

# Chapter III

## EXISTING CVP PLANT-IN-SERVICE COST ALLOCATION

As an initial step in conducting this CVP cost allocation study, Mid-Pacific Region staff of Reclamation reviewed and revised the 1995 annual interim update to the allocation of plant-in-service costs (the most recent completed at the time). The review, which was made to assure compliance with authorizing legislation, regulatory requirements, interagency agreements, and/or policy guidelines revealed several deficiencies that had been part of previous annual updates, and data that had been introduced into the 1995 interim allocation. The types of deficiencies identified and corrected included arithmetic errors in some computations, inconsistent rounding of computed values, incomplete allocation of some costs, and the use of allocation criteria that were inconsistent with authorizing legislation, regulatory requirements, and/or policy guidelines.

In November 1998 prior to the first public meeting on the cost allocation study that was held in February 1999, Reclamation provided a three-volume documentation of the CVP cost allocation to agency staff, stakeholders, and interested parties. The first volume presented allocation factors and repayment responsibilities for plant-in-service costs listed in the CVP financial statement on a feature-by-feature basis. For each feature, this volume described any adjustments to costs reported in the financial statement that are needed prior to the allocation computations, the authorization of and allocation criteria applied to each feature, and the repayment criteria used to determine reimbursable costs allocated to the water supply, power, fish and wildlife, and recreation purposes. The second and third volumes of the documentation comprised a compendium of reference materials regarding authorizations, agreements, and agency policies on issues affecting cost allocation and repayment. Subsequently, the 1996 and 1997 plant-in-service interim cost allocations were based on intermediate versions of the revisions that were available for

application in these annual updates. Beginning in 1998, annual cost allocation updates have been based on the results of the revisions made at this step.

As a part of the study, a revised and expanded computer spreadsheet was developed to improve the speed with which cost allocation updates can be completed. The spreadsheet uses standardized computations to allocate costs and calculate repayment responsibilities for each feature in the CVP. Beginning in 1996, interim cost allocation updates have been completed in a matter of weeks rather than over a period of months, which had typically been required prior to the improvements.

### COST ALLOCATION COMPUTATIONAL PROCESS

A three-step process is followed in the allocation of CVP costs.

- Identify costs to be allocated.
- Allocate costs to project purposes.
- Calculate repayment responsibilities for each project purpose.

The following discussions provide general descriptions of these three steps.

#### Identify Costs to be Allocated

As described in Chapter II, the CVP was authorized at different times through various pieces of legislation and includes facilities constructed by Reclamation and other facilities constructed by the COE that have been transferred to Reclamation for repayment. In addition, certain facilities constructed by Reclamation, while still operated as an integral part of the CVP, have been transferred from Reclamation to DOE.

The Department of Energy Organization Act of 1977, establishing DOE, transferred the power marketing functions of Reclamation, including the construction, operation, and maintenance of transmission lines, to the new department. Western was created within DOE and exercises the power marketing functions for the CVP. The plant-in-service costs of CVP transmission lines were subsequently transferred to Western and no longer appear in Schedule No.1 (Plant, Property and Equipment) of the CVP financial statement.

The CVP financial statement reflects costs of facilities that can be broadly grouped into the six categories described below. Costs of facilities transferred to Western are included as a seventh category.

**Single-Purpose Facilities** – These are features of the project that serve a single purpose, such as canals and pumping plants (water supply purpose), powerplants and switchyards (power purpose), fish facilities (fish and wildlife purpose), and recreation facilities (recreation purpose). The allocation of single-purpose facilities is simple, with costs assigned to the single purpose the facility serves.

Some of the single-purpose facilities listed in the CVP financial statement are local water distribution systems serving both M&I and irrigation water users that are being repaid through repayment contracts with the United States. A repayment contract specifies a fixed obligation that is to be repaid through a fixed number of installments and is similar in nature to a home mortgage. These facilities are included in the CVP cost allocation because Reclamation is responsible for collections under provisions of the repayment contracts. Their costs are allocated to the water supply purpose and then set aside in a separate repayment contract category. Since these costs are recovered through repayment contracts, they are not included in water or power rates.

**Multi-Purpose Facilities** – These are features of the CVP that serve multiple purposes, such as dams and reservoirs. A number of CVP dams and reservoirs provide flood control benefits and/or store water for both hydroelectric power generation and water supply. Other multi-purpose facilities include

radio, telemetry, and other communications equipment, rain and stream gages, permanent operating facilities, and protective measures in Suisun Marsh to control salinity water conditions. Since 1956, the costs for multi-purpose features of the CVP have generally been allocated among the purposes served by each facility using the SCRB method.

The existing cost allocation uses factors that were calculated in the 1975 reallocation study. These factors identify the portion of costs for each multi-purpose facility that are specific to individual purposes (separable factors) and the proportional allocation of remaining joint costs among multiple purposes (joint factors).

**COE-Transferred Facilities** – The CVP includes three facilities listed below that were constructed by the COE and transferred to Reclamation for operational and financial integration with the CVP. They appear in Schedule No.1 of the CVP financial statement. Folsom Dam was constructed by the COE, transferred to Reclamation, and integrated into the CVP; Reclamation has developed allocation factors for Folsom Dam as part of its own cost allocation studies. Reclamation has adopted the COE cost allocation for the other two facilities and collects for repayment accordingly. Each year the COE provides a letter to Reclamation that presents the current-year allocation of costs for the two facilities.

- Folsom Dam and Reservoir
- New Melones Dam, Powerplant, and Reservoir
- Black Butte Dam and Reservoir

In addition, Reclamation, through the CVP, has assumed the repayment obligation for two other facilities constructed and operated by the COE. The two facilities are listed below. Reclamation has also adopted the COE allocation for these facilities and collects for repayment accordingly. Each year the COE provides a letter to Reclamation that presents the current-year allocation of costs for the two facilities.

- Hidden Dam and Hensley Lake
- Buchanan Dam and Eastman Lake

**Non-Reimbursable Costs** – The plant-in-service costs of a number of CVP facilities include components directly set aside to a non-reimbursable category pursuant to Congressional legislation. In the CVP allocation these component costs are directly assigned to the appropriate category and are removed from the allocation base. The non-reimbursable costs are as follows:

- Federal share of Safety of Dams improvements
- Archeology, cultural, and historical
- Highway improvement
- Non-reimbursable Interest During Construction
- Capitalized movable equipment
- Buildings and service facilities

**Authorized Deferred Use** – Public Law 89-161, dated September 2, 1965, authorized the Auburn-Folsom South unit and allowed the Secretary to include additional capacity in the Folsom South Canal to deliver water to potential future additions to the CVP along the east side of the Central Valley. Public Law 90-65, dated August 19, 1967, authorized the Secretary to include extra capacity in the Tehama-Colusa Canal to enable it to provide future water service to areas that could be authorized as an extension of the CVP. In both cases the incremental costs of the additional canal capacity were to be assigned to deferred use. These costs would become the repayment responsibility of water users if and when facilities that formed the basis for the deferral are ever constructed.

**State Share of San Luis Unit** – Public Law 86-488, dated June 3 1960, authorized the Secretary to construct, operate, and maintain the San Luis Unit as an integral part of the CVP. Certain facilities, including San Luis Dam, pumping plants, and the

San Luis Canal, were to be jointly used with the State and are known as joint-use facilities. Contract No. 14-06-200-9755, dated December 30, 1961, provides that the State shall pay 55 percent of the construction cost of joint-use facilities and the Federal government 45 percent. In the allocation of CVP costs, the State share of the construction costs of joint-use facilities is directly assigned to the State and removed from the allocation base.

**Western Facilities** – Facilities owned and operated by Western are the Central Valley Power System and Interties Power System. They are single-purpose power facilities, and plant-in-service costs are derived from Western’s annual Results of Operations for both systems.

### **Allocate Costs to Project Purposes**

Starting with each year’s financial statement, cost allocation computations are completed in several steps to assure that cost components are identified and allocated in accordance with existing legislation, agreements, and policies. First, costs reported in the financial statement are disaggregated, as necessary. The total costs of many features reported in the financial statement include cost components that are to be directly assigned to a non-reimbursable expense category or are subject to allocation and repayment criteria that differ from those of the main feature.

For example, the total cost of a feature reported in the financial statement may include non-reimbursable costs associated with archaeological, cultural, and historical studies. These costs are identified and assigned directly to the appropriate non-reimbursable cost category. In other cases, total costs in the financial statement include interest during construction (IDC), safety of dams improvements, or other items that are not subject to the same cost allocation and repayment criteria as the main feature. In general, the repayment requirements of these components have been specified by Congressional legislation. The costs are identified and allocated separately. Such adjustments may be based on specified dollar amounts or percentages of total costs incurred.

After completing the adjustments described above, the remaining costs represent the total capital

investment to be allocated among the authorized project purposes of the CVP. For single-purpose facilities, costs are allocated in total to the purpose served. Subsequent computations, described in a later section, distribute allocated costs for determination of repayment responsibilities.

For multi-purpose facilities, costs are allocated using separable and joint cost allocation factors. In the existing cost allocation, these factors are based on the results of the 1975 reallocation study, which was completed using the SCRB method. First, separable cost factors are applied to identify the portion of total costs allocated among project purposes as separable costs. (Separable costs are discussed in Chapter IV.) The remaining costs are then allocated among multiple purposes using the joint cost allocation factors. The total allocation to each project purpose is the sum of separable costs and that portion of joint costs allocated to the purpose.

### **Calculate Repayment Responsibilities**

Repayment responsibilities for costs allocated to each project purpose are determined separately for each purpose. Depending on the facility, costs allocated to water supply, power, fish and wildlife, and recreation purposes are either fully or partly reimbursable by the project beneficiaries. Costs allocated to flood control, navigation, and water quality are non-reimbursable Federal expenditures. In general, the costs of constructing CVP facilities are initially paid by the Federal government (Reclamation) with funds appropriated by Congress. Reimbursable costs are the costs that will be repaid to the Federal government by M&I and irrigation water users, commercial power customers, the State, and counties within the State. In the context of this study, the term “reimbursable” generally applies to costs to be repaid by water and power customers. Non-reimbursable costs are the construction costs that will not be repaid to the Federal government; in effect, they are borne by the Federal taxpayer. A brief description of the repayment analysis to determine reimbursable costs follows.

**Water Supply Repayment** – Costs allocated to the water supply purpose are sub-allocated among the M&I, irrigation, and wildlife refuge water use

functions in proportion to their respective water deliveries. More specifically, costs are distributed using factors based on the type of facility used (storage, conveyance, conveyance pumping, or direct pumping) in proportion to the amount of water stored, conveyed, or distributed for each function. In order to appropriately reflect use of such facilities, proportional use is based on the total of actual historic and projected future water deliveries for both water users and wetland habitat areas. For any given allocation update, actual water delivery records begin with the first CVP water deliveries and continue through the year two years prior to the year of the update. Projected water deliveries extend from that date through the end of the repayment period (2030 for in-basin facilities, and 2036 for San Felipe Division facilities) and assume the delivery of full contract amounts or are reduced to reflect possible future reductions in the amount of CVP water available to its contractors. The effect of year-to-year changes in water deliveries on these proportions based on actual use is normally very small due to the long period considered. Consequently, factors used to determine water supply repayment obligations do not vary significantly from year to year.

Costs sub-allocated to the wildlife refuge water supply function are further sub-allocated among reimbursable and non-reimbursable functions based on cost sharing criteria included in the CVPIA. Reimbursable costs are assigned to non-Federal entities (project water and power users and the State) in accordance with legislative requirements. The distribution of that portion of wildlife refuge water supply costs that is reimbursable by project water and power users (M&I water, irrigation water, and commercial power contractors) is made in proportion to the previous year’s costs allocated to the three reimbursable functions of M&I water supply, irrigation water supply, and commercial power.

**Power Repayment** – Costs allocated to the power purpose are first sub-allocated between project use and commercial power using factors derived from the long-term project power generation and project use power studies prepared by Reclamation with input from the Western. In this distribution, the costs of Western’s Interties Power

System are allocated entirely to the commercial power function. They and other costs allocated to commercial power are collected by Western in the power rates it charges preference power customers.

Costs sub-allocated to project use power are further sub-allocated among the M&I, irrigation, and wildlife refuge water use functions. This sub-allocation is based on estimates of project use power requirements prepared by Reclamation.

Costs for project use power that is used to convey water to wildlife refuges are further sub-allocated among reimbursable and non-reimbursable functions based on cost sharing criteria included in the CVPIA. Similar to what is done for refuge water supply costs, the distribution of reimbursable power costs for refuge water supply among project water and power users (M&I water, irrigation water, and commercial power contractors) is made in proportion to the previous year's costs allocated to the three reimbursable functions.

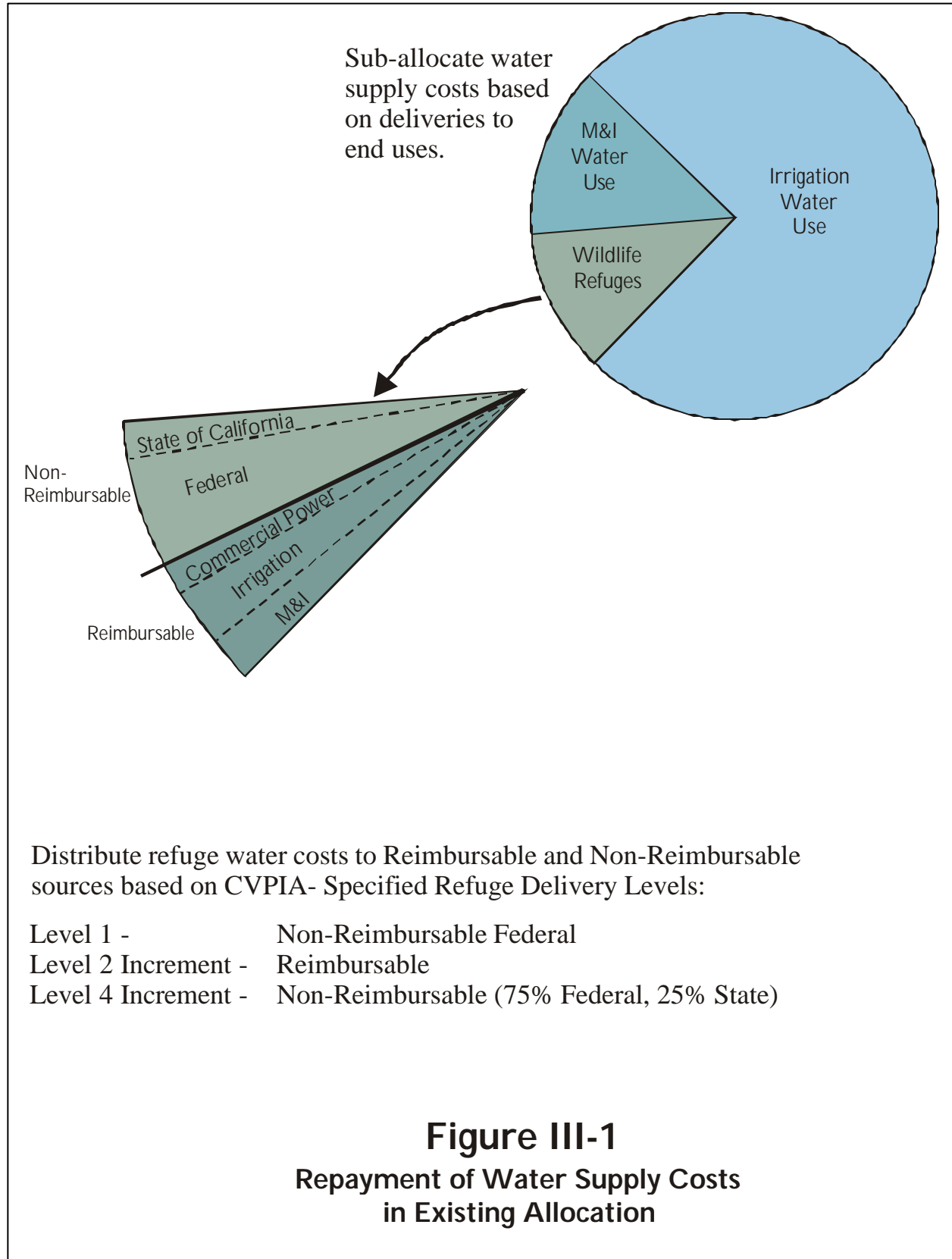
**Fish and Wildlife Repayment** – The repayment of costs allocated to the fish and wildlife purpose depends whether the actions involved are enhancement or mitigation. Costs incurred for enhancement are entirely non-reimbursable while costs for mitigation may be reimbursable or non-reimbursable. As described in Chapter II, the Coordination Act has been amended several times, and the year in which mitigation costs are incurred is the key factor that determines whether fish and wildlife mitigation costs are reimbursable or non-reimbursable. Reimbursable mitigation costs are assigned to irrigation and M&I water users and commercial power customers in proportion to the current year's costs of the "causal" facility assigned for repayment purposes to these three functions. As an example, the Coleman National Fish Hatchery was built to mitigate losses of anadromous fish spawning areas behind Keswick and Shasta Dams and its costs are assigned to irrigation and M&I water users and commercial power customers in proportion to the current year's costs of Keswick and Shasta Dams allocated to those three functions for repayment. If a particular "causal" facility cannot be identified (i.e., if the facility is for mitigation of project operation in general), costs are distributed in proportion to the previous year's overall project costs allocated to these three

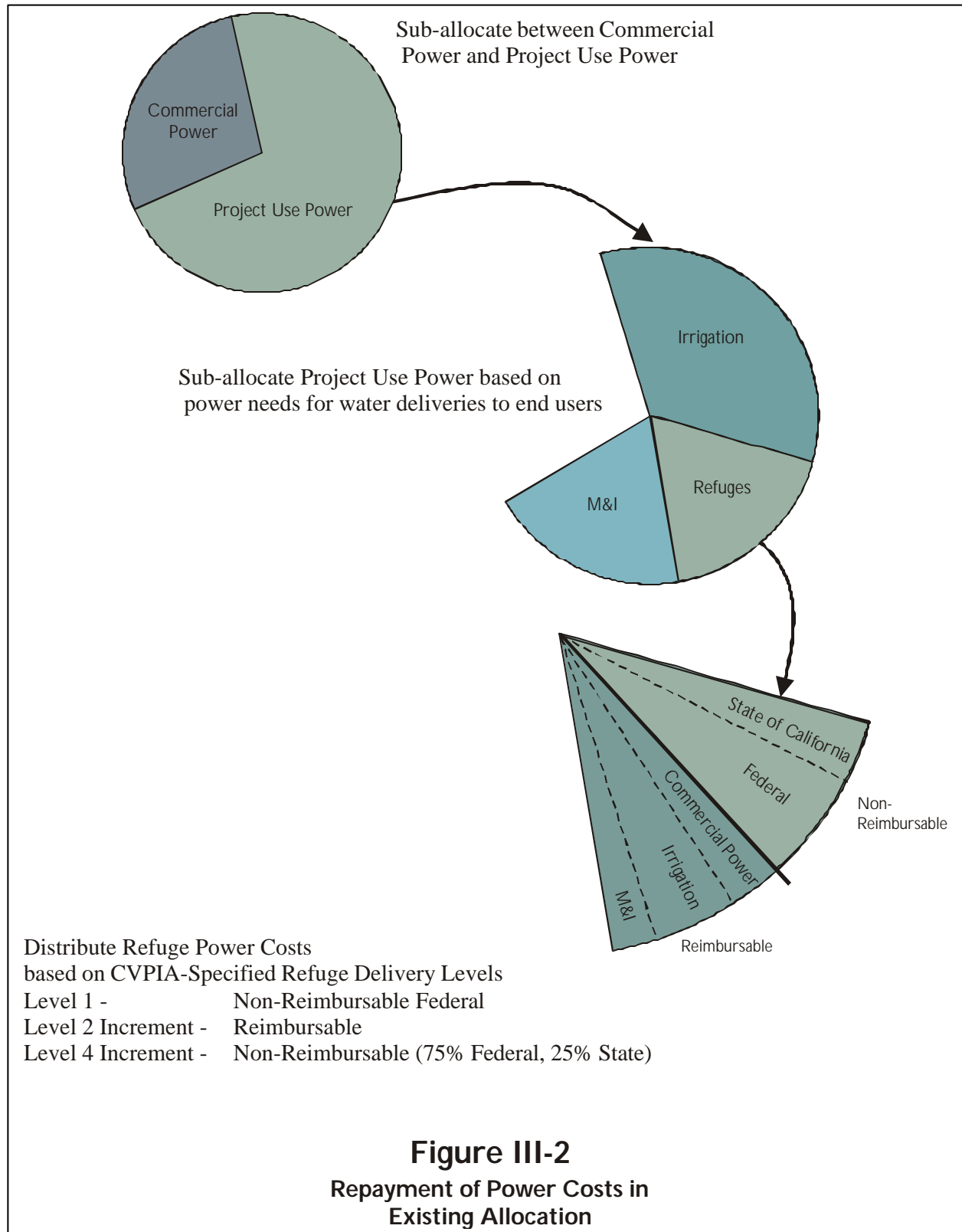
functions for repayment.

Most recently, the cost sharing criteria applied to certain activities designed to mitigate impacts on and restore fish, wildlife, and associated habitats have been Congressionally mandated by the CVPIA.

The costs of many of these activities are partially non-reimbursable and therefore paid by Federal taxpayers while a portion is repaid by the State and a portion repaid by CVP water and power users. The distribution of reimbursable costs among M&I water, irrigation water, and commercial power contractors is made in proportion to the current year's costs of the "causal" facility allocated to these three functions for repayment. In the event a particular "causal" facility cannot be identified, costs are also distributed in proportion to the previous year's overall project costs allocated to these three functions for repayment.

**Recreation Repayment** – Capital costs allocated to the recreation purpose are repaid according to the legislation authorizing the expenditure. In some cases, recreation facilities have been provided under the authority of the Federal Water Project Recreation Act, dated July 9, 1965, which authorizes construction of recreation facilities as a part of Federal water resources projects. The act also has provisions governing the allocation of costs to recreation and cost sharing with non-Federal entities. Legislation authorizing a number of units and divisions of the CVP has included the construction of recreational facilities and provided that the Federal share of such costs shall be non-reimbursable.





**SUMMARY OF EXISTING CVP COST ALLOCATION**

To date the total cost of CVP plant-in-service facilities is approximately \$3,290 million (1999 CVP interim cost allocation annual update). This amount represents total non-indexed costs incurred since construction of CVP facilities began. As noted in Chapter I, the central challenge of the allocation process is the allocation of joint costs; these amount to a total of about \$623 million (about 19 percent of total CVP plant-in-service costs).

As described above, the allocation of joint costs is a multi-step process that uses allocation factors developed in the 1975 reallocation study and applies repayment criteria provided in legislation, agreements, and policies. Although the allocation of CVP costs to its authorized purposes may be of interest, the final results of cost allocation computations are generally displayed as repayment responsibilities for reimbursable and non-reimbursable costs. A summary of repayment responsibilities from the 1999 CVP cost allocation is provided in Table III-1.

**TABLE III-1  
EXISTING CVP COST ALLOCATION  
REPAYMENT RESPONSIBILITIES  
AS OF SEPTEMBER 30, 1999**

Repayment Entity	Cost (\$Million)
M&I Water Users	436.5
Irrigation Water Users	1,476.2
Commercial Power Customers	568.8
State of California and Local Governments	244.5
Federal Non-reimbursable	564.1
<b>TOTAL</b>	<b>3,290.2</b>
<p>Notes:</p> <p>Results based on the 1999 CVP Interim Cost Allocation Annual Update.</p> <p>Costs for multi-purpose facilities allocated using factors derived from 1975 reallocation study.</p> <p>Totals may not be completely accurate due to rounding.</p>	