

Chapter I

INTRODUCTION

Cost allocation is a process to distribute the costs of multi-purpose project facilities among the various purposes served in order to identify responsibilities for repayment of reimbursable costs. Reimbursable costs are costs that require some level of repayment from project beneficiaries. These can be contrasted with non-reimbursable costs, which are costs borne by the Federal government (i.e., Federal taxpayers). Generally, cost allocation is first performed during project planning before construction begins to give contractors an estimate of their repayment responsibility and to determine whether the project is financially feasible. In the case of the CVP, an initial allocation was completed while the project was in the early stages of construction. Since that time, several updated and revised cost allocations have been developed as more and more actual construction costs have been incurred. In addition, numerous laws have been enacted, agreements made, and policies established to guide the allocation of costs among CVP purposes and to assign repayment responsibilities for reimbursable costs to water and power users and other non-Federal entities.

The last detailed CVP cost allocation study was completed in 1975, and the percentages developed in that study for allocating costs among purposes served are still in use today. Since then, relatively minor updates and adjustments have been made annually to the cost allocation to determine repayment responsibilities of water and power users as new project facilities have been added and water and power uses changed.

This report describes the existing allocation of CVP costs and its historical basis, considers alternative methods to allocate costs, and selects a recommended alternative. This study was undertaken to comply with the requirements of Public Law 99-546, dated October 27, 1986, and to respond to recommendations presented in the GAO report titled *Central Valley Project Cost Allocation Overdue and New Method Needed*, dated March

1992.

The remainder of this chapter provides background for this CVP cost allocation study, Chapter II summarizes past CVP cost allocation studies, Chapter III describes the existing CVP cost allocation, Chapter IV discusses cost allocation methods and presents two alternatives to the existing allocation, Chapter V contains numerical results of cost allocations using the existing and two alternative allocation methods, Chapter VI presents evaluation criteria and results of comparative evaluations of the three allocation methods, and Chapter VII contains conclusions and recommendations.

BACKGROUND

The CVP is the largest surface water storage and delivery system in California and is also the largest irrigation water supply project constructed and operated by Reclamation. Facilities and service areas of the CVP cover a large geographic area and include 35 of the State's 58 counties. The CVP includes 20 reservoirs, with a combined storage capacity of approximately 11 million acre feet; 8 powerplants and 2 pumping-generating plants, with a combined capacity of approximately 2 million kilowatts; 2 pumping plants; and approximately 500 miles of major canals and aqueducts. The CVP supplies water to more than 250 long-term water contractors in the Central Valley, the San Francisco Bay Area, and the Santa Clara Valley.

The CVP is authorized as a financially and operationally integrated water supply project, providing water storage both north and south of the Sacramento-San Joaquin River/San Francisco Bay Delta (Delta). As shown on Figure I-1, major CVP dams and reservoirs are located on the Trinity, Sacramento, American, Stanislaus, and San Joaquin rivers. CVP water supplies north of the Delta are controlled by Shasta and Folsom dams on the

Sacramento and American rivers, respectively. Water from the Trinity River is stored, re-regulated, and diverted through a system of dams, reservoirs, tunnels, and powerplants to the Sacramento River to supplement the supply developed by Shasta Reservoir.

Hydroelectric power generation at numerous CVP facilities provides adequate power for project requirements (project use power) and additional power is available for commercial sale. Commercial power generated by CVP facilities is marketed and sold by the Western Area Power Administration (Western), an agency of the Department of Energy.

Total long-term contracts for CVP water exceed 9 million acre-feet per year. Historically, approximately 90 percent of the water delivered by the CVP has been for agricultural uses. At present, increasing quantities of water is being provided to municipal customers, including the cities of Redding, Sacramento, Folsom, Tracy, and Fresno, most of Santa Clara County, and the northeastern portion of Contra Costa County.

The CVP was authorized through a series of legislative acts, beginning with the Rivers and Harbors Act of 1935, which authorized construction of initial features on the Sacramento and San Joaquin Rivers and in the Delta by the COE. The River and Harbors Act of August 26, 1937, reauthorized the CVP for construction under provisions of Federal reclamation laws by the Secretary of the Interior (Secretary). Successive Congressional acts authorized additional facilities, and, in most cases, groups of facilities were authorized as Divisions or Units (components of a division) based on geographical proximity and purposes served.

The first allocation of costs and assessment of financial feasibility for the CVP was completed in 1946. In 1954, the COE, the Federal Power Commission, and the Department of the Interior agreed to use the separable costs-remaining benefits (SCRB) method as the preferred approach for the allocation of project costs. (The SCRB allocation method is explained in Chapter IV.) In 1956, Reclamation completed its first reallocation of CVP costs based on the SCRB method. This allocation was revised in 1960 and again in 1970, when

updated SCRB analyses were completed. In 1975, a “short-form” reallocation of CVP costs was prepared using updated benefits and indexed costs for some project purposes to revise the 1970 allocation. No major reallocation of CVP costs has been completed since 1975.

To date, the allocation studies of the CVP have provided “interim” results because construction of the CVP is not yet considered complete. Capital costs continue to be incurred for new facilities and for replacements and additions to existing facilities. Consequently, a final cost allocation cannot be completed at this time.

Each year, Reclamation prepares an update to the interim cost allocation of the CVP for plant-in-service, operations and maintenance (O&M), construction work-in-progress, and the authorized project. The updates utilize factors developed in the 1975 reallocation study. The annual plant-in-service update provides input to Reclamation’s water ratesetting process, Western’s commercial power ratesetting process, Reclamation’s and Western’s financial statements, Reclamation’s Statement of Project Construction Cost and Repayment, and Western’s Power Repayment Study. In addition, Reclamation prepares an allocation of CVP operation and maintenance (O&M) costs annually that also provides input to Reclamation’s water ratesetting process.

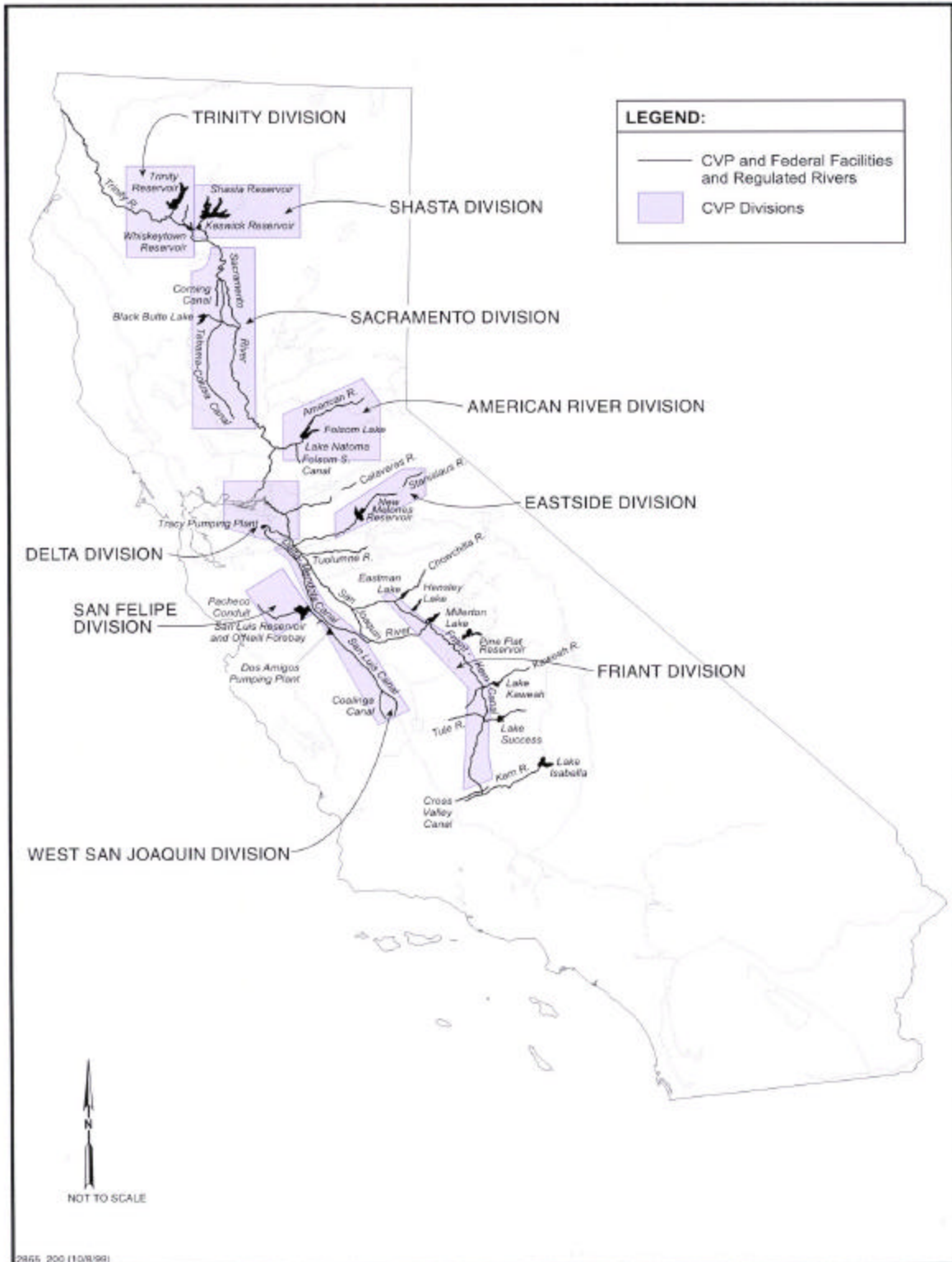


FIGURE I-1
THE CENTRAL VALLEY PROJECT

NEED FOR COST ALLOCATIONS

Early Federal efforts in the field of water resources development consisted of simple, single-purpose projects, but soon after that the trend was toward increasingly complex, multi-purpose developments. If a project serves only one purpose, its costs can simply be assigned to that purpose, whether or not the purpose is reimbursable. If all of the purposes in a multi-purpose project are non-reimbursable, no cost allocation is required, at least for repayment purposes, since no reimbursement is necessary. In a multi-purpose project, such as the CVP, with one or more purposes that must reimburse costs, a cost allocation is necessary to determine the level of reimbursement responsibilities.

Like many major water resources projects designed and operated to serve multiple purposes, the CVP is comprised of both single-purpose and multi-purpose components. Costs for single-purpose facilities, such as canals to provide M&I water and irrigation water, are, of course, allocated to the purposes they serve for repayment in accordance with legislation, agreements, and policies. Costs of multi-purpose facilities, such as dams and reservoirs that may be designed and operated to provide water supply, flood control, and other benefits, must be allocated to the multiple purposes served. Costs incurred for some purposes are completely or partially reimbursable while costs incurred for other purposes are completely non-reimbursable. Thus, the central challenge of the allocation process is the equitable allocation of joint costs – the costs of facilities serving more than one project purpose.

Since repayment requirements are established by law and agency policies, some of which are project-specific, the cost allocation process is often project-specific and can require substantial detail. Any allocation process relies to some extent on judgment, and the goal is the development of an apportionment of joint costs that complies with Federal laws and regulations, agency cost allocation and contracting policies, and is perceived as acceptable to all parties. In the CVP, the cost allocation process is used to distribute project costs among its seven authorized purposes and to identify repayment responsibilities for reimbursable costs. The cost allocation identifies costs to be repaid to

the Federal government by water and power users as well as the repayment obligations of non-Federal public entities, such as the State of California (State) and counties. The allocation also identifies non-reimbursable costs, borne by Federal taxpayers.

NEED FOR A REVISED COST

Authorized Purposes of the CVP

- Water Supply
- Hydroelectric Power Generation
- Flood Control
- Fish and Wildlife Protection, Restoration and Enhancement
- Recreation
- Navigation
- Water Quality

Repayment Entities

- Irrigation Water Users
- Municipal and Industrial Water Users
- Commercial Power Customers
- State of California and Counties

ALLOCATION OF THE CVP

Since the last cost reallocation study completed in 1975, two events have occurred that direct Reclamation to conduct a new CVP cost allocation study. Title I of P.L. 99-546 directed the Secretary to operate the CVP in conformity with State water quality standards for the Delta. That law also required that the costs associated with providing CVP water supplies for the purpose of salinity control and for complying with State water quality standards of the Coordinated Operations Agreement be allocated among the project purposes and reimbursed in accordance with existing Reclamation law and policy. The Secretary was authorized and directed to undertake a cost allocation study of the CVP and implement it no later than January 1, 1988. Reclamation completed a draft cost allocation study in 1988, but it was never implemented.

In 1992, the GAO submitted a report titled *Central Valley Project Cost Allocation Overdue and*

New Method Needed, dated March 1992, on the CVP cost allocation to the Chairman of the Congressional Subcommittee on Water, Power and Offshore Energy Resources. According to the report, the analysis in the 1988 draft allocation study included inappropriate costs, was based on questionable estimates of project benefits and alternative costs, and required information that was not always available or was costly and time-consuming to obtain. The GAO recommended that the process used to complete the allocation study be streamlined by using less costly and more timely methodologies and suggested two approaches to allocate joint costs that differ from the SCRB procedure. In a response to the GAO recommendation that was published as part of the GAO report, Reclamation indicated that it was working expeditiously to complete the new interim cost allocation study and would examine one approach suggested by the GAO. It would allocate joint costs in direct proportion to specific costs and compare the results to joint costs allocated using the benefits-based method. This would allow Reclamation to assess the results of both methods and determine which methodology is more appropriate for use in allocating costs for the CVP.

SCOPE OF STUDY

The objectives of this cost allocation study were established based on issues raised by the GAO in its 1992 report and other concerns raised by Reclamation staff in recent years. Study objectives include:

- Consider the use of a simplified method to allocate joint costs
- Develop a streamlined process for completing annual updates to the CVP cost allocation
- Identify and correct discrepancies in the allocation or repayment computations to assure compliance with legislation, agreements, and policies
- Consider the need for a new, comprehensive cost reallocation study

In planning this cost allocation study,

Reclamation decided not to develop an entirely new allocation with new allocation factors based on updated estimates of project benefits or alternative costs. Updating water and power operations studies, re-estimating project benefits, re-designing project features and re-estimating their costs in today's dollars would require a significant investment in time and effort and would not be consistent with the GAO recommendation for a more streamlined allocation process. Before making such an investment, it would be prudent to consider the need for it and to consider whether it would likely result in a more acceptable allocation of costs. Accordingly, this study was limited to the level of effort needed to identify and correct discrepancies in the computations, revise computational tools, and to consider alternative allocation methods that would not require a new application of the SCRB method to complete.

As noted above, although Reclamation annually updates four different types of CVP cost allocations, only the plant-in-service allocation and O&M cost allocation are used in the water ratesetting process. Furthermore, the O&M allocation itself is generally based on the plant-in-service allocation. From a functional standpoint then, the plant-in-service allocation is the most crucial of the four and is the only one addressed in this study.

PUBLIC OUTREACH

Public outreach began shortly after the study was initiated and included a presentation of the existing cost allocation process. Outreach continued through development and evaluation of alternatives considered in this report. A summary of public meetings and workshops held during development of this draft report is provided in Table I-1.

A public meeting will be held during the review of the Draft Report to provide clarification and solicit comments from the public. The Final Report will include responses to comments received on the Draft Report.

TABLE I-1
SUMMARY OF PUBLIC MEETINGS AND WORKSHOPS

DATE	PURPOSE
February 4, 1999	<ul style="list-style-type: none"> • Provided Overview of the Cost Allocation Study • Described Methodology Used in Existing Cost Allocation • Described Corrections Applied to 1995 Cost Allocation • Discussed Potential Strategies for Development of Alternatives
March 10, 1999	<ul style="list-style-type: none"> • Provided Examples of Existing Allocation Computations • Described Allocation Methods Suggested by the GAO
April 23, 1999	<ul style="list-style-type: none"> • Reviewed GAO Recommendations • Presented Initial Results from Analysis of GAO-Suggested Method
May 20, 1999	<ul style="list-style-type: none"> • Presented Further Results from Analysis of GAO-Suggested Method
July 15, 1999	<ul style="list-style-type: none"> • Presented Revised Results from Analysis of GAO-Suggested Method • Solicited Input on Other Possible Allocation Alternatives to be Considered • Water and Power Contractors Requested Opportunity to Present Alternative for Consideration
February 8, 2000	<ul style="list-style-type: none"> • Presented Summary and Results of Three Allocation Alternatives (Existing Allocation, Proportional Alternative, Contractors' Proposal) • Solicited Input on Criteria to Evaluate and Compare Alternatives
June 15, 2000	<ul style="list-style-type: none"> • Summarized Allocation Alternatives Under Consideration • Presented Evaluation Criteria to be Applied to Alternatives