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BUREAU OF
RECLAMATION

Water Marketing
Activities and Costs at
the Central Valley
Project



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United States General Accounting Office
Washington, DC 20548

May 4, 2001

The Honorable John T. Doolittle
House of Representatives

Dear Mr. Doolittle:

This report responds to your request that we review the water marketing activities¹ undertaken by the Department of the Interior's Bureau of Reclamation's (Bureau) Central Valley Project (CVP) and their associated costs. In previous work we performed for the Subcommittee on Water and Power, House Committee on Resources, pertaining to the Bureau's operation and maintenance (O&M) costs,² we identified concerns among some CVP water customers that the amounts they were charged for water marketing were excessive, and that the reasons for the increased costs were unclear to them.

To follow-up on that work, you asked us to review the CVP water marketing activities and costs in more detail. Specifically, you asked us to provide information concerning (1) the activities and costs that comprise water marketing, (2) the trend in associated costs, (3) the legal basis for charging the costs of water marketing activities to water customers, and (4) the type of information about water marketing activities provided to water customers and ways to improve the information.

Results In Brief

CVP water marketing costs, which are allocated to all water users through rates, stem from two general categories of activities: system-wide activities and contract administration activities. Both categories of activities have contributed to the increase in water marketing costs for irrigation and for municipal and industrial (M&I) customers. For irrigation customers, the water marketing rate component increased from \$.20 per

¹ Water marketing consists of two general categories of activities: contract administration and system-wide activities. The contract administration category consists of general administration and contract renewal activities, while the system-wide category consists of a wide variety of activities.

² *Bureau of Reclamation: Information on Operations and Maintenance Activities and Costs at Multipurpose Water Projects* (GAO/AIMD-00-127, May 31, 2000).

acre-foot in 1989 to \$6.91 per acre-foot in 2001,³ rising from about 11 percent of the total O&M rate⁴ in 1989 to 62 percent in 2001. For M&I customers, the water marketing rate component experienced a similar increase—from \$.21 per acre-foot in 1989 to \$7.00 per acre-foot in 2001. Much of the cost increase relates to new technology, such as replacement of the Centralized Water and Power System Control equipment and software that controls the dams and other facilities; costs associated with contract renewals; costs of environmental assessments; and increased emphasis on initiatives such as water conservation and water quality monitoring. In addition, the reclassification of certain costs—those related to the general expense and water conservation—to the water marketing category contributed significantly to the increase in water marketing costs.

Under the provisions of reclamation law, project-specific legislation, and contracts with customers, the Secretary of the Interior has broad discretion in defining which of the activities it undertakes constitute O&M that can be charged to customers. Federal guidance also indicates that the full costs incurred by the federal government in providing services should be recovered from beneficiaries of those services. The Bureau is required to recover the full costs of these activities, unless cost recovery for an individual activity is specifically precluded by law. Our review of documents describing the types of activities for which the Bureau was charging customers under the water marketing component of rates did not identify any activities that did not appear to be O&M related to CVP, nor any costs that were precluded by law from recovery.

The Mid-Pacific Region provides many budget and ratesetting documents to customers, responds to numerous questions from customers about the budget and rates, and holds several informational meetings annually. The region provides information from Budget Activity Plans, which are detailed descriptions of planned water marketing and other O&M activities. However, we found that the Budget Activity Plan information does not enable customers to determine whether (1) estimated costs represent increases over prior year amounts, and (2) customers will have to pay for the described activities. We are making a recommendation to address this issue.

³ These increases are in nominal dollars. The increasing trend in inflation-adjusted dollars, shown later in this report, is similar.

⁴ As discussed later, for the purpose of analysis the O&M rate is comprised of the water marketing and water storage rate components.

The Department of the Interior, in a letter from the Acting Chief of Staff to the Assistant Secretary for Water and Science, generally agreed with our report, but suggested that we clarify the wording of our recommendation with respect to the timing of information to be provided to customers. We agreed with the Department's suggestion and revised our recommendation accordingly. The Department also stated that the Bureau has begun capturing this information in its database and therefore considers the recommendation to be implemented. However, implementation will not be complete until the Bureau actually provides the customers with the recommended information.

Background

The Department of the Interior's Bureau of Reclamation constructs and operates water resource projects to provide water to arid lands in 17 western states. Construction, operation, and maintenance of these projects are financed primarily with federal funds. The Bureau provides water for irrigation purposes to state-established water and irrigation districts that obtain the water under contracts and distribute it to farmers. The Bureau also provides water for M&I, fish and wildlife habitat, recreation, and power generation purposes. Through water service or repayment contracts, the Bureau, over time, recoups a portion of the federal government's costs of providing the water. These contracts provide for both the repayment of construction costs and O&M costs allocated to water supply.

The Bureau's costs of constructing, operating, and maintaining its projects are classified as either reimbursable or nonreimbursable. Reimbursable costs are recovered from customers; nonreimbursable costs are borne by the federal government. Generally, costs associated with supplying water for agriculture, M&I, and hydroelectric generation purposes are reimbursable. Costs related to flood control, recreation, and fish and wildlife enhancement generally are nonreimbursable. While the Bureau recovers costs from water customers through rates, cost recovery for power generation is done by the Department of Energy's Power Marketing Administrations (PMAs).⁵

⁵ The PMAs are Bonneville Power Administration, Southeastern Power Administration, Southwestern Power Administration, and Western Area Power Administration.

Water marketing costs are charged to customers as part of the Bureau's total O&M costs. The Bureau defined the O&M activities associated with its projects in a 1998 report to Congress by describing its complex mission and by providing examples of the widely varied activities it conducts. The report stated that the Bureau is "responsible for the O&M of an extensive infrastructure of constructed facilities, including diversion and storage dams, pumping plants, powerplants, canals and laterals, pipelines, and drains." Further, it said that the Bureau is "also responsible for management of the federally owned lands on which these facilities are located and for the natural and cultural resources of those lands." The water marketing component of the Bureau's O&M reflects this diversity. Water marketing costs are the result of many different distinct activities.

The CVP, located in California's Central Valley Basin, is the one of the Bureau's largest multiple purpose water projects. The CVP is technologically complex, consisting of numerous dams, reservoirs, canals, and pumping and power-generating facilities. Historically the CVP has provided about 6 million acre-feet⁶ of irrigation water each year to approximately 3.8 million acres of cropland. Water used for irrigation purposes represents about 85 percent of the total water available through CVP; the remainder is used for M&I, fish and wildlife, and recreation. CVP water is also used to generate power.

The Bureau enters into contracts to provide water to irrigation and M&I customers. These contracts establish a rate for each acre-foot of water with the intent to recover the CVP construction costs allocated to water supply as well as the annual O&M costs. The Bureau annually sets rates for both M&I and irrigation water customers. The rate depends upon the extent and type of services provided to the customer by the Bureau, and consists of a number of rate components (or cost pools) which correspond to the water services provided. The rate components generally are

- water storage: the cost of facilities (primarily dams and reservoirs) associated with the collection and storage of water; and
- water marketing: the costs incurred for monitoring, administering, and negotiating water service contracts; record-keeping and accounting; developing annual water rates; conducting environmental studies; and performing other related activities.

⁶ An acre-foot of water is the volume necessary to cover 1 acre to a depth of 1 foot. It is approximately 326,000 gallons of water.

Other costs involved in delivering water to customers include conveyance (associated with facilities such as canals used for transporting water), conveyance pumping (associated with facilities such as pumping plants used to pump water through the project to more than one customer), and direct pumping (associated with plants that pump water exclusively for specific customers). “Project Use Energy” costs are primarily associated with conveyance pumping and direct pumping. Direct pumping costs are paid by customers through the direct pumping rate component charged by the Bureau. Since fiscal year 1998, conveyance and conveyance pumping costs are typically not charged to customers through O&M rates, but instead are direct billed to those customers using these services. As a result, these costs are not included in our analyses of water marketing costs and their impact on O&M costs.

The Bureau sets rates based on projected water deliveries and estimated costs.⁷ Typically, the Bureau uses its budget request data in determining its estimated costs. After allocating the total estimated costs to irrigation, M&I, and the other uses, the O&M rate for each component is then calculated by dividing the component’s estimated total annual cost by the applicable estimated water deliveries. After the actual water deliveries and the Bureau’s actual costs have been determined, the customers’ payments are applied against the Bureau’s costs as specified by the CVP ratesetting policies. The Bureau’s budget, ratesetting process, and application of payments are graphically depicted in appendix II.

In recent years, some Bureau irrigation and M&I water customers have raised concerns about O&M rates charged for CVP water. The rates have been increasing faster than inflation, and the customers have expressed concern about the impact of these costs on their businesses. The rate component causing much of their concern relates to activities categorized by the Bureau as “water marketing.” The water marketing component of rates has increased significantly over the past decade and CVP customers have voiced concern, saying that they do not understand the underlying reasons for the increases.

⁷According to Bureau officials, the ratesetting policies for irrigation and M&I functions are basically the same, and the water marketing activities that apply to irrigation also apply to M&I.

Objectives, Scope, And Methodology

For each of the four objectives of this report, we were asked to address specific issues.

Regarding the activities and costs that comprise water marketing, we were asked to (1) determine the general types of activities that were historically categorized as water marketing, compared to the types of activities categorized as water marketing today; and (2) provide detailed information on water marketing activities and costs for fiscal years 1998 and 1999 and obtain the projections for future years, if available.

Regarding the trend in water marketing costs, we were asked to determine annual increases or decreases in the water marketing component of rates charged under water service contracts for fiscal years 1990 through 2000, and identify reasons for any significant trends.

Regarding the legal basis for these costs, we were asked to determine the Bureau's legal basis for charging the costs of water marketing activities to water customers.

Regarding the information provided to water customers, we were asked to determine generally what information is provided to customers about water marketing activities and costs, including information pertaining to fiscal year 2000 and any projections for future years. We were also asked to identify options that would enable the Bureau to provide customers with better information.

To determine the activities and costs that comprise water marketing and determine the trend in water marketing costs (objectives 1 and 2), we reviewed and analyzed various Bureau documents. We analyzed historical water ratesetting books showing budgeted amounts for fiscal years 1990-2001, actual water marketing amounts for fiscal years 1992-1999, ratesetting policy manuals, and Mid-Pacific Region files pertaining to water marketing activities at CVP. We also interviewed Mid-Pacific Region officials.

To determine the legal basis for charging the costs of water marketing activities to water customers (objective 3), we analyzed Reclamation law, project-specific legislation, and authorizing legislation applicable to selected activities. We also reviewed Office of Management and Budget

(OMB) Circular A-25 and federal accounting standards for federal guidance as to what constitutes the full cost of an agency's provision of goods and services.

To determine the information provided to water customers, and identify options for improving it (objective 4), we analyzed examples of documents provided to customers and reports prepared by customer groups. We also interviewed Bureau officials and representatives of CVP water customers.

We conducted our review from June 2000 to March 2001 in accordance with generally accepted government auditing standards. We performed audit work at the Bureau's Mid-Pacific region, which manages and operates CVP. We also interviewed officials from the CVP Water Association, which represents customers of CVP. We did not verify the accuracy of all the data we obtained and used in our analyses. Most of the data presented in this report relate to budget projections; it was beyond the scope of the assignment to verify linkage of budget data to the audited financial statements. We have considered written comments from the Department of the Interior and revised our report, as appropriate. The department's comments are reproduced as appendix III. The department also provided technical comments, which we incorporated as appropriate but did not reproduce. Appendix I describes our objectives, scope, and methodology in detail.

Water Marketing Includes Two General Categories Of Activities

Our analysis concluded that CVP water marketing costs stem from two general categories of activities: system-wide activities and contract administration activities. Water marketing traditionally consisted of contract administration activities but the category has grown to include a variety of others, as represented by the system-wide category.

System-wide activities are categorized as "water marketing" in order to be "spread" to all customers for repayment. Some system-wide costs arise as new mandates are passed that the Bureau must implement, such as costs stemming from the CVP Improvement Act (CVPIA), which was passed in 1992. Other system-wide costs, such as those classified as general expense, have been reclassified as water marketing to assure that each CVP customer pays a proportionate share of the cost involved. In addition, some water conservation costs, which the Bureau had previously treated

as nonreimbursable, have been reclassified as water marketing and charged to water customers.⁸ As shown later, when comparing the amount paid for water marketing in fiscal year 1996 to the amount paid in fiscal year 2001, the general expense reclassification accounted for about 12 percent of the total increase for irrigation customers and about 15 percent of the increase for M&I customers. Similarly, the reclassification of water conservation costs accounted for about 11 percent of the total increase in the water marketing rate component for irrigation customers and about 12 percent of the increase for M&I customers.⁹

Contract administration activities, according to Bureau officials, can be considered to be “traditional” water marketing activities. These include the recurring activities involved in managing the terms of the Bureau’s contracts with its customers, such as costs incurred for monitoring, administering, and negotiating water service contracts, maintaining water delivery and payment records, accounting for the annual financial results of CVP water operations, and developing annual water rates. Since 1995, the Bureau has also been incurring significant contract renewal costs as the long-term contracts held with customers expire.

The Bureau allocates the costs of system-wide and contract administration water marketing activities into several sub-categories. The sub-categories relate to:

- programs, such as water quality monitoring, water conservation, and hazardous materials management;
- legislation, such as the National Environmental Policy Act (NEPA), Endangered Species Act (ESA), and CVPIA;
- CVP divisions or offices, such as water and power operations, water and land resources management, and general contract administration and contract renewal; and
- project-wide activities, such as those included in the miscellaneous project, CVP-wide, and general expense sub-categories.

⁸ Under the provisions of the CVPIA, the Bureau treated the costs of water conservation projects implemented by September 30, 1999, as nonreimbursable.

⁹ These were the two largest reclassifications to water marketing that we identified. General expenses had previously been recovered through rate components other than water marketing. Water conservation costs had previously been classified as nonreimbursable. We did not identify all reclassifications to water marketing from other rate components.

Table 1 shows examples of specific activities associated with each category and sub-category.

Table 1: Water Marketing General Categories, Sub-categories, and Examples of Activities

Category	Sub-category	Activity
System-wide	Water & power operations	Operating dam control center
	Water & land resources management	Providing technical assistance to customers on drainage problems
	NEPA/ESA/other environmental impact activities	Environmental studies related to management of existing contracts and contract renewal
	Hazardous materials management	Site audits at dams; inspection of lands for transfer of ownership
	Miscellaneous project activities	Stations that monitor water salinity; general rehabilitation and maintenance of facilities
	Other CVP-wide programs	Regional geographic information system
	CVPIA	Water conservation training and research; re-establish damaged waterways
	Water quality monitoring	Testing for pollutants
	Water conservation	Evaluating customers' water conservation plans
	General expense	Project-wide NEPA and ESA activities
Contract administration	General administration	Ratesetting and accounting
	Contract renewal	Negotiating contract terms and environmental assessments

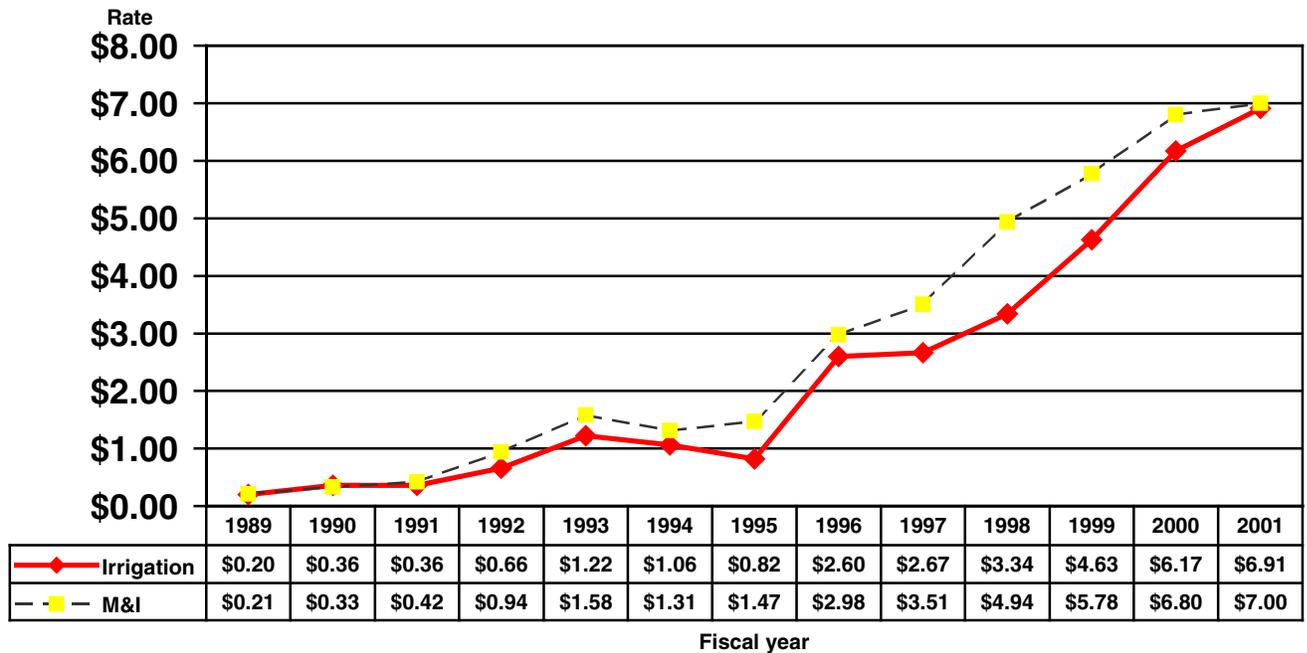
Source: Derived from information provided by the Bureau of Reclamation's Mid-Pacific Region.

Water Marketing O&M Rate Component Has Increased Significantly

The water marketing component of O&M rates has been increasing steadily since 1989 for both irrigation and M&I customers, with significant increases since 1995. The increases are due to rising costs in both the system-wide and contract administration categories. As a result, water marketing costs currently make up the largest share of CVP's O&M rates.

Figure 1 shows that the water marketing component of rates has been increasing for both irrigation and M&I customers. As the figure shows, the rate for irrigation customers increased from \$.20 per acre-foot in 1989 to \$6.91 per acre-foot in 2001. M&I customers experienced a similar increase—from \$.21 per acre-foot in 1989 to \$7.00 per acre-foot in 2001.

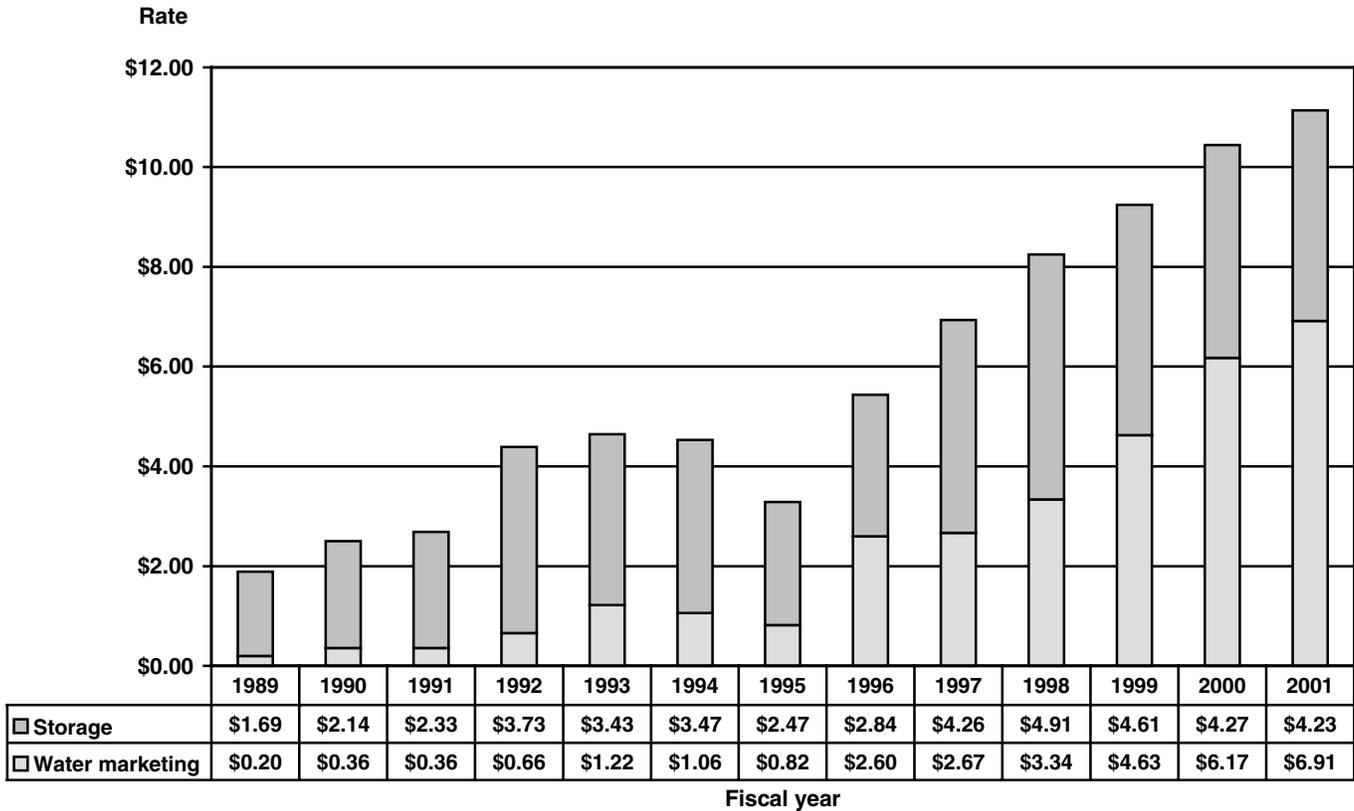
Figure 1: CVP Irrigation and M&I Water Marketing Rates, Fiscal Years 1989 Through 2001 (in nominal \$ per acre-foot)



Source: Derived from information provided by the Bureau of Reclamation's Mid-Pacific Region.

Since fiscal year 1998, the total O&M rate has typically been comprised of the water marketing and storage rate components. Figure 2 compares the water marketing and storage rate components for irrigation. As figure 2 shows, while both water marketing and storage rate components have increased for irrigation customers since 1989, water marketing has overtaken storage to become the largest rate component. Water marketing comprised about 11 percent of the combined total of the water marketing and storage rate components in 1989 and about 62 percent in 2001. For M&I customers, water marketing comprised about 12 percent of the combined total of the water marketing and storage rate components in 1989 and 61 percent in 2001.

Figure 2: Relationship of Irrigation Water Marketing and Storage O&M Rate Components: Water Marketing Plus Storage, Fiscal Years 1989 Through 2001 (in nominal \$ per acre-foot)



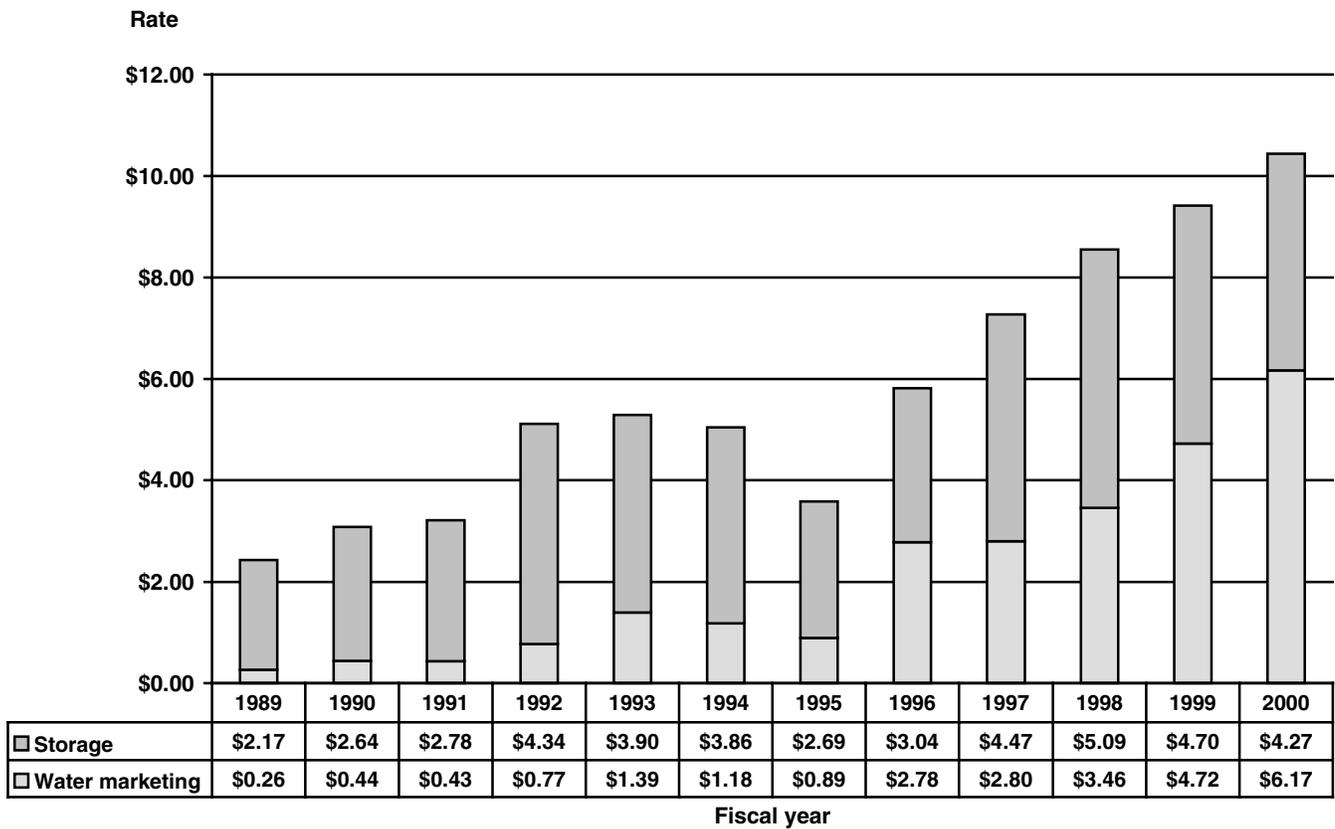
Source: Derived from information provided by the Bureau of Reclamation's Mid-Pacific Region.

The trend in inflation-adjusted¹⁰ dollars is similar to that in nominal dollars. As shown in figure 3, water marketing and storage costs have increased and water marketing has become the largest rate component. Converting the nominal dollars into constant year 2000 dollars shows that the irrigation water marketing rate ranged from \$.26 in 1989 to \$6.17 in 2000, and the storage rate from \$2.17 per acre-foot in 1989 to \$4.27 per acre-foot in 2000. The total inflation-adjusted irrigation O&M rate (water

¹⁰ To convert the nominal dollars into constant year 2000 dollars we used the Gross Domestic Product index dated February 28, 2001, from the Bureau of Economic Analysis.

marketing plus storage) would have ranged from \$2.43 per acre-foot in 1989 to \$10.44 in 2000.

Figure 3: Relationship of Irrigation Water Marketing and Storage O&M Rate Components Adjusted for Inflation: Water Marketing Plus Storage, Fiscal Years 1989 Through 2000 (in constant year 2000 \$ per acre-foot)



Note: Amounts are adjusted for inflation with 2000 being the base year.

The inflation index is the Gross Domestic Product index taken from the Bureau of Economic Analysis dated February 28, 2001.

Source: Derived from information provided by the Bureau of Reclamation's Mid-Pacific Region and the Bureau of Economic Analysis.

To demonstrate more specifically which categories and sub-categories of water marketing contributed most to cost increases, we reviewed in detail

the costs for irrigation and M&I users for fiscal years 1996 and 2001.¹¹ Tables 2 and 3 show the costs of irrigation and M&I-related water marketing activities for fiscal years 1996 and 2001 and the amount of change over that period of time.

Table 2: General Categories and Sub-Categories of Costs Included in the Water Marketing Component of Rates for CVP Irrigation Customers, Fiscal Years 1996 and 2001

Dollars in thousands ^a				
Category	Fiscal year 1996	Fiscal year 2001	Change	Annual compounded percentage change ^b
System-wide:				
Water & power operations	\$1,425	\$4,384	\$2,960	25.2
NEPA/ESA/other environmental activities	105	2,359	2,255	86.4
Water & land resources management	254	1,948	1,694	50.3
General expense (first included fiscal year 2000)	^c	1,647	1,647	
Water conservation	^c	1,503	1,503	
Other CVP-wide programs	38	1,400	1,362	105.6
Miscellaneous project activities	747	1,656	910	17.3
Water quality monitoring	13	746	733	123.9
Hazardous materials management program	1,535	870	-665	-10.7
CVPIA	1,153	69	-1,085	-43.1
Total system-wide	\$5,269	\$16,582	\$11,313	25.8
Contract administration:				
General contract administration	\$1,845	\$3,381	\$1,536	12.9
Contract renewal	2,135	2,946	811	6.6
Total contract administration	\$3,981	\$6,327	\$2,346	9.7
Total water marketing	\$9,250	\$22,909	\$13,659	19.9

^a Totals and differences may not add due to rounding.

^b Annual compounded percentage change is the average annual percent change, compounded annually, between the amounts for fiscal years 1996 and 2001.

^c General expense and water conservation had no costs included in water marketing for 1996 and therefore an annual rate of change was not calculated for these two items.

Source: Derived from information provided by the Bureau of Reclamation's Mid-Pacific Region.

¹¹ We compared fiscal year 2001 to fiscal year 1996 because 1996 was the earliest year for which we could readily obtain detailed information.

Table 3: General Categories and Sub-Categories of Costs Included in the Water Marketing Component of Rates for CVP M&I Customers, Fiscal Years 1996 and 2001

Dollars in thousands^a				
Category	Fiscal year 1996	Fiscal year 2001	Change	Annual compounded percentage change^b
System-wide:				
Water & power operations	\$256	\$623	\$367	19.4
NEPA/ESA/other environmental activities	19	318	299	75.9
Water & land resources management	46	264	218	42.1
General expense (first included fiscal year 2000)	^c	234	234	
Water conservation	^c	181	181	
Other CVP-wide programs	7	199	192	96.1
Miscellaneous project activities	134	236	102	11.9
Water quality monitoring	2	90	87	106.6
Hazardous materials management program	276	124	-153	-14.9
CVPIA	183	10	-174	-44.4
Total system-wide	\$924	\$2,278	\$1,354	19.8
Contract administration:				
General contract administration	\$282	\$407	\$124	7.6
Contract renewal	316	354	39	2.3
Total contract administration	\$598	\$761	\$163	4.9
Total water marketing	\$1,522	\$3,039	\$1,517	14.8

^a Totals and differences may not add due to rounding.

^b Annual compounded percentage change is the average annual percent change, compounded annually, between the amounts for fiscal years 1996 and 2001.

^c General expense and water conservation had no costs included in water marketing for 1996 and therefore an annual rate of change was not calculated for these two items.

Source: Derived from information provided by the Bureau of Reclamation's Mid-Pacific Region.

As shown in tables 2 and 3, both categories of costs—system-wide and contract administration—have contributed to the increase in irrigation and M&I water marketing costs since 1996. The costs related to system-wide activities have been the primary driver of the water marketing cost increases, rising from \$5.3 million in 1996 to \$16.6 million in 2001 for irrigation, and from \$.9 million in 1996 to \$2.3 million in 2001 for M&I.

A wide range of activities have contributed to the overall increase in water marketing costs over time, and the mix of activities responsible for the increase differs from year to year. However, certain activities resulted in significant costs over the 1996-2001 time period. These include the costs within both the system-wide and contract administration categories, such

as the costs of new technology; costs associated with contract renewals; costs of environmental assessments; and new or increased emphasis on initiatives such as water conservation and water quality monitoring.

Costs classified as general expenses have also contributed to the water marketing increase. As discussed previously, general expenses involve a variety of project-wide costs that, until fiscal year 2000, had been allocated to other rate components such as water storage. Beginning in fiscal year 2000, general expenses have been included in the water marketing rate calculation and recovered from all customers. The effect of this reclassification of general expenses to water marketing is shown in tables 2 and 3. When comparing the amount paid for water marketing in fiscal year 1996 to the amount paid in fiscal year 2001, the general expense reclassification accounted for \$1.65 million of the \$13.66 million (about 12 percent) of the total increase in water marketing costs for irrigation customers. Similarly, the general expense reclassification accounted for \$234,000 of the \$1.52 million (about 15 percent) of the total increase in water marketing costs for M&I customers.

In addition, in fiscal year 1999 the Bureau reclassified water conservation costs to water marketing and began to recover them through rates charged to water customers. These costs¹² had previously been classified as nonreimbursable and therefore had not been recovered. The effect of this reclassification of water conservation to water marketing is shown in tables 2 and 3. When comparing the amount paid for water marketing in fiscal year 1996 to the amount paid in fiscal year 2001, the water conservation reclassification accounted for \$1.50 million of the \$13.66 million (about 11 percent) increase in water marketing costs for irrigation customers. Similarly, the water conservation reclassification accounted for \$181,000 of the \$1.52 million (about 12 percent) increase in water marketing costs for M&I customers.

Combined, the reclassification of general expense and water conservation accounted for \$3.15 million of the \$13.66 million (about 23 percent) increase in water marketing costs for irrigation customers when comparing fiscal year 1996 to fiscal year 2001. The reclassification of general expense and water conservation accounted for \$415,000 of the

¹² As noted earlier, under the provisions of the CVPIA, the Bureau treated the costs of water conservation projects implemented by September 30, 1999 as nonreimbursable.

\$1.52 million (about 27 percent) increase in water marketing costs for M&I customers.

The following list provides examples of activities responsible for water marketing budget increases during fiscal years 1996 to 2001 as described in the Bureau's explanations to its customers.

Water & power operations (increase: irrigation \$2.96 million; M&I \$.37 million):

Replacement of the Centralized Water and Power System Control over a 5-year period with new equipment and software that controls the dams and other facilities. Both the old and new systems were run in parallel during the conversion period.

Increase in the Hydromet System (which provides precipitation, temperature, and snow water content data) for new equipment and to fully fund the Bureau's contract with the State of California for snow surveys.

Developing a new CVP Operating Criteria and Plans for consultation under Section 7 of the ESA requiring technical assistance.

Required conversion of the CVP radio systems to a new system due to a change in operating frequencies.

NEPA/ESA compliance (increase: irrigation \$2.26 million; M&I \$.30 million):

Implementation of biological opinions in conjunction with contract renewals.

Implementation of endangered species conservation plans.

Water & land resources management (increase: irrigation \$1.70 million; M&I \$.22 million):

Increased resources for activities including review of proposals for joint use of lands, wetlands development, and ground-water recharge.

Extensive coordination with water users; other federal, state, and local agencies; and special interest groups.

Increased demand for services such as irrigation and drainage technical assistance, land classification, crop reports, and emergency response planning.

Water conservation (increase: irrigation \$1.50 million; M&I \$.18 million):

Establishment of a water conservation office whose staff provides technical support and services for water conservation measures.

Other CVP-wide programs (increase: irrigation \$1.36 million; M&I \$.19 million):

Replacement of narrow band radios and CO2 fire suppression systems.

Increased coordination costs of the CVP and State Water Project models and data gathering.

Increased demand for Geographical Information Systems in support of water management and development activities.

Budgeted Water Marketing Costs Differ from Actual Costs

In some years the Bureau's projected water marketing costs, which are the basis for customers' rates, have varied significantly from actual costs. Actual costs are affected by unanticipated O&M needs. Depending on the customers' water needs, actual water deliveries can vary from projected deliveries. The uncertainty of estimating O&M costs in advance of the year's actual events, will result, as shown in table 4, in projected costs varying from actual costs.

Table 4: Projected Versus Actual Irrigation and M&I-related Water Marketing Costs, Fiscal Years 1992 through 1999

Dollars in thousands		Fiscal year							
		1992	1993	1994	1995	1996	1997	1998	1999
Irrigation									
Projected		\$2,000	\$3,708	\$3,445	\$4,007	\$9,250	\$9,250	\$10,042	\$14,898
Actual		2,156	2,663	3,768	3,927	5,767	7,519	9,771	12,562
Difference		-\$156	\$1,045	-\$323	\$80	\$3,483	\$1,731	\$271	\$2,336
Percent of projected		-7.8	28.2	-9.4	2.0	37.7	18.7	2.7	15.7
M&I									
Projected		\$350	\$611	\$649	\$775	\$1,522	\$1,522	\$1,880	\$2,310
Actual		346	431	656	729	997	925	1,609	2,047
Difference		\$4	\$180	-\$8	\$46	\$525	\$598	\$271	\$262
Percent of projected		1.2	29.4	-1.2	6.0	34.5	39.3	14.4	11.4

(Totals and differences may not add due to rounding)

Source: Derived from information provided by the Bureau of Reclamation's Mid-Pacific Region.

As shown in table 4, actual water marketing costs differed from projected for each of fiscal years 1992 through 1999. For irrigation, the differences ranged from about \$80,000 in 1995 (2.0 percent from the projected amount) to almost \$3.5 million in 1996 (37.7 percent from the projected amount). The difference between the Bureau's projected and actual costs has ranged from underestimating by 9.4 percent to over estimating by 37.7 percent. For M&I, the difference has ranged from about \$4,000 in 1992 (1.2 percent from the projected amount) to \$598,000 in 1997 (39.3 percent from the projected amount). The difference has ranged from underestimating by 1.2 percent to overestimating by 39.3 percent.

Actual costs are allocated to each customer's account based on actual water usage. The customers' payments (which are paid in advance of water deliveries) are to be applied against the Bureau's costs as specified by CVP ratesetting policies. If actual costs allocated to a customer exceed the customer's payments, the deficit is recovered through adjustments to subsequent years' rates. If payments exceed allocated costs, the overpayment is applied to any balances the customer has in the following accounts: unpaid prior year O&M costs; interest on unpaid prior year O&M costs; and construction costs. The order in which a customer's payments are to be applied to these balances is different for irrigation and M&I customers and is shown in appendix II.

Water Marketing Costs Are Recoverable As Normal Operations And Maintenance Costs

Water marketing costs are charged to customers as part of the Bureau's total O&M costs. The Bureau's ability to determine which O&M costs to charge to customers is governed by reclamation law, project-specific legislation, and specific provisions of contracts¹³ between the Bureau and water users. Within these constraints, the Bureau¹⁴ has broad discretion to decide which O&M costs to charge to customers. Federal courts have confirmed the Secretary of the Interior's broad discretion to define what can properly be assessed as an O&M expense. During the course of our review, we did not identify any activities that did not appear to be O&M related to CVP, or any costs that were precluded by law from recovery.

OMB guidance and federal accounting standards also guide the Secretary. This guidance indicates that the full costs incurred by the federal government in providing services should be recovered from beneficiaries of those services, unless such cost recovery is precluded by law.

For example, OMB Circular A-25 provides guidance for federal agencies to use in setting fees to recover the full costs of providing goods or services.¹⁵ OMB Circular A-25 defines full costs as all direct and indirect costs of

¹³ Bureau contracts require that water supply customers pay for O&M expenses assigned to irrigation or M&I purposes.

¹⁴ The authority to make the determination is delegated to the Bureau by the Secretary of the Interior.

¹⁵ The purpose of OMB Circular A-25 is to implement a law commonly known as the User Fee Statute. However, its guidance may be used by agencies in setting fees authorized by other laws to the extent that it does not conflict with the requirements of those laws.

providing the goods or service. This definition is consistent with that contained in federal accounting standards. The federal accounting standards define the full cost of an entity's output as "the sum of (1) the costs of resources consumed by the segment that directly or indirectly contribute to the output, and (2) the costs of identifiable supporting services provided by other responsibility segments within the reporting entity, and by other reporting entities."¹⁶ Applying the definitions of "full cost" used in OMB Circular A-25 and federal accounting standards indicates that the full cost of the water supplied by the Bureau includes all direct and indirect costs incurred in providing these services and that these costs should be recovered, except where precluded by law.

We reviewed the Bureau's exercise of its discretion to classify water marketing costs as O&M that is charged to customers for reimbursement. We analyzed selected fiscal year 2001 Budget Activity Plans, and determined that the activities described in the plans could reasonably be defined as O&M related to CVP. We further analyzed several of these plans and determined that the described activities were not specifically excluded from recovery by law. Thus, our review of these documents did not identify any activities that were not O&M activities related to CVP or any costs that were precluded by law from recovery.

However, in the course of our work we did note that the Mid-Pacific Region is not recovering certain costs associated with employee postretirement health benefits and Civil Service Retirement System employee pension costs related to reimbursable project purposes that we recommended, on May 31, 2000, that the Bureau recover. These costs were estimated by the Mid-Pacific Region to total \$709,000 for fiscal year 1999. As we previously recommended, these costs should be recovered as part of the Bureau's normal O&M costs. Our recommendation is still under consideration by the Bureau.

¹⁶ Financial Accounting Standards Advisory Board Statement of Federal Financial Accounting Standards No. 4, *Managerial Cost Accounting Concepts and Standards for the Federal Government*, June 1995.

Customers Receive Substantial Information, But The Information Could Be More Complete

The Mid-Pacific Region has made substantial progress in involving customers in the budget process. The region provides many documents to customers, responds to numerous questions about the budget and rates, and holds several budget update meetings annually. However, providing some additional information at the beginning of the budget process would facilitate customers' understanding of the Bureau's planned activities and their ability to review and provide input to the planned activities.

The House Committee on Appropriations, reporting on the Energy and Water Development Appropriations Bill of 1998,¹⁷ stated that "The Committee strongly encourages the Bureau of Reclamation to create new opportunities for water and power customers to participate in the review and development of O&M budget priorities for their respective Bureau of Reclamation projects." In response to this committee's concerns, the Bureau's Commissioner issued a directive dated September 24, 1998, that required Bureau regions to involve customers in the budget process. The directive states, in part, that the Bureau is to provide customers with the opportunity to assist in formulating O&M activities and cost estimates, and setting priorities in which the customers share in the responsibility or pay a portion of the O&M cost with Reclamation."¹⁸

The Mid-Pacific Region has involved customers in the budget process in a variety of ways. In 1999 and 2000, the region held meetings that discussed budget priorities and reviewed budget execution. The Bureau also provided information to customers about its ratesetting process, during which budget data are converted to water rates. Examples of budget and ratesetting information provided to customers are provided below.

Budget priority information. The Bureau provides detailed descriptions of activities planned for the upcoming budget year to customers. This information is based upon Budget Activity Plans, which are submitted by program managers at both regional and area office levels. Among the major informational categories the Budget Activity Plans include are:

- the name of the activity;
- whether the activity is new or ongoing;
- which appropriation will fund the activity;

¹⁷ House Report 105-190, 105th Congress, 1st Session.

¹⁸ At the time the budget is formulated, O&M activities have not been sub-classified into water marketing, storage, conveyance, and the other components of water rates.

-
- a description of the activity, and justification for undertaking it;
 - laws authorizing the activity; and
 - years of future estimated costs.

At the outset of the budget process, the Bureau asks the customers to prioritize the activities described in Budget Activity Plans. In preparing the final budget, the Bureau considers customer input and other factors such as Bureau-wide priorities and the amount of funding available for the year.

We analyzed the fiscal year 2001 Budget Activity Plans the Bureau identified as involving water marketing activities, and found that the preparer had usually provided information that was indicated by the various categories in the document. However, we found that although the plans call for budget estimates for future years, no information was given regarding previously budgeted costs. As a result, customers cannot determine whether the estimated amounts represent increases in previous estimates. In addition, it was not possible to determine whether the described activity was reimbursable—that is, whether the irrigation or M&I customer would have to pay for the costs of the activity.

Budget execution information. The Bureau provides information that compares budgeted costs to actual costs during the year. This provides customers with information regarding whether the Bureau is providing services within budgeted amounts. For example, the information provided to customers at the region's March 2000 meeting included:

Water marketing budgeted costs compared to expenditures and obligations through February 2000 (42 percent of the year complete). The information was categorized by type of activity and by the CVP office responsible for the program.

Budgeted costs compared to expenditures and obligations for non-water marketing rate components, such as storage.

Adjustments made to budgeted costs because of reclassification of costs from storage to water marketing and analysis of reimbursable costs that result in the final rates for irrigation and M&I.

Information on M&I and irrigation expenditures and obligations broken down into labor and non-labor as of the end of February 2000.

Ratesetting information. The Bureau prepares a ratebook each year that details the O&M rate applicable to each customer. Customers and CVP

Water Association staff review and comment upon the ratebook, which specifically identifies the customer's water marketing costs. The ratebook also includes tables showing each customer's capital and energy costs for the year; historical and projected water deliveries; and prior year actual cost data.¹⁹ In addition, the Bureau:

Responds to frequent written and telephonic questions from customers about rates.

Regularly attends CVP Water Association meetings, at which rates are a primary subject of discussion. The CVP Water Association includes representatives of the CVP's largest customers, and is the customers' focal point for interaction with the region on rates.

Prepares an analysis, which is summarized in the ratebook, that identifies significant changes from the preceding year's budget and determines if any significant changes have occurred in the budget as of the time that the annual water rates are computed.

Conclusions

Water marketing costs have increased significantly, but we found no evidence that the costs were derived from activities other than normal O&M activities that are recoverable under applicable law. However, our analysis of the information provided to water customers confirmed that the customers were not able to determine whether (1) budgeted activities were ones that would actually be charged to them, and (2) budgeted amounts for the coming year's activities represented increases in previous estimates.

Recommendation

The Bureau of Reclamation's Mid-Pacific Region's Regional Director should ensure that appropriate regional personnel:

Provide additional budget information to customers at the beginning of the budget process that would enable them to determine whether the budgeted activities are ones that will actually be charged to them; and

¹⁹ The actual cost data presented is for the 2 fiscal years prior to the year for which rates are being set.

Provide additional information during the subsequent ratesetting process to enable customers to determine whether the amounts estimated for budget activities represent changes in prior year estimates.

Agency Comments And Our Evaluation

We provided the Department of the Interior an opportunity to comment on a draft of this report. The Department, in a letter from the Acting Chief of Staff to the Assistant Secretary for Water and Science, generally agreed with our report, but suggested that we clarify the wording of our recommendation with respect to the timing of information to be provided to customers. The Department suggested that the recommendation for informing customers whether the estimated costs of the upcoming year's activities represent changes in previous estimates be revised so that this information is provided not at the beginning of the budget development process, but rather during the subsequent ratesetting process. We considered this a reasonable view. Accordingly, we are calling on the Bureau to (1) provide customers information at the beginning of the budget process necessary to determine whether the budgeted activities are ones that will actually be charged to them, and (2) provide information in the subsequent ratesetting process to enable customers to determine whether the amounts estimated for budget activities represent changes in prior year estimates.

The Department also stated that the Bureau considers the recommendation to be implemented. We agree that the Bureau has begun implementing the recommendation by capturing the necessary information in its database. However, implementation will not be complete until the Bureau actually provides the customers with the recommended information. The Department's comment letter is reproduced in appendix III.

As agreed with your office, unless you publicly announce its contents earlier, we plan no further distribution of this letter until 10 days from its date. At that time, we will send copies to appropriate House and Senate Committees; interested Members of Congress; The Honorable Mitchell E. Daniels, Jr., Director, Office of Management and Budget; and other interested parties. This letter will also be available on GAO's home page at <http://www.gao.gov>. We will also make copies available to others upon request.

Please call me at (202) 512-9508 if you or your staff have any questions.
Major contributors to this report are listed in appendix IV.

A handwritten signature in black ink that reads "Linda Calbom". The signature is written in a cursive, flowing style.

Linda M. Calbom
Director
Financial Management and Assurance

Appendix I

OBJECTIVES, SCOPE, AND METHODOLOGY

We were asked to address specific issues related to the Bureau's water marketing activities and costs at CVP, including (1) the activities and costs that comprise water marketing, (2) the trend in associated costs, (3) the legal basis for charging the costs of water marketing activities to water customers, and (4) the type of information about water marketing activities provided to water customers and ways to improve the information.

Specifically, for each of these issues we were asked to address:

(1) Water Marketing Activities and Costs

The general types of activities that the Bureau has categorized as water marketing, both currently and historically.

The specific activities that comprised water marketing during fiscal years 1996 through 2000 and the charges associated with each activity.

The projected water marketing charges for fiscal year 2001.

(2) Trends in Water Marketing Costs

The annual changes in water marketing charges for fiscal years 1990 through 2000, and the reasons for any significant trends.

(3) Legal Basis for Charging Water Customers

The Bureau's legal basis for including costs classified as water marketing in water rates.

(4) Information Provided to Customers

The general information about costs classified as water marketing that the Bureau provides to its customers.

The specific information provided regarding fiscal year 2000 water marketing costs.

Options, if any, that would enable the Bureau to provide customers with more detailed information.

We addressed these issues in the following ways.

(1) Water Marketing Activities and Costs

Interviewed Bureau officials regarding changes in water marketing over time.

Reviewed applicable definitions in law, manuals, and written policies.

Reviewed Bureau budget documents that listed and described the specific work activities constituting the water marketing category of costs.

(2) Trends in Water Marketing Costs

Obtained Bureau documents showing annual water marketing charges for fiscal years 1996 through 2000 and information on actual costs, to the extent available.

Analyzed the data and prepared graphs to identify trends over time.

Compared charges to actual costs (if available) and interviewed Bureau officials to determine reasons for substantial differences between charges and actual costs.

Obtained projected water marketing charges for 2001, and compared them to prior years.

(3) Legal Basis for Charging Water Customers

Reviewed applicable law and documents and interviewed Bureau officials to determine whether water marketing is defined in law.

Reviewed prior GAO work regarding the legal requirement that O&M costs be recovered in water rates.

Reviewed selected water marketing activities to determine whether any law exists that excludes the specific activity from being recovered in rates.

Interviewed Bureau officials regarding water marketing cost recovery.

(4) Information Provided to Customers

Reviewed documentation of meetings between the Bureau and customers in fiscal year 2000 regarding water marketing charges.

Analyzed documents provided to customers to determine whether they described the types of work being charged to customers as a cost of water marketing.

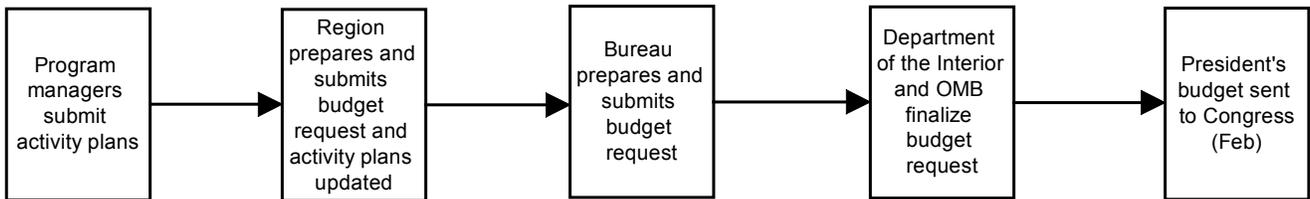
Interviewed Bureau officials and representatives of the CVP Water Association, which represents CVP customers, to determine whether more detailed water marketing cost information was warranted. We also reviewed information provided by the CVP Water Association.

We conducted our review at the Bureau's Mid-Pacific Region, which operates and manages CVP, from June 2000 through April 2001 in accordance with generally accepted government auditing standards. To the extent practical, we corroborated data provided by the Bureau through interviews and by comparing amounts to amounts shown on audited financial statements. However, in most cases we did not verify the accuracy of the data provided. We have considered written comments from the Department of the Interior and revised our report, as appropriate.

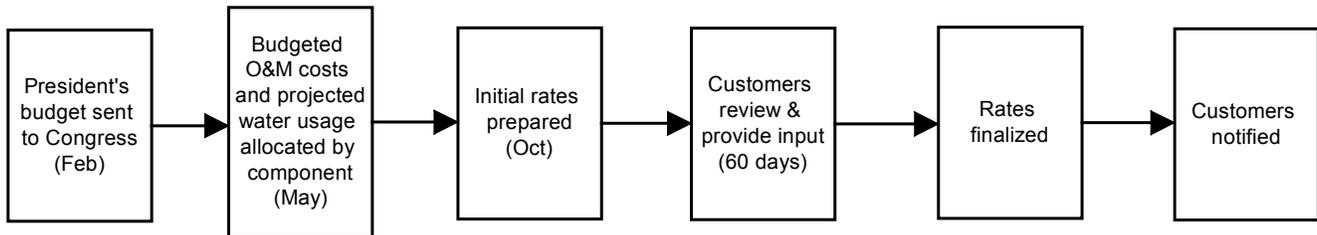
Appendix II O&M Water Rate Setting & Application of Payments

O&M Water Rate Setting & Application of Payments

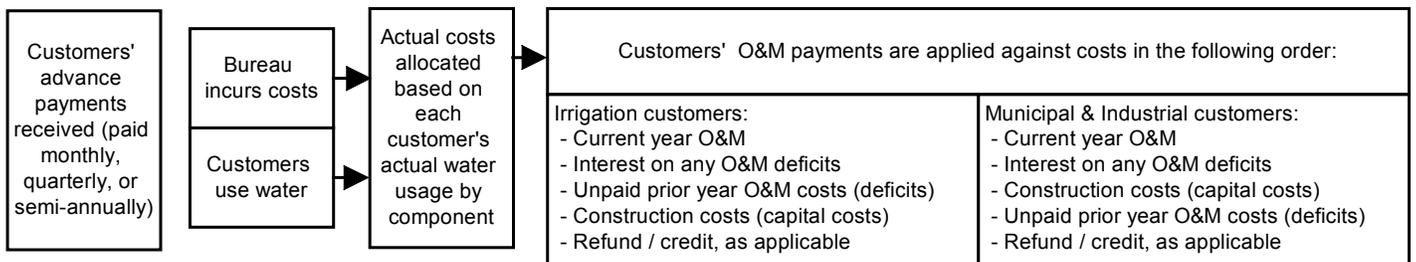
Budget preparation



Ratesetting



Actual activity



Source: Derived from information provided by the Bureau of Reclamation's Mid-Pacific Region.

Appendix III

Comments from the Department of the Interior



United States Department of the Interior

OFFICE OF THE SECRETARY

Washington, D.C. 20240

APR 23 2001

Ms. Linda M. Calbom
Director, Financial Management and Assurance
General Accounting Office
441 G Street N.W.
Washington, D.C. 20548

Dear Ms. Calbom:

Enclosed is the Department of the Interior's response to the General Accounting Office draft report entitled "Bureau of Reclamation: Water Marketing Activities and Costs at the Central Valley Project." (GAO/GAO-01-553)

We appreciate the opportunity to review the draft report and to comment on the subject matter. In general we found the report to be well balanced and informative and believe the report will be of value to the Congress and water customers. To further the efforts to provide timely and relevant information to water customers, we are suggesting a revision to the recommendation such that the Bureau of Reclamation would provide the additional information at the beginning of the rate development process instead of at the beginning of the budget process. The information used at the beginning of the budget process is the budget year plus 2 out-years and does not relate directly to the previous year's information. Concurrence with the revised recommendation and additional comments on the text of the report are also enclosed.

We appreciate the difficulty of reporting on such a multifaceted subject. We hope you will find the enclosed comments to be of assistance.

Sincerely,

Amy Holley, Acting Chief of Staff
Office of the Assistant Secretary
Water and Science

Enclosures

Bureau of Reclamation
Draft GAO Report
Response to Audit Recommendation

**Bureau of Reclamation: Water Marketing Activities
and Costs at the Central Valley Project**
GAO/GAO-01-553

Recommendation 1:

The Bureau of Reclamation's Mid-Pacific Region's Regional Director should ensure that appropriate regional personnel: Provide additional budget information to customers at the beginning of the budget process that would enable them to determine whether budgeted amounts represent changes in previous estimates and whether the budgeted activities are ones that will actually be charged to them.

Response: We nonconcur with the recommendation as it is written because the information used at the beginning of the budget process is the current budget year plus 2 out-years and this data does not relate directly to the previous year's information. In addition, after a certain point in the budget development process the budget information is embargoed pending release by the President. To meet the goal of providing timely and relevant information to water users, the Bureau of Reclamation is suggesting rewording the recommendation as follows:

The Bureau of Reclamation's Mid-Pacific Region's Regional Director should ensure that appropriate regional personnel:

- Provide additional budget information concurrently with the water rate development process that enables the water users to determine whether budgeted amounts represent changes in previous estimates.
- Provide additional budget information to customers at the beginning of the budget process that would enable them to determine whether the budgeted activities are ones that will actually be charged to them.

In addressing the proposed revised recommendation, the Mid-Pacific Region concurs with the revised recommendation. Concerning the comparisons of data by customers for previous years, the region currently provides an analysis at the beginning of the rate development process that compares the estimated cost of each activity in the water rates with previous year estimates.

With regard to providing information to customers on whether charges will apply to them, the Mid-Pacific Region has modified the Regional Activity Plan Database to include a data element on whether the budget activity is reimbursable, either fully or partially, through the normal cost allocation process. As a result of the modification to the database, the budget analysis

Appendix III
Comments from the Department of the
Interior

information to determine whether budgeted amounts represent changes in previous estimates is also currently provided to water users.

The Bureau of Reclamation considers the revised recommendation fully implemented. The region will continue to work collaboratively with water users to refine the level of detail in order to meet their expectations. Additional comments on the draft report are enclosed.

Appendix IV

GAO Contact and Staff Acknowledgments

GAO Contact

Rob Martin, (202) 512-4063

Acknowledgments

In addition to the individual named above, Dave Bogdon, Brian Eddington, Edda Emmanuelli-Perez, Larry Feltz, Jeff Jacobson, Mary Merrill, and Maria Zacharias made key contributions to this report.

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