,493,780	419,308
2025	2,375,932	558,457	459,733	115,431	758,261	39,329	1,011,016	295,815	1,493,780	419,308
2026	2,375,932	558,457	459,733	115,431	758,261	39,329	1,011,016	295,815	1,493,780	419,308
2027	2,375,932	558,457	459,733	115,431	758,261	39,329	1,011,016	295,815	1,493,780	419,308
2028	2,375,932	558,457	459,733	115,431	758,261	39,329	1,011,016	295,815	1,493,780	419,308
2029	2,375,932	558,457	459,733	115,431	758,261	39,329	1,011,016	295,815	1,493,780	419,308
2030	2,375,932	558,457	459,733	115,431	758,261	39,329	1,011,016	295,815	1,493,780	419,308
2031	2,375,932	558,457	459,733	115,431	758,261	39,329	1,011,016	295,815	1,493,780	419,308
2032	2,375,932	558,457	459,733	115,431	758,261	39,329	1,011,016	295,815	1,493,780	419,308
2033	2,375,932	558,457	459,733	115,431	758,261	39,329	1,011,016	295,815	1,493,780	419,308
2034	2,375,932	558,457	459,733	115,431	758,261	39,329	1,011,016	295,815	1,493,780	419,308
2035	2,375,932	558,457	459,733	115,431	758,261	39,329	1,011,016	295,815	1,493,780	419,308
TOTAL	121,128,154	27,449,820	24,861,680	6,242,857	40,780,253	2,102,198	50,130,261	15,086,531	81,648,397	19,933,534

) Unadjusted for prior overpayments or underpayments of charges.

TRANSPORTATION CHARGE FOR EACH CONTRACTOR[a]

(in dollars)

CALENDAR YEAR	SOUTHERN CALIFORNIA AREA (continued)				FEATHER RIVER AREA				FUTURE CONTRACTOR	GRAND TOTAL
	San Gorgonio Pass Water Agency	The Metropolitan Water District of Southern California	Ventura County Flood Control District	Total	City of Yuba City	County of Butte	Plumas County FC & WCD	Total	South Bay	
	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)
1962	0	0	0	0	0	0	0	0	0	36,964
1963	0	0	0	0	0	0	0	0	0	57,703
1964	0	0	0	0	0	0	0	0	0	74,094
1965	0	0	0	0	0	0	0	0	0	142,540
1966	0	0	0	0	0	0	0	0	0	192,522
1967	0	0	0	0	0	0	0	0	0	236,350
1968	0	0	0	0	0	0	0	0	0	1,117,038
1969	0	0	0	0	0	0	0	0	0	771,483
1970	0	0	0	0	0	0	0	0	0	1,143,310
1971	0	0	0	0	0	0	0	0	0	1,547,817
1972	0	1,279,410	0	1,528,924	0	0	0	0	0	3,569,215
1973	0	2,125,428	0	3,062,180	0	0	0	0	0	4,655,911
1974	0	3,342,255	0	4,273,113	0	0	0	0	0	5,665,610
1975	0	3,852,318	0	5,267,010	0	0	0	0	0	7,330,073
1976	0	4,425,585	0	5,922,511	0	0	0	0	0	7,786,612
1977	0	5,335,233	0	6,979,063	0	0	0	0	0	8,977,468
1978	0	5,094,532	0	6,753,114	0	0	0	0	0	8,935,619
1979	0	7,013,318	0	9,105,241	0	0	0	0	0	11,579,748
1980	73,591	6,586,437	3,655	8,935,181	0	0	0	0	0	11,562,152
1981	90,624	7,801,208	10,384	10,582,305	0	0	0	0	0	13,693,810
1982	106,656	8,751,831	20,542	11,957,489	0	0	0	0	0	15,367,848
1983	121,780	9,249,824	28,044	12,757,017	0	0	0	0	0	16,693,029
1984	137,144	10,335,657	40,506	14,338,107	0	0	0	0	0	18,423,727
1985	151,495	10,856,375	50,214	15,231,127	0	0	0	0	0	19,785,632
1986	165,146	12,146,104	76,742	16,993,978	0	0	0	0	0	21,646,793
1987	188,038	13,617,771	101,794	19,050,557	0	0	0	0	0	23,990,581
1988	198,608	14,719,051	140,736	20,500,218	0	0	0	0	0	25,786,652
1989	205,793	15,484,697	176,354	21,770,035	0	0	0	0	0	27,432,027
1990	234,934	17,405,177	233,501	24,477,059	0	0	0	0	0	29,752,550
1991	227,898	17,445,799	234,275	24,834,034	0	0	0	0	0	30,696,521
1992	232,560	17,910,979	235,843	25,328,112	0	0	0	0	0	31,394,326
1993	234,094	18,286,396	237,834	25,649,052	0	0	0	0	0	31,472,999
1994	230,759	18,208,398	233,073	25,568,558	0	0	0	0	0	31,708,664
1995	229,315	18,523,277	235,786	25,885,562	0	0	0	0	0	32,202,530
1996	239,363	19,085,527	235,853	26,596,387	0	0	0	0	0	32,664,123
1997	232,173	19,416,926	242,239	26,878,192	0	0	0	0	0	32,961,126
1998	229,276	20,031,279	251,485	27,459,831	0	0	0	0	0	33,325,926
1999	244,391	20,683,998	249,830	28,304,972	0	0	0	0	0	34,412,241
2000	243,261	21,065,239	252,793	28,672,496	0	0	0	0	0	34,854,833
2001	233,375	21,003,862	252,865	28,586,941	0	0	0	0	0	34,699,205
2002	234,973	21,387,385	254,090	29,014,406	0	0	0	0	0	35,160,070
2003	242,569	22,110,855	258,151	29,799,353	0	0	0	0	0	35,905,071
2004	243,921	21,995,762	250,764	29,805,524	0	0	0	0	0	36,010,634
2005	250,247	23,363,954	266,449	31,360,144	0	0	0	0	0	37,800,067
2006	248,132	23,663,960	268,186	31,619,519	0	0	0	0	0	37,996,195
2007	249,681	23,737,963	263,861	31,759,994	0	0	0	0	0	38,203,199
2008	247,993	23,566,519	257,566	31,493,403	0	0	0	0	0	37,955,238
2009	242,275	23,777,469	259,799	31,648,126	0	0	0	0	0	38,139,263
2010	256,311	25,548,521	276,527	33,714,830	0	0	0	0	0	39,960,194
2011	254,497	25,392,259	270,635	33,495,578	0	0	0	0	0	39,906,255
2012	238,844	24,544,045	261,108	32,339,576	0	0	0	0	0	38,567,484
2013	252,538	26,015,374	272,638	34,151,353	0	0	0	0	0	40,428,016
2014	246,301	25,840,191	268,927	33,845,901	0	0	0	0	0	40,368,832
2015	249,661	26,209,995	268,622	34,262,856	0	0	0	0	0	40,624,285
2016	258,177	27,735,028	282,928	36,008,155	0	0	0	0	0	42,231,765
2017	250,806	26,586,465	265,787	34,614,086	0	0	0	0	0	40,724,738
2018	250,291	27,745,656	278,465	35,901,873	0	0	0	0	0	42,223,392
2019	255,240	28,140,729	277,871	36,363,124	0	0	0	0	0	42,552,567
2020	251,875	27,681,885	269,135	35,729,957	0	0	0	0	0	41,915,281
2021	251,875	27,681,885	269,135	35,729,957	0	0	0	0	0	41,915,281
2022	251,875	27,681,885	269,135	35,729,957	0	0	0	0	0	41,915,281
2023	251,875	27,681,885	269,135	35,729,957	0	0	0	0	0	41,915,281
2024	251,875	27,681,885	269,135	35,729,957	0	0	0	0	0	41,915,281
2025	251,875	27,681,885	269,135	35,729,957	0	0	0	0	0	41,915,281
2026	251,875	27,681,885	269,135	35,729,957	0	0	0	0	0	41,915,281
2027	251,875	27,681,885	269,135	35,729,957	0	0	0	0	0	41,915,281
2028	251,875	27,681,885	269,135	35,729,957	0	0	0	0	0	41,915,281
2029	251,875	27,681,885	269,135	35,729,957	0	0	0	0	0	41,915,281
2030	251,875	27,681,885	269,135	35,729,957	0	0	0	0	0	41,915,281
2031	251,875	27,681,885	269,135	35,729,957	0	0	0	0	0	41,915,281
2032	251,875	27,681,885	269,135	35,729,957	0	0	0	0	0	41,915,281
2033	251,875	27,681,885	269,135	35,729,957	0	0	0	0	0	41,915,281
2034	251,875	27,681,885	269,135	35,729,957	0	0	0	0	0	41,915,281
2035	251,875	27,681,885	269,135	35,729,957	0	0	0	0	0	41,915,281
TOTAL	12,752,731	1,261,356,181	12,652,882	1,676,125,479	0	0	0	0	0	2,023,749,133

TABLE B-19: TOTAL TRANSPORTATION

(in dollars)

CALENDAR YEAR	NORTH BAY AREA			SOUTH BAY AREA				CENTRAL COASTAL AREA		
	Napa County FC & WCD	Solano County FC & WCD	Total	Alameda County FC & WCD Zone 7	Alameda County Water District	Santa Clara 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	11,723	43,758	0	55,481	0	0	0
1963	0	0	0	146,236	182,557	431,844	760,637	0	0	0
1964	0	0	0	163,063	257,239	599,066	1,019,368	7,653	18,930	26,583
1965	0	0	0	234,961	355,550	1,120,084	1,710,595	13,173	31,967	45,140
1966	20,197	0	20,197	258,188	363,566	1,364,469	1,986,223	22,149	53,136	75,285
1967	44,718	0	44,718	328,460	437,907	1,623,904	2,390,271	40,084	95,235	135,319
1968	130,503	0	130,503	358,141	522,780	1,880,050	2,760,971	64,876	153,376	218,252
1969	269,202	0	269,202	412,613	458,365	1,974,808	2,845,786	121,537	285,841	407,378
1970	281,550	0	281,550	438,703	462,329	2,135,253	3,036,285	129,248	304,005	433,253
1971	223,454	0	223,454	394,057	473,747	2,078,487	2,946,291	130,301	306,612	436,913
1972	241,689	0	241,689	522,511	641,084	2,221,312	3,384,907	128,075	301,621	429,696
1973	246,549	29,572	276,121	537,014	588,778	2,246,897	3,372,689	131,700	310,113	441,813
1974	248,607	31,595	280,202	535,486	583,235	2,206,777	3,325,498	131,943	310,731	442,674
1975	251,021	34,951	285,972	556,181	606,144	2,283,825	3,446,150	132,424	311,854	444,278
1976	257,436	41,346	298,782	557,248	602,545	2,246,128	3,405,921	243,031	578,787	821,818
1977	272,550	55,936	328,486	564,075	607,512	2,245,438	3,417,025	278,584	677,949	956,533
1978	303,236	83,374	386,610	570,522	609,974	2,238,066	3,418,562	357,533	887,488	1,245,021
1979	375,555	153,208	528,763	587,761	620,751	2,261,098	3,469,610	725,560	1,933,893	2,659,453
1980	651,115	425,413	1,076,528	604,144	631,842	2,282,551	3,518,537	1,201,065	3,301,045	4,502,110
1981	680,058	456,675	1,136,733	617,764	642,024	2,293,378	3,553,166	1,221,298	3,379,023	4,600,321
1982	682,907	458,107	1,141,014	629,224	649,997	2,296,665	3,575,886	1,238,545	3,402,443	4,640,988
1983	692,465	460,872	1,153,337	662,742	677,965	2,361,351	3,702,058	1,267,860	3,482,764	4,750,624
1984	691,059	459,907	1,150,966	666,087	677,269	2,335,975	3,679,331	1,284,133	3,479,080	4,763,213
1985	691,610	460,787	1,152,397	682,277	688,171	2,345,515	3,715,963	1,325,608	3,495,534	4,821,142
1986	704,522	461,020	1,165,542	686,249	689,091	2,325,439	3,700,779	1,356,438	3,514,072	4,870,510
1987	707,474	464,222	1,171,696	693,401	692,450	2,314,989	3,700,840	1,399,462	3,551,495	4,950,957
1988	707,441	465,737	1,173,178	704,899	699,701	2,315,106	3,719,706	1,429,537	3,557,414	4,986,951
1989	706,961	471,217	1,178,178	712,755	703,819	2,319,337	3,735,911	1,486,800	3,576,638	5,063,438
1990	717,884	483,294	1,201,178	710,768	699,564	2,302,848	3,713,180	1,546,364	3,591,918	5,138,282
1991	716,014	481,164	1,197,178	725,221	713,185	2,326,828	3,765,234	1,524,081	3,598,025	5,122,106
1992	718,327	481,369	1,199,696	737,406	724,955	2,346,086	3,808,447	1,536,404	3,641,231	5,177,635
1993	733,110	481,190	1,214,300	726,373	723,738	2,334,273	3,784,384	1,524,663	3,655,582	5,180,245
1994	734,535	480,765	1,215,300	741,030	740,467	2,377,297	3,858,794	1,546,422	3,712,148	5,258,570
1995	734,948	480,352	1,215,300	743,829	743,025	2,383,387	3,870,241	1,537,091	3,728,316	5,265,407
1996	739,752	481,308	1,221,060	739,396	738,957	2,373,537	3,851,890	1,533,625	3,750,722	5,284,347
1997	741,044	481,016	1,222,060	739,207	738,783	2,373,121	3,851,111	1,527,116	3,768,597	5,295,713
1998	738,685	479,842	1,218,527	729,601	729,999	2,352,137	3,811,737	1,509,380	3,765,915	5,275,295
1999	741,349	480,178	1,221,527	733,934	733,956	2,361,566	3,829,456	1,547,375	3,860,100	5,407,475
2000	740,660	479,867	1,220,527	736,023	735,866	2,366,112	3,838,001	1,536,955	3,870,144	5,407,099
2001	741,660	479,867	1,221,527	734,256	734,251	2,362,267	3,830,774	1,534,294	3,893,577	5,427,871
2002	738,261	479,266	1,217,527	730,580	730,893	2,354,268	3,815,741	1,516,369	3,885,055	5,401,424
2003	739,261	479,266	1,218,527	731,531	731,762	2,356,336	3,819,629	1,516,667	3,912,510	5,429,177
2004	741,660	479,867	1,221,527	734,643	734,604	2,363,102	3,832,349	1,516,073	3,938,015	5,454,088
2005	739,261	479,266	1,218,527	738,450	738,082	2,371,390	3,847,922	1,510,957	3,952,852	5,463,809
2006	738,261	479,266	1,217,527	735,350	735,250	2,364,648	3,835,248	1,505,967	3,941,203	5,447,170
2007	739,261	479,266	1,218,527	737,946	737,622	2,370,296	3,845,864	1,507,277	3,944,268	5,451,545
2008	739,261	479,266	1,218,527	738,985	738,571	2,372,554	3,850,110	1,508,016	3,945,990	5,454,006
2009	739,261	479,266	1,218,527	739,646	739,176	2,373,996	3,852,818	1,505,588	3,940,326	5,445,914
2010	739,261	479,266	1,218,527	732,068	732,252	2,357,509	3,821,829	1,504,351	3,937,435	5,441,786
2011	738,261	479,266	1,217,527	736,021	735,864	2,366,104	3,837,989	1,503,133	3,934,588	5,437,721
2012	736,864	478,663	1,215,527	730,308	730,643	2,353,674	3,814,625	1,496,489	3,919,080	5,415,569
2013	739,261	479,266	1,218,527	625,534	634,202	2,008,356	3,268,092	1,503,486	3,935,415	5,438,901
2014	739,261	479,266	1,218,527	599,503	588,628	1,866,731	3,054,862	1,499,892	3,925,963	5,425,855
2015	739,261	479,266	1,218,527	558,696	523,351	1,502,449	2,584,496	1,490,052	3,902,833	5,392,885
2016	719,064	479,266	1,198,330	537,049	497,358	1,329,828	2,364,235	1,481,410	3,882,444	5,363,854
2017	692,145	478,663	1,170,808	504,116	467,058	1,213,094	2,184,268	1,454,218	3,818,739	5,272,957
2018	616,180	479,266	1,095,446	474,097	438,498	1,119,207	2,031,802	1,447,208	3,802,114	5,249,322
2019	572,661	479,266	1,051,927	434,833	402,937	1,017,049	1,854,819	1,442,887	3,791,839	5,234,726
2020	565,974	478,663	1,044,637	419,770	388,790	976,231	1,784,791	1,434,196	3,771,379	5,205,575
2021	563,167	478,663	1,041,830	416,783	385,941	969,443	1,772,167	1,432,858	3,768,109	5,200,967
2022	561,820	478,663	1,040,483	416,213	385,254	965,375	1,766,842	1,431,846	3,765,537	5,197,383
2023	557,522	449,092	1,006,614	414,580	383,565	957,538	1,755,683	1,431,410	3,764,493	5,195,903
2024	555,481	447,068	1,002,549	413,810	382,836	954,783	1,751,429	1,431,136	3,763,802	5,194,938
2025	553,047	443,713	996,760	413,537	382,587	953,768	1,749,892	1,431,009	3,763,506	5,194,515
2026	548,652	437,317	985,969	409,876	379,295	945,082	1,734,253	1,319,888	3,495,371	4,815,259
2027	537,734	422,728	960,462	408,796	378,305	942,325	1,729,426	1,290,818	3,411,343	4,702,161
2028	515,099	395,290	910,389	407,452	376,837	936,012	1,720,301	1,211,595	3,201,170	4,412,765
2029	445,252	325,456	770,708	406,490	375,930	933,413	1,715,833	844,191	2,156,213	3,000,404
2030	276,706	171,592	448,298	405,636	375,149	931,502	1,712,287	521,503	1,266,456	1,787,959
2031	236,313	131,394	367,707	405,291	374,834	930,700	1,710,825	486,407	1,161,341	1,647,748
2032	235,332	129,984	365,316	405,140	374,696	930,321	1,710,157	479,712	1,144,296	1,624,008
2033	235,080	129,602	364,682	404,912	374,487	929,775	1,709,174	476,547	1,136,329	1,612,876
2034	234,847	129,250	364,097	404,152	373,792	928,068	1,706,012	474,972	1,132,653	1,607,625
2035	234,847	129,250	364,097	403,499	373,196	926,596	1,703,291	473,344	1,128,852	1,602,196
TOTAL	38,683,426	24,588,059	63,271,485	41,008,822	41,629,141	133,778,794	216,416,757	77,353,859	198,278,840	275,632,699

a) Unadjusted for prior overpayments or underpayments of charges.

CHARGE FOR EACH CONTRACTOR(a

(in dollars)

CALENDAR YEAR	SAN JOAQUIN VALLEY AREA									
	Devil's Den Water District	Dudley Ridge Water District	Empire West Side Irrigation District	Hacienda Water District	Kern County Water Agency		County of Kings	Oak Flat Water District	Tulare Lake Basin Water Storage District	Total
					Municipal and Industrial	Agricultural				
	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1962	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	61,849	0	0	0	0	61,849
1966	0	0	0	0	116,540	0	0	0	0	116,540
1967	1-	2-	0	0	227,374	47-	0	0	5-	227,319
1968	68,816	168,909	10,037	5,124	383,591	1,425,845	12,438	10,555	186,919	2,272,234
1969	116,902	171,150	11,725	23,676	472,582	2,330,274	11,423	9,428	301,683	3,448,843
1970	136,851	194,200	18,789	36,474	518,047	2,809,275	11,408	12,323	232,064	3,969,431
1971	139,356	185,604	19,621	26,960	543,984	3,598,088	16,520	13,399	398,952	4,942,484
1972	156,053	213,145	20,229	26,623	580,915	4,474,094	13,753	12,270	472,293	5,969,375
1973	150,876	192,357	16,893	26,619	610,709	4,652,817	14,462	11,435	342,090	6,018,258
1974	158,657	195,584	15,606	27,829	648,992	4,720,106	13,868	10,435	348,597	6,139,674
1975	179,494	234,514	18,597	33,298	697,452	5,413,888	15,625	14,075	418,860	7,025,803
1976	184,524	232,770	16,934	33,167	682,097	5,631,628	14,735	12,699	416,379	7,224,933
1977	199,607	246,050	16,972	35,104	695,983	6,049,186	14,934	13,345	441,360	7,712,541
1978	196,814	262,589	17,291	38,143	744,220	6,527,313	15,499	14,410	471,630	8,287,909
1979	199,181	280,356	17,667	40,721	769,699	7,082,947	16,012	14,976	504,146	8,925,705
1980	195,710	283,669	16,826	41,248	761,755	7,394,113	15,879	14,379	510,562	9,234,141
1981	198,880	311,757	17,973	45,962	805,275	8,159,955	17,016	16,207	561,819	10,134,844
1982	200,076	329,368	18,201	48,429	831,052	8,742,196	17,732	17,113	592,882	10,797,049
1983	204,446	347,037	18,541	51,198	855,260	9,430,135	18,793	17,802	627,771	11,570,983
1984	202,084	359,613	18,398	52,937	874,484	9,933,836	19,418	18,279	649,676	12,128,725
1985	209,817	383,810	19,034	57,156	920,041	10,609,301	21,062	19,617	693,987	12,933,825
1986	207,429	392,337	18,672	58,397	933,256	11,027,655	21,526	19,606	710,403	13,389,281
1987	206,781	407,592	18,726	60,619	957,019	11,571,380	22,273	19,946	738,435	14,002,771
1988	207,204	426,867	19,003	63,432	984,603	12,138,132	22,648	20,979	773,808	14,656,676
1989	207,462	447,429	19,330	67,148	1,014,730	12,609,418	23,080	22,342	811,555	15,222,494
1990	202,233	433,229	17,823	65,032	970,283	12,517,308	21,080	19,196	814,232	15,060,416
1991	206,510	458,276	19,121	68,723	1,020,768	12,945,666	22,806	21,845	861,930	15,625,645
1992	207,963	463,670	19,401	69,515	1,031,226	13,043,903	23,171	22,344	872,174	15,753,367
1993	205,665	454,052	18,903	68,100	1,010,486	12,863,912	22,507	21,437	853,852	15,518,914
1994	207,102	461,063	19,266	69,132	1,026,571	12,992,317	22,989	22,154	867,203	15,687,797
1995	208,334	468,384	19,646	70,210	1,040,733	13,114,642	23,496	22,915	881,148	15,849,508
1996	205,691	454,596	18,930	68,181	1,017,180	12,905,654	22,550	21,447	854,906	15,569,135
1997	205,637	454,897	18,946	68,226	1,017,398	12,907,571	22,571	21,364	855,481	15,572,091
1998	203,726	449,602	18,673	67,444	1,002,533	12,776,642	22,206	21,033	845,404	15,407,263
1999	204,603	453,068	18,852	67,955	1,011,402	12,849,248	22,446	21,300	852,006	15,500,880
2000	205,152	456,276	19,018	68,429	1,017,240	12,901,230	22,666	21,647	858,117	15,569,775
2001	204,175	451,668	18,780	67,749	1,011,632	12,835,406	22,351	21,162	849,339	15,482,262
2002	204,369	455,817	18,994	68,361	1,018,406	12,894,263	22,635	21,599	857,244	15,561,688
2003	203,942	453,202	18,859	67,975	1,011,880	12,835,819	22,455	21,449	852,259	15,487,840
2004	204,339	454,058	18,904	68,100	1,019,117	12,884,697	22,514	21,299	853,891	15,546,919
2005	206,045	463,991	19,419	69,563	1,038,594	13,048,811	23,201	22,392	872,807	15,764,823
2006	205,499	462,212	19,328	69,301	1,035,249	13,024,070	23,079	22,217	869,418	15,730,373
2007	206,006	463,813	19,411	69,538	1,041,237	13,064,010	23,189	22,329	872,471	15,782,004
2008	206,226	464,801	19,461	69,683	1,041,471	13,072,900	23,257	22,458	874,350	15,794,607
2009	206,515	466,550	19,552	69,940	1,044,345	13,099,504	23,377	22,658	877,678	15,830,119
2010	204,385	456,982	19,055	68,533	1,026,750	12,934,020	22,715	21,664	859,459	15,613,563
2011	205,883	464,165	19,429	69,589	1,039,921	13,054,149	23,213	22,389	873,136	15,771,874
2012	204,508	459,338	19,176	68,879	1,026,463	12,945,929	22,878	22,010	863,945	15,633,126
2013	204,553	457,738	19,095	68,645	1,030,416	12,961,494	22,767	21,657	860,896	15,647,261
2014	206,746	467,809	19,616	70,126	1,047,423	13,116,652	23,463	22,794	880,081	15,854,710
2015	205,327	461,436	19,287	69,187	974,533	13,020,311	23,024	22,113	867,940	15,663,158
2016	204,135	456,095	19,010	68,402	909,729	12,924,048	22,654	21,569	857,768	15,483,410
2017	203,406	454,404	18,922	68,153	792,141	12,872,899	22,538	21,533	854,551	15,308,547
2018	205,093	460,621	19,243	69,069	706,063	12,996,097	14,730	22,040	866,385	15,359,341
2019	203,933	455,173	18,962	68,266	641,886	12,907,208	13,837	21,434	856,015	15,186,714
2020	204,049	457,516	19,083	68,611	612,518	12,927,426	13,758	21,767	860,476	15,185,204
2021	204,049	457,516	19,083	68,611	591,620	12,927,426	13,625	21,767	860,476	15,164,173
2022	204,049	457,516	19,083	68,611	582,467	12,927,426	13,575	21,767	860,476	15,154,970
2023	204,049	457,516	19,083	68,611	576,583	12,927,426	13,523	21,767	860,476	15,149,034
2024	204,049	457,516	19,083	68,611	574,387	12,927,426	13,496	21,767	860,476	15,146,811
2025	204,049	457,516	19,083	68,611	573,510	12,927,426	13,481	21,767	860,476	15,145,919
2026	204,049	457,516	19,083	68,611	573,040	12,927,426	13,472	21,767	860,476	15,145,440
2027	204,049	457,516	19,083	68,611	572,439	12,927,426	13,453	21,767	860,476	15,144,820
2028	204,049	457,516	19,083	68,611	571,608	12,927,426	13,426	21,767	860,476	15,143,962
2029	204,049	457,516	19,083	68,611	569,244	12,927,426	13,349	21,767	860,476	15,141,521
2030	204,049	457,516	19,083	68,611	566,212	12,927,426	13,250	21,767	860,476	15,138,390
2031	204,049	457,516	19,083	68,611	563,318	12,927,426	13,163	21,767	860,476	15,135,409
2032	204,049	457,516	19,083	68,611	559,069	12,927,426	13,042	21,767	860,476	15,131,039
2033	204,049	457,516	19,083	68,611	554,934	12,927,426	12,931	21,767	860,476	15,126,793
2034	204,049	457,516	19,083	68,611	551,020	12,927,426	12,817	21,767	860,476	15,122,765
2035	204,049	457,516	19,083	68,611	542,417	12,927,426	12,539	21,767	860,476	15,113,884
TOTAL	13,349,504	27,323,947	1,263,475	4,058,046	55,448,971	751,480,731	1,249,369	1,337,340	50,809,568	906,320,951

TABLE B-19: TOTAL TRANSPORTATION

(in dollars)

CALENDAR YEAR	SOUTHERN CALIFORNIA AREA									
	Antelope Valley-East Kern Water Agency	Castaic Lake Water Agency	Coachella Valley County Water District	Crestline Lake Arrowhead Water Agency	Desert Water Agency	Littlerock Creek Irrigation District	Mojave Water Agency	Palmdale 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	32,041	0	0	0	0	0	0	0	50,037	0
1964	59,697	18,757	13,609	4,081	35,389	1,093	26,921	7,816	77,859	33,300
1965	114,152	36,366	24,072	6,846	39,139	2,012	48,389	14,680	129,219	33,887
1966	209,016	69,413	43,283	11,971	70,822	3,641	87,705	26,809	224,191	59,409
1967	406,326	144,053	83,749	22,729	137,559	7,076	170,576	52,438	421,466	112,516
1968	712,718	302,444	148,222	40,220	243,888	12,476	301,772	92,475	760,898	203,322
1969	1,041,726	461,598	221,755	60,197	365,157	18,396	451,063	135,794	1,185,545	316,755
1970	1,351,467	586,966	309,545	87,874	509,946	24,750	621,009	180,858	1,740,682	458,380
1971	1,667,783	735,930	423,538	125,419	697,943	31,112	838,608	224,984	2,479,989	645,071
1972	2,063,824	905,934	583,445	179,178	961,669	43,689	1,157,913	283,019	3,635,833	880,822
1973	2,166,651	942,686	715,814	198,033	1,170,721	45,366	1,229,686	297,452	4,314,926	1,105,682
1974	2,195,208	970,849	727,738	204,723	1,191,580	46,924	1,279,856	301,864	4,390,767	1,129,387
1975	2,519,230	988,722	754,993	213,040	1,235,733	49,471	1,299,636	303,342	4,520,873	1,164,949
1976	2,545,690	994,318	768,398	219,355	1,258,124	50,771	1,312,758	302,660	4,576,647	1,181,829
1977	2,597,314	1,017,336	784,954	224,989	1,279,607	52,110	1,320,687	302,585	4,618,322	1,194,204
1978	2,684,528	1,016,717	787,808	225,842	1,279,698	54,034	1,343,280	315,973	4,551,323	1,174,604
1979	2,824,320	1,063,614	826,094	236,403	1,333,611	57,656	1,375,174	328,907	4,693,557	1,206,667
1980	3,029,962	1,046,767	836,245	244,520	1,362,563	58,393	1,388,352	341,165	4,761,102	1,214,543
1981	3,156,459	1,092,692	866,159	248,787	1,410,905	61,351	1,434,547	364,312	4,794,988	1,221,213
1982	3,294,517	1,148,094	898,368	256,521	1,463,276	63,907	1,483,044	394,329	4,882,441	1,237,502
1983	3,382,489	1,173,299	925,546	264,693	1,507,903	65,364	1,527,134	426,027	4,999,094	1,258,864
1984	3,550,682	1,221,893	952,870	270,076	1,552,414	68,209	1,608,045	473,579	5,040,546	1,264,478
1985	3,901,322	1,254,977	976,273	275,844	1,590,872	69,796	1,684,899	521,416	5,108,835	1,275,327
1986	4,331,671	1,305,299	1,002,882	282,237	1,634,331	72,352	1,764,579	538,998	5,162,111	1,280,304
1987	4,470,662	1,345,886	1,032,296	288,870	1,691,621	74,626	1,886,907	553,034	5,260,439	1,294,159
1988	4,560,120	1,398,169	1,041,933	291,656	1,716,725	75,268	1,975,068	555,773	5,298,410	1,295,069
1989	4,755,768	1,424,767	1,070,326	298,283	1,772,527	77,923	2,096,627	572,697	5,303,586	1,290,392
1990	4,988,585	1,462,189	1,107,335	307,233	1,825,735	80,466	2,237,367	589,812	5,443,587	1,311,304
1991	5,239,415	1,504,176	1,108,968	305,564	1,828,423	81,088	2,299,155	594,485	5,371,830	1,299,239
1992	5,238,091	1,505,457	1,109,112	307,375	1,828,664	81,093	2,295,331	594,503	5,443,459	1,317,741
1993	5,201,335	1,506,659	1,102,412	305,851	1,817,611	80,471	2,280,236	589,819	5,456,339	1,324,672
1994	5,218,712	1,498,004	1,107,040	308,403	1,825,248	80,768	2,287,258	592,028	5,468,301	1,331,420
1995	5,220,275	1,502,965	1,105,871	306,945	1,823,314	80,773	2,287,318	592,076	5,433,860	1,329,022
1996	5,245,166	1,505,390	1,109,928	306,698	1,830,003	81,180	2,299,182	595,155	5,461,925	1,339,118
1997	5,236,935	1,509,890	1,111,766	310,106	1,833,041	81,066	2,296,561	594,296	5,484,989	1,347,591
1998	5,214,685	1,553,605	1,101,403	301,290	1,815,950	80,677	2,287,909	591,409	5,326,754	1,320,679
1999	5,254,829	1,526,140	1,113,320	311,078	1,835,611	81,332	2,298,698	596,336	5,569,219	1,374,062
2000	5,248,824	1,531,139	1,108,628	307,449	1,827,874	81,215	2,293,941	595,435	5,507,663	1,366,518
2001	5,269,456	1,539,110	1,116,120	311,058	1,840,222	81,571	2,306,467	598,125	5,488,147	1,365,866
2002	5,288,599	1,538,182	1,114,681	308,986	1,837,849	81,881	2,307,178	600,431	5,459,657	1,365,006
2003	5,277,544	1,550,625	1,112,568	307,610	1,834,363	81,696	2,304,455	599,053	5,485,495	1,375,882
2004	5,335,507	1,537,626	1,124,545	310,049	1,854,119	82,673	2,332,037	606,402	5,482,192	1,380,210
2005	5,383,455	1,570,680	1,133,299	315,298	1,868,562	83,490	2,344,354	612,510	5,589,105	1,407,185
2006	5,369,999	1,560,239	1,129,055	313,585	1,861,557	83,253	2,336,483	610,754	5,561,822	1,406,042
2007	5,397,381	1,562,760	1,134,417	314,033	1,870,402	83,706	2,350,305	614,144	5,551,514	1,409,184
2008	5,365,676	1,552,261	1,126,360	310,120	1,857,111	83,189	2,336,876	610,252	5,498,668	1,403,057
2009	5,357,470	1,555,333	1,126,053	311,728	1,856,611	83,036	2,332,385	609,107	5,502,335	1,406,735
2010	5,417,003	1,587,333	1,139,123	317,352	1,878,164	84,032	2,355,794	616,583	5,638,758	1,442,462
2011	5,402,537	1,573,688	1,133,585	313,938	1,869,026	83,793	2,348,204	614,781	5,582,643	1,435,735
2012	5,326,294	1,562,543	1,118,451	308,214	1,844,061	82,526	2,319,327	605,274	5,445,060	1,407,980
2013	5,384,126	1,579,253	1,135,556	312,976	1,859,332	84,025	2,355,836	616,506	5,488,476	1,423,328
2014	5,325,268	1,554,668	1,118,510	311,364	1,844,729	82,411	2,313,815	604,802	5,497,948	1,425,508
2015	5,274,275	1,537,002	1,105,841	303,897	1,823,832	81,535	2,296,898	598,272	5,373,667	1,403,489
2016	5,230,531	1,533,282	1,099,133	306,172	1,812,779	80,770	2,275,415	592,615	5,425,079	1,414,980
2017	4,968,507	1,419,672	1,043,767	289,241	1,721,461	76,263	2,165,329	558,954	5,128,260	1,343,883
2018	4,762,670	1,317,327	998,134	275,756	1,646,205	72,532	2,075,975	531,438	4,818,513	1,267,318
2019	4,481,157	1,157,409	932,563	257,874	1,538,065	67,404	1,943,250	494,073	4,453,909	1,175,055
2020	4,133,638	1,018,027	839,674	231,795	1,384,868	60,425	1,755,187	444,300	3,957,932	1,049,262
2021	3,879,736	887,978	736,969	197,105	1,215,482	55,109	1,560,973	408,013	3,269,095	876,435
2022	3,748,370	801,407	682,501	179,875	1,125,652	52,642	1,454,923	390,417	2,862,981	777,444
2023	3,685,727	779,705	660,340	172,555	1,089,104	51,430	1,412,761	381,988	2,670,513	729,547
2024	3,665,516	753,932	652,966	170,355	1,076,942	51,056	1,398,225	379,289	2,612,006	714,357
2025	3,661,563	746,651	648,081	168,837	1,068,885	50,975	1,388,726	378,723	2,551,013	698,410
2026	3,659,376	745,522	640,660	166,940	1,056,648	50,935	1,373,434	378,429	2,502,661	685,306
2027	3,651,010	744,665	637,860	166,225	1,052,030	50,897	1,367,661	378,141	2,486,844	681,017
2028	3,570,340	744,224	637,619	166,160	1,051,632	50,877	1,367,169	377,997	2,485,571	680,690
2029	3,509,672	743,201	637,094	166,027	1,050,767	50,828	1,366,077	377,631	2,483,219	680,043
2030	3,481,608	740,195	636,303	165,827	1,049,462	50,755	1,364,432	377,079	2,479,672	679,067
2031	3,471,855	735,062	634,536	165,380	1,046,548	50,592	1,360,774	375,853	2,471,763	676,896
2032	3,448,677	729,102	631,093	164,509	1,040,869	50,274	1,353,650	373,465	2,456,356	672,666
2033	3,420,260	722,234	626,984	163,470	1,034,093	49,894	1,345,153	370,617	2,437,974	667,621
2034	3,397,260	717,560	624,188	162,763	1,029,483	49,636	1,339,368	368,678	2,425,465	664,187
2035	3,132,617	713,342	621,676	162,128	1,025,339	49,403	1,334,149	366,929	2,414,222	661,096
TOTAL	278,066,875	80,384,960	60,496,003	16,729,581	99,521,451	4,443,409	120,820,236	31,859,965	297,990,147	76,046,950

a) Unadjusted for prior overpayments or underpayments of charges.

CHARGE FOR EACH CONTRACTOR[a]

(in dollars)

CALENDAR YEAR	SOUTHERN CALIFORNIA AREA (continued)				FEATHER RIVER AREA				FUTURE CONTRACTOR	GRAND TOTAL
	San Gorgonio Pass Water Agency	The Metropolitan Water District of Southern California	Ventura County Flood Control District	Total	City of Yuba City	County of Butte	Plumas County FC & WCD	Total	South Bay	
	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)
1962	0	0	0	0	0	0	0	0	0	55,481
1963	0	662,250	0	744,328	0	0	0	0	57,091	1,562,056
1964	20,679	1,205,519	8,766	1,513,486	0	0	0	0	94,429	2,653,866
1965	20,957	2,104,923	16,938	2,591,580	0	0	397	397	163,117	4,572,678
1966	36,680	3,781,463	32,159	4,656,562	0	0	550	550	188,612	7,043,969
1967	69,384	7,502,040	66,141	9,196,053	0	0	548	548	247,000	12,241,228
1968	125,453	14,927,025	138,625	18,009,538	0	0	550	550	319,084	23,711,132
1969	195,664	22,803,478	211,732	27,468,860	0	0	3,066	3,066	388,455	34,831,590
1970	283,901	30,083,546	268,391	36,507,315	0	0	14,501	14,501	445,323	44,687,658
1971	400,379	39,187,571	335,048	47,793,375	0	0	15,414	15,414	421,286	56,779,217
1972	546,423	52,724,955	410,712	64,377,416	0	0	16,888	16,888	466,520	74,886,491
1973	605,373	58,228,001	422,942	71,443,333	0	0	16,902	16,902	474,052	82,043,168
1974	621,831	61,690,173	433,171	75,184,071	0	0	16,923	16,923	473,048	85,862,090
1975	631,846	62,853,367	436,354	76,971,556	0	0	16,920	16,920	475,513	88,666,192
1976	639,435	63,717,950	435,344	78,003,279	0	0	16,916	16,916	482,848	90,254,497
1977	641,565	64,422,641	436,308	78,892,622	0	0	16,913	16,913	485,219	91,809,339
1978	637,155	64,445,464	435,277	78,951,703	0	0	16,906	16,906	486,423	92,793,134
1979	637,313	66,282,487	437,517	81,303,320	0	0	16,909	16,909	487,190	97,390,950
1980	723,088	66,276,821	441,250	81,724,771	0	0	16,913	16,913	487,167	100,560,167
1981	733,587	67,333,790	450,636	83,169,426	0	0	16,918	16,918	487,653	103,099,061
1982	752,140	69,050,733	464,484	85,389,356	0	0	16,919	16,919	487,800	106,049,012
1983	775,014	69,882,708	474,402	86,662,537	0	0	16,918	16,918	488,314	108,344,771
1984	788,169	70,933,196	488,431	88,212,588	0	0	16,904	16,904	487,815	110,439,542
1985	805,071	71,877,524	501,259	89,843,415	0	0	16,908	16,908	488,211	112,971,861
1986	819,571	72,873,681	527,206	91,595,222	0	0	16,909	16,909	488,185	115,226,428
1987	841,340	74,504,963	552,971	93,797,774	0	0	16,910	16,910	488,166	118,129,114
1988	853,004	75,818,550	593,474	95,473,219	0	0	16,900	16,900	487,686	120,514,316
1989	859,770	76,488,558	627,980	96,639,204	0	0	16,900	16,900	487,636	122,343,761
1990	888,948	77,904,886	682,075	98,829,522	0	0	16,900	16,900	487,537	124,447,015
1991	876,227	78,349,557	687,732	99,545,859	0	0	16,900	16,900	487,540	125,760,462
1992	886,685	79,220,975	688,779	100,517,265	0	0	16,910	16,910	488,068	126,961,388
1993	888,714	79,323,952	689,819	100,567,890	0	0	16,915	16,915	488,125	126,770,773
1994	889,465	79,368,927	685,475	100,661,049	0	0	16,915	16,915	488,304	127,186,729
1995	884,719	79,430,069	687,991	100,685,198	0	0	16,915	16,915	488,337	127,390,906
1996	890,603	80,106,369	688,703	101,459,420	0	0	16,912	16,912	487,888	127,890,652
1997	891,810	80,485,119	692,219	101,875,389	0	0	16,912	16,912	487,886	128,321,162
1998	870,796	81,275,038	709,443	102,449,638	0	0	16,916	16,916	487,598	128,666,974
1999	905,481	81,662,947	699,939	103,228,992	0	0	16,916	16,916	487,651	129,692,897
2000	897,335	82,022,585	702,538	103,491,144	0	0	16,916	16,916	487,677	130,031,139
2001	892,465	82,053,556	705,158	103,567,321	0	0	16,916	16,916	487,655	130,034,326
2002	889,223	82,342,922	705,266	103,839,861	0	0	16,916	16,916	487,609	130,340,766
2003	894,354	83,195,277	710,628	104,729,550	0	0	16,916	16,916	487,622	131,189,261
2004	894,309	83,054,509	704,019	104,698,197	0	0	16,916	16,916	487,660	131,257,656
2005	909,564	84,517,180	719,900	106,454,582	0	0	16,916	16,916	487,707	133,254,286
2006	905,547	84,536,983	717,039	106,392,358	0	0	16,916	16,916	487,669	133,127,261
2007	904,635	84,694,473	716,484	106,603,438	0	0	16,916	16,916	487,701	133,405,995
2008	897,444	84,789,788	711,026	106,541,828	0	0	16,916	16,916	487,713	133,363,707
2009	896,526	84,938,525	712,751	106,688,595	0	0	16,916	16,916	487,721	133,540,610
2010	917,389	86,597,091	728,574	108,719,658	0	0	16,916	16,916	487,629	135,319,908
2011	909,778	86,459,130	722,233	108,449,071	0	0	16,916	16,916	487,677	135,218,775
2012	888,332	85,784,693	715,502	107,408,257	0	0	16,916	16,916	487,607	133,991,627
2013	895,772	86,324,734	724,686	108,184,606	0	0	16,916	16,916	443,071	134,217,374
2014	894,466	85,941,581	712,840	107,627,910	0	0	16,916	16,916	407,185	133,605,965
2015	877,441	85,104,538	704,540	106,485,227	0	0	16,519	16,519	353,596	131,714,408
2016	882,520	85,002,142	703,501	106,358,919	0	0	16,366	16,366	330,507	131,115,621
2017	835,250	80,141,633	651,244	100,343,464	0	0	16,368	16,368	288,384	124,584,796
2018	784,864	75,008,596	604,005	94,163,333	0	0	16,366	16,366	211,744	118,127,354
2019	724,700	67,769,898	532,126	85,527,483	0	0	13,851	13,851	148,797	109,018,317
2020	643,818	60,321,673	469,001	76,309,600	0	0	2,416	2,416	126,869	99,659,092
2021	535,848	52,178,093	411,460	66,212,296	0	0	1,574	1,574	122,867	89,515,874
2022	474,209	45,553,817	374,578	58,478,816	0	0	246	246	122,025	81,760,765
2023	444,230	42,353,928	368,792	54,800,620	0	0	246	246	119,773	78,027,873
2024	434,757	40,543,396	359,556	52,812,353	0	0	246	246	118,550	76,026,876
2025	424,763	39,939,809	356,843	52,083,279	0	0	246	246	118,059	75,288,670
2026	416,645	39,626,514	356,345	51,659,415	0	0	246	246	108,378	74,448,960
2027	413,995	39,506,985	355,944	51,493,274	0	0	246	246	105,885	74,136,274
2028	413,794	39,482,943	355,748	51,384,764	0	0	246	246	104,096	73,676,523
2029	413,398	39,434,053	355,275	51,267,285	0	0	246	246	103,564	71,999,561
2030	412,799	39,307,062	354,084	51,098,345	0	0	246	246	103,241	70,288,766
2031	411,466	39,081,403	351,947	50,834,075	0	0	246	246	103,101	69,799,111
2032	408,868	38,789,604	349,106	50,468,239	0	0	246	246	103,030	69,402,035
2033	405,769	38,450,340	345,797	50,040,206	0	0	246	246	102,932	68,956,909
2034	403,660	38,219,419	343,544	49,745,211	0	0	246	246	102,643	68,648,599
2035	401,764	38,011,208	341,512	49,235,385	0	0	246	246	102,392	68,121,491
TOTAL	47,589,937	4,459,871,297	36,313,285	5,610,134,096	0	0	849,157	849,157	26,203,113	7,098,828,258

TABLE B-20: CALCULATION OF DELTA WATER RATES

(values in millions of dollars ($) or millions of acre-feet (AF)
discounted to 1972 at 4.342 percent per annum, unless otherwise noted)

Procedure	Capital Cost Component	Minimum Operation, Maintenance, Power, and Replacement Component(a	Total Delta Water Charge
In accordance with amendment to Articles 22(e) and 22(g)			
Commencing in 1973:			
Total costs of "initial conservation facilities" to be reimbursed, and project water entitlements to be delivered, during the project repayment period	$866.80(b 69.51 AF	$168.92 69.51 AF	$1,035.72 69.51 AF
less, project power revenues to be realized during the project repayment period(c	$386.65	$ 36.87	$ 423.52
less, Delta Water Charges paid, and project water entitlements, prior to 1973(d	$ 10.97 2.20 AF	$ 2.96 2.20 AF	$ 13.93 2.20 AF
Subtotal	$469.18 ÷ 67.31 AF	$129.09 ÷ 67.31 AF	$ 598.27 ÷ 67.31 AF
Rate applicable for remainder of the project repayment period	$ 6.97 per acre-foot	$ 1.92 per acre-foot	$ 8.89 per acre-foot
Commencing in 1988:			
Additional costs to be reimbursed during the project repayment period for Trans-Basin Diversion Works	$111.17	$ 11.43	$ 122.60
less, Delta Water Charges paid, and project water entitlements delivered, during the period 1973 thru 1987	$159.33 22.86 AF	$ 43.89 22.86 AF	$ 203.22 22.86 AF
Cumulative Subtotal	$421.02 ÷ 44.45 AF	$ 96.63 ÷ 44.45 AF	$ 517.65 ÷ 44.45 AF
Rate applicable for remainder of the project repayment period	$ 9.47 per acre-foot	$ 2.18 per acre-foot	$ 11.65 per acre-foot
Commencing in 1996:			
Additional costs to be reimbursed during the project repayment period for payments to the Corps of Engineers for initial block of storage on Eel River	$ 41.32	$ 6.49	$ 47.81
less, Delta Water Charges paid, and project water entitlements delivered, during the period 1988 thru 1995	$137.32 14.50 AF	$ 31.61 14.50 AF	$ 168.93 14.50 AF
Cumulative Subtotal	$325.02 ÷ 29.95 AF	$ 71.51 ÷ 29.95 AF	$ 396.53 ÷ 29.95 AF
Rate applicable for remainder of the project repayment period	$ 10.85 per acre-foot	$ 2.39 per acre-foot	$ 13.24 per acre-foot
Commencing in 2003:			
Additional costs to be reimbursed during the project repayment period for payments to the Corps of Engineers for reserved block of storage on Eel River	$ 20.00	$ 3.25	$ 23.25
less, Delta Water Charges paid, and project water entitlements delivered, during the period 1996-2002	$102.21 9.42 AF	$ 22.51 9.42 AF	$ 124.72 9.42 AF
Cumulative Subtotal	$242.81 ÷ 20.53 AF	$ 52.25 ÷ 20.53 AF	$ 295.06 ÷ 20.53 AF
Rate applicable for remainder of the project repayment period	$ 11.83 per acre-foot	$ 2.54 per acre-foot	$ 14.37 per acre-foot
Calculation under original provisions of the Contract			
Commencing in 1973:			
Total costs of "initial" and "additional" project conservation facilities to be reimbursed, and project water entitlements to be delivered, during the project repayment period	$1,039.29(b 69.51 AF	$190.09 69.51 AF	$1,229.38 69.51 AF
less, project power revenues to be realized during the project repayment period(c	$ 386.65	$ 36.87	$ 423.52
less, Delta Water Charges paid, and project water entitlements delivered, prior to 1973(d	$ 10.97 2.20 AF	$ 2.96 2.20 AF	$ 13.93 2.20 AF
TOTAL	$ 641.67 ÷ 67.31 AF	$150.26 ÷ 67.31 AF	$ 791.93 ÷ 67.31 AF
Rate applicable for remainder of the project repayment period	$ 9.53 per acre-foot	$ 2.24 per acre-foot	$ 11.77 per acre-foot

a) Considering that all operating costs of project conservation facilities will not vary with annual amounts of project water delivered, and therefore are properly classified as "minimum" OMP&R costs.

b) Including net credits of $4,850,000 for settlement as to the magnitude of project capital costs incurred prior to December 31, 1960, and net credits of $4,888,868 for settlement as to the magnitude of project capital costs incurred during the 1961 through 1968 period.

c) Applying all conservation power revenues to reimbursement of capital costs, except that portion equal to specific operating costs of power facilities under the Oroville Revenue Bond Resolution ($1,500,000 annually).

d) Applying all Delta Water Charges paid prior to 1970 to reimbursement of capital costs (the Charge is not divided into components until 1970), and applying payments of $8,514 in 1970 and $10,411 in 1971 (under a short term water supply contract with Mustang Water District), payments of $14,000 per year (1963 through 1972, under a short term water supply contract with Last Chance Creek Water District) and payments from the Joint Water Districts Board of $5,500 per year (1968 through 1972) 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	11.77	11.77
County of Butte	0	0	0	0	11.77	11.77
Plumas County Flood Control and Water Conservation District	18.23	0.26	0	18.49	15.51	34.00
Feather River Area	.79	.01	0	.80	12.68	13.48
NORTH BAY AREA						
Napa County Flood Control and Water Conservation District	28.51	8.78	3.82	41.11	12.71	53.82
Solano County Flood Control and Water Conservation District	12.43	3.72	0.59	16.74	11.77	28.51
North Bay Area	19.26	5.88	1.97	27.11	13.47	40.58
SOUTH BAY AREA						
Alameda County Flood Control and Water Conservation District, Zone 7	11.08	5.57	5.84	22.49	10.77	33.26
Alameda County Water District	12.85	5.33	6.28	24.46	11.29	35.75
Santa Clara County Flood Control and Water District	16.41	4.49	5.78	26.68	10.34	37.02
South Bay Area	14.68	4.87	5.89	25.44	10.61	36.05
SAN JOAQUIN VALLEY AREA						
County of Kings	3.35	0.99	2.18	6.52	11.15	17.67
Devil's Den Water District	7.46	4.13	3.59	15.18	9.64	24.82
Dudley Ridge Water District	4.13	1.22	2.15	7.50	10.04	17.54
Empire West Side Irrigation District	2.88	0.85	2.03	5.76	9.54	15.30
Hacienda Water District	4.29	1.27	2.14	7.70	10.26	17.96
Kern County Water Agency	7.25	2.45	2.94	12.64	11.19	23.83
Oak Flat Water District	1.48	0.56	1.46	3.50	9.71	13.21
Tulare Lake Basin Water Storage District	4.21	1.24	2.13	7.58	10.42	18.00
San Joaquin Valley Area	6.75	2.27	2.82	11.84	11.03	22.87
CENTRAL COASTAL AREA						
San Luis Obispo County Flood Control and Water Conservation District	59.69	13.78	11.89	85.36	12.91	98.27
Santa Barbara County Flood Control and Water Conservation District	85.87	18.04	11.82	115.73	15.81	131.54
Central Coastal Area	76.76	16.55	11.84	105.15	14.80	119.95
SOUTHERN CALIFORNIA AREA						
Antelope Valley-East Kern Water Agency	27.29	6.28	16.15	49.72	13.60	63.32
Castaic Lake Water Agency	34.12	6.13	11.13	51.38	12.51	63.89
Coachella Valley County Water District	32.36	10.02	18.78	61.16	11.93	73.09
Crestline-Lake Arrowhead Water Agency	38.73	11.06	18.80	68.59	11.83	80.42
Desert Water Agency	32.87	10.18	18.81	61.86	11.97	73.83
Littlerock Creek Irrigation District	22.24	6.45	15.85	44.54	11.79	56.33
Mojave Water Agency	37.71	11.97	19.28	68.96	15.67	84.63
Palmdale Irrigation District	25.18	7.16	16.24	48.58	14.69	63.27
San Bernardino Valley Municipal Water District	40.59	10.98	13.02	64.59	11.60	76.19
San Gabriel Valley Municipal Water District	45.95	12.85	13.03	71.83	13.98	85.81
San Gorgonio Pass Water Agency	50.49	14.05	13.58	78.12	12.31	90.43
The Metropolitan Water District of Southern California	46.13	9.29	12.05	67.47	14.91	82.38
Ventura County Flood Control District	38.81	7.33	12.17	58.31	12.84	71.15
Southern California Area	43.73	9.28	12.73	65.74	14.48	80.22
ALL AREAS	27.38	6.27	8.22	41.87	12.88	54.75

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; 4.342 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	9.10	2.92	.55	12.57	9.10	2.92	.55	12.57
2	2.86	.62	.00	3.48	11.96	3.54	.55	16.05
3	17.63	5.46	3.32	26.41	29.59	9.00	3.87	42.46
SOUTH BAY AQUEDUCT								
1	4.49	2.90	4.12	11.51	5.53	3.45	5.70	14.68
2	.44	.30	.00	.74	5.97	3.75	5.70	15.42
4	1.58	.56	.00	2.14	7.55	4.31	5.70	17.56
5	3.82	.91	.00	4.73	11.37	5.22	5.70	22.29
6	.14	.02	.00	.16	11.51	5.24	5.70	22.45
7	1.67	.06	.00	1.73	13.18	5.30	5.70	24.18
8	2.53	.10	.00	2.63	15.71	5.40	5.70	26.81
9	4.78	.35	.00	5.13	20.49	5.75	5.70	31.94
CALIFORNIA AQUEDUCT								
1	1.04	.55	1.58	3.17	1.04	.55	1.58	3.17
2A	.87	.16	.00	1.03	1.91	.71	1.58	4.20
2B	.43	.06	.00	.49	2.34	.77	1.58	4.69
3	.35	.04	.00	.39	2.69	.81	1.58	5.08
4	.67	.26	.64	1.57	3.36	1.07	2.22	6.65
5	.55	.10	.00	.65	3.91	1.17	2.22	7.30
6	.17	.02	.00	.19	4.08	1.19	2.22	7.49
7	.41	.07	.00	.48	4.49	1.26	2.22	7.97
8C	.00	.01	.00	.01	4.49	1.27	2.22	7.98
8D	.29	.09	.00	.38	4.78	1.36	2.22	8.36
9	.21	.08	.00	.29	4.99	1.44	2.22	8.65
10A	.24	.08	.00	.32	5.23	1.52	2.22	8.97
11B	.37	.06	.00	.43	5.60	1.58	2.22	9.40
12D	.34	.08	.00	.42	5.94	1.66	2.22	9.82
12E	.20	.06	.00	.26	6.14	1.72	2.22	10.08
13B	.47	.12	.00	.59	6.61	1.84	2.22	10.67
14A	1.67	.46	1.03	3.16	8.28	2.30	3.25	13.83
14B	.31	.13	.00	.44	8.59	2.43	3.25	14.27
14C	.29	.09	.00	.38	8.88	2.52	3.25	14.65
15A	1.22	.40	1.12	2.74	10.10	2.92	4.37	17.39
16A	2.03	.71	2.57	5.31	12.13	3.63	6.94	22.70
17E	7.10	1.18	8.90	17.18	19.23	4.81	15.84	39.88
17F	2.03	.02	.00	2.05	21.26	4.83	15.84	41.93
18A	.45	.13	.00	.58	21.71	4.96	15.84	42.51
19	1.26	.75	.00	2.01	22.97	5.71	15.84	44.52
20A	1.14	.59	.00	1.73	24.11	6.30	15.84	46.25
20B	1.31	.59	.00	1.90	25.42	6.89	15.84	48.15
21	.83	.35	.00	1.18	26.25	7.24	15.84	49.33
22A	.58	.21	.00	.79	26.83	7.45	15.84	50.12
22B	5.68	2.32	2.95	10.95	32.51	9.77	18.79	61.07
23	.33	.03	.00	.36	32.84	9.80	18.79	61.43
24	3.96	.61	.00	4.57	36.80	10.41	18.79	66.00
25	2.05	.00	.00	2.05	38.85	10.41	18.79	68.05
26A	3.13	1.02	-5.55	-1.40	41.98	11.43	13.24	66.65
28G	4.92	.09	.00	5.01	46.90	11.52	13.24	71.66
28H	5.61	.14	.00	5.75	52.51	11.66	13.24	77.41
28J	12.70	.86	.00	13.56	65.21	12.52	13.24	90.97
WEST BRANCH								
29A	2.04	.93	.93	3.90	23.30	5.76	16.77	45.83
29F	.90	.44	.00	1.34	24.20	6.20	16.77	47.17
29G	.68	.13	.00	.81	24.88	6.33	16.77	47.98
29H	3.33	.23	.00	3.56	28.21	6.56	16.77	51.54
29J	5.69	.06	-5.60	.15	33.90	6.62	11.17	51.69
30	8.95	.63	.00	9.58	42.85	7.25	11.17	61.27
COASTAL BRANCH								
31A	4.22	3.47	1.45	9.14	9.00	4.83	3.67	17.50
33A	46.52	7.39	8.13	62.04	55.52	12.22	11.80	79.54
34	4.44	.38	.00	4.82	59.96	12.60	11.80	84.36
35	16.47	1.28	.00	17.75	76.43	13.88	11.80	102.11

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; 4.342 percent per annum.

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REDETERMINED ANNUAL TRANSPORTATION CHARGE FOR EACH WATER CONTRACTOR	B-14	149	Capital Costs of Transportation Facilities Allocated to Each Contractor	B-14	B-14	B-14	B-17	B-11	B-11	B-13	C-10	33
	B-15	151	Capital Cost Component of Transportation Charge for Each Contractor	B-15	B-15	B-15	B-18	B-12	B-12	B-14	C-11	34
	B-16	155	Minimum OMP&R Component of Transportation Charge for Each Contractor	B-16	B-16	B-16	B-19	B-13	B-13	B-15	C-12	35
	B-17	159	Unit Variable OMP&R Component of Transportation Charge	B-17	B-17	B-17	B-5	B-14	B-14	B-16	C-13	none
	B-18	162	Variable OMP&R Component of Transportation Charge for Each Contractor	B-18	B-18	B-18	B-20	B-15	B-15	B-17	C-14	36
	B-19	166	Total Transportation Charge for Each Contractor	B-19	B-19	B-19	B-21	B-16	B-16	B-18	C-15	37
FUTURE DELTA WATER RATES	B-20	170	Calculation of Delta Water Rates	B-20	B-20	B-20	none	none	none	none	none	30
EQUIVALENT COSTS OF WATER	B-21	171	Equivalent Unit Charges for Water Supply for Each Contractor	B-21	B-21	B-23	B-23	none	none	none	none	39
	B-22	172	Equivalent Unit Costs of Water Delivered From or Thru Each Aqueduct Reach	B-22	none	none	none	none	none	none	none	none

6 POWERPLANTS

Name	Number of Units	Normal Static Head (feet)	Total Design Flow (cubic feet per second)	Power Generator Output (kilowatts)	Maximum Annual Energy Output (kilowatt-hours)
Edward Hyatt	6	410/676 1/	14,550	678,750	2,475,000,000
Thermalito	4	85/100 1/	16,900	119,600	383,000,000
San Luis					
Total	8	99/327 1/	13,120	424,000	
State Share			6,872	222,100	170,000,000
Devil Canyon	2	1,418	1,200	119,700	877,000,000
Castaic					
Total	7	1,063	18,400	1,250,000	
State Share 2			3,092	214,000	1,457,000,000
San Luis Obispo	1	730	111	5,900	41,000,000
Total, State Share					**5,403,000,000**

1/ Minimum and maximum static heads.
2/ The City of Los Angeles Department of Water and Power will construct and operate a 1,250,000-kilowatt Castaic Powerplant and will supply the Project with electrical power and energy equivalent to the generation from a 213,984-kilowatt powerplant the State originally planned to construct.

22 PUMPING PLANTS

Name	Number of Units	Normal Static Head (feet)	Total Design Flow (cubic feet per second)	Total Motor Rating (horsepower)	Maximum Annual Energy Requirements (kilowatt-hours)
Edward Hyatt (pumped storage)	3	500/660 1/	5,610	519,000	465,000,000
Thermalito (pumped storage)	3	85/102 1/	9,000	120,000	91,000,000
North Bay Aqueduct:					
Calhoun	6	33	120	600	1,200,000
Travis	6	0	120	900	1,800,000
Cordelia	3	448	48	3,100	14,400,000
South Bay Aqueduct:					
South Bay	9	545	330	27,750	166,000,000
Del Valle	4	0/38 2/	120	1,000	2,000,000
California Aqueduct (main line);					
Delta	11	244	10,303	333,000	1,355,000,000
San Luis					
Total	8	99/327 2/	11,000	504,000	
State Share			5,762	264,000	313,000,000
Dos Amigos					
Total	6	113	13,200	240,000	
State Share			7,100	130,000	573,000,000
Buena Vista	10 3/	205	5,049	136,000	746,000,000
Wheeler Ridge	9 3/	233	4,598	140,000	787,000,000
Wind Gap	9 3/	518	4,410	308,000	1,760,600,000
A. D. Edmonston	14 3/	1,926	4,095	1,040,000	5,916,000,000
Pearblossom	6	542	1,380	113,200	573,000,000
California Aqueduct (branches):					
Oso	8	220	3,128	93,800	429,000,000
Las Perillas	6	55	450	4,050	20,000,000
Badger Hill	6	151	450	10,500	56,000,000
Devil's Den	4	409	126	8,000	51,000,000
Sawtooth	4	331	126	6,500	41,000,000
Polonio	4	810	126	16,000	101,000,000
Peripheral Canal					
Total	16	10	21,800	30,500	
State Share			10,900	15,250	48,000,000
Total, State Share					**13,511,000,000**

1/ Minimum and maximum total pumping heads.
2/ Minimum and maximum static heads.
3/ Includes one spare unit.

STATISTICS

AQUEDUCTS

Name	Length (miles)				
	Total	Canal	Pipeline	Tunnel	Channel & Reservoir
North Bay Aqueduct	26.5	14.3	12.2	0	0
South Bay Aqueduct	42.9	8.4	32.9	1.6	0
Peripheral Canal	43.0	42.0	1.0	0	0
Subtotal	112.4	64.7	46.1	1.6	0
California Aqueduct (main line):					
Delta to O'Neill Forebay	68.4	67.0	0	0	1.4
O'Neill Forebay to Kettleman City	105.7	103.5	0	0	2.2
Kettleman City to A. D. Edmonston Pumping Plant	120.9	120.9	0	0	0
A. D. Edmonston Pumping Plant thru Tehachapi Afterbay	10.6	0.2	2.5	7.9	0
Tehachapi Afterbay thru Lake Perris	138.4	93.4	38.3	3.8	2.9
Subtotal, main line	444.0	385.0	40.8	11.7	6.5
California Aqueduct (branches):					
West Branch	31.9	9.1	6 4	7.2	9.2
Coastal Branch	96.2	14.8	81.4	0	0
Subtotal, branches	128.1	23.9	87.8	7.2	9.2
TOTALS	**684.5**	**473.6**	**174.7**	**20.5**	**15.7**

23 DAMS AND RESERVOIRS

Name of Reservoir	Reservoirs			Dams			
	Gross Capacity 1/ (Acre-feet)	Surface Area (acres)	Shore-line (miles)	Struc-tural Height (feet)	Crest Eleva-tion 2/ (feet)	Crest Length (feet)	Volume (cubic yards)
Frenchman Lake	55,477	1,580	21	139	5,607	720	537,000
Antelope Lake	22,566	931	15	120	5,025	1,320	380,000
Lake Davis	84,371	4,026	32	132	5,785	800	253,000
Abbey Bridge	45,000	1,950	21	117	5,475	1,150	500,000
Dixie Refuge	16,000	900	15	100	5,754	1,050	400,000
Lake Oroville	3,537,577	15,805	167	770	922	6,920	80,000,000
Thermalito Diversion Pool	13,328	323	10	143	233	1,300	154,000
Fish Barrier Pool	580	52	1	91	181	600	10,500
Thermalito Forebay	11,768	630	10	91	231	15,900	1,840,000
Thermalito Afterbay	57,041	4,302	26	39	142	42,000	5,020,000
Clifton Court Forebay	30,000	2,200	8	30	14	36,500	2,440,000
Bethany	4,804	161	6	121	250	3,940	1,400,000
Lake Del Valle	77,106	1,060	16	235	773	880	4,150,000
San Luis	2,038,008	12,700	65	385	554	18,600	77,645,000
O'Neill Forebay	56,426	2,700	12	88	233	14,350	3,000,000
Los Banos	34,562	623	12	167	384	1,370	2,100,000
Little Panoche	13,236	354	10	152	676	1,440	1,210,000
Buttes	21,800	580	6	190	2,790	2,230	3,130,000
Silverwood Lake	74,978	976	13	249	3,378	2,230	7,600,000
Lake Perris	120,000	2,240	10	128	1,600	11,600	20,000,000
Pyramid Lake	179,000	1,358	21	400	2,606	1,090	6,860,000
Castaic Forebay	34,500	497	7	195	1,550	2,000	6,000,000
Castaic Lake	324,000	2,230	29	425	1,535	4,900	46,000,000
Totals	**6,852,128**	**58,178**	**533**			**172,890**	**270,629,500**

1/ At maximum normal operating level.

2/ Above sea level.

VC-83232-950 4-72 2,500

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