

# MUNICIPAL AND INDUSTRIAL WATER RATESETTING POLICY

CENTRAL VALLEY PROJECT  
CALIFORNIA

TBD

Department of the Interior  
Bureau of Reclamation  
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## **INTRODUCTION:**

This policy provides cost recovery principles and guidelines for costs of the Central Valley Project (Project) reimbursable by Municipal and Industrial (M&I) contractors. This policy is referred to as the M&I ratesetting policy. This Policy is to be applied prospectively from the date of this policy.

## **DESCRIPTION OF THE CENTRAL VALLEY PROJECT**

The Project was authorized by the Act of August 26, 1937 and new features and operations have been subsequently authorized. The Project was designed for coordinated operation of its surface reservoirs and canals with existing rivers, streams and ground water supplies. Project operations are coordinated to maximize water yield and delivery and efficiency of operations. The Project catches and stores the mountain runoff and, through a complex web of storage and diversion dams, pumping plants, canals and distribution facilities, delivers water throughout its authorized service area.

The Project provides multiple benefits associated with water resources management activities. The authorized project purposes are: Fish and Wildlife, Flood Control, Navigation, Power, Recreation, Water Quality, and Water Supply. The Western Area Power Administration of the Department of Energy operates the power transmission features, while the power generation features and all other Project functions are the responsibility of Reclamation.

Passage of the Central Valley Project Improvement Act (CVPIA) in October 1992 increased the emphasis on operating the Project in a more environmentally sensitive manner requiring improved water conservation and expanded use of voluntary water transfers, and use of a balanced approach to meeting the competing demands for Project water by fish and wildlife, agricultural, M&I, and power components of the Project.

The plant-in-service investment cost allocation is updated each year to reflect additions to and retirements from the project of facilities, as reflected in Reclamation's plant investment accounts. Annual updates may also reflect changes in forecasts of future Project water deliveries. Deficits are also updated on an annual basis.

The repayment requirements for the M&I water supply function are set forth in Federal reclamation law.

## **LEGISLATION AND CHANGES**

**Public Law 99-546** (Coordinated Operations Agreement) enacted October 1986: The legislation prescribed existing construction cost obligations to be repaid by 2030. Further, deficits arising after October 1, 1985 are to be repaid with interest by 2030.

**M&I Settlement Agreement** (Case No. CIV-F-03-5359 OWW SMS) dated March 3, 2005: This Agreement established provisions for payment of obligations to the United States with interest. Paragraph 3(A)(2) through 3(A)(5) of the Agreement outlines CVP Contractors will be responsible for

CVP construction costs; as well as allocable operation and maintenance expenses; including interest on the unpaid balances.

**PL 111-11, Subtitle G** (Aging Infrastructure) enacted March 30, 2009: The legislation provides parameters relating to repayment of aging infrastructures. Projects meeting criteria outlined in this legislation will be repaid within 50 years, with interest.

**Other Legislation and Changes:** Other legislation and regulations that influences cost recovery will be implemented as required by the statute.

## **ATTRIBUTES OF THE M&I RATESSETTING POLICY**

Both the irrigation and M&I functions of the Project are integral water delivery operations governed by common requirements, criteria, and principles. The integrated operations and common characteristics dictate consistency and uniformity in the ratesetting policies for these two functions wherever possible. Accordingly, the basic principles, criteria and methodologies established by the irrigation ratesetting policy provided the broad framework upon which the M&I Policy was based.

Two fundamental concepts underlie the M&I Policy as outlined in PL 99-546: Individual Contractor Accounting and, Cost of Service water rates.

- A) Individual Contractor Accounting refers to the use of water rate revenue for the recovery of O&M, interest, construction cost and deficit obligation. Each contractor is responsible for allocable costs associated with M&I water delivered annually. If the annual O&M obligation is not fully covered by water revenues, a deficit is incurred, and the individual contractor has continuing repayment responsibility for that deficit, and any applicable interest.
- B) Cost of Service refers to the determination of annual water rates based on the Government's cost of providing M&I water to the individual contractor's designated delivery point. This includes recovery, within the authorized repayment period, of: (1) annual O&M costs, (2) interest costs, (3) M&I construction costs, and (4) any individual contractor deficit balances.

In accordance with Public Law 99-546, the repayment period for the main Project water system facilities ends in 2030. The repayment period commenced in 1981 the year after the last major facility, the New Melones Dam and Reservoir, was placed in service.

Annual M&I water rates are developed based on the reimbursable portion of budgeted operating cost; as well as each contractor's outstanding balance of construction cost, for each pool or component; including applicable interest, and the outstanding deficit balance, if any. The O&M cost components include the annual labor, supervision, materials, and other types of O&M expenses associated with each of the five operating cost components – water marketing, storage, conveyance, conveyance pumping, and direct pumping. Where Operation & Maintenance agreements exist, the servicing authority recovers costs from contractors and expenses for these facilities are not included in Reclamation costs.

A preliminary step in the determination of annual O&M and construction cost component rates is to accumulate the total pooled cost and the acre-feet of water deliveries applicable to each component. Once the costs and acre-feet applicable to each component have been determined, the basic methodology for computing annual water rates is to divide each component's pooled cost by its corresponding acre-feet of water deliveries.

- A) For the O&M cost components, the annually determined rates are computed by dividing the pooled annual costs by the corresponding projected annual water deliveries for each component, respectively. Operating cost components are assigned to contractors on the basis of the services used to deliver their water supply. All water deliveries require water marketing and storage services.
- B) The in-basin construction cost components are determined by accumulating all M&I plant costs by component, as of the most recently completed fiscal year, and then dividing each component's costs by its total historical and projected acre-feet for the authorized repayment period of 1981-2030. The resultant component construction rates are then combined as applicable by individual contractor. The combined construction rate is then multiplied by the total quantity of water to be delivered to the contractor during the 1981-2030 repayment period, with the result being the construction cost allocation to the contractor. This allocation, less any repayment realized as of the end of the same fiscal year, is then divided by the present worth of future deliveries (see definition in Glossary) to be made during the repayment period, with the result being the individual construction rate for the then current water year.
- C) Interest is comprised of two elements: Interest on unpaid plant investment, and interest on deficit balances, by individual contractor. All interest costs are computed annually on a compound basis.
- D) Individual contractor deficit recovery rates are computed by dividing the contractor's accumulated deficit balance as of the end of the most recently completed fiscal year by the present worth of that contractor's projected deliveries over the remaining repayment period. The present worth of each contractor's projected deliveries is computed using each contractor's composite deficit interest rate.

Deficits or surpluses, as well as the updating of accumulated deficit or surplus balances, are determined for each fiscal year. M&I O&M costs are compiled and grouped into the components indicated above. Costs in each component are allocated to those contractors utilizing that component, based on each contractor's respective share of the total annual water deliveries for that component. Total costs applicable to each contractor, including applicable interest, are compared with the corresponding revenues of each contractor. The result is either a net surplus or deficit for that fiscal year. Contractor revenues are applied in the following order:

- 1<sup>st</sup> – Current Year O&M Expenses
- 2<sup>nd</sup> – Interest Expense
- 3<sup>rd</sup> – Interest-bearing O&M deficit
- 4<sup>th</sup> – Construction Repayment

# **ANNUAL WATER RATE**

Each contractor's annual water rate is comprised of the following components:

- O&M Component – Water Marketing and O&M costs associated with Storage, Conveyance, Conveyance Pumping, and Direct Pumping Facilities.
- Construction Cost Component<sup>1</sup> – construction costs associated with Storage, Conveyance, Conveyance Pumping, and Direct Pumping facilities. Construction costs are an interest-bearing obligation. Interest of the outstanding balance is computed annually and recorded as an annual expense
- Deficit component: unpaid operation and maintenance costs from prior fiscal years. Deficit costs are an interest-bearing obligation. Interest of the outstanding balance is computed annually and recorded as an annual expense

## **DESCRIPTION OF WATER RATE COMPONENTS**

A general description of each of the M&I water rate components, computational mechanics, and other specifics is provided below.

### **Water Marketing**

The water marketing cost component includes costs such as (but not limited to) monitoring, administering and negotiating water service contracts, maintaining water delivery and payment records, accounting for the annual financial results for Project water operations, developing annual water rates, and related types of activities.

Dividing total water marketing costs by the total projected water deliveries for the corresponding water year results in the average cost per acre-foot for this component.

### **Storage**

The storage O&M cost and construction components represent the costs of project facilities associated with the collection and storage of Project water. These facilities consist primarily of the Project's dams and reservoirs, such as Shasta, Folsom and New Melones.

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<sup>1</sup> Certain construction costs are determined to be reimbursable and benefit users CVP wide (such as Programmatic Environmental Impact Statement Cost). As such, a separate cost component is developed to recover these costs.

All contractors receiving storage services are assigned a Project-wide construction rate. Except for San Felipe Division users whose storage capital rate includes an adjustment for the costs of the San Luis Pumping-Generating Plant. Because the San Luis Pumping-Generating Plant services as a pumping-only facility for the San Felipe Division, the costs of this facility are assigned to the San Felipe Division as direct pumping costs, rather than as storage costs.

Storage O&M costs include the project use energy costs associated with pumping water at the San Luis Pumping-Generating Plant, the Columbia-Mowry System, and the Folsom Pumping Plant. Similar to the Treatment of storage construction costs, all storage contractors receive the same storage O&M rate, except for the San Felipe Division. The San Felipe rates include an adjustment for the costs of the San Luis Pumping-Generating Plant as described above.

## **Conveyance**

The conveyance O&M and construction cost components include the costs associated with Project facilities designed and used for transporting water throughout the Project. Canals such as the Delta-Mendota, San Luis, and Friant-Kern Canals, are the primary type of facility included in this cost component.

## **Conveyance Pumping**

The conveyance pumping O&M and construction cost components include the costs of the three main Project pumping facilities used to move M&I water through the Project; the Jones Pumping Plant (formerly Tracy Pumping Plant), the O'Neill Pumping-Generating Plant, and the Dos Amigos Pumping Plant. Separate O&M and construction rates are computed for each of the three pumping plants and assigned to contractors who use these pumping plants. These costs include project use energy costs.

Project use energy costs are charged on the energy used to pump water at each of the pumping plants. The amount of energy required to pump an acre-foot of water varies at each of the three facilities because of the different lift requirement at each facility. The greater the lift requirement, the more energy required to pump each acre-foot of water and the more pumping O&M expenses associated with that acre-foot of water.

Total conveyance pumping costs are assigned to pumping plants based on each plant's prorated share of project use energy used. The per acre-foot rates calculated for each of the pumping facilities used by a contractor are totaled to determine each contractor's conveyance pumping O&M rate.

Separate conveyance pumping construction rates are calculated for each of the three pumping plants based on the recorded construction costs as of the end of the most recently completed fiscal year. A rate per acre-foot is calculated for each facility based on its total historic and projected deliveries. The rates for each of the main pumping facilities used by a contractor are totaled to determine the contractor's construction rate for conveyance pumping.

A portion of the Jones Pumping Plant's construction costs and O&M expenses are assigned to the Friant-Kern Canal and Madera Canal contractors on the basis of the historical and projected deliveries to the Exchange contractors located in the Delta-Mendota Pool service area.

## **Direct Pumping**

The direct pumping O&M and construction cost components are based on the costs associated with relift pumping plants which pump water exclusively for specific contractors. These facilities were constructed by Reclamation and are now operated and maintained by the local water districts whose water they pump. These facilities and the operating entities follow:

<b>Pumping Plant</b>	<b>Operator</b>
Wintu Pumping Plant	Bella Vista Water District
Contra Costa Canal Pumping Plant	Contra Costa Water District
Ygnacio Pumping Plant	Contra Costa Water District
Clayton Pumping Plant	Contra Costa Water District
San Luis Relift Pumping Plant	San Luis Water District
Westlands Relift Pumping Plant	Westlands Water District
Pleasant Valley Pumping Plant	Westlands Water District
Pacheco Pumping Plant	Santa Clara Valley Water District
Coyote Pumping Plant	Santa Clara Valley Water District

The direct pumping construction costs as of the end of the most recently completed fiscal year are allocated to the contractors using the facilities. A per acre-foot rate is calculated for each plant based on the total of the historical and projected deliveries over the 50-year repayment period.

Because each pumping plant is operated by a local water district at its expense, the only project O&M costs to be recovered are the project use energy costs. Project use energy costs are charged directly to the user of the direct pumping facility.

## **Interest – Construction Costs**

M&I is an interest-bearing function, and interest is computed annually on the individual contractor's unpaid construction cost. Annual interest on general (non-specific) plant investment is calculated using a composite interest rate for the Project. A composite interest rate is developed each year which weighs each of the authorized interest rates by the expenditures to date for the in-service facilities.

The composite interest rate is updated annually to reflect any additions to the Project plant in service accounts and their authorized interest rates.

## **Deficits and Interest on Deficit**

The deficit balance for an individual contractor identifies the unpaid operation and maintenance costs, including applicable interest expenses. Deficits are incurred when a contractor's annual revenue is not sufficient to repay their allocable share of operation & maintenance costs. In accordance with the terms of condition of settlement reached, a zero interest rate is used on deficit balances through 1986. For years 1986 forward, pursuant to PL 99-546, the treasury rate is applied to any annual obligation incurred for each year. Deficit balances are updated annually to reflect repayment, additional deficit incurred and the annual interest expense.



## **DEFERRED INTEREST METHOD**

A potential inequity in the allocation of interest was identified during the early development of the Proposed Policy. This inequity stems from a disproportionate allocation of interest costs.

In the first years of M&I water deliveries, few contractors were taking water from a system ultimately designed for many contractors. Initially, all the plant costs of the M&I function and the repayment interest for the early years would be allocated to few users. The contractors would not be ultimately responsible for repaying all the construction costs, as the construction costs would be reallocated each year based upon the then current contractors receiving water services. Accordingly, the contractors should not be forever burdened with the repayment obligation for the entire interest amount computed for the earlier years.

The need for a method to equitably allocate historic interest costs during completion of the many features of the Project led to the development of the Deferred Interest Method. The Deferred Interest Method established the period 1949 to 1987 as the period during which inequitable plant allocations and interest computations occurred. As such, M&I plant costs, annual plant interest, O&M deficits, and deficit interest applicable to that period were recomputed under the Deferred Interest Method.

Interest for the early project years, 1949 through 1987, under the Deferred Interest Method is considerably less than the amount of interest originally computed and allocated to contractors. The Deferred Interest Method ensures recovery of the deferred amount by amortizing these charges as an additional construction cost component to be repaid over the remaining Project repayment period. By doing this, it permits the reallocation of construction costs and the resultant computation of a substantially lower amount of interest as of 1987, while still providing of full recovery of the interest amount. This is accomplished by capitalizing the deferred interest at the applicable interest composite interest rate, and including a deferred interest component in M&I rates to recover such amount.

Both the Deferred Interest Method and the original interest computation method yield essentially the same financial result to the U.S. Government. The difference between the two methods lies in the procedures for computing interest costs by contractor and in the timing and method for recovering such interest costs. The Deferred Interest Method erases the inequity in computing contractor annual interest for years prior to 1988, and provides for recovery of the deferred interest, through the capitalized Deferred Interest Method. The Deferred Interest Method is the procedure utilized in the M&I Policy.

# **GLOSSARY**

**Annual O&M:** Annual O&M costs, annual interest expense related to the outstanding M&I capital investment and, where applicable, annual interest on the operating cost deficit.

**Deficit:** The accumulation of annual O&M and interest costs in excess of the total revenues received from the sale of water under existing water service contracts.

**Historical and Projected Water Deliveries:** All Paid Water and Project water expected to be delivered by Project facilities within the Project's repayment period. The time frame extends from the beginning of the first year in which water was delivered through the end of the repayment period.

**In-Basin Facilities:** The main Project water storage and delivery system facilities located in the Central Valley Basin of California.

**Isolated Facilities:** Project constructed water storage and delivery facilities which are not operationally integrated with the main Project water system. For example, Project water developed by Sugar Pine Dam and Reservoir is all delivered to the local service area; none of that water is exported from the local area for delivery to other Project water users.

**Fiscal Year:** Federal Year that runs from October 1st through September 30<sup>th</sup>.

**Long-Term Contractor:** A contractor who's receiving Project water under a water service or repayment contract having a term of greater than 10 years.

**Net Repayment:** Accumulation of annual water service payments in excess of the amount required to cover the annual O&M and interest costs. The revenue available to reduce a contractor's deficit and capital investment balances.

**Out-of-Basin Facilities:** The Project water system facilities located outside the Central Valley Basin of California, i.e., those Project facilities located in the San Felipe Division service.

**Paid Water:** All Project water supplies required to be paid under water service and/or repayment (9d) contracts.

**Present Worth:** A financial term referring to the time value of money. The present worth concept recognizes that the interest earning capability of money makes \$1 in the future worth less than \$1 today. As an example, if \$1 was deposited today at a 10 percent interest rate, it would be worth \$1.10 in 1 year. Thus, \$1 in 1 year would be worth something less than \$1 today.

**Present Worth of Future Deliveries:** The same concept as indicated in the preceding Present Worth definition, only as applied to a stream of water deliveries rather than monetary payments. Similar to the concept that money earns interest, M&I costs must be repaid with interest; and hence, as \$1 is worth more today than in the future, an acre-foot of water today is worth more than an acre-foot sold at the same price in the future. Because of this, the time value of future deliveries must be considered in determining capital

and O&M deficit water rates required to repay these costs within the repayment period. The present value of future deliveries is computed by discounting such deliveries by the applicable interest rate over the remaining repayment period.

Projected Water Deliveries: All Project water expected to be delivered for revenue producing purposes during the remainder of the repayment period.

Repayment Period: The time allowed for the recovery of the construction invested in a project. For main project feature, the repayment period began in fiscal year 1981 and continues through fiscal year 2030. Separate repayment periods may be established for major rehabilitation or new facilities.

Water Rate(s): As discussed throughout this document, general use of these terms refers to the cost of M&I water expressed on a cost per acre-foot basis. When other meanings are intended in the use of the words “rate” or “rates”, such as in referring to an interest rate or rates, such clarifying words are provided in the text as appropriate.

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