

Decision S9 04 005

APR 12 1989

ORIGINAL

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Mailed

In the Matter of the Application of
California Water Service Company
(U 60 W), a corporation, for an
order authorizing it to increase
rates charged for water service in
the Dixon District.

Application 88-04-071
(Filed April 28, 1988)

APR 14 1989

In the Matter of the Application of
California Water Service Company
(U 60 W), a corporation, for an
order authorizing it to increase
rates charged for water service in
the Hermosa-Redondo District.

Application 88-04-072
(Filed April 28, 1988)

In the Matter of the Application of
California Water Service Company
(U 60 W), a corporation, for an
order authorizing it to increase
rates charged for water service in
the King City District.

Application 88-04-073
(Filed April 28, 1988)

In the Matter of the Application of
California Water Service Company
(U 60 W), a corporation, for an
order authorizing it to increase
rates charged for water service in
the Marysville District.

Application 88-04-074
(Filed April 28, 1988)

In the Matter of the Application of
California Water Service Company
(U 60 W), a corporation, for an
order authorizing it to increase
rates charged for water service in
the Willows District.

Application 88-04-076
(Filed April 28, 1988)

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OPINION

Summary of Decision

We authorize California Water Service Company (CWS) to increase rates in its Dixon, Hermosa-Redondo, King City, Marysville, and Willows Districts by amounts which are designed to increase revenues as shown below:

<u>District</u>	<u>1989</u>		<u>1990</u>		<u>1991</u>	
	<u>Amount</u>	<u>Percent</u>	<u>Amount</u>	<u>Percent</u>	<u>Amount</u>	<u>Percent</u>
Dixon	\$ 3,400	0.53%	\$ 18,300	2.83%	\$ 18,000	2.71%
Hermosa-Redondo	4,500	0.05	217,600	2.66	223,400	2.65
King City	17,800	3.65	16,100	3.12	19,200	3.60
Marysville	5,600	0.64	39,100	3.90	38,700	4.26
Willows	900	0.14	20,100	2.98	19,800	3.05

A rate of return on rate base of 11.33% for 1989, 1990, and 1991 are found to be reasonable. The authorized return on common equity is 12.25%.

Tables 1 through 5 show, for each district, the adopted summary of earnings at present and authorized rates for test years 1989 and 1990.

TABLE 1

CALIFORNIA WATER SERVICE COMPANY
Dixon District

Adopted Summary of Earnings

	-----1989-----	
	Present	Authorized

	(Thousands of Dollars)	
Total Revenues	\$ 635.5	\$ 638.9
Operating Expenses		
Oper. & Maint.	211.9	211.9
Adm. & Gen.	25.4	25.4
Gen. Off. Alloc.	81.8	81.8
Depreciation	57.6	57.6
Other Taxes	27.7	27.7
State Franch. Tax	10.9	11.2
Federal Inc. Tax	45.4	46.5
Total	460.7	462.0
Net Income	174.8	176.9
Rate Base	1,560.7	1,560.7
Rate of Return	11.20	11.33

	-----1990-----	
	Present	Authorized

	(Thousands of Dollars)	
Total Revenues	\$ 641.5	\$ 663.1
Operating Expenses		
Oper. & Maint.	218.8	218.8
Adm. & Gen.	26.1	26.1
Gen. Off. Alloc.	85.4	85.4
Depreciation	58.7	58.7
Other Taxes	28.4	28.4
State Franch. Tax	10.3	12.3
Federal Inc. Tax	43.0	49.6
Total	470.7	479.3
Net Oper. Revenue	170.8	183.7
Rate Base	1,619.7	1,619.7
Rate of Return	10.55	11.33

TABLE 2

SOUTHERN CALIFORNIA WATER COMPANY
Hermosa-Redondo DistrictAdopted Summary of Earnings

	-----1989-----	
	Present	Authorized

	(Thousands of Dollars)	
Total Revenues	\$ 8,148.8	\$ 8,153.3
Operating Expenses		
Oper. & Maint.	4,586.4	4,586.3
Adm. & Gen.	148.5	148.5
Gen. Off. Alloc.	746.2	746.2
Depreciation	414.5	414.5
Other Taxes	223.1	223.1
State Franch. Tax	84.7	85.1
Federal Inc. Tax	408.9	410.3
Total	6,612.3	6,614.1
Net Income	1,536.5	1,539.2
Rate Base	13,584.5	13,584.5
Rate of Return	11.31	11.33

	-----1990-----	
	Present	Authorized

	(Thousands of Dollars)	
Total Revenues	\$ 8,207.4	\$ 8,429.5
Operating Expenses		
Oper. & Maint.	4,664.4	4,664.7
Adm. & Gen.	154.9	154.9
Gen. Off. Alloc.	780.0	780.0
Depreciation	439.9	439.9
Other Taxes	234.1	234.2
State Franch. Tax	72.1	92.8
Federal Inc. Tax	371.0	439.7
Total	6,716.4	6,806.1
Net Oper. Revenue	1,491.0	1,623.5
Rate Base	14,316.3	14,316.3
Rate of Return	10.41	11.33

TABLE 3

CALIFORNIA WATER SERVICE COMPANY
King City District

Adopted Summary of Earnings

		-----1989-----	
		Present	Authorized

		(Thousands of Dollars)	
Total Revenues	\$	489.0	\$ 506.8
Operating Expenses			
Oper. & Maint.		191.8	191.8
Adm. & Gen.		19.1	19.1
Gen. Off. Alloc.		56.8	56.8
Depreciation		40.2	40.2
Other Taxes		31.4	31.7
State Franch. Tax		5.7	7.3
Federal Inc. Tax		27.2	32.6
Total		372.1	379.5
Net Income		116.9	127.3
Rate Base		1,123.7	1,123.7
Rate of Return		10.40	11.33

		-----1990-----	
		Present	Authorized

		(Thousands of Dollars)	
Total Revenues	\$	494.9	\$ 528.8
Operating Expenses			
Oper. & Maint.		199.6	199.7
Adm. & Gen.		19.6	19.6
Gen. Off. Alloc.		59.4	59.4
Depreciation		41.6	41.6
Other Taxes		32.7	33.4
State Franch. Tax		4.8	7.8
Federal Inc. Tax		24.8	35.1
Total		382.5	396.6
Net Oper. Revenue		112.4	132.2
Rate Base		1,166.0	1,166.0
Rate of Return		9.64	11.33

TABLE 4

CALIFORNIA WATER SERVICE COMPANY
Marysville District

Adopted Summary of Earnings

-----1989-----			
	Present		Authorized

	(Thousands of Dollars)		
Total Revenues	\$	868.5	\$ 874.1
Operating Expenses			
Oper. & Maint.		347.7	347.7
Adm. & Gen.		14.5	14.5
Gen. Off. Alloc.		121.6	121.6
Depreciation		72.4	72.4
Other Taxes		38.0	38.0
State Franch. Tax		10.5	11.0
Federal Inc. Tax		52.3	54.0
Total		656.9	659.2
Net Income		211.6	214.9
Rate Base		1,896.4	1,896.4
Rate of Return		11.16	11.33

-----1990-----			
	Present		Authorized

	(Thousands of Dollars)		
Total Revenues	\$	871.6	\$ 916.4
Operating Expenses			
Oper. & Maint.		358.4	358.5
Adm. & Gen.		14.8	14.8
Gen. Off. Alloc.		127.0	127.0
Depreciation		77.1	77.1
Other Taxes		39.7	39.7
State Franch. Tax		7.9	12.0
Federal Inc. Tax		44.8	58.6
Total		669.6	687.7
Net Oper. Revenue		202.0	228.7
Rate Base		2,016.5	2,016.5
Rate of Return		10.02	11.33

TABLE 5

CALIFORNIA WATER SERVICE COMPANY
Willows District

Adopted Summary of Earnings

	-----1989-----	
	Present	Authorized

	(Thousands of Dollars)	
Total Revenues	\$ 624.9	\$ 625.8
Operating Expenses		
Oper. & Maint.	251.6	251.6
Adm. & Gen.	20.5	20.5
Gen. Off. Alloc.	75.0	75.0
Depreciation	52.4	52.4
Other Taxes	38.0	38.0
State Franch. Tax	7.4	7.5
Federal Inc. Tax	38.7	39.0
Total	483.6	484.0
Net Income	141.3	141.8
Rate Base	1,250.6	1,250.6
Rate of Return	11.30	11.33

	-----1990-----	
	Present	Authorized

	(Thousands of Dollars)	
Total Revenues	\$ 627.6	\$ 648.1
Operating Expenses		
Oper. & Maint.	259.1	259.2
Adm. & Gen.	21.4	21.4
Gen. Off. Alloc.	78.4	78.4
Depreciation	54.1	54.1
Other Taxes	39.4	39.8
State Franch. Tax	6.3	8.1
Federal Inc. Tax	36.7	42.9
Total	495.3	503.8
Net Oper. Revenue	132.3	144.3
Rate Base	1,272.2	1,272.2
Rate of Return	10.40	11.33

Summary of Applications

CWS requests rate adjustments for its Dixon (Application (A.) 88-04-071), Hermosa-Redondo (A.88-04-072), King City (A.88-04-073), Marysville (A.88-04-074), and Willows (A.88-04-076) Districts. The proposed rates are designed to produce returns on rate base of 12.26% in 1989, 12.27% in 1990, and 12.28% in 1991, and a constant return on equity (ROE) of 13.75%. CWS claims that these rates of return are the minimums necessary for it to maintain its credit standing, obtain new capital at a reasonable cost, and provide a fair and reasonable return on equity.

Based on the proposed returns on capital and estimates of revenues, expenses, and rate base, CWS requests the following revenue increases:

<u>District</u>	<u>1989</u>		<u>1990</u>		<u>1991</u>	
Dixon	\$ 57,800	9.2%	\$ 24,200	3.5%	\$ 24,300	3.4%
Hermosa-Redondo	480,000	5.9	240,000	2.8	240,100	2.7
King City	69,500	14.5	19,900	3.6	20,000	3.5
Marysville	56,500	6.5	44,900	4.8	45,000	4.6
Willows	45,000	7.2	21,000	3.1	22,100	3.2

CWS, whose general offices are in San Jose, California, provides water service in 21 separate operating districts located throughout the state. As of December 31, 1987 the company had an investment in utility plant of \$367,002,154 (including utility plant under construction), served 337,783 customers, and employed 538 persons. The gross operating revenue for 1987 was \$112,775,722. At the end of 1987 there were approximately 5,976 stockholders.

For the districts subject to these applications, the following table shows the territory served, the number of customers in 1987, and operating revenues for that year:

<u>District</u>	<u>Territory Served</u>	<u>1987 Recorded Average No. of Connections</u>	<u>1987 Recorded Operating Revenues</u>
Dixon	City of Dixon and adjacent areas of Solano County	2,572	\$ 638,700
Hermosa-Redondo	Cities of Hermosa Beach, Redondo Beach and adjacent areas of Torrance and Los Angeles Co.	23,620	\$8,163,200
King City	City of King City and adjacent areas of Monterey County	1,418	\$ 470,600
Marysville	City of Marysville	3,784	\$ 886,900
Willows	City of Willows and adjacent areas of Glenn County	2,099	\$ 619,200

Background

CWS served copies and provided notice of the applications in accordance with the Commission's Rules of Practice and Procedure. Shortly after the applications were filed, the Water Utilities Branch of the Commission Advisory and Compliance Division scheduled informal public meetings to provide customers with an opportunity to discuss the proposed rate increase and related issues with utility and staff representatives. Meetings were held in each of the districts in May and June of 1988.

Notice of the informal meetings was included with a summary of the applications which CWS mailed to each customer. In addition to the staff Project Manager, the meetings were attended by the Executive Vice President of CWS and in most instances by district and local managers of the company. No customers or other parties were in attendance at the Dixon, King City, and Marysville meetings. The Commission's formal files include a letter from

Mayor David E. Roloff of the City of Marysville stating that the city council had voted to oppose the three-year step increases proposed by applicant. Also included is a reply letter from staff explaining the three-year plan of general rate cases for water utilities.

Mayor Etta Simpson and Public Safety Director Steve Wisniewski of the City of Hermosa Beach participated in the staff's Hermosa-Redondo District meeting, but no other customers were present. The Hermosa Beach officials raised concerns about the adequacy of fire flows within the city. Staff reported that utility and city officials will work together to resolve these concerns. Four customers, two of whom objected to the proposed rates, attended the Willows meeting. There were no complaints about the service or the quality of water provided by CWS.

Staff evaluated the company's water quality and its overall level of service. On a company-wide basis, it found that CWS renders good service, and goes out of its way to accommodate customers who have complaints about service or water quality. In reviewing the company's complaint files for the districts subject to these applications, staff found that CWS has resolved any problems. Based on this review and the results of its informal public meetings, staff concludes that the overall service provided in each district is satisfactory.

The applications were consolidated for hearings which were held in San Francisco on August 29, 30, and 31, and September 1, 1988, before Administrative Law Judge (ALJ) Wetzell. Applicant presented its evidence through testimony and exhibits introduced by its Executive Vice-President, Donald Houck; its Chief Financial Officer, Treasurer, and Vice-President Harold C. Ulrich; its Director of Water Quality, Raymond Taylor; and the Assistant Chief Engineer, Michael Rossi. The Commission Advisory and Compliance Division (CACD) presented its case through the testimony and exhibits of Senior Utilities Engineer/Project Manager Richard

Tom and Utilities Engineers Donald Yep, Peter Liu, Larry Hirsch, and Antoine Gamarra, all of the Water Utilities Branch. CACD also called Regulatory Program Specialist Phebe A. Greenwood of the Division of Ratepayer Advocates as its cost of capital witness.

The matters were concluded at the close of hearings on September 1, 1988, subject to the submission of late-filed comparison exhibits and the filing of concurrent briefs due on September 30, 1988. At subsequent hearings involving general rate increase requests for the company's Los Altos-Suburban and South San Francisco Districts (A.88-04-070 and A.88-04-075 respectively), matters which are currently pending and will be considered in a separate order, CWS moved for incorporation of the record of these applications into the consolidated proceeding in A.88-04-070 and A.88-04-075. Staff joined in the motion, which the ALJ granted, and the parties further agreed that the record of the later proceedings would be incorporated into and considered in these proceedings. The records thus consolidated, the matters stood submitted upon the filing of concurrent briefs in A.88-04-070 and A.88-04-075 on December 2, 1988.

The only comments received on the ALJ's proposed decision consisted of requests to correct typographical misprints in the appendixes. All of the requested corrections have been incorporated in this order.

Issues

During the course of these proceedings representatives of applicant and staff reached agreement on most estimates of test year results of operations. Areas of agreement include revenue estimates and most operating expense and tax estimates. The estimated results of operations' amounts agreed upon are reasonable and will be adopted; it is not necessary to discuss them in detail.

The discussion which follows focuses on the areas of disagreement between CWS and staff, which are listed below:

Disputed Issues

1. Rate of Return
 - a. Capital Structure
 - b. Return on Equity
2. Tax on Unbilled Revenue
3. Ductile Iron Pipe
4. Working Cash
5. General Office
 - a. Outside Services Expenses
 - b. Pension and Benefit Expenses
 - c. Plant Retirements
6. Dixon District
 - a. Other Operation Expense
 - b. Plant Additions: Paving, Main Replacement, Shed
7. Hermosa-Redondo District
 - a. Plant Additions: Office Expansion, Non-specifics
 - b. Gain on Sale of Station 12-01
8. King City District-Auxiliary Generator
9. Marysville District-Other Operation Expense
10. Willows District-Auxiliary Generator
11. Rate Design

Tables 6 through 15 show CWS's and staff's final estimates of the results of operations for each district, at present rates, for test years 1989 and 1990.

TABLE 6

Comparison of Applicant's and Staff's Summary of Earnings
Dixon District, Test Year 1989
(Dollars in Thousands)

<u>Item</u>	<u>Applicant</u>	<u>Differences</u>	<u>Staff</u>
Operating Revenues	\$ 635.5	\$ 0.0	\$ 635.5
<u>Operating Expenses</u>			
Purchased Power	68.9	0.0	68.9
Purchased Water	0.0	0.0	0.0
Groundwater Charges	0.0	0.0	0.0
Replenishment Assessment	0.0	0.0	0.0
Purchased Chemicals	0.0	0.0	0.0
Payroll - District	120.0	0.0	120.0
Other O & M	38.6	2.6	36.0
Other A & G and Misc.	11.3	0.0	11.3
AD Valorem Taxes - District	18.1	0.0	18.1
Business License	0.1	0.0	0.1
Payroll Taxes - District	9.5	0.0	9.5
Depreciation	57.6	0.0	57.6
Ad Valorem Taxes - G.O.	0.3	0.0	0.3
Payroll Taxes - G.O.	1.7	0.0	1.7
Other Prorates - G.O.	79.9	0.3	79.6
Balancing Account Adjustment	0.0	0.0	0.0
Subtotal	406.0	2.9	403.1
Uncollectibles	1.1	0.0	1.1
Business License	0.0	0.0	0.0
Local Franch. Tax & Bus. Lic.	0.0	0.0	0.0
Local Franchise Tax	0.0	0.0	0.0
Income Taxes	60.4	3.7	56.7
Total Operating Expenses	467.5	6.6	460.9
Net Operating Revenues	168.0	(6.6)	174.6
Rate Base	1,564.5	16.6	1,547.9
Rate of Return	10.74%	-0.54%	11.28%

TABLE 7

Comparison of Applicant's and Staff's Summary of Earnings
Dixon District, Test Year 1990
(Dollars in Thousands)

<u>Item</u>	<u>Applicant</u>	<u>Differences</u>	<u>Staff</u>
Operating Revenues	\$ 641.5	\$ 0.0	\$ 641.5
<u>Operating Expenses</u>			
Purchased Power	69.6	0.0	69.6
Purchased Water	0.0	0.0	0.0
Groundwater Charges	0.0	0.0	0.0
Replenishment Assessment	0.0	0.0	0.0
Purchased Chemicals	0.0	0.0	0.0
Payroll - District	126.0	0.0	126.0
Other O & M	39.8	2.9	36.9
Other A & G and Misc.	11.3	0.0	11.3
AD Valorem Taxes - District	18.4	0.0	18.4
Business License	0.1	0.0	0.1
Payroll Taxes - District	9.9	0.0	9.9
Depreciation	58.7	0.3	58.4
Ad Valorem Taxes - G.O.	0.3	0.0	0.3
Payroll Taxes - G.O.	1.8	0.0	1.8
Other Prorates - G.O.	83.5	0.4	83.1
Balancing Account Adjustment	0.0	0.0	0.0
Subtotal	419.4	3.6	415.8
Uncollectibles	1.1	0.0	1.1
Business License	0.0	0.0	0.0
Local Franch. Tax & Bus. Lic.	0.0	0.0	0.0
Local Franchise Tax	0.0	0.0	0.0
Income Taxes	57.4	3.6	53.8
Total Operating Expenses	477.9	7.2	470.7
Net Operating Revenues	163.6	(7.2)	170.8
Rate Base	1,627.0	33.9	1,593.1
Rate of Return	10.06%	-0.66%	10.72%

TABLE 8

Comparison of Applicant's and Staff's Summary of Earnings
Hermosa-Redondo District, Test Year 1989
 (Dollars in Thousands)

<u>Item</u>	<u>Applicant</u>	<u>Differences</u>	<u>Staff</u>
Operating Revenues	\$ 8,148.8	\$ 0.0	\$ 8,148.8
<u>Operating Expenses</u>			
Purchased Power	223.5	0.0	223.5
Purchased Water	3,081.1	0.0	3,081.1
Groundwater Charges	0.0	0.0	0.0
Replenishment Assessment	147.0	0.0	147.0
Purchased Chemicals	3.4	0.0	3.4
Payroll - District	782.5	0.0	782.5
Other O & M	437.3	0.0	437.3
Other A & G and Misc.	49.5	0.0	49.5
AD Valorem Taxes - District	142.7	0.0	142.7
Business License	16.3	0.0	16.3
Payroll Taxes - District	61.3	0.0	61.3
Depreciation	414.5	0.3	414.2
Ad Valorem Taxes - G.O.	2.8	0.0	2.8
Payroll Taxes - G.O.	15.2	0.0	15.2
Other Prorates - G.O.	729.1	2.5	726.6
Balancing Account Adjustment	0.0	0.0	0.0
Subtotal	6,105.9	2.8	6,103.1
Uncollectibles	10.7	0.0	10.7
Business License	0.0	0.0	0.0
Local Franch. Tax & Bus. Lic.	0.0	0.0	0.0
Local Franchise Tax	3.1	0.0	3.1
Income Taxes	563.3	67.4	495.9
Total Operating Expenses	6,683.0	70.2	6,612.8
Net Operating Revenues	1,465.8	(70.2)	1,536.0
Rate Base	13,667.1	171.5	13,495.6
Rate of Return	10.73%	-0.65%	11.38%

TABLE 9

Comparison of Applicant's and Staff's Summary of Earnings
Hermosa-Redondo District, Test Year 1990
 (Dollars in Thousands)

<u>Item</u>	<u>Applicant</u>	<u>Differences</u>	<u>Staff</u>
Operating Revenues	\$ 8,207.4	\$ 0.0	\$ 8,207.4
<u>Operating Expenses</u>			
Purchased Power	225.0	0.0	225.0
Purchased Water	3,105.8	0.0	3,105.8
Groundwater Charges	0.0	0.0	0.0
Replenishment Assessment	147.0	0.0	147.0
Purchased Chemicals	3.4	0.0	3.4
Payroll - District	812.6	0.0	812.6
Other O & M	454.9	0.0	454.9
Other A & G and Misc.	50.9	0.0	50.9
AD Valorem Taxes - District	150.0	0.0	150.0
Business License	16.0	0.0	16.0
Payroll Taxes - District	65.0	0.0	65.0
Depreciation	439.9	2.9	437.0
Ad Valorem Taxes - G.O.	3.0	0.0	3.0
Payroll Taxes - G.O.	15.9	0.0	15.9
Other Prorates - G.O.	762.5	3.9	758.6
Balancing Account Adjustment	0.0	0.0	0.0
Subtotal	6,260.9	6.8	6,254.1
Uncollectibles	10.7	0.0	10.7
Business License	0.0	0.0	0.0
Local Franch. Tax & Bus. Lic.	0.0	0.0	0.0
Local Franchise Tax	3.1	0.0	3.1
Income Taxes	514.9	67.2	447.7
Total Operating Expenses	6,789.6	74.0	6,715.6
Net Operating Revenues	1,417.8	(74.0)	1,491.8
Rate Base	14,406.5	271.7	14,134.8
Rate of Return	9.84%	-0.71%	10.55%

TABLE 10

Comparison of Applicant's and Staff's Summary of Earnings
King City District, Test Year 1989
 (Dollars in Thousands)

<u>Item</u>	<u>Applicant</u>	<u>Differences</u>	<u>Staff</u>
Operating Revenues	\$ 489.0	\$ 0.0	\$ 489.0
<u>Operating Expenses</u>			
Purchased Power	46.6	0.0	46.6
Purchased Water	0.0	0.0	0.0
Groundwater Charges	0.0	0.0	0.0
Replenishment Assessment	0.0	0.0	0.0
Purchased Chemicals	0.0	0.0	0.0
Payroll - District	102.8	0.0	102.8
Other O & M	48.2	0.0	48.2
Other A & G and Misc.	12.7	0.0	12.7
AD Valorem Taxes - District	13.2	0.0	13.2
Business License	0.0	0.0	0.0
Payroll Taxes - District	8.2	0.0	8.2
Depreciation	40.2	0.0	40.2
Ad Valorem Taxes - G.O.	0.2	0.0	0.2
Payroll Taxes - G.O.	1.2	0.0	1.2
Other Prorates - G.O.	55.5	0.2	55.3
Balancing Account Adjustment	0.0	0.0	0.0
Subtotal	328.8	0.2	328.6
Uncollectibles	0.6	0.0	0.6
Business License	9.8	0.0	9.8
Local Franch. Tax & Bus. Lic.	0.2	0.0	0.2
Local Franchise Tax	0.0	0.0	0.0
Income Taxes	37.3	4.4	32.9
Total Operating Expenses	376.7	4.6	372.1
Net Operating Revenues	112.3	(4.6)	116.9
Rate Base	1,127.0	3.6	1,123.4
Rate of Return	9.96%	-0.45%	10.41%

TABLE 11

Comparison of Applicant's and Staff's Summary of Earnings
King City District, Test Year 1990
(Dollars in Thousands)

<u>Item</u>	<u>Applicant</u>	<u>Differences</u>	<u>Staff</u>
Operating Revenues	\$ 494.9	\$ 0.0	\$ 494.9
<u>Operating Expenses</u>			
Purchased Power	47.1	0.0	47.1
Purchased Water	0.0	0.0	0.0
Groundwater Charges	0.0	0.0	0.0
Replenishment Assessment	0.0	0.0	0.0
Purchased Chemicals	0.0	0.0	0.0
Payroll - District	107.9	0.0	107.9
Other O & M	50.7	0.0	50.7
Other A & G and Misc.	12.9	0.0	12.9
AD Valorem Taxes - District	13.9	0.0	13.9
Business License	0.0	0.0	0.0
Payroll Taxes - District	8.7	0.0	8.7
Depreciation	41.6	0.0	41.6
Ad Valorem Taxes - G.O.	0.2	0.0	0.2
Payroll Taxes - G.O.	1.2	0.0	1.2
Other Prorates - G.O.	58.1	0.3	57.8
Balancing Account Adjustment	0.0	0.0	0.0
Subtotal	342.3	0.3	342.0
Uncollectibles	0.6	0.0	0.6
Business License	9.8	0.0	9.8
Local Franch. Tax & Bus. Lic.	0.2	0.0	0.2
Local Franchise Tax	0.0	0.0	0.0
Income Taxes	34.5	4.4	30.1
Total Operating Expenses	387.4	4.7	382.7
Net Operating Revenues	107.5	(4.7)	112.2
Rate Base	1,169.4	27.4	1,142.0
Rate of Return	9.19%	-0.63%	9.82%

TABLE 12

Comparison of Applicant's and Staff's Summary of Earnings
Marysville District, Test Year 1989
 (Dollars in Thousands)

<u>Item</u>	<u>Applicant</u>	<u>Differences</u>	<u>Staff</u>
Operating Revenues	\$ 868.5	\$ 0.0	\$ 868.5
<u>Operating Expenses</u>			
Purchased Power	100.4	0.0	100.4
Purchased Water	0.0	0.0	0.0
Groundwater Charges	0.0	0.0	0.0
Replenishment Assessment	0.0	0.0	0.0
Purchased Chemicals	0.4	0.0	0.4
Payroll - District	201.7	0.0	201.7
Other O & M	65.5	2.4	63.1
Other A & G and Misc.	(5.5)	0.0	(5.5)
AD Valorem Taxes - District	21.8	0.0	21.8
Business License	0.3	0.0	0.3
Payroll Taxes - District	15.9	0.0	15.9
Depreciation	72.4	0.0	72.4
Ad Valorem Taxes - G.O.	0.5	0.0	0.5
Payroll Taxes - G.O.	2.5	0.0	2.5
Other Prorates - G.O.	118.7	0.4	118.3
Balancing Account Adjustment	0.0	0.0	0.0
Subtotal	594.6	2.8	591.8
Uncollectibles	2.1	0.0	2.1
Business License	0.0	0.0	0.0
Local Franch. Tax & Bus. Lic.	0.0	0.0	0.0
Local Franchise Tax	0.0	0.0	0.0
Income Taxes	65.2	2.3	62.9
Total Operating Expenses	661.9	5.1	656.8
Net Operating Revenues	206.6	(5.1)	211.7
Rate Base	1,902.0	6.3	1,895.7
Rate of Return	10.86%	-0.31%	11.17%

TABLE 13

Comparison of Applicant's and Staff's Summary of Earnings
Marvsville District, Test Year 1990
 (Dollars in Thousands)

<u>Item</u>	<u>Applicant</u>	<u>Differences</u>	<u>Staff</u>
Operating Revenues	\$ 871.6	\$ 0.0	\$ 871.6
<u>Operating Expenses</u>			
Purchased Power	100.9	0.0	100.9
Purchased Water	0.0	0.0	0.0
Groundwater Charges	0.0	0.0	0.0
Replenishment Assessment	0.0	0.0	0.0
Purchased Chemicals	0.4	0.0	0.4
Payroll - District	211.8	0.0	211.8
Other O & M	66.5	2.3	64.2
Other A & G and Misc.	(6.2)	0.0	(6.2)
AD Valorem Taxes - District	22.6	0.0	22.6
Business License	0.3	0.0	0.3
Payroll Taxes - District	16.8	0.0	16.8
Depreciation	77.1	0.0	77.1
Ad Valorem Taxes - G.O.	0.5	0.0	0.5
Payroll Taxes - G.O.	2.6	0.0	2.6
Other Prorates - G.O.	124.1	0.6	123.5
Balancing Account Adjustment	0.0	0.0	0.0
Subtotal	617.4	2.9	614.5
Uncollectibles	2.1	0.0	2.1
Business License	0.0	0.0	0.0
Local Franch. Tax & Bus. Lic.	0.0	0.0	0.0
Local Franchise Tax	0.0	0.0	0.0
Income Taxes	55.2	2.4	52.8
Total Operating Expenses	674.7	5.3	669.4
Net Operating Revenues	196.9	(5.3)	202.2
Rate Base	2,024.3	9.2	2,015.1
Rate of Return	9.73%	-0.30%	10.03%

TABLE 14

Comparison of Applicant's and Staff's Summary of Earnings
Willows District, Test Year 1989
 (Dollars in Thousands)

<u>Item</u>	<u>Applicant</u>	<u>Differences</u>	<u>Staff</u>
Operating Revenues	\$ 624.9	\$ 0.0	\$ 624.9
<u>Operating Expenses</u>			
Purchased Power	62.1	0.0	62.1
Purchased Water	0.0	0.0	0.0
Groundwater Charges	0.0	0.0	0.0
Replenishment Assessment	0.0	0.0	0.0
Purchased Chemicals	1.0	0.0	1.0
Payroll - District	134.1	0.0	134.1
Other O & M	62.6	0.0	62.6
Other A & G and Misc.	9.3	0.0	9.3
AD Valorem Taxes - District	14.9	0.0	14.9
Business License	0.0	0.0	0.0
Payroll Taxes - District	10.6	0.0	10.6
Depreciation	52.9	0.5	52.4
Ad Valorem Taxes - G.O.	0.3	0.0	0.3
Payroll Taxes - G.O.	1.5	0.0	1.5
Other Prorates - G.O.	73.3	0.3	73.0
Balancing Account Adjustment	0.0	0.0	0.0
Subtotal	422.6	0.8	421.8
Uncollectibles	3.0	0.0	3.0
Business License	12.5	0.0	12.5
Local Franch. Tax & Bus. Lic.	0.0	0.0	0.0
Local Franchise Tax	0.0	0.0	0.0
Income Taxes	50.5	4.3	46.2
Total Operating Expenses	488.6	5.1	483.5
Net Operating Revenues	136.3	(5.1)	141.4
Rate Base	1,295.3	47.4	1,247.9
Rate of Return	10.52%	-0.81%	11.33%

TABLE 15

Comparison of Applicant's and Staff's Summary of Earnings
Willows District, Test Year 1990
(Dollars in Thousands)

<u>Item</u>	<u>Applicant</u>	<u>Differences</u>	<u>Staff</u>
Operating Revenues	\$ 627.6	\$ 0.0	\$ 627.6
<u>Operating Expenses</u>			
Purchased Power	62.4	0.0	62.4
Purchased Water	0.0	0.0	0.0
Groundwater Charges	0.0	0.0	0.0
Replenishment Assessment	0.0	0.0	0.0
Purchased Chemicals	1.0	0.0	1.0
Payroll - District	140.8	0.0	140.8
Other O & M	63.7	0.0	63.7
Other A & G and Misc.	9.6	0.0	9.6
Ad Valorem Taxes - District	15.6	0.0	15.6
Business License	0.0	0.0	0.0
Payroll Taxes - District	11.2	0.0	11.2
Depreciation	54.5	0.5	54.0
Ad Valorem Taxes - G.O.	0.3	0.0	0.3
Payroll Taxes - G.O.	1.6	0.0	1.6
Other Prorates - G.O.	76.6	0.4	76.2
Balancing Account Adjustment	0.0	0.0	0.0
Subtotal	437.3	0.9	436.4
Uncollectibles	3.0	0.0	3.0
Business License	12.6	0.0	12.6
Local Franch. Tax & Bus. Lic.	0.0	0.0	0.0
Local Franchise Tax	0.0	0.0	0.0
Income Taxes	47.3	4.2	43.1
Total Operating Expenses	500.2	5.1	495.1
Net Operating Revenues	127.4	(5.1)	132.5
Rate Base	1,317.6	50.5	1,267.1
Rate of Return	9.67%	-0.79%	10.46%

Rate of Return

The rate of return on a utility's rate base is a composite value of the cost of capital incorporating costs of long-term debt, preferred stock, and common equity. These costs are

weighted according to the firm's capital ratios, i.e. the ratios of the respective capital components to total capital. As shown in the following table, CWS requests rates of return on rate base of 12.17% in 1989, 12.19% in 1990, and 12.21% in 1991, in order to earn a return on common equity (ROE) of 13.75%. Staff recommends that the adopted ROE be within a range from 11.75% to 12.25%, and further advocates that the low point of 11.75% be adopted. Largely because its ROE recommendation is two percentage points (200 basis points) less than CWS's, and partly because it urges approval of somewhat lower equity ratios, the rates of return recommended by staff are lower than CWS's by 110 basis points for 1989 and by slightly greater amounts for 1990 and 1991.

Requested/Recommended Rates of Return

	<u>Applicant</u>			<u>Staff</u>		
	<u>Capital Ratios</u>	<u>Cost Factors</u>	<u>Rate of Return</u>	<u>Capital Ratios</u>	<u>Cost Factors</u>	<u>Rate of Return</u>
<u>1989</u>						
Long-term Debt	44.40%	10.54%	4.68%	45.25%	10.55%	4.77%
Preferred Stock	1.70	4.41	0.08	1.75	4.19	0.07
Common Equity	<u>53.90</u>	13.75	<u>7.41</u>	<u>53.00</u>	11.75	<u>6.23</u>
	100.00%		12.17%	100.00%		11.07%
<u>1990</u>						
Long-term Debt	43.90%	10.55%	4.63%	45.25%	10.56%	4.78%
Preferred Stock	1.70	4.41	0.08	1.75	4.19	0.07
Common Equity	<u>54.40</u>	13.75	<u>7.48</u>	<u>53.00</u>	11.75	<u>6.23</u>
	100.00%		12.19%	100.00%		11.08%
<u>1991</u>						
Long-term Debt	43.40%	10.55%	4.58%	45.25%	10.56%	4.78%
Preferred Stock	1.60	4.41	0.07	1.75	4.19	0.07
Common Equity	<u>55.00</u>	13.75	<u>7.56</u>	<u>53.00</u>	11.75	<u>6.23</u>
	100.00%		12.21%	100.00%		11.08%

Applicant's and staff's initial estimates of long-term debt costs were apart by nearly 50 basis points. As a result of discussions which took place during these proceedings, the parties have reached agreement on estimates of new long-term debt costs. A new bond issue of \$18 million in 1988 (CWS's Series BB) will carry an interest rate of 9.48% and, including issuance costs, an estimated effective cost of 9.60%. Planned issues of \$3 million in 1989, and \$4 million each in 1990 and 1991 will have an estimated effective cost of 10.50%. Combining these costs with the embedded costs of outstanding debt, CWS estimates the average cost will be 10.54% in 1989 and 10.55% in 1990 and 1991. The parties agree on estimated costs of the new debt issues, and their remaining differences on debt costs amount to only one basis point. We, therefore, adopt CWS's estimates as reasonable.

Staff's estimates of the effective dividend rates on preferred stock reflect the 1988 liquidation of all but Series C holdings. The effective cost of this series is 4.19%. Staff notes that CWS's higher cost estimate of 4.41% for preferred stock was made prior to the liquidation of Series D, E, F, G, H, and K, which took place in the second quarter of 1988. Staff's recommendation is based on more current information and will therefore be adopted.

Capital Structure

CWS's projections show that its equity ratio will be 53.90% in 1989, 54.40% in 1990, and 55.00% in 1991. Staff believes that because of the relatively low financial and business risk faced by the company, ratios this high are not required. Because equity costs more than debt financing, staff claims that excessive capital costs would be passed on to ratepayers if these ratios are approved for ratemaking purposes. It recommends that a limit of 53.00% be imposed for each of the three years.

Staff's analysis shows that the company's equity ratio has steadily increased in recent years, growing from 42.47% in 1983 to 55.10% in 1987. In each of the past five years, CWS's ratio

exceeded the group average of eleven comparable water utilities by a steadily growing margin, as shown in the following table:¹

Equity Ratios

	<u>CWS</u>	<u>Group Average</u>	<u>Difference</u>
1983	42.47%	38.56%	3.91%
1984	45.18	39.82	5.36
1985	47.73	40.60	7.13
1986	51.79	44.34	7.45
1987	55.10	46.12	8.98
1983-87 average	48.45%	41.53%	6.92%

Staff explains that the growth in CWS's equity ratio has resulted because its cash flow has exceeded cash requirements. According to staff, one indicator of excess cash flow is the growth in the ratio of internal cash flow (net income plus depreciation plus deferred taxes and investment tax credits less total dividends) to net construction outlays (additions to utility plant less contributions and advances net of refunds). This ratio, which is a measure of the ability to fund construction outlays with internal cash sources, rose from 68.28% in 1983 to 118.48% in 1987. Also, staff observes, CWS's payout ratio (the proportion of earnings available to common stock which is actually paid to stockholders in dividends) during this period was 60%, compared to

1 For the purpose of this and other financial analyses, staff selected a group of water utilities which are listed in C.A. Turner's Telephone and Water Utility Reports, earn at least 70% of total revenues from water operations, and whose stock is regularly traded. The eleven companies meeting these criteria are American Water Works, Connecticut Water Service, Consumers Water, E'Town Corporation, The Hydraulic Company, IWC Resources Corporation, Middlesex Water, Philadelphia Suburban Co., SJW Corporation, Southern California Water, and United Water Resources. We discuss the issue (raised by applicant) whether these companies can be compared to CWS in the following section on return on equity.

an average of 66.72% for the group of eleven comparable water companies.

Staff's cost of capital witness testified that in an optimal capital structure, the costs of different modes of financing will be appropriately balanced in accordance with the company's financial risk:

"Debt financing is cheaper than equity financing, yet increases in the debt ratio also increase financial risk. Debt financing is cheaper for two reasons: interest payments on debt are usually cheaper than returns paid to company stockholders, and debt interest is tax deductible while returns on common equity are not. Although debt is less expensive, it has the disadvantage of increasing financial risk; furthermore, the more a company is leveraged, the more expensive marginal debt issues become. As a company's financial risk increases, lenders are scarcer and must be attracted by higher returns. Company management must therefore balance the use of cheaper debt against the loss of flexibility of use of working cash and the increased risk of a higher level of fixed obligations."

Staff acknowledges that with higher equity ratios, debt financing becomes cheaper, but goes on to note there are limits to this benefit. First, lower cost financing affects the cost of new debt issues only. For example, CWS's planned bond issue of \$3 million in 1989 represents less than 5% of the company's total debt. Also, CWS already enjoys a high AA2 bond rating from Moody's and a similarly high rating of AA+ from Standard and Poor's. Staff concludes that for CWS's ratepayers, there is no benefit in raising the equity ratio in order to improve the company's bond rating.

Staff also notes that in a regulated industry, tax savings such as those enjoyed with deductibility of debt costs are passed through to ratepayers. Utility stockholders lack the same incentive to maximize the use of debt that owners of firms in competitive markets have. Staff believes that while a utility's

stockholders would prefer higher equity ratios, ratepayers would prefer higher debt ratios to take advantage of tax savings and lower financial costs.

Admittedly lacking a more conclusive study of the optimal capital structure for CWS, staff believes that the equity ratios of eleven comparable companies, and a lack of business and financial risk, support a decrease in CWS's ratio. Staff indicates that while it does not recommend a decrease in the equity ratio, it opposes further increases. Its specific recommendation of a 53.00% equity ratio is close to the level it expects the company to be at in 1989 following the \$18 million bond issue. It was developed with a model which assumes that equity growth is a function of the authorized return on equity, the payout ratio, and new equity issues. Using a payout ratio of 66.7%, which approximates the eleven-company group average payout ratio, the model results in a projected equity ratio for CWS of 53.00% throughout the period from 1989 to 1991.

CWS takes issue with staff's characterization that it plans to build up its equity ratio in the period covered by these applications. Its highest projected ratio of 55.00% in 1991 is less than the December 1987 ratio of 55.30%. Also, the 55.00% projection rests on the assumption that the requested 13.75% ROE will be authorized. A lower authorized value, such as the 11.75% ROE recommended by staff, would result in a lower amount of funds available for equity capital.

CWS's financial witness explained the equity ratio increase of recent years as follows:

1. The 1981 Tax Act, which required, for ratemaking purposes, deferral of the benefits of the investment tax credit and reduced taxes due to accelerated tax depreciation. The cash flow resulting from this act allowed the company to forgo borrowing \$14,795,000 through December 1987.

2. The company was authorized an ROE of 14.5% during much of the period 1983 to 1987, and that rate was actually realized in all of the operating districts in 1984. CWS earned its authorized rate of return in the years 1984 through 1987.
3. The payout rate of dividends on common stock has been somewhat lower than the level targeted by the company. It has averaged 60%, where 65% would have been paid out if the company had been better able to anticipate favorable earnings at the time that dividend rates were established. This situation resulted in part because of higher-than-expected sales during the period due to dry weather conditions. It was not possible to anticipate such sales at the time dividend rates were set.

According to the company, the increased cash flow which resulted from these conditions has resulted in an improvement in its bond rating, and has provided funds which enabled the calling of high coupon bonds. Redemption of Series Y and Z bonds, with interest rates of 13.00% and 16.25%, respectively, and subsequent issuance of Series BB bonds with an interest rate of 9.48%, resulted in a net annual interest savings of \$270,954. The company's effective cost of debt (upon which applicant and staff agree) would have been 18 basis points higher without these savings.

CWS maintains that it is not the company's policy to raise its equity ratio in the test period, and that the ratio will not in fact continue to increase as it did between 1983 and 1987. There are several indications that the financial conditions which led to the increase in recent years will change. Planned bond issues of \$29 million in the period from 1988 to 1991 exceed anticipated retained earnings of approximately \$18.5 million during the same period (although some of the proceeds from new issues will offset the retiring or refunding of existing issues). Conditions

such as high sales levels which contributed to the somewhat low dividend payouts in recent years have changed. The Tax Reform Act of 1986 (TRA-86) has had the effect of reducing cash flow by eliminating the investment tax credit, requiring longer lives for depreciation purposes, and imposing a tax on contributions in aid of construction which is paid in part by the company. These effects will gradually increase the debt ratio.

We note that despite their disagreements and the extent of litigation on this issue, the parties' estimates are not far apart. CWS's projected equity ratios exceed staff's recommendation of 53.00% by just 0.9 percentage points in 1989, 1.4 percentage points in 1990, and 2.0 percentage points in 1991. Staff presented a hypothetical "sensitivity analysis" which shows dramatically different revenue requirements depending on whether equity ratios are 10%, 30%, 50%, 70%, or 90%, but the differences at issue here are minor by comparison. For 1991, when the greatest difference of 2 percentage points occurs, based on our adopted ROE of 12.25%, the difference in the rate of return on rate base using applicant's and staff's recommended capital structures is six basis points (11.39% with CWS's recommendation and 11.33% with staff's). With this perspective in mind, we turn to resolution of the issue.

We concur with staff that there are limits to a utility's ability to lower total capital costs by adding to the amount of equity capital and minimizing the amount and the cost of debt. While a more leveraged firm might benefit from the improved bond ratings which would be expected to accompany an increased equity position, CWS has already benefited and will continue to benefit from high ratings from Standard and Poor's and Moody's. It is noteworthy that these ratings have been achieved, but the record shows it to be unlikely that further increases in the equity ratio would result in any further improvement in the bond ratings. It is also unlikely that maintaining the equity ratio at 53.00% would

result in a downgrading of the ratings. However, an increase in CWS's ratio would increase its total capital costs.

We will adopt the staff's recommended equity ratio of 53.00%, and related capital ratios for preferred stock and long-term debt. While it is clear that CWS is not proposing, as a matter of company policy, to increase its equity ratio significantly during the ratemaking period covered by these applications, it is also apparent staff's somewhat lower recommendation is a more realistic estimate of the equity ratio which can be expected to occur. As indicated by CWS's financial witness, the actual equity ratio will most likely be lower than the company's projections because we are authorizing an ROE of 12.25%, which is 150 basis points less than that requested and upon which his projections were based. Staff's recommended equity ratio, which is based on the reasonable assumption that the dividend payout ratio should approximate the average of comparable utilities, is consistent with this expectation of a lower value.

Return on Equity

In proceedings in which the cost of capital is at issue, disagreement on the cost of common equity is typically the greatest source of the parties' differences on the recommended rate of return. Unlike debt and preferred stock costs, which are in large part measured from recorded, contractual information, estimating a utility's equity cost requires consideration of a variety of factors such as business and financial risk, investor expectations, capital ratios, and past earnings performance. It requires quantitative analysis, which usually involves use of one or more financial models, as well as qualitative analysis.

In this case, both applicant and staff utilized the discounted cash flow (DCF) and the risk premium (RP) models as part of their analyses. To measure an investor's expected return, and thus a utility's cost of equity capital, the DCF model incorporates data on the current market price of the utility's stock, the

present value of the expected dividend yields, and expected growth. Growth is typically estimated on the basis of the stock's historical performance. The RP model is based on the premise that investors expect a higher return on common stock than on debt because greater risk is involved. With this model, an estimate of the required premium above debt returns is added to forecasted debt costs to measure future equity costs.

CWS indicates that its requested ROE of 13.75% is supported by the following:

1. A DCF analysis which used the company's earnings and dividends growth from 1977 to 1987. This analysis indicates a required ROE ranging from 13% (based on dividends) to 15.5% (based on earnings).
2. A similar DCF analysis which used the company's performance from 1982 to 1987. This analysis indicates an ROE between 14.6% and 21% is required to meet investor expectations. The company acknowledges that its performance was particularly favorable during this shorter period and, therefore, that it would be reasonable to use the longer ten-year DCF analysis.
3. A risk premium analysis which compared the authorized ROE's and embedded debt costs of five energy and communication utilities and five water utilities (not including CWS) which were the subject of Commission decisions on rate of return in 1987.² The average risk premium for the energy and communication utilities was 3.48%. The average for the water companies was 2.89%.

² The five energy and communication utilities are Pacific Gas and Electric Company, Southern California Edison Company, San Diego Gas & Electric Company, Southern California Gas Company, and GTE California Incorporated. The five water companies are California-American Water Company, Dominguez Water Corporation, Park Water Company, Southern California Water Company, and Suburban Water System.

By adding these premiums to the embedded debt cost of 10.65% for 1988 (the company later revised this projection to 10.55%), the risk premium analysis indicates the company is entitled to an ROE of 14.13%, based on comparisons with energy and communication utilities, or 13.54%, based on comparisons with water utilities.

CWS believes that in evaluating a stock's potential for future growth and investment return, an investor will place great reliance on a company's own performance record. According to the company's financial witness, the company's performance is to a degree an individual matter which reflects the company's particular management philosophies. He, therefore, used only CWS's earnings performance in his DCF analysis. On the other hand, when using the RP model, he believes it is appropriate to make comparisons with other California-regulated utilities in estimating the risk premium and the ROE. He also asserts that CWS's authorized ROE should not be significantly lower than the returns of other California water utilities, and that comparisons should not be made with utilities in other states because different commissions have different policies and procedures.

CWS maintains that it faces operational risks which should also be weighed in establishing its ROE. Included among these risks is the potential for revenue shortfall which can occur with sales reductions related to water shortages and rationing. Although revenue and sales adjustment mechanisms have been established for energy utilities to reduce their risk, the Commission has not established comparable mechanisms for water utilities. Also, the risk of revenue shortfall is made greater by the lingering effects of the Commission's lifeline rate design policy of the 1970's and early 1980's. This policy was changed recently (D.86-05-064), but it will take years to fully implement changes in the rate structure which are designed to stabilize revenues by phasing out lifeline rates and increasing service

charges. Another operational risk that CWS asserts should be considered is the potential for high capital expenditures which may be required to meet EPA and Department of Health Services water quality and monitoring regulations.

According to staff, the allowed ROE should be a function of market-based equity returns and the firm's financial and business risk. Staff used the DCF model to estimate the expected return by analyzing the earnings performance of eleven comparable water utilities (listed in Footnote 1). The growth rate used for each of the eleven firms was the average of growth in dividends and earnings over the five-year period 1983-1987. The stock price used was an average of the most recent three months' high and low prices. As shown in the following summary table, this analysis yielded an expected return on equity of 12.18% for the group.

Discounted Cash Flow Model

<u>Utility</u>	<u>Expected ROE</u>
American Water Works	17.80%
Connecticut Water Service	9.74
Consumers Water	14.63
E'Town Corporation	7.53
The Hydraulic Company	10.94
IWC Resources Corporation	10.79
Middlesex Water	9.50
Philadelphia Suburban Co.	6.55
SJW Corporation	16.26
Southern California Water	14.85
United Water Resources	15.44
Average	12.18%

Staff made a separate DCF analysis by including CWS for information only (staff does not recommend inclusion of CWS in the group analysis because of the problem of circularity, whereby past Commission decisions rather than market conditions could be the basis for future Commission decisions). Adding CWS, with its expected return of 15.49%, raises the group average to 12.46%.

To demonstrate that future growth may not follow historical financial performance, staff also incorporated July 1988 Value Line growth forecasts in the DCF model. A widely known financial information service, Value Line publishes data on three water utilities: American Water Works, United Water Service, and CWS. Incorporation of Value Line's forecasts of dividend and earnings growth for these three companies resulted in uniformly more conservative ROE estimates of 11.04%, 14.76%, and 10.72%, respectively, compared to historically based estimates of 17.80%, 15.44%, and 15.49% as shown above. When the Value Line forecasts were incorporated, the model yielded an estimated ROE requirement of 11.51%, based on the group of eleven comparable utilities. When CWS was included, this analysis resulted in a group average ROE of 11.44%.

Staff maintains that its approach to the DCF analysis is in keeping with two landmark cases, Bluefield Waterworks and Improvement Company v West Virginia Public Service Commission (1923) 262 US 679; 67 L ed 1176, 43 S. Ct. 675 and Federal Power Commission v Hope Natural Gas Company (1944) 320 US 591; 88 L ed 333, 64 S. Ct. 281. Staff explains that the essence of Bluefield is that authorized returns should be sufficient to attract investors. It explains further that Hope reinforces this decision, dictating that the return to the equity owner should be commensurate with returns for comparable investments having corresponding risks, and should be sufficient to assure confidence in the financial integrity of the utility so that its credit is maintained and to attract capital. Staff argues that CWS's sole use of its own financial performance in its DCF analysis is contrary to the mandate of Hope to consider comparable investments.

Staff believes that risk premium measurements should be made over a long period of time, because temporary swings in debt and equity markets could yield incorrect results if short periods are used. For its RP analysis, staff computed the average recorded

ROE of the eleven comparable water utilities for each of the years 1978 through 1987. The return on equity was calculated from each company's earnings/price ratio. By comparing the group average ROE to the costs of 10-year and 30-year treasury bonds in each year during this period and averaging the results, staff measured a 2.05% risk premium over the cost of 10-year bonds and a 2.09% premium over the cost of 30-year bonds. Adding these premiums to bond costs forecasted for 1989 by Blue Chip Financial Forecasts and Data Resources, Inc., staff arrived at an ROE range of 11.33% to 11.66% as shown in the following table:

Risk Premium Model

<u>Debt Issue</u>	<u>Blue Chip Financial Forecasts (1)</u>	<u>Data Resources Inc. (2)</u>	<u>Historical Average Premium</u>	<u>Forecasted Return on Equity</u>
10-year Treasury Bonds	9.43%	9.28%	2.05%	11.33%-11.48%
30-year Treasury Bonds	9.57%	9.39%	2.09%	11.48%-11.66%

(1) From the August 1, 1988 Blue Chip publication.

(2) From the June 1988 DRI publication.

In addition to its analyses using the DCF and RP models, staff considered the following in arriving at its ROE recommendation:

1. The near doubling of earnings per share in the past 10 years, the decline in the payout ratio, and two stock splits since 1982 (a period of relatively low inflation), lead staff to conclude that investors will perceive CWS to be a company with low financial risk.
2. The conclusion of low financial risk, and the conclusion that the company faces very little business risk, is bolstered in

staff's view by a steady growth in returns, culminating in a 17.08% return on equity in 1987 compared to the 1978 return of 9.81%, and a 14.08% return on total capital in 1987 compared to 9.00% in 1978.

3. From 1983 to 1987, CWS earned an average ROE of 14.79% and an average return to total capital of 12.50%. These returns exceed the eleven company group averages by 168 basis points and 218 basis points, respectively. Staff asserts that following Hope and Bluefield, a lower authorized ROE, more in line with the market average indicated by the other water utilities, is appropriate, and will still assure CWS's ability to attract capital and maintain its credit standing.
4. Evaluating rates for utility bonds and short- and long-term government securities since 1981, staff concludes that interest rates have been declining, while CWS's ROE has been increasing. Staff claims that this trend supports its view that lowering the ROE is appropriate.

Having established a recommended ROE range of 11.75% to 12.25%, staff asserts that the lower figure of 11.75% is indicated by CWS's above-average equity ratio. According to staff's cost of capital witness, there is an inverse relationship between a utility's equity ratio and the ROE required by investors, because of the reduced financial risk which is associated with higher equity ratios. For example, according to the staff, an investor would be indifferent to a 14% return on a utility with a 40% equity ratio and a 9.33% return on a utility with a 60% equity ratio. Staff maintains that its recommendation for the low end of the range is also supported by the company's low business and financial risk, and by the DCF and RP model analysis.

As we have frequently found in other proceedings, there are enough facts, opinions, and comments in this record to enable us to choose an ROE from a wide range of estimates. There are

enough valid criticisms to warrant attaching at least some doubt to each of the recommendations and underlying analyses. Applicant's DCF analysis yielded a range of 13% to 15.5% (not considering the higher range of 14.6% to 21%, which the company acknowledges to be less representative of investor requirements), and its RP analysis points to an ROE range of 13.54% to 14.13%. Staff's analysis points to lower range of estimates, as low as 11.33% based on its RP analysis, and as high as 12.18%, based on its recommendation from its DCF analysis. Even when growth and earnings values for CWS are included in staff's DCF analysis, staff's methods yield an estimate no higher than 12.46%. Given this wide range, we will assess applicant's and staff's use of the financial models.

We place little reliance on the RP model analyses in this case. Staff maintains, and we agree, that CWS's risk comparisons with energy and communications utilities are less valid than comparisons with other water utilities. Water utilities are not subject to the same competitive pressures that affect these other utilities. CWS acknowledges that it is not significantly affected by the existence of core, noncore, and interruptible customers as energy utilities are. Although CWS also used water utilities in its RP analysis, it relied on a relatively small and, therefore, less reliable sample of five such companies, compared to staff's group of eleven companies. In this regard, we reject the company's assertion that our analysis should be limited to California utilities falling under our own jurisdiction. Any regulatory differences that may exist in other states are likely to have much less of an impact on risk premiums than the differences noted between water utilities and energy and communications utilities.

Additionally, we note that CWS's risk premium measurements are based on the differences between authorized equity returns and embedded debt costs. Since the objective of the RP analysis is to reflect the additional return that equity investors require due to the higher risk of equity compared to debt

investments, the comparisons should be related as closely as possible in time. Embedded debt costs reflect the weighted costs of all of a firm's outstanding debt issues, and probably will not be the same as the cost of new issues at any point in time. Comparing historical, embedded debt against current equity returns is, therefore, a less accurate method of ascertaining the premium demanded by investors than contemporaneous comparisons. Finally, we agree with staff that an RP analysis over a long period of time (such as staff's ten years) will correct for temporary swings in debt and equity markets that can otherwise render the analysis less reliable. CWS's comparison of embedded debt and equity returns adopted in 1987 is more susceptible to such swings.

For the preceding reasons, we would be inclined to place more reliance on staff's RP analysis. However, we share CWS's concern that staff has used market instead of book value. Since the stocks of the eleven comparable companies have recently been selling at a premium of 49% above book value, the measured return on the stocks understates the return on book value. Consequently, the risk premiums measured by staff are understated to the extent that stocks were selling above book value.

Using the DCF model, staff estimated an ROE requirement of 12.18%, while CWS developed a substantially higher range of 13% to 15.5%, based on its own historical performance. Because the estimates are so far apart, a considerable amount of evidence and argument is addressed to the issue of whether the model should be limited to the financial performance of CWS only, and the related question of whether the group of eleven water utilities used by staff is sufficiently representative for market comparison purposes.

We are persuaded by staff's showing and arguments that it is proper to consider the performance of other water utilities in determining what return investors will require. Following the principles of the Hope and Bluefield decisions, our objective is to

determine investors' expectations and requirements in the context of market alternatives that are available to them. If we were to rely solely on CWS's historical earnings performance, we would be giving little consideration to market-based information about such alternatives. As stated by staff's cost of capital witness:

"[T]he Commission is supposed to entitle Cal Water to a return...that will enable it to attract capital in the market, and not a return that will enable it to continue its past performance or be based solely on [its] own past performance."

There may be some investors who have come to expect continued high earnings from the company, but the record does not show that lower returns which are more reflective of market conditions will endanger CWS's ability to attract capital. One indication that investors will not necessarily expect a continuation of historically high earnings comes from staff's analysis of Value Line forecast data on dividends and earnings growth. Each of three water utilities is shown to have a lower ROE requirement when current forecast data is substituted for historical data.³

We find that staff's selection criteria for comparable water utilities are reasonable and result in a valid sample. The

3 We concur with CWS that it would be improper to adjust staff's DCF average by including Value Line data for only two of eleven utilities. Therefore, we do not believe that the DCF estimate average of 11.51% based on this method is valid. Further, we acknowledge the company's concern that there may be inaccuracies in those forecasts based on Value Line's less-than-perfect forecast record for CWS. Nevertheless, the fact remains that each of three water utilities (including CWS) in the Value Line data showed a lower ROE requirement when growth forecasts were substituted for historical earnings in the DCF model. In two of the three cases the reduction is substantial, from 17.80% to 11.04% (American Water Works), and from 15.49% to 10.72% (CWS). In the third case, the reduction is from 15.44% to 14.76% (United Water Resources).

requirement that at least 70% of revenues be earned from water operations properly excludes companies with predominantly nonutility operations, yet allows a workable sample size of eleven. A higher threshold would be desirable, but it would also reduce the sample size, and thereby make it less reliable. CWS maintains that three of these companies in staff's sample, Philadelphia Suburban Co., Consumers Water, and United Water Resources, are not representative of water utilities because they have a significant amount of nonutility operations. We note that even if the three companies are excluded, the group average for the remaining eight companies remains at 12.18%.

We disagree with the assertion that equity returns should be established solely on the basis of water utilities under our jurisdiction. Inclusion of out-of-state utilities in the staff's sample reduces the problem of circularity. If the comparison were limited as proposed by CWS, we would run a greater risk of setting ROE's on the basis of our own decisions, and unnecessarily establishing a different standard for utilities in this state which is not warranted by equity market conditions.

While it is true that staff did not investigate the details of the operations of the other utilities, this omission does not mean the sample is invalid. Except as to the existence of non-water operations for three companies whose exclusion does not affect the final analysis, we find no evidence that staff's sample is unrepresentative of water utilities from an investor's perspective.

We conclude that on the basis of the quantitative models, staff's DCF-based recommendation of 12.18% is the single most reliable indicator of the ROE which will be required by investors. To authorize a significantly higher ROE would require that we assume that investors require far better performance from CWS than from other water utilities. On the other hand, a significantly lower ROE, such as that favored by staff, would require that we

give greater weight to staff's RP analysis than is warranted by the facts.

In arriving at our final determination of an appropriate return, we have also evaluated the various qualitative analyses, and criticisms thereof, of both CWS and staff. There is no need to discuss each of these in detail, and we do not address staff's rationale for recommending the lower end of its range, since we find fault with the range itself. Although CWS asserts that staff fails to consider operational risks related either to potential revenue shortfall or required capital expenditures for water quality and monitoring, we find no basis to conclude that investors are unaware of such risks, or that CWS is affected in a substantially different manner than other water utilities. We believe that investors do have some awareness of such risks. For example, as shown by staff, Value Line advised its readers in July 1988 that CWS could be affected by below-normal precipitation and mandatory conservation measures. To the extent that investors have taken such risks into consideration, and we believe it is a significant extent, staff's market-based analysis should be reflective of their effects.

We concur with staff's partial reliance on 1981 to 1986 interest rate declines to support its favoring of lower equity returns, to the extent that it is clear that much higher returns such as the 14.50% ROE authorized during much of that time is no longer required. However, we also agree with applicant that there are recent indications of a rise in interest rates, as seen in staff's own data on interest rate trends. While interest rates of the magnitude seen from 1981 to 1985 have not returned, recent trends tend to support an ROE as high, if not higher, than that measured through staff's DCF analysis.

CWS asserts that staff's low ROE recommendation represents a penalty for its success. Staff, on the other hand, states that its recommendation is in no way an attempt to punish

the company, but is simply a reflection of market requirements. The record clearly shows that CWS does indeed maintain good service standards and a high degree of customer satisfaction, and staff does not disagree with the company's characterization that it is a well-managed operation. We fully agree that the company should not in any way be penalized. In determining the appropriate return for CWS, we recognize the quality of the company's company's operations.

Accordingly, we will adopt a constant ROE of 12.25%. This is consistent with staff's DCF analysis as well as the recent upward trend in interest rates. As shown in the following table, the resulting rate of return on rate base, incorporating this ROE, our adopted costs of long-term debt and preferred stock, and our adopted capital structure, is 11.33%. These returns will result in pre-tax interest coverage of 3.32x in 1989, 1990, and 1991, which should serve adequately to maintain CWS's favorable bond ratings.

<u>Adopted Rate of Return</u>			
<u>1989</u>	<u>Capital Ratios</u>	<u>Cost Factors</u>	<u>Rate of Return</u>
Long-term Debt	45.25%	10.54%	4.77%
Preferred Stock	1.75	4.19	0.07
Common Equity	<u>53.00</u>	12.25	<u>6.49</u>
	100.00%		11.33%
<u>1990</u>			
Long-term Debt	45.25%	10.55%	4.77%
Preferred Stock	1.75	4.19	0.07
Common Equity	<u>53.00</u>	12.25	<u>6.49</u>
	100.00%		11.33%
<u>1991</u>			
Long-term Debt	45.25%	10.55%	4.77%
Preferred Stock	1.75	4.19	0.07
Common Equity	<u>53.00</u>	12.25	<u>6.49</u>
	100.00%		11.33%

Tax on Unbilled Revenue

Staff recommends disallowance of a non-recurring income tax expense which resulted from a change in accounting methods. Prior to enactment of the Tax Reform Act of 1986 (TRA-86), CWS used the unbilled revenue method of accounting by which utilities recognized revenues as accrued when the customer's meter was read and a bill based on the meter reading was issued. Under this method, the total amount of a bill issued in January of any year was reported as revenue earned in that year, even if most of the water had been delivered in December of the previous year. With the enactment of TRA-86, utilities are required to recognize revenues at the time that services or commodities are delivered. Accordingly, CWS now estimates the consumption which occurs from the date the meter is read in December to the end of the month. For tax purposes, the associated unbilled revenue estimate is included in that year's revenues.

Because the company reads meters and issues bills throughout the month, this accounting change results, on the average, in an approximate one-half month shift of revenues. For 1986 and earlier years, each year's revenue included approximately a half month's consumption from the previous year and likewise excluded a half month's consumption from the current year. Beginning in 1987, each year's revenue reflects an estimate of actual consumption from January 1 to December 31.

The shift has a negligible impact on revenue estimates for ratemaking purposes, particularly since the estimates are made for December consumption, when water use is at a minimum. However, TRA-86 also requires CWS to pay a one-time tax on \$3.775 million in unbilled revenues recorded as of January 1, 1987. This amount represents the estimated revenue for water delivered in December 1986 after meters were read for the month. Under TRA-86, the tax of approximately \$1.6 million is payable over a period of four

years. CWS made the first payment in March 1988 and will make the remaining payments in each of the next three years.

Staff does not dispute these facts, but argues that CWS is not entitled to recovery of the tax payment in its rates because the tax has already been paid by ratepayers. Staff maintains that the unbilled revenue method has been used by CWS for taxes but not for ratemaking. According to staff's testimony:

"The ratemaking issue created by this change in the FIT law relates to whether or not a utility's test year revenue estimate was based upon an unbilled revenue basis or upon a twelve month period representing a calendar year (January 1 to December 31). If the revenue estimate was based upon an unbilled revenue method, then the utility received in rates the FIT on ratemaking taxable income which is comparable to the FIT paid on the utility's tax return for the same period. Only if the unbilled revenue method was used in ratemaking would the utility be allowed to recover over four years the difference which occurred in 1987 due to the mandated conversion. CWS's test year revenue estimates have been and will continue to be based on a full twelve month period. Any inclusion in ratemaking tax expense for unbilled revenues would be collecting from the ratepayers tax dollars that the ratepayers have already paid."

To illustrate the contention that ratepayers have already paid the tax, the staff witness developed a hypothetical situation in which a utility with \$100 million in revenues in one year receives a 10% rate increase effective January 1 of the next year. For the purposes of the example, staff assumed that 7.34% of sales occur in December (based on actual data for CWS's Hermosa-Redondo District), and that revenues are proportional to sales. In this example, if the second year is used as a test year, then the income tax allowed for ratemaking would be based on \$110 million in revenue. However, under the pre-TRA-86 method, the income tax actually paid for the second year would have been computed on

billed revenues of \$109,633,100. The difference of \$366,900, or approximately one-third of 1%, is due to the lower amount of revenues earned in the latter part of December of the first year compared to the same period in the second year.

The record does not disclose the amount of overcollection, if any, applicable in this case, but using staff's own hypothetical example it is in all likelihood based on an amount equivalent to less than one third of 1% of the company's annual revenue in any year. The tax payment at issue, on the other hand, is based on the much higher unbilled revenue of \$3,775,000 for the latter part of December 1986, or 3.45% of the company's 1986 recorded revenue of \$109,523,000.

In Decision (D.) 88-01-061 in our investigation of ratemaking issues created by TRA-86 (I.86-11-019), we considered the question of how to treat the tax on unbilled revenue for all utilities. We found that to the extent any utility is affected by the unbilled revenue method required by TRA-86, it is appropriate for such utility to request a revenue requirement adjustment with a complete justification. Staff agrees that the CWS is affected by the unbilled revenue in that it is required to pay the additional tax, but notes that the finding was based on the following Division of Ratepayer Advocates recommendation:

"[T]o the extent that the unbilled revenue method was used for tax and ratemaking, the affected utilities are entitled to recovery over four years the difference which will occur in 1987 due to the mandated conversion from the unbilled revenue method to the revenue earned for service provided method for FIT purposes."

Thus, staff believes that D.88-01-061 precludes recovery of the tax because, in its view, the unbilled revenue method has never been used for ratemaking. CWS takes issue with staff's assertion that the unbilled revenues have always been included in test year revenue estimates for ratemaking purposes. The statistical data used to develop test year revenue estimates is

based on actual consumption data from meter readings. According to the company, the resulting revenue estimates are only assumed to be on a calendar-year basis; adjustments have never been made to reflect estimates of unbilled revenues.

By petition filed jointly with San Jose Water Company on November 2, 1988, CWS has requested modification of D.88-01-061, besides other changes, to clarify the conditions that would allow a utility to provide for recovery of the one-time tax on unbilled revenues in its rates. The petitioners specifically request inclusion of a finding in that decision which would allow the expense recovery as proposed in these applications. The petition was protested by the Division of Ratepayer Advocates, and the matter has been set for hearing. Staff urges that our decision in these proceedings be written to conform with the final outcome of the D.88-01-061 matter.

Although we are not persuaded by the argument that CWS has already recovered the tax on unbilled revenue recorded as of January 1, 1987, we concur with staff that D.88-01-061 precludes CWS, and possibly all other utilities in similar circumstances, from recovering the tax expense in rates. While it is true that the raw data used in developing normalized consumption estimates comes from meter readings and not from end-of-December estimates, it does not follow that the unbilled revenue method was used for ratemaking. Staff's testimony shows that the raw consumption data thus obtained is used to develop normalized consumption estimates which are combined with adopted estimates of revenue requirements for calendar test years in establishing rates.

I.86-11-019 was established specifically to consider tax issues such as this one, and the issue is now before us in that investigation as a result of CWS's joint petition for modification. We will adopt staff's recommendation to disallow the tax expense at this time based on the position that D.88-01-061 precludes such

recovery, and defer further consideration of the issue to that proceeding.

Ductile Iron Pipe

CWS has recently decided to stop installing asbestos cement (AC) pipe for mains and to use ductile iron (DI) pipe instead. Staff recommends disallowance of the higher plant costs which the company estimates will result from this change. Staff argues that AC pipe is available, and should be used due to its lower cost. The differences in the plant-in-service estimates, which affect all districts except King City, are shown below:

Utility Plant-Ductile Iron Pipe
Utility Exceeds Staff
(Dollars in Thousands)

<u>District</u>	<u>1989</u>	<u>1990</u>
Dixon	\$ 1.7	\$ 1.0
Hermosa-Redondo	19.2	20.4
Marysville	-	3.7
Willows	2.8	3.1

The company's decision to convert to DI pipe was based on the following:

1. Anticipated environmental and occupational safety regulations may prohibit the manufacture of AC pipe in the not too distant future.
2. At the time of the August hearings, CWS was experiencing delays in the delivery of AC pipe of four to six weeks. Some diameters of pipe, such as 12" pipe, required up to eight weeks or longer for delivery. One manufacturer, Johns-Manville, has stopped manufacturing AC pipe. At the time of the November hearings CWS was experiencing average delays of six to eight weeks for delivery of AC pipe, and in some cases as much as 12 weeks. By contrast, DI pipe is delivered in less than a week, and commonly within two days.

3. Although there are no known dangers associated with the use of AC pipe for water delivery, there has been negative reaction to its use due to a general public perception that asbestos in any form is dangerous. Applicant has experienced problems with news media coverage due to its use of AC pipe, and the City of Hermosa Beach has objected to its installation in that city.
4. Installation contractors are encountering increasing problems with safety regulations governing AC pipe.
5. DI pipe has been in extensive use throughout the nation and California for years. For example, it is used by Contra Costa Water District, San Francisco Water District, and San Jose Water Company.

Staff did not become aware of the company's decision to use DI pipe until July of 1988, only a month before staff exhibits were due to be mailed. A staff engineer requested detailed justification for the increased cost, but did not receive the requested information prior to the August hearings. He stated that even if the information requested had been made available, there was not enough time prior to those hearings to make a study of whether the change is beneficial to ratepayers.

It is clear that company management considered the change to DI pipe necessary despite cost considerations, not because of them. Based on the reasons given by the company, we conclude that the expenses arising from the change should be allowed for ratemaking even though there is no indication of a direct and immediate financial benefit to ratepayers.

Although staff was unable to make an in-depth study of the additional plant costs involved, we do not believe this warrants disallowance of the costs, in view of the relatively modest sums at issue. The estimates range from \$1,000 in Dixon to \$20,400 in Hermosa-Redondo, both in 1990. Any error or discrepancy

which a staff investigation might have uncovered in these estimates (and we have no basis to believe there would be any) would in all likelihood be minor in nature. The company's estimates of costs associated with this decision will be adopted. However, we caution the company that for the future it must have full justification available in a timely manner for staff review if it expects such higher costs to be included in rates.

Working Cash

Staff and applicant disagree on the amount of working cash that should be allowed in rate base, primarily because their estimates of the number of lag days in billing and collecting of revenues are different. These differences are reflected in the following table. Other differences, which are due to different expense estimates, are minor.

Rate Base-Working Cash Allowance
Lag Day Difference
Utility Exceeds Staff
(Dollars in Thousands)

<u>District</u>	<u>1989</u>	<u>1990</u>
Dixon	\$ 3.9	\$ 4.1
Hermosa-Redondo	55.7	58.6
King City	3.3	3.4
Marysville	5.6	5.9
Willows	4.1	4.3

Staff adjusted revenue lag day estimates from the utility's 1980 working cash study by adding one lag day to compensate the utility for a delay in bank crediting of revenues, and by subtracting three lag days to reflect a more efficient billing process. The latter adjustment was made by staff based on its estimate that a new electronic meter reading system has reduced the time from the date the meter is read to the date the customer receives the bill by three days.

CWS disagrees with staff's adjustment, largely because it expects that customers will continue to pay their bills on the same

day of the month despite receiving them two or three days earlier. For example, the company believes that a customer who receives a bill on the 18th, 20th, or 21st of the month will pay it on the same date as before, probably a pay day. At best, in the company's view, there will be a minor improvement, probably two or three-tenths of one day. The company also disagrees with staff's estimate of a three-day improvement in the billing process, contending it is only two days.

We will adopt staff's adjustments to working cash, based on the reduced number of revenue lag days which it has estimated will occur. Staff's analysis of the billing process shows that if a meter is read on a Monday, the bills will be mailed on Wednesday and received on Thursday or Friday. This represents an improvement of three days compared to the 1980 working cash study. We are not persuaded by the company's contention that the customer payment period will be increased by three days. Since meters are read and bills are mailed throughout the month, we expect the average payment period to remain the same even though some individual customers will pay at longer intervals and others at shorter intervals.

General Office

General office expenses are incurred at the company's San Jose headquarters offices and a meter testing and repair facility in Stockton. General office functions include accounting, administration, engineering, and water quality testing and monitoring. Expenses and rate base items associated with the general office operations are allocated to each of CWS's 21 districts based on the percentage of total company operations that the district represents. The allocation factor for each district is the average of the district's percentage of utility plant, payroll, customers, and operations & maintenance expenses. General office items which are in contention are discussed below.

Outside Services Expenses

This expense category includes the cost of professional services such as outside legal fees and auditing charges. It is one of several expense categories where applicant and staff disagree on the appropriate methodology to be used in estimating future test year expenses. Staff used five years of recorded numbers (1983 to 1987) and adjusted them for inflation to 1987 constant dollar values. The average of the constant dollar values was then used as the base upon which inflation-adjusted projections were made for 1988 and for test years 1989 and 1990. The adjustments were made using inflation data recommended by the Advisory Branch of CACD. Applicant used the least squares method, a standard statistical technique which develops a trend line representing the "best fit" with recorded data. CWS used ten to twelve years of historical data.

CWS concedes that the staff's method is valid for some expense categories, but contends that in other cases it fails to reflect increasing trends in expenses that inflation alone cannot explain. We agree, but we also note that using the least square method without making inflation adjustments could result in erroneous estimates to the extent that inflation rates have changed over time. Both methods can be useful, but both should be used with due consideration to the facts pertaining to a particular account. Where it is clear that there is a trend of increasing expenses which cannot be explained by inflation alone, and that such increases are necessarily incurred in providing utility service, less weight should be given to the constant dollar averaging method. On the other hand, where it appears that an expense category is subject to year-to-year variations, constant dollar averaging may be a more appropriate method to smooth out such variations.

The recorded outside service expenses for the last five years are shown below:

General Office
Outside Services Expenses
 (Dollars in Thousands)

1983	\$150.1
1984	135.7
1985	144.9
1986	191.0
1987	231.8

Staff characterizes the 1987 expense as extraordinarily high. Applicant on the other hand asserts it is indicative of an upward trend for this account. Absent an explanation of why there is such a dramatic increase in this account, and why increases are expected to continue into the test period, we are left with the strong possibility that staff's characterization is correct. The nature of outside legal and auditing services lends support to this view. We would expect to see year-to-year variations, and we note that this account declined by nearly 10% in 1984. We do not have a sufficient basis for concluding that there is an upward trend. We note further that staff's method does not disregard the high expense level in 1987, it merely gives it equal weight with the other four years, after accounting for past and future inflation. We conclude that for this account, staff's method is proper.

CWS criticizes staff's use of nonlabor inflation adjustment factors for this account, claiming that legal and auditing services are labor intensive. However, it does not necessarily follow that inflationary trends in legal fees and auditing fees are more closely aligned with wage inflation than with nonlabor inflation. Moreover, any differences that might result from using the labor instead of nonlabor inflation series would be insignificant compared to those resulting from the different methods used by CWS and staff. Also, although CWS claims that using nonlabor factors understates the expense estimates, the record shows that for 1988, 1989, and 1990, the nonlabor inflation factors used by staff were greater than the labor factors.

Finally, CWS criticizes staff's inflation factors because they were furnished to the Water Utilities Branch by the Advisory Branch in a memorandum which indicates the factors are for use in small water company rate requests. It is clear that the staff of the Water Utilities Branch has determined that the factors are appropriate for use in large water utility proceedings as well. We have no reason to conclude otherwise. Staff's estimates for this account of \$191,900 in test year 1989 and \$201,500 in test year 1990 are adopted.

Pension and Benefit Expenses

Applicant and staff do not agree on test year expenses for the company's contributions to its retirement savings and pension plans. The disagreement is due to staff's use of nonlabor inflation factors and the company's use of labor-related inflation factors which the parties agree upon for the purpose of estimating payroll expenses.

Since the company's testimony shows that the retirement savings and pension expenses can be expected to vary directly with payroll expenses, it is appropriate to use the same inflation factors for both categories. Staff agrees with CWS on payroll expenses, and we will; therefore, adopt the company's estimates as shown below:

General Office
Pension and Benefits Expenses
(Dollars in Thousands)

Retirement Savings Plan:

1989	\$ 526.5
1990	\$ 557.0

Retirement Plan:

1989	\$1,911.0
1990	\$2,021.8

Plant Retirements

Staff estimated general office plant retirements by using recorded figures for plant additions and retirements from 1983 to 1987. Based on the five year totals, staff found that retirements averaged 36.4% of plant additions. Staff acknowledges that there was an unusually large retirement of \$288,900 in 1986 associated with the replacement of a mainframe computer. The related addition was a relatively small \$96,300. With the year 1986 excluded, the resulting four year average retirement factor was approximately 26%. Observing that retirements were generally between 20% and 30% of additions, and also that larger amounts do occur on occasion, staff believes that a 32% retirement factor is reasonable.

CWS contends that the 1986 mainframe retirement is abnormally large and should therefore be excluded from the historical average. Using the same five years of data as staff, and excluding both the additions and the retirements associated with the 1986 mainframe replacement (but including the remaining 1986 data), the company developed a retirement factor of 26.3%. Based on this factor, and on itemized adjustments known to be associated with the addition of a central processing unit in 1989, CWS estimates that retirements will be \$129,200 in 1988, \$248,200 in 1989, and \$144,200 in 1990.

Where it is clear that retirements generally average 20% to 30%, it is reasonable to characterize the mainframe computer retirement, which is 300% of the associated addition, as abnormal. We are persuaded that the 1986 mainframe retirement should be excluded as recommended by applicant. Staff in effect acknowledged that it should be at least partially excluded by its decision to use 32% instead of the five year average of 36.4%. The 20 to 30% range which staff agrees is generally applicable does not include its own recommendation. The company's estimates will be adopted, with a minor adjustment to incorporate an agreement reached by the

parties on the timing of a \$16,000 addition for storage of gas cylinders in 1989.

Dixon District

Other Operation Expenses

Other Operation Expenses include such items as oil and grease for pumps, charts, telephone lease lines for controlling pumps, interoffice courier services, janitorial and gardening services, and miscellaneous tools and supplies. Disagreement on the estimates of these expenses stems from the same methodological differences that arose over general office outside service expenses. We will not repeat our analysis of these differences here. The recorded numbers for this account are shown below:

Dixon District
Other Operation Expenses
(Dollars in Thousands)

1983	\$13.3
1984	12.4
1985	12.8
1986	15.6
1987	18.0

At issue is whether the increases in 1986 and 1987 represent an increasing trend which can be expected to continue throughout the test period. The company contends there is a definite increasing trend. Staff believes the 1987 expense is abnormally high and is therefore given too much weight when the least squares method is used. We agree with staff, finding insufficient basis to conclude that there is an increasing trend as projected by applicant.

In response to the company's criticism that it did not account for growth in the number of customers, which could explain, at least in part, CWS's higher projections, staff showed that growth in the Dixon District has had little or no bearing on the estimates for this account. Staff also showed there was a significant amount of variation in the numbers, which supports its

decision to use constant dollar averaging. Staff's method fully takes into account the effect of past and future inflation and is reasonable for ratemaking purposes. We concur with staff's estimates of \$16,200 in 1989 and \$17,000 in 1990.

Plant Additions

Staff recommends disallowance of two budgeted plant additions and a reduced allowance for a third budgeted addition in the Dixon District:

1. Field Yard Paving: \$4,200 in test year 1989 and \$4,200 in test year 1990.
2. Alley Main Replacement: \$17,200 in test year 1989.
3. Tool Shed: \$7,500 in test year 1990.
Staff recommends a reduced allowance of \$1,100.

CWS is in the middle of a three-phase project to to pave the Dixon field yard. The first phase was completed in 1988. CWS's testimony shows that during the rainy season the yard becomes a muddy mess, and mud is tracked throughout the facility and onto city streets by pedestrians and service trucks. Truck tires create problems with ruts, and the danger of a pedestrian slipping and sustaining an injury increases. Staff acknowledges that paving might be convenient, but contends it is not essential. We will allow the paving expenditures since the increased convenience should be translated into reduced costs for cleaning vehicles and facilities and for repairing ruts. At the same time the danger of injury will be reduced.

The alley main replacement is proposed to remedy shallow installation of a main serving eight commercial establishments in Dixon. The main is only 24" deep, and services which come off the top of the main are only 12" below the surface. Traffic from trucks making deliveries in the alley is damaging to the services, and the company has experienced leak problems in past years. Staff

believes the replacement is unnecessary because no new customers will be added, fire protection is adequate, it is unrelated to the utility's main replacement program, and the cost of the return on the new main in rate base would exceed the cost of periodically flushing the existing main. Since applicant's objective is to eliminate the potential for leaks and the cost of repairing them, we find staff's reasons for disallowance unconvincing, and will allow the replacement.

The company proposes to build a concrete block wall building for tool storage in the Dixon yard. Staff believes that a 14' by 23' tool shed costing \$1,100 (installed) is adequate. The shed will be used for garden tools, hand tools, gasoline, and pesticides. The company's higher cost facility is stated to be necessary to deter theft and vandalism. We are not convinced that any additional protection gained from a more permanent building warrants the additional cost involved, particularly in view of the type of property which will be stored. We conclude that staff's recommended expenditure is adequate.

Hermosa-Redondo District

Plant Additions

The utility has agreed to staff's recommendation to disallow field yard paving in the Hermosa-Redondo District, but differences remain over a planned expansion of the field office and the estimated amounts of nonspecific plant additions.

CWS has determined that it requires more storage capacity for materials and supplies at the Hermosa-Redondo field office. Expansion of an existing office building to make room for more storage is proposed. Staff recommends that we disallow the estimated cost of \$70,000 for 1989, asserting that with proper organization, existing buildings are adequate for storage needs. In addition to the main office building where most indoor materials and supplies are stored, staff believes that the utility could make better use of a pump building and a third storage building.

We are satisfied with the company's explanation that the pump building is unavailable because it is reserved for use by a traveling meter mechanic, and that the nonreinforced masonry storage building, used only for housing a noncritical backup pump and storing seldom-used materials, is inappropriate for day-to-day storage needs because of a potential earthquake hazard. Also, the proposed expansion will enable the storekeeper to maintain better control of inventories by keeping all stores in a single location. Finally, we are persuaded that an increase in the number of services and meters in this district caused by customer growth has contributed to the need for additional storage. Real estate has become very expensive in the Hermosa Beach and Redondo Beach areas, and a number of small two-bedroom beach cottages are being replaced with higher density housing. We conclude that the expansion is necessary, and will therefore adopt the proposed addition.

Nonspecific plant additions represent construction budget expenditures that are normally made each year, but cannot be specifically identified or located at the time budgets are established. Examples of the types of items included are services, meters, mains, and pumps. For the last five years, services and meters accounted for 80% to 85% of the total expenditures in this account.

Applicant's estimates of \$514,600 in 1988, \$540,000 in 1989, and 567,700 in 1990 exceed staff's estimates by \$41,000, \$41,300, and \$42,700, respectively. In developing its projections for this account, staff used the same five-year constant-dollar averaging method that it used for estimating expenses. The company used a similar method, but limited its analysis to recorded figures for 1985, 1986 and part of 1987. We find in this case that the company's explanation for an increasing trend of expenditures is convincing. The trend is a direct result of the growth resulting from the conversion to higher density housing in the community. It

is, therefore, appropriate to base the estimates on more recent data. The company's estimates are adopted.

Gain on Sale of Station 12-01

Staff believes the Commission has consistently treated gains from the sale and transfer of utility property as a benefit to ratepayers, and therefore recommends that gains from the planned sale of Station 12-01 in the Hermosa-Redondo District be flowed through to ratepayers in the next general rate increase. CWS states that the recommendation is premature, since the treatment of gains has been deferred in several interim orders authorizing the sale or transfer of utility property. The company recommends that we remain silent on the issue at this time. Since the question of treatment of gains has not been fully resolved, we will adopt that recommendation for this proceeding, but also provide for recording of any gains in the appropriate accounts. We place the company on notice that staff's recommended treatment of gains may be a proper issue in future rate cases.

King City District-Auxiliary Generator

Staff recommends disallowance of CWS's planned 1990 addition of \$48,000 for an auxiliary generator at Station 6 in the King City District. According to staff's testimony, the well at Station 6 has a mobile generator as a secondary source of power, and by 1989 the other wells in the district will have a secondary source of power, making the proposed new generator unnecessary.

The company notes that although there are six wells in the system, excess nitrates in the water produced by the two wells at Station 1 require that it be mixed with water from Station 6 in order to meet water quality standards. Thus, Station 1 cannot operate if Station 6 is unavailable. A third well with nitrate contamination can only be used for emergencies such as a fire. The remaining two wells at Station 2 are insufficient to meet system demand.

CWS prepared an analysis of the backup capacity in the King City District in the event of a system power outage. It shows that for an average summer day, without a generator at Station 6, the system backup production capability of 1,175 gallons per minute (GPM) is inadequate to meet the daily average system demand of 1,183 GPM and the peak hour demand of 1,825 GPM. Deficiencies are substantially greater on a peak summer day, but the company believes that prudent planning only requires backup capacity for an average day.

It is apparent that existing backup capacity in the King City District is inadequate without a generator at Station 6. Staff acknowledges that the system could lose pressure in as little as two hours. Its recommendation appears to rely on continued availability of the mobile generator at Station 6. However, this generator was only temporarily brought to King City from the Bear Gulch District when the nitrate problem was discovered. There is little likelihood the nitrate problem will go away, and the company understandably plans to return the mobile unit to the Bear Gulch District to be made available as a standby resource for all of the company's districts. We agree it is appropriate for it to do so, and will adopt this plant addition for 1990.

Marysville District-Other Operation Expenses

Differences on the estimates of Other Operation Expenses for the Marysville District involve the same issues and arguments and essentially the same facts discussed in connection with the same account in the Dixon District. The recorded numbers are shown below:

Marysville District
Other Operation Expenses
(Dollars in Thousands)

1983	\$13.9
1984	14.9
1985	14.8
1986	16.2
1987	18.2

Again at issue is whether the increases in 1986 and 1987 represent an increasing trend which can be expected to continue throughout the test period. We agree with staff that a trend such as that projected by applicant has not been demonstrated. Staff showed that growth in the Marysville District has had little or no bearing on expenditures in this account. Its method fully takes into account the effect of past and future inflation and is reasonable for ratemaking purposes. We will adopt staff's estimates of \$17,500 in 1989 and \$18,400 in 1990.

Willows District-Auxiliary Generator

Staff recommends exclusion of a 1988 plant addition of \$42,000 for an auxiliary generator at Station 8-01 in the Willows District. According to staff, in the event of a power failure, system backup capacity without the addition is 1,825 GPM. This is sufficient to handle the highest monthly average production experienced between October 1986 and September 1987, and more than sufficient to handle the highest average yearly production experienced in the past 13 years. Although there would be a deficiency if production requirements were as high as those experienced on peak demand days, staff notes that in the event of a power failure, consumers would not use washing machines and dishwashers, and most of them would not take showers and baths in the dark. Staff believes that backup capacity is adequate without the addition.

CWS also made an analysis of the Willows District backup capacity with no auxiliary generator at Station 8-01. It shows that based on the demand experienced on two average summer days in August of 1987, the system backup production capability of 1,825 GPM is sufficient to meet the daily average system demand of 1,706 to 1,769 GPM, but insufficient to meet the peak hour demand of 2,275 to 2,505 GPM. Deficiencies are substantially greater on a peak summer day, but the company believes that prudent planning only requires backup capacity for an average day. Reviewing the

company's analysis, the staff witness calculated that in the event of a power outage, it would take two to three hours to drain the system tank assuming it is filled to 80% of capacity at the time of outage, based on the peak hour production on the two average summer days.

We conclude that existing backup capacity in the Willows District is adequate without a generator at Station 8-01. The situation in Willows is not the same as the one the company faces in King City, where we determined a similar addition is warranted. The company's operating flexibility is not limited by the same water quality considerations as in King City. More significantly, backup capacity in Willows is adequate to meet the daily average production requirements on average summer days. Although there could be a deficiency based on peak hour requirements experienced in the past, the level and duration of peak demand should be diminished in the event of a power failure. Also, as staff calculated, there is up to an additional hour of cushion before the system loses pressure compared to the King City District. CWS did not show that the peak hour demand which can reasonably be expected to occur during a power failure warrants the additional capacity. Staff's recommendation to disallow this addition is adopted.

Rate Design

CWS indicates that its rate proposals for the five districts were prepared in accordance with the water rate design policy guidelines we adopted in D.86-05-064. The guidelines generally provide for a flatter rate design, and include the following:

1. Service charges shall be set to allow utilities to recover up to 50% of their fixed cost.
2. Lifeline rate shall be phased out.

The company proposes phasing out lifeline rates over a period of two years. For the Dixon, Hermosa-Redondo, and King City

Districts, all of the revenue increases would be from increases in the service charges. For the Marysville and Willows districts, where the majority of customers receive service under the flat rate schedules, the same overall percentage of increase would be applied to residential flat rates and general metered service rates.

Staff concurs with CWS's proposed application of the guidelines, but also proposes that they be implemented in such a manner that customer bills will not be increased by more than twice the overall percentage increase. In response to the company's concern that this limit could pose difficulties if customers who use little or no water in a billing period are included, the staff witness indicated that the limit should be considered as a guideline for customers with average consumption, not an absolute standard for all customers. The adopted rates are in conformance with applicants's and staff's proposals, which we find to be reasonable.

Attrition Allowance

The parties agree that an attrition adjustment to revenue should be authorized for 1991. The revenue adjustment is calculated by multiplying operational attrition times the adopted rate base in 1990 times the net-to-gross multiplier. Operational attrition is the change in rate of return from 1989 to 1990 assuming no change in rates in 1990. The adopted allowance for each district is shown in the following table:

ATTRITION RATE

<u>District</u>	<u>Operational</u>	<u>Financial</u>	<u>Total</u>	<u>Dollars</u>
Dixon	0.66%	0.0%	0.66%	\$ 18,000
Hermosa-Redondo	0.93	0.0	0.93	223,400
King City	0.96	0.0	0.96	19,200
Marysville	1.14	0.0	1.14	38,700
Willows	0.91	0.0	0.91	19,800

Findings of Fact

1. On April 28, 1988 CWS filed applications requesting rate increases for its Dixon, Hermosa-Redondo, King City, Marysville, and Willows Districts which were designed to produce returns on rate base of 12.26% in 1989, 12.27% in 1990, and 12.28% in 1991, and a constant return on equity (ROE) of 13.75%.

2. After the applications were filed, CWS revised its requested rates of return on rate base of 12.17% in 1989, 12.19% in 1990, and 12.21% in 1991 to reflect revised estimates of long term debt costs.

3. Staff recommends that the adopted ROE be within a range from 11.75% to 12.25%, and further advocates that the low point of 11.75% be adopted.

4. A new bond issue of \$18 million in 1988 (CWS's Series BB) will carry an interest rate of 9.48% and, including issuance costs, an estimated effective cost of 9.60%.

5. Planned bond issues of \$3 million in 1989, and \$4 million each in 1990 and 1991 will have an estimated effective cost of 10.50%.

6. CWS's estimated long-term debt costs of 10.54% in 1989 and 10.55% in 1990 and 1991 are reasonable.

7. Staff's estimates of the effective dividend rates on preferred stock reflect the 1988 liquidation of all but Series C holdings. The estimated cost of 4.19% is based on more current information than CWS's higher cost estimate of 4.41%.

8. CWS's equity ratio has steadily increased in recent years, growing from 42.47% in 1983 to 55.10% in 1987.

9. In each of the past five years, CWS's equity ratio exceeded the group average of eleven comparable water utilities by a steadily growing margin. The five-year average equity ratio of CWS exceeded that of the group by 6.92%.

10. Growth in CWS's equity ratio has resulted because its cash flow has exceeded cash requirements.

11. The ratio of internal cash flow to net construction outlays, a measure of the ability to fund construction outlays with internal cash sources, rose from 68.28% in 1983 to 118.48% in 1987.

12. CWS's average dividend payout ratio from 1983 to 1987 was 60%, compared to an average of 66.72% for the group of eleven comparable water companies.

13. Cash flow resulting from the 1981 Tax Act allowed the company to forgo borrowing \$14,795,000 through December, 1987.

14. CWS earned its authorized rate of return on a company-wide basis in the years 1984 through 1987, and in all of the operating districts in 1984.

15. The payout rate of dividends on common stock averaged 60% in recent years, where 65% would have been paid out if the company had been better able to anticipate higher sales due to dry weather conditions.

16. The increased cash flow which resulted from these conditions has resulted in an improvement in its bond rating, and has provided funds which enabled the calling of high coupon bonds.

17. Redemption of Series Y and Z bonds, with interest rates of 13.00% and 16.25%, respectively, and subsequent issuance of Series BB bonds with an interest rate of 9.48%, resulted in a net annual interest savings of \$270,954.

18. In an optimal capital structure, the costs of different modes of financing will be appropriately balanced in accordance with the company's financial risk.

19. Although debt is generally less expensive than equity financing because interest payments on debt are usually cheaper than returns paid to company stockholders, and interest is tax deductible, it has the disadvantage of increasing financial risk, and the more leveraged a company becomes, the more expensive marginal debt issues become.

20. Lower cost financing affects the cost of new debt issues only, and CWS's planned bond issue of \$3 million in 1989 represents less than 5% of the company's total debt.

21. CWS already enjoys a high AA2 bond rating from Moody's and a similarly high rating of AA+ from Standard and Poor's, and there is no benefit in raising the equity ratio in order to improve the company's bond rating.

22. Utility stockholders lack the same incentive to maximize the use of debt that owners of firms in competitive markets have.

23. Staff's recommendation of a 53.00% equity ratio throughout the period from 1989 to 1991 is close to the level it expects the company to be at in 1989 following the \$18 million bond issue, and is consistent with a payout ratio of 66.7%, which approximates the eleven-company group average payout ratio.

24. The company's projection of a 55.00% equity ratio in 1991 is based on the assumption that the requested 13.75% ROE will be authorized.

25. Staff's recommended equity ratio of 53.00% is a more realistic indicator of the equity ratio which can be expected to occur because we are authorizing an ROE of 12.25%, which is 150 basis points less than that upon which CWS based its equity ratio projections.

26. Planned bond issues of \$29 million in the period from 1988 to 1991, a reduction in the sales levels which contributed to the low dividend payouts in recent years, and the effects of TRA-86 will gradually increase the debt ratio.

27. There are limits to a utility's ability to lower total capital costs by adding to equity capital and minimizing the amount and the cost of debt.

28. CWS has already benefited and will continue to benefit from high bond ratings from Standard and Poor's and Moody's, and it is unlikely that further increases in the equity ratio would result in any further improvement in the bond ratings, or that maintaining

the equity ratio at 53.00% would result in a downgrading of the ratings.

29. An increase in CWS's equity ratio would increase its total capital costs.

30. CWS's DCF analysis, which used the company's earnings and dividends growth from 1977 to 1987, indicates that the required ROE lies within a range from 13% (based on dividends) to 15.5% (based on earnings).

31. Using the DCF model, staff estimated the required equity return by analyzing the historical performance of eleven comparable water utilities. This analysis yielded an expected return on equity of 12.18%.

32. Use of Value Line's forecasts of dividend and earnings growth for American Water Works, United Water Service, and CWS resulted in ROE estimates of 11.04%, 14.76%, and 10.72%. These estimates are uniformly more conservative than the estimates of 17.80%, 15.44%, and 15.49%, which are based on historical performance.

33. Staff's criteria for selecting comparable water utilities includes a requirement that at least 70% of revenues be earned from water operations. This requirement results in the exclusion of companies with predominantly nonutility operations, yet allows a sample size of eleven. A higher revenue threshold would be desirable, but it would also reduce the sample size, and thereby make it less reliable.

34. If Philadelphia Suburban Co., Consumers Water, and United Water Resources are excluded from the group of water companies used by staff in its DCF analysis, the average for the remaining eight companies is 12.18%.

35. Inclusion of out-of-state utilities in staff's sample of comparable utilities reduces the problem of circularity in determining the returns required by equity investors.

36. Some investors may have come to expect continued high earnings from CWS, but lower returns which are more reflective of market conditions will not endanger CWS's ability to attract capital.

37. CWS's RP analysis, which compared the authorized ROE's and embedded debt costs of five energy and communication utilities and five water utilities, indicates the company is entitled to an ROE of 14.13%, based on comparisons with energy and communication utilities, or 13.54%, based on comparisons with water utilities.

38. For its RP analysis, staff computed the average recorded ROE of the eleven comparable water utilities for each of the years 1978 through 1987 based on each company's earnings/price ratio, and arrived at an ROE range of 11.33% to 11.66%.

39. Risk comparisons with energy and communications utilities are less valid than comparisons with other water utilities. Water utilities are not subject to the same competitive pressures that affect these other utilities.

40. CWS is not significantly affected by the existence of core, noncore, and interruptible customers as energy utilities are.

41. In its RP analysis, CWS relied on a relatively small and therefore less reliable sample of five such companies, compared to staff's group of eleven companies.

42. Any regulatory differences that may exist in other states are likely to have much less of an impact on risk premiums than the differences between water utilities and energy and communications utilities.

43. Embedded debt costs reflect the weighted costs of all of a firm's outstanding debt issues, and probably will not be the same as the cost of new issues at any point in time. Comparing embedded debt against current equity returns is therefore a less accurate method of ascertaining the premium demanded by investors than contemporaneous comparisons.

44. An RP analysis over a long period of time will correct for temporary swings in debt and equity markets that can otherwise render the analysis less reliable. CWS's comparison of embedded debt and equity returns adopted in 1987 is susceptible to such swings.

45. The risk premiums measured by staff are understated to the extent that stocks were selling above book value.

46. Based on the quantitative analyses of CWS and staff, 12.18% is the single most reliable indicator of the ROE which will be required by investors.

47. Value Line advised its readers in July, 1988 that CWS could be affected by below-normal precipitation and mandatory conservation measures.

48. Equity returns as high as the 14.50% ROE authorized prior to 1986 are no longer required, but recent indications of a rise in interest rates support an ROE as high, if not higher, than that measured through staff's DCF analysis.

49. On a company-wide basis, CWS renders good service, and goes out of its way to accommodate customers who have complaints about service or water quality, and the overall service provided in each district for which rate increases are requested is satisfactory.

50. An ROE of 12.25% will give recognition to the fact that CWS maintains good service standards and a high degree of customer satisfaction, and is a well-managed operation.

51. The resulting rate of return on rate base, incorporating this ROE, our adopted costs of long-term debt and preferred stock, and our adopted capital structure, is 11.33% for each of the three years subject to these applications.

52. These returns will result in pre-tax interest coverage of 3.32x in 1989, 1990, and 1991, which should serve to maintain CWS's favorable bond ratings.

53. Prior to enactment of the Tax Reform Act of 1986, CWS used the unbilled revenue method of accounting by which utilities recognized revenues as accrued when the customer's meter was read and a bill based on the meter reading was issued.

54. Utilities are now required to recognize revenues at the time that services or commodities are delivered.

55. For 1986 and earlier years, each year's revenue included approximately a half month's consumption from the previous year and likewise excluded a half month's consumption from the current year.

56. Beginning in 1987, each year's revenue reflects an estimate of actual consumption from January 1 to December 31.

57. TRA-86 requires CWS to pay a one-time tax on \$3.775 million in unbilled revenues recorded as of January 1, 1987. This amount represents the estimated revenue for water delivered in December 1986 after meters were read for the month, and is equivalent to 3.45% of the company's 1986 recorded revenue of \$109,523,000.

58. Any possible overcollection of taxes in rates which may be applicable is in all likelihood based on an amount equal to less than one-third of 1% of the company's revenue in any year.

59. The statistical data used to develop test year revenue estimates is based on actual consumption data from meter readings; adjustments have never been made to reflect estimates of unbilled revenues.

60. By petition filed jointly with San Jose Water Company on November 2, 1988, CWS has requested modification of D.88-01-061 to clarify the conditions that would allow a utility to provide for recovery of the one-time tax on unbilled revenues in its rates.

61. I.86-11-019 was established specifically to consider tax issues such as this one, and the issue is now before us in that investigation as a result of CWS's joint petition for modification.

62. CWS has recently decided to stop installing asbestos cement (AC) pipe for mains and to use ductile iron (DI) pipe instead.

63. Anticipated environmental and occupational safety regulations may prohibit the manufacture of AC pipe in the not too distant future.

64. At the time of the August hearings, CWS was experiencing delays in the delivery of AC pipe of four to six weeks. Some diameters of pipe, such as 12" pipe, required up to eight weeks or longer for delivery. At the time of the November hearings CWS was experiencing average delays of six to eight weeks for delivery of AC pipe, and in some cases as much as 12 weeks.

65. DI pipe is delivered in less than a week, and commonly within two days.

66. There are no known dangers associated with the use of AC pipe for water delivery.

67. Applicant has experienced problems with news media coverage due to its use of AC pipe, and the City of Hermosa Beach has objected to its installation in that city.

68. Installation contractors are encountering increasing problems with safety regulations governing AC pipe.

69. DI pipe has been in extensive use throughout the nation and California for years. It is used by Contra Costa Water District, San Francisco Water District, and San Jose Water Company.

70. Company management considered the change to DI pipe necessary despite cost considerations, not because of them.

71. The expenses relating to use of ductile iron pipe are relatively minor, and it is reasonable to allow the costs for ratemaking even though there is no indication of a direct and immediate financial benefit to ratepayers.

72. Staff adjusted revenue lag day estimates from the utility's 1980 working cash study by adding one lag day to compensate the utility for a delay in bank crediting of revenues,

and by subtracting three lag days to reflect a more efficient billing process.

73. Staff calculated that a new electronic meter reading system has reduced the time from the date the meter is read to the date the customer receives the bill by three days.

74. Meters are read and bills are mailed throughout the month.

75. The constant dollar averaging method used by staff to estimate test year expenses may, in some cases, fail to reflect an increasing trend in expenses.

76. Use of the the least square method without making inflation adjustments could result in erroneous estimates where inflation rates have changed over time.

77. There is a strong possibility that the increase in General Office Outside Services Expenses in 1987 does not indicate an upward trend.

78. The constant dollar averaging method does not disregard the high expense level in 1987, but merely gives it equal weight with the other four years, after accounting for past and future inflation.

79. Any differences that might result from using the labor instead of nonlabor inflation series for General Office Outside Services Expenses would be insignificant compared to those resulting from the different methods used by CWS and staff.

80. For 1988, 1989, and 1990, the nonlabor inflation factors used by staff were greater than the labor factors.

81. The Water Utilities Branch has determined that the inflation factors furnished by the Advisory Branch are appropriate for use in large water utility proceedings.

82. Disagreement on General Office pension and benefit expenses is due to staff's use of nonlabor inflation factors and the company's use of labor-related inflation factors.

83. The parties agree on the company's labor-related inflation factors for the purpose of estimating payroll expenses.

84. Retirement savings and pension expenses can be expected to vary directly with payroll expenses

85. From 1983 to 1987, General Office retirements averaged 36.4% of plant additions.

86. There was an unusually large retirement of \$288,900 in 1986 associated with the replacement of a mainframe computer. The related addition was a relatively small \$96,300.

87. With the year 1986 excluded, the resulting four year average retirement factor was approximately 26%.

88. Using the same five years of data as staff, and excluding both the additions and the retirements associated with the 1986 mainframe replacement (but including the remaining 1986 data), the company developed a retirement factor of 26.3%.

89. Where it is clear that retirements generally average 20% to 30%, it is reasonable to characterize the mainframe computer retirement, which is 300% of the associated addition, as abnormal.

90. The 20 to 30% range for retirements does not include staff's recommendation of 32%.

91. Other Operation Expenses include such items as oil and grease for pumps, charts, telephone lease lines for controlling pumps, interoffice courier services, janitorial and gardening services, and miscellaneous tools and supplies.

92. The 1987 Other Operations expense in the Dixon District is abnormally high and is therefore given too much weight when the least squares method is used.

93. Growth in the Dixon District has had little or no bearing on the Other Operations expenses.

94. There was a significant amount of variation in the recorded Other Operations Expenses in the Dixon District.

95. The constant dollar averaging method fully takes into account the effect of past and future inflation and is reasonable for ratemaking purposes.

96. During the rainy season the Dixon field yard becomes a muddy mess, and mud is tracked throughout the facility and on city streets by pedestrians and service trucks. Truck tires create problems with ruts, and the danger of a pedestrian slipping and sustaining an injury increases.

97. The increased convenience from paving the Dixon field yard should be translated into reduced costs for cleaning vehicles and facilities and for repairing ruts, and at the same time the danger of injury will be reduced.

98. The alley main replacement is proposed to remedy shallow installation of a main serving eight commercial establishments in Dixon.

99. The Dixon alley main is 24" deep, and services which come off the top of the main are only 12" below the surface. Traffic from trucks making deliveries in the alley is damaging to the services, and the company has experienced leak problems in past years.

100. Applicant's objective in replacing the Dixon alley main is to eliminate the potential for leaks and the cost of repairing them.

101. CWS proposes to build a concrete block wall building in the Dixon yard to store garden tools, hand tools, gasoline, and pesticides.

102. A tool shed costing \$1,100 is adequate for the storage requirements in the Dixon yard. Any additional protection from theft and vandalism gained by a more permanent building will be outweighed by the additional cost involved, particularly in view of the type of property which will be stored.

103. CWS has determined that it requires more storage capacity for materials and supplies at the Hermosa-Redondo field office.

104. The pump building at the Hermosa-Redondo field office is unavailable because it is reserved for use by a traveling meter mechanic, and the nonreinforced masonry storage building is inappropriate for day-to-day storage needs because of a potential earthquake hazard. Also, the proposed expansion will enable the storekeeper to maintain better control of inventories by keeping all stores in a single location.

105. An increase in the number of services and meters in the Hermosa-Redondo District caused by customer growth has contributed to the need for additional storage.

106. For the last five years, services and meters accounted for 80% to 85% of the total expenditures on nonspecific plant additions in the Hermosa-Redondo District. The increasing trend of expenditures in this account is a direct result of the growth resulting from the conversion to higher density housing in the community.

107. The issue of ratemaking treatment of gains from the sale and transfer of utility property has been deferred in several interim orders authorizing the sale or transfer of utility property, but it is appropriate to require that applicant record any gain on the sale and transfer of Hermosa-Redondo Station 12-01.

108. Excess nitrates in the water produced by the two wells at Station 1 in the King City District require that it be mixed with water from Station 6 in order to meet water quality standards.

109. Station 1 cannot operate if Station 6 is unavailable, and the remaining two wells at Station 2 are insufficient to meet system demand.

110. In the event of a system power outage in the King City District on an average summer day, without a generator at Station 6, the system backup production capability of 1,175 gallons per minute (GPM) is inadequate to meet the daily average system demand of 1,183 GPM and the peak hour demand of 1,825 GPM. The system could lose pressure in as little as two hours.

111. The mobile generator at Station 6 was only temporarily brought to King City from the Bear Gulch District when the nitrate problem was discovered.

112. There is little likelihood the nitrate problem will go away, and CWS plans to return the mobile unit to the Bear Gulch District to be made available as a standby resource for all of the company's districts.

113. Increases in Other Operations Expenses for the Marysville District in 1986 and 1987 do not represent an increasing trend which can be expected to continue throughout the test period.

114. Growth in the Marysville District has had little or no bearing on expenditures in this account.

115. In the event of a power failure in the Willows District, existing system backup capacity is 1,825 GPM, which is adequate to handle the highest monthly average production experienced between October 1986 and September 1987, and more than adequate to handle the highest average yearly production experienced in the past 13 years.

116. Based on the demand experienced on two average summer days in August of 1987, the system backup production capability of 1,825 GPM is sufficient to meet the daily average system demand of 1,706 to 1,769 GPM, but insufficient to meet the peak hour demand of 2,275 to 2,505 GPM.

117. In the event of a power outage, it would take two to three hours to drain the system tank assuming it is filled to 80% of capacity at the time of outage, based on the peak hour production on two average summer days.

118. Although there could be a deficiency based on peak hour requirements experienced in the past, the level and duration of peak demand should be diminished in the event of a power failure.

119. Existing backup capacity in the Willows District is adequate to meet the daily average production requirements on average summer days without a generator at Station 8-01.

120. The rate proposals for the five districts were prepared in accordance with the water rate design policy guidelines we adopted in D.86-05-064.

121. CWS proposes phasing out lifeline rates over a period of two years.

122. Staff proposes a guideline that bills of customers with average consumption not be increased by more than twice the overall percentage increase.

123. Operational attrition is the change in rate of return from 1989 to 1990 assuming no change in rates in 1990.

124. The amounts of operating revenues, operating expenses, and rate base, as well as each element thereof, shown on Tables 1 through 5, "At Authorized Rates," represent a fair and reasonable determination of the revenue requirement for test years 1989 and 1990.

125. CWS requires additional revenues for each of the five districts, but the rates proposed would produce an excessive rate of return.

126. The increases in annual revenue required to produce the adopted rates of return are as follows:

<u>District</u>	<u>1989</u>		<u>1990</u>		<u>1991</u>	
	<u>Amount</u>	<u>Percent</u>	<u>Amount</u>	<u>Percent</u>	<u>Amount</u>	<u>Percent</u>
Dixon	\$ 3,400	0.53%	\$ 18,300	2.83%	\$ 18,000	2.71%
Hermosa-Redondo	4,500	0.05	217,600	2.66	223,400	2.65
King City	17,800	3.65	16,100	3.12	19,200	3.60
Marysville	5,600	0.64	39,100	3.90	38,700	4.26
Willows	900	0.14	20,100	2.98	19,800	3.05

127. The increases in rates and charges authorized in this decision are justified; the rates and charges authorized in this decision are just and reasonable; and the present rates and charges, insofar as they are different from those prescribed in this decision, are for the future unjust and unreasonable.

Conclusions of Law

1. An equity ratio of 53.00% is reasonable and should be adopted.
2. An ROE of 12.25% is reasonable and should be adopted.
3. The issue of whether CWS is entitled to recover the tax expense on unbilled revenue should be considered in future proceedings in the joint petition of CWS and San Jose Water Company for modification of D.88-01-061 in I.86-11-019.
4. Applicant's estimates of plant additions associated with the conversion to ductile iron pipe should be adopted.
5. The working cash allowance should be adjusted to reflect a three day reduction in revenue lag days due to implementation of a new billing system.
6. The estimates of General Office Outside Service expenses of \$191,900 in 1989 and \$201,500 in 1990 are reasonable and should be adopted.
7. The estimates of General Office Pension and Benefit expenses of \$526,500 in 1989 and \$557,000 in 1990 for the retirement savings plan and \$1,911,000 in 1989 and \$2,021,800 in 1990 for the retirement plan are reasonable and should be adopted.
8. General Office plant retirements should be computed using a retirement factor of 26.3%.
9. The Other Operation Expenses estimates of \$16,200 in 1989 and \$17,000 in 1990 in the Dixon District, and \$17,500 in 1989 and \$18,400 in 1990 in the Marysville District are reasonable and should be adopted.
10. Applicant's estimates of plant additions for field yard paving and an alley main replacement in the Dixon District, office expansion and nonspecific plant additions in the Hermosa Redondo District, and an auxiliary generator in the King City District should be adopted.
11. Staff's estimates of plant additions for a tool shed in the Dixon District should be adopted.

12. CWS should be directed to record any gain from the planned sale of Station 12-01 in an appropriate account.

13. CWS should be authorized to file the rates set forth in Appendixes A-1 through A-5 and the step rate increases set forth in Appendixes B-1 through B-5, as specified in the following order.

14. The application should be granted to the extent provided by the following order.

15. Because there is an immediate need for rate relief and the revenue projections were made for rates to be in effect for the beginning of January 1989, the order should be effective today.

O R D E R

IT IS ORDERED that:

1. California Water Service Company (CWS) is authorized to file the revised schedules attached as Appendixes A-1 through A-5, respectively, for its Dixon, Hermosa-Redondo, King City, Marysville, and Willows Districts. These filings shall comply with General Order Series 96 (GO 96). The effective date of the revised schedules shall be 5 days after the date of filing. The revised schedules shall apply only to service rendered on and after their effective date.

2. On or after November 5, 1989, CWS is authorized to file an advice letter for each of its Dixon, Hermosa-Redondo, King City, Marysville, and Willows Districts, with appropriate supporting workpapers, requesting the step rate increases for 1990 included in Appendixes B-1 through B-5, or to file lesser increases for any district, in the event that the rate of return on rate base for that district, adjusted to reflect the rates then in effect and normal ratemaking adjustments for the 12 months ending September 30, 1989, exceeds the later of (a) the rate of return found reasonable by the Commission for applicant for the corresponding period in the then most recent rate decision, or

(b) 11.33%. This filing shall comply with GO 96. The requested rates shall be reviewed by the staff to determine their conformity with this order and shall go into effect upon the staff's determination of conformity. Staff shall inform the Commission if it finds that the proposed rates are not in accord with this decision, and the Commission may then modify the increase. The effective date of the revised schedules shall be no earlier than January 1, 1990, or 40 days after filing, whichever is later. The revised schedules shall apply only to service rendered on and after their effective date.

3. On or after November 5, 1990, CWS is authorized to file an advice letter for each of its Dixon, Hermosa-Redondo, King City, Marysville, and Willows Districts, with appropriate supporting workpapers, requesting the step rate increases for 1991 included in Appendixes B-1 through B-5, or to file lesser increases for any district, in the event that the rate of return on rate base for that district, adjusted to reflect the rates then in effect and normal ratemaking adjustments for the 12 months ending September 30, 1990, exceeds the later of (a) the rate of return found reasonable by the Commission for applicant for the corresponding period in the then most recent rate decision, or (b) 11.33%. This filing shall comply with GO 96. The requested rates shall be reviewed by the staff to determine their conformity with this order and shall go into effect upon the staff's determination of conformity. Staff shall inform the Commission if it finds that the proposed rates are not in accord with this decision, and the Commission may then modify the increase. The effective date of the revised schedules shall be no earlier than January 1, 1991, or 40 days after filing, whichever is later. The revised schedules shall apply only to service rendered on and after their effective date.

4. Within 10 days of an actual transfer, CWS shall record any gain net of taxes from the sale and transfer of Hermosa-Redondo Station 12-01 in Account No. 242 - "Other Deferred Credits". The amount shall be subject to possible further order providing for transfer to Account No. 614 - "Other Water Revenues" and flow through to CWS's ratepayers in the next general rate proceeding.

This order is effective today.

Dated APR 12 1989, at San Francisco, California.

G. MITCHELL WILK
President
STANLEY W. HULETT
JOHN B. OHANIAN
PATRICIA M. ECKERT
Commissioners

Commissioner Frederick R. Duda
being necessarily absent, did
not participate.

I CERTIFY THAT THIS DECISION
WAS APPROVED BY THE ABOVE
COMMISSIONERS TODAY.

Victor Weisart
Victor Weisart, Executive Director

California Water Service Company
Dixon District

SCHEDULE NO. DX-1

GENERAL METERED SERVICE

Applicability

Applicable to all metered water service.

Territory

Dixon and vicinity, Solano County.

Rates

Service Charge:

Per Meter
Per Month*

For 5/8 x 3/4-inch meter.....	\$	5.90
For 1-inch meter.....		13.40
For 1 1/2-inch meter.....		20.90
For 2-inch meter.....		27.50
For 3-inch meter.....		44.00
For 4-inch meter.....		61.00
For 6-inch meter.....		102.00
For 8-inch meter.....		150.00
For 10-inch meter.....		184.00

Quantity Rates:

For the first 300 cu.ft., per 100 cu.ft.....	.435 I
For all over 300 cu.ft., per 100 cu.ft.....	.573

The Service Charge is a readiness-to-serve charge which is applicable to all metered service and to which is to be added the monthly charge computed at the Quantity Rates.

* All rates are subject to the reimbursement fee set forth on schedule No. UF.

Dixon District

Each of the following increases in rates may be put into effect on the indicated date by filing a rate schedule which adds the appropriate increase to the rate which would otherwise be in effect on that date.

Effective Dates
1-1-90 1-1-91

Schedule DX-1 General Metered Service

Service Charge:

Per Meter Per Month

For 5/8 x 3/4-inch meter.....	\$	.45	\$.50
For 1-inch meter.....		1.00	.85
For 1 1/2-inch meter.....		1.70	.95
For 2-inch meter.....		2.40	1.10
For 3-inch meter.....		3.00	2.00
For 4-inch meter.....		5.00	2.00
For 6-inch meter.....		9.00	3.00
For 8-inch meter.....		13.00	4.00
For 10-inch meter.....		16.00	4.00

Quantity Rates:

For the first 300 cu.ft., per 100 cu.ft	.001	.000
For all over 300 cu.ft., per 100 cu.ft	.000	.000

California Water Service Company
Dixon DistrictAdopted Quantities

PURCHASED POWER -----	1989 ----	1990 ----
PGE 5-88		
Well Stations		
Production: KCcf	752.3	759.5
Kwh per Ccf	950.0	950.0
Wells Kwh(1000)	714.7	721.6
Unit Cost \$/kwh	.09647	.09647
Energy Cost	\$68,942.1	\$69,605.1
 Total Power Cost	 \$68,900.0	 \$69,600.0

California Water Service Company
Dixon District

Adopted Quantities

Number of Service, Meter Size	1989	1990
-----	----	----
DX-1		
5/8 x 3/4	2115	2135
1	441	445
1 1/2	11	11
2	33	33
3	3	3
4	1	1
6	0	0
8	0	0
10	0	0
total	2604	2628
0 - 3 Ccf	92000	92900
Over 3	627300	633400
total	719300	726300

Number of Service	No. of Service		Usage-KCcf		Avg. Usage Ccf/Yr.	
	1989	1990	1989	1990	1989	1990
-----	----	----	----	----	----	----
Commercial	2576	2600	699.6	706.2	271.6	271.6
Industrial	4	4	.4	.4	100.0	100.0
Public Authority	24	24	18.8	19.2	783.3	783.3
Other	0	0	.5	.5		
subtotal	2604	2628	719.3	726.3		
Private Fire Prot.	14	14				
Total	2618	2642				
Water Loss: 4.38%			33.0	33.3		
Total Water Produced			752.3	759.5		

Dixon District

Utility Plant, Depreciation Reserve, and Rate Base

	1989	1990
	-----	-----
	(Thousands of Dollars)	
UTILITY PLANT		

Plant BOY	\$ 2,644.2	\$ 2722.8
Utility Add.	71.4	72.8
Advances	0	0
Contributions	.0	.0
Total Additions	92.8	77.0
Retirement	14.2	14.6
Plant EOY	2,722.8	2,785.2
Wgt.Plant @ 53.0%	41.7	33.0
Wgt.Avg. Plant	2,685.9	2,755.8
DEPRECIATION RESERVE		

Reserve BOY.	709.8	759.2
Contrib.	.8	.8
Depr Exp. (2.43%)	57.6	58.7
Clear.Chg.	4.3	4.8
Total Accrual	62.7	64.3
Retirement	13.3	13.6
Reserve EOY	759.2	809.9
Wgt.Accr.@ 49.9%	24.7	25.3
Wgt.Avg.Deprec.Reserve	734.5	784.6
RATE BASE		

Utility Plant	2,685.9	2,755.8
Material & Sup.	16.3	16.7
Work.Cash Allow.	19.5	20.4
Deprec Res.	-734.5	-784.6
Adv.Const.	-341.1	-296.2
Contrib.	-25.9	-25.1
G.O.Alloc.	24.5	26.7
Unamort.Defer.Taxes	-58.5	-69.2
Unamort. ITC	-25.5	-24.9
Avg RATE BASE	1,560.7	1,619.7

Dixon District

Income Tax Calculations

	1989	1990
	-----	-----
	(Thousands of Dollars)	
Total Revenues	\$ 638.9	\$ 663.1
Purch. Power	68.9	69.6
Payroll	120.0	126.0
OM Other	36.0	36.9
AG Other	11.3	11.3
Gen. Office Alloc.	81.8	85.4
Payroll Tax	9.5	9.9
Ad Valorem Taxes	18.1	18.4
Uncoll. .001719	1.1	1.1
Loc. Franch.	.1	.1
subtotal	346.8	358.7
Interest	79.1	82.5
Total Deductions	421.0	435.8
State Tax Deprec.	97.6	94.9
State Tax 9.3	11.2	12.3
Federal Tax Deprec.	70.0	69.0
Fed Tax 34%	46.5	49.6
Total Federal Taxes	46.5	49.6
Net/Gross	1.676433	

(End of APPENDIX C-1)

Dixon District

Comparison of typical bills for commercial metered customers of various usage level and average usage level at present and authorized rates for the year 1989.

General Metered Service (5/8 x 3/4) Inch Meters

: Monthly Usage:	At Present	:At Authorized :	Percent	:
: (Cubic Feet):	Rates	: Rates	: Increase	:
300	\$ 7.09	\$ 7.21	1.6 %	
500	8.24	8.35	1.3	
1,000	11.11	11.22	1.0	
2,000	16.84	16.95	.7	
2,250 (Avg.)	18.34	18.45	.6	
3,000	22.57	22.68	.5	
5,000	34.03	34.14	.3	
10,000	62.68	62.79	.2	

California Water Service Company
Hermosa-Redondo District

SCHEDULE NO. HR-1

GENERAL METERED SERVICE

Applicability

Applicable to all metered water service.

Territory

Hermosa Beach, Redondo Beach, Torrance, and vicinity,
Los Angeles County.

Rates

Service Charge:

Per Meter
Per Month*

For 5/8 x 3/4-inch meter.....	\$	4.25
For 1-inch meter.....		10.60
For 1 1/2-inch meter.....		14.90
For 2-inch meter.....		21.00
For 3-inch meter.....		34.00
For 4-inch meter.....		52.00
For 6-inch meter.....		81.00
For 8-inch meter.....		120.00
For 10-inch meter.....		149.00

Quantity Rates:

For the first 300 cu.ft., per 100 cu.ft.....	.809 I
For all over 300 cu.ft., per 100 cu.ft.....	.979

The Service Charge is a readiness-to-serve charge which is applicable to all metered service and to which is to be added the monthly charge computed at the Quantity Rates.

* All rates are subject to the reimbursement fee set forth on schedule No. UF.

Hermosa-Redondo District

Each of the following increases in rates may be put into effect on the indicated date by filing a rate schedule which adds the appropriate increase to the rate which would otherwise be in effect on that date.

Effective Dates
1-1-90 1-1-91

Schedule HR-1 General Metered ServiceService Charge:Per Meter Per Month

For 5/8 x 3/4-inch meter.....	\$.45	\$.15
For 1-inch meter.....	1.30	.60
For 1 1/2-inch meter.....	1.80	.80
For 2-inch meter.....	3.00	1.00
For 3-inch meter.....	4.00	2.00
For 4-inch meter.....	7.00	3.00
For 6-inch meter.....	10.00	5.00
For 8-inch meter.....	15.00	7.00
For 10-inch meter.....	19.00	8.00

Quantity Rates:

For the first 300 cu.ft.per 100 cu.ft.	.002	.168
For all over 300 cu.ft. per 100 cu.ft.	.000	.000

California Water Service Company
Hermosa-Redondo District

Adopted Quantities

PURCHASED POWER -----	1989 ----	1990 ----
SCE 6-88		
Well Stations		
Production: KCcf	7,017.1	7,063.7
Kwh per Ccf	368.39	368.39
Wells Kwh(1000)	2,585.0	2,602.2
Unit Cost \$/kwh	.08646	.08646
Energy Cost (\$1000)	\$223.5	\$225.0
 Purchased Water		
Purch.Water:KCcf	6,115.4	6,162.0
AF	14,039.1	14,146.0
Interrup.Water,AF	2,000.0	2,000.0
NonInterp.Water,AF	12,039.1	12,146.0
NonInt.Cost \$/AF	231.00	\$2,805.7
Inter.Cost \$/AF	187.00	\$374.0
P.V. 999AF	85.00	\$84.9
Standby FixChrg.		\$1.1
WBMWD credit,2000	80.00	\$160.0
 Total Purchased Water Cost (\$1000)	\$3,081.1	\$3,105.8
 Replen.Assm. (\$1000)	71.00	\$147.0
 Chemical Cost (\$1000)	\$3.4	\$3.4

California Water Service Company
Hermosa-Redondo District

Adopted Quantities

Number of Service, Meter Size	1989	1990
-----	-----	-----
HR-1		
5/8 x 3/4	18275	18415
1	3579	3605
1 1/2	1053	1062
2	779	785
3	83	84
4	28	28
6	10	10
8	6	6
10	0	0
total	23813	23995
0 - 3 Ccf	824500	830800
Over 3	5683200	5720100
total	6507700	6550900

Number of Service	No. of Service 1989	No. of Service 1990	Usage-KCcf 1989	Usage-KCcf 1990	Avg. Usage Ccf/Yr. 1989	Avg. Usage Ccf/Yr. 1990
	-----	-----	-----	-----	-----	-----
Commercial	23413	23594	5,588.7	5,631.9	238.7	238.7
Industrial	43	43	523.5	523.5	12174	12174
Public Authority	354	355	391.0	391.0	1,104.5	1,104.5
Other	3	3	4.5	4.5		
subtotal	23813	23995	6,507.7	6,550.9		
Private Fire Prot.	68	73				
Total	23881	24068				
Water Loss: 7.26%			509.4	512.8		
Total Water Produced			7,017.1	7,063.7		

Hermosa-Redondo District

Utility Plant, Depreciation Reserve, and Rate Base

	1989	1990
	-----	-----
	(Thousands of Dollars)	
UTILITY PLANT		

Plant BOY	\$ 20,979.3	\$ 22,253.8
Utility Add.	1,115.6	1,133.7
Advances	55.8	55.8
Contributions	100.9	100.9
Total Additions	1,383.6	1333.1
Retirement	109.2	102.1
Plant EOY	22,253.8	23,484.8
Wgt.Plant @ 51.0%	654.6	627.8
Wgt.Avg. Plant	21,633.9	22,881.6
DEPRECIATION RESERVE		

Reserve BOY	5,599.0	5,933.3
Contrib.	29.3	31.5
Depr Exp. (2.25%)	414.5	439.9
Clear.Chg.	18.6	19.4
Total Accrual	462.4	490.8
Retirement	128.1	123.5
Reserve EOY	5,933.3	6,300.6
Wgt.Accr.@ 58.2%	194.6	213.8
Wgt.Avg.Deprec.Reserve	5,793.6	6,146.5
RATE BASE		

Utility Plant	21,633.9	22,881.6
Work.Cash Allow.	-33.9	-28.8
Material & Sup.	129.5	132.8
Depreciation Reserve	-5,793.6	-6,146.5
Advances For Constr.	-534.9	-569.2
Contributions-in-Aid	-1,212.2	-1,282.9
Gen.Office Alloc.	223.2	242.0
Unamort.Defer.Taxes	-621.4	-736.2
Unamort-ITC	-219.8	-214.3
CIAC FTC	57.0	75.8
Capit.Items	31.4	40.3
Amortiz.Intang.	-74.7	-78.3
Avg RATE BASE	13,584.5	14,316.3

Hermosa-Redondo District

Income Tax Calculations

	1989	1990
	-----	-----
	(Thousands of Dollars)	
Total Revenues	\$ 8,153.3	\$ 8,429.5
Purch. Power	223.5	225.0
Purch. Water	3,081.1	3,105.8
Pump Tax	147.0	147.0
Purch. Chem	3.4	3.4
Payroll	782.5	821.6
OM Other	437.2	454.9
AG Other	49.5	50.9
Gen.Office Alloc.	746.2	780.0
Payroll Tax	61.3	65
Ad Valorem Taxes	142.7	150.0
Uncoll. .001305	10.6	11.0
Loc.Franch..00041	19.1	19.2
subtotal	5,704.2	5,833.8
Interest	703.9	745.8
Total Deductions	6,383.8	6,554.1
State Tax Deprec.	854.2	877.9
State Tax 9.3	85.1	92.8
Federal Tax Deprec.	477.5	489.8
Pre-StkDvCr.	4.3	4.3
Fed Tax 34%	410.3	439.7
Total Federal Taxes	410.3	439.7
Net/Gross	1.676426	

(End of APPENDIX C-2)

Hermosa-Redondo District

Comparison of typical bills for commercial metered customers of various usage level and average usage level at present and authorized rates for the year 1989.

General Metered Service (5/8 x 3/4) Inch Meters

: Monthly Usage:	At Present	:At Authorized :	Percent	:
: (Cubic Feet):	Rates	: Rates :	Increase	:
300	\$ 6.66	\$ 6.68	.3	%
500	8.62	8.64	.2	
1,000	13.51	13.53	.1	
2,000	23.20	23.21	.1	
2,250 (Avg.)	23.30	23.32	.1	
3,000	33.09	33.11	.1	
5,000	52.67	52.69	.0	
10,000	101.6	101.6	.0	

California Water Service Company
King City District

SCHEDULE NO. KC-1

GENERAL METERED SERVICE

Applicability

Applicable to all metered water service.

Territory

King City and vicinity, Monterey County.

Rates

Service Charge:

Per Meter
Per Month*

For 5/8 x 3/4-inch meter.....	\$	7.30	I
For 1-inch meter.....		12.00	:
For 1 1/2-inch meter.....		16.80	:
For 2-inch meter.....		21.40	:
For 3-inch meter.....		40.00	:
For 4-inch meter.....		52.00	:
For 6-inch meter.....		89.00	:
For 8-inch meter.....		132.00	:
For 10-inch meter.....		158.00	I

Quantity Rates:

For the first 300 cu.ft., per 100 cu.ft.....	.387
For all over 300 cu.ft., per 100 cu.ft.....	.593

The Service Charge is a readiness-to-serve charge which is applicable to all metered service and to which is to be added the monthly charge computed at the Quantity Rates.

Special Condition

Due to the overcollection in the balancing account a reduction of \$0.010 per Ccf of water usage is to be applied to the quantity rates to amortize the overcollection.

* All rates are subject to the reimbursement fee set forth on schedule No. UF.

King City District

Each of the following increases in rates may be put into effect on the indicated date by filing a rate schedule which adds the appropriate increase to the rate which would otherwise be in effect on that date.

Effective Dates
1-1-90 1-1-91

Schedule KC-1 General Metered Service

Service Charge:

Per Meter Per Month

For 5/8 x 3/4-inch meter.....	\$	.65	\$	.80
For 1-inch meter.....		1.10		1.30
For 1 1/2-inch meter.....		1.50		1.80
For 2-inch meter.....		1.90		2.40
For 3-inch meter.....		4.00		5.00
For 4-inch meter.....		5.00		6.00
For 6-inch meter.....		8.00		10.00
For 8-inch meter.....		12.00		14.00
For 10-inch meter.....		14.00		17.00

Quantity Rates:

For the first 300 cu.ft., per 100 cu.ft	.0000	.0000
For all over 300 cu.ft., per 100 cu.ft	.0000	.0000

California Water Service Company
King City DistrictAdopted Quantities

<u>PURCHASED POWER</u>	<u>1989</u>	<u>1990</u>
PGE 5-88		
Well Stations		
Production: KCcf	646.0	653.4
Kwh per Ccf	745.4	745.4
Wells Kwh(1000)	481.6	487.1
Unit Cost \$/kwh	.09680	.09680
Energy Cost	\$46,613.8	\$47,145.7
 Total Power Cost	 \$46,613.8	 \$47,145.7

California Water Service Company
King City District

Adopted Quantities

Number of Service, Meter Size	1989	1990
-----	----	----
KC-1		
5/8 x 3/4	1080	1093
1	282	286
1 1/2	40	40
2	64	65
3	10	10
4	7	7
6	1	1
8	1	1
10	0	0
total	1486	1504
0 - 3 Ccf	51000	51600
Over 3	524900	530900
total	575900	582500

Number of Service	No. of Service		Usage-KCcf		Avg. Usage Ccf/Yr.	
	1989	1990	1989	1990	1989	1990
	----	----	----	----	----	----
Commercial	1446	1464	495.8	502.0	342.9	342.9
Industrial	6	6	53.9	53.9	8986	8986
Public Authority	33	33	25.5	25.9	772.7	772.7
Other	1	1	.7	.7		
subtotal	1486	1504	575.9	582.5		
Private Fire Prot.	68	73				
Total	1554	1577				
Water Loss: 10.85%			70.1	70.9		
Total Water Produced			646.0	653.4		

King City District

Utility Plant, Depreciation Reserve, and Rate Base

	1989	1990
	-----	-----
	(Thousands of Dollars)	
UTILITY PLANT		

Plant BOY	\$ 2,073.9	\$ 2,160.5
Utility Add.	75.3	85.1
Advances	12.2	12.2
Contributions	16.2	16.2
Total Additions	103.7	113.5
Retirement	17.1	6.6
Plant EOY	2,160.5	2,267.4
Wgt.Plant @ 38.1%	42.2	52.1
Wgt.Avg. Plant	2,116.1	2,212.6
DEPRECIATION RESERVE		

Reserve BOY	535.6	567.5
Contrib.	3.4	3.7
Depr Exp. (1.92%)	40.2	41.6
Clear.Chg.	1.3	1.4
Total Accrual	44.9	46.7
Retirement	13.0	8.0
Reserve EOY	567.5	606.2
Wgt.Accr.@ 50%	19.0	23.1
Wgt.Avg.Deprec.Reserve	554.6	590.6
RATE BASE		

Utility Plant	2,116.1	2,212.6
Material & Sup.	11.9	12.0
Work.Cash Allow.	25.6	27.0
Depreciation Reserve	-554.6	-590.6
Advances For Constr.	-298.3	-299.3
Contributions-in-Aid	-149.8	-162.5
Gen.Office Alloc.	16.9	18.5
Unamort.Defer.Taxes	-63.7	-76.5
Unamort-ITC	-16.2	-15.8
CIAC FTC	7.6	10.7
Capit.Items	28.3	29.8
Avg RATE BASE	1,123.7	1,166.0

King City District
Income Tax Calculations

	1989	1990
	-----	-----
	(Thousands of Dollars)	
Total Revenues	\$ 506.8	\$ 528.8
Purch. Power	46.6	47.1
Payroll	102.8	107.9
OM Other	48.2	50.7
AG Other	12.7	12.9
Gen.Office Alloc.	56.8	59.4
Payroll Tax	8.2	8.7
Ad Valorem Taxes	13.2	13.9
Uncoll. .00418	.6	.7
Loc.Franch..00489	10.3	10.8
subtotal	299.5	312.0
Interest	57.2	59.9
Total Deductions	355.0	370.0
State Tax Deprec.	73.4	74.4
State Tax 9.3	7.3	7.8
Federal Tax Deprec.	48.7	47.7
Fed Tax 34%	32.6	35.1
Total Federal Taxes	32.6	35.1
Net/Gross	1.710523	

(End of APPENDIX C-3)

King City District

Comparison of typical bills for commercial metered customers of various usage level and average usage level at present and authorized rates for the year 1989.

General Metered Service (5/8 x 3/4) Inch Meters

: Monthly Usage:	At Present	:At Authorized :	Percent	:
: (Cubic Feet):	Rates	: Rates	Increase	:

300	\$ 7.71	\$ 8.46	9.7 %
500	8.90	9.65	8.4
1,000	11.86	12.61	6.3
2,000	17.79	18.54	4.2
2,860 (Avg.)	22.88	23.63	3.3
3,000	23.72	24.47	3.2
5,000	35.58	36.33	2.1
10,000	65.23	65.98	1.1

(End of Appendix D-3)

California Water Service Company
Marysville District

SCHEDULE NO. MR-1

GENERAL METERED SERVICE

Applicability

Applicable to all metered water service.

Territory

Marysville and vicinity, Yuba County.

Rates

Service Charge:

Per Meter
Per Month*

For	5/8 x 3/4-inch meter.....	\$	6.60
For	1-inch meter.....		12.60
For	1 1/2-inch meter.....		19.60
For	2-inch meter.....		24.50
For	3-inch meter.....		41.00
For	4-inch meter.....		58.00
For	6-inch meter.....		86.00
For	8-inch meter.....		154.00
For	10-inch meter.....		178.00

Quantity Rates:

For all water delivered, per 100 cu.ft..... .310 I

The Service Charge is a readiness-to-serve charge which is applicable to all metered service and to which is to be added the monthly charge computed at the Quantity Rates.

* All rates are subject to the reimbursement fee set forth on schedule No. UF.

 Marysville District

Each of the following increases in rates may be put into effect on the indicated date by filing a rate schedule which adds the appropriate increase to the rate which would otherwise be in effect on that date.

Effective Dates
 1-1-90 1-1-91

Schedule MR-1 General Metered Service

Service Charge:

Per Meter Per Month

For 5/8 x 3/4-inch meter.....	\$	.35	\$.30
For 1-inch meter.....		.60	.55
For 1 1/2-inch meter.....		.90	.80
For 2-inch meter.....		1.10	1.10
For 3-inch meter.....		2.00	2.00
For 4-inch meter.....		3.00	3.00
For 6-inch meter.....		4.00	4.00
For 8-inch meter.....		7.00	7.00
For 10-inch meter.....		8.00	8.00

Quantity Rates:

For all water delivered, per 100 cu.ft	.014	.012
--	------	------

Schedule MR-2R Residential Flat Rate Service

For a single-family residential unit,
 including premises having the following
 areas:

6,000 sq., or less .....	.63	.65
6,001 to 10,000 sq.ft.....	.77	.80
10,001 to 16,000 sq.ft.....	.97	.95
16,001 to 25,000 sq.ft.....	1.24	1.20

For each additional single-family
 residential unit.....

.42 .50

California Water Service Company
Marysville DistrictAdopted Quantities

<u>PURCHASED POWER</u>	<u>1989</u>	<u>1990</u>
PGE 5-88		
Well Stations		
Production: KCcf	1,489.8	1,497.2
Kwh per Ccf	710.95	710.95
Wells Kwh(1000)	1,059.2	1,064.5
Unit Cost \$/kwh	.09484	.09484
Energy Cost	\$100,448.0	\$100,947.9
 Total Power Cost	 \$100,400.0	 \$100,900.0

Chemical Cost

\$.4

\$.4

California Water Service Company
Marysville District

Adopted Quantities

Number of Service, Meter Size	1989	1990
-----	----	----
MR-1		
5/8 x 3/4	650	659
1	223	225
1 1/2	60	61
2	103	105
3	11	11
4	6	6
6	1	1
8	0	0
10	0	0
	-----	-----
total	1054	1068
Quantity, CCF	631100	640700

Number of Service	No. of Service		Usage-KCcf		Avg. Usage Ccf/Yr.	
	1989	1990	1989	1990	1989	1990
-----	----	----	----	----	----	----
Commercial	994	1008	491.3	498.3	494.3	494.3
Industrial	4	4	42.1	42.1	10525	10525
Public Auth.	56	56	97.5	100.1	1741.1	1,741.1
Other	0	0	.2	.2		
subtotal	1054	1068	631.1	640.7		
Flat Rate Serv.	2699	2689				
Private Fire Prot.	30	30				
Public Fire Prot.	3	3				
Total	3786	3790				
Water Loss: 8.0%			119.2	119.8		
Total Water Produced			1,489.8	1,497.2		

Flat Rate Service		
6000sq.-ft. less	1340	1335
6-10000sq.-ft.	1183	1178
10-16000sq.-ft.	142	142
16-25000sq.-ft.	34	34
add. unit	65	65
	2699	2689

Marysville District

Utility Plant, Depreciation Reserve, and Rate Base

	1989	1990
	-----	-----
(Thousands of Dollars)		
UTILITY PLANT		

Plant BOY	\$ 3,381.1	\$ 3592.9
Utility Add.	225.0	158.3
Advances	.0	.0
Contributions	2.8	2.8
Total Additions	227.8	161.1
Retirement	16.0	16.4
Plant EOY	3,592.9	3,737.6
Wgt.Plant @ 50.6%	107.2	73.2
Wgt.Avg. Plant	3,488.3	3,666.1
DEPRECIATION RESERVE		

Reserve BOY	1,035.9	1,100.3
Contrib.	3.2	3.3
Depr Exp. (2.45%)	72.4	77.1
Clear.Chg.	4.8	5.3
Total Accrual	80.4	85.7
Retirement	16.0	16.2
Reserve EOY	1,100.3	1,169.8
Wgt.Accr.@ 52.5%	33.8	36.5
Wgt.Avg.Deprec.Reserve	1,069.7	1,136.8
RATE BASE		

Utility Plant	3,488.3	3666.1
Material & Sup.	21.1	21.3
Work.Cash Allow.	-16.9	-17.8
Depreciation Reserve	-1,069.7	-1,136.8
Advances For Constr.	-278.1	-253.8
Contributions-in-Aid	-121.5	-121.1
Gen.Office Alloc.	36.3	39.6
Unamort.Defer.Taxes	-118.3	-138.0
Unamort. ITC	-47.1	-45.9
CIAC FTX	2.3	2.8
Avg RATE BASE	1,896.4	2,016.5

Marysville District
Income Tax Calculations

	1989	1990
	-----	-----
	(Thousands of Dollars)	
Total Revenues	\$ 874.1	\$ 916.4
Purch. Power	100.4	100.9
Purch. Chem	.4	.4
Payroll	201.7	211.8
OM Other	63.1	64.2
AG Other	-5.5	-6.2
Gen. Office Alloc.	121.6	127.0
Payroll Tax	15.9	16.8
Ad Val. Taxes .9679	21.8	22.6
Uncoll. .002377	2.1	2.2
Loc. Franch.	.3	.3
subtotal	521.8	540.0
Interest	101.5	108.4
Total Deductions	617.5	642.1
State Tax Deprec.	138.6	145.1
State Tax 9.3%	11.0	12.0
Federal Tax Deprec.	86.7	89.9
Fed Tax 34%	54.0	58.6
Total Federal Taxes	54.0	58.6
Net/Gross	1.677539	

(End of APPENDIX C-4)

Marysville District

Comparison of typical bills for commercial metered customers of various usage level and average usage level at present and authorized rates for the year 1989.

General Metered Service (5/8 x 3/4) Inch Meters

: Monthly Usage:	At Present	:At Authorized :	Percent	:
: (Cubic Feet):	Rates	: Rates :	Increase	:
300	\$ 7.38	\$ 7.53	2.0 %	
500	7.99	8.15	2.1	
1,000	9.50	9.70	2.1	
2,000	12.53	12.80	2.1	
2,250 (Avg.)	18.95	19.37	2.2	
3,000	15.56	15.90	2.2	
5,000	21.62	22.10	2.2	
10,000	36.77	37.60	2.3	

(End of Appendix D-4)

California Water Service Company
Willows District

SCHEDULE NO. WL-1

GENERAL METERED SERVICE

Applicability

Applicable to all metered water service.

Territory

The City of Willows and vicinity, Glenn County.

Rates

Service Charge:

Per Meter
Per Month*

For 5/8 x 3/4-inch meter.....	\$	6.19
For 1-inch meter.....		12.29
For 1 1/2-inch meter.....		16.48
For 2-inch meter.....		21.17
For 3-inch meter.....		41.76
For 4-inch meter.....		56.35
For 6-inch meter.....		90.52
For 8-inch meter.....		132.70
For 10-inch meter.....		161.87

Quantity Rates:

For the first 300 cu.ft., per 100 cu.ft.....	.453 I
For all over 300 cu.ft., per 100 cu.ft.....	.583

The Service Charge is a readiness-to-serve charge which is applicable to all metered service and to which is to be added the monthly charge computed at the Quantity Rates.

* All rates are subject to the reimbursement fee set forth on schedule No. UF.

 Willows District

Each of the following increases in rates may be put into effect on the indicated date by filing a rate schedule which adds the appropriate increase to the rate which would otherwise be in effect on that date.

Effective Dates
 1-1-90 1-1-91

Schedule WL-1 General Metered Service

Service Charge:

Per Meter Per Month

For 5/8 x 3/4-inch meter.....	\$	.26	\$.45
For 1-inch meter.....		.61	.80
For 1 1/2-inch meter.....		.82	1.00
For 2-inch meter.....		1.03	1.30
For 3-inch meter.....		2.24	3.00
For 4-inch meter.....		2.65	4.00
For 6-inch meter.....		4.48	6.00
For 8-inch meter.....		6.30	8.00
For 10-inch meter.....		8.13	10.00

Quantity Rates:

For the first 300 cu.ft., per 100 cu.ft.	.130	.007
For all over 300 cu.ft., per 100 cu.ft.	.000	.007

Schedule WL-2R Residential Flat Rate Service

For a single-family residential unit,
 including premises having the following
 areas:

6,000 sq., or less .....	.64	.65
6,001 to 10,000 sq.ft.....	.79	.75
10,001 to 16,000 sq.ft.....	.98	.95
16,001 to 25,000 sq.ft.....	1.32	1.25

For each additional single-family
 residential unit.....

.45 .45

California Water Service Company
Willows District

Adopted Quantities

Number of Service, Meter Size	1989	1990
-----	----	----
WL-1		
5/8 x 3/4	794	818
1	125	129
1 1/2	37	38
2	37	37
3	7	7
4	2	2
6	0	0
8	0	0
10	0	0
total	1002	1031
0 - 3 Ccf	32600	33600
Over 3	291900	300500
total	324500	334100

Number of Service	No. of Service		Usage-KCcf		Avg. Usage Ccf/Yr.	
	1989	1990	1989	1990	1989	1990
-----	----	----	----	----	----	----
Commercial	963	992	275.3	283.6	285.9	285.9
Industrial	0	0	.0	.0	1000	1000
Public Auth.	39	39	49.0	50.3	1256.4	1,256.4
Other	0	0	.2	.2		
subtotal	1002	1031	324.5	334.1		
Resid. Flat Serv.	1107	1088	367.0	360.3		
Priv. Fire Prot.	30	30				
Publ. Fire Prot.	3	3				
Total	2142	2152				
Water Loss: 8.0%			60.1	60.4		
Total Water Produced			751.6	754.8		

Flat Rate Service		
6,000sq.ft. less	244	240
6-10,000sq.ft.	555	545
10-16,000sq.ft.	272	267
16-25,000sq.ft.	36	36
add. unit	6	6
	1107	1088

Willows District

Utility Plant, Depreciation Reserve, and Rate Base

	1989	1990
	-----	-----
	(Thousands of Dollars)	
UTILITY PLANT		

Plant BOY	\$ 2,509.4	\$ 2611.5
Utility Add.	87.5	87.2
Advances	18.7	18.7
Contributions	11.1	11.1
Total Additions	117.3	117.0
Retirement	15.2	5.0
Plant EOY	2,611.5	2,723.5
Wgt.Plant @ 38.1%	49.3	53.2
Wgt.Avg. Plant	2,558.7	2,664.7
DEPRECIATION RESERVE		

Reserve BOY	747.8	793.4
Contrib.	2.7	3.2
Depr Exp. (2.44%)	52.4	54.1
Clear.Chg.	3.3	3.7
Total Accrual	58.4	61.0
Retirement	12.8	7.3
Reserve EOY	793.4	847.1
Wgt.Accr. @ 50.3%	23.0	27.0
Wgt.Avg. Deprec. Reserve	770.8	820.5
RATE BASE		

Utility Plant	2,558.7	2,664.7
Material & Sup.	15.3	15.8
Work.Cash Allow.	1.5	.7
Depreciation Reserve	-770.8	-820.5
Advances For Constr.	-348.9	-356.3
Contributions-in-Aid	-115.3	-134.5
Gen.Office Alloc.	22.6	24.5
Unamort.Defer.Taxes	-102.0	-117.6
Unamort.ITC	-21.1	-20.5
CIAC FTC	4.1	6.2
Capit.Items	6.4	9.5
Avg RATE BASE	1,250.6	1,272.2

Willows District
Income Tax Calculations

	1989 ----- (Thousands of Dollars)	1990 ----- (Thousands of Dollars)
Total Revenues	\$ 625.8	\$ 648.1
Purch. Power	62.1	62.4
Purch. Chem	1.0	1.0
Payroll	134.1	140.8
OM Other	62.6	63.7
AG Other	9.3	9.6
Gen. Office Alloc.	75.0	78.4
Payroll Tax	10.6	11.2
Ad Valorem Taxes	14.9	15.6
Uncoll. .004752	3.0	3.1
Loc. Franch. .02	12.5	13.0
subtotal	385.1	398.7
Interest	66.9	68.8
Total Deductions	448.1	463.3
State Tax Deprec.	97.0	97.5
State Tax 9.3	7.5	8.1
Federal Tax Deprec.	55.4	50.7
Fed Tax 34%	39.0	42.9
Total Federal Taxes	39.0	42.9
Net/Gross	1.715860	

(End of APPENDIX C-5)

Willows District

Comparison of typical bills for commercial metered customers of various usage level and average usage level at present and authorized rates for the year 1989.

General Metered Service (5/8 x 3/4) Inch Meters

: Monthly Usage:	At Present	:At Authorized :	Percent	:
: (Cubic Feet):	Rates	: Rates	: Increase	:
300	\$ 7.46	\$ 7.55	1.2 %	
500	8.63	8.72	1.0	
1,000	11.54	11.63	.8	
2,000	17.37	17.46	.5	
2,250 (Avg-)	19.60	19.69	.4	
3,000	23.20	23.29	.4	
5,000	34.86	34.95	.2	
10,000	64.01	64.10	.1	

Tom and Utilities Engineers Donald Yep, Peter Liu, Larry Hirsch, and Antoine Gamarra, all of the Water Utilities Branch. CACD also called Regulatory Program Specialist Phebe A. Greenwood of the Division of Ratepayer Advocates as its cost of capital witness.

The matters were concluded at the close of hearings on September 1, 1988, subject to the submission of late-filed comparison exhibits and the filing of concurrent briefs due on September 30, 1988. At subsequent hearings involving general rate increase requests for the company's Los Altos-Suburban and South San Francisco Districts (A.88-04-070 and A.88-04-075 respectively), matters which are currently pending and will be considered in a separate order, CWS moved for incorporation of the record of these applications into the consolidated proceeding in A.88-04-070 and A.88-04-075. Staff joined in the motion, which the ALJ granted, and the parties further agreed that the record of the later proceedings would be incorporated into and considered in these proceedings. The records thus consolidated, the matters stood submitted upon the filing of concurrent briefs in A.88-04-070 and A.88-04-075 on December 2, 1988.

Issues

During the course of these proceedings representatives of applicant and staff reached agreement on most estimates of test year results of operations. Areas of agreement include revenue estimates and most operating expense and tax estimates. The estimated results of operations' amounts agreed upon are reasonable and will be adopted; it is not necessary to discuss them in detail.

The discussion which follows focuses on the areas of disagreement between CWS and staff, which are listed below:

the company, but is simply a reflection of market requirements. The record clearly shows that CWS does indeed maintain good service standards and a high degree of customer satisfaction, and staff does not disagree with the company's characterization that it is a well-managed operation. We fully agree that the company should not in any way be penalized. In determining the appropriate return for CWS, we recognize the quality of the company's company's operations.

Accordingly, we will adopt a constant ROE of 12.25%. This is consistent with staff's DCF analysis as well as the recent upward trend in interest rates. As shown in the following table, the resulting rate of return on rate base, incorporating this ROE, our adopted costs of long-term debt and preferred stock, and our adopted capital structure, is 11.33%. These returns will result in pre-tax interest coverage of 3.32x in 1989, 1990, and 1991, which should serve adequately to maintain CWS's favorable bond ratings.

<u>Adopted Rate of Return</u>			
<u>1989</u>	<u>Capital Ratios</u>	<u>Cost Factors</u>	<u>Rate of Return</u>
Long-term Debt	45.25%	10.54%	4.77%
Preferred Stock	1.75	4.19	0.07
Common Equity	<u>53.00</u>	12.25	<u>6.49</u>
	100.00%		11.33%
<u>1990</u>			
Long-term Debt	45.25%	10.55%	4.77%
Preferred Stock	1.75	4.19	0.07
Common Equity	<u>53.00</u>	12.25	<u>6.49</u>
	100.00%		11.33%
<u>1991</u>			
Long-term Debt	45.25%	10.55%	4.77%
Preferred Stock	1.75	4.19	0.07
Common Equity	<u>53.00</u>	12.25	<u>6.49</u>

Hermosa-Redondo District

Utility Plant, Depreciation Reserve, and Rate Base

	1989	1990
	-----	-----
	(Thousands of Dollars)	
UTILITY PLANT		

Plant BOY	\$ 20,979.3	\$ 22,253.8
Utility Add.	1,115.6	1,133.7
Advances	55.8	55.8
Contributions	100.9	100.9
Total Additions	1,383.6	1333.1
Retirement	109.2	102.1
Plant EOY	22,253.8	23,484.8
Wgt.Plant @ 51.0%	654.6	627.8
Wgt.Avg. Plant	21,633.9	22,881.6
DEPRECIATION RESERVE		

Reserve BOY	5,599.0	5,933.3
Contrib.	29.3	31.5
Depr Exp. (2.25%)	414.5	439.9
Clear.Chg.	18.6	19.4
Total Accrual	462.4	490.8
Retirement	128.1	123.5
Reserve EOY	5,933.3	6,300.6
Wgt.Accr. @ 58.2%	194.6	213.8
Wgt.Avg. Deprec. Reserve	5,793.6	6,146.5
RATE BASE		

Utility Plant	21,633.9	22,881.6
Work.Cash Allow.	-47.1	-42.0
Material & Sup.	129.5	132.8
Depreciation Reserve	-5,793.6	-6,146.5
Advances For Constr.	-534.9	-569.2
Contributions-in-Aid	-1,212.2	-1,282.9
Gen.Office Alloc.	223.2	242.0
Unamort. Defer. Taxes	-621.4	-736.2
Unamort. ITC	-219.8	-214.3
CIAC FTC	57.0	75.8
Capit. Items	31.4	40.3
Avg RATE BASE	13,584.5	14,316.3

California Water Service Company
King City District

SCHEDULE NO. KC-1

GENERAL METERED SERVICE

Applicability

Applicable to all metered water service.

Territory

King City and vicinity, Monterey County.

Rates

Service Charge:

Per Meter
Per Month*

For 5/8 x 3/4-inch meter.....	\$	7.30	I
For 1-inch meter.....		12.00	I
For 1 1/2-inch meter.....		16.80	I
For 2-inch meter.....		21.40	I
For 3-inch meter.....		40.00	I
For 4-inch meter.....		52.00	I
For 6-inch meter.....		89.00	I
For 8-inch meter.....		132.00	I
For 10-inch meter.....		132.00	I

Quantity Rates:

For the first 300 cu.ft., per 100 cu.ft.....	.387
For all over 300 cu.ft., per 100 cu.ft.....	.593

The Service Charge is a readiness-to-serve charge which is applicable to all metered service and to which is to be added the monthly charge computed at the Quantity Rates.

Special Condition

Due to the overcollection in the balancing account a reduction of \$0.010 per Ccf of water usage is to be applied to the quantity rates to amortize the overcollection.

* All rates are subject to the reimbursement fee set forth on schedule No. UF.

King City District

Utility Plant, Depreciation Reserve, and Rate Base

	1989	1990
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	(Thousands of Dollars)	
UTILITY PLANT		

Plant BOY	\$ 2,073.9	\$ 2,160.5
Utility Add.	75.3	85.1
Advances	12.2	12.2
Contributions	16.2	16.2
Total Additions	103.7	113.5
Retirement	17.1	6.6
Plant EOY	2,160.5	2,267.4
Wgt.Plant @ 38.1%	42.2	52.1
Wgt.Avg. Plant	2,116.1	2,212.6
DEPRECIATION RESERVE		

Reserve BOY	535.6	567.5
Contrib.	3.4	3.7
Depr Exp. (1.92%)	40.2	41.6
Clear.Chg.	1.3	1.4
Total Accrual	44.9	46.7
Retirement	13.0	8.0
Reserve EOY	567.5	606.2
Wgt.Accr.@ 50%	19.0	23.1
Wgt.Avg.Deprec.Reserve	554.6	590.6
RATE BASE		

Utility Plant	2,116.1	2,212.6
Material & Sup.	11.9	12.0
Work.Cash Allow.	24.6	26.0
Depreciation Reserve	-554.6	-590.6
Advances For Constr.	-298.3	-299.3
Contributions-in-Aid	-149.8	-162.5
Gen.Office Alloc.	16.9	18.5
Unamort.Defer.Taxes	-63.7	-76.5
Unamort.ITC	-16.2	-15.8
CIAC FTC	7.6	10.7
Capit.Items	28.3	29.8
Avg RATE BASE	1,123.7	1,166.0

Marysville District

Each of the following increases in rates may be put into effect on the indicated date by filing a rate schedule which adds the appropriate increase to the rate which would otherwise be in effect on that date.

Effective Dates
1-1-90 1-1-91

Schedule MR-1 General Metered Service

Service Charge:

Per Meter Per Month

For 5/8 x 3/4-inch meter.....	\$.35	\$.30
For 1-inch meter.....	.60	.55
For 1 1/2-inch meter.....	.90	.80
For 2-inch meter.....	1.10	1.10
For 3-inch meter.....	2.00	2.00
For 4-inch meter.....	3.00	3.00
For 6-inch meter.....	4.00	4.00
For 8-inch meter.....	7.00	7.00
For 10-inch meter.....	8.00	8.00

Quantity Rates:

For all water delivered, per 100 cu.ft.	.014	.012
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Schedule MR-2R Residential Flat Rate Service

For a single-family residential unit,
including premises having the following
areas:

6,000 sq. or less .....	.63	.45
6,001 to 10,000 sq.ft.....	.77	.55
10,001 to 16,000 sq.ft.....	.97	.65
16,001 to 25,000 sq.ft.....	1.24	.85

For each additional single-family
residential unit.....

.42	.30
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