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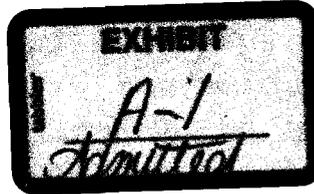
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COMMISSIONERS:
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IN THE MATTER OF THE APPLICATION OF AJO
IMPROVEMENT COMPANY FOR RATE
ADJUSTMENTS IN ITS WATER AND
WASTEWATER RATES

Docket No. ^{WS} ~~F~~-01025A-03-B50

APPLICATION

Ajo Improvement Company ("Applicant" or "AIC") hereby makes application to the Commission to approve adjustments to its rate schedules for water and wastewater service.

In support of its Application, Applicant states the following:

1. Applicant is an Arizona public service corporation certificated by the Commission to provide electric, water and wastewater service to customers in and around the unincorporated community of Ajo, Pima County, Arizona. Ajo Improvement Company's Water Department provides service to approximately 1,119 customers and its Sewer Department services approximately 1,089 customers.

2. Applicant's principal place of business in Pima County is Post Office Drawer 9, Ajo, Arizona 85321. Correspondence concerning this Application should be sent to Fred Menzer/Rodney Smith, Ajo Improvement Company, New Cornelia Branch, P.O. Drawer, Ajo, Arizona 85321; with a copy to Michael W. Patten at Roshka Heyman & DeWulf, PLC, One Arizona Center, 400 East Van Buren Street, Suite 800, Phoenix, Arizona 85004; and a copy to Dan L. Neidlinger, Neidlinger & Associates, 3020 North 17th Drive, Phoenix, Arizona 85015.

3. This Application is made pursuant to the provisions of A.A.C. R14-2-103 covering the twelve-month period that ended December 31, 2002, the test year in this

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PHOENIX, ARIZONA 85004
TELEPHONE NO 602-256-6100
FACSIMILE 602-256-6800

1 case. Attached to this Application as Exhibit A are the schedules required under A.A.C.
2 R14-2-103 for both the Water Department (pp. 1-18 of Ex. A) and the Wastewater
3 Department (pp. 19-29) of Ex. A). Exhibit A also includes schedules (pp. 30-51) that cover
4 total company operations with relevant information separated out for water and wastewater
5 operations on some of those schedules. The schedules are based on financial information
6 obtained from the books and records of Applicant.

7 WATER SERVICE

8 4. Applicant has not filed a general water rate case since 1984. The
9 Commission set Applicant's current water rates in Decision No. 54709 (Oct. 10, 1985).

10 5. Applicant is a Class C utility with respect to its water service. In
11 connection with and in support of this Application, Applicant is filing the attached
12 schedules regarding water service required by A.A.C. R14-2-103, which includes a
13 schedule of the rates and charges necessary to produce revenues that will allow Applicant to
14 earn a fair return on the fair value of Applicant's property devoted to public service.

15 6. Applicant is requesting an increase in annual water revenues of
16 approximately \$111,123 (or a 17.3% increase over test year revenues). This increase is
17 based on a 10% rate of return on an adjusted rate base of \$92,745.

18 7. As shown in the schedules filed herewith, under the present rates,
19 Applicant experienced an operating loss during the test year of \$54,930 thereby resulting in
20 a negative return on rate base of 59.23%.

21 8. Schedule B-1 (p. 3) shows original cost less depreciation ("OCLD") and
22 reconstruction cost new less depreciation ("RCND") rate bases both in the amount of
23 \$92,745 at December 31, 2002. The OCLD and RCND are the same because Applicant
24 seeks permission to waive the requirement to prepare a separate and costly RCND rate base
25 analysis.

26 9. As shown on Schedule D-1 (p. 37), the weighted cost of capital for
27 Applicant is estimated at 10% using a pro forma capital structure of approximately 20%

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1 debt and 80% equity. Accordingly, Applicant requests a 10% rate of return on rate base for
2 both its Water Department and its Wastewater Department.

3 10. The proposed changes in water rates are set forth in Schedule H-3 (p.
4 10). First, proposed monthly service charges for each meter size have been increased by
5 five percent (5%). Second, the proposed water usage charge for treated water has been
6 increased from \$2.54 per 1,000 gallons to \$3.14 per 1,000 gallons. Third, the proposed
7 water usage charge for untreated water has been increased from \$1.75 per 1,000 gallons to
8 \$1.85 per 1,000 gallons. For the average residential water customer using a 5/8" meter to
9 purchase treated water, the average monthly bill will increase from \$23.51 to \$27.38, an
10 increase of \$3.87 per month or 16.46%. Schedule H-4 (p. 12-13) sets forth additional bill
11 impact analyses.

12 WASTEWATER SERVICE

13 11. Applicant has not filed a general wastewater rate case since 1986. The
14 Commission set Applicant's current water rates in Decision No. 55233 (Oct. 16, 1986).

15 12. Applicant is a Class C utility with respect to its wastewater service. In
16 connection with and in support of this Application, Applicant is filing the attached
17 schedules regarding wastewater service required by A.A.C. R14-2-103, which includes a
18 schedule of the rates and charges necessary to produce revenues that will allow Applicant to
19 earn a fair return on the fair value of Applicant's property devoted to public service.

20 13. Applicant is requesting an increase in annual wastewater revenues of
21 approximately \$156,315 (or a 163.7% increase over test year revenues). This increase is
22 based on a 10% rate of return on an adjusted rate base of \$217,822. Although the
23 percentage increase is large, it must be considered in the context of the current residential
24 wastewater rate of \$6.08 per month. That rate is extremely low and the new proposed
25 residential treatment rate of \$16.64 per month remains relatively low in comparison with
26 other wastewater rates across Arizona.

27

1 14. As shown in exhibits filed herewith, under the present rates, Applicant
2 experienced an operating loss during the test year of \$68,533 thereby resulting in a negative
3 return on rate base of 31.46%.

4 15. Schedule B-1 (p. 21) shows original cost less depreciation ("OCLD")
5 and reconstruction cost new less depreciation ("RCND") rate bases both in the amount of
6 \$217,822 at December 31, 2002. The OCLD and RCND are the same because Applicant
7 seeks permission to waive the requirement to prepare a separate and costly RCND rate base
8 analysis.

9 16. The wastewater rate base has increased as a result of significant capital
10 improvements to AIC's wastewater treatment plant. The cost of those improvements
11 exceeded \$1.8 million and were paid for by AIC's parent, Phelps Dodge. However, all but
12 approximately \$200,000 of these capital expenditures has been written off and is not
13 included in the rate base.

14 17. The proposed changes in wastewater rates are set forth in Schedule H-3
15 (p. 27). The proposed monthly residential service charge has been increased from \$6.08 to
16 \$16.64. AIC also proposes to increase rates, by an equivalent percentage, for all other
17 wastewater customers. Schedule H-4 (page 29) sets forth typical bill analyses for AIC's
18 wastewater customers.

19 WHEREFORE, Applicant hereby requests that the Commission promptly hold
20 hearings in this matter and determine the fair value of Applicant's water and wastewater
21 utility properties for ratemaking purposes; fix a just and reasonable rate of return thereon;
22 and approve appropriate rate schedules for Applicant.

23
24
25
26
27

1 RESPECTFULLY SUBMITTED May 28, 2003.

2 AJO IMPROVEMENT COMPANY

3
4 By 

5 Michael W. Patten
6 ROSHKA HEYMAN & DEWULF, PLC
7 One Arizona Center
8 400 East Van Buren Street, Suite 800
9 Phoenix, Arizona 85004
10 (602) 256-6100

11 ORIGINAL + 13 COPIES of the foregoing
12 filed May 28, 2003, with:

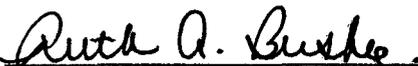
13 Docket Control
14 ARIZONA CORPORATION COMMISSION
15 1200 West Washington
16 Phoenix, Arizona 85007

17 COPIES of the foregoing hand-delivered
18 May 28, 2003, to:

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24 Lynn Farmer, Esq.
25 Chief ALJ, Hearing Division
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SCHEDULES

AJO IMPROVEMENT COMPANY

Before the Arizona Corporation Commission

**Application for an Increase in Water & Sewer Rates
Test Year Ended December 31, 2002**

April 2003

AJO IMPROVEMENT COMPANY

Test Year Ended December 31, 2002

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WATER SERVICE

**AJO IMPROVEMENT COMPANY
WATER DEPARTMENT
Test Year Ended December 31, 2002**

COMPUTATION OF INCREASE IN GROSS REVENUE REQUIREMENTS

DESCRIPTION	ORIGINAL COST	RCND
Adjusted Rate Base (1)	\$92,745	\$92,745
Adjusted Operating Income (2)	(54,930)	(54,930)
Current Rate of Return	-59.23%	-59.23%
	<u>FAIR VALUE</u>	
Fair Value Rate Base (50/50)	\$92,745	
Required Rate of Return	10.000%	
Operating Income Requirement	\$9,274	
Operating Income Deficiency	\$64,204	
Gross Revenue Conversion Factor (3)	1.7308	
Increase in Gross Revenue Requirements	\$111,123	
Indicated Percentage Increase (4)	17.32%	

Supporting Schedules:

- (1) Schedule B-1
- (2) Schedule C-1
- (3) Schedule C-3
- (4) Schedule H-1

**AJO IMPROVEMENT COMPANY
WATER DEPARTMENT
Test Year Ended December 31, 2002**

SUMMARY OF REVENUES AT PRESENT AND PROPOSED RATES

DESCRIPTION	REVENUES IN THE TEST YEAR		INCREASE	
	PRESENT	PROPOSED	AMOUNT	PERCENT
TREATED WATER SALES:				
5/8" Meters	\$306,899	\$357,503	\$50,604	16.49%
1" Meters	14,219	16,863	2,644	18.59%
1 1/2" Meters	77	82	5	6.49%
2" Meters	54,085	65,157	11,072	20.47%
3" Meters	8,775	10,178	1,403	15.99%
4" Meters	164,957	203,477	38,520	23.35%
Total Metered Sales - Treated	\$549,012	\$653,260	\$104,248	18.99%
UNTREATED WATER SALES:				
5/8" Meters	\$10,315	\$10,899	\$584	5.66%
2" Meters	28,784	30,420	1,636	5.68%
3" Meters	37,721	39,841	2,120	5.62%
4" Meters	8,826	9,313	487	5.52%
Total Metered Sales - Untreated	\$85,646	\$90,473	\$4,827	5.64%
Total Water Sales	\$634,658	\$743,733	\$109,075	17.19%
Other Water Revenues	6,986	9,466	2,480	35.50%
Total Water Revenues	\$641,644	\$753,199	\$111,555	17.39%

**AJO IMPROVEMENT COMPANY
WATER DEPARTMENT
Test Year Ended December 31, 2002**

ORIGINAL COST AND RCND RATE BASE ELEMENTS

DESCRIPTION	ORIGINAL COST RATE BASE (1)	RCND RATE BASE (2)
Gross Utility Plant In Service	\$1,479,545	\$1,479,545
Less: Accumulated Depreciation	<u>1,429,092</u>	<u>1,429,092</u>
Net Utility Plant In Service	\$50,453	\$50,453
Plus:		
Working Capital Allowance	42,292	42,292
Total Rate Base	<u><u>\$92,745</u></u>	<u><u>\$92,745</u></u>

Supporting Schedules & Notes:

- (1) Schedules B-2, B-5 and E-5
- (2) Ajo Improvement Company Requests a Waiver on the Development of RCND Rate Base

AJO IMPROVEMENT COMPANY
WATER DEPARTMENT
Test Year Ended December 31, 2002

PRO FORMA ADJUSTMENTS TO ORIGINAL COST RATE BASE

DESCRIPTION	ACTUAL AT 12-31-02	PRO FORMA ADJUSTMENTS	ADJUSTED AMOUNT
Gross Utility Plant In Service	\$1,477,142	\$2,403	\$1,479,545
Less: Accumulated Depreciation	1,421,455	7,637	1,429,092
Net Utility Plant In Service	\$55,687	(\$5,234)	\$50,453
Total Rate Base Adjustments	\$55,687	(\$5,234)	\$50,453

AJO IMPROVEMENT COMPANY
WATER DEPARTMENT
Test Year Ended December 31, 2002

CALCULATION OF WORKING CAPITAL ALLOWANCE

DESCRIPTION	AMOUNT
Purchased Water	\$477,938
Adjusted O&M	\$179,022
Working Capital Calculation:	
1/24 Purchased Water	\$19,914
1/8 O&M	\$22,378
Total Working Capital Allowance	<u>\$42,292</u>

**AJO IMPROVEMENT COMPANY
WATER DEPARTMENT
Test Year Ended December 31, 2002

OPERATING INCOME STATEMENT**

DESCRIPTION	ACTUAL AT 12-31-02 (1)	PRO FORMA (2) ADJUSTMENTS	ADJUSTED AMOUNT
Revenues:			
Water Sales	\$634,658		\$634,658
Other Water Revenues	8,371	(1,385)	6,986
Total Revenues	643,029	(1,385)	641,644
Operating Expenses:			
Salaries & Wages	28,167	845	29,012
Employee Pensions & Benefits	18,740	562	19,302
Purchased Water	548,982	(71,044)	477,938
Outside Services - Legal & Consulting	3,153		3,153
Outside Services - Oper. & Maint.	85,787		85,787
Rental Expense	1,200		1,200
Materials & Supplies	17,571	(2,403)	15,168
General & Administrative	24,827	573	25,400
Depreciation	28,326	7,637	35,963
Property Taxes	34,330	5,052	39,382
Income Taxes	(30,079)	(5,652)	(35,731)
Total Operating Expenses	761,004	(64,430)	696,574
Operating Income	(\$117,975)	\$63,045	(\$54,930)

Supporting Schedules:

- (1) Schedule E-6
- (2) Schedule C-2

**AJO IMPROVEMENT COMPANY
WATER DEPARTMENT
Test Year Ended December 31, 2002**

PRO FORMA ADJUSTMENTS TO OPERATING INCOME STATEMENT

DESCRIPTION	AMOUNT
OTHER WATER SALES:	
To Remove Non-Recurring Water Revenues From Hydrant Replacement	(\$1,385)
SALARIES & WAGES:	
Annualization of Salary & Wage Expense For 3% Increase	\$845
FRINGE BENEFITS:	
Annualization of Fringe Benefit Expense On S&W Increase	\$562
PURCHASED WATER:	
To Adjust 2002 Purchased Water to Cost	(\$71,044)
MATERIALS & SUPPLIES:	
To Capitalize Meters Expensed in 2002	(\$2,403)
GENERAL & ADMINISTRATIVE:	
Three Year Amortization of \$45,000 Rate Case Exp. - 50% to Water Dept.	\$7,500
Normalization of Allowance for Doubtful Accounts	(6,927)
Net Pro Forma Adjustment - General & Administrative Expense	\$573
DEPRECIATION:	
Annual Depreciation at ACC Staff Rates	\$35,963
Water Depreciation Per Books	(28,326)
Pro Forma Adjustment - Depreciation	\$7,637
PROPERTY TAXES:	
Property Taxes Per ADOR Formula	\$39,382
Property Taxes Per Books	(34,330)
Pro Forma Adjustment - Property Taxes	\$5,052
INCOME TAXES:	
Income Taxes on Pro Forma Adjustments:	
Revenues	(\$1,385)
Expenses	(58,778)
Net Pro Forma Operating Income Adjustment Before Taxes	57,393
Income Taxes @ 38.598%	22,153
Adjustment to Book Income Taxes Based On 2002 Taxable Income	(27,805)
Net Pro Forma Adjustment to Income Taxes	(\$5,652)

AJO IMPROVEMENT COMPANY
WATER DEPARTMENT
Test Year Ended December 31, 2002

SUMMARY OF WATER REVENUES AT PRESENT AND PROPOSED RATES
TREATED WATER & OTHER WATER REVENUES

DESCRIPTION	REVENUES IN THE TEST YEAR		INCREASE	
	PRESENT	PROPOSED	AMOUNT	PERCENT
5/8" Meters	\$306,899	\$357,503	\$50,604	16.49%
1" Meters	14,219	16,863	2,644	18.59%
1 1/2" Meters	77	82	5	6.49%
2" Meters	54,085	65,157	11,072	20.47%
3" Meters	8,775	10,178	1,403	15.99%
4" Meters	164,957	203,477	38,520	23.35%
Total Metered Sales - Treated	\$549,012	\$653,260	\$104,248	18.99%
Other Revenues	6,986	9,466	2,480	35.50%
Total Water Revenues	<u>\$555,998</u>	<u>\$662,726</u>	<u>\$106,728</u>	<u>19.20%</u>

AJO IMPROVEMENT COMPANY
WATER DEPARTMENT
Test Year Ended December 31, 2002

SUMMARY OF WATER REVENUES AT PRESENT AND PROPOSED RATES
UNTREATED WATER

DESCRIPTION	REVENUES IN THE TEST YEAR		INCREASE	
	PRESENT	PROPOSED	AMOUNT	PERCENT
5/8" Meters	\$10,315	\$10,899	\$584	5.66%
2" Meters	28,784	30,420	1,636	5.68%
3" Meters	37,721	39,841	2,120	5.62%
4" Meters	8,826	9,313	487	5.52%
Total Metered Sales - Untreated	<u>\$85,646</u>	<u>\$90,473</u>	<u>\$4,827</u>	<u>5.64%</u>

**AJO IMPROVEMENT COMPANY
WATER DEPARTMENT
Test Year Ended December 31, 2002**

PROPOSED CHANGES IN WATER RATES

DESCRIPTION	PRESENT RATE	PROPOSED RATE
MONTHLY SERVICE CHARGES:		
5/8" Meters	\$9.00	\$9.25
1" Meters	15.00	15.75
1 1/2" Meters	25.00	26.25
2" Meters	50.00	52.50
3" Meters	100.00	105.00
4" Meters	200.00	210.00
ALL WATER USAGE - PER 1,000 GAL.:		
Treated Water	\$2.54	\$3.14
Untreated Water	1.75	1.85

AJO IMPROVEMENT COMPANY
WATER DEPARTMENT
Test Year Ended December 31, 2002

PROPOSED CHANGES IN OTHER RATES & CHARGES

DESCRIPTION	PRESENT RATE	PROPOSED RATE
SERVICE CHARGES:		
Establishment of Service:		
Regular Hours	\$25.00	No Change
After Hours	NR (1)	\$40.00
Re-Establishment of Service Within 12 Months:		
Monthly Minimum Times Months Disconnected for Both Water and Sewer Service (R14-2-403)		No Change No Change
Re-Connection of Service:		
Regular Hours	\$10.00	\$50.00
After Hours	NR (1)	\$65.00
Water Meter Test (If Correct)	Cost of Test (2)	No Change
Water Meter Relocation at Cust. Request	Cost of Move (2)	No Change
Meter Re-read (If Correct)	\$10.00	No Change
NSF Check Charge	\$10.00	\$20.00
Late Charge	1 1/2% Per Mo.	No Change
Deferred Payment Finance Charge	1 1/2% Per Mo.	No Change
Service Calls - Per Hour:		
After Hours Only	\$25.00	\$40.00
Deposit Requirements	ACC Rule R14-2-403B	No Change
Deposit Interest	ACC Rule R14-2-403B	3.50%
REFUNDABLE METER INSTALLATION CHARGES:		
Scheduled Installation Charges:		
5/8" X 3/4" Meters	\$100.00	\$400.00
1" Meters	\$150.00	\$500.00
1 1/2" Meters	\$200.00	\$750.00
2" Meters	\$250.00	\$1,300.00
Unscheduled Installation Charges:		
Charges For Installation of Meters That are 4" or Greater In Diameter Shall be Based on Actual Costs.		

NOTES:

- (1) No Currently Approved Rate
- (2) Cost Includes Materials, Labor and Overheads

AJO IMPROVEMENT COMPANY
WATER DEPARTMENT
Test Year Ended December 31, 2002

TYPICAL BILL ANALYSIS - TREATED WATER

DESCRIPTION	WATER USAGE	BILL AT: (1)		PERCENT INCREASE
		PRESENT RATES	PROPOSED RATES	
5/8" METERS:				
	5,000	\$21.70	\$25.15	15.90%
	10,000	34.40	40.85	18.75%
	15,000	47.10	56.55	20.06%
	20,000	59.80	72.25	20.82%
	25,000	72.50	87.95	21.31%
	30,000	85.20	103.65	21.65%
	40,000	110.60	135.05	22.11%
	50,000	136.00	166.45	22.39%
Median Usage	4,400	\$20.18	\$23.27	15.32%
Average Usage	5,711	23.51	27.38	16.49%
1" METERS:				
	5,000	\$27.70	\$31.45	13.54%
	10,000	40.40	47.15	16.71%
	15,000	53.10	62.85	18.36%
	20,000	65.80	78.55	19.38%
	25,000	78.50	94.25	20.06%
	30,000	91.20	109.95	20.56%
	40,000	116.60	141.35	21.23%
	50,000	142.00	172.75	21.65%
Median Usage	6,000	\$30.24	\$34.59	14.38%
Average Usage	15,961	55.54	65.87	18.59%
2" METERS:				
	20,000	\$100.80	\$115.30	14.38%
	40,000	151.60	178.10	17.48%
	60,000	202.40	240.90	19.02%
	80,000	253.20	303.70	19.94%
	100,000	304.00	366.50	20.56%
	150,000	431.00	523.50	21.46%
	200,000	558.00	680.50	21.95%
	250,000	685.00	837.50	22.26%
Median Usage	30,000	\$126.20	\$146.70	16.24%
Average Usage	96,672	295.55	356.05	20.47%

NOTES:

(1) Excluding Revenue Taxes

**AJO IMPROVEMENT COMPANY
WATER DEPARTMENT
Test Year Ended December 31, 2002**

TYPICAL BILL ANALYSIS - UNTREATED WATER

DESCRIPTION	WATER USAGE	BILL AT: (1)		PERCENT INCREASE
		PRESENT RATES	PROPOSED RATES	
5/8" METERS:				
	20,000	\$44.00	\$46.45	5.57%
	40,000	79.00	83.45	5.63%
	60,000	114.00	120.45	5.66%
	80,000	149.00	157.45	5.67%
	100,000	184.00	194.45	5.68%
	150,000	271.50	286.95	5.69%
	200,000	359.00	379.45	5.70%
	250,000	446.50	471.95	5.70%
Average Usage	67,625	\$127.34	\$134.56	5.66%
2" METERS:				
	20,000	\$85.00	\$89.50	5.29%
	40,000	120.00	126.50	5.42%
	60,000	155.00	163.50	5.48%
	80,000	190.00	200.50	5.53%
	100,000	225.00	237.50	5.56%
	150,000	312.50	330.00	5.60%
	200,000	400.00	422.50	5.63%
	250,000	487.50	515.00	5.64%
Average Usage	656,758	\$1,199.33	\$1,267.50	5.68%
3" METERS:				
	20,000	\$135.00	\$142.00	5.19%
	40,000	170.00	179.00	5.29%
	60,000	205.00	216.00	5.37%
	80,000	240.00	253.00	5.42%
	100,000	275.00	290.00	5.45%
	150,000	362.50	382.50	5.52%
	200,000	450.00	475.00	5.56%
	250,000	537.50	567.50	5.58%
Average Usage	382,747	\$769.81	\$813.08	5.62%

NOTES:
(1) Excluding Revenue Taxes

AJO IMPROVEMENT COMPANY
WATER DEPARTMENT
Test Year Ended December 31, 2002

BILL COUNT

DESCRIPTION	BLOCK				CUMULATIVE			
	BILLS	PERCENT	GALLONS	PERCENT	BILLS	PERCENT	GALLONS	PERCENT
5/8" METERS:								
No Usage	592	4.51%	0	0.00%	592	4.51%	0	0.00%
0-1,000	1,383	10.53%	691,253	0.86%	1,975	15.04%	691,253	0.86%
1,000 - 2,000	1,546	11.77%	2,319,618	2.90%	3,521	26.81%	3,010,871	3.76%
2,000 - 3,000	1,276	9.72%	3,189,029	3.99%	4,797	36.53%	6,199,900	7.75%
3,000 - 4,000	1,425	10.85%	4,988,425	6.23%	6,222	47.38%	11,188,325	13.98%
4,000 - 5,000	1,147	8.73%	5,163,020	6.45%	7,369	56.11%	16,351,345	20.43%
5,000 - 6,000	1,033	7.87%	5,683,242	7.10%	8,402	63.98%	22,034,587	27.54%
6,000 - 7,000	812	6.18%	5,280,604	6.60%	9,214	70.16%	27,315,191	34.13%
7,000 - 8,000	620	4.72%	4,649,925	5.81%	9,834	74.88%	31,965,116	39.95%
8,000 - 9,000	570	4.34%	4,845,899	6.06%	10,404	79.22%	36,811,015	46.00%
9,000 - 10,000	463	3.53%	4,400,504	5.50%	10,867	82.75%	41,211,519	51.50%
10,000 - 12,000	748	5.70%	8,230,902	10.29%	11,615	88.44%	49,442,421	61.79%
12,000 - 14,000	399	3.04%	5,187,962	6.48%	12,014	91.48%	54,630,383	68.27%
14,000 - 16,000	257	1.96%	3,848,214	4.81%	12,271	93.44%	58,478,597	73.08%
16,000 - 18,000	242	1.84%	4,119,014	5.15%	12,513	95.28%	62,597,611	78.23%
18,000 - 20,000	214	1.63%	4,062,003	5.08%	12,727	96.91%	66,659,614	83.30%
20,000 - 25,000	135	1.03%	3,046,503	3.81%	12,862	97.94%	69,706,117	87.11%
25,000 - 30,000	114	0.87%	3,135,582	3.92%	12,976	98.80%	72,841,699	91.03%
30,000 - 40,000	107	0.81%	3,741,319	4.68%	13,083	99.62%	76,583,018	95.70%
40,000 - 50,000	36	0.27%	1,603,422	2.00%	13,119	99.89%	78,186,440	97.71%
50,000 - 60,000	7	0.05%	391,948	0.49%	13,126	99.95%	78,578,388	98.20%
60,000 - 70,000	0	0.00%	0	0.00%	13,126	99.95%	78,578,388	98.20%
70,000 - 80,000	0	0.00%	0	0.00%	13,126	99.95%	78,578,388	98.20%
80,000 - 90,000	0	0.00%	0	0.00%	13,126	99.95%	78,578,388	98.20%
90,000 - 100,000	0	0.00%	0	0.00%	13,126	99.95%	78,578,388	98.20%
Over 100,000	7	0.05%	1,443,057	1.80%	13,133	100.00%	80,021,445	100.00%
Total	13,133	100.00%	80,021,445	100.00%				

AJO IMPROVEMENT COMPANY
WATER DEPARTMENT
Test Year Ended December 31, 2002

BILL COUNT

DESCRIPTION	BLOCK				CUMULATIVE			
	BILLS	PERCENT	GALLONS	PERCENT	BILLS	PERCENT	GALLONS	PERCENT
1" METERS:								
No Usage	20	7.87%	0	0.00%	20	7.87%	0	0.00%
0-1,000	20	7.87%	10,106	0.25%	40	15.75%	10,106	0.25%
1,000 - 2,000	27	10.63%	40,425	0.99%	67	26.38%	50,531	1.24%
2,000 - 3,000	20	7.87%	50,531	1.24%	87	34.25%	101,062	2.47%
3,000 - 4,000	20	7.87%	70,743	1.73%	107	42.13%	171,805	4.20%
4,000 - 5,000	7	2.76%	30,319	0.74%	114	44.88%	202,124	4.95%
5,000 - 6,000	13	5.12%	74,112	1.81%	127	50.00%	276,236	6.76%
6,000 - 7,000	13	5.12%	87,587	2.14%	140	55.12%	363,823	8.90%
7,000 - 8,000	7	2.76%	50,531	1.24%	147	57.87%	414,354	10.14%
8,000 - 9,000	7	2.76%	57,268	1.40%	154	60.63%	471,622	11.54%
9,000 - 10,000	0	0.00%	0	0.00%	154	60.63%	471,622	11.54%
10,000 - 12,000	7	2.76%	74,112	1.81%	161	63.39%	545,734	13.36%
12,000 - 14,000	0	0.00%	0	0.00%	161	63.39%	545,734	13.36%
14,000 - 16,000	27	10.63%	404,248	9.89%	188	74.02%	949,982	23.25%
16,000 - 18,000	0	0.00%	0	0.00%	188	74.02%	949,982	23.25%
18,000 - 20,000	0	0.00%	0	0.00%	188	74.02%	949,982	23.25%
20,000 - 25,000	7	2.76%	151,593	3.71%	195	76.77%	1,101,575	26.96%
25,000 - 30,000	13	5.12%	370,560	9.07%	208	81.89%	1,472,135	36.03%
30,000 - 40,000	13	5.12%	471,622	11.54%	221	87.01%	1,943,757	47.57%
40,000 - 50,000	7	2.76%	303,186	7.42%	228	89.76%	2,246,943	54.99%
50,000 - 60,000	20	7.87%	1,111,681	27.21%	248	97.64%	3,358,624	82.19%
60,000 - 70,000	0	0.00%	0	0.00%	248	97.64%	3,358,624	82.19%
70,000 - 80,000	0	0.00%	0	0.00%	248	97.64%	3,358,624	82.19%
80,000 - 90,000	0	0.00%	0	0.00%	248	97.64%	3,358,624	82.19%
90,000 - 100,000	0	0.00%	0	0.00%	248	97.64%	3,358,624	82.19%
Over 100,000	6	2.36%	727,663	17.81%	254	100.00%	4,086,287	100.00%
Total	254	100.00%	4,086,287	100.00%				

**AJO IMPROVEMENT COMPANY
WATER DEPARTMENT
Test Year Ended December 31, 2002**

BILL COUNT

DESCRIPTION	BLOCK				CUMULATIVE			
	BILLS	PERCENT	GALLONS	PERCENT	BILLS	PERCENT	GALLONS	PERCENT
2" METERS:								
No Usage	16	7.73%	0	0.00%	16	7.73%	0	0.00%
0 - 5,000	45	21.74%	223,971	0.67%	61	29.47%	223,971	0.67%
5,000 - 20,000	19	9.18%	290,294	0.87%	80	38.65%	514,265	1.54%
20,000 - 40,000	32	15.46%	945,882	2.83%	112	54.11%	1,460,147	4.36%
40,000 - 60,000	24	11.59%	1,217,647	3.64%	136	65.70%	2,677,794	8.00%
60,000 - 80,000	24	11.59%	1,704,706	5.10%	160	77.29%	4,382,500	13.10%
80,000 - 100,000	6	2.90%	547,941	1.64%	166	80.19%	4,930,441	14.74%
100,000 - 120,000	0	0.00%	0	0.00%	166	80.19%	4,930,441	14.74%
120,000 - 140,000	0	0.00%	0	0.00%	166	80.19%	4,930,441	14.74%
140,000 - 160,000	0	0.00%	0	0.00%	166	80.19%	4,930,441	14.74%
160,000 - 180,000	0	0.00%	0	0.00%	166	80.19%	4,930,441	14.74%
180,000 - 200,000	0	0.00%	0	0.00%	166	80.19%	4,930,441	14.74%
200,000 - 250,000	0	0.00%	0	0.00%	166	80.19%	4,930,441	14.74%
250,000 - 300,000	0	0.00%	0	0.00%	166	80.19%	4,930,441	14.74%
300,000 - 400,000	0	0.00%	0	0.00%	166	80.19%	4,930,441	14.74%
400,000 - 500,000	0	0.00%	0	0.00%	166	80.19%	4,930,441	14.74%
Over 500,000	41	19.81%	28,522,768	85.26%	207	100.00%	33,453,209	100.00%
Total	207	100.00%	33,453,209	100.00%				

AJO IMPROVEMENT COMPANY
WATER DEPARTMENT
Test Year Ended December 31, 2002

BILL COUNT

DESCRIPTION	BLOCK				CUMULATIVE			
	BILLS	PERCENT	GALLONS	PERCENT	BILLS	PERCENT	GALLONS	PERCENT
3" METERS:								
No Usage	6	7.14%	0	0.00%	6	7.14%	0	0.00%
0 - 5,000	6	7.14%	30,357	0.15%	12	14.29%	30,357	0.15%
5,000 - 20,000	0	0.00%	0	0.00%	12	14.29%	30,357	0.15%
20,000 - 40,000	6	7.14%	182,143	0.88%	18	21.43%	212,500	1.02%
40,000 - 60,000	18	21.43%	910,714	4.38%	36	42.86%	1,123,214	5.40%
60,000 - 80,000	6	7.14%	425,000	2.04%	42	50.00%	1,548,214	7.45%
80,000 - 100,000	0	0.00%	0	0.00%	42	50.00%	1,548,214	7.45%
100,000 - 120,000	0	0.00%	0	0.00%	42	50.00%	1,548,214	7.45%
120,000 - 140,000	6	7.14%	789,286	3.80%	48	57.14%	2,337,500	11.24%
140,000 - 160,000	6	7.14%	910,714	4.38%	54	64.29%	3,248,214	15.62%
160,000 - 180,000	6	7.14%	1,032,143	4.96%	60	71.43%	4,280,357	20.59%
180,000 - 200,000	0	0.00%	0	0.00%	60	71.43%	4,280,357	20.59%
200,000 - 250,000	0	0.00%	0	0.00%	60	71.43%	4,280,357	20.59%
250,000 - 300,000	6	7.14%	1,669,643	8.03%	66	78.57%	5,950,000	28.62%
300,000 - 400,000	0	0.00%	0	0.00%	66	78.57%	5,950,000	28.62%
400,000 - 500,000	0	0.00%	0	0.00%	66	78.57%	5,950,000	28.62%
Over 500,000	18	21.43%	14,842,173	71.38%	84	100.00%	20,792,173	100.00%
Total	84	100.00%	20,792,173	100.00%				

AJO IMPROVEMENT COMPANY
WATER DEPARTMENT
Test Year Ended December 31, 2002

BILL COUNT

DESCRIPTION	BLOCK				CUMULATIVE			
	BILLS	PERCENT	GALLONS	PERCENT	BILLS	PERCENT	GALLONS	PERCENT
4" METERS:								
No Usage	0	0.00%	0	0.00%	0	0.00%	0	0.00%
0 - 500,000	10	41.67%	2,589,000	3.83%	10	41.67%	2,589,000	3.83%
500,000 - 1,000,000	2	8.33%	1,039,000	1.54%	12	50.00%	3,628,000	5.36%
1,000,000 - 2,000,000	0	0.00%	0	0.00%	12	50.00%	3,628,000	5.36%
2,000,000 - 3,000,000	0	0.00%	0	0.00%	12	50.00%	3,628,000	5.36%
3,000,000 - 4,000,000	1	4.17%	3,963,000	5.86%	13	54.17%	7,591,000	11.22%
4,000,000 - 5,000,000	4	16.67%	17,348,000	25.64%	17	70.83%	24,939,000	36.85%
5,000,000 - 6,000,000	5	20.83%	28,262,000	41.76%	22	91.67%	53,201,000	78.62%
6,000,000 - 7,000,000	1	4.17%	6,169,000	9.12%	23	95.83%	59,370,000	87.73%
Over 7,000,000	1	4.17%	8,300,822	12.27%	24	100.00%	67,670,822	100.00%
Total	24	100.00%	67,670,822	100.00%				

**WASTEWATER
SERVICE**

AJO IMPROVEMENT COMPANY
SEWER DEPARTMENT
Test Year Ended December 31, 2002

COMPUTATION OF INCREASE IN GROSS REVENUE REQUIREMENTS

DESCRIPTION	ORIGINAL COST	RCND
Adjusted Rate Base (1)	\$217,822	\$217,822
Adjusted Operating Income (2)	(68,533)	(68,533)
Current Rate of Return	-31.46%	-31.46%
	<u>FAIR VALUE</u>	
Fair Value Rate Base (50/50)	\$217,822	
Required Rate of Return	10.000%	
Operating Income Requirement	\$21,782	
Operating Income Deficiency	\$90,315	
Gross Revenue Conversion Factor (3)	1.7308	
Increase in Gross Revenue Requirements	\$156,315	
Indicated Percentage Increase (4)	163.67%	

Supporting Schedules:

- (1) Schedule B-1
- (2) Schedule C-1
- (3) Schedule C-3
- (4) Schedule H-1

**AJO IMPROVEMENT COMPANY
SEWER DEPARTMENT
Test Year Ended December 31, 2002**

SUMMARY OF REVENUES AT PRESENT AND PROPOSED RATES

DESCRIPTION	REVENUES IN THE TEST YEAR		INCREASE	
	PRESENT	PROPOSED	AMOUNT	PERCENT
Residential	\$73,908	\$202,302	\$128,394	173.72%
Commercial	15,888	43,489	27,601	173.72%
Other Sewer Revenues	5,709	6,029	320	5.61%
Total Sewer Revenues	\$95,505	\$251,820	\$156,315	163.67%

AJO IMPROVEMENT COMPANY
SEWER DEPARTMENT
Test Year Ended December 31, 2002

ORIGINAL COST AND RCND RATE BASE ELEMENTS

DESCRIPTION	ORIGINAL COST RATE BASE (1)	RCND RATE BASE (2)
Gross Utility Plant In Service	\$537,455	\$537,455
Less: Accumulated Depreciation	<u>344,072</u>	<u>344,072</u>
Net Utility Plant In Service	\$193,383	\$193,383
Plus:		
Working Capital Allowance	24,439	24,439
Total Rate Base	<u><u>\$217,822</u></u>	<u><u>\$217,822</u></u>

Supporting Schedules & Notes:

- (1) Schedules B-2, B-5 and E-5
- (2) LPSCO Requests a Waiver on the Development of RCND Rate Base

**AJO IMPROVEMENT COMPANY
SEWER DEPARTMENT
Test Year Ended December 31, 2002**

PRO FORMA ADJUSTMENTS TO ORIGINAL COST RATE BASE

DESCRIPTION	ACTUAL AT 12-31-02	PRO FORMA ADJUSTMENTS	ADJUSTED AMOUNT
Gross Utility Plant In Service	\$537,455		\$537,455
Less: Accumulated Depreciation	339,665	4,407	344,072
Net Utility Plant In Service	\$197,790	(\$4,407)	\$193,383
Total Rate Base Adjustments	<u>\$197,790</u>	<u>(\$4,407)</u>	<u>\$193,383</u>

AJO IMPROVEMENT COMPANY
SEWER DEPARTMENT
Test Year Ended December 31, 2002

CALCULATION OF WORKING CAPITAL ALLOWANCE

DESCRIPTION	AMOUNT
Adjusted Pumping Power	\$1,183
Adjusted O&M	\$195,120
Working Capital Calculation:	
1/24 Pumping Power	\$49
1/8 O&M	\$24,390
Total Working Capital Allowance	\$24,439

**AJO IMPROVEMENT COMPANY
SEWER DEPARTMENT
Test Year Ended December 31, 2002**

OPERATING INCOME STATEMENT

DESCRIPTION	ACTUAL AT 12-31-02 (1)	PRO FORMA (2) ADJUSTMENTS	ADJUSTED AMOUNT
Revenues:			
Revenues From Sewer Service	\$88,765	\$1,031	\$89,796
Other Sewer Revenues	5,709	0	5,709
Total Revenues	94,474	1,031	95,505
Operating Expenses:			
Salaries & Wages	28,167	845	29,012
Employee Pensions & Benefits	19,166	575	19,741
Purchased Power	1,183		1,183
Outside Services - Legal & Consulting	4,343		4,343
Outside Services - Oper. & Maint.	111,106	(7,469)	103,637
Rental Expense	15,600		15,600
Materials & Supplies	7,767		7,767
General & Administrative	9,125	5,895	15,020
Depreciation	3,558	4,407	7,965
Property Taxes	9,449	(3,874)	5,575
Income Taxes	(23,361)	(22,444)	(45,805)
Total Operating Expenses	186,103	(22,065)	164,038
Operating Income	(\$91,629)	\$23,096	(\$68,533)

Supporting Schedules:

- (1) Schedule E-6
- (2) Schedule C-2

AJO IMPROVEMENT COMPANY
SEWER DEPARTMENT
Test Year Ended December 31, 2002

PRO FORMA ADJUSTMENTS TO OPERATING INCOME STATEMENT

DESCRIPTION	AMOUNT
OPERATING REVENUES - SEWER SERVICES::	
Reconciliation to Bill Count	\$1,031
SALARIES & WAGES:	
Annualization of Salary & Wage Expense For 3% Increase	\$845
FRINGE BENEFITS:	
Annualization of Fringe Benefit Expense On S&W Increase	\$575
OUTSIDE SERVICES - OPERATION & MAINTENANCE:	
Start-Up Expenses - Wastewater Treatment Plant	(\$11,204)
Annual Amortization Over Three Years	\$3,735
Pro Forma Adjustment	(\$7,469)
GENERAL & ADMINISTRATIVE:	
Three Year Amortization of \$45,000 Rate Case Exp. - 50% to Sewer Dept.	\$7,500
Normalization of Allowance for Doubtful Accounts	(1,605)
Net Pro Forma Adjustment - General & Administrative Expense	\$5,895
DEPRECIATION:	
Annual Depreciation at ACC Staff Rates	\$7,965
Water Depreciation Per Books	(3,558)
Pro Forma Adjustment - Depreciation	\$4,407
PROPERTY TAXES:	
Property Taxes Per ADOR Formula	\$5,575
Property Taxes Per Books	(9,449)
Pro Forma Adjustment - Property Taxes	(\$3,874)
INCOME TAXES:	
Income Taxes on Pro Forma Adjustments:	
Revenues	\$1,031
Expenses	379
Net Pro Forma Operating Income Adjustment Before Taxes	\$652
Income Taxes @ 38.598%	252
Adjustment to Book Income Taxes Based On 2002 Taxable Income	(22,696)
Net Pro Forma Adjustment to Income Taxes	(\$22,444)

**AJO IMPROVEMENT COMPANY
SEWER DEPARTMENT
Test Year Ended December 31, 2002**

SUMMARY OF SEWER REVENUES AT PRESENT AND PROPOSED RATES

DESCRIPTION	REVENUES IN THE TEST YEAR		INCREASE	
	PRESENT	PROPOSED	AMOUNT	PERCENT
Residential	\$73,908	\$202,302	\$128,394	173.72%
Commercial & Municipal	15,888	43,489	27,601	173.72%
Other Sewer Revenues	5,709	6,029	320	5.61%
Total Sewer Revenues	<u>\$95,505</u>	<u>\$251,820</u>	<u>\$156,315</u>	<u>163.67%</u>

**AJO IMPROVEMENT COMPANY
SEWER DEPARTMENT
Test Year Ended December 31, 2002**

PROPOSED CHANGES IN SEWER RATES

DESCRIPTION	PRESENT RATE	PROPOSED RATE
Residential Service - Per Month	\$6.08	\$16.64
Small Commercial:		
Per Unit Per Month	\$6.08	\$21.91
Additional Per Toilet Fixture	1.53	None
Restaurants With Dishwashers	\$18.43	\$50.44
Additional Monthly Commercial Charges:		
Laundromats - Per Washing Machine	\$2.93	\$5.09
Wash Racks - Per Rack	\$2.93	\$5.09
Residential Equivalents (REU):		
Industrial & Commercial - Per REU	\$6.08	\$16.64
Schools - Per REU	\$6.08	\$16.64

**AJO IMPROVEMENT COMPANY
SEWER DEPARTMENT
Test Year Ended December 31, 2002**

PROPOSED CHANGES IN OTHER RATES & CHARGES

DESCRIPTION	PRESENT RATE	PROPOSED RATE
SERVICE CHARGES:		
Establishment of Service:		
Regular Hours	\$25.00	No Change
After Hours	NR (1)	\$40.00
Re-Establishment of Service Within 12 Months:		
Monthly Minimum Times Months Disconnected for Both Water and Sewer Service (R14-2-403)		No Change No Change
Re-Connection of Service:		
Regular Hours	\$10.00	\$50.00
After Hours	NR (1)	\$65.00
NSF Check Charge	\$10.00	\$20.00
Late Charge	1 1/2% Per Mo.	No Change
Deferred Payment Finance Charge	1 1/2% Per Mo.	No Change
Service Calls - Per Hour:		
After Hours Only	\$25.00	\$40.00
Deposit Requirements	ACC Rule R14-2-403B	No Change
Deposit Interest	ACC Rule R14-2-403B	3.50%

NOTE:

(1) No Currently Approved Rate

**AJO IMPROVEMENT COMPANY
SEWER DEPARTMENT
Test Year Ended December 31, 2002**

TYPICAL BILL ANALYSIS

DESCRIPTION	TYPE OF SERVICE	BILL AT: (1)		PERCENT INCREASE
		PRESENT RATES	PROPOSED RATES	
Residential	Flat Rate	\$6.08	\$16.64	173.68%
Small Commercial (2)	Flat Rate	\$8.00	\$21.91	173.88%
Restaurants (3)	Flat Rate	\$12.35	\$33.80	173.68%
Laundromat (4)	Flat Rate	\$70.54	\$193.08	173.72%

NOTES:

- (1) Excluding Revenue Taxes
- (2) Current Rate is \$6.08 Plus Extra Charge Per Toilet of \$1.53 (Avg. of 1.25 Per Commercial Cust.)
- (3) Restaurants With Dishwashers & Garbage Disposals
- (4) Laundromat With 22 Washers

**TOTAL
COMPANY**

**AJO IMPROVEMENT COMPANY
TOTAL COMPANY
Test Year Ended December 31, 2002**

SUMMARY RESULTS OF OPERATIONS

DESCRIPTION	YEAR ENDED (1)				PROJECTED YEAR (3)	
	12-31-00	12-31-01	12-31-02	12-31-02 (2)	PRESENT RATES	PROPOSED RATES
Operating Revenues	\$1,668,602	\$1,969,709	\$2,021,074	\$2,020,720	\$2,021,074	\$2,287,072
Operating Expenses	1,835,299	1,750,284	2,318,888	2,232,393	2,246,547	2,355,934
Operating Income (Loss)	(166,697)	219,425	(297,814)	(211,673)	(225,473)	(68,862)
Interest Expense	31,200	31,200	31,200	31,200	31,200	31,200
Other (Income) Expense	(103,166)	(5,140)	1,601,539	1,601,539	0	0
Net Income (Loss)	<u>(\$94,731)</u>	<u>\$193,365</u>	<u>(\$1,930,553)</u>	<u>(\$1,844,412)</u>	<u>(\$256,673)</u>	<u>(\$100,062)</u>
Return on Average Capital	-6.34%	7.74%	-13.55%	-9.45%	-17.81%	-5.66%
Return on Y/E Capital	-6.25%	7.31%	-21.36%	-14.30%	-19.82%	-5.32%
Return on Average Equity	-4.09%	7.67%	-102.41%	-95.65%	-26.90%	-11.07%
Return on Y/E Equity	-4.02%	7.19%	-178.34%	-157.82%	-31.08%	-10.18%

Supporting Schedules:

- (1) Schedule E-2
- (2) Adjusted Test Year - Schedule C-1
- (3) Schedule F-1

**AJO IMPROVEMENT COMPANY
TOTAL COMPANY
Test Year Ended December 31, 2002**

SUMMARY OF CAPITAL STRUCTURE

DESCRIPTION	YEAR ENDED (1)				PROJECTED YEAR	
	12-31-00	12-31-01	12-31-02	12-31-02 (2)	PRESENT RATES	PROPOSED RATES
Long Term Debt	\$311,963	\$311,963	\$311,963	\$311,963	\$311,963	\$311,963
Common Equity	2,356,425	2,687,722	1,082,534	1,168,675	825,861	982,472
Total Capital	<u>\$2,668,388</u>	<u>\$2,999,685</u>	<u>\$1,394,497</u>	<u>\$1,480,638</u>	<u>\$1,137,824</u>	<u>\$1,294,435</u>
Capitalization Ratios:						
Long Term Debt	11.69%	10.40%	22.37%	21.07%	27.42%	24.10%
Common Equity	88.31%	89.60%	77.63%	78.93%	72.58%	75.90%
Total Capital	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>

Supporting Schedules:
(1) Schedule E-2
(2) Adjusted Test Year

AJO IMPROVEMENT COMPANY
TOTAL COMPANY
Test Year Ended December 31, 2002

CONSTRUCTION EXPENDITURES AND GROSS UTILITY PLANT IN SERVICE

YEAR	CONSTRUCTION EXPENDITURES (1)	NET PLANT PLACED IN SERVICE (2)	GROSS UTILITY PLANT IN SERVICE
2000	\$1,577,310	\$243,409	\$3,209,874
2001	\$357,981	\$0	\$3,209,874
2002	\$20,793	\$220,793	\$3,430,667
2003	\$50,000	\$50,000	\$3,480,667
2004	\$245,000	\$245,000	\$3,725,667
2005	\$420,000	\$420,000	\$4,145,667

Supporting Schedules:

- (1) Schedule F-3
- (2) Schedule E-5

AJO IMPROVEMENT COMPANY
WATER DEPARTMENT
Test Year Ended December 31, 2002

CONSTRUCTION EXPENDITURES AND GROSS UTILITY PLANT IN SERVICE

YEAR	CONSTRUCTION EXPENDITURES (1)	NET PLANT PLACED IN SERVICE (2)	GROSS UTILITY PLANT IN SERVICE
2000	\$77,691	\$77,691	\$1,525,998
2001	\$0	\$0	\$1,525,998
2002	\$1,348	\$1,348	\$1,527,346
2003	\$0	\$0	\$1,527,346
2004	\$195,000	\$195,000	\$1,722,346
2005	\$370,000	\$370,000	\$2,092,346

Supporting Schedules:
(1) Schedule F-3
(2) Schedule E-5

AJO IMPROVEMENT COMPANY
SEWER DEPARTMENT
Test Year Ended December 31, 2002

CONSTRUCTION EXPENDITURES AND GROSS UTILITY PLANT IN SERVICE

YEAR	CONSTRUCTION EXPENDITURES (1)	NET PLANT PLACED IN SERVICE (2)	GROSS UTILITY PLANT IN SERVICE
2000	\$1,345,153	\$11,252	\$336,107
2001	\$357,981	\$0	\$336,107
2002	\$1,348	\$201,348	\$537,455
2003	\$0	\$0	\$537,455
2004	\$0	\$0	\$537,455
2005	\$0	\$0	\$537,455

Supporting Schedules:

- (1) Schedule F-3
- (2) Schedule E-5

AJO IMPROVEMENT COMPANY
ELECTRIC DEPARTMENT
Test Year Ended December 31, 2002

CONSTRUCTION EXPENDITURES AND GROSS UTILITY PLANT IN SERVICE

<u>YEAR</u>	<u>CONSTRUCTION EXPENDITURES (1)</u>	<u>NET PLANT PLACED IN SERVICE (2)</u>	<u>GROSS UTILITY PLANT IN SERVICE</u>
2000	\$154,466	\$154,466	\$1,347,769
2001	\$0	\$0	\$1,347,769
2002	\$18,097	\$18,097	\$1,365,866
2003	\$50,000	\$50,000	\$1,415,866
2004	\$50,000	\$50,000	\$1,465,866
2005	\$50,000	\$50,000	\$1,515,866

Supporting Schedules:

- (1) Schedule F-3
- (2) Schedule E-5

AJO IMPROVEMENT COMPANY
TOTAL COMPANY
Test Year Ended December 31, 2002

COMPUTATION OF GROSS REVENUE CONVERSION FACTOR

DESCRIPTION	PERCENTAGE
Federal Income Taxes	31.6300%
State Income Taxes	6.9680%
Total Income Taxes	38.5980%
Incremental Property Taxes	3.6244%
Total Taxes	42.2224%
Gross Revenue Conversion Factor = $1/1 - \text{Tax Percentage} =$	1.7308

**AJO IMPROVEMENT COMPANY
TOTAL COMPANY
Test Year Ended December 31, 2002**

SUMMARY COST OF CAPITAL

DESCRIPTION	12-31-02 AMOUNT	PERCENT	COST RATE	WEIGHTED COST RATE
Long Term Debt	\$311,963	19.91%	10.00%	1.991%
Common Equity	1,255,274	80.09%	10.00%	8.009%
Total Capital	<u>\$1,567,237</u>	<u>100.00%</u>		<u>10.000%</u>

AJO IMPROVEMENT COMPANY
TOTAL COMPANY
Test Year Ended December 31, 2002

COMPARATIVE BALANCE SHEETS
ASSETS

DESCRIPTION	BALANCE AT		
	12-31-02	12-31-01	12-31-00
Utility Plant:			
Gross Utility Plant In Service	\$3,443,178	\$3,233,231	\$3,233,231
Less: Accumulated Depreciation	2,378,634	2,326,009	2,256,867
Net Utility Plant In Service	\$1,064,544	\$907,222	\$976,364
CWIP	0	1,798,738	1,440,757
Total Utility Plant	\$1,064,544	\$2,705,960	\$2,417,121
Current Assets:			
Cash & Equivalents	\$124,204	\$150,172	\$208,230
Accounts Receivable - Net of AFDA	262,860	223,120	189,049
Due From Affiliates	401,297	0	20,157
Supplies Inventories & Prepays	2,226	2,931	8,994
Total Current Assets	\$790,587	\$376,223	\$426,430
Deferred Debits:			
Purchased Power Undercollection	\$973,542	\$1,006,883	\$579,042
Deferred Income Taxes	212,631	212,631	212,631
Total Deferred Debits	\$1,186,173	\$1,219,514	\$791,673
Total Assets	\$3,041,304	\$4,301,697	\$3,635,224

**AJO IMPROVEMENT COMPANY
TOTAL COMPANY
Test Year Ended December 31, 2002**

**COMPARATIVE BALANCE SHEETS
LIABILITIES AND EQUITY**

DESCRIPTION	BALANCE AT		
	12-31-02	12-31-01	12-31-00
Capitalization:			
Long Term Debt	\$311,963	\$311,963	\$311,963
Equity:			
Common Stock	\$392,000	\$392,000	\$392,000
Paid In Capital	3,144,546	3,144,546	3,144,546
Retained Earnings	(2,454,012)	(848,824)	(1,180,121)
Total Equity	<u>1,082,534</u>	<u>2,687,722</u>	<u>2,356,425</u>
Total Capital	\$1,394,497	\$2,999,685	\$2,668,388
Other Liabilities:			
Due to Affiliates	\$1,451,448	\$1,376,063	\$681,596
Current Liabilities			
Accounts Payable	\$175,748	(\$84,935)	\$261,153
Accrued Benefits Payable	2,112	1,778	16
Accrued Taxes	25,609	17,216	14,875
Other Accrued Expenses (Credits)	(8,110)	(8,110)	9,196
Total Current Liabilities	<u>\$195,359</u>	<u>(\$74,051)</u>	<u>\$285,240</u>
Total Liabilities and Equity	<u>\$3,041,304</u>	<u>\$4,301,697</u>	<u>\$3,635,224</u>

**AJO IMPROVEMENT COMPANY
TOTAL COMPANY
Test Year Ended December 31, 2002
COMPARATIVE INCOME STATEMENTS**

DESCRIPTION	YEAR ENDED (1)		
	12-31-02	12-31-01	12-31-00
Operating Revenues:			
Electric	\$1,283,571	\$1,258,424	\$958,561
Water	643,029	618,172	616,403
Sewer	94,474	93,113	93,638
Total Operating Revenues	2,021,074	1,969,709	1,668,602
Operating Expenses:			
Salaries & Wages	84,871	122,536	164,899
Employee Benefits	55,934	69,628	85,618
Purchased Power	1,130,319	458,829	821,430
Purchased Water	548,982	543,133	484,904
Outside Services - Legal & Eng.	29,219	26,008	17,008
Outside Services - Oper. & Maint.	267,861	137,398	128,015
Rental Expense	28,899	18,000	18,000
Materials & Supplies	38,530	50,065	59,874
General & Administrative	78,085	51,889	21,026
Depreciation & Amortization	63,471	69,142	79,523
Property Taxes	68,647	65,723	60,090
Income Taxes	(75,930)	137,933	(105,088)
Total Operating Expenses	2,318,888	1,750,284	1,835,299
Operating Income (Loss)	(\$297,814)	\$219,425	(\$166,697)
Other (Income) & Expense:			
Interest Income	0	(5,140)	(148,408)
Interest Expense	31,200	31,200	31,200
Other (2)	1,601,539	0	45,242
Total Other Income & Expense	1,632,739	26,060	(71,966)
Net Income (Loss)	<u>(\$1,930,553)</u>	<u>\$193,365</u>	<u>(\$94,731)</u>

Supporting Schedules:

(1) Schedule E-6

(2) Ajo Improvement Company Wrote-Down \$1,601,539 of New WWTP Assets in 2002

**AJO IMPROVEMENT COMPANY
WATER DEPARTMENT
Test Year Ended December 31, 2002**

DETAIL OF UTILITY PLANT

DESCRIPTION	BALANCE AT 12-31-02	NET ADDITIONS	BALANCE 12-31-01
Water Treatment Equipment	\$644,369	\$0	\$644,369
Storage Tanks	194,594	0	194,594
Transmission & Distribution Mains	487,756	0	487,756
Services	72,768	0	72,768
Meters & Meter Installations	25,265	0	25,265
Hydrants	23,555	0	23,555
Office Furniture & Equipment	1,348	1,348	0
Transportation Equipment	27,487	0	27,487
Total Gross Utility Plant In Service	\$1,477,142	\$1,348	\$1,475,794
Accumulated Depreciation	1,421,455	28,326	1,393,129
Net Utility Plant In Service	\$55,687	(\$26,978)	\$82,665

**AJO IMPROVEMENT COMPANY
SEWER DEPARTMENT
Test Year Ended December 31, 2002**

DETAIL OF UTILITY PLANT

DESCRIPTION	BALANCE AT 12-31-02	NET ADDITIONS	BALANCE 12-31-01
Oxidation Ponds/Treatment Facilities	\$231,085	\$200,000	\$31,085
Collection Sewers	150,376	0	150,376
Manholes	23,774	0	23,774
Pumping Equipment	19,444	0	19,444
Collection Services	65,920		65,920
Office Furniture & Equipment	1,348	1,348	0
Transportation Equipment	11,252	0	11,252
Tools & Shop Equipment	34,256	0	34,256
Total Gross Utility Plant In Service	\$537,455	\$201,348	\$336,107
Accumulated Depreciation	339,665	3,558	336,107
Net Utility Plant In Service	\$197,790	\$197,790	\$0

**AJO IMPROVEMENT COMPANY
ELECTRIC DEPARTMENT
Test Year Ended December 31, 2002**

COMPARATIVE OPERATING INCOME STATEMENTS

DESCRIPTION	YEAR ENDED		
	12-31-02	12-31-01	12-31-00
Operating Revenues:			
Electric Sales	\$1,278,166	\$1,252,846	\$954,287
Other Electric Revenues	5,405	5,578	4,274
Total Operating Revenues	<u>1,283,571</u>	<u>1,258,424</u>	<u>958,561</u>
Operating Expenses:			
Salaries & Wages	28,537	80,342	107,306
Employee Benefits	18,028	46,293	49,822
Purchased Power	1,129,136	458,829	820,583
Purchased Water	0	0	0
Outside Services - Legal & Eng.	21,723	25,765	16,608
Outside Services - Oper. & Maint.	70,968	21,519	30,239
Rental Expense	12,099	1,200	1,200
Materials & Supplies	13,192	24,981	32,941
General & Administrative	44,133	29,865	11,404
Depreciation	31,587	33,368	38,480
Property Taxes	24,868	23,270	24,472
Income Taxes	(22,490)	198,005	(67,396)
Total Operating Expenses	<u>1,371,781</u>	<u>943,437</u>	<u>1,065,659</u>
Operating Income	<u>(\$88,210)</u>	<u>\$314,987</u>	<u>(\$107,098)</u>

**AJO IMPROVEMENT COMPANY
WATER DEPARTMENT
Test Year Ended December 31, 2002**

COMPARATIVE OPERATING INCOME STATEMENTS

DESCRIPTION	YEAR ENDED		
	12-31-02	12-31-01	12-31-00
Operating Revenues:			
Water Sales	\$634,658	\$611,545	\$610,996
Other Water Revenues	8,371	6,627	5,407
Total Operating Revenues	643,029	618,172	616,403
Operating Expenses:			
Salaries & Wages	28,167	23,566	36,098
Employee Benefits	18,740	12,821	23,562
Purchased Power	0	0	0
Purchased Water	548,982	543,133	484,904
Outside Services - Legal & Eng.	3,153	166	184
Outside Services - Oper. & Maint.	85,787	72,498	62,974
Rental Expense	1,200	1,250	1,200
Materials & Supplies	17,571	16,663	21,129
General & Administrative	24,827	16,459	5,373
Depreciation	28,326	35,774	41,157
Property Taxes	34,330	32,097	29,082
Income Taxes	(30,079)	(52,592)	(34,592)
Total Operating Expenses	761,004	701,835	671,071
Operating Income (Loss)	(\$117,975)	(\$83,663)	(\$54,668)

**AJO IMPROVEMENT COMPANY
SEWER DEPARTMENT
Test Year Ended December 31, 2002**

COMPARATIVE OPERATING INCOME STATEMENTS

DESCRIPTION	YEAR ENDED		
	12-31-02	12-31-01	12-31-00
Operating Revenues:			
Sewer Service	\$88,765	\$87,388	\$88,822
Other Sewer Revenues	5,709	5,725	4,816
Total Operating Revenues	<u>94,474</u>	<u>93,113</u>	<u>93,638</u>
Operating Expenses:			
Salaries & Wages	28,167	18,628	21,495
Employee Benefits	19,166	10,514	12,234
Purchased Power	1,183	0	847
Purchased Water	0	0	0
Outside Services - Legal & Eng.	4,343	77	216
Outside Services - Oper. & Maint.	111,106	43,381	34,802
Rental Expense	15,600	15,550	15,600
Materials & Supplies	7,767	8,421	5,804
General & Administrative	9,125	5,565	4,249
Depreciation	3,558	0	(114)
Property Taxes	9,449	10,356	6,536
Income Taxes	(23,361)	(7,480)	(3,100)
Total Operating Expenses	<u>186,103</u>	<u>105,012</u>	<u>98,569</u>
Operating Income (Loss)	<u>(\$91,629)</u>	<u>(\$11,899)</u>	<u>(\$4,931)</u>

**AJO IMPROVEMENT COMPANY
WATER & SEWER DEPARTMENTS
Test Year Ended December 31, 2002**

OPERATING STATISTICS

DESCRIPTION	YEAR ENDED		
	12-31-02	12-31-01	12-31-00
WATER DEPARTMENT:			
Year End Customers:			
Residential	1,029	1,012	1,014
Commercial	68	64	65
Municipal	45	43	44
Average Customers:			
Residential	1,021	1,013	1,014
Commercial	66	65	66
Municipal	44	44	44
Gallons Sold:			
Residential	70,451,100	65,776,600	63,874,400
Commercial	105,040,200	106,179,100	106,922,700
Municipal	28,109,800	25,331,600	24,832,500
Revenues:			
Residential	\$290,774	\$279,112	\$273,081
Commercial	272,341	265,770	274,204
Municipal	71,544	68,339	70,696
Revenues Per Avg. Customer:			
Residential	\$285	\$276	\$269
Commercial	4,126	4,120	4,155
Municipal	1,626	1,571	1,607
SEWER DEPARTMENT:			
Year End Customers:			
Residential	1,014	1,022	1,019
Commercial	47	50	48
Municipal	28	28	28
Average Customers:			
Residential	1,018	1,021	1,019
Commercial	49	49	48
Municipal	28	28	28
Revenues:			
Residential	\$72,888	\$73,317	\$73,024
Commercial	7,772	8,341	9,049
Municipal	8,104	6,115	7,579
Revenues Per Avg. Customer:			
Residential	\$72	\$72	\$72
Commercial	160	170	189
Municipal	289	218	271

**AJO IMPROVEMENT COMPANY
WATER & SEWER DEPARTMENTS
Test Year Ended December 31, 2002**

TAXES CHARGED TO OPERATIONS

DESCRIPTION	YEAR ENDED		
	12-31-02	12-31-01	12-31-00
WATER DEPARTMENT:			
Property Taxes	\$34,330	\$32,097	\$29,082
FICA Taxes	2,207	3,027	3,937
Federal Unemployment Taxes	37	70	72
State Unemployment Taxes	2	225	239
Income Taxes	(30,079)	(52,592)	19,513
SEWER DEPARTMENT:			
Property Taxes	\$9,449	\$10,356	\$6,536
FICA Taxes	2,207	3,027	3,937
Federal Unemployment Taxes	37	70	72
State Unemployment Taxes	2	225	239
Income Taxes	(23,361)	(7,480)	(11,978)

**AJO IMPROVEMENT COMPANY
TOTAL COMPANY
Test Year Ended December 31, 2002**

NOTES TO FINANCIAL STATEMENTS

A. AUDITS:

The financial statements of Ajo Improvement Company are not audited except in connection with the audit of its parent company, Phelps Dodge Corporation.

B. ACCOUNTING METHODS:

The accrual accounting method is used by Ajo Improvement Company

C. DEPRECIATION RATES:

Straight-line depreciation rates are used for both the Water & Sewer Departments and vary by plant account.

D. ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION (AFUDC) :

AFUDC is not capitalized on construction as a general policy.

AJO IMPROVEMENT COMPANY
TOTAL COMPANY
Test Year Ended December 31, 2002

PROJECTED INCOME STATEMENTS - PRESENT AND PROPOSED RATES

DESCRIPTION	TEST YEAR 12-31-02	PROJECTED YEAR AT	
		PRESENT RATES 12-31-03	PROPOSED RATES 12-31-03
Operating Revenues:			
Electric	\$1,283,571	\$1,283,571	\$1,283,571
Water	643,029	643,029	754,402
Sewer	94,474	94,474	249,100
Total Operating Revenues	\$2,021,074	\$2,021,074	\$2,287,072
Operating Expenses:			
Salaries & Wages	84,871	87,417	87,417
Employee Benefits	55,934	57,612	57,612
Purchased Power	1,130,319	1,130,319	1,130,319
Purchased Water	548,982	548,982	548,982
Outside Services - Legal & Eng.	29,219	29,803	29,803
Outside Services - Oper. & Maint.	267,861	273,218	273,218
Rental Expense	28,899	29,477	29,477
Materials & Supplies	38,530	39,301	39,301
General & Administrative	78,085	79,647	79,647
Depreciation & Amortization	63,471	63,471	63,471
Property Taxes	68,647	68,647	79,587
Income Taxes	(75,930)	(161,347)	(62,900)
Total Operating Expenses	2,318,888	2,246,547	2,355,934
Operating Income	(297,814)	(225,473)	(68,862)
Other (Income) & Expense:			
Interest Income	0	0	0
Interest Expense	31,200	31,200	31,200
Other	1,601,539	0	0
Total Other Income & Expense	1,632,739	31,200	31,200
Net Income	<u>(\$1,930,553)</u>	<u>(\$256,673)</u>	<u>(\$100,062)</u>

**AJO IMPROVEMENT COMPANY
TOTAL COMPANY
Test Year Ended December 31, 2002**

PROJECTED CONSTRUCTION REQUIREMENTS

DESCRIPTION	ACTUAL 12-31-02	PROJECTED		
		2003	2004	2005
ELECTRIC DEPARTMENT:				
Distribution System Improvements	\$16,749	\$50,000	\$50,000	\$50,000
Computer System	1,348			
Total Electric Department	\$18,097	\$50,000	\$50,000	\$50,000
WATER DEPARTMENT:				
Water Storage Improvements			\$50,000	
Water Treatment Plant Improvements			75,000	300,000
Water Distribution Line Replacements			70,000	70,000
Computer System	1,348			
Total Water Department	\$1,348	\$0	\$195,000	\$370,000
SEWER DEPARTMENT:				
Sewer Treatment Plant	\$23,595			
Computer System	1,348			
Total Sewer Department	\$24,943	\$0	\$0	\$0
TOTAL COMPANY	\$44,388	\$50,000	\$245,000	\$420,000

**AJO IMPROVEMENT COMPANY
TOTAL COMPANY
Test Year Ended December 31, 2002**

KEY ASSUMPTIONS SUPPORTING THE DEVELOPMENT OF PROJECTIONS

DESCRIPTION	FACTOR
A. REVENUES & EXPENSES - PRESENT RATES: Small Increases, 2% to 3%, Expected in Operating Expenses	
B. OTHER INCOME AND EXPENSE: No Change From Test Year Amounts	
C. REVENUES - PROPOSED RATES: Water Revenues - Percentage Increase Sewer Revenues - Percentage Increase	17% 164%
D. INCOME TAXES: Incremental Income Tax Rate	38.5980%

BEFORE THE ARIZONA CORPORATION COMMISSION



COMMISSIONERS

**MARC SPITZER, CHAIRMAN
WILLIAM A. MUNDELL
JEFF HATCH-MILLER
MIKE GLEASON
KRISTIN K. MAYES**

IN THE MATTER OF THE APPLICATION OF
AJO IMPROVEMENT COMPANY FOR RATE
ADJUSTMENTS IN ITS WATER AND
WASTEWATER RATES

Docket No. WS-01025A-03-0350

**REBUTTAL TESTIMONY
OF
DAN L. NEIDLINGER
ON BEHALF OF
AJO IMPROVEMENT COMPANY
FEBRUARY 27, 2004**

Rebuttal Testimony of Dan L. Neidlinger

1

2 **Q: PLEASE STATE YOUR NAME, ADDRESS AND OCCUPATION**

3 A: My name is Dan L. Neidlinger. My business address is 3020 North 17th Drive, Phoenix,
4 Arizona. I am President of Neidlinger & Associates, Ltd., a consulting firm specializing in
5 utility rate economics.

6 **Q: PLEASE DESCRIBE YOUR PROFESSIONAL QUALIFICATIONS AND**
7 **EXPERIENCE.**

8 A: A summary of my professional qualifications and experience is included in the attached
9 Statement of Qualifications. In addition to the Arizona Corporation Commission
10 ("ACC"), I have presented expert testimony before regulatory commissions and agencies
11 in Alaska, California, Colorado, Guam, Idaho, New Mexico, Nevada, Texas, Utah,
12 Wyoming and the Province of Alberta, Canada.

13 **Q: ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?**

14 A: I am appearing on behalf of Ajo Improvement Company ("AIC" or the "Company"), the
15 applicant in this case.

16 **Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

17 A: The purpose of my testimony is to rebut certain portions of the direct testimony of Ms.
18 Crystal Brown, ACC Staff accounting and rates witness in this case. I will also provide
19 comments on the direct testimony of Ms. Sheryl Hubbard on behalf of intervenor Arizona
20 Water Company ("Arizona Water"). My rebuttal testimony addresses cost of equity
21 capital, income tax and water rate design issues.

22 **Q: DOES THE LACK OF REBUTTAL TO EVERY POSITION TAKEN OR**
23 **ADJUSTMENTS MADE BY THESE WITNESSES ON OTHER RATEMAKING**
24 **ISSUES MEAN THAT YOU AGREE WITH SUCH POSITIONS OR**
25 **ADJUSTMENTS?**

26 A: No, it does not. However, the issues I address in rebuttal have the most substantial
27 impact on AIC's revenue requirement and water rate design.

1 **Q: PLEASE PROVIDE A SUMMARY OF YOUR REBUTTAL TESTIMONY.**

2 **A:** A summary of my rebuttal testimony is as follows:

- 3 1. Staff's recommended 8.5% cost of equity is unreasonably low and is based on a
4 recent analysis for a large water company, Arizona-American Water Company, that is
5 not, by any operating or statistical measure, comparable to AIC;
- 6 2. In developing its recommended water and wastewater revenue requirements, Staff
7 used federal income tax rates that are significantly lower than the actual tax rate paid
8 by AIC. Accordingly, Staff's revenue levels will result in dollar returns for both the
9 water and wastewater departments that are well short of those recommended by Staff;
- 10 3. Staff recommends inverted block rates to encourage conservation. There is no
11 evidence to support the contention that AIC's water customers are inefficient in their
12 water use and need additional price incentives to conserve water usage;
- 13 4. Staff's recommended inverted block rates are not cost based, are improperly designed
14 and produce large intra and interclass subsidies among AIC's water customers;
- 15 5. Seasonal water rates are preferable to inverted block rates since customers generally
16 understand and react more positively to seasonal rates than to inverted block rates;
17 and
- 18 6. The rates proposed by intervenor Arizona Water are not acceptable since they do not
19 adequately cover total costs associated with 4" treated water service.

20
21 **I. COST OF EQUITY**

22 **Q: WHAT IS THE COST OF EQUITY REQUESTED IN THIS CASE?**

23 **A:** The requested cost of equity is 10% – a percentage equal to the Company's embedded
24 cost of debt.

25 **Q: WHAT IS STAFF'S RECOMMENDED COST OF EQUITY?**

26 **A:** Ms. Brown is recommending a cost of equity of 8.50%. She states, on page 5 of her
27 testimony, that this cost is based on a recent analysis for Arizona-American Water
28 Company in Docket No. WS-01303A-02-0867. Staff's proposed return on rate base is
29 8.80% or 1.20% lower than the 10% recommended by AIC. This lower rate of return

1 reduces revenue requirements for the water and wastewater departments by \$2,300 and
2 \$4,350, respectively.

3 **Q: ARE ARIZONA-AMERICAN OPERATIONS COMPARABLE TO THOSE OF**
4 **AIC?**

5 A: Certainly not. AIC serves approximately 1,200 water and wastewater customers
6 compared to the over 76,000 water and 40,000 wastewater customers served by Arizona-
7 America. Further, Arizona-American's total capital (\$289 million) is more than 200
8 times greater than that of the Company (\$1.4 million). The financial and business risks
9 confronted by these two companies are quite different. However, the Staff did not
10 address these differences in formulating its recommended cost of equity.

11 **Q: HAS STAFF RECOMMENDED EQUITY RETURNS GREATER THAN 8.5%**
12 **FOR OTHER WATER COMPANIES IN RECENT RATE PROCEEDINGS?**

13 A: Yes. In at least one other major water rate case, Arizona Water, Docket No. W-01445A-
14 02-0619, the Staff 's recommended cost of equity was 9.0%. Arizona Water is
15 admittedly much larger than AIC but closer in size to AIC than Arizona-America.
16 However, Staff gave no consideration to this analysis in determining cost of equity for
17 AIC. Accordingly, I believe that Staff's proposed 8.5% cost of equity recommendation
18 in this case is arbitrary and unreasonable.

19
20 **II. INCOME TAXES**

21 **Q: MS. BROWN CALCULATED FEDERAL INCOME TAXES FOR AIC'S WATER**
22 **AND SEWER DEPARTMENTS ON A STAND-ALONE BASIS. IS HER USE OF**
23 **THESE LOW FEDERAL INCOME TAX RATES, 16% FOR WATER AND 22%**
24 **FOR SEWER, CORRECT?**

25 A: No. AIC is a wholly-owned subsidiary of Phelps Dodge Corporation ("PD"). For federal
26 income tax purposes, the income of AIC is consolidated with the income of all of PD's
27 other operations in determining total taxable income. AIC does not file separate federal
28 income tax returns.

29 **Q: WHAT IS THE FEDERAL INCOME TAX RATE FOR PD?**

1 A: PD's federal income tax rate is 35% since its taxable income exceeds \$10 million.
2 Accordingly, the federal income tax rate for AIC is also 35% -- not 16% or 22%. The
3 federal income tax rate used in this case to determine revenue requirements was 34%.

4 **Q: DOES THE COMPANY ACTUALLY PAY FEDERAL INCOME TAXES AT A**
5 **35% RATE?**

6 A: Yes, it does. If AIC paid federal income taxes at a rate less than 35%, other operations of
7 PD would be required to pay a rate greater than 35% thereby subsidizing AIC.

8 **Q: IN THE COMPANY'S LAST RATE CASE FOR AIC'S ELECTRIC**
9 **DEPARTMENT, DOCKET NO. E-0125A-99-0564, WHAT WAS THE FEDERAL**
10 **INCOME TAX RATE USED BY STAFF?**

11 A: Staff used the correct federal income tax rate of 35%. That rate was implicitly adopted
12 by the Commission in approving the settlement reached by Staff and AIC in Decision No.
13 62764.

14 **Q: WHAT IS THE REVENUE EFFECT OF THE FEDERAL INCOME TAX**
15 **ERRORS IN THIS CASE?**

16 A: Had Staff used AIC's federal income tax rate of 35%, the gross revenue conversion factor
17 for both departments would have been 1.6537. Staff's recommended increase in water
18 revenues would be \$89,225 or \$20,392 greater than the \$68,833 increase shown on
19 Schedule CSB-1. The comparable calculation for the sewer department would have
20 provided an increase in revenues of \$161,429 or \$26,358 more than the recommended
21 \$135,071 increase. This \$46,750 shortfall in revenue requirements is significant and
22 must be corrected.

23

24

III. WATER RATE DESIGN

25 **Q: HAVE YOU REVIEWED STAFF'S RECOMMENDED WATER RATE**
26 **STRUCTURE?**

27 A: Yes. Staff is recommending monthly meter charges that are somewhat higher than those
28 proposed by the Company and inverted block rates for all commodity usage. Two
29 inverted block rates are recommended for customers receiving treated water through 5/8"

1 meters; one inverted block is recommended for all other meter sizes for both treated and
2 untreated water.

3 **Q: ARE THERE ERRORS IN STAFF'S RATE CALCULATIONS?**

4 A: Yes. The billing units used by Staff are incorrect. Moreover, for some meter sizes, Staff
5 classified commodity in the wrong rate block. As a result, Staff's proposed water rates
6 produce water revenues that are greater than its recommended revenue requirement for
7 the water department.

8 **Q: IS STAFF AWARE OF THESE ERRORS?**

9 A: Yes. Shortly after receiving Staff's report, I notified Ms. Brown of these errors. It is my
10 understanding that Staff is in the process of revising its proposed water rates.

11 **Q: WHAT IS STAFF'S RATIONALE FOR PROPOSING INVERTED BLOCK
12 RATES?**

13 A: The only rationale provided is Ms. Brown's statement on page 21 of her direct testimony,
14 at line 13, that " Staff recommends an inverted tier rate structure to encourage efficient
15 water use."

16 **Q: IS THERE ANY EVIDENCE TO SUPPORT THE CONTENTION THAT AIC'S
17 CUSTOMERS ARE INEFFICIENT IN THEIR USE OF WATER?**

18 A: No. The Company's residential customers, on average, use only 68,000 gallons of water
19 annually or 5,667 gallons per month. By any standard, this is an extremely modest level
20 of consumption for residential use. Moreover, as shown on the attached Schedule DLN-
21 1, AIC's total water sales and usage per customer over the past three years have been
22 essentially flat. Accordingly, there are no alarming upward trends in water consumption
23 that would warrant the use of inverted block rates as a conservation incentive for this
24 company.

25 **Q: IS THE COMPANY'S SERVICE TERRITORY IN AN ARIZONA
26 DEPARTMENT OF WATER RESOURCE'S ACTIVE MANAGEMENT AREA?**

27 A: No, it is not.

1 **Q: DID THE STAFF PROVIDE ANY COST JUSTIFICATION FOR ITS PROPOSED**
2 **WATER RATE STRUCTURE?**

3 A: No. The Company requested cost justification from the Staff but none was provided.
4 Although a class cost of service study was not conducted in this case, the cost of
5 purchased water is readily quantifiable at \$2.67 per thousand gallons. Purchased water
6 represents over 60% of the total cost of service for the water department. This basic
7 costing consideration was overlooked or ignored by the Staff in the design of the 5/8"
8 treated water rate. In fact, the first block of this rate does not even cover the cost of
9 purchased water. As shown on Schedule DLN-2, the proposed rate for the first 3,000
10 gallons of usage through a 5/8" meter is \$1.93 per thousand gallons or \$0.74 per thousand
11 less than the cost to AIC to purchase the water. Under this rate proposal, over 30.8
12 million gallons of water would be sold at an out-of-pocket loss to the Company of
13 \$22,800 – an absurd and improper result.

14 **Q: DOES STAFF'S RATE PROPOSAL FOR THE 5/8" METER CLASS CREATE**
15 **SIGNIFICANT CROSS-SUBSIDIES FOR RESIDENTIAL CUSTOMERS?**

16 A: Yes. The overall increase for the 5/8" meter class is 3.8%. However, approximately
17 5,385 bills, or 43% of total 5/8" meter bills, receive decreases up to 6%. As shown on
18 Ms. Brown's Schedule 19, page 1 of 10, customers with average usage of 5,861 gallons
19 receive essentially no increase and customers with a median usage of 4,275 gallons
20 receive a rate reduction of 2.7%. Under this proposed rate, the larger residential
21 customers would provide significant subsidies to those customers using less than 6,000
22 gallons per month. That could mean that a large family would be subsidizing a single
23 person household simply because they have more people in the residence.

24 **Q: DO RATE DECREASES PROVIDE CUSTOMERS WITH ANY INCENTIVE TO**
25 **CONSERVE THEIR WATER USAGE?**

26 A: No. There is no justification from either a cost or conservation standpoint for providing a
27 customer with a rate reduction for doing nothing with respect to his or her water
28 consumption.

1 **Q: ARE THERE ALSO INEQUITIES INHERENT IN THE STAFF'S PROPOSED**
2 **RATES FOR METER CLASSES LARGER THAN 5/8"?**

3 A: Yes. One can quickly conclude from the distribution of bills, by block, provided on
4 Schedule DLN-2 that the Staff did not analyze the usage characteristics of the larger
5 meter sizes when blocking the proposed rates. Bill percentages in the top tier vary
6 dramatically from 3% for 3" meters to 100% for 4" meters. The inverted rate design for
7 these meters is essentially meaningless since all bills fall into either the lower block or
8 the upper block. The bill percentages in both blocks should be comparable for all meter
9 sizes. In summary, major revisions to the blocking and pricing of Staff's rate proposals
10 are required to make them equitable to all customers.

11 **Q: WHAT IS THE EFFECT OF STAFF'S FLAWED RATE DESIGN PROPOSALS?**

12 A: In addition to the inequities within the meter class blocks, Staff's proposed rates unfairly
13 transfer the bulk of the rate increase from the 5/8" meter class to the 4" meter class.
14 Proposed increases for treated water, by meter size, are shown on Schedule DLN-3. The
15 5/8" meters account for approximately 56% of total revenues but only 13% of the total
16 revenue increase. In contrast, the 4" meters, which represent 30% of total revenues, are
17 assigned 66% of the total revenue increase. As previously discussed, these inequitable
18 disparities are largely the product of improperly designed rates.

19 **Q: ARE STAFF'S PROPOSED RATES FOR UNTREATED WATER SIMILARLY**
20 **FLAWED?**

21 A: Yes, but to a lesser extent because the proposed commodity rates for all blocks of
22 untreated water exceed the purchase cost of \$1.03 per thousand gallons.

23 **Q: ARE THERE RATE DESIGN ALTERNATIVES TO STAFF'S PROPOSED**
24 **INVERTED BLOCK RATES THAT MIGHT BE CONSIDERED IN THIS CASE?**

25 A: Yes. A logical alternative is seasonal rates. The Company's water system has a
26 demonstrable summer peak as indicated by the graph prepared by John Chelus, Staff
27 Engineer in this proceeding (see page 4 of Mr. Chelus's report). Seasonal rates, or some
28 version thereof, are used by many municipal water utilities. Seasonal rates are preferable
29 to inverted block rates because customers understand seasonal rates but have a difficult

1 time understanding or effectively benefiting from inverted block rates. It is much easier
2 for a customer to manage water usage and the resulting bill under seasonal rates than
3 under inverted block rates.

4 **Q: HAVE YOU DESIGNED SEASONAL RATES FOR CONSIDERATION IN THIS**
5 **CASE?**

6 A: Yes, I have. A seasonal rate alternative is shown on Schedule DLN-4. The summer
7 season is the six-month period of April through September. Summer rates would be
8 \$0.50 per thousand gallons greater than winter rates for treated water and \$0.18 greater
9 for untreated water. I am not recommending these rates but offer them as a preferred
10 alternative to inverted block rates should the Commission wish to inject differential
11 pricing in AIC's water rates.

12 **Q: HAVE YOU REVIEWED THE TESTIMONY OF MS. SHERYL HUBBARD ON**
13 **BEHALF OF INTERVENOR ARIZONA WATER?**

14 A: Yes. AIC sells water to Arizona Water for resale purposes. Arizona Water's annual
15 purchases are 26% of AIC's total water sales. Arizona Water is the only customer that
16 receives service through the Company's 4" treated water meter. Ms. Hubbard contends
17 that the rate proposals of both the Company and the Staff for Arizona Water are
18 excessive. In addition, she states neither rate design recognizes that Arizona Water
19 receives its water on an off-peak basis. Her recommended rate for Arizona Water is the
20 monthly service charge proposed by the Company of \$210 and a commodity charge of
21 \$2.67 per thousand gallons.

22 **Q: DO YOU AGREE?**

23 A: I do agree, as previously discussed, that the Staff's rate proposal of a 36% increase
24 imposes an excessive and unfair revenue burden on Arizona Water. I do not view the
25 Company's proposed 23% increase for Arizona Water as excessive since it is only
26 marginally greater than the overall increase of 19% sought for treated water. With
27 respect to off-peak service, the Company has not made a study of the benefits, if any, of
28 off-peak service. All water purchased by AIC is currently pumped by PD off-peak. If
29 there are benefits associated with off-peak service, they would not, in my view, approach

1 the \$0.47 per thousand gallons discount (\$30,000 in annual revenues) proposed by Ms.
2 Hubbard. Her proposed rate would provide the Company with only \$2,520 annually to
3 cover Arizona Water's share of both operating costs (other than the cost of purchased
4 water) and return on water utility plant. The Company's test year operating costs for the
5 water department, excluding purchased water, income taxes and return, were \$254,367.
6 Under Ms. Hubbard's rate proposal, Arizona Water would cover only 1% of these costs;
7 therefore, her rate proposal is unreasonably low and should be rejected. Arizona Water's
8 commodity rate should set at a level that is no less the system average rate.

9 **Q: DOES THAT CONCLUDE YOUR REBUTTAL TESTIMONY?**

10 **A:** Yes, it does.

DAN L. NEIDLINGER

SUMMARY STATEMENT OF QUALIFICATIONS

I. General:

Mr. Neidlinger is President of Neidlinger & Associates, Ltd., a Phoenix consulting firm specializing in utility rate economics and financial management. During his consulting career, he has managed and performed numerous assignments related to utility ratemaking and energy management.

II. Education:

Mr. Neidlinger was graduated from Purdue University with a Bachelor of Science degree in Electrical Engineering. He also holds a Master of Science degree in Industrial Management from Purdue's Krannert Graduate School of Management. He is a licensed Certified Public Accountant in Arizona and Ohio.

III. Consulting Experience:

Mr. Neidlinger has presented expert testimony on financial, accounting, cost of service and rate design issues in regulatory proceedings throughout the western United States involving companies from every segment of the utility industry. Testimony presented to these regulatory bodies has been on behalf of commission staffs, applicant utilities, industrial intervenors and consumer agencies. He has also testified in a number of civil litigation matters involving utility ratemaking and once served as a Special Master to a Nevada court in a lawsuit involving a Nevada public utility.

Mr. Neidlinger has performed feasibility studies related to energy management including cogeneration, self-generation, peak shaving and load-shifting analyses for clients with large electric loads. In addition, he has conducted electric and gas privatization studies for U.S. Army installations and assisted these and other consumer clients in contract negotiations with utility providers of electric, gas and wastewater service.

Mr. Neidlinger has extensive experience in the costing and pricing of utility services. During his consulting career, he has been responsible for the design and implementation of utility rates for over 30 electric, gas, water and wastewater utility clients ranging in size from 50 to 25,000 customers.

IV. Professional Affiliations:

Professional affiliations include the American Institute of Certified Public Accountants.

AJO IMPROVEMENT COMPANY
ACC DOCKET NO. WS-01025A-03-0350

Annual Water Sales - Years 2000 - 2002

DESCRIPTION	YEAR	GALLONS SOLD (000)	AVERAGE CUSTOMERS	ANNUAL GALLONS PER CUST.
TREATED WATER:				
	2000	177,237	1,110	160
	2001	177,905	1,119	159
	2002	182,946	1,115	164
UNTREATED WATER:				
	2000	18,393	13	1,415
	2001	19,383	13	1,491
	2002	20,655	14	1,475
TOTAL WATER SALES:				
	2000	195,630	1,123	174
	2001	197,288	1,132	174
	2002	203,601	1,129	180

AJO IMPROVEMENT COMPANY
ACC DOCKET NO. WS-01025A-03-0350

Effect of Staff Proposed Rates on Treated Water Bills

DESCRIPTION	STAFF RATE PER 1,000 GALLONS (1)	MARGIN (2)	TEST YEAR BILLS (3)	PERCENT OF TOTAL BILLS
TREATED WATER:				
5/8" Meters:				
First 3,000 Gallons	\$1.93	(\$0.74)	4,197	33.68%
3,000 - 14,000 Gallons	2.90	\$0.23	7,206	57.83%
Over 14,000 Gallons	3.47	\$0.80	1,058	8.49%
Total 5/8" Meters			12,461	100.00%
1" Meters:				
First 25,000 Gallons	2.90	\$0.23	175	74.15%
Over 25,000 Gallons	3.47	\$0.80	61	25.85%
Total 1" Meters			236	100.00%
2" Meters:				
First 63,000 Gallons	2.90	\$0.23	108	64.29%
Over 63,000 Gallons	3.47	\$0.80	60	35.71%
Total 2" Meters			168	100.00%
3" Meters:				
First 120,000 Gallons	2.90	\$0.23	28	96.55%
Over 120,000 Gallons	3.47	\$0.80	1	3.45%
Total 3" Meters			29	100.00%
4" Meters:				
First 180,000 Gallons	2.90	\$0.23	0	0.00%
Over 180,000 Gallons	3.47	\$0.80	12	100.00%
Total 4" Meters			12	100.00%

NOTES:

- (1) Staff Proposed Commodity Rates - Revised
- (2) Margin is the Excess Over the Purchased Cost of \$2.67 Per Thousand Gallons
- (3) Bills With Water Usage

AJO IMPROVEMENT COMPANY
ACC DOCKET NO. WS-01025A-03-0350

Proposed Increases by Meter Size Under Staff Proposed Rates
Treated Water

DESCRIPTION	REVENUES AT:		INCREASE	PERCENT OF TOTAL REVENUES (2)	PERCENT OF TOTAL INCREASE
	PRESENT RATES	STAFF PROPOSED RATES (1)			
5/8" Meters	\$306,818	\$318,494	\$11,676	55.89%	13.13%
1" Meters	14,219	17,174	2,955	2.59%	3.32%
2" Meters	54,093	68,424	14,331	9.85%	16.11%
3" Meters	8,818	10,129	1,311	1.61%	1.47%
4" Meters	164,986	223,653	58,667	30.06%	65.96%
	<u>\$548,934</u>	<u>\$637,874</u>	<u>\$88,940</u>	<u>16.20%</u>	<u>100.00%</u>

NOTES:

- (1) Adjusted for Errors In Pricing of Staff Billing Units
- (2) Present Revenues

AJO IMPROVEMENT COMPANY
ACC DOCKET NO. WS-01025A-03-0350

SEASONAL RATE DESIGN

DESCRIPTION	PRES. RATE	PROP. RATE	GALLONS (000)	PRES. REV.	PROP. REV.	INCREASE	PERCENT INCREASE
TREATED WATER:							
Summer Usage (Apr. - Sep.)	\$2.54	\$3.35	94,313	\$239,555	\$315,949	\$76,394	31.89%
Winter Usage (Oct. - Mar.)	\$2.54	\$2.85	68,045	172,834	193,928	21,094	12.20%
Total			162,358	\$412,389	\$509,877	\$97,487	23.64%
UNTREATED WATER:							
Summer Usage (Apr. - Sep.)	\$1.75	\$1.90	31,370	\$54,898	\$59,603	\$4,706	8.57%
Winter Usage (Oct. - Mar.)	\$1.75	\$1.72	12,297	21,520	21,151	(369)	-1.71%
Total			43,667	\$76,417	\$80,754	\$4,337	5.67%



1 ARIZONA WATER COMPANY
 2 Robert W. Geake (No. 009695)
 3 Vice President and General Counsel
 3805 N. Black Canyon Highway
 4 Phoenix, Arizona 85015-5351
 Telephone: (602) 240-6860

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Attorney for Arizona Water Company

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE
 APPLICATION OF AJO
 IMPROVEMENT COMPANY FOR
 RATE ADJUSTMENTS IN ITS WATER
 AND WASTEWATER RATES.

Docket No. WS-01025A-03-0350

**DIRECT TESTIMONY
 OF
 SHERYL L. HUBBARD**

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1 I. INTRODUCTION AND QUALIFICATIONS

2 Q. What is your name, employer and occupation?

3 A. My name is Sheryl L. Hubbard. I am employed by Arizona
4 Water Company ("Arizona Water") as Manager of Rates and
5 Regulatory Accounting.

6 Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL
7 BACKGROUND.

8 A. I graduated from Michigan State University with a
9 Bachelor of Arts degree in Accounting and I am a certified
10 public accountant. I have twenty-five years of experience
11 with public utility accounting and regulation having been an
12 auditor/audit manager with the Michigan Public Service
13 Commission for seventeen of those years. During my
14 employment with the Michigan Commission, my responsibilities
15 included preparation of revenue requirement calculations for
16 water, steam and electric utilities. Following my
17 employment with the Michigan Public Service Commission, I
18 was employed by the Arizona Corporation Commission ("ACC")
19 as the Chief of Accounting and Rates where my
20 responsibilities included applying statutes, rules and
21 regulations, and ACC policies in regulating public utilities
22 in Arizona.

23 Subsequent to my employment with the ACC, I joined
24 Citizens Communications Company ("Citizens") as a Regulatory
25 Accounting Manager in its Arizona Gas division. My
26 responsibilities, with Citizens, included assuring

1 compliance with applicable state statutes and regulatory
2 rules and decisions as well as preparation of rate cases and
3 other regulatory filings with state regulatory agencies in
4 Arizona and Colorado. Subsequent to my employment with
5 Citizens Communications Company, I joined Arizona Water in
6 my current position as Manager of Rates and Regulatory
7 Accounting.

8 **II. PURPOSE AND EXTENT OF TESTIMONY**

9 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

10 A. The purpose of my testimony in this proceeding is to: 1)
11 clarify the type of service that Arizona Water receives from
12 Ajo Improvement Company ("Ajo Improvement"), 2) establish
13 that the cost to serve Arizona Water is less than Ajo
14 Improvement's other General Service customers, and 3)
15 present Arizona Water's proposed rate design for a wholesale
16 4-inch meter classification for Ajo Improvement under which
17 Arizona Water would be served.

18 **III. CHARACTERISTICS OF SERVICE TO ARIZONA WATER**

19 **Q. PLEASE DESCRIBE THE CHARACTERISTICS OF THE WHOLESALE SERVICE**
20 **ARRANGEMENT THAT EXISTS BETWEEN AJO IMPROVEMENT AND ARIZONA**
21 **WATER.**

22 A. Ajo Improvement provides treated water to Arizona Water
23 through one delivery point. Arizona Water owns, operates
24 and maintains booster pumps, two storage tanks, a
25 distribution system, and other plant facilities necessary to
26 provide reliable water service to its nearly 700 customers

1 and performs meter reading, customer billing and other
2 customer services for its customers.

3 Commission Decision No. 54369 issued February 14, 1985,
4 established a wholesale tariff and hourly (16,000 gph) and
5 daily delivery limitations (384,000 gallons) which govern
6 the way Arizona Water operates its storage tank pumping
7 operations. That tariff specifies that no more than half of
8 the actual daily consumption shall be taken between 7:00 AM
9 and 7:00 PM. The delivery limitations relate to quantities
10 of water delivered, authorizations necessary to exceed
11 specified deliveries of water (referred to in the Decision
12 as "requested overdraft"), and charges for deliveries in
13 excess of the maximum quantities specified when they are not
14 expressly authorized by Ajo Improvement.

15 Arizona Water's two storage tanks are operated in a
16 manner that reduces peak, daily and hourly demand on Ajo
17 Improvement's system while still meeting the needs of
18 Arizona Water's customers. As such, Arizona Water's demand
19 characteristics are typically off-peak, significantly
20 differentiating its usage from that of Ajo Improvement's
21 other customers and thereby greatly easing the burden on Ajo
22 Improvement's water system.

23 In addition, Arizona Water does not have a large
24 seasonal usage variation. Arizona Water's Ajo Height's
25 system customer count, remains relatively constant
26 throughout the year without large numbers of seasonal

1 residents.

2 Q. UNDER WHAT TARIFF DOES AJO IMPROVEMENT CURRENTLY PROVIDE
3 WATER SERVICE TO ARIZONA WATER?

4 A. Currently, Arizona Water is served under Ajo Improvement's
5 General Water Service tariff approved in Decision No. 54709
6 issued on October 14, 1985. However, as discussed above,
7 Arizona Water is not treated as a general service customer,
8 but must take delivery of water as a wholesale customer in
9 accordance with a delivery schedule and limitations in the
10 wholesale tariff.

11 Q. HAVE YOU REVIEWED AJO IMPROVEMENT'S AND THE ACC STAFF'S
12 RESPECTIVE RATE DESIGN PROPOSALS FOR THE 4-INCH METER TARIFF
13 FOR TREATED WATER?

14 A. Yes. Based upon my review, Ajo Improvement is proposing a
15 monthly minimum charge of \$210 and a single commodity rate
16 of \$3.14 per 1000 gallons ("M gallons") for all water sold.
17 The ACC Staff is recommending an inverted tier rate
18 structure "to encourage efficient water use". More
19 specifically, for the 4-inch meter, Staff is recommending a
20 monthly minimum charge of \$234 and a two-block commodity
21 rate design, \$2.90 for the first 180 M gallons and \$3.47 for
22 all deliveries in excess of 180 M gallons. Neither Ajo
23 Improvement or the ACC Staff are proposing to include any
24 gallons in the monthly minimum charge.

25 Q. HAS ARIZONA WATER ANALYZED THE EFFECTS OF AJO IMPROVEMENT'S
26 AND THE ACC STAFF'S PROPOSED RATE DESIGN ON FUTURE COSTS OF

1 **WATER FOR ARIZONA WATER?**

2 A. Yes, we have. Ajo Improvement is requesting an overall
3 increase in revenues of 17.32% and proposing to increase the
4 4-inch meter tariff for treated water by 23.35%. The ACC
5 Staff, on the other hand, is recommending an overall
6 increase in revenues of 10.73% (Schedule CSB-1) while
7 recommending a 35.7% increase for the 4-inch meter tariff
8 for treated water (Schedule 19, page 6 of 19). The ACC
9 Staff's proposed rate design has the effect of imposing a
10 35.7% increase in the cost of water for Arizona Water's 658
11 5/8-inch customers while comparable sized customers in Ajo
12 Improvement's service territory may actually see reductions
13 in their rates based on the testimony of ACC Staff's
14 witness, Ms. Crystal S. Brown. Neither Ajo Improvement nor
15 the ACC Staff have recommended a rate design that recognizes
16 the service limitations under which Arizona Water receives
17 water or excluded any of the costs that are not attributable
18 to Arizona Water's service.

19 **Q. IS THERE A FLAW INHERENT IN THE RATE DESIGN PROPOSED BY THE**
20 **ACC STAFF?**

21 A. Yes, there is. The ACC Staff's witness recommends an
22 inverted tier rate structure "to encourage efficient water
23 use". Because Ms. Brown's recommended rate design does not
24 result in an increased bill for the 5/8-inch customer until
25 consumption exceeds 6000 gallons, the intended result cannot
26 be achieved because the average usage in the 5/8-inch

1 classification is 5700 gallons. Although there is a price
2 signal at higher volumes under the ACC Staff's
3 recommendation, a more appropriate rate design to encourage
4 efficient water use would not place the entire burden of a
5 recommended rate increase on the largest users. Staff is
6 proposing an increase in gross revenue of \$68,833 (CSB-1,
7 line 8), \$57,998 (84.26%) of this increase would be borne by
8 Arizona Water as shown on Exhibit SLH-1.

9 **Q. AS A WHOLESALE CUSTOMER OF AJO IMPROVEMENT, PLEASE DESCRIBE**
10 **ARIZONA WATER'S CUSTOMER MIX.**

11 A. Of Arizona Water's 689 customers, over 95%, or 658
12 customers, are served through 5/8-inch meters and use 75.5%
13 of the water. 29 customers are served through 1-inch meters
14 and use 19.6% of the water, while 2 customers are served
15 through 2-inch meters and use less than 2% of the water.
16 The average monthly use by 5/8-inch customers is 5323
17 gallons. Even so, most of the water Ajo Improvement
18 delivers to Arizona Water would be billed at the above-6000
19 gallon rate.

20 **Q. DOES AJO IMPROVEMENT PROVIDE ANY DISTRIBUTION SERVICES OR**
21 **CUSTOMER-RELATED SERVICES FOR ARIZONA WATER'S CUSTOMERS?**

22 A. Ajo Improvement does not provide any distribution services
23 or other customer-related services to Arizona Water's
24 customers.

25 **Q. IS ARIZONA WATER THE ONLY CUSTOMER RECEIVING TREATED WATER**
26 **SERVICE FROM AJO IMPROVEMENT USING THE 4-INCH METER?**

1 A. Yes. Based upon discussions with Ajo Improvement's witness,
2 Mr. Dan Neidlinger, as well as the statistics included in
3 their treated water bill count, Arizona Water is the only
4 customer receiving treated water service from Ajo
5 Improvement utilizing a 4-inch meter.

6 **IV. PROPOSED RATE DESIGN**

7 **Q. WHAT RATES ARE YOU PROPOSING FOR THE 4-INCH METER CUSTOMER**
8 **USING TREATED WATER?**

9 A. Based upon an analysis of Arizona Water's customer
10 characteristics, time of day pumping limitations and the
11 characteristics of the delivery system and Ajo Improvement's
12 proposed revenue requirement of \$752,767, Arizona Water
13 proposes that it be served under a separate Wholesale Rate
14 tariff consisting of the rates set forth on Exhibit SLH-2
15 for Ajo Improvement's 4-inch meter classification. Arizona
16 Water proposes a monthly minimum rate of \$210 and a
17 commodity rate of \$2.67 per 1000 gallons.

18 **Q. PLEASE EXPLAIN THE RATIONALE SUPPORTING ARIZONA WATER'S**
19 **RECOMMENDED RATE DESIGN PROPOSAL.**

20 A. Arizona Water purchases treated water from Ajo Improvement
21 for resale purposes only. Arizona Water's customer base
22 consists primarily of 5/8-inch meter customers with a small
23 number of 1-inch and 2-inch meters. Ajo Improvement does not
24 provide meter reading, billing or other customer-related
25 services or any distribution-related services to Arizona
26 Water's customers. Moreover, Arizona Water operates within

1 fixed hourly and daily pumping limits on a year-round basis.
2 To reduce the potential cross-subsidy between Arizona
3 Water's customers and Ajo Improvement's customers, a
4 wholesale rate based on only the costs of serving Arizona
5 Water should be developed to recover those costs. A rate
6 design that recognizes the wholesale nature of the service
7 provided by Ajo Improvement to Arizona Water is necessary to
8 avoid the potential cross-subsidy.

9 **Q. WHAT METHODOLOGY HAS BEEN USED BY ARIZONA WATER TO SEGREGATE**
10 **THE DISTRIBUTION CHARGES AND CUSTOMER SERVICE CHARGES FROM**
11 **THE COST OF SERVICE APPLICABLE TO ARIZONA WATER?**

12 A. Generally, a cost of service study is utilized to segregate
13 the cost to serve specific classes of customers. Absent the
14 availability of a cost of service study, another method that
15 identifies the specific costs incurred to provide treated
16 water to Arizona Water can be used. I have proposed a rate
17 design that recovers the variable cost of the treated water
18 provided to Arizona Water and a fixed monthly meter charge
19 to contribute to Ajo Improvement's fixed costs.

20 **Q. PLEASE DESCRIBE THE BASIS OF ARIZONA WATER'S RATE DESIGN**
21 **PROPOSAL.**

22 A. Ajo Improvement purchases raw water directly from Phelps
23 Dodge. The raw water is treated before it is served to Ajo
24 Improvement's customers. Ajo Improvement has quantified the
25 cost incurred for treated water at \$2.67 per 1000 gallons.
26 See Ajo Improvement workpapers 000015 and 000016 attached as

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Exhibit SLH-3. Arizona Water, therefore, is proposing a commodity rate of \$2.67 per 1000 gallons for the 4-inch wholesale rate in this proceeding. In addition, Ajo Improvement is proposing a monthly minimum charge of \$210 for the 4-inch meter classification. Arizona Water recognizes that there are some fixed costs associated with providing wholesale water service and Arizona Water does not oppose the monthly minimum charge proposed by Ajo Improvement to cover these costs and the monthly billing charge. The revenue that results from Arizona Water's proposed rate design as shown in Exhibit SLH-1 is \$171,394.83.

Q. DOES THAT COMPLETE YOUR TESTIMONY IN THIS MATTER?

A. Yes, it does.

Exhibit SLH-1

ARIZONA WATER COMPANY
 Ajo Improvement Company-Water Rate Increase
 Effect of Proposed Increase on Arizona Water

Line	Description	Water Usage (M Gal)	Present Rates		A/C's		Staff's		Arizona Water's	
			Present Rates	Increase	Proposed Rates	Increase	Proposed Rates	Increase	Proposed Rates	Increase
4" METERS:										
1	Monthly Service Charge		200.00	10.00	210.00		234.00	34.00	210.00	10.00
2	Commodity Rate per 1000 Gallons (1st Block)	180000	2.54	0.60	3.14		2.90	0.36	2.67	0.13
3	Commodity Rate per 1000 Gallons (2nd Block)	>180000	2.54	0.60	3.14		3.47	0.93	2.67	0.13
4	Arizona Water's 2002 Consumption	63,249	163,052.46	38,069.40	201,121.86		221,050.83	57,998.37	171,394.83	8,342.37
5 Detail of Effect of Proposed Increase on Arizona Water's 2002 Consumption:										
6	12-27-01 to 1-30-02	4,667	12,054.18	2,810.20	14,864.38		16,325.89	4,271.71	12,670.89	616.71
7	1-30-02 to 2-27-02	4,142	10,720.68	2,495.20	13,215.88		14,504.14	3,783.46	11,269.14	548.46
8	2-27-02 to 3-26-02	4,435	11,464.90	2,671.00	14,135.90		15,520.85	4,055.95	12,051.45	586.55
9	3-26-02 to 4-26-02	5,234	13,494.36	3,150.40	16,644.76		18,293.38	4,799.02	14,184.78	690.42
10	4-26-02 to 5-30-02	5,866	15,089.64	3,529.60	18,629.24		20,486.42	5,386.78	15,872.22	772.58
11	5-30-02 to 6-27-02	6,169	15,869.26	3,711.40	19,580.66		21,537.83	5,868.57	16,681.23	811.97
12	6-27-02 to 7-30-02	7,507	19,267.78	4,514.20	23,781.98		26,180.69	6,912.91	20,253.69	985.91
13	7-30-02 to 8-29-02	5,924	15,246.96	3,564.40	18,811.36		20,687.68	5,440.72	16,027.08	780.12
14	8-29-02 to 9-27-02	5,951	15,315.54	3,580.60	18,896.14		20,781.37	5,465.83	16,099.17	783.63
15	9-27-02 to 10-28-02	5,287	13,628.98	3,182.20	16,811.18		18,477.29	4,848.31	14,326.29	697.31
16	10-28-02 to 11-26-02	4,104	10,624.16	2,472.40	13,096.56		14,372.28	3,748.12	11,167.68	543.52
17	11-26-02 to 12-30-02	3,963	10,266.02	2,387.80	12,653.82		13,883.01	3,616.99	10,791.21	525.19
18	Totals	63,249	163,052.46	38,069.40	201,121.86		221,050.83	57,998.37	171,394.83	8,342.37
19	Proposed Gross Revenue Increase			111,125				68,833		111,125
20	Percentage of Proposed Increase Allocated to AWC			34.26%				84.26%		7.51%

Exhibit SLH-2

ARIZONA WATER COMPANY
 Ajo Improvement Company-Water Rate Increase
 Wholesale Rate Design - 4" Meter Size

Line	Description	Blocks	Present	Ajo Improvement	Proposed Staff	Arizona Water	Arizona Water Proposed Increase to Present Rates
1	Monthly Service Charge		\$ 200.00	\$ 210.00	\$ 234.00	\$ 210.00	5.00%
2	Commodity Rate per 1000 Gallons	0 to 180,000	\$ 2.54	\$ 3.14	\$ 2.90	\$ 2.67	5.12%
3	Commodity Rate per 1000 Gallons	Over 180,000	\$ 2.54	\$ 3.14	\$ 3.47	\$ 2.67	5.12%

AJO IMPROVEMENT COMPANY
 TEST YEAR ENDED 12-31-02

Exhibit SLH-3
 Page 1 of 2

WATER DEPARTMENT
 COST OF TREATED
 AND UNTREATED WATER

DESCRIPTION	TOTAL	TREATED	UNTREAT.
Water Sales:			
Gallons Sold	206,024,846	162,358,586	43,666,260
Percent	100.00%	78.81%	21.19%
Purchased Water Cost:			
Raw Water @ \$1.08	\$232,392	\$183,137	\$49,255
PD Adder - 10%	23,239	18,314	4,925
Total Cost - Raw Water	\$255,631	\$201,451	\$54,180
Treatment Costs	266,682	266,682	
PD Adder - 10%	26,669	26,669	
Total Treatment Costs	\$293,351	\$293,351	\$0
Total Purchased Water Costs	\$548,982	\$494,802	\$54,180
Pro Forma Adjustments:			
Raw Water	(\$21,136)	(\$16,656)	(\$4,480)
PD Adder - 10%	(49,908)	(44,983)	(4,925)
Total Pro Forma Adjustments	(\$71,044)	(\$61,639)	(\$9,405)
Adjusted Purchased Water Cost	\$477,938	\$433,163	\$44,775
Cost Per 1,000 Gallons Sold	\$2.32	\$2.67	\$1.03

000015

AJO IM. JUMENT COMPANY
TEST YEAR ENDED 12-31-02

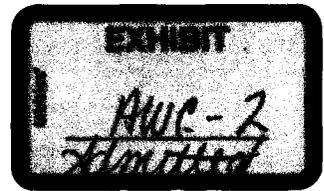
WATER DEPARTMENT

PURCHASED WATER
WATER TREATMENT CHGS.

DESCRIPTION	TOTAL 2002	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Salaries/Exempt - Operating	\$94,484	\$9,055	\$6,936	\$8,146	\$8,552	\$9,648	\$5,842	\$4,867	\$5,673	\$6,534	\$8,105	\$11,974	\$9,152
Insurance/Flex - Hourly	666									106			666
Reagents - Acid	218					112				678			
Water Treatment Chemicals	38,101	1,284	1,309	9,038	17,487	905	1,047	1,448	1,221		1,221	1,827	656
Freight Allocation - Acid Sales	950					473					477		
Other Operating Supplies	5,267	249	203	388	14			162	627	695	1,342	377	1,210
Maintenance & Repair Parts	1,247									1,247			
Outside Services - Other (1)	82,220	11,473	4,222	4,895	5,301	6,389	5,855	12,288	5,767	8,455	5,503	4,660	7,412
Employee Travel	100								100				
Employee Meals	12								12				
Allocation of Power	14,865	1,173	763	1,395	1,079	1,070	1,243	1,188	956	1,098	761	1,049	3,090
Allocation of Steam (2)	44,182	16,052	12,770	15,360									
Allocation of Benefits	28,549	2,749	2,110	2,473	2,594	2,923	1,608	1,460	1,702	1,960	2,432	3,792	2,746
Adjust. For Expense Elements	(7,322)			(7,322)									
	(44,182)			(44,182)									
	7,332			7,332									
	44,182			44,182									
Allocation to Water Treat. (2)	188,210				21,311	23,207	22,999	30,192	23,996	22,015	18,151	13,214	13,125
Transfer to BS - CIP Project (3)	11,203	4,202	2,831	4,170									
Adjust. For Expense Elements	(11,203)			(11,203)									
	11,203			11,203									
Transfer to BS - Accls. Rec.(3)	38,705				5,634	4,473	3,859	5,161	4,005	4,279	3,799	3,756	3,739
Total	\$548,989	\$46,217	\$31,144	\$45,875	\$61,972	\$49,200	\$42,453	\$56,766	\$44,059	\$47,067	\$41,791	\$41,315	\$41,130

NOTES:

- (1) Charges From Maintenance Contracting Firm
- (2) Purchased Raw Water from PD @ \$1.08 per thousand gallons
- (3) PD Add-On (10%) to Direct Charges



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ARIZONA WATER COMPANY
Robert W. Geake (No. 009695)
Vice President and General Counsel
3805 N. Black Canyon Highway
Phoenix, Arizona 85015-5351
Telephone: (602) 240-6860

Attorney for Arizona Water Company

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE
APPLICATION OF AJO
IMPROVEMENT COMPANY FOR
RATE ADJUSTMENTS IN ITS WATER
AND WASTEWATER RATES.

Docket No. WS-01025A-03-0350

**SURREBUTTAL TESTIMONY
OF
SHERYL L. HUBBARD**

1 **I. INTRODUCTION AND QUALIFICATIONS**

2 **Q. What is your name, employer and occupation?**

3 A. My name is Sheryl L. Hubbard. I am employed by Arizona
4 Water Company ("Arizona Water") as Manager of Rates and
5 Regulatory Accounting.

6 **Q. ARE YOU THE SAME SHERYL L. HUBBARD WHO CAUSED TO BE FILED**
7 **DIRECT TESTIMONY IN THIS PROCEEDING?**

8 A. Yes, I am.

9 **II. PURPOSE AND EXTENT OF TESTIMONY**

10 **Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY IN THIS**
11 **PROCEEDING?**

12 A. The purpose of my surrebuttal testimony in this proceeding
13 is to reassert that the cost to serve Arizona Water is less
14 than Ajo Improvement's costs to serve other customers in its
15 service territory, contrary to Ajo Improvement's rebuttal
16 testimony that Arizona Water's commodity rate should be set
17 at a level that is no less than the system average rate.

18 **III. BASIS OF ARIZONA WATER'S ASSERTION**

19 **Q. PLEASE DISCUSS THE BASIS OF ARIZONA WATER'S ASSERTION THAT**
20 **AJO IMPROVEMENT'S COST TO SERVE ARIZONA WATER IS LESS THAN**
21 **THE COST OF SERVING ITS OTHER CUSTOMERS.**

22 A. As a result of Ajo Improvement's wholesale service
23 arrangement with Arizona Water, Ajo Improvement benefits
24 from economies of scale derived from its ability to operate
25 its treatment facility without the normal increases and
26 decreases in demand associated with on-peak and off-peak

1 consumption that other water treatment facilities generally
2 experience. Because of the level, off-peak characteristics
3 of Arizona Water's usage, Ajo Improvement is able to operate
4 its treatment facility with a relatively flat base load.
5 This type of demand reduces the overall treatment costs,
6 which is a benefit to all of Ajo Improvement's general
7 service customers. Additionally, Arizona Water derives no
8 benefit from Ajo Improvement's storage facilities because
9 Arizona Water is restricted to service during non-peak
10 periods. Consequently, the service provided to Arizona Water
11 by Ajo Improvement is not the same as Ajo Improvement's
12 service to its other customers. Accordingly, Arizona
13 Water's rates should be less than the system average to
14 account for these inherent benefits to Ajo Improvement and
15 its other general service customers that result from the
16 provision of service to Arizona Water.

17 By designing commodity rates that do not reflect the
18 differences in the cost of service between Arizona Water and
19 Ajo Improvement's other customers, a subsidy is provided by
20 the customers of Arizona Water to the customers of Ajo
21 Improvement. As stated in my direct testimony, Ajo
22 Improvement's proposed rate design does not recognize the
23 service limitations under which Arizona Water receives water
24 or exclude any of the costs that are not attributable to the
25 provision of service to Arizona Water.

26 **IV. PROPOSED RATE DESIGN**

1 Q. WHAT RATES ARE YOU PROPOSING FOR THE 4-INCH METER CUSTOMER
2 USING TREATED WATER?

3 A. Ajo Improvement has not advanced any convincing arguments
4 why the commodity rates charged to a wholesale customer with
5 a required uniform daily demand should be the same as the
6 commodity rate charged to full-service distribution
7 customers with varying load factors and peak demand.
8 Consequently, Arizona Water proposes a commodity rate of
9 \$2.67 per 1000 gallons with a monthly minimum rate of \$210.

10 Q. DOES THAT COMPLETE YOUR SURREBUTTAL TESTIMONY IN THIS
11 MATTER?

12 A. Yes, it does.
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BEFORE THE ARIZONA CORPORATION COMMISSION

MARC SPITZER
Chairman
WILLIAM A. MUNDELL
Commissioner
JEFF HATCH-MILLER
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner

IN THE MATTER OF THE APPLICATION OF)
AJO IMPROVEMENT COMPANY FOR)
RATE ADJUSTMENTS IN ITS WATER AND)
WASTEWATER RATES)
_____)

DOCKET NO. SW-01025A-03-0350

DIRECT
TESTIMONY
OF
CRYSTAL S. BROWN
PUBLIC UTILITIES ANALYST V
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION

JANUARY 9, 2004

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**EXECUTIVE SUMMARY
AJO IMPROVEMENT COMPANY
WATER AND WASTEWATER DEPARTMENTS
DOCKET NO. SW-01025A-03-0350**

Ajo Improvement Company ("Ajo" or "Company") is a certificated Arizona based company that provides electric, water and wastewater public service to approximately 1,076 water and 1,089 wastewater customers in and around the unincorporated community of Ajo, in Pima County, Arizona. Ajo is a wholly owned subsidiary of Phelps Dodge Corporation.

On May 28, 2003, Ajo filed an application for a permanent rate increase for its Water and Wastewater Departments. The Company states that it incurred operating losses of \$54,930 for the Water Department and \$68,533 for the Wastewater Department during the Test Year.

For the Water Department, the Company proposes revenues of \$752,769 that provide a 10 percent rate of return on the Water Department's \$92,745 rate base. For the Wastewater Department, the Company proposes revenues of \$251,823 that provide a 10 percent rate of return on the Wastewater Department's \$217,822 rate base.

For the Water Department, Staff recommends a \$68,833, or 10.73 percent, revenue increase from \$641,644 to \$710,477. Staff's proposed revenue increase would produce an operating income of \$10,187 for an 8.8 percent rate of return on an original cost rate base of \$115,786. Staff's recommended rates would decrease the typical residential bill with a median usage of 4,275 gallons, from \$19.86 to \$19.33, for a decrease of \$0.53 or 2.7 percent.

For the Wastewater Department, Staff recommends a \$135,071, or 141.43 percent, revenue increase from \$95,505 to \$230,576. Staff's proposed revenue increase would produce an operating income of \$19,291 for an 8.8 percent rate of return on an original cost rate base of \$219,254. Staff's recommended rates would increase the typical residential bill from \$6.08 to \$15.65, for an increase of \$9.57 or 157.4 percent.

1 **INTRODUCTION**

2 **Q. Please state your name, occupation, and business address.**

3 A. My name is Crystal S. Brown. I am a Public Utilities Analyst V employed by the Arizona
4 Corporation Commission ("ACC" or "Commission") in the Utilities Division ("Staff").
5 My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

6
7 **Q. Briefly describe your responsibilities as a Public Utilities Analyst V.**

8 A. I am responsible for the examination and verification of financial and statistical
9 information included in utility rate applications. In addition, I develop revenue
10 requirements, prepare written reports, testimonies, and schedules that include Staff
11 recommendations to the Commission. I am also responsible for testifying at formal
12 hearings on these matters.

13
14 **Q. Please describe your educational background and professional experience.**

15 A. I received a Bachelor of Science Degree in Business Administration from the University
16 of Arizona and a Bachelor of Science Degree in Accounting from Arizona State
17 University. After successfully meeting the prescribed requirements established by the
18 Institute of Internal Auditors, I was awarded the professional designation of Certified
19 Internal Auditor ("CIA").

20
21 Since joining the Commission, I have participated in numerous rate cases and other
22 regulatory proceedings involving large electric, gas, telecommunications, and water
23 utilities. I have testified on matters involving regulatory accounting and auditing. During
24 the past six years, I have attended utility-related seminars on regulation, accounting,
25 finance and income taxes designed to provide continuing and updated education in these
26 areas. Various professional and industry organizations sponsored these seminars.

1 I have been employed by the Commission as a regulatory auditor and a rate analyst since
2 August 1996. Prior to joining the Commission, I was employed by the Department of
3 Revenue as a Senior Internal Auditor and by the Office of the Auditor General as a
4 Financial Auditor. I was a Cost Center Review Specialist for Blue Cross Blue Shield of
5 Arizona prior to my employment in state government.

6
7 **Q. What is the scope of your testimony in this case?**

8 A. I am presenting Staff's analysis and recommendations regarding Ajo Improvement
9 Company's ("Ajo" or "Company") application for a permanent rate increase in the areas
10 of rate base, operating income, revenue requirement, rate design and cost of capital. Staff
11 witness John Chelus is presenting Staff's engineering analysis and recommendations.

12
13 **Q. What is the basis of your recommendations?**

14 A. I performed a regulatory audit of the financial statements that were filed in support of
15 Ajo's application to determine whether sufficient, relevant, and reliable evidence exists to
16 support the Company's requested rate increase. The regulatory audit consisted of
17 examining and testing the financial information, accounting records, and other supporting
18 documentation and verifying that the accounting principles applied were in accordance
19 with the Commission adopted National Association of Regulatory Utility Commissioners
20 ("NARUC") Uniform System of Accounts ("USOA").

21
22 **BACKGROUND**

23 **Q. Please review the background of this application.**

24 A. Ajo is a certificated Arizona-based company that provides electric, water, and wastewater
25 public service in and around the unincorporated community of Ajo, in Pima County,
26 Arizona. The Company served approximately 1,030 electric customers, 1,076 water

1 customers, and 1,089 sewer customers during the Test Year. Ajo is a wholly owned
2 subsidiary of Phelps Dodge Corporation.

3
4 On May 28, 2003, Ajo filed an application for a permanent rate increase for its Water and
5 Wastewater Departments. On June 30, 2003, Ajo filed amendments to its application. On
6 July 14, 2003, Staff filed a letter declaring the application sufficient.

7
8 **CONSUMER SERVICE**

9 **Q. Please provide a brief history of customer complaints received by the Commission**
10 **regarding Ajo. Also, please discuss customer responses to Ajo's proposed rate**
11 **increase.**

12 **A.** Staff reviewed the Commission's records and found no formal complaints since 2001.
13 One opinion not in favor of the proposed rate increase was received.

14
15 **ORDER OF TESTIMONY**

16 **Q. Briefly summarize how your testimony is organized.**

17 **A.** My testimony is organized to present my analysis, recommendations, and supporting
18 schedules for the cost of capital, Water and Wastewater Departments separately.

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COST OF CAPITAL

1 **COST OF CAPITAL**

2
3 **What is Staff's recommended rate of return ("ROR") in this case?**

4 A. Staff recommends an 8.8 percent ROR. Staff's recommended ROR is shown in the
5 following table:

6 **Table 1**

	Weight	Cost	Weighted Cost
Long-term Debt	19.9%	10.0%	1.99%
Common Equity	80.1%	8.5%	6.81%
ROR			8.8%

7
8 Staff's recommended ROR is based on the Company's December 31, 2002, capital
9 structure which consisted of 19.9 percent long-term debt and 80.1 percent equity. The
10 Company's cost of debt is 10.0 percent and Staff recommends an 8.5 percent return on
11 equity ("ROE")
12

13 **Q. What is the basis of Staff's ROE recommendation?**

14 A. Staff's ROE recommendation is based on the recent cost of equity analysis and
15 recommendation made by Staff in Docket No. WS-01303A-02-0867¹ et al. ("Arizona-
16 American case"), a rate case currently pending before the Commission. According to
17 Staff's market-based analysis in that case, the average cost of equity to a water/wastewater
18 utility is 8.5 percent.²
19
20
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¹ Application of Arizona-American Water Company for a rate increase.

² See surrebuttal testimony of Joel M. Reiker, dated October 31, 2003, in Docket No WS-01303A-02-0867 et al.

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WATER DEPARTMENT

1 **WATER DEPARTMENT**

2 **Q. Please review the background of the Water Department.**

3 A. Ajo's Water Department provides service to approximately 1,076 customers in Pima
4 County, Arizona. Its current rates were approved in Decision No. 54709, dated October
5 10, 1985. That order authorized an operating income of \$100,500 to provide a 6.5 percent
6 rate of return on a \$1,544,880 rate base.

7
8 **Q. What are the primary reasons stated by the Company for requesting a permanent
9 rate increase for the Water Department?**

10 A. The Company's application states that it has not requested a rate increase for the Water
11 Department in approximately 19 years. Additionally, it states that it has incurred an
12 operating loss of \$54,930 for the Water Department resulting in no rate of return on the
13 Department's \$92,745 rate base during the Test Year.

14
15 **SUMMARY OF PROPOSED REVENUES – WATER DEPARTMENT**

16 **Q. Please summarize the Company's filing for the Water Department.**

17 A. The Company proposes rates that produce operating revenue of \$752,769 and operating
18 income of \$9,275 for a 10.0 percent rate of return on an original cost rate base of \$92,745.
19 The Company's proposal would increase annual operating revenues by \$111,125 (or 17.32
20 percent) over Test Year revenues.

21
22 **Q. Please summarize Staff's recommended revenue.**

23 A. Staff recommends total annual operating revenue of \$710,477 and operating income of
24 \$10,187 for an 8.8 percent rate return on an original cost rate base of \$115,786. This
25 revenue amount represents an increase of \$68,833, or 10.73 percent, over Test Year
26 revenues.

1 **Q. Please summarize the rate base and operating income recommendations and**
2 **adjustments addressed in your testimony for the Water Department.**

3 A. My testimony addresses the following issues:

4
5 Meters – This adjustment increases Meters by \$35,827.

6
7 Office Furniture and Equipment – This adjustment increases Office Furniture and
8 Equipment by \$2,000.

9
10 Accumulated Depreciation – This adjustment increases Accumulated Depreciation by
11 \$14,218.

12
13 Working Capital – This adjustment decreases Working Capital by \$568.

14
15 Salaries and Wage Expense – This adjustment decreases Salaries and Wage Expense by
16 \$282.

17
18 Pensions and Benefits – This adjustment decreases Pensions and Benefits by \$187.

19
20 Outside Services, Legal and Consulting – This adjustment decreases Outside Services
21 Expense by \$2,074.

22
23 General and Administrative – This adjustment decreases General and Administrative
24 Expense by \$2,000.

25
26 Depreciation Expense – This adjustment decreases Depreciation Expense by \$29,405.

1 Property Tax Expense – This adjustment increases Property Tax Expense by \$153.

2
3 Income Tax Expense – This adjustment increases Income Tax Expense by \$22,939.

4
5 **RATE BASE - WATER DEPARTMENT**

6
7 **Fair Value Rate Base**

8 **Q. Has the Company prepared a Schedule showing the elements of Reconstruction Cost**
9 **New Rate Base (“RCND”)?**

10 A. No. The Company requested to waive the RCND schedule filing requirement. Therefore,
11 Staff evaluated the original cost rate base as the fair value rate base (“FVRB”).

12
13 **Rate Base Summary – Water Department**

14 **Q. Please summarize Staff’s adjustments to the Water Department’s rate base shown on**
15 **Schedule CSB-3.**

16 A. Staff’s adjustments to the Water Department’s rate base resulted in a net increase of
17 \$23,041, from \$92,745 to \$115,786. This increase was primarily due to Staff capitalizing
18 plant costs that the Company had expensed.

19
20 **Rate Base Adjustment 1 – Water Department, Meters**

21 **Q. What is Ajo proposing for Meters?**

22 A. Ajo is proposing \$25,265 for Meters. The Company also proposes a separate \$2,403 pro
23 forma adjustment to capitalize meters that were expensed during the Test Year.

24

1 Q. During Staff's review of the Meters account, Staff found that the Company had
2 expensed additional used and useful meters. Should used and useful plant be
3 expensed?

4 A. Plant that is used and useful in the provision of service should be capitalized by recording
5 the cost in the appropriate plant account and depreciating the cost over the useful life of
6 the plant asset in accordance to the NARUC USOA.

7
8 Staff found that the Company improperly expensed over 600 meters costing \$38,230
9 during the period of 1993 to 2002. Staff added \$38,230 in meters and removed the
10 Company's \$2,403 pro forma adjustment to capitalize meters expensed during the Test
11 Year as the pro forma adjustment did not agree to the actual cost of meters expensed
12 during the Test Year.³

13
14 Q. What adjustment is Staff recommending?

15 A. Staff recommends increasing the Meters account by \$38,230, from \$25,265 to \$63,495
16 and removing the Company proposed \$2,403 pro forma adjustment as shown on
17 Schedules CSB-4 and CSB-5.

18
19 **Rate Base Adjustment 2 – Water Department, Computer Software**

20 Q. What is Ajo proposing for Office Furniture and Equipment?

21 A. Ajo is proposing \$1,348 for Office Furniture and Equipment.
22
23
24

³ Data request response CSB 4-6

1 **Q. During Staff's review of Operating Expenses, Staff found that the Company**
2 **expensed computer software. Should the computer software be expensed?**

3 A. The \$2,000 in software costs⁴ (the Water Department's allocated portion of the total
4 \$6,000 software cost) should have been capitalized. Plant that is used and useful in the
5 provision of service should be capitalized by recording the cost in the appropriate plant
6 account and depreciating the cost over the useful life of the plant asset in accordance to
7 the NARUC USOA. Thus, reclassification of the software costs from General and
8 Administrative Expense to Office Furniture and Equipment is appropriate.

9
10 **Q. What is Staff recommending?**

11 A. Staff recommends increasing Office Furniture and Equipment by \$2,000, from \$1,348 to
12 \$3,348 as shown on Schedules CSB-4 and CSB-6. This cost is removed from expense in
13 Operating Income Adjustment No. 4.

14
15 **Q. Did anything else come to your attention while performing the audit of plant in**
16 **service?**

17 A. Staff noted that the Company employed a capitalization policy⁵ that was not consistent
18 with the NARUC Uniform System of Accounts during the 2002 test year. That policy
19 required items costing less than \$5,000 to be expensed. A review of the meters and
20 services (assets costing less than \$5,000) for the Water Department showed no additions
21 or retirements to these accounts since 1981, over 20 years.

22
23 The Company's capitalization policy is not consistent with the matching principle which
24 requires that revenues of an accounting period be matched to the expenses that were used
25 to generate that revenue. It also over-states expenses and under-states plant. Further, the

⁴ Data request response CSB 2-9

⁵ Data request response CSB 1-17

1 Company's capitalization policy is not consistent with the capitalization policy proposed
2 in the NARUC USOA. The breakover point for capitalization versus expensing is \$400
3 for utilities with revenues between \$200,000 and \$1,000,000.

4
5 The same problem was identified during the 1999 rate proceeding for Ajo Improvement
6 Company's Electric Department. The Electric Department expensed meters, services,
7 poles, street lights and other plant items costing under \$5,000. In that case, the
8 Commission adopted the recommendation that Ajo Electric capitalize rather than expense
9 assets costing less than \$5,000 (Decision No. 62764, dated August 2, 2000).

10
11 The Company did not implement the change in its capitalization policy for its Water and
12 Wastewater Departments at the same time it made the required change for the Electric
13 Department. The Company indicated in response to data request CSB 1-17 that it began
14 capitalizing assets less than \$5,000 for the Water Department in 2003. Staff did not
15 review the plant added in 2003 and can make no assertion concerning compliance with the
16 NARUC USOA.

17
18 **Q. What is Staff recommending?**

19 **A.** Staff recommends that the Company continue with its plan to capitalize plant costing less
20 than \$5,000 for both its Water and Wastewater Departments in order to comply with the
21 NARUC USOA

22
23
24
25

1 **Rate Base Adjustment 3 – Water Department, Accumulated Depreciation**

2 **Q. What is Ajo proposing for Accumulated Depreciation?**

3 A. Ajo is proposing \$1,429,092 for Accumulated Depreciation. The amount is composed of
4 the \$1,421,455 Accumulated Depreciation balance recorded at the end of the Test Year
5 and a \$7,637 pro forma adjustment to reflect the restatement based on the depreciation
6 rates used by Litchfield Park in Docket No. W-01427A-01-0487.⁶

7
8 **Q. During Staff's review of Accumulated Depreciation, Staff found that Ajo used**
9 **depreciation rates that were different than that authorized by the Commission.**
10 **Should the Company use unauthorized depreciation rates?**

11 A. No. Companies are required to use the depreciation rate(s) authorized by the Commission.
12 In Ajo's last rate case (Decision No. 54709, dated October 10, 1985), the Commission
13 authorized a five percent depreciation rate.

14
15 Decision No. 54709 states that Ajo accepted the Staff report.⁷ The Staff report contained
16 the five percent depreciation rate that was authorized by the Commission. Staff
17 recalculated the 2002 Accumulated Depreciation balance by applying the five percent
18 depreciation rate to the Staff recommended plant balances for the years 1983 to 2002.

19
20 **Q. What is Staff recommending?**

21 A. Staff recommends increasing Accumulated Depreciation by \$14,218, from \$1,429,092 to
22 \$1,443,310 as shown on Schedules CSB-4 and CSB-7.

23
24

⁶ Per Company's response to data request CSB 3-4.

⁷ Page 15, line 24 of Decision No. 54709, dated October 10, 1985

1 **Rate Base Adjustment 4 – Water Department, Working Capital**

2 **Q. What is Ajo proposing for its Working Capital?**

3 A. Ajo is proposing \$42,292 for Working Capital.
4

5 **Q. How did Ajo and Staff calculate Working Capital?**

6 A. The Working Capital was calculated by using the formula method which equals one-
7 eighth of the operating expenses less depreciation, property and income taxes, and
8 purchased water expense, plus one twenty-fourth of purchased water expense. Staff's
9 working capital amount is different from Ajo's because some of Staff's recommended
10 operating expenses are different than the Company's.
11

12 **Q. What is Staff recommending?**

13 A. Staff recommends decreasing Working Capital by \$568, from \$42,292 to \$41,724 as
14 shown on Schedules CSB-4 and CSB-8.
15

16 **OPERATING INCOME – WATER DEPARTMENT**

17
18 **Operating Income Summary – Water Department**

19 **Q. What are the results of Staff's analysis of Test Year revenues, expenses, and**
20 **operating income?**

21 A. As shown on Schedules CSB-9 and CSB-10 Staff's analysis resulted in Test Year
22 revenues of \$641,644, expenses of \$685,411, and an operating loss of \$43,767.
23
24
25

1 **Operating Income Adjustment No. 1 – Water Department, Salaries and Wages**

2 **Q. What is the Company proposing for Salaries and Wages?**

3 A. The Company is proposing \$29,012 for Salaries and Wages. That amount is composed of
4 \$28,167 of Test Year salary and wage expense and an \$845 pro forma adjustment to
5 reflect annualization of a salary and wage increase at three percent. The increase became
6 effective in July of the Test Year.

7
8 **Q. During Staff's review of Salaries and Wage expense, Staff found that Ajo**
9 **inadvertently used a three percent rather than the actual two percent increase to**
10 **calculate the pro forma adjustment. Did Staff correct the error?**

11 A. Yes. Staff corrected the error by recalculating the annualization adjustment using the two
12 percent increase authorized by Phelps Dodge.

13
14 **Q. What is Staff recommending?**

15 A. Staff recommends decreasing Salary and Wages by \$282, from \$29,012 to \$28,730 as
16 shown on Schedules CSB-10 and CSB-11.

17
18 **Operating Income Adjustment No. 2 – Water Department, Pensions and Benefits Expense**

19 **Q. What is the Company proposing for Pensions and Benefits Expense?**

20 A. The Company is proposing \$19,302 for Pensions and Benefits Expense. That amount is
21 composed of \$18,740 of Test Year 2002 pensions and benefits expense and a \$562 pro
22 forma adjustment to reflect annualization of a pensions and benefits increase at three
23 percent. The increase became effective in July of the Test Year.

24
25

1 Q. During Staff's review of Pensions and Benefits expense, Staff found that Ajo used a
2 three percent rather than the actual two percent increase to calculate the pro forma
3 adjustment. Did Staff correct the error?

4 A. Yes. Staff corrected the error by recalculating the annualization adjustment using the
5 Phelps Dodge authorized two percent increase.
6

7 Q. What is Staff recommending?

8 A. Staff recommends decreasing Pensions and Benefits by \$187, from \$19,302 to \$19,115 as
9 shown on Schedules CSB-10 and CSB-12.
10

11 **Operating Income Adjustment No. 3 – Water Department, Outside Services – Legal and**
12 **Consulting**

13 Q. What is the Company proposing for Outside Services – Legal and Consulting
14 Expense?

15 A. The Company is proposing \$3,153 for Outside Services – Legal and Consulting.
16

17 Q. During Staff's review of the Outside Services – Legal and Consulting expense, Staff
18 found that Ajo had not amortized its computer conversion and training costs.
19 Should the computer conversion and training costs be amortized?

20 A. Yes. The computer conversion and related training costs should be amortized because
21 they benefit multiple years. Costs should be allocated over the period they benefit. Staff
22 amortized the expense over the number of years the conversion and training costs are
23 expected to benefit the Company (i.e., five years).
24
25
26

1 **Q. What is Staff recommending?**

2 A. Staff recommends decreasing Outside Services – Legal and Consulting expense by
3 \$2,074, from \$3,153 to \$1,079 as shown on Schedules CSB-10 and CSB-13.
4

5 **Operating Income Adjustment No. 4 – Water Department, General and Administrative**

6 **Q. What is the Company proposing for General and Administrative Expense?**

7 A. The Company is proposing \$25,400 for General and Administrative.
8

9 **Q. During Staff's review of the General and Administrative expense, Staff found that**
10 **Ajo had expensed computer software costs. Should computer software costs be**
11 **expensed?**

12 A. No. Generally Accepted Accounting Principles ("GAAP") and specifically, Statement of
13 Procedure 98-1 issued by the Financial Accounting Standards Board ("FASB"), indicate
14 that software that is obtained for internal use should be capitalized and amortized over its
15 service life. Thus, reclassification of the software costs from General and Administrative
16 Expense to Office Furniture and Equipment is appropriate.
17

18 **Q. What is Staff recommending?**

19 A. Staff recommends decreasing General and Administrative expense by \$2,000, from
20 \$25,400 to \$23,400 as shown on Schedules CSB-10 and CSB-14.
21

22 **Operating Income Adjustment No. 4 – Water Department, Depreciation Expense**

23 **Q. What is the Company proposing for Depreciation Expense?**

24 A. The Company is proposing \$35,963 for Depreciation Expense.
25

1 **Q. Please explain why Staff's plant balances used in the depreciation expense**
2 **calculation are less than that proposed by the Company.**

3 A. The Company used a depreciation rate that was lower than the Commission authorized
4 depreciation rate, therefore, the plant assets were depreciated at an overall lower rate than
5 authorized, resulting in higher net plant balances (i.e., original cost less depreciation).
6 Also, plant items that should have been fully depreciated over an 18 year period at a five
7 percent depreciation rate were not fully depreciated.

8
9 Staff used the Commission authorized five percent depreciation rate to calculate the
10 depreciation expense on plant from 1983 to 2002. As a result of using the correct
11 depreciation rate, Staff calculated lower net plant balances (i.e. original cost less
12 depreciation) and more fully depreciated plant items. Depreciation expense should not be
13 calculated on fully depreciated plant as this would result in an over-recovery of plant cost.
14 Therefore, Staff calculated depreciation expense by removing fully depreciated plant and
15 applying Staff's recommended depreciation rates to Staff's recommended plant account
16 balances.

17
18 **Q. What is Staff recommending?**

19 A. Staff recommends decreasing Depreciation Expense by \$29,405, from \$35,963 to \$6,558
20 as shown on Schedules CSB-10 and CSB-15.

21
22 **Operating Income Adjustment No. 5 – Water Department, Property Tax Expense**

23 **Q. What is the Company proposing for Property Tax Expense?**

24 A. The Company is proposing \$39,382 for Property Tax Expense.
25

1 **Q. Please discuss the primary difference between Staff's and the Company's property**
2 **tax formula.**

3 A. The Department of Revenue's property tax calculation is based on a three-year average of
4 revenue. There is a two-year lag between the year of billing and the most recent of the
5 years included in the average. For example, a property tax bill issued in August 2002 will
6 be based on revenues for the years 1998, 1999, and 2000.

7
8 The Company calculates the three year average of revenue by adding the 2000, 2001, and
9 2002 revenues and dividing the sum by three. Staff's methodology calculates the three
10 year average of revenue by adding twice the 2002 Revenue to the Staff Proposed Revenue
11 then dividing the sum by three. Staff's pro forma adjustment to include Staff
12 recommended revenue in the three-year average of revenue provides a better
13 normalization of property tax expense.

14
15 The reason is that the Company's property tax expense will increase in future years if its
16 revenues increase as the result of a rate increase. However, there is a two-year lag
17 between the year of a rate increase and the year the increase is reflected in property tax
18 expense. Staff's method of calculating property tax expense is normalized to recognize
19 that it is revenue dependent.

20
21 **Q. What is Staff recommending?**

22 A. Staff recommends increasing Property Tax Expense by \$153, from \$39,382 to \$39,229 as
23 shown on Schedules CSB-10 and CSB-16.

24

25

1 **Operating Income Adjustment No. 6 – Water Department, Income Tax Expense**

2 **Q. What is the Company proposing for Income Tax Expense?**

3 A. The Company is proposing a negative \$35,731 for Income Tax Expense.
4

5 **Q. Would you please discuss the primary differences between Staff's and the**
6 **Company's income tax expense?**

7 A. The primary differences between the Company's and Staff's income tax expenses are due
8 to the amount of operating loss and the formula used. Staff's formula applies the statutory
9 rates to the operating loss as shown on Schedule CSB-17. The Company's formula
10 applies a 38.598 percent tax rate to its entire taxable loss amount.
11

12 **Q. What is Staff recommending?**

13 A. Staff recommends increasing Test Year Income Tax Expense by \$22,939, from (\$35,731)
14 to (\$12,792) as shown on Schedules CSB-10 and CSB-17.
15

16 **RATE DESIGN – WATER DEPARTMENT**
17

18 **Q. Have you prepared a schedule summarizing the present, Company proposed, and**
19 **Staff's recommended rates and service charges?**

20 A. Yes. Schedule CSB-18 provides a summary of the Company's present, Company's
21 proposed, and Staff's recommended rates.
22

23 **Q. Please summarize the present rate design.**

24 A. The present monthly customer charges vary by meter size as follows: 5/8-¾ inch \$9.00;
25 1-inch, \$15.00; 1 ½ -inch, \$25.00; 2-inch, \$50.00; 3-inch, \$100; 4-inch, \$200; and 6-inch,

1 \$300. No gallons are included in the customer charge. The present commodity rate is
2 \$2.54 per 1,000 gallons for treated water and \$1.75 per 1,000 gallons for untreated water.
3

4 **Q. Please summarize the Company's proposed rate design.**

5 A. The Company's proposed monthly customer charges are as follows: 5/8-3/4 inch \$9.25; 1-
6 inch, \$15.75; 1 1/2 -inch, \$26.25; 2-inch, \$52.50; 3-inch, \$105; 4-inch, \$210; and 6-inch,
7 \$300. No gallons are included in the customer charge. The proposed commodity rate is
8 \$3.14 per 1,000 gallons for treated water and \$1.85 per 1,000 gallons for untreated water.
9 Additionally, the Company proposed new service related charges and increases to existing
10 service related charges.
11

12 **Q. Please summarize Staff's recommended rate design.**

13 A. As shown on Schedule CSB-18, Staff recommends an inverted tier rate structure to
14 encourage efficient water use. The rate structure is based on the usage of customers on
15 various meter sizes for treated and untreated water. Staff recommends rates and charges
16 for meter sizes that the Company currently does not have. Additionally, Staff
17 recommends new service related charges and increases to existing service related charges.
18

19 **Q. The Typical Bill Analysis (Schedule CSB-19, page 1 of 10) shows that a customer
20 with a 5/8" x 3/4" meter would experience a decrease in his/her monthly bill for use
21 between 2,000 and 5,000 gallons under Staff's recommended rates. Please explain
22 why this occurs.**

23 A. The current monthly customer charge is \$9.00. Staff's recommended monthly customer
24 charge is \$9.85. Therefore, a customer with no consumption would experience an \$0.85
25 increase.
26

1 The currently commodity rate is \$2.54 per 1,000 gallons for all usage. Staff recommends
2 an inverted three tier rate structure where cost increases with usage as shown on Schedule
3 CSB-18.

4
5 The rates per 1,000 gallons for the first, second and third tiers are \$1.93, \$2.90, and \$3.47,
6 respectively. Since Staff's recommended first tier rate is \$0.61 per thousand gallons less
7 than the current commodity rate, the commodity savings exceeds the \$0.85 increase in the
8 monthly customer charge when consumption reaches 2,000 gallons. That is, two times
9 \$0.61 is greater than \$0.85. This \$0.61 savings per 1,000 gallons continues for use
10 through 3,000 gallons.

11
12 Under Staff's recommended rates, a customer's bill for 3,000 gallons of use would be
13 \$0.98 less than under current rates. Although Staff's recommended second tier rate (i.e.
14 \$2.90, which begins with 3,001 gallons of use) exceeds the current commodity rate by
15 \$0.36, a customer's total bill will not exceed the current bill until the accumulation of the
16 \$0.36 incremental cost per 1,000 gallons exceeds the \$0.98 deficit that occurred at the
17 3,000 gallon use level. This occurs at 6,000 gallons. The tables below show detailed
18 billings under present and Staff recommended rates for 5,000 through 7,000 gallons of
19 use.

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1

Company Present Rates

	5,000 Gallons	6,000 Gallons	7,000 Gallons
Monthly Customer Charge	\$ 9.00	\$ 9.00	\$ 9.00
Commodity Rate (\$2.54 for 0 to 3,000 gallons)	\$ 7.62	\$ 7.62	\$ 7.62
Commodity Rate (\$2.54 for 3,001 to 14,000 gallons)	\$ 5.08	\$ 7.62	\$10.16
Total Bill	\$21.70	\$24.24	\$26.78

2

3

Staff's Recommended Rates

	5,000 Gallons	6,000 Gallons	7,000 Gallons
Monthly Customer Charge	\$ 9.85	\$ 9.85	\$ 9.85
Commodity Rate (\$1.93 for 0 to 3,000 gallons)	\$ 5.79	\$ 5.79	\$ 5.79
Commodity Rate (\$2.90 for 3,001 to 14,000 gallons)	\$ 5.80	\$ 8.70	\$11.60
Total Bill	\$21.44	\$24.34	\$27.24

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13

Q. Does the revenue generated by Staff's recommended rates result in an overall increase to the 5/8" x 3/4" meter customer class?

A. Yes. Staff's recommended average commodity rate is \$2.56⁸ per thousand gallons compared to the present rate of \$2.54 per thousand gallons. Applying Staff's recommended rates to the Test Year billing determinant data for the 5/8" x 3/4" meter customer class results in an overall increase to that class. Thus, while a 5/8" x 3/4" meter customer with median use would experience a small decrease in his/her bill, the overall billings to the 5/8" x 3/4" meter customers would increase.

⁸ Average commodity rate = (Staff recommended commodity revenue / gallons sold) = \$195,713 / 76,499 = \$2.56.

REVENUE REQUIREMENT

<u>LINE NO.</u>	<u>DESCRIPTION</u>	<u>[A] COMPANY ORIGINAL COST</u>	<u>[B] STAFF ORIGINAL COST</u>
1	Adjusted Rate Base	\$ 92,745	\$ 115,786
2	Adjusted Operating Income (Loss)	\$ (54,930)	\$ (43,767)
3	Current Rate of Return (L2 / L1)	-59.23%	-37.80%
4	Required Rate of Return	10.00%	8.80%
5	Required Operating Income (L4 * L1)	\$ 9,275	\$ 10,187
6	Operating Income Deficiency (L5 - L2)	\$ 64,205	\$ 53,955
7	Gross Revenue Conversion Factor	1.73080	1.27575
8	Increase In Gross Revenue (L7 * L6)	\$ 111,125	\$ 68,833
9	Adjusted Test Year Revenue	\$ 641,644	\$ 641,644
10	Proposed Annual Revenue (L8 + L9)	\$ 752,769	\$ 710,477
11	Required Increase in Revenue (%) (L8/L9)	17.32%	10.73%

References:

Column [A]: Company Schedules A-1, C-1, C-3 & D-1

Column [B]: Staff Schedules CSB-2, CSB-3, & CSB-9

GROSS REVENUE CONVERSION FACTOR

LINE NO.	DESCRIPTION	(A)	(B)	(C)	(D)
<u>Calculation of Gross Revenue Conversion Factor:</u>					
1	Billings		1.000000		
2	Uncollectible Factor		<u>0.000000</u>		
3	Revenues		1.000000		
4	Less: Combined Federal and State Tax Rate (Line 12)		<u>0.216148</u>		
5	Subtotal (L3 - L4)		0.7839		
6	Revenue Conversion Factor (L1 / L5)		<u>1.27575</u>		
 <u>Calculation of Effective Tax Rate:</u>					
7	Operating Income Before Taxes (Arizona Taxable Income)		100.0000%		
8	Arizona State Income Tax Rate		<u>6.9680%</u>		
9	Federal Taxable Income (L7 - L8)		93.0320%		
10	Applicable Federal Income Tax Rate (Line 34)		<u>15.7438%</u>		
11	Effective Federal Income Tax Rate (L9 x L10)		<u>14.6468%</u>		
12	Combined Federal and State Income Tax Rate (L8 +L11)		<u><u>21.6148%</u></u>		
13	Required Operating Income (Schedule CSB-1, Line 5)	\$ 10,187			
14	Adjusted Test Year Operating Income (Loss) (Schedule CSB-10, Line 16)	<u>\$ (43,767)</u>			
15	Required Increase in Operating Income (L13 - L14)		\$ 53,955		
16	Income Taxes on Recommended Revenue (Col. (D), L33)	\$ 2,086			
17	Income Taxes on Test Year Revenue (Col. (B), L33)	<u>\$ (12,792)</u>			
18	Required Increase in Revenue to Provide for Income Taxes (L16 -L17)		<u>\$ 14,878</u>		
19	Total Required Increase in Revenue (L15 + L18)		<u><u>\$ 68,833</u></u>		
 <u>Calculation of Income Tax:</u>					
		<u>Test Year</u>		<u>Staff Proposed</u>	
20	Revenue (Schedule CSB-9, Columns C and E)	\$ 641,644		\$ 710,477	
21	Less: Operating Expenses Excluding Income Taxes	\$ 698,204		\$ 698,204	
22	Less: Synchronized Interest (L37)	\$ 2,305		<u>\$ 2,305</u>	
23	Arizona Taxable Income (L20 - L21 - L22)	\$ (58,865)		\$ 9,968	
24	Arizona State Income Tax Rate	6.968%		6.968%	
25	Arizona Income Tax (L23 x L24)		\$ (4,102)		\$ 695
26	Federal Taxable Income (L23 - L25)	\$ (54,763)		\$ 9,274	
27	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$ (7,500)		\$ 1,391	
28	Federal Tax on Second Income Bracket (\$51,001 - \$75,000) @ 25%	\$ (1,191)		-	
29	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	-		-	
30	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	-		-	
31	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	-		-	
32	Total Federal Income Tax		<u>\$ (8,691)</u>		<u>\$ 1,391</u>
33	Combined Federal and State Income Tax (L25 + L32)		<u><u>\$ (12,792)</u></u>		<u><u>\$ 2,086</u></u>
34	Applicable Federal Income Tax Rate [Col. (D), L32 - Col. (B), L32] / [Col. (C), L26 - Col. (A), L26]				15.7438%
 <u>Calculation of Interest Synchronization:</u>					
35	Rate Base (Schedule CSB-3, Col. (C), Line 13)	\$ 115,786			
36	Weighted Average Cost of Debt		<u>1.99%</u>		
37	Synchronized Interest (L35 x L37)		<u><u>\$ 2,305</u></u>		

RATE BASE - ORIGINAL COST

LINE NO.	(A) COMPANY AS FILED	(B) STAFF ADJUSTMENTS REF	(C) STAFF AS ADJUSTED
1	Plant in Service	\$ 1,479,545	\$ 1,517,372
2	Less: Accumulated Depreciation	(1,429,092)	(1,443,310)
3	Net Plant in Service	<u>\$ 50,453</u>	<u>\$ 74,062</u>
<u>LESS:</u>			
4	Advances in Aid of Construction (AIAC)	\$ -	\$ -
5	Service Line and Meter Advances	\$ -	\$ -
6	Contributions in Aid of Construction (CIAC)	\$ -	\$ -
7	Less: Accumulated Amortization	-	-
8	Net CIAC	<u>-</u>	<u>-</u>
9	Total Advances and Contributions	\$ -	\$ -
10	Customer Deposits	\$ -	\$ -
11	Deferred Income Tax Credits	\$ -	\$ -
<u>ADD:</u>			
12	Working Capital	\$ 42,292	\$ 41,724
13	Total Rate Base	<u>\$ 92,745</u>	<u>\$ 115,786</u>

References:

Column [A], Company Schedule B-1, Page 1;
Column [B]: Schedule CSB-4
Column [C]: Column [A] + Column [B]

SUMMARY OF RATE BASE ADJUSTMENTS

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJ No.1	[C] ADJ No.2	[D] ADJ No.3	[E] ADJ No.4	[F] ADJ No.5	[I] STAFF ADJUSTED
PLANT IN SERVICE:								
1	Intangible Plant	\$ -	-	-	\$ -	-	-	\$ -
2	Wells	-	-	-	-	-	-	\$ -
3	Pumping Plant	-	-	-	-	-	-	\$ -
4	Water Treatment Plant	644,369	-	-	-	-	-	\$ 644,369
5	Storage Tanks	194,594	-	-	-	-	-	\$ 194,594
6	Transmission and Distribution Mains	487,756	-	-	-	-	-	\$ 487,756
7	Services	72,768	-	-	-	-	-	\$ 72,768
8	Meters	25,265	38,230	-	-	-	-	\$ 63,495
9	Hydrants	23,555	-	-	-	-	-	\$ 23,555
10	General Plant	-	-	-	-	-	-	\$ -
11	Office Furniture and Equipment	1,348	-	2,000	-	-	-	\$ 3,348
12	Transportation Equipment	27,487	-	-	-	-	-	\$ 27,487
13	Total Plant in Service - Actual	1,477,142	38,230	2,000	-	-	-	\$ 1,517,372
14	Pro-forma Adjustment, 2002 Meters	2,403	(2,403)	-	-	-	-	\$ -
15	Total Plant in Service - Adjusted	\$ 1,479,545	\$ 35,827	\$ 2,000	\$ -	\$ -	\$ -	\$ 1,517,372
16	Less: Accumulated Depreciation - Actual	\$ (1,421,455)	-	-	(21,855)	-	-	(1,443,310)
17	Less: Accumulated Depreciation - Pro Forma	(7,637)	-	-	7,637	-	-	-
18	Total Accumulated Depreciation - Adjusted	\$ (1,429,092)	\$ -	\$ -	\$ (14,218)	\$ -	\$ -	\$ (1,443,310)
19	Net Plant in Service	\$ 50,453	\$ 35,827	\$ 2,000	\$ (14,218)	\$ -	\$ -	\$ 74,062
LESS:								
20	Advances in Aid of Construction (AIAC)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
21	Service Line and Meter Advances	-	-	-	-	-	-	-
22	Contributions in Aid of Construction (CIAC)	-	-	-	-	-	-	-
23	Less: Accumulated Amortization	-	-	-	-	-	-	-
24	Net CIAC	-	-	-	-	-	-	-
25	Total Advances and Contributions	-	-	-	-	-	-	-
26	Customer Deposits	-	-	-	-	-	-	-
27	Deferred Income Tax Credits	-	-	-	-	-	-	-
ADD:								
28	Working Capital Allowance	42,292	-	-	-	(568)	-	41,724
29	Other Additions	-	-	-	-	-	-	-
30	Total Rate Base	\$ 92,745	\$ 35,827	\$ 2,000	\$ (14,218)	\$ (568)	\$ -	\$ 115,786

ADJ No.	References:
1	Meters
2	Office Furn. & Equip - Software
3	Accumulated Depreciation
4	Working Capital

RATE BASE ADJUSTMENT NO. 1 - CAPITALIZED METER COSTS

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Meters	\$ 25,265	\$ 38,230	\$ 63,495
2	Pro Forma Plant In Service, Meters	\$ 2,403	\$ (2,403)	\$ -
3		<u>\$ 27,668</u>	<u>\$ 35,827</u>	<u>\$ 63,495</u>
			Additions	
		Company	1993 to 2002	
		As Filed	(Per CSB 4-6)	Total
4	Company As Filed	\$ 25,265.00	\$ -	\$ 25,265.00
5	1993 Additions	\$ -	\$ 2,327.50	\$ 2,327.50
6	1994 Additions	\$ -	\$ 5,736.25	\$ 5,736.25
7	1995 Additions	\$ -	\$ 6,034.09	\$ 6,034.09
8	1996 Additions	\$ -	\$ 3,778.18	\$ 3,778.18
9	1997 Additions	\$ -	\$ 2,730.30	\$ 2,730.30
10	1998 Additions	\$ -	\$ 3,257.20	\$ 3,257.20
11	1999 Additions	\$ -	\$ 7,410.20	\$ 7,410.20
12	2000 Additions	\$ -	\$ 3,346.97	\$ 3,346.97
13	2001 Additions	\$ -	\$ 1,403.93	\$ 1,403.93
14	2002 Additions	\$ -	\$ 2,204.98	\$ 2,204.98
15	Total	<u>\$ 25,265.00</u>	<u>\$ 38,229.60</u>	<u>\$ 63,494.60</u>

References:

Column A: Company Schedule C-2, Page 1

Column B: Testimony, CSB, Company Data Request Responses CSB 3-18 and CSB 3-19

Column C: Column [A] + Column [B]

**RATE BASE ADJUSTMENT NO. 2 - OFFICE FURNITURE AND EQUIPMENT
SOFTWARE COST**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Office Furniture & Equipment, Software	\$ 1,348	\$ 2,000	\$ 3,348

References:

Column A: Company Schedule E-5, Page 1

Column B: Testimony, CSB, Company Data Request Responses CSB 2-9

Column C: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 3 - ACCUMULATED DEPRECIATION

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Accumulated Depreciation, Actual	\$ (1,421,455)	\$ (21,855)	\$ (1,443,310)
2	Accumulated Depreciation, Pro-forma	\$ (7,637)	\$ 7,637	\$ -
		<u>\$ (1,429,092)</u>	<u>\$ (14,218)</u>	<u>\$ (1,443,310)</u>

References:

- Column [A]: Company Schedule B-2, Page 1
- Column [B]: Testimony, CSB
- Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 4 - WORKING CAPITAL ALLOWANCE

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	1/24th Purchased Water			
2	Purchased Water Expense	\$ 477,938	\$ -	\$ 477,938
3	Multiplied by	x 1/24		x 1/24
		<u>\$ 19,914</u>		<u>\$ 19,914</u>
4	1/8th O & M (Less Depr, Taxes, and Pur Water)			
5	Salaries and Wages	\$ 29,012	\$ (282)	\$ 28,730
6	Employee Pension and Benefits	\$ 19,302	\$ (187)	\$ 19,115
7	Purchased Water	\$ -	\$ -	\$ -
8	Outside Services - Legal and Consulting	\$ 3,153	\$ (2,074)	\$ 1,079
9	Outside Services - Oper. and Maint.	\$ 85,787	\$ -	\$ 85,787
10	Rental Expense	\$ 1,200	\$ -	\$ 1,200
11	Materials and Supplies	\$ 15,168	\$ -	\$ 15,168
12	General and Administrative	\$ 25,400	\$ (2,000)	\$ 23,400
13	Depreciation	\$ -	\$ -	\$ -
14	Property Taxes	\$ -	\$ -	\$ -
15	Income Taxes	\$ -	\$ -	\$ -
16		<u>\$ 179,022</u>	<u>\$ (4,543)</u>	<u>\$ 174,479</u>
17	Multiplied by	x 1/8		x 1/8
18		<u>\$ 22,378</u>		<u>\$ 21,810</u>
19	Total Working Capital Allowance	<u>\$ 42,292</u>	<u>\$ (568)</u>	<u>\$ 41,724</u>

References:

- Column [A]: Company Schedule B-5, Page 1
- Column [B]: Testimony, CSB
- Column [C]: Column [A] + Column [B]

OPERATING INCOME - TEST YEAR AND STAFF PROPOSED

LINE NO.	DESCRIPTION	[A] COMPANY TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF PROPOSED CHANGES	[E] STAFF RECOMMENDED
REVENUES:						
	Water Sales	\$ 634,658	\$ -	\$ 634,658	\$ 66,353	\$ 703,491
	Other Water Revenues	6,986	-	6,986	2,480	9,466
1	Total Operating Revenues	<u>\$ 641,644</u>	<u>\$ -</u>	<u>\$ 641,644</u>	<u>\$ 68,833</u>	<u>\$ 710,477</u>
EXPENSES:						
2	Salaries and Wages	\$ 29,012	\$ (282)	\$ 28,730	\$ -	\$ 28,730
3	Employee Pension and Benefits	19,302	(187)	19,115	-	19,115
4	Purchased Water	477,938	-	477,938	-	477,938
5	Outside Services - Legal and Consulting	3,153	(2,074)	1,079	-	1,079
6	Outside Services - Oper. and Maint.	85,787	-	85,787	-	85,787
7	Rental Expense	1,200	-	1,200	-	1,200
8	Materials and Supplies	15,168	-	15,168	-	15,168
9	General and Administrative	25,400	(2,000)	23,400	-	23,400
10	Depreciation	35,963	(29,405)	6,558	-	6,558
11	Property Taxes	39,382	(153)	39,229	-	39,229
12	Income Taxes	(35,731)	22,939	(12,792)	14,878	2,086
13	Total Operating Expenses	<u>\$ 696,574</u>	<u>\$ (11,163)</u>	<u>\$ 685,411</u>	<u>\$ 14,878</u>	<u>\$ 700,290</u>
14	Operating Income (Loss)	<u>\$ (54,930)</u>	<u>\$ 11,163</u>	<u>\$ (43,767)</u>	<u>\$ 53,955</u>	<u>\$ 10,188</u>

References:

- Column (A): Company Schedule C-1, Page 2
- Column (B): Schedule CSB-9
- Column (C): Column (A) + Column (B)
- Column (D): Schedules CSB-1 and CSB-2
- Column (E): Column (C) + Column (D)

Ajo Improvement Company - Water Department
 Docket No. WS-01025A-03-0350
 Test Year Ended December 31, 2002

SUMMARY OF OPERATING INCOME ADJUSTMENTS - TEST YEAR

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) ADJ #1	(C) ADJ #2	(D) ADJ #3	(E) ADJ #4	(F) ADJ #5	(G) ADJ #6	(H) ADJ #7	(I) STAFF ADJUSTED
REVENUES:										
1	Water Sales	\$ 634,658	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 634,658
2	Other Water Revenues	6,986	-	-	-	-	-	-	-	6,986
3	Total Revenues	\$ 641,644	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 641,644
OPERATING EXPENSES:										
4	Salaries and Wages	\$ 29,012	(282)	-	-	-	-	-	-	28,730
5	Employee Pension and Benefits	19,302	-	(187)	-	-	-	-	-	19,115
6	Purchased Water	477,938	-	-	-	-	-	-	-	477,938
7	Outside Services - Legal and Consulting	3,153	-	-	(2,074)	-	-	-	-	1,079
8	Outside Services - Oper. and Maint.	85,787	-	-	-	-	-	-	-	85,787
9	Rental Expense	1,200	-	-	-	-	-	-	-	1,200
10	Materials and Supplies	15,168	-	-	-	-	-	-	-	15,168
11	General and Administrative	25,400	-	-	-	(2,000)	-	-	-	23,400
12	Depreciation	35,963	-	-	-	-	(29,405)	-	-	6,558
13	Property Taxes	39,382	-	-	-	-	-	(153)	-	39,229
14	Income Taxes	(35,731)	-	-	-	-	-	-	22,939	(12,792)
15	Total Operating Expenses	\$ 696,574	\$ (282)	\$ (187)	\$ (2,074)	\$ (2,000)	\$ (29,405)	\$ (153)	\$ 22,939	\$ 685,411
16	Operating Income (Loss)	\$ (54,930)	\$ 282	\$ 187	\$ 2,074	\$ 2,000	\$ 29,405	\$ 153	\$ (22,939)	\$ (43,767)

ADJ No.	References:
1	Salaries and Wages
2	Pensions and Benefits
3	Outside Services, Legal & Cons.
4	General and Administrative
5	Depreciation Expense
6	Property Taxes
7	Income Taxes
	Schedule CSB-11
	Schedule CSB-12
	Schedule CSB-13
	Schedule CSB-14
	Schedule CSB-15
	Schedule CSB-16
	Schedule CSB-17

OPERATING INCOME ADJUSTMENT NO. 1 - SALARY AND WAGE INCREASE

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Salary and Wage Expense	\$ 28,167	\$ -	\$ 28,167
2	Percentage	3%	-1%	2%
3	Salary and Wage Adjustment	\$ 845	\$ (282)	\$ 563

References:

- Column A: Company Data Request Response CSB 1-20, Company Workpaper 000025
- Column B: Testimony, CSB
- Column C: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 2 - PENSIONS AND BENEFITS

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Pension and Benefits	\$ 18,740	\$ -	\$ 18,740
2	Percentage	3%	-1%	2%
3	Pension and Benefits Adjustment	\$ 562	\$ (187)	\$ 375

References:

- Column A: Company Data Request Response CSB 1-20, Company Workpaper 000025
- Column B: Testimony, CSB
- Column C: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 3 - OUTSIDE SERVICES, LEGAL & CONSULTING

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Data File Conversion	967	-	967
2	Training	\$ 1,625	-	\$ 1,625
3	Total Computer Conversion Expense	\$ 2,592	-	\$ 2,592
4	Division Factor	1		5
5	Total Annual Computer Conversion Exp	\$ 2,592	\$ (2,074)	\$ 518

References:

Column A: Company Data Request Response CSB 1-24 and 2-9

Column B: Testimony, CSB

Column C: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 4 - GENERAL & ADMINSTRATIVE

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	General & Administrative, Computer Software	\$ 2,000	\$ (2,000)	\$ -

References:

- Column A: Company Data Request Response CSB 1-3 and 2-9
- Column B: Testimony, CSB
- Column C: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 5 - DEPRECIATION EXPENSE ON TEST YEAR PLANT

LINE NO.	DESCRIPTION	[A] PLANT IN SERVICE	[B] FULLY DEPRECIATED PLANT	[C] DEPRECIABLE PLANT (Col A - Col B)	[D] DEPRECIATION RATE	[E] DEPRECIATION EXPENSE (Col C x Col D)
1	Water Treatment Plant	\$ 644,369	\$ 623,963	\$ 20,406	3.33%	\$ 680
2	Storage Tanks	\$ 194,594	\$ 168,815	\$ 25,779	2.22%	\$ 572
3	Transmission and Distribution Mains	\$ 487,756	\$ 423,997	\$ 63,759	2.00%	\$ 1,275
4	Services	\$ 72,768	\$ 72,768	\$ -	3.33%	\$ -
5	Meters	\$ 63,495	\$ 23,147	\$ 40,348	8.33%	\$ 3,361
6	Hydrants	\$ 23,555	\$ 23,555	\$ -	2.00%	\$ -
7	Office Furniture and Equipment	\$ 3,348	\$ -	\$ 3,348	20.00%	\$ 670
8	Transportation Equipment	\$ 27,487	\$ 27,487	\$ -	20.00%	\$ -
9	Total Plant	\$ 1,517,372	\$ 1,363,732	\$ 153,640		\$ 6,558
10	Composite Depreciation Rate (Depr Exp / Depreciable Plant):	4.27%				
11	CIAC:	\$ -				
12	Amortization of CIAC (Line 10 x Line 11):	\$ -				
13	Depreciation Expense Before Amortization of CIAC:	\$ 6,558				
14	Less Amortization of CIAC:	\$ -				
15	Test Year Depreciation Expense - Staff:	\$ 6,558				
16	Depreciation Expense - Company:	\$ 35,963				
17	Staff's Total Adjustment:	\$ (29,405)				

References:

- Column [A]: Schedule CSB-4
- Column [B]: Staff Workpapers
- Column [C]: Column [A] - Column [B]
- Column [D]: Engineering Staff Report
- Column [E]: Column [C] x Column [D]

OPERATING INCOME ADJUSTMENT NO. 6 - PROPERTY TAX EXPENSE

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENT	[C] STAFF AS ADJUSTED
1	2002 Staff Adjusted Test Year Revenues			\$ 641,644
2	Weight Factor			\$ 2
3	Subtotal (Line 1 x Line 2)			\$ 1,283,288
4	Staff Recommended Revenue			\$ 710,477
5	Subtotal (Line 4 + Line 5)			\$ 1,993,765
6	Number of Years			\$ 3
7	Three Year Average (Line 5 / Line 6)			\$ 664,588
8	Department of Revenue Multiplier			2
9	Revenue Base Value (Line 7 x Line 8)			\$ 1,329,177
10	Plus: 10% of 2002 CWIP			\$ -
11	Less: Net Book Value of Licensed Vehicles			\$ -
12	Full Cash Value (Line 9 + Line 10 - Line 11)			\$ 1,329,177
13	Assessment Ratio			0.25
14	Assessed Value (Line 12 x Line 13)			\$ 332,294
15	Composite Property Tax Rate			0.118055
16	Staff Proposed Property Tax Expense (Line 14 x Line 15)	\$ 39,382	\$ (153)	\$ 39,229

References:

- Column A: Company Schedule C-1, Page 2
- Column B: Testimony, CSB
- Column C: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 7 - INCOME TAXES

LINE NO.	DESCRIPTION	(A)	(B)
	<u>Calculation of Income Tax:</u>		
		<u>Test Year</u>	
1	Revenue (Schedule CSB-9, Line 9)	\$ 641,644	
2	Less: Operating Expenses Excluding Income Taxes	\$ 698,204	
3	Less: Synchronized Interest (L17)	\$ 2,305	
4	Arizona Taxable Income (L1- L2 - L3)	\$ (58,865)	
5	Arizona State Income Tax Rate	6.968%	
6	Arizona Income Tax (L4 x L5)		\$ (4,102)
7	Federal Taxable Income (L4 - L6)	\$ (54,763)	
8	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$ (7,500)	
9	Federal Tax on Second Income Bracket (\$51,001 - \$75,000) @ 25%	\$ (1,191)	
10	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	\$ -	
11	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	\$ -	
12	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	\$ -	
13	Total Federal Income Tax		\$ (8,691)
14	Combined Federal and State Income Tax (L6 + L13)		<u>\$ (12,792)</u>
	<u>Calculation of Interest Synchronization:</u>		
15	Rate Base (Schedule CSB-3, Col. (C), Line 13)	\$ 115,786	
16	Weighted Average Cost of Debt	1.99%	
17	Synchronized Interest (L16 x L17)	<u>\$ 2,305</u>	
18	Income Tax - Per Staff	\$ (12,792)	
19	Income Tax - Per Company	\$ (35,731)	
20	Staff Adjustment	\$ 22,939	

RATE DESIGN

Monthly Customer Charge:

5/8" x 3/4" Meter
 3/4" Meter
 1" Meter
 1 1/2" Meter
 2" Meter
 3" Meter
 4" Meter
 6" Meter

Monthly Customer Charge			
Present Rates	--Proposed Rates--		
	Company	Staff	
\$ 9.00	\$ 9.25	\$ 9.85	
(a)	(a)	\$ 12.80	
\$ 15.00	\$ 15.75	\$ 17.55	
\$ 25.00	\$ 26.25	\$ 29.25	
\$ 50.00	\$ 52.50	\$ 58.50	
\$ 100.00	\$ 105.00	\$ 117.00	
\$ 200.00	\$ 210.00	\$ 234.00	
\$ 300.00	\$ 300.00	\$ 300.00	

Gallons Included in Monthly Customer Charge:

5/8" x 3/4" Meter
 3/4" Meter
 1" Meter
 1 1/2" Meter
 2" Meter
 3" Meter
 4" Meter
 6" Meter

0	0	0
(a)	(a)	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

TREATED WATER

Commodity Rates For 5/8 Inch Meter - Treated Water:

Per 1,000 Gallons (In Excess of Minimum)	\$ 2.54	\$ 3.14	N/A
Per 1,000 Gallons for 0 to 3,000 Gallons	N/A	N/A	\$ 1.93
Per 1,000 Gallons for 3,001 to 14,000 Gallons	N/A	N/A	\$ 2.90
Per 1,000 Gallons for Gallons in Excess of 14,000	N/A	N/A	\$ 3.47

Commodity Rates For 3/4 Inch Meter - Treated Water:

Per 1,000 Gallons (In Excess of Minimum)	(a)	(a)	N/A
Per 1,000 Gallons for 0 to 3,000 Gallons	(a)	(a)	\$ 1.93
Per 1,000 Gallons for 3,001 to 14,000 Gallons	(a)	(a)	\$ 2.90
Per 1,000 Gallons for Gallons in Excess of 14,000	(a)	(a)	\$ 3.47

Commodity Rates For 1-Inch Meter - Treated Water:

Per 1,000 Gallons (In Excess of Minimum)	\$ 2.54	\$ 3.14	N/A
Per 1,000 Gallons for 0 to 25,000 Gallons	N/A	N/A	\$ 2.90
Per 1,000 Gallons for Gallons in Excess of 25,000	N/A	N/A	\$ 3.47

Commodity Rates For 1 1/2-Inch Meter - Treated Water:

Per 1,000 Gallons (In Excess of Minimum)	\$ 2.54	\$ 3.14	N/A
Per 1,000 Gallons for 0 to 42,000 Gallons	N/A	N/A	\$ 2.90
Per 1,000 Gallons for Gallons in Excess of 42,000	N/A	N/A	\$ 3.47

Commodity Rates For 2-Inch Meter - Treated Water:

Per 1,000 Gallons (In Excess of Minimum)	\$ 2.54	\$ 3.14	N/A
Per 1,000 Gallons for 0 to 63,000 Gallons	N/A	N/A	\$ 2.90
Per 1,000 Gallons for Gallons in Excess of 63,000	N/A	N/A	\$ 3.47

Commodity Rates For 3-Inch Meter - Treated Water:

Per 1,000 Gallons (In Excess of Minimum)	\$ 2.54	\$ 3.14	N/A
Per 1,000 Gallons for 0 to 120,000 Gallons	N/A	N/A	\$ 2.90
Per 1,000 Gallons for Gallons in Excess of 120,000	N/A	N/A	\$ 3.47

Commodity Rates For 4-Inch Meter - Treated Water:

Per 1,000 Gallons (In Excess of Minimum)	\$ 2.54	\$ 3.14	N/A
Per 1,000 Gallons for 0 to 180,000 Gallons	N/A	N/A	\$ 2.90
Per 1,000 Gallons for Gallons in Excess of 180,000	N/A	N/A	\$ 3.47

Commodity Rates For 6-Inch Meter - Treated Water:

Per 1,000 Gallons (In Excess of Minimum)	\$ 2.54	\$ 3.14	N/A
Per 1,000 Gallons for 0 to 290,000 Gallons	N/A	N/A	\$ 2.90
Per 1,000 Gallons for Gallons in Excess of 290,000	N/A	N/A	\$ 3.47

**RATE DESIGN
 CONTINUED**

UNTREATED WATER

Commodity Rates For 5/8 Inch Meter - Untreated Water:

	Present	---Proposed Rates---	
	Rates	Company	Staff
Per 1,000 Gallons (In Excess of Minimum)	\$ 1.75	\$ 1.85	N/A
Per 1,000 Gallons for 0 to 14,000 Gallons	N/A	N/A	\$ 1.68
Per 1,000 Gallons for Gallons in Excess of 14,000	N/A	N/A	\$ 2.02

Commodity Rates For 3/4 Inch Meter - Untreated Water:

Per 1,000 Gallons (In Excess of Minimum)	(a)	(a)	N/A
Per 1,000 Gallons for 0 to 14,000 Gallons	(a)	(a)	\$ 1.68
Per 1,000 Gallons for Gallons in Excess of 14,000	(a)	(a)	\$ 2.02

Commodity Rates For 1-Inch Meter - Untreated Water:

Per 1,000 Gallons (In Excess of Minimum)	\$ 1.75	\$ 1.85	N/A
Per 1,000 Gallons for 0 to 25,000 Gallons	N/A	N/A	\$ 1.68
Per 1,000 Gallons for Gallons in Excess of 25,000	N/A	N/A	\$ 2.02

Commodity Rates For 1 1/2-Inch Meter - Untreated Water:

Per 1,000 Gallons (In Excess of Minimum)	\$ 1.75	\$ 1.85	N/A
Per 1,000 Gallons for 0 to 42,000 Gallons	N/A	N/A	\$ 1.68
Per 1,000 Gallons for Gallons in Excess of 42,000	N/A	N/A	\$ 2.02

Commodity Rates For 2-Inch Meter - Untreated Water:

Per 1,000 Gallons (In Excess of Minimum)	\$ 1.75	\$ 1.85	N/A
Per 1,000 Gallons for 0 to 63,000 Gallons	N/A	N/A	\$ 1.68
Per 1,000 Gallons for Gallons in Excess of 63,000	N/A	N/A	\$ 2.02

Commodity Rates For 3-Inch Meter - Untreated Water:

Per 1,000 Gallons (In Excess of Minimum)	\$ 1.75	\$ 1.85	N/A
Per 1,000 Gallons for 0 to 120,000 Gallons	N/A	N/A	\$ 1.68
Per 1,000 Gallons for Gallons in Excess of 120,000	N/A	N/A	\$ 2.02

Commodity Rates For 4-Inch Meter - Untreated Water:

Per 1,000 Gallons (In Excess of Minimum)	\$ 1.75	\$ 1.85	N/A
Per 1,000 Gallons for 0 to 180,000 Gallons	N/A	N/A	\$ 1.68
Per 1,000 Gallons for Gallons in Excess of 180,000	N/A	N/A	\$ 2.02

Commodity Rates For 6-Inch Meter - Untreated Water:

Per 1,000 Gallons (In Excess of Minimum)	\$ 1.75	\$ 1.85	N/A
Per 1,000 Gallons for 0 to 290,000 Gallons	N/A	N/A	\$ 1.68
Per 1,000 Gallons for Gallons in Excess of 290,000	N/A	N/A	\$ 2.02

Service Line and Meter Installation Charge:

5/8" x 3/4" Meter
 3/4" Meter
 1" Meter
 1 1/2" Meter
 2" Meter
 3" Meter
 4" Meter
 6" Meter

	Present	---Proposed Rates---	
	Rates	Company	Staff
5/8" x 3/4" Meter	\$ 100.00	\$ 100.00	\$ 400.00
3/4" Meter	(a)	(a)	\$ 450.00
1" Meter	\$ 150.00	\$ 500.00	\$ 500.00
1 1/2" Meter	\$ 200.00	\$ 750.00	\$ 750.00
2" Meter	\$ 250.00	\$ 1,300.00	\$ 1,300.00
3" Meter	\$ 250.00	\$ 1,300.00	\$ 2,000.00
4" Meter	Cost	Cost (b)	\$ 3,000.00
6" Meter	Cost	Cost (b)	\$ 6,035.00

Service Charges:

	Present	---Proposed Rates---	
	Rates	Company	Staff
Establishment (Regular Hours)	\$ 25.00	\$ 25.00	\$ 25.00
Establishment (After Hours)	(a)	\$ 40.00	\$ 40.00
Re-establishment Within 12 Months	(c)	(c)	(c)
Re-connection of Service (Regular Hours)	\$ 10.00	\$ 50.00	\$ 25.00
Re-connection of Service (After Hours)	(a)	\$ 65.00	\$ 40.00
Water Meter Test (If Correct)	Cost (b)	Cost (b)	Cost (b)
Water Meter Relocation at Customer's Request	Cost (b)	Cost (b)	Cost (b)
Meter Re-read (If Correct)	\$ 10.00	\$ 10.00	\$ 10.00
NSF Check Charge	\$ 10.00	\$ 20.00	\$ 20.00
Late Charge	1.50%	1.50%	1.50%
Deferred Payment Finance Charge	1.50%	1.50%	1.50%
Service Calls - After Hours Only	\$25/hr	\$40/hr	\$40/hr
Deposits	(d)	(d)	(d)
Deposit Interest	(d)	(d)	(d)

(a) No current tariff or Company proposal
 (b) Cost includes materials, labor, and overheads
 (c) Monthly minimum times months off system (Rule A.A.C. R14-2-403D)
 (d) Per A.A.C. R14-2-403B
 N/A Non applicable

TYPICAL BILL ANALYSIS
TREATED WATER
General Service 5/8 X 3/4 - Inch Meter

Average Number of Customers: 1088

<u>Company</u>	<u>Gallons</u>	<u>Present Rates</u>	<u>Proposed Rates</u>	<u>Dollar Increase</u>	<u>Percent Increase</u>
Average Usage	5,861	\$23.89	\$27.65	\$3.77	15.8%
Median Usage	4,275	\$19.86	\$22.67	\$2.81	14.2%
<u>Staff</u>					
Average Usage	5,861	\$23.89	\$23.92	\$0.04	0.1%
Median Usage	4,275	\$19.86	\$19.33	(\$0.53)	-2.7%

Present & Proposed Rates (Without Taxes)
General Service 5/8 X 3/4 - Inch Meter

<u>Gallons Consumption</u>	<u>Present Rates</u>	<u>Company Proposed Rates</u>	<u>% Increase</u>	<u>Staff Proposed Rates</u>	<u>% Increase</u>
0	\$9.00	\$9.25	2.8%	\$9.85	9.4%
1,000	11.54	12.39	7.4%	11.78	2.1%
2,000	14.08	15.53	10.3%	13.71	-2.6%
3,000	16.62	18.67	12.3%	15.64	-5.9%
4,000	19.16	21.81	13.8%	18.54	-3.3%
5,000	21.70	24.95	15.0%	21.43	-1.2%
6,000	24.24	28.09	15.9%	24.33	0.4%
7,000	26.78	31.23	16.6%	27.22	1.6%
8,000	29.32	34.37	17.2%	30.12	2.7%
9,000	31.86	37.51	17.7%	33.01	3.6%
10,000	34.40	40.65	18.2%	35.91	4.4%
15,000	47.10	56.35	19.6%	50.96	8.2%
20,000	59.80	72.05	20.5%	68.33	14.3%
25,000	72.50	87.75	21.0%	85.70	18.2%
50,000	136.00	166.25	22.2%	172.55	26.9%
75,000	199.50	244.75	22.7%	259.40	30.0%
100,000	263.00	323.25	22.9%	346.25	31.7%
125,000	326.50	401.75	23.0%	433.10	32.6%
150,000	390.00	480.25	23.1%	519.95	33.3%
175,000	453.50	558.75	23.2%	606.80	33.8%
200,000	517.00	637.25	23.3%	693.65	34.2%

TYPICAL BILL ANALYSIS
TREATED WATER
General Service 1.5 - Inch Meter

Average Number of Customers: 1

<u>Company Proposed</u>	<u>Gallons</u>	<u>Present Rates</u>	<u>Proposed Rates</u>	<u>Dollar Increase</u>	<u>Percent Increase</u>
Average Usage	500	\$26.27	\$27.82	\$1.55	5.9%
Median Usage	500	\$26.27	\$27.82	\$1.55	5.9%
<u>Staff Proposed</u>					
Average Usage	500	\$26.27	\$30.70	\$4.43	16.9%
Median Usage	500	\$26.27	\$30.70	\$4.43	16.9%

Present & Proposed Rates (Without Taxes)
General Service 1.5 - Inch Meter

<u>Gallons Consumption</u>	<u>Present Rates</u>	<u>Company Proposed Rates</u>	<u>% Increase</u>	<u>Staff Proposed Rates</u>	<u>% Increase</u>
0	\$25.00	\$26.25	5.0%	\$29.25	17.0%
1,000	27.54	29.39	6.7%	32.15	16.7%
2,000	30.08	32.53	8.1%	35.04	16.5%
3,000	32.62	35.67	9.4%	37.94	16.3%
4,000	35.16	38.81	10.4%	40.83	16.1%
5,000	37.70	41.95	11.3%	43.73	16.0%
6,000	40.24	45.09	12.1%	46.62	15.9%
7,000	42.78	48.23	12.7%	49.52	15.7%
8,000	45.32	51.37	13.3%	52.41	15.6%
9,000	47.86	54.51	13.9%	55.31	15.6%
10,000	50.40	57.65	14.4%	58.20	15.5%
15,000	63.10	73.35	16.2%	72.68	15.2%
20,000	75.80	89.05	17.5%	87.15	15.0%
25,000	88.50	104.75	18.4%	101.63	14.8%
50,000	152.00	183.25	20.6%	178.63	17.5%
75,000	215.50	261.75	21.5%	265.48	23.2%
100,000	279.00	340.25	22.0%	352.33	26.3%
125,000	342.50	418.75	22.3%	439.18	28.2%
150,000	406.00	497.25	22.5%	526.03	29.6%
175,000	469.50	575.75	22.6%	612.88	30.5%
200,000	533.00	654.25	22.7%	699.73	31.3%

TYPICAL BILL ANALYSIS
TREATED WATER
General Service 2.0 - Inch Meter

Average Number of Customers: 15

<u>Company Proposed</u>	<u>Gallons</u>	<u>Present Rates</u>	<u>Proposed Rates</u>	<u>Dollar Increase</u>	<u>Percent Increase</u>
Average Usage	99,220	\$302.02	\$364.05	\$62.03	20.5%
Median Usage	35,766	\$140.84	\$164.80	\$23.96	17.0%
<u>Staff Proposed</u>					
Average Usage	99,220	\$302.02	\$366.71	\$64.69	21.4%
Median Usage	35,766	\$140.84	\$162.04	\$21.20	15.0%

Present & Proposed Rates (Without Taxes)
General Service 2.0 - Inch Meter

<u>Gallons Consumption</u>	<u>Present Rates</u>	<u>Company Proposed Rates</u>	<u>% Increase</u>	<u>Staff Proposed Rates</u>	<u>% Increase</u>
0	\$50.00	\$52.50	5.0%	\$58.50	17.0%
1,000	52.54	55.64	5.9%	61.40	16.9%
2,000	55.08	58.78	6.7%	64.29	16.7%
3,000	57.62	61.92	7.5%	67.19	16.6%
4,000	60.16	65.06	8.1%	70.08	16.5%
5,000	62.70	68.20	8.8%	72.98	16.4%
6,000	65.24	71.34	9.4%	75.87	16.3%
7,000	67.78	74.48	9.9%	78.77	16.2%
8,000	70.32	77.62	10.4%	81.66	16.1%
9,000	72.86	80.76	10.8%	84.56	16.1%
10,000	75.40	83.90	11.3%	87.45	16.0%
15,000	88.10	99.60	13.1%	101.93	15.7%
20,000	100.80	115.30	14.4%	116.40	15.5%
25,000	113.50	131.00	15.4%	130.88	15.3%
50,000	177.00	209.50	18.4%	203.25	14.8%
75,000	240.50	288.00	19.8%	282.57	17.5%
100,000	304.00	366.50	20.6%	369.42	21.5%
125,000	367.50	445.00	21.1%	456.27	24.2%
150,000	431.00	523.50	21.5%	543.12	26.0%
175,000	494.50	602.00	21.7%	629.97	27.4%
200,000	558.00	680.50	22.0%	716.82	28.5%

TYPICAL BILL ANALYSIS
TREATED WATER
General Service 3.0 - Inch Meter

Average Number of Customers: 3

<u>Company Proposed</u>	<u>Gallons</u>	<u>Present Rates</u>	<u>Proposed Rates</u>	<u>Dollar Increase</u>	<u>Percent Increase</u>
Average Usage	58,171	\$247.76	\$287.66	\$39.90	16.1%
Median Usage	50,714	\$228.81	\$264.24	\$35.43	15.5%
<u>Staff Proposed</u>					
Average Usage	58,171	\$247.76	\$285.41	\$37.65	15.2%
Median Usage	50,714	\$228.81	\$263.82	\$35.00	15.3%

Present & Proposed Rates (Without Taxes)
General Service 3.0 - Inch Meter

<u>Gallons Consumption</u>	<u>Present Rates</u>	<u>Company Proposed Rates</u>	<u>% Increase</u>	<u>Staff Proposed Rates</u>	<u>% Increase</u>
0	\$100.00	\$105.00	5.0%	\$117.00	17.0%
1,000	102.54	108.14	5.5%	119.90	16.9%
2,000	105.08	111.28	5.9%	122.79	16.9%
3,000	107.62	114.42	6.3%	125.69	16.8%
4,000	110.16	117.56	6.7%	128.58	16.7%
5,000	112.70	120.70	7.1%	131.48	16.7%
6,000	115.24	123.84	7.5%	134.37	16.6%
7,000	117.78	126.98	7.8%	137.27	16.5%
8,000	120.32	130.12	8.1%	140.16	16.5%
9,000	122.86	133.26	8.5%	143.06	16.4%
10,000	125.40	136.40	8.8%	145.95	16.4%
15,000	138.10	152.10	10.1%	160.43	16.2%
20,000	150.80	167.80	11.3%	174.90	16.0%
25,000	163.50	183.50	12.2%	189.38	15.8%
50,000	227.00	262.00	15.4%	261.75	15.3%
75,000	290.50	340.50	17.2%	334.13	15.0%
100,000	354.00	419.00	18.4%	406.50	14.8%
125,000	417.50	497.50	19.2%	481.77	15.4%
150,000	481.00	576.00	19.8%	568.62	18.2%
175,000	544.50	654.50	20.2%	655.47	20.4%
200,000	608.00	733.00	20.6%	742.32	22.1%

TYPICAL BILL ANALYSIS
TREATED WATER
General Service 4.0 - Inch Meter

Average Number of Customers: 1

<u>Company Proposed</u>	<u>Gallons</u>	<u>Present Rates</u>	<u>Proposed Rates</u>	<u>Dollar Increase</u>	<u>Percent Increase</u>
Average Usage	5,333,251	\$13,746.46	\$16,956.41	\$3,209.95	23.4%
<u>Staff Proposed</u>					
Average Usage	5,333,251	\$13,746.46	\$18,657.49	\$4,911.04	35.7%

Present & Proposed Rates (Without Taxes)
General Service 4.0 - Inch Meter

<u>Gallons Consumption</u>	<u>Present Rates</u>	<u>Company Proposed Rates</u>	<u>% Increase</u>	<u>Staff Proposed Rates</u>	<u>% Increase</u>
0	\$200.00	\$210.00	5.0%	\$234.00	17.0%
1,000	202.54	213.14	5.2%	236.90	17.0%
2,000	205.08	216.28	5.5%	239.79	16.9%
3,000	207.62	219.42	5.7%	242.69	16.9%
4,000	210.16	222.56	5.9%	245.58	16.9%
5,000	212.70	225.70	6.1%	248.48	16.8%
6,000	215.24	228.84	6.3%	251.37	16.8%
7,000	217.78	231.98	6.5%	254.27	16.8%
8,000	220.32	235.12	6.7%	257.16	16.7%
9,000	222.86	238.26	6.9%	260.06	16.7%
10,000	225.40	241.40	7.1%	262.95	16.7%
15,000	238.10	257.10	8.0%	277.43	16.5%
20,000	250.80	272.80	8.8%	291.90	16.4%
25,000	263.50	288.50	9.5%	306.38	16.3%
50,000	327.00	367.00	12.2%	378.75	15.8%
75,000	390.50	445.50	14.1%	451.13	15.5%
100,000	454.00	524.00	15.4%	523.50	15.3%
125,000	517.50	602.50	16.4%	595.88	15.1%
150,000	581.00	681.00	17.2%	668.25	15.0%
175,000	644.50	759.50	17.8%	740.63	14.9%
200,000	708.00	838.00	18.4%	824.58	16.5%

TYPICAL BILL ANALYSIS
UNTREATED WATER
General Service 5/8 X 3/4 - Inch Meter

Average Number of Customers: 7

<u>Company</u>	<u>Gallons</u>	<u>Present Rates</u>	<u>Proposed Rates</u>	<u>Dollar Increase</u>	<u>Percent Increase</u>
Average Usage	68,034	\$128.06	\$135.11	\$7.05	5.5%
Median Usage	40,820	\$80.44	\$84.77	\$4.33	5.4%
<u>Staff</u>					
Average Usage	68,034	\$128.06	\$142.30	\$14.24	11.1%
Median Usage	40,820	\$80.44	\$87.44	\$7.00	8.7%

Present & Proposed Rates (Without Taxes)
General Service 5/8 X 3/4 - Inch Meter

<u>Gallons Consumption</u>	<u>Present Rates</u>	<u>Company Proposed Rates</u>	<u>% Increase</u>	<u>Staff Proposed Rates</u>	<u>% Increase</u>
0	\$9.00	\$9.25	2.8%	\$9.85	9.4%
1,000	10.75	11.10	3.3%	11.53	7.3%
2,000	12.50	12.95	3.6%	13.21	5.7%
3,000	14.25	14.80	3.9%	14.89	4.5%
4,000	16.00	16.65	4.1%	16.57	3.6%
5,000	17.75	18.50	4.2%	18.25	2.8%
6,000	19.50	20.35	4.4%	19.93	2.2%
7,000	21.25	22.20	4.5%	21.61	1.7%
8,000	23.00	24.05	4.6%	23.29	1.3%
9,000	24.75	25.90	4.6%	24.97	0.9%
10,000	26.50	27.75	4.7%	26.65	0.6%
15,000	35.25	37.00	5.0%	35.39	0.4%
20,000	44.00	46.25	5.1%	45.47	3.3%
25,000	52.75	55.50	5.2%	55.55	5.3%
50,000	96.50	101.75	5.4%	105.95	9.8%
75,000	140.25	148.00	5.5%	156.35	11.5%
100,000	184.00	194.25	5.6%	206.75	12.4%
125,000	227.75	240.50	5.6%	257.15	12.9%
150,000	271.50	286.75	5.6%	307.55	13.3%
175,000	315.25	333.00	5.6%	357.95	13.5%
200,000	359.00	379.25	5.6%	408.35	13.7%

TYPICAL BILL ANALYSIS
UNTREATED WATER
General Service 2.0 - Inch Meter

Average Number of Customers: 2

<u>Company Proposed</u>	<u>Gallons</u>	<u>Present Rates</u>	<u>Proposed Rates</u>	<u>Dollar Increase</u>	<u>Percent Increase</u>
Average Usage	659,129	\$1,203.48	\$1,271.89	\$68.41	5.7%
Median Usage	16,000	\$78.00	\$82.10	\$4.10	5.3%
<u>Staff Proposed</u>					
Average Usage	659,129	\$1,203.48	\$1,366.14	\$162.66	13.5%
Median Usage	16,000	\$78.00	\$85.38	\$7.38	9.5%

Present & Proposed Rates (Without Taxes)
General Service 2.0 - Inch Meter

<u>Gallons Consumption</u>	<u>Present Rates</u>	<u>Company Proposed Rates</u>	<u>% Increase</u>	<u>Staff Proposed Rates</u>	<u>% Increase</u>
0	\$50.00	\$52.50	5.0%	\$58.50	17.0%
1,000	51.75	54.35	5.0%	60.18	16.3%
2,000	53.50	56.20	5.0%	61.86	15.6%
3,000	55.25	58.05	5.1%	63.54	15.0%
4,000	57.00	59.90	5.1%	65.22	14.4%
5,000	58.75	61.75	5.1%	66.90	13.9%
6,000	60.50	63.60	5.1%	68.58	13.4%
7,000	62.25	65.45	5.1%	70.26	12.9%
8,000	64.00	67.30	5.2%	71.94	12.4%
9,000	65.75	69.15	5.2%	73.62	12.0%
10,000	67.50	71.00	5.2%	75.30	11.6%
15,000	76.25	80.25	5.2%	83.70	9.8%
20,000	85.00	89.50	5.3%	92.10	8.4%
25,000	93.75	98.75	5.3%	100.50	7.2%
50,000	137.50	145.00	5.5%	142.50	3.6%
75,000	181.25	191.25	5.5%	188.53	4.0%
100,000	225.00	237.50	5.6%	238.93	6.2%
125,000	268.75	283.75	5.6%	289.33	7.7%
150,000	312.50	330.00	5.6%	339.73	8.7%
175,000	356.25	376.25	5.6%	390.13	9.5%
200,000	400.00	422.50	5.6%	440.53	10.1%

TYPICAL BILL ANALYSIS
UNTREATED WATER
General Service 3.0 - Inch Meter

Average Number of Customers: 4

<u>Company Proposed</u>	<u>Gallons</u>	<u>Present Rates</u>	<u>Proposed Rates</u>	<u>Dollar Increase</u>	<u>Percent Increase</u>
Average Usage	383,041	\$770.32	\$813.63	\$43.30	5.6%
Median Usage	99,550	\$274.21	\$289.17	\$14.96	5.5%
<u>Staff Proposed</u>					
Average Usage	383,041	\$770.32	\$848.89	\$78.57	10.2%
Median Usage	99,550	\$274.21	\$284.24	\$10.03	3.7%

Present & Proposed Rates (Without Taxes)
General Service 3.0 - Inch Meter

<u>Gallons Consumption</u>	<u>Present Rates</u>	<u>Company Proposed Rates</u>	<u>% Increase</u>	<u>Staff Proposed Rates</u>	<u>% Increase</u>
0	\$100.00	\$105.00	5.0%	\$117.00	17.0%
1,000	101.75	106.85	5.0%	118.68	16.6%
2,000	103.50	108.70	5.0%	120.36	16.3%
3,000	105.25	110.55	5.0%	122.04	16.0%
4,000	107.00	112.40	5.0%	123.72	15.6%
5,000	108.75	114.25	5.1%	125.40	15.3%
6,000	110.50	116.10	5.1%	127.08	15.0%
7,000	112.25	117.95	5.1%	128.76	14.7%
8,000	114.00	119.80	5.1%	130.44	14.4%
9,000	115.75	121.65	5.1%	132.12	14.1%
10,000	117.50	123.50	5.1%	133.80	13.9%
15,000	126.25	132.75	5.1%	142.20	12.6%
20,000	135.00	142.00	5.2%	150.60	11.6%
25,000	143.75	151.25	5.2%	159.00	10.6%
50,000	187.50	197.50	5.3%	201.00	7.2%
75,000	231.25	243.75	5.4%	243.00	5.1%
100,000	275.00	290.00	5.5%	285.00	3.6%
125,000	318.75	336.25	5.5%	328.68	3.1%
150,000	362.50	382.50	5.5%	379.08	4.6%
175,000	406.25	428.75	5.5%	429.48	5.7%
200,000	450.00	475.00	5.6%	479.88	6.6%

TYPICAL BILL ANALYSIS
UNTREATED WATER
General Service 4.0 - Inch Meter

Average Number of Customers: 1

<u>Company Proposed</u>	<u>Gallons</u>	<u>Present Rates</u>	<u>Proposed Rates</u>	<u>Dollar Increase</u>	<u>Percent Increase</u>
Average Usage	305,985	\$732.41	\$776.07	\$43.66	6.0%
<u>Staff Proposed</u>					
Average Usage	305,985	\$732.41	\$790.38	\$57.97	7.9%

Present & Proposed Rates (Without Taxes)
General Service 4.0 - Inch Meter

<u>Gallons Consumption</u>	<u>Present Rates</u>	<u>Company Proposed Rates</u>	<u>% Increase</u>	<u>Staff Proposed Rates</u>	<u>% Increase</u>
0	\$200.00	\$210.00	5.0%	\$234.00	17.0%
1,000	201.74	211.85	5.0%	235.68	16.8%
2,000	203.48	213.70	5.0%	237.36	16.7%
3,000	205.22	215.55	5.0%	239.04	16.5%
4,000	206.96	217.40	5.0%	240.72	16.3%
5,000	208.70	219.25	5.1%	242.40	16.1%
6,000	210.44	221.10	5.1%	244.08	16.0%
7,000	212.18	222.95	5.1%	245.76	15.8%
8,000	213.92	224.80	5.1%	247.44	15.7%
9,000	215.66	226.65	5.1%	249.12	15.5%
10,000	217.40	228.50	5.1%	250.80	15.4%
15,000	226.10	237.75	5.2%	259.20	14.6%
20,000	234.80	247.00	5.2%	267.60	14.0%
25,000	243.50	256.25	5.2%	276.00	13.3%
50,000	287.00	302.50	5.4%	318.00	10.8%
75,000	330.50	348.75	5.5%	360.00	8.9%
100,000	374.00	395.00	5.6%	402.00	7.5%
125,000	417.50	441.25	5.7%	444.00	6.3%
150,000	461.00	487.50	5.7%	486.00	5.4%
175,000	504.50	533.75	5.8%	528.00	4.7%
200,000	548.00	580.00	5.8%	576.72	5.2%

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WASTEWATER DEPARTMENT

1 **WASTEWATER DEPARTMENT**

2
3 **Q. What are the primary reasons stated by the Company for requesting a permanent**
4 **rate increase for the Wastewater Department?**

5 A. The Company's application states that it has not requested a rate increase for the
6 Wastewater Department in approximately 17 years. Additionally, the application states
7 that the Company has incurred an operating loss of \$68,533 for the Wastewater
8 Department resulting in no rate of return on the department's \$217,822 rate base during
9 the Test Year.

10
11 **SUMMARY OF PROPOSED REVENUES – WASTEWATER DEPARTMENT**

12
13 **Q. Please summarize the Company's filing for the Wastewater Department.**

14 A. The Company proposes rates that produce operating revenue of \$251,823 and operating
15 income of \$21,782 for a 10.0 percent rate of return on an original cost rate base of
16 \$217,822. The Company's proposal would increase annual operating revenues by
17 \$156,318 (or 163.67 percent) over Test Year revenues.

18
19 **Q. Please summarize Staff's recommended revenue.**

20 A. Staff recommends total annual operating revenue of \$230,576 and operating income of
21 \$19,291 for an 8.8 percent rate of return on an original cost rate base of \$219,254. This
22 revenue amount represents an increase of \$135,071, or 141.43 percent, over Test Year
23 revenues.

24
25
26

1 Q. Please summarize the recommendations and adjustments addressed in your
2 testimony for the Wastewater Department.

3 A. My testimony addresses the following issues:

4
5 Office Furniture and Equipment – This adjustment increases the Office Furniture and
6 Equipment account by \$2,000.

7
8 Working Capital – This adjustment decreases Working Capital by \$568.

9
10 Salaries and Wage Expense – This adjustment decreases Salaries and Wage Expense by
11 \$282.

12
13 Pensions and Benefits – This adjustment decreases Pensions and Benefits by \$192.

14
15 Outside Services, Legal and Consulting – This adjustment decreases Outside Services,
16 Legal and Consulting Expense by \$2,074.

17
18 General and Administrative – This adjustment decreases General and Administrative
19 Expense by \$2,000.

20
21 Depreciation Expense – This adjustment decreases Depreciation Expense by \$680.

22
23 Property Tax Expense – This adjustment increases Property Tax Expense by \$2,720.

24
25 Income Tax Expense – This adjustment increases Income Tax Expense by \$12,300.
26

1 **RATE BASE - WASTEWATER DEPARTMENT**

2
3 **Fair Value Rate Base**

4 **Q. Has the Company prepared a Schedule showing the elements of Reconstruction Cost**
5 **New Rate Base ("RCND")?**

6 **A. No. The Company requested to waive the RCND schedule filing requirement. Therefore,**
7 **Staff evaluated the original cost rate base as the fair value rate base ("FVRB").**

8
9 **Rate Base Summary – Wastewater Department**

10 **Q. Please summarize Staff's adjustments to the Wastewater Department's rate base**
11 **shown on Schedule CSB-3.**

12 **A. Staff's adjustments to the Wastewater Department's rate base resulted in a net increase of**
13 **\$1,432, from \$217,822 to \$219,254. This increase was primarily due to Staff reclassifying**
14 **costs from an expense account to the Office Furniture and Equipment account.**

15
16 **Rate Base Adjustment 1 – Wastewater Department, Office Furniture and Equipment**

17 **Q. What is Ajo proposing for Office Furniture and Equipment?**

18 **A. Ajo is proposing \$1,348 for Office Furniture and Equipment.**

19
20 **Q. During Staff's review of Operating Expenses, Staff found that the Company**
21 **expensed computer software. Should the computer software be expensed?**

22 **A. The \$2,000 in software costs⁹ (the Wastewater Department's allocated portion of the total**
23 **\$6,000 software cost) should have been capitalized. Plant that is used and useful in the**
24 **provision of service should be capitalized by recording the cost in the appropriate plant**
25 **account and depreciating the cost over the useful life of the plant asset in accordance to**

⁹ Data request responses CSB 2-9

1 the NARUC USOA. Thus, reclassification of the software costs from General and
2 Administrative Expense to Office Furniture and Equipment is appropriate.

3
4 **Q. What is Staff recommending?**

5 A. Staff recommends increasing Office Furniture and Equipment by \$2,000, from \$1,348 to
6 \$3,348 as shown on Schedules CSB-4 and CSB-5. This cost is removed from expense by
7 Staff Operating Income Adjustment No. 4.

8
9 **Rate Base Adjustment 2 – Wastewater Department, Working Capital**

10 **Q. What is Ajo proposing for its Working Capital?**

11 A. Ajo is proposing \$24,439 for Working Capital.

12
13 **Q. How did Ajo and Staff calculate Working Capital?**

14 A. Working Capital was calculated by using the formula method which equals one-eighth of
15 the operating expenses less depreciation, property and income taxes, and purchased power
16 expense, plus one twenty-fourth of purchased power expense. Staff's working capital
17 amount is different from Ajo's because some of Staff's recommended operating expenses
18 are different than the Company's.

19
20 **Q. What is Staff recommending?**

21 A. Staff recommends decreasing Working Capital by \$568, from \$24,439 to \$23,871 as
22 shown on Schedules CSB-4 and CSB-6.

23

1 **OPERATING INCOME – WASTEWATER DEPARTMENT**

2 **Operating Income Summary – Wastewater Department**

3 **Q. What are the results of Staff's analysis of Test Year revenues, expenses, and**
4 **operating income?**

5 A. As shown on Schedules CSB-7 and CSB-8, Staff's analysis resulted in Test Year revenues
6 of \$95,505, expenses of \$173,828, and an operating loss of \$78,323.

7

8 **Operating Income Adjustment No. 1 – Wastewater Department, Salaries and Wages**

9 **Q. What is the Company proposing for Salaries and Wages?**

10 A. The Company is proposing \$29,012 for Salaries and Wages. That amount is composed of
11 \$28,167 of Test Year salary and wage expense and an \$845 pro forma adjustment to
12 reflect annualization of salary and wage increase at three percent. The increase became
13 effective in July of 2002.

14

15 **Q. During Staff's review of Salaries and Wage expense, Staff found that Ajo**
16 **inadvertently used a three percent rather than the actual two percent increase to**
17 **calculate the pro forma adjustment. Did Staff correct the error?**

18 A. Yes. Staff corrected the error by recalculating the annualization adjustment using the two
19 percent increase authorized by Phelps Dodge.

20

21 **Q. What is Staff recommending?**

22 A. Staff recommends decreasing Salary and Wages by \$282, from \$29,012 to \$28,730 as
23 shown on Schedules CSB-8 and CSB-9.

24

1 **Operating Income Adjustment No. 2 – Wastewater Department, Pensions and Benefits**
2 **Expense**

3 **Q. What is the Company proposing for Pensions and Benefits Expense?**

4 A. The Company is proposing \$19,741 for Pensions and Benefits Expense. The amount is
5 composed of \$19,166 of Test Year 2002 pensions and benefits expense and a \$575 pro
6 forma adjustment to reflect annualization of salary and wage increase at three percent.
7 The increase became effective in July of 2002.

8
9 **Q. During Staff's review of Pensions and Benefits expense, Staff found that Ajo used a**
10 **three percent rather than the actual two percent increase to calculate the pro forma**
11 **adjustment. Did Staff correct the error?**

12 A. Yes. Staff corrected the error by recalculating the annualization adjustment using the
13 Phelps Dodge authorized two percent increase.

14
15 **Q. What is Staff recommending?**

16 A. Staff recommends decreasing Pensions and Benefits by \$192, from \$19,741 to \$19,549 as
17 shown on Schedules CSB-8 and CSB-10.

18
19 **Operating Income Adjustment No. 3 – Wastewater Department, Outside Services – Legal**
20 **and Consulting**

21 **Q. What is the Company proposing for Outside Services – Legal and Consulting**
22 **Expense?**

23 A. The Company is proposing \$4,343 for Outside Services – Legal and Consulting.
24

1 **Q. During Staff's review of the Outside Services – Legal and Consulting expense, Staff**
2 **found that Ajo had not amortized its computer conversion and training costs.**
3 **Should the computer conversion and training costs be amortized?**

4 A. Yes. The computer conversion and related training costs should be amortized because
5 they benefit multiple years. Costs should be distributed over the periods benefited. Staff
6 amortized the expense over the number of years the conversion and training costs are
7 expected to benefit the Company (i.e., five years).

8
9 **Q. What is Staff recommending?**

10 A. Staff recommends decreasing Outside Services – Legal and Consulting expense by
11 \$2,074, from \$4,343 to \$2,269 as shown on Schedules CSB-8 and CSB-11.

12
13 **Operating Income Adjustment No. 4 – Wastewater Department, General and**
14 **Administrative**

15 **Q. What is the Company proposing for General and Administrative Expense?**

16 A. The Company is proposing \$15,020 for General and Administrative.

17
18 **Q. During Staff's review of the General and Administrative expense, Staff found that**
19 **Ajo had expensed computer software costs. Should computer software costs be**
20 **expensed?**

21 A. No. Generally Accepted Accounting Principles ("GAAP") and specifically, Statement of
22 Procedure 98-1 issued by the Financial Accounting Standards Board ("FASB"), indicate
23 that software that is obtained for internal use should be capitalized and amortized over its
24 service life. Thus, reclassification of the software costs from General and Administrative
25 Expense to Office Furniture and Equipment is appropriate.

26

1 **Q. What is Staff recommending?**

2 A. Staff recommends decreasing General and Administrative expense by \$2,000, from
3 \$15,020 to \$13,020 as shown on Schedules CSB-8 and CSB-12. This cost is capitalized
4 by Staff Rate Base Adjustment No. 1.

5

6 **Operating Income Adjustment No. 4 – Wastewater Department, Depreciation Expense**

7 **Q. What is the Company proposing for Depreciation Expense?**

8 A. The Company is proposing \$7,965 for Depreciation Expense.

9

10 **Q. Please explain Staff's depreciation expense calculation.**

11 A. Staff calculated depreciation expense by applying Staff's recommended depreciation rates
12 to Staff's recommended plant account balances.

13

14 **Q. What is Staff recommending?**

15 A. Staff recommends decreasing Depreciation Expense by \$680, from \$7,965 to \$7,285 as
16 shown on Schedules CSB-8 and CSB-13.

17

18 **Operating Income Adjustment No. 5 – Wastewater Department, Property Tax Expense**

19 **Q. What is the Company proposing for Property Tax Expense?**

20 A. The Company is proposing \$5,575 for Property Tax Expense.

21

22 **Q. Please discuss the primary difference between Staff's and the Company's property
23 tax formula.**

24 A. The Department of Revenue's property tax calculation is based on a three-year average of
25 revenue. There is a two-year lag between the year of billing and the most recent of the

1 years included in the average. For example, a property tax bill issued in August 2002 will
2 be based on revenues for the years 1998, 1999, and 2000.

3
4 The Company calculates the three year average of revenue by adding the 2000, 2001, and
5 2002 revenues and dividing the sum by three. Staff's methodology calculates the three
6 year average of revenue by adding twice the 2002 Revenue to the Staff Proposed Revenue
7 then dividing the sum by three. Staff's pro forma adjustment to include Staff
8 recommended revenue in the three-year average of revenue provides a better
9 normalization of property tax expense.

10
11 The reason is that the Company's property tax expense will increase in future years if its
12 revenues increase as the result of a rate increase. However, there is a two-year lag
13 between the year of a rate increase and the year the increase is reflected in property tax
14 expense. Staff's method of calculating property tax expense is normalized to recognize
15 that it is revenue dependent.

16
17 **Q. What is Staff recommending?**

18 A. Staff recommends increasing Property Tax Expense by \$2,720, from \$5,575 to \$8,295 as
19 shown on Schedules CSB-8 and CSB-14.

20
21 **Operating Income Adjustment No. 6 – Wastewater Department, Income Tax Expense**

22 **Q. What is the Company proposing for Income Tax Expense?**

23 A. The Company is proposing a negative \$45,805 for Income Tax Expense.
24
25
26

1 **Q. Would you please discuss the primary differences between Staff's and the**
2 **Company's income tax expense?**

3 A. The primary differences between the Company's and Staff's income tax expenses are due
4 to the amount of operating loss and the formula used. Staff's formula applies the statutory
5 rates to the operating loss as shown on Schedule CSB-15. The Company's formula
6 applies a 38.598 percent rate to its entire taxable loss amount.

7
8 **Q. What is Staff recommending?**

9 A. Staff recommends increasing Test Year Income Tax Expense by \$12,300, from (\$45,805)
10 to (\$33,502) as shown on Schedules CSB-8 and CSB-15.

11

12 **RATE DESIGN – WASTEWATER DEPARTMENT**

13

14 **Q. Have you prepared a schedule summarizing the present, Company proposed, and**
15 **your recommended rates and service charges?**

16 A. Yes. Schedule CSB-16 provides a summary of the Company's present, Company's
17 proposed, and Staff's recommended rates.

18

19 **Q. Please summarize the present rate design.**

20 A. The present monthly customer charges vary by customer class as follows: Residential,
21 \$6.08; Small Commercial, \$6.08 (Additional toilet, \$1.53); Restaurants with Dishwashers,
22 \$18.43; Additional Monthly Commercial Charges (Laundromats \$2.93 per washing
23 machine and Wash Racks \$2.93 per wash rack); and Residential Equivalents, \$6.08.

24

25

26

1 **Q. Please summarize the Company's proposed rate design.**

2 A. The present monthly customer charges vary by customer class as follows: Residential,
3 \$16.64; Small Commercial, \$21.91; Restaurants with Dishwashers, \$50.44; Additional
4 Monthly Commercial Charges (Laundromats \$8.02 per washing machine and Wash Racks
5 \$8.02 per wash rack); and Residential Equivalents, \$16.64. Additionally, the Company
6 proposes new service related charges and increases to existing service related charges.
7

8 **Q. Please summarize Staff's recommended rate design.**

9 A. As shown on Schedule CSB-16, Staff's recommended rate design is as follows:
10 Residential, \$15.65; Small Commercial, \$19.60; Restaurants with Dishwashers, \$46.14;
11 Additional Monthly Commercial Charges (Laundromats \$7.33 per washing machine and
12 Wash Racks \$7.33 per wash rack); and Residential Equivalents, \$15.65. Additionally,
13 Staff recommends new service related charges and increases to existing service related
14 charges.
15

16 **Q. Does this conclude your testimony?**

17 A. Yes, it does.
18

Ajo Improvement Company - Wastewater Department
 Docket No. WS-01025A-03-0350
 Test Year Ended December 31, 2002

Schedule CSB-1

REVENUE REQUIREMENT

<u>LINE NO.</u>	<u>DESCRIPTION</u>	<u>[A] COMPANY ORIGINAL COST</u>	<u>[B] STAFF ORIGINAL COST</u>
1	Adjusted Rate Base	\$ 217,822	\$ 219,254
2	Adjusted Operating Income (Loss)	\$ (68,533)	\$ (78,326)
3	Current Rate of Return (L2 / L1)	-31.46%	-35.72%
4	Required Rate of Return	10.00%	8.80%
5	Required Operating Income (L4 * L1)	\$ 21,782	\$ 19,291
6	Operating Income Deficiency (L5 - L2)	\$ 90,315	\$ 97,617
7	Gross Revenue Conversion Factor	1.73080	1.38369
8	Increase In Gross Revenue (L7 * L6)	\$ 156,318	\$ 135,071
9	Adjusted Test Year Revenue	\$ 95,505	\$ 95,505
10	Proposed Annual Revenue (L8 + L9)	\$ 251,823	\$ 230,576
11	Required Increase in Revenue (%) (L8/L9)	163.67%	141.43%

References:

Column [A]: Company Schedules A-1, C-1, C-3, & D-1

Column [B]: Staff Schedules CSB-2, CSB-3, & CSB-7

GROSS REVENUE CONVERSION FACTOR

LINE NO.	DESCRIPTION	(A)	(B)	(C)	(D)
<i>Calculation of Gross Revenue Conversion Factor:</i>					
1	Billings	1.000000			
2	Uncollectible Factor	0.000000			
3	Revenues	1.000000			
4	Less: Combined Federal and State Tax Rate (Line 12)	0.277293			
5	Subtotal (L3 - L4)	0.7227			
6	Revenue Conversion Factor (L1 / L5)	1.38369			
 <i>Calculation of Effective Tax Rate:</i>					
7	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%			
8	Arizona State Income Tax Rate	6.9680%			
9	Federal Taxable Income (L7 - L8)	93.0320%			
10	Applicable Federal Income Tax Rate (Line 34)	22.3163%			
11	Effective Federal Income Tax Rate (L9 x L10)	20.7613%			
12	Combined Federal and State Income Tax Rate (L8 +L11)	27.7293%			
13	Required Operating Income (Schedule CSB-1, Line 5)	\$ 19,291			
14	Adjusted Test Year Operating Income (Loss) (Schedule CSB-8, Line 16)	\$ (78,326)			
15	Required Increase in Operating Income (L13 - L14)		\$ 97,617		
16	Income Taxes on Recommended Revenue (Col. (D), L33)	\$ 3,950			
17	Income Taxes on Test Year Revenue (Col. (B), L33)	\$ (33,505)			
18	Required Increase in Revenue to Provide for Income Taxes (L16 -L17)		\$ 37,454		
19	Total Required Increase in Revenue (L15 + L18)		\$ 135,072		
<i>Calculation of Income Tax:</i>					
		<u>Test Year</u>		<u>Staff Proposed</u>	
20	Revenue (Schedule CSB-7, Columns C and E)	\$ 95,505		\$ 230,577	
21	Less: Operating Expenses Excluding Income Taxes	\$ 207,336		\$ 207,336	
22	Less: Synchronized Interest (L37)	\$ 4,364		\$ 4,364	
23	Arizona Taxable Income (L20 - L21 - L22)	\$ (116,195)		\$ 18,877	
24	Arizona State Income Tax Rate	6.968%		6.968%	
25	Arizona Income Tax (L23 x L24)		\$ (8,096)		\$ 1,315
26	Federal Taxable Income (L23 - L25)	\$ (108,099)		\$ 17,562	
27	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$ (7,500)		\$ 2,634	
28	Federal Tax on Second Income Bracket (\$51,001 - \$75,000) @ 25%	\$ (6,250)		\$ -	
29	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	\$ (8,500)		\$ -	
30	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	\$ (3,158)		\$ -	
31	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	\$ -		\$ -	
32	Total Federal Income Tax		\$ (25,408)		\$ 2,634
33	Combined Federal and State Income Tax (L25 + L32)		\$ (33,505)		\$ 3,950
34	Applicable Federal Income Tax Rate [Col. (D), L32 - Col. (B), L32] / [Col. (C), L26 - Col. (A), L26]				22.3163%
 <i>Calculation of Interest Synchronization:</i>					
35	Rate Base (Schedule CSB-3, Col. (C), Line 13)	\$ 219,254			
36	Weighted Average Cost of Debt	1.99%			
37	Synchronized Interest (L35 x L37)	\$ 4,364			

RATE BASE - ORIGINAL COST

LINE NO.	(A) COMPANY AS FILED	(B) STAFF ADJUSTMENTS REF	(C) STAFF AS ADJUSTED
1	Plant in Service	\$ 537,455	\$ 539,455
2	Less: Accumulated Depreciation	(344,072)	(344,072)
3	Net Plant in Service	\$ 193,383	\$ 195,383
<u>LESS:</u>			
4	Advances in Aid of Construction (AIAC)	\$ -	\$ -
5	Service Line and Meter Advances	\$ -	\$ -
6	Contributions in Aid of Construction (CIAC)	\$ -	\$ -
7	Less: Accumulated Amortization	-	-
8	Net CIAC	-	-
9	Total Advances and Contributions	\$ -	\$ -
10	Customer Deposits	\$ -	\$ -
11	Deferred Income Tax Credits	\$ -	\$ -
<u>ADD:</u>			
12	Working Capital	\$ 24,439	\$ 23,871
13	Total Rate Base	\$ 217,822	\$ 219,254

References:

Column [A], Company Schedule B-1, Page 1
Column [B]: Schedule CSB-4
Column [C]: Column [A] + Column [B]

SUMMARY OF RATE BASE ADJUSTMENTS

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) ADJ No.1	(C) ADJ No.2	(D) ADJ No.3	(E) ADJ No.4	(F) ADJ No.5	(I) STAFF ADJUSTED
PLANT IN SERVICE:								
1	Oxidation Ponds / Treatment Facilities	\$ 231,085	-	\$ -	-	\$ -	-	\$ 231,085
2	Collection Mains	150,376	-	-	-	-	-	150,376
3	Manholes	23,774	-	-	-	-	-	23,774
4	Pumping Equipment	19,444	-	-	-	-	-	19,444
5	Collection Services	65,920	-	-	-	-	-	65,920
6	Office Furniture and Equipment	1,348	2,000	-	-	-	-	3,348
7	Transportation Equipment	11,252	-	-	-	-	-	11,252
8	Tools & Shop Equipment	34,256	-	-	-	-	-	34,256
9	Total Plant in Service - Actual	537,455	2,000	-	-	-	-	539,455
10	Pro-forma Adjustment	-	-	-	-	-	-	-
11	Total Plant in Service	\$ 537,455	\$ 2,000	\$ -	-	\$ -	-	\$ 539,455
12	Less: Accumulated Depreciation - Actual	\$ (339,665)	-	-	-	-	-	(339,665)
13	Less: Accumulated Depreciation - Pro Forma	(4,407)	-	-	-	-	-	(4,407)
14	Total Accumulated Depreciation - Adjusted	\$ (344,072)	-	\$ -	-	\$ -	-	\$ (344,072)
15	Net Plant in Service	\$ 193,383	\$ 2,000	\$ -	-	\$ -	-	\$ 195,383
LESS:								
16	Advances in Aid of Construction (AIAC)	\$ -	\$ -	\$ -	-	\$ -	-	\$ -
17	Service Line and Meter Advances	-	-	-	-	-	-	-
18	Contributions in Aid of Construction (CIAC)	-	-	-	-	-	-	-
19	Less: Accumulated Amortization	-	-	-	-	-	-	-
20	Net CIAC	-	-	-	-	-	-	-
21	Total Advances and Contributions	-	-	-	-	-	-	-
22	Customer Deposits	-	-	-	-	-	-	-
23	Deferred Income Tax Credits	-	-	-	-	-	-	-
24	Working Capital Allowance	24,439	-	(568)	-	-	-	23,871
25	Other Additions	-	-	-	-	-	-	-
26	Total Rate Base	\$ 217,822	\$ 2,000	\$ (568)	-	\$ -	-	\$ 219,254

ADD:

24	Working Capital Allowance	24,439	-	(568)	-	-	-	23,871
25	Other Additions	-	-	-	-	-	-	-
26	Total Rate Base	\$ 217,822	\$ 2,000	\$ (568)	-	\$ -	-	\$ 219,254

ADJ No.	References:
1	Office Furn. & Equip - Software
2	Working Capital
	Schedule CSB-5
	Schedule CSB-6

**RATE BASE ADJUSTMENT NO. 1 - OFFICE FURNITURE AND EQUIPMENT
SOFTWARE COST**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Office Furniture & Equipment, Software	\$ 1,348	\$ 2,000	\$ 3,348

References:

Column A: Company Schedule E-5, Page 2

Column B: Testimony, CSB, Company Data Request Responses CSB 2-9

Column C: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 2 - WORKING CAPITAL ALLOWANCE

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	1/24th Purchased Power			
2	Purchased Power Expense	\$ 1,183	\$ -	\$ 1,183
3	Multiplied by	x 1/24		x 1/24
		<u>\$ 49</u>		<u>\$ 49</u>
4	1/8th O & M (Less Depr, Taxes, and Pur Water)			
5	Salaries and Wages	\$ 29,012	\$ (282)	\$ 28,730
6	Employee Pension and Benefits	\$ 19,741	\$ (192)	\$ 19,549
7	Purchased Power	\$ 1,183	\$ (1,183)	\$ -
8	Outside Services - Legal and Consulting	\$ 4,343	\$ (2,074)	\$ 2,269
9	Outside Services - Oper. and Maint.	\$ 103,637	\$ -	\$ 103,637
10	Rental Expense	\$ 15,600	\$ -	\$ 15,600
11	Materials and Supplies	\$ 7,767	\$ -	\$ 7,767
12	General and Administrative	\$ 15,020	\$ (2,000)	\$ 13,020
13	Depreciation	\$ -	\$ -	\$ -
14	Property Taxes	\$ -	\$ -	\$ -
15	Income Taxes	\$ -	\$ -	\$ -
16		<u>\$ 196,303</u>	<u>\$ (5,730)</u>	<u>\$ 190,573</u>
17	Multiplied by	x 1/8		x 1/8
		<u>\$ 24,538</u>		<u>\$ 23,822</u>
18	To Reconcile to Company	\$ (148)		\$ -
19	Total Working Capital Allowance	<u>\$ 24,439</u>	<u>\$ (568)</u>	<u>\$ 23,871</u>

References:

- Column [A]: Company Schedule B-5, Page 1 and Schedule C-1, Page 1
- Column [B]: Testimony, CSB
- Column [C]: Column [A] + Column [B]

OPERATING INCOME - TEST YEAR AND STAFF PROPOSED

LINE NO.	DESCRIPTION	[A] COMPANY TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF PROPOSED CHANGES	[E] STAFF RECOMMENDED
REVENUES:						
	Water Sales	\$ 89,796	\$ -	\$ 89,796	\$ 135,071	\$ 224,867
	Other Water Revenues	5,709	-	5,709	320	6,029
1	Total Operating Revenues	<u>\$ 95,505</u>	<u>\$ -</u>	<u>\$ 95,505</u>	<u>\$ 135,391</u>	<u>\$ 230,576</u>
EXPENSES:						
2	Salaries and Wages	\$ 29,012	\$ (282)	\$ 28,730	\$ -	\$ 28,730
3	Employee Pension and Benefits	19,741	(192)	19,549	-	19,549
4	Purchased Power	1,183	-	1,183	-	1,183
5	Outside Services - Legal and Consulting	4,343	(2,074)	2,269	-	2,269
6	Outside Services - Oper. and Maint.	103,637	-	103,637	-	103,637
7	Rental Expense	15,600	-	15,600	-	15,600
8	Materials and Supplies	7,767	-	7,767	-	7,767
9	General and Administrative	15,020	(2,000)	13,020	-	13,020
10	Depreciation	7,965	(680)	7,285	-	7,285
11	Property Taxes	5,575	2,720	8,295	-	8,295
12	Income Taxes	(45,805)	12,300	(33,505)	37,454	3,950
13	Total Operating Expenses	<u>\$ 164,038</u>	<u>\$ 9,793</u>	<u>\$ 173,831</u>	<u>\$ 37,454</u>	<u>\$ 211,285</u>
14	Operating Income (Loss)	<u>\$ (68,533)</u>	<u>\$ (9,793)</u>	<u>\$ (78,326)</u>	<u>\$ 97,617</u>	<u>\$ 19,291</u>

References:

- Column (A): Company Schedule C-1, Page 2
- Column (B): Schedule CSB-8
- Column (C): Column (A) + Column (B)
- Column (D): Schedules CSB-1 and CSB-2
- Column (E): Column (C) + Column (D)

Ajo Improvement Company - Wastewater Department
 Docket No. WS-01025A-03-0350
 Test Year Ended December 31, 2002

SUMMARY OF OPERATING INCOME ADJUSTMENTS - TEST YEAR

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) ADJ #1	(C) ADJ #2	(D) ADJ #3	(F) ADJ #4	(G) ADJ #5	(H) ADJ #6	(I) ADJ #7	(K) STAFF ADJUSTED
REVENUES:										
1	Water Sales	\$ 89,796	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 89,796
2	Other Water Revenues	5,709	-	-	-	-	-	-	-	5,709
3	Total Revenues	\$ 95,505	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 95,505
OPERATING EXPENSES:										
4	Salaries and Wages	\$ 29,012	(282)	-	-	-	-	-	-	28,730
5	Employee Pension and Benefits	19,741	-	(192)	-	-	-	-	-	19,549
6	Purchased Power	1,183	-	-	-	-	-	-	-	1,183
7	Outside Services - Legal and Consulting	4,343	-	-	(2,074)	-	-	-	-	2,269
8	Outside Services - Oper. and Maint.	103,637	-	-	-	-	-	-	-	103,637
9	Rental Expense	15,600	-	-	-	-	-	-	-	15,600
10	Materials and Supplies	7,767	-	-	-	-	-	-	-	7,767
11	General and Administrative	15,020	-	-	-	(2,000)	-	-	-	13,020
12	Depreciation	7,965	-	-	-	-	(680)	-	-	7,285
13	Property Taxes	5,575	-	-	-	-	-	2,720	-	8,295
14	Income Taxes	(45,805)	-	-	-	-	-	-	-	(33,505)
15	Total Operating Expenses	\$ 164,038	\$ (282)	\$ (192)	\$ (2,074)	\$ (2,000)	\$ (680)	\$ 2,720	\$ 12,300	\$ 173,831
16	Operating Income (Loss)	\$ (68,533)	\$ 282	\$ 192	\$ 2,074	\$ 2,000	\$ 680	\$ (2,720)	\$ (12,300)	\$ (78,326)

ADJ No.	References:
1	Salaries and Wages
2	Pensions and Benefits
3	Outside Services, Legal & Cons.
4	General and Administrative
5	Depreciation Expense
6	Property Taxes
7	Income Taxes

OPERATING INCOME ADJUSTMENT NO. 1 - SALARY AND WAGE INCREASE

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Salary and Wage Expense	\$ 28,167	\$ -	\$ 28,167
2	Percentage	3%	-1%	2%
3	Salary and Wage Adjustment	\$ 845	\$ (282)	\$ 563

References:

- Column A: Company Data Request Response CSB 1-20, Company Workpaper 000025
- Column B: Testimony, CSB
- Column C: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 2 - PENSIONS AND BENEFITS

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Pensions and Benefits	\$ 19,166	\$ -	\$ 19,166
2	Percentage	3%	-1%	2%
3	Pensions and Benefits Adjustment	\$ 575	\$ (192)	\$ 383

References:

- Column A: Company Data Request Response CSB 1-20, Company Workpaper 000025
- Column B: Testimony, CSB
- Column C: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 3 - OUTSIDE SERVICES, LEGAL & CONSULTING

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Data File Conversion	967	-	967
2	Training	\$ 1,625	-	\$ 1,625
3	Total Computer Conversion Expense	\$ 2,592	-	\$ 2,592
4	Division Factor	1		5
5	Total Annual Computer Conversion Exp	\$ 2,592	\$ (2,074)	\$ 518

References:

Column A: Company Data Request Response CSB 1-24 and 2-9

Column B: Testimony, CSB

Column C: Column [A] + Column [B]

Ajo Improvement Company - Wastewater Department
Docket No. WS-01025A-03-0350
Test Year Ended December 31, 2002

Schedule CSB-12

OPERATING INCOME ADJUSTMENT NO. 4 - GENERAL & ADMINSTRATIVE

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	General & Admin., Computer Software	\$ 2,000	\$ (2,000)	\$ -

References:

- Column A: Company Data Request Response CSB 1-3 and 2-9
- Column B: Testimony, CSB
- Column C: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 5 - DEPRECIATION EXPENSE ON TEST YEAR PLANT

LINE NO.	DESCRIPTION	[A] PLANT IN SERVICE	[B] FULLY DEPRECIATED PLANT	[C] DEPRECIABLE PLANT (Col A - Col B)	[D] DEPRECIATION RATE	[E] DEPRECIATION EXPENSE (Col C x Col D)
1	Oxidation Ponds / Treatment Facilities	\$ 231,085	\$ 31,085	\$ 200,000	3.33%	\$ 6,660
2	Collection Mains	\$ 150,376	\$ 150,376	\$ -	0.00%	\$ -
3	Manholes	\$ 23,774	\$ 23,774	\$ -	0.00%	\$ -
4	Pumping Equipment	\$ 19,444	\$ 19,444	\$ -	0.00%	\$ -
5	Collection Services	\$ 65,920	\$ 65,920	\$ -	0.00%	\$ -
6	Office Furniture and Equipment, Computers	\$ 3,348	\$ 225	\$ 3,123	20.00%	\$ 625
7	Transportation Equipment	\$ 11,252	\$ 11,252	\$ -	0.00%	\$ -
8	Tools & Shop Equipment	\$ 34,256	\$ 34,256	\$ -	0.00%	\$ -
9	Total Plant	\$ 539,455	\$ 336,332	\$ 203,123		\$ 7,285
10	Composite Depreciation Rate (Depr Exp / Depreciable Plant):		3.59%			
11	CIAC: \$		-			
12	Amortization of CIAC (Line 10 x Line 11): \$		-			
13	Depreciation Expense Before Amortization of CIAC: \$		7,285			
14	Less Amortization of CIAC: \$		-			
15	Test Year Depreciation Expense - Staff: \$		7,285			
16	Depreciation Expense - Company: \$		7,965			
17	Staff's Total Adjustment: \$		(680)			

References:

- Column [A]: Schedule CSB-4
- Column [B]: Staff Workpapers
- Column [C]: Column [A] - Column [B]
- Column [D]: Engineering Staff Report
- Column [E]: Column [C] x Column [D]

OPERATING INCOME ADJUSTMENT NO. 6 - PROPERTY TAX EXPENSE

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENT	[C] STAFF AS ADJUSTED
1	2002 Staff Adjusted Test Year Revenues			\$ 95,505
2	Weight Factor			\$ 2
3	Subtotal (Line 1 x Line 2)			\$ 191,010
4	Staff Recommended Revenue			\$ 230,576
5	Subtotal (Line 4 + Line 5)			\$ 421,586
6	Number of Years			\$ 3
7	Three Year Average (Line 5 / Line 6)			\$ 140,529
8	Department of Revenue Multiplier			2
9	Revenue Base Value (Line 7 x Line 8)			\$ 281,057
10	Plus: 10% of 2002 CWIP			\$ -
11	Less: Net Book Value of Licensed Vehicles			\$ -
12	Full Cash Value (Line 9 + Line 10 - Line 11)			\$ 281,057
13	Assessment Ratio			0.25
14	Assessed Value (Line 12 x Line 13)			\$ 70,264
15	Composite Property Tax Rate			0.118055
16	Staff Proposed Property Tax Expense (Line 14 x Line 15)	\$ 5,575	\$ 2,720	\$ 8,295

References:

Column A: Company Schedule C-1, Page 2

Column B: Testimony, CSB

Column C: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 7 - INCOME TAXES

LINE NO.	<u>DESCRIPTION</u>	(A)	(B)
	<u>Calculation of Income Tax:</u>		
		<u>Test Year</u>	
1	Revenue (Schedule CSB-9, Line 9)	\$ 95,505	
2	Less: Operating Expenses Excluding Income Taxes	\$ 207,336	
3	Less: Synchronized Interest (L17)	<u>\$ 4,364</u>	
4	Arizona Taxable Income (L1- L2 - L3)	\$ (116,195)	
5	Arizona State Income Tax Rate	6.968%	
6	Arizona Income Tax (L4 x L5)		\$ (8,096)
7	Federal Taxable Income (L4 - L6)	\$ (108,099)	
8	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$ (7,500)	
9	Federal Tax on Second Income Bracket (\$51,001 - \$75,000) @ 25%	\$ (6,250)	
10	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	\$ (8,500)	
11	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	\$ (3,158)	
12	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	\$ -	
13	Total Federal Income Tax		<u>\$ (25,408)</u>
14	Combined Federal and State Income Tax (L6 + L13)		<u>\$ (33,505)</u>
	<u>Calculation of Interest Synchronization:</u>		
15	Rate Base (Schedule CSB-3, Col. (C), Line 13)	\$ 219,254	
16	Weighted Average Cost of Debt	1.99%	
17	Synchronized Interest (L16 x L17)	<u>\$ 4,364</u>	
18		Income Tax - Per Staff	\$ (33,505)
19		Income Tax - Per Company	\$ (45,805)
20		Staff Adjustment	\$ 12,300

RATE DESIGN

	Present Rates	---Proposed Rates---	
		Company	Staff
Residential Service - Per Month	\$ 6.08	\$ 16.64	\$ 15.65
Commercial and Municipal			
Regular Service	\$ 6.08	\$ 21.91	\$ 19.60
Additional Toilets	\$ 1.53	None	None
Restaurants with Dishwashers	\$ 18.43	\$ 50.44	\$ 46.14
Additional Monthly Commercial Charges:			
Laundromats - Per Washing Machine	\$ 2.93	\$ 8.02	\$ 7.33
Wash Racks - Per Rack	\$ 2.93	\$ 8.02	\$ 7.33
Residential Equivalents (REU):			
Industrial and Commercial - Per REU	\$ 6.08	\$ 16.64	\$ 15.65
Schools - Per REU	\$ 6.08	\$ 16.64	\$ 15.65

Service Charges:	Present Rates	---Proposed Rates---	
		Company	Staff
Establishment (Regular Hours)	\$ 25.00	\$ 25.00	\$ 25.00
Establishment (After Hours)	(a)	\$ 40.00	\$ 40.00
Re-establishment Within 12 Months	(b)	(b)	(b)
Re-connection of Service (Regular Hours)	\$ 10.00	\$ 50.00	\$ 25.00
Re-connection of Service (After Hours)	(a)	\$ 65.00	\$ 40.00
NSF Check Charge	\$ 10.00	\$ 20.00	\$ 20.00
Late Charge	1.50%	1.50%	1.50%
Deferred Payment Finance Charge	1.50%	1.50%	1.50%
Service Calls - After Hours Only	\$25/hr	\$40/hr	\$40/hr
Deposits	(d)	(d)	(d)
Deposit Interest	(d)	(d)	(d)

- (a) No current tariff.
- (b) Monthly minimum times months off system (Rule A.A.C. R14-2-603D)
- (c) Per A.A.C. R14-2-603D
- (d) Per A.A.C. R14-2-603B

Ajo Improvement Company - Wastewater Department
Docket No. WS-01025A-03-00350
Test Year Ended December 31, 2002

Schedule 17

TYPICAL BILL ANALYSIS
Residential Service

	<u>Present Rates</u>	<u>Proposed Rates</u>	<u>Dollar Increase</u>	<u>Percent Increase</u>
Company	\$6.08	\$16.64	\$10.56	173.7%
Staff	\$6.08	\$15.65	\$9.57	157.4%



BEFORE THE ARIZONA CORPORATION COMMISSION

MARC SPITZER
Chairman
WILLIAM A. MUNDELL
Commissioner
JEFF HATCH-MILLER
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner

IN THE MATTER OF THE APPLICATION OF)
AJO IMPROVEMENT COMPANY FOR)
RATE ADJUSTMENTS IN ITS WATER AND)
WASTEWATER RATES)
_____)

DOCKET NO. WS-01025A-03-0350

SURREBUTTAL
TESTIMONY
OF
CRYSTAL S. BROWN
PUBLIC UTILITIES ANALYST V
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION

MARCH 17, 2004

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**EXECUTIVE SUMMARY
AJO IMPROVEMENT COMPANY
WATER AND WASTEWATER DEPARTMENTS
DOCKET NO. WS-01025A-03-0350**

Ms. Brown's surrebuttal testimony presents Staff's response to Ajo Improvement Company's ("Ajo" or "Company") rebuttal testimony regarding the cost of capital, total gallons sold, income taxes, and the inverted tier rate design. She also addresses the issues raised in the direct testimony of Arizona Water Company's witness Ms. Sheryl L. Hubbard.

Ms. Brown revises Staff's billing determinants to reflect the actual number of gallons sold; recommends a uniform block rate structure for water sold to public water systems; and revises the commodity rates for treated and untreated water. Ms. Brown's position on all other issues remains unchanged from her direct testimony.

1 **INTRODUCTION**

2 **Q. Please state your name.**

3 A. My name is Crystal S. Brown.

4
5 **Q. Are you the same Crystal S. Brown who testified earlier?**

6 A. Yes, I am.

7
8 **Q. What is the purpose of Staff's surrebuttal testimony?**

9 A. The purpose of this surrebuttal testimony is to respond, on behalf of the Utilities Division
10 Staff ("Staff"), to the rebuttal testimony of Ajo Improvement Company's ("Ajo" or the
11 "Company") testimony regarding the cost of capital, test year gallons sold, income taxes,
12 and the inverted tier rate design. Staff also addresses the issues raised in the direct
13 testimony of Arizona Water Company's ("Arizona Water") witness Ms. Sheryl L.
14 Hubbard.

15
16 **Correction to Operating Income – Test Year and Staff Proposed Schedule**

17 **Q. Would Staff like to make a correction to Schedule CSB-9, "Operating Income – Test
18 Year and Staff Proposed" of Staff's direct testimony?**

19 A. Yes. Water sales revenue for Staff recommended rates is presented as \$703,491. The
20 corrected amount is \$701,011. The misstated amount was not used in any other
21 calculations or any other schedules and it had no effect on Staff's recommendations. The
22 corrected schedule is presented as Staff's Surrebuttal Schedule CSB-1.

23
24
25

1 **SUMMARY OF COMPANY'S TESTIMONY**

2 **Q. Please summarize Ajo's rebuttal testimony and Arizona Water's direct testimony.**

3 A. Ajo disagrees with Staff's recommended cost of capital, total gallons sold, income taxes,
4 and the inverted tier rate design. Arizona Water disagrees with Staff's recommended
5 four-inch meter rate design and proposes a rate design specifically for Arizona Water.

6
7 **Cost of Capital**

8 **Q. Did the Company raise concerns about Staff's cost of equity?**

9 A. Yes. Ajo argues that the cost of equity is affected by (1) size and (2) financial and
10 business risks. Ajo indicates that its size and financial and business risks are not the same
11 as that of Arizona-American Water Company ("Arizona-American") and, therefore,
12 Staff's cost of equity is not applicable to Ajo.

13
14 **Q. Before you respond to the Company's concerns, please summarize how Staff
15 estimated an 8.5 percent cost of equity for Ajo.**

16 A. As discussed in my direct testimony, Staff has determined through an analysis performed
17 during the Arizona-American rate proceeding¹ that the cost of equity to a sample of
18 publicly traded water companies ranges from 8.0 to 9.6 percent with an average of 8.5
19 percent. The average equity cost is then increased or decreased in relation to the
20 percentage of long-term debt in a company's capital structure. This adjustment recognizes
21 that the use of long-term debt concentrates a company's risk on its shareholders;
22 increasing both the financial risk and the return an investor expects to receive.

23
24 In this case, Ajo had a capital structure consisting of approximately 20 percent long-term
25 debt and 80 percent equity. Staff's sample of companies had a capital structure consisting

¹ Docket No. WS-01303A-02-0867

1 of approximately 40 percent equity and 60 percent long-term debt with an average cost of
2 equity of 8.5 percent. Since Ajo has less long-term debt and, consequently, less financial
3 risk than the average company in the sample, Staff determined that Ajo's cost of equity
4 should be no greater than the average cost of equity for the sample.

5
6 **Q. How did Staff determine that the range for the cost of equity (i.e., 8.0 to 9.6 percent)**
7 **is the same for all water/wastewater companies?**

8 A. Staff performed an analysis using market based financial models and modern portfolio
9 theory. The analysis consisted of reviewing sufficient relevant financial information and
10 making calculations necessary to estimate the cost of equity to a sample of
11 water/wastewater companies. The result of the sample is considered as representative of
12 the water/wastewater industry. Thus, the calculated cost of equity range is applicable to
13 individual utilities in the water/wastewater utility industry.

14
15 In simple terms, the range for the cost of equity is the same for all water/wastewater
16 companies because firm specific risk, which is defined as the plethora of risks specific to a
17 particular company, can be diversified away.² What basically remains is market risk.
18 Market risk, the risk that changes in a stock's price will result from changes in the market
19 as a whole affects all companies. Market risk consists of business risk and financial risk.
20 Financial risk is a function of percentage of debt in the capital structure. Financial risk
21 increases as the debt percentage increases. Ajo has less debt in its capital structure than
22 the sample companies, therefore, its financial risk is less. Business risk is defined as the
23 uncertainty of income caused by the firm's industry³. All water utilities operate within the
24 same industry. Consequently, Ajo's argument that its business risk makes it more risky is
25 not valid.

² NRRI Journal of Applied Regulation – Volume 1, June 2003, p.79

³ Investment Analysis and Portfolio Management, p. 338

1 **Q. Is there any other evidence to support Staff's position?**

2 A. Yes. An article entitled "How Improper Risk Assessment Leads to Overstated Required
3 Returns" published by the National Regulatory Research Institute ("NRRRI"), an affiliate of
4 the National Association of Regulatory Commissioners ("NARUC"), states that "Since
5 firm-specific risks are not relevant to the required return, regulators can ignore any
6 adjustment suggested for those items when setting a utility's authorized return."

7
8 **Q. Did the Company provide any evidence to support its argument that the cost of
9 equity is affected by (1) size and (2) financial and business risks?**

10 A. No, it did not.

11

12 **Q. Has the Commission ruled in the past on the relationship between the size of a utility
13 and its cost of equity?**

14 A. Yes, it has. The Commission stated in the Arizona Water Company rate proceeding that
15 "We do not agree with the Company's proposal to assign a risk premium to Arizona Water
16 based on its size relative to other publicly traded companies . . ."⁴

17

18 **Q. Ajo argues that it has greater financial risk than Arizona-American and that Staff
19 did not consider the differences between Ajo and Arizona-American. Did Staff
20 consider the differences and does Ajo have greater financial risk than Arizona-
21 American?**

22 A. Staff considered the differences and determined that Ajo does not have greater financial
23 risk than Arizona-American. As previously discussed, the financial risk is the risk to
24 shareholders caused by a firm's reliance on long-term debt financing. Ajo's capital
25 structure consists of approximately 80 percent equity and 20 percent long-term debt,

⁴ Decision No. 64282, page 18, beginning at line 28.

1 whereas Arizona-American's capital structure consisted of approximately 40 percent
2 equity and 60 percent long-term debt. Therefore, Ajo has lower financial risk.

3
4 **Q. Are the Company's concerns that Ajo's (1) size and (2) financial and business risks**
5 **make it more risky than Arizona-American valid?**

6 A. No, they are not. The Commission has ruled in the past that size does not affect the cost
7 of equity. Ajo has less financial risk than Arizona-American because it has less long-term
8 debt. Ajo operates in the same industry as Arizona-American, thus its business risk is
9 similar. Therefore, none of Ajo's arguments are valid and Staff's recommended cost of
10 equity should be adopted.

11
12 **Q. How does Staff respond to the Company's assertion that Staff gave no consideration**
13 **to its recommendation for a 9.0 percent cost of equity in the Arizona Water**
14 **Company rate case, Docket No. W-01445A-02-0619?**

15 A. The cost of equity analysis performed by Staff in the Arizona-American Water Company
16 proceeding is more current than its analysis in the Arizona Water Company proceeding.
17 The latter is superseded by the more current analysis.

18
19 **Q. What does Staff recommend for Ajo's cost of equity?**

20 A. Staff continues to recommend an 8.5 percent cost of equity.

21
22 **Total Gallons Sold**

23 **Q. Did the Company raise concerns about Staff's calculation of Total Gallons Sold?**

24 A. Yes. The Company indicated that Staff's calculation of the total number of gallons sold
25 during 2002 overstates the Company's actual number of gallons sold during 2002.

26

1 **Q. Do you agree that Staff's calculation over-states the number of total gallons sold?**

2 A. Yes. Staff's bill frequency analysis calculation assumes that the usage on bills falling
3 within each range (e.g. 0 to 1,000 gallons) is at the midpoint.

4

5 Staff determined the number of gallons sold for each range by multiplying the midpoint
6 for each range by the number of bills falling within that range. To illustrate, the midpoint
7 of the 0 to 1,000 gallons range is 500 gallons, the number of bills falling in this range for
8 Ajo was 1,380, therefore the number of gallons Staff calculated for this range was 690,000
9 gallons (500 x 1,380). The number of gallons reported by the Company for this range was
10 675,000. Staff's use of the midpoint resulted in a 1.04 overstatement of the total gallons
11 sold.

12

13 **Q. Does Staff agree that the actual gallons sold in the Test Year as proposed by the**
14 **Company are the correct billing determinants to be used for designing rates to**
15 **recover the revenue requirement?**

16 A. Yes.

17

18 **Q. What is Staff recommending?**

19 A. Staff recommends revised rates and charges based upon reflecting actual gallons sold and
20 incorporation of a new rate structure for Ajo's four-inch customer, Arizona Water, as
21 discussed later in this testimony.

22

23

24

25

1 **Income Tax**

2 **Q. What concerns did the Company raise regarding Staff's calculation of income tax**
3 **expense?**

4 A. The Company argues that federal tax expense included in the revenue requirement should
5 be based on the federal income tax rate paid by its parent, Phelps Dodge Corporation
6 ("Phelps Dodge"), because Phelps Dodge files a consolidated tax return.

7
8 **Q. Is the Company's proposal to calculate the federal income taxes for Ajo on Phelps**
9 **Dodge federal tax rate consistent with past Commission decisions on this issue?**

10 A. No. The Commission has consistently ruled that income tax be calculated based on the
11 utility systems that are the subject of the immediate proceeding. To name a few examples,
12 the income taxes were calculated on the systems before the Commission or an individual
13 basis for (1) Arizona Water Company – Northern Division, Decision No. 64282, dated
14 December 28, 2001 (2) Arizona Water Company, Decision No. 58120, dated December
15 23, 1992, and (3) Sedona Venture Company - water and sewer systems, Decision No.
16 62425, dated April 3, 2000.

17
18 **Q. What is Staff recommending concerning the income tax?**

19 A. Staff continues to recommend that income tax expense be calculated on a stand alone
20 basis.

21
22 **Four-Inch Customer, Arizona Water Company**

23 **Q. What is Arizona Water Company's ("Arizona Water") interest in this proceeding?**

24 A. Arizona Water is a wholesale customer and is currently Ajo's only four-inch meter
25 customer. Decision No. 54369 requires that Arizona Water take water only during off-
26 peak hours and limits Arizona Water to 384,000 gallons of water per day.

1 **Q. Please discuss the concerns raised in the direct testimony of Arizona Water**
2 **Company witness, Sheryl L. Hubbard.**

3 A. Arizona Water disagrees with Staff's rate design for Arizona Water. Arizona Water
4 claims that Staff's recommended inverted tier rate structure for the four-inch meter places
5 too much of Ajo's total revenue increase on Arizona Water.

6
7 **Q. What rate is Arizona Water proposing for its own use?**

8 A. Arizona Water proposes a monthly customer charge of \$210 per month and a commodity
9 charge of \$2.67 per 1,000 gallons for treated water.

10
11 **Q. Does Staff agree that Arizona Water is a wholesale customer, is governed by the**
12 **restrictions set forth in decision No. 54369 and as such should have a different rate**
13 **design than other four-inch meter customers?**

14 A. Yes.

15
16 **Q. Does Staff agree with Arizona Water's proposed \$210 monthly customer charge and**
17 **\$2.67 per 1,000 gallons commodity rate?**

18 A. No, Staff does not agree with Arizona Waters' proposed rate design because these rates do
19 not recover all costs that are attributable to serving Arizona Water.

20
21 **Q. What costs are attributable to serving Arizona Water?**

22 A. Arizona Water receives treated water through a four-inch meter. Therefore, a portion of
23 all costs incurred by Ajo to deliver treated water to Arizona Water are properly
24 attributable to Arizona Water and should be allocated to Arizona Water based upon on a
25 reasonable allocation method.
26

1 Costs attributable to Arizona Water include the pumps needed to pump raw water from the
2 wells⁵; the transmission mains needed to transport the raw water to the raw water storage
3 tank; the water treatment plant needed to treat the raw water; the finished water storage
4 tank needed to store the treated water; and the distribution main needed to deliver the
5 treated water to Arizona Water. Meter reading, billing, collection and general and
6 administrative costs plus a return on the plant allocated to serve Arizona Water must also
7 be recovered.

8
9 Finally, Ajo's cost to purchase water from Phelps Dodge is directly chargeable to Arizona
10 Water for its volume of use. Staff determined that with the exception of some of Ajo's
11 distribution mains (which are not identified separately from the transmission mains) a
12 portion of all of the aforementioned costs incurred by Ajo should be allocated to Arizona
13 Water.

14
15 **Q. Did Ajo provide an analysis showing its cost to serve Arizona Water?**

16 A. No, it did not. Staff asked Ajo to provide "the cost (estimated if the actual data is not
17 known) to provide service" to Arizona Water.⁶ In response to the data request, Ajo
18 indicated that the cost to serve four-inch meters could not be determined without a
19 complete cost of service study.

20
21 **Q. Did Staff prepare an analysis to estimate the cost to serve Arizona Water?**

22 A. Yes.
23
24
25

⁵ The wells are owned by Phelps Dodge Corporation.

⁶ Data request CSB 6-1

1 **Q. What was the result of Staff's analysis?**

2 A. Staff's analysis determined that Arizona Water's commodity rate should be \$2.80 per
3 1,000 gallons with no change to Staff's recommended \$234 monthly customer charge.

4
5 **Q. What analysis supports Staff's conclusion?**

6 A. The analysis is presented on Schedule CSB-2. Staff's analysis shows that the average
7 commodity rate necessary to recover Staff's recommended revenue requirement and
8 generate the same proportion of revenue from the customer and commodity charges as
9 present rates is \$2.80 per 1,000 gallons of treated water. In other words, a \$2.80 per 1,000
10 gallons commodity rate is the uniform commodity rate that would apply to all treated
11 water if tiered rates were not adopted. Ajo would generate \$179,198 from Arizona Water
12 with a \$2.80 per 1,000 gallon commodity rate. As shown on Schedule CSB-3, Ajo
13 recovered 30 percent of Test Year revenues from Arizona Water. Ajo would need to
14 recover \$182,005 from Arizona Water to recover 30 percent of Staff's recommended
15 revenue from Arizona Water. Therefore, Ajo needs to recover \$2,808, or \$234, per month
16 as a customer charge from Arizona Water.

17

18 **Inverted Tier Rate Design**

19 **Q. Did the Company raise concerns about Staff's inverted tier rate design?**

20 A. Yes. The Company argues that Staff's rate design is not cost based and results in cross-
21 subsidies within the same customer class.

22

23

24

25

26

1 **Q. Is Staff's rate design cost based?**

2 A. Yes, Staff's rate design is cost based. Staff's rate design:

3 1. Is based on the cost to recover Staff's recommended operating expenses, return on
4 rate base, and income taxes.

5 2. Is based on recovering the costs from the monthly customer charge and the
6 commodity charge in approximately the same percentages as was recovered under
7 present rates in order to maintain revenue stability.

8 3. Is based on equitably recovering costs through usage patterns.
9

10 **Q. Is Ajo's seasonal uniform block rate design supported by a fully allocated cost of
11 service study?**

12 A. No, it is not.
13

14 **Q. What is the primary problem with the seasonal uniform block rate structure?**

15 A. The primary problem with the uniform block rate structure (whether seasonal or not) is
16 that the uniform block rate structure does not reflect a good relationship between the price
17 of water and the cost to provide water at varying consumption levels. A uniform block
18 rate structure presumes a uniform rate of usage for all customer classes, and consequently
19 does not address the additional costs caused by high volume users.
20

21 **Q. What is the cost relationship between the price of water and the amount of water
22 used?**

23 A. The cost relationship is twofold. Usage patterns affect (1) equitable recovery of capacity
24 costs from plant and (2) equitable recovery of capacity costs from source of
25 supply/purchased water costs. The size of a water system is dependent upon the amount
26 of water customers use during the peak period. Customers who use large amounts of

1 water during the peak cause the water system to be built larger than otherwise necessary.

2 A uniform rate does not address this issue.

3
4 Additionally, a uniform rate does not address the fact that customers who use large
5 amounts of water deplete water resources faster, thus, accelerating the need to find and
6 pay for additional water resources. The quantity of water resources available to Arizona
7 and in Ajo's service territories does not grow with customer usage. The cost of
8 developing, treating and delivering this finite resource increases with diminishing supply
9 and increased health and safety issues.

10
11 **Q. Does Staff's rate design create significant cross-subsidies for residential customers as**
12 **claimed by the Company?**

13 A. No. Staff's rate design does not create significant cross-subsidies for residential
14 customers. Staff's rate design equitably recovers costs based on usage patterns. Higher
15 use customers pay more than that of average use customers to reflect the increasing cost of
16 developing new water supplies.

17
18 **Q. Does Ajo's seasonal uniform block rate design create significant cross-subsidies for**
19 **customers within the same customer class?**

20 A. Yes, it does. As I discussed earlier, a uniform rate structure presumes a uniform rate of
21 usage for all customer classes. This is an erroneous assumption. All customers within a
22 given customer class do not use the same amount of water each month. Some customers
23 use significantly more water than others and these high use customers should pay for the
24 higher costs they are placing on the water system.

25

1 Ajo's uniform rate structure averages the costs of higher use customers with those of
2 lower use customers. In effect, the uniform block rate structure rewards customers within
3 the same customer class who use more water than the average (because some of the costs
4 incurred by these customers are transferred to the lower use customers) and penalizes
5 customers who use less water than average (because they are subsidizing the higher use
6 customers).

7
8 **Q. Does Ajo's proposed uniform block rate structure provide a good cost relationship**
9 **between usage patterns and capacity costs?**

10 A. No, the price of water reflected in Ajo's proposed uniform block rate structure does not
11 provide a good cost relationship between usage patterns and capacity costs because it
12 averages the cost of higher use customers with lower use customers.

13
14 **Q. How can water be priced to better assign cost responsibility and to encourage**
15 **efficient water use?**

16 A. Water can be priced to better assign cost responsibility and encourage efficient use by
17 adopting Staff's recommended inverted tier rate design.

18
19 Ideally, the best way to price water is to determine the cost to serve each customer and
20 design rates accordingly. This level of cost analysis is time, information, and cost
21 prohibitive. Costs, however, can be determined for groups of customers that have similar
22 usage patterns. Staff's inverted tier rate structure encourages efficient water usage by
23 assigning higher costs to customers within the same customer class who use more than the
24 average.⁷ Accordingly, Staff's rate design assigns a lower cost to customers within the
25 same customer class who use less than the average.

⁷ The range of average water usage for an inverted three-tier structure is the range of the second tier. The range of average water usage for an inverted two-tier structure is the range of the first tier.

1 **Q. Did Staff provide a schedule of revised rates for treated water?**

2 A. Yes, the revised rates for treated water presented on Surrebuttal Schedule CSB-4. No
3 changes were made to the untreated water rates, service line and meter installation charges
4 or to the service charges.

5

6 **Q. Does this conclude your Surrebuttal testimony?**

7 A. Yes, it does.

OPERATING INCOME - TEST YEAR AND STAFF PROPOSED

LINE NO.	DESCRIPTION	[A] COMPANY TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF PROPOSED CHANGES	[E] STAFF RECOMMENDED
REVENUES:						
1	Water Sales	\$ 634,658	\$ -	\$ 634,658	\$ 66,353	\$ 701,011
2	Other Water Revenues	6,986	-	6,986	2,480	9,466
3	Total Operating Revenues	\$ 641,644	\$ -	\$ 641,644	\$ 68,833	\$ 710,477
EXPENSES:						
4	Salaries and Wages	\$ 29,012	\$ (282)	\$ 28,730	\$ -	\$ 28,730
5	Employee Pension and Benefits	19,302	(187)	19,115	-	19,115
6	Purchased Water	477,938	-	477,938	-	477,938
7	Outside Services - Legal and Consulting	3,153	(2,074)	1,079	-	1,079
8	Outside Services - Oper. and Maint.	85,787	-	85,787	-	85,787
9	Rental Expense	1,200	-	1,200	-	1,200
10	Materials and Supplies	15,168	-	15,168	-	15,168
11	General and Administrative	25,400	(2,000)	23,400	-	23,400
12	Depreciation	35,963	(29,405)	6,558	-	6,558
13	Property Taxes	39,382	(153)	39,229	-	39,229
14	Income Taxes	(35,731)	22,939	(12,792)	14,878	2,086
15	Total Operating Expenses	\$ 696,574	\$ (11,163)	\$ 685,411	\$ 14,878	\$ 700,290
16	Operating Income (Loss)	\$ (54,930)	\$ 11,163	\$ (43,767)	\$ 53,955	\$ 10,188

References:

- Column (A): Company Schedule C-1, Page 2
- Column (B): Schedule CSB-9
- Column (C): Column (A) + Column (B)
- Column (D): Schedules CSB-1 and CSB-2
- Column (E): Column (C) + Column (D)

COST ANALYSIS FOR ARIZONA WATER COMPANY

Line No.			
1	Commodity Costs for Treated Water		
2	\$ 433,163	Total Actual Treated Water Costs	
3	\$ 44,775	Total Actual Untreated Water Costs	
4	\$ 477,938	Total Actual Treated and Untreated Water Costs	
5			
6		162,358 Treated Water Gallons (in 1,000's)	
7	Plus: 43,667	Untreated Water Gallons (in 1,000's)	
8		206,025 Total Gallons	
9			
10		43,667 Untreated Water Gallons	
11	Divided by: 206,025	Total Gallons	
12		21.2% Percentage of Untreated Water Gallons	
13			
14			
15	Calculation of Estimated Treated Water Costs to be Recovered Through Commodity Rate		
16			
17	\$ 701,011	Staff's Metered Water Revenue (Total Purchased Water + All Other Operating Expenses)	
18	Less: \$ 477,938	Total Actual Purchased Water Costs for Treated and Untreated	
19	\$ 223,073	Total "All Other Operating Expenses" for Treated and Untreated Water	
20			
21	Removal of All Untreated Water Expenses		
22	\$ 223,073	Total "All Other Operating Expenses" for Treated and Untreated Water	
23	Multiplied by: 21.2%	Percentage of Untreated Water Gallons	
24	\$ 47,291	Total "All Other Operating Expenses" for Untreated Water	
25			
26	\$ 223,073	Total "All Other Operating Expenses" for Treated and Untreated Water	
27	Less: \$ 47,291	Total "All Other Operating Expenses" for Untreated Water	
28	\$ 175,782	Total "All Other Operating Expenses" for Treated Water	
29			
30	Portion of "All Other Operating Expenses" for Treated Water Recovered Through Monthly Cust. Charge		
31	\$ 175,782	Total "All Other Operating Expenses" for Treated Water	
32	Multiplied by: 86.02%	Percent of Total "All Other Oper Exp" To Be Recovered through Monthly Customer Charge	
33	\$ 151,207	Total Treated Wtr "All Other Operating Exps" to be Recovered Thru Monthly Cust Charge	
34			
35	Portion of "All Other Operating Expenses" for Treated Water Recovered Through Commodity Charge		
36	\$ 175,782	Total "All Other Operating Expenses" for Treated Water	
37	Less: \$ 151,207	Total Treated Wtr "All Other Operating Exps" to be Recovered Thru Monthly Cust Charge	
38	\$ 24,574	Total Treated Wtr "All Other Operating Exps" to be Recovered Through Commodity Charge	
39			
40	\$ 24,574	Total Treated Wtr "All Other Operating Exps" to be Recovered Through Commodity Charge	
41	Plus: \$ 433,163	Total Actual Treated Purchased Water Cost	
42	\$ 457,737	Total Treated Pur Wtr & "All Other Oper Exp" Costs to be Recovered thru Commodity Rate	
43	Less: \$ 1,042	To Maintain same percent of Commodity Rev as generated under present rates (about 64%)	
44	\$ 456,695	Commodity Rev Generated Under Proposed Rates (\$456,695 / \$710,477 = 64.29%)	
45			
46	Calculation of Commodity Rate for Arizona Water		
47	\$ 456,695	Total Treated Water Costs	
48	Less: \$ 2,092	To Maintain 30% of commodity revenue as generated from 4"meter customer under present rates	
49	\$ 454,603		
50	Divided by: 162,358	Total Treated Water Gallons	
51	\$ 2.80	per 1,000 gallons	
52			
53	\$ 2.80		
54	Multiplied by: 63,999	Gallons used by Arizona Water	
55	\$ 179,198	Total Purchased Water and "All Other Operating Expenses" Allocated to Arizona Water	

**AJO IMPROVEMENT - WATER DIVISION
PRESENT AND PROPOSED RATES AND PERCENTAGES**

	Treated Water		TOTAL TREATED WATER		Untreated Water		TOTAL UNTREATED WATER		Other Water Rev	Total
	Present Rates	Proposed Rates	Present Rates	Proposed Rates	Present Rates	Proposed Rates	Present Rates	Proposed Rates		
5/8 Inch Meter	\$ 117,477.00	\$ 189,341.20	\$ 306,818.20	\$ 55.89%	\$ 729.00	\$ 9,585.91	\$ 10,314.91	\$ 6,986.00	\$ 324,119.11	
1 Inch Meter	\$ 3,840.00	\$ 10,379.17	\$ 14,219.17	2.59%	-	-	-	-	\$ 14,219.17	
1.5 Inch Meter	\$ 75.00	\$ 3.81	\$ 78.81	0.01%	-	-	-	-	\$ 78.81	
2 Inch Meter	\$ 9,150.00	\$ 44,935.20	\$ 54,085.20	9.85%	\$ 1,200.00	\$ 27,583.83	\$ 28,783.83	\$ 82,869.03		
3 Inch Meter	\$ 3,600.00	\$ 5,175.45	\$ 8,775.45	1.60%	\$ 4,900.00	\$ 32,845.74	\$ 37,745.74	\$ 46,521.19		
4 Inch Meter	\$ 2,400.00	\$ 162,557.48	\$ 164,957.48	30.05%	\$ 2,400.00	\$ 6,388.96	\$ 8,788.96	\$ 173,746.44		
	\$ 136,542.00	\$ 412,392.31	\$ 548,934.31	100.00%	\$ 9,229.00	\$ 76,404.44	\$ 85,633.44	\$ 6,986.00	\$ 641,553.75	
	21.2830%	64.2802%	1.4385%	11.9093%	1.0889%	100.0000%				

	Treated Water		TOTAL TREATED WATER		Untreated Water		TOTAL UNTREATED WATER		Other Water Rev	Total
	Present Rates	Proposed Rates	Present Rates	Proposed Rates	Present Rates	Proposed Rates	Present Rates	Proposed Rates		
5/8 Inch Meter	\$ 128,572.05	\$ 196,643.03	\$ 325,215.08	53.67%	\$ 797.85	\$ 10,661.95	\$ 11,459.80	\$ 9,466.00	\$ 346,140.88	
1 Inch Meter	\$ 4,492.80	\$ 13,134.69	\$ 17,627.49	2.91%	-	-	-	-	\$ 17,627.49	
1.5 Inch Meter	\$ 87.75	\$ 4.50	\$ 92.25	0.02%	-	-	-	-	\$ 92.25	
2 Inch Meter	\$ 10,705.50	\$ 59,933.48	\$ 70,638.98	11.66%	\$ 1,404.00	\$ 31,547.82	\$ 32,951.82	\$ 103,590.80		
3 Inch Meter	\$ 4,212.00	\$ 6,191.90	\$ 10,403.90	1.72%	\$ 5,733.00	\$ 36,059.98	\$ 41,792.98	\$ 52,196.88		
4 Inch Meter	\$ 2,808.00	\$ 179,197.22	\$ 182,005.22	30.03%	\$ 2,808.00	\$ 6,676.62	\$ 9,484.62	\$ 191,489.84		
	\$ 150,878.10	\$ 455,104.83	\$ 606,982.93	100.00%	\$ 10,742.85	\$ 84,946.37	\$ 95,689.22	\$ 9,466.00	\$ 711,138.14	
	21.2164%	63.9967%	1.5107%	11.9451%					\$ 710,477.00	

Divided by \$ 710,477.00
0.09%

RATE DESIGN

Monthly Customer Charge:

5/8" x 3/4" Meter
 3/4" Meter
 1" Meter
 1 1/2" Meter
 2" Meter
 3" Meter
 4" Meter
 6" Meter

Monthly Customer Charge		
Direct Testimony		Surrebuttal Testimony
\$	9.85	\$ 9.85
\$	12.80	\$ 12.80
\$	17.55	\$ 17.55
\$	29.25	\$ 29.25
\$	58.50	\$ 58.50
\$	117.00	\$ 117.00
\$	234.00	\$ 234.00
\$	300.00	\$ 300.00

Gallons Included In Monthly Customer Charge:

5/8" x 3/4" Meter
 3/4" Meter
 1" Meter
 1 1/2" Meter
 2" Meter
 3" Meter
 4" Meter
 6" Meter

0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0

TREATED WATER

Commodity Rates For 5/8 Inch Meter - Treated Water:

Per 1,000 Gallons (In Excess of Minimum)	N/A	N/A
Per 1,000 Gallons for 0 to 3,000 Gallons	\$ 1.93	\$ 2.00
Per 1,000 Gallons for 3,001 to 14,000 Gallons	\$ 2.90	\$ 3.00
Per 1,000 Gallons for Gallons in Excess of 14,000	\$ 3.47	\$ 3.60

Commodity Rates For 3/4 Inch Meter - Treated Water:

Per 1,000 Gallons (In Excess of Minimum)	N/A	N/A
Per 1,000 Gallons for 0 to 3,000 Gallons	\$ 1.93	\$ 2.00
Per 1,000 Gallons for 3,001 to 14,000 Gallons	\$ 2.90	\$ 3.00
Per 1,000 Gallons for Gallons in Excess of 14,000	\$ 3.47	\$ 3.60

Commodity Rates For 1-inch Meter - Treated Water:

Per 1,000 Gallons (In Excess of Minimum)	N/A	N/A
Per 1,000 Gallons for 0 to 25,000 Gallons	\$ 2.90	\$ 3.00
Per 1,000 Gallons for Gallons in Excess of 25,000	\$ 3.47	\$ 3.60

Commodity Rates For 1 1/2-Inch Meter - Treated Water:

Per 1,000 Gallons (In Excess of Minimum)	N/A	N/A
Per 1,000 Gallons for 0 to 42,000 Gallons	\$ 2.90	\$ 3.00
Per 1,000 Gallons for Gallons in Excess of 42,000	\$ 3.47	\$ 3.60

Commodity Rates For 2-Inch Meter - Treated Water:

Per 1,000 Gallons (In Excess of Minimum)	N/A	N/A
Per 1,000 Gallons for 0 to 63,000 Gallons	\$ 2.90	\$ 3.00
Per 1,000 Gallons for Gallons in Excess of 63,000	\$ 3.47	\$ 3.60

Commodity Rates For 3-Inch Meter - Treated Water:

Per 1,000 Gallons (In Excess of Minimum)	N/A	N/A
Per 1,000 Gallons for 0 to 120,000 Gallons	\$ 2.90	\$ 3.00
Per 1,000 Gallons for Gallons in Excess of 120,000	\$ 3.47	\$ 3.60

Commodity Rates For 4-Inch Meter - Treated Water:

Per 1,000 Gallons (In Excess of Minimum)	N/A	N/A
Per 1,000 Gallons for 0 to 180,000 Gallons	\$ 2.90	\$ 3.00
Per 1,000 Gallons for Gallons in Excess of 180,000	\$ 3.47	\$ 3.60

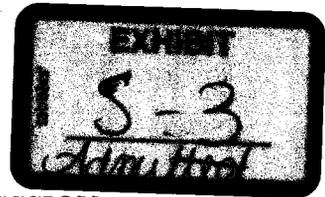
Commodity Rates For 6-Inch Meter - Treated Water:

Per 1,000 Gallons (In Excess of Minimum)	N/A	N/A
Per 1,000 Gallons for 0 to 290,000 Gallons	\$ 2.90	\$ 3.00
Per 1,000 Gallons for Gallons in Excess of 290,000	\$ 3.47	\$ 3.60

Commodity Rates For Public Water Systems (During Off-Peak Hours) - Treated Water:

Per 1,000 Gallons (In Excess of Minimum)	N/A	\$ 2.80
Per 1,000 Gallons for 0 to 180,000 Gallons	\$ 2.90	N/A
Per 1,000 Gallons for Gallons in Excess of 180,000	\$ 3.47	N/A

No changes were made to untreated water rates.



BEFORE THE ARIZONA CORPORATION COMMISSION

RECEIVED

COMMISSIONERS

MARC SPITZER - Chairman
WILLIAM A. MUNDELL
JEFF HATCH-MILLER
MIKE GLEASON
KRISTIN K. MAYES

2004 MAR 31 P 3: 51

AZ CORP COMMISSION
DOCUMENT CONTROL

IN THE MATTER OF THE APPLICATION OF AJO
IMPROVEMENT COMPANY FOR RATE
ADJUSTMENTS IN ITS WATER AND
WASTEWATER RATES.

DOCKET NO. WS-01025A-03-0350

STAFF'S NOTICE OF STIPULATION

On May 28, 2003, Ajo Improvement Company ("Company") filed with the Arizona Corporation Commission ("Commission") a rate application. The Commission granted intervention to Arizona Water Company ("AWC") on September 14, 2003.

On March 18, 2004, Utilities Division Staff ("Staff") of the Commission filed a Notice of Proposed Settlement Discussions. On March 24, 2004, Staff, the Company and AWC met and had settlement discussions.

The Company has agreed to stipulate to Staff's revenue requirement (as outlined in Staff's testimony). In addition, the Company has agreed to stipulate to the following Staff schedules (which were previously filed):

1. Direct Testimony- Water Department: Schedule CSB-1, CSB-2, CSB-3, CSB-15
2. Direct Testimony- Wastewater Department: Schedule CSB-1, CSB-2, CSB-3, CSB-7, CSB-13
3. Surrebuttal Testimony- Water Department: Surrebuttal Schedule CSB-1.

Furthermore, Staff and the Company have stipulated to two revised rate design schedules (see attached). The proposed settlement rates are for treated water and untreated water. A typical bill analysis for treated water has also been attached to this pleading. Copies of all three attachments have been provided to AWC.

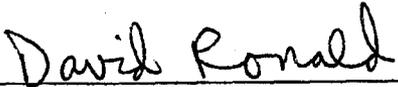
AWC has stipulated to the following items only:

1. Staff's monthly service charge for 4" meters: \$210.00 per month.
2. Staff's commodity rate for public water systems (during off-peak hours) for treated water: \$2.80 per 1,000 gallons (in excess of minimum).

1 AWC takes no position to the other items in this notice stipulated to by Staff and the
2 Company.

3 The stipulations relating to the income tax calculations and to the rate of return by Staff and
4 the Company in this case are only applicable to this particular case for purposes of settlement.

5 **RESPECTFULLY SUBMITTED** this 30th day of March 2004.

6
7
8 
9 David M. Ronald
10 Attorney, Legal Division
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007
(602) 542-3402

11 The original and thirteen (13) copies
12 of the foregoing were filed this
31st day of March 2004 with:

13 Docket Control
14 Arizona Corporation Commission
1200 West Washington Street
15 Phoenix, Arizona 85007

16 Copies of the foregoing were mailed
this 31st day of March 2004 to:

17 Jane L. Rodda
18 Administrative Law Judge
400 West Congress Street
19 Tucson, Arizona 85701

20 Michael W. Patten
Roshka Heyman & DeWulf, PLC
21 One Arizona Center
400 East Van Buren Street
Suite 800
22 Phoenix, Arizona 85004

23 Fred Menzer
24 Ajo Improvement Company
New Cornelia Branch
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25 Ajo, Arizona 85321

26 Dan Neidlinger
27 Neidlinger & Associates
3020 North 17th Drive
Phoenix, Arizona 85015
28 ...

1 Robert W. Geake
2 Vice President and General Counsel
3 Arizona Water Company
4 P.O. Box 29006
5 Phoenix, Arizona 85038-9006

6 Christopher C. Kempley, Chief Counsel
7 Legal Division
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9 1200 West Washington Street
10 Phoenix, Arizona 85007

11 Ernest Johnson, Director
12 Utilities Division
13 Arizona Corporation Commission
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Angela L. Bennett secretary to
David M. Ronald

**AJO IMPROVEMENT CO
CALCULATION OF WATER REVENUES
PROPOSED SETTLEMENT RATES - TREATED WATER**

DESCRIPTION	PRESENT REVENUES	PROPOSED REVENUES	INCREASE	PERCENT INCREASE
TREATED WATER:				
5/8" Meters	\$306,818	\$332,111	\$25,293	8.24%
1" Meters	14,219	16,465	2,246	15.80%
1 1/2" Meters	79	83	4	5.06%
2" Meters	54,085	65,413	11,328	20.94%
3" Meters	8,776	9,786	1,010	11.51%
4" Meters	164,957	181,717	16,760	10.16%
Total Treated Water	\$548,934	\$605,575	\$56,641	10.32%

	MONTHLY SERV. CHG.	COMMODITY RATE (000)
PROPOSED RATES - TREATED:		
5/8" X 3/4" Meters & 3/4" Meters:	\$9.45	
First 3,000 Gallons		\$2.50
Next 7,000 Gallons		2.90
Over 10,000 Gallons		3.30
1" Meters:	\$15.75	
First 25,000 Gallons		\$2.90
Over 25,000 Gallons		3.30
1 1/2" Meters:	\$26.25	
First 42,000 Gallons		\$2.90
Over 42,000 Gallons		3.30
2" Meters:	\$52.50	
First 63,000 Gallons		\$2.90
Over 63,000 Gallons		3.30
3" Meters:	\$105.00	
First 120,000 Gallons		\$2.90
Over 120,000 Gallons		3.30
4" Meters :	\$210.00	
First 180,000 Gallons		\$2.90
Over 180,000 Gallons		3.30
6" Meters	\$300.00	
First 290,000 Gallons		\$2.90
Over 290,000 Gallons		3.30
Commodity Rates for Public Water Systems (During Off-Peak Hours) - Treated Water (1) Per 1,000 Gallons (In Excess of Minimum)		\$2.80

NOTE:

- (1) Applicable for Service From Meter
Sizes of 4" or Greater

**AJO IMPROVEMENT CO
CALCULATION OF WATER REVENUES
PROPOSED SETTLEMENT RATES - UNTREATED WATER**

DESCRIPTION	PRESENT REVENUES	PROPOSED REVENUES	INCREASE	PERCENT INCREASE
UNTREATED WATER:				
5/8" Meters	\$10,315	\$11,665	\$1,350	13.09%
2" Meters	28,784	33,172	4,388	15.24%
3" Meters	37,746	41,596	3,850	10.20%
4" Meters	8,789	9,276	487	5.54%
Total Treated Water	\$85,634	\$95,709	\$10,075	11.77%

	MONTHLY SERV. CHG.	COMMODITY RATE (000)
PROPOSED RATES - UNTREATED:		
5/8" X 3/4" Meters & 3/4" Meters:	\$9.45	
First 10,000 Gallons		\$1.70
Over 10,000 Gallons		2.04
1" Meters:	\$15.75	
First 25,000 Gallons		\$1.70
Over 25,000 Gallons		2.04
1 1/2" Meters:	\$26.25	
First 42,000 Gallons		\$1.70
Over 42,000 Gallons		2.04
2" Meters:	\$52.50	
First 63,000 Gallons		\$1.70
Over 63,000 Gallons		2.04
3" Meters:	\$105.00	
First 120,000 Gallons		\$1.70
Over 120,000 Gallons		2.04
4" Meters :	\$210.00	
First 180,000 Gallons		\$1.70
Over 180,000 Gallons		2.04
6" Meters	\$300.00	
First 290,000 Gallons		\$1.70
Over 290,000 Gallons		2.04

**AJO IMPROVEMENT COMPANY
WATER DEPARTMENT
Test Year Ended December 31, 2002**

TYPICAL BILL ANALYSIS - TREATED WATER

DESCRIPTION	WATER USAGE	BILL AT: (1)		PERCENT INCREASE
		PRESENT RATES	PROPOSED RATES	
5/8" METERS:	3,000	\$16.62	\$16.95	1.99%
	5,000	21.70	22.75	4.84%
	10,000	34.40	37.25	8.28%
	15,000	47.10	53.75	14.12%
	20,000	59.80	70.25	17.47%
	25,000	72.50	86.75	19.66%
	30,000	85.20	103.25	21.19%
	40,000	110.60	136.25	23.19%
	50,000	136.00	169.25	24.45%
Median Usage	4,400	\$20.18	\$21.01	4.13%
Average Usage	5,711	23.51	24.81	5.54%
1" METERS:				
	5,000	\$27.70	\$30.25	9.21%
	10,000	40.40	44.75	10.77%
	15,000	53.10	59.25	11.58%
	20,000	65.80	73.75	12.08%
	25,000	78.50	88.25	12.42%
	30,000	91.20	104.75	14.86%
	40,000	116.60	137.75	18.14%
	50,000	142.00	170.75	20.25%
Median Usage	6,000	\$30.24	\$33.15	9.62%
Average Usage	15,961	55.54	62.04	11.70%
2" METERS:				
	20,000	\$100.80	\$110.50	9.62%
	40,000	151.60	168.50	11.15%
	63,000	210.02	235.20	11.99%
	80,000	253.20	291.30	15.05%
	100,000	304.00	357.30	17.53%
	150,000	431.00	522.30	21.18%
	200,000	558.00	687.30	23.17%
	250,000	685.00	852.30	24.42%
Median Usage	30,000	\$126.20	\$139.50	10.54%
Average Usage	96,672	295.55	346.32	17.18%

NOTES:

(1) Excluding Revenue Taxes



BEFORE THE ARIZONA CORPORATION COMMISSION

MARC SPITZER
Chairman
WILLIAM A. MUNDELL
Commissioner
JEFF HATCH-MILLER
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner

IN THE MATTER OF THE APPLICATION OF)
AJO IMPROVEMENT COMPANY FOR RATE)
ADJUSTMENTS IN ITS WATER AND)
WASTEWATER RATES)
_____)

DOCKET NO. WS-0125A-03-0350

DIRECT TESTIMONY

OF

JOHN A CHELUS

UTILITIES ENGINEER

UTILITIES DIVISION

January 9, 2004

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Recommendations	

DIRECT TESTIMONY

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Purpose of Testimony	2
Engineering Report	3

ATTACHMENT JAC-1 , Engineering Report – Ajo Water Division

A. Location of Company	1
B. Description of Water System.....	1
C. Arsenic	3
D. Arizona Department of Environmental Quality Compliance	3
E. Arizona Corporation Commission Compliance.....	3
F. Arizona Department of Water Resources Compliance	3
G. Water Testing Expenses.....	3
H. Water Use.....	3
I. Growth	4
J. Depreciation Rates	4
K. Curtailment Tariff.....	4
L. Service Line and Meter Installation Charges.....	5

Exhibits

Pima County Location Map	Exhibit 1
Certificated Area.....	Exhibit 2
Process Schematic.....	Exhibit 3
Depreciation Rates	Exhibit 4

ATTACHMENT JAC-2, Engineering Report – Ajo Wastewater Division

A. Location of Company	1
B. Description of Water System	1
C. Arizona Department of Environmental Quality Compliance	2
D. Arizona Corporation Commission Compliance.....	3
E. Wastewater Flow	3
F. Growth	3
G. Depreciation Rates	3

Exhibits

Pima County Location Map	Exhibit 1
Certificated Area.....	Exhibit 2
Process Schematic.....	Exhibit 3
Depreciation Rates	Exhibit 4

**EXECUTIVE SUMMARY
AJO IMPROVEMENT COMPANY
DOCKET NO. WS-0125A-03-0350**

Water Division

CONCLUSIONS

- I. ADEQ reported TOTAL COMPLIANCE with the state drinking water rules. ADEQ certified that the water system is delivering water that does not exceed any maximum contaminant level and meets the water quality standards of the Safe Drinking Water Act.
- II. The system has adequate storage and well capacity.

RECOMMENDATIONS

- I. Staff recommends that Ajo Improvement Company use depreciation rates by individual National Association of Regulatory Utilities Commissioners ("NARUC") category, as delineated in Exhibit 4.
- II. Staff recommends that the Company file a curtailment tariff within 45 days after the effective date of any decision and order pursuant to this application. The tariff shall be submitted to the Director of the Utilities Division for his review and certification. Staff also recommends that the tariff shall generally conform to the sample tariff found posted on the Commission's web site (www.cc.state.az.us/utility) or available upon request from Commission Staff.
- III. Staff recommends adopting the meter and service line installation charges proposed by the Company with the modifications proposed by Staff as shown in table 1 Section L.
- IV. Staff recommends that the Company, within 6 months from the effective date of a decision in this proceeding, submit a report to the Commission's Utilities Division describing what steps the Company is planning to take in order to reduce the arsenic level in its water to a concentration below 10 µg/l.
- V. The Company reported water testing expenses for Ajo Water of \$440 for the test year ending December 31, 2002. Staff considers the reported expense reasonable.

Wastewater Division

RECOMMENDATIONS

- I. Staff recommends that Ajo Improvement Company use depreciation rates by individual NARUC category, as delineated in Exhibit 4.
- II. Staff recommends that any permanent rates and charges in this matter shall become effective on the first day of the month after the Director of the Utilities Division receives notice from the Arizona Department of Environmental Quality that Ajo Improvement Company – Wastewater Division meets the standards required by the Arizona Administrative Code.

1 **INTRODUCTION**

2 **Q. Please state your name, place of employment and job title.**

3 A. My name is John A. Chelus. My place of employment is the Arizona Corporation
4 Commission ("Commission"), Utilities Division, 1200 West Washington Street, Phoenix,
5 Arizona 85007. My job title is Utilities Engineer.

6
7 **Q. How long have you been employed by the Commission?**

8 A. I have been employed by the Commission since September 1990.

9
10 **Q. Please list your duties and responsibilities.**

11 A. As a Utilities Engineer, specializing in water and wastewater engineering, my
12 responsibilities include: the inspection, investigation, and evaluation of water and
13 wastewater systems; obtaining data, preparing reconstruction cost new and/or original cost
14 studies, cost of service studies and investigative reports; providing technical
15 recommendations and suggesting corrective action for water and wastewater systems; and
16 providing written and oral testimony on rate applications and other cases before the
17 Commission.

18
19 **Q. How many companies have you analyzed for the Utilities Division?**

20 A. I have analyzed approximately 145 companies in various areas for the Utilities Division.

21
22 **Q. Have you previously testified before this Commission?**

23 A. Yes.

1 **Q. What is your educational background?**

2 A. I graduated from the Rochester Institute of Technology in 1976 with a Bachelors Degree
3 in Civil Engineering and from Oklahoma State University in 1978 with a Masters Degree
4 in Environmental Engineering.

5
6 **Q. Briefly describe your pertinent work experience.**

7 A. I worked for the Dallas Water Utilities as an engineer in the Wastewater Division, and
8 then in the Engineering Design Division from 1978 to 1981. I moved to Grand Junction,
9 Colorado and worked for Multi Mineral Corporation as a research engineer until 1982.
10 After this I worked for Westwater Engineering Consultants as a design engineer. In 1983,
11 I was employed by Sauter Construction as a construction engineer for the construction of
12 the Ute Water Treatment facilities in Palisade, Colorado. In 1984 and 1985, I was
13 employed by the City of Grand Junction as a Grade IV wastewater operator at its 12
14 million gallon per day activated sludge treatment facility. In 1986, I moved to Phoenix
15 and began working for the Arizona Department of Environmental Quality ("ADEQ"),
16 Office of Water Quality, as a design review engineer, and then as a field engineer. I
17 stayed at ADEQ until transferring to the Commission in 1990.

18

19 **PURPOSE OF TESTIMONY**

20 **Q. Were you assigned to provide an engineering analysis and recommendation for the**
21 **Ajo Improvement Company ("Company") in this proceeding?**

22 A. Yes. I reviewed the Company's application and responses to data requests, and I visited
23 the water and wastewater systems on September 25, 2003. This testimony and its
24 attachments will present Staff's findings and engineering evaluation.

25

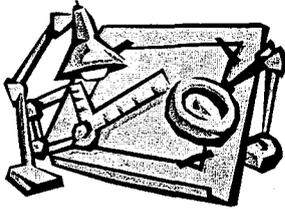
1 **ENGINEERING REPORT**

2 **Q. Please describe the attached Engineering Reports, Exhibit JAC-1 and JAC-2.**

3 A. Exhibit JAC-1 presents the details and analyses of Staff's findings of the Ajo
4 Improvement Company – Water Division, and is attached to this direct testimony. Exhibit
5 JAC-1 contains the following major topics: (1) location of the company, (2) a description
6 of the water system and the processes, (3) arsenic analysis (4) compliance with the rules of
7 the Arizona Department of Environmental Quality, (5) compliance with the Arizona
8 Corporation Commission, (6) compliance with the Arizona Department of Water
9 Resources, (7) water testing expense, (8) water use, (9) growth, (10) depreciation rates,
10 (11) curtailment tariffs, and (12) service line and meter installation charges. Exhibit JAC-
11 2 presents the details and analyses of my findings of the Ajo Improvement Company –
12 Wastewater Division, and is attached to this direct testimony. Exhibit JAC-2 contains the
13 following major topics: (1) location of the company, (2) a description of the water system
14 and the processes, (3) compliance with the rules of the Arizona Department of
15 Environmental Quality, (4) compliance with the Arizona Corporation Commission (5)
16 wastewater flow, (6) growth, (7) and depreciation rates. Staff's conclusions and
17 recommendations from the engineering report are contained in the “EXECUTIVE
18 SUMMARY”, above.

19
20 **Q. Does this conclude your direct testimony?**

21 A. Yes, it does.



**ENGINEERING REPORT FOR
AJO IMPROVEMENT COMPANY
WATER DIVISION (RATES)
Docket No. WS-01025A-03-0350
By John A. Chelus
January 9, 2004**

A. LOCATION OF COMPANY

Ajo Improvement Company - Water Division ("Ajo Water or Company") serves approximately 1,130 customers in Ajo, Arizona in Pima County. Ajo is approximately 110 miles southwest of downtown Phoenix. Exhibit 1 describes the location of the Company within Pima County, and Exhibit 2 describes the certificated area of the Company within Pima County.

B. DESCRIPTION OF THE WATER SYSTEM

The plant facilities were visited on September 25, 2003, by John A. Chelus, Utilities Engineer, in the accompaniment of Mike Lane, Operations Manager for Phelps Dodge Corporation (Phelps Dodge).

Phelps Dodge Well and Booster System

Phelps Dodge owns a number of wells located approximately eight miles outside of the town of Ajo. These wells supply water to the Phelps Dodge mines and Ajo Water. The wells that supply Ajo Water are listed in the following table. During the inspection, only Well No. 12 was supplying water to Ajo Water. Well No. 10 was down for repair and the others were out of service for other reasons.

Well No.	ADWR No.	Location	Depth (feet)	Casing Diameter (inches)	Water Level (feet)	Pump Size & Type	Max Pump Capacity (gpm)	Date Complete
9	55-600485	C(11-6) 24 bda	1,200	24/20	711	Sub.	1,710	01/15/53
10	55-600488	C(11-6) 24 ada	1,333	24/20	724	500 hp Sub	1,700	10/29/54
11	55-600489	C(11-6) 24 bda	1,350	30/24/20	722	Sub.	N/A	08/06/60
12	55-600590	C(11-6) 24 add	1,170.	30/20	732	500 hp Turb.	1,750	12/19/74

Water from the wells is pumped through two 10,000 gallon surge tanks. From here the water enters a booster pump building. Three 400-hp booster pumps send the water over approximately 8 miles of 24-inch and 30-inch Drisco (polyethelene) pipe up a rise of over 400 feet where raw water is stored in two 500,000 gallon elevated tanks for delivery to Ajo Water.

Ajo Improvement Company System – 10-221

Ajo Improvement Company is a consecutive system to the Phelps Dodge system. Water from the Phelps Dodge raw water storage tanks is gravity fed to a water treatment facility where the water is fed through three activated alumina towers to remove arsenic and fluoride. The raw water arsenic concentration is at 75 micrograms per liter ($\mu\text{g/l}$) and fluoride is at 8.7 milligrams per liter (mg/l). Gas chlorination is used for disinfection prior to treatment. Caustic soda and sulfuric acid are used to regenerate the activated alumina and adjust pH. The towers are regenerated after every 7 or 8 million gallons of water is treated. Approximately 350,000 gallons are used for each re-generation. The backwash water from this process is sent to the wastewater treatment lagoons for disposal. Arsenic is reduced in the treated water to an arsenic level of 22 $\mu\text{g/l}$ and a fluoride level below 4.0 mg/l . The treated water is blended with raw water to reach the current arsenic maximum contaminant level (MCL) of 50 $\mu\text{g/l}$ and fluoride level of 4.0 mg/l . Treated water is pumped using two 25-hp booster pumps to two 500,000 gallon elevated treated water storage tanks. These tanks are called the Hot Rod tanks. From here, the water is sent to the distribution system. Ajo Water is charged for the water that is used by the customers. At points in the distribution system, there are interconnections to the Arizona Water Company Ajo Heights system and the Five Acres Water Corporation and the Phelps Dodge Plant. The following tables list the Ajo Water plant in tabular form. Exhibit 3 provides a process schematic for the water system. The water system has adequate storage and well production.

Treatment, Storage, Pumping

Structure or equipment	Quantity and Capacity
Treatment Plant	Three tower activated alumina reactors
Booster Pumps	Two 25 hp
Storage Tanks	Two - 500,000 gallons
Fire Hydrants	130

Distribution Mains

Diameter	Material	Length
12 inch	Ductile Iron & Asbestos Cement	3,900/3,300
10 inch	Ductile Iron & Asbestos Cement	11,400/13,060
8 inch	Cast Iron & Steel	600/9,500 ft
6 inch	Asbestos Cement & PVC	11,300/600 ft
5 inch	Cast Iron	7,600 ft
4 inch	Cast Iron/PVC/Steel	1,200/900/1,200 ft
2 inch	Copper & PVC	2,100/300 ft
	Total	66,960 ft.

Meters

Size	Quantity
5/8 x 3/4 inch	1,073
1 inch	19
1 1-2 inch	1
2 inch	17
Turbo 3 inch	7
Turbo 4 inch	2

C. ARSENIC

The U.S. Environmental Protection Agency (EPA) has reduced the MCL in drinking water from 50 micrograms per liter ($\mu\text{g/l}$) to 10 $\mu\text{g/l}$. The date for compliance with the new MCL is January 23rd, 2006. The most recent lab analysis by the Company indicated that the arsenic level in its source supply is 75 $\mu\text{g/l}$. Ajo Water has the treatment facilities in place to bring the level down to 22 $\mu\text{g/l}$. This level of treatment is adequate to reach the current MCL of 50 $\mu\text{g/l}$ but will fall short of meeting the new standard of 10 $\mu\text{g/l}$. The Company will be required to implement a plan to address this issue. This could mean installing additional treatment facilities or locating better sources of water to achieve 10 $\mu\text{g/l}$ or less.

Staff recommends that the Company, within 6 months from the effective date of a decision in this case, submit a report to the Commission's Utilities Division describing what steps the Company is planning to take in order to reduce the arsenic level in its water to a concentration below 10 $\mu\text{g/l}$.

D. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY COMPLIANCE (ADEQ)

ADEQ has determined that this system is currently delivering water that meets the water quality standards required by Arizona Administrative Code, Title 18, Chapter 4.

E. ARIZONA CORPORATION COMMISSION COMPLIANCE

A check with the Utilities Division Compliance Unit showed no outstanding compliance issues.

F. ARIZONA DEPARTMENT OF WATER RESOURCES COMPLIANCE

Ajo Water is not within any Active Management Area, and consequently is not subject to reporting and conservation rules.

G. WATER TESTING EXPENSES

Water Testing Expense

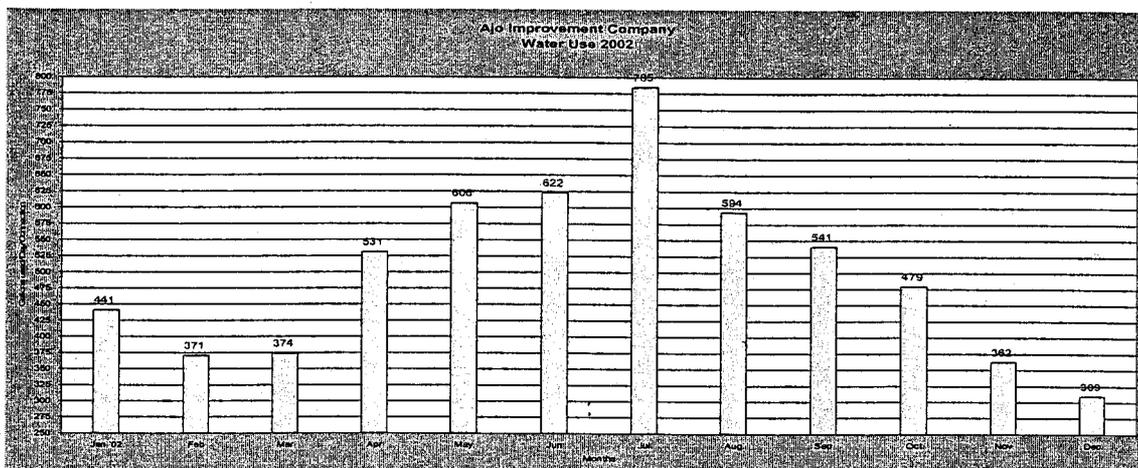
The Company reported water testing expenses for Ajo Water of \$440 for the test year ending December 31, 2002 in response to Staff data request CSB-2-10. Staff considers the reported expense reasonable.

H. WATER USE

Water Sold

Based on the information provided by the Company in its 2002 annual report, water use for the year 2002 is presented below. Customer consumption experienced a high monthly

water use of 785 gallons per day (“GPD”) per connection and a low monthly water use of 309 GPD per connection for an average annual use of 501 GPD per connection.



Non-account Water

Non-account water should be 10% or less and never more than 15%. It is important to be able to reconcile the difference between water sold and the water produced by the source. A water balance will allow a water company to identify water and revenue losses due to leakage, theft, and flushing. Based on water usage reported in the 2002 annual report, non-account water was calculated to be 5.40%, which is within acceptable limits.

I. GROWTH

Based on information provided by Ajo Water in its annual reports, the Company has grown from 1,123 customers in 1999 to 1,130 customers in 2002. There are no indications this slow growth rate will change in the near future.

J. DEPRECIATION RATES

Staff has developed typical and customary depreciation rates within a range of anticipated equipment life. These rates are presented in Exhibit 4. It is recommended that the Company use depreciation rates by individual National Association of Regulatory Utilities Commissioners (NARUC) category, as delineated in Exhibit 4.

K. CURTAILMENT PLAN TARIFF

A curtailment tariff is an effective tool to allow a water company to manage its resources during periods of shortages due to pump breakdowns, droughts, or other unforeseeable events. Since Ajo Water does not have a curtailment tariff, this rate application provides an opportune time to prepare and file such a tariff. Staff recommends that the Company file a curtailment tariff within 45 days after the effective date of any decision and order pursuant to this application. The tariff shall be submitted to the Director of the Utilities Division for his review and certification. Staff also recommends that the tariff shall generally conform to the sample tariff found posted on the Commission's web site (www.cc.state.az.us/utility) or available upon request from Commission Staff.

L. SERVICE LINE AND METER INSTALLATION CHARGES

The Company has requested to change its meter and service line charges as shown in the following table. These charges are refundable advances. The Company’s proposed charges are considered reasonable and customary charges. The Company did not provide charges for all meter sizes. Therefore, Staff recommends adopting the meter and service line installation charges proposed by Staff which includes charges for all meter sizes

**Table 1
Service Line and Meter Installation Charges**

Meter Size	Current Charges	Proposed Charges	Staff Recommendation
5/8 x3/4-inch	\$100	\$400	\$400
3/4-inch	--	--	\$450
1-inch	\$150	\$500	\$500
1-1/2-inch	--	\$750	\$750
2-inch	\$150	\$1,300	\$1,300
3-inch	--	--	\$2,000
4-inch	--	--	\$3,000
6-inch	--	--	\$6,035

EXHIBITS

LOCATION OF AJO IMPROVEMENT COMPANY EXHIBIT 1

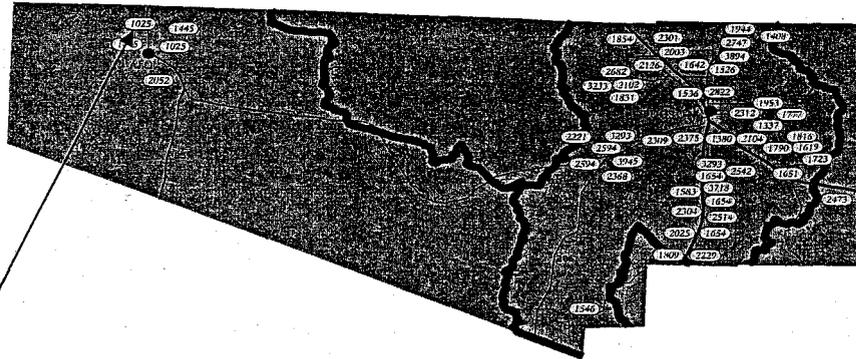
CERTIFICATED AREA OF AJO IMPROVEMENT COMPANY..... EXHIBIT 2

PROCESS SCHEMATIC EXHIBIT 3

DEPRECIATION RATES EXHIBIT 4

Exhibit 1

P I M A C O U N T Y

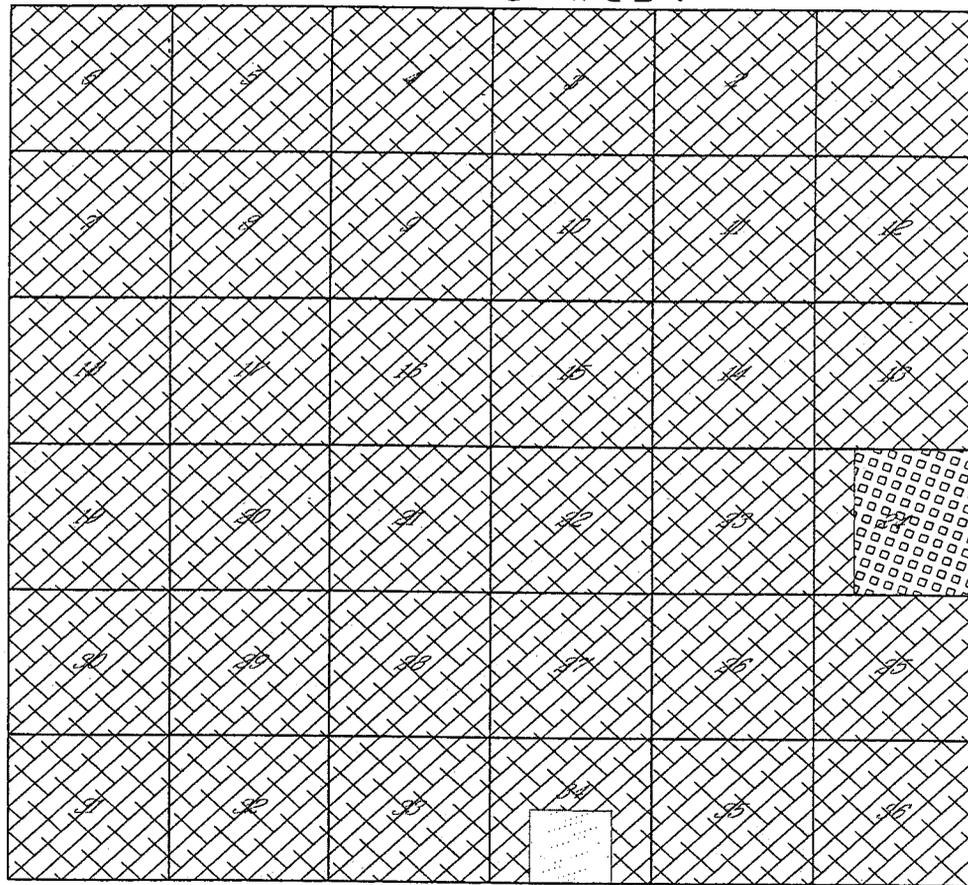


- | | | | |
|------|---|------|---|
| 1025 | AJO IMPROVEMENT COMPANY | 2163 | MIRABELL WATER COMPANY, INC. |
| 2473 | ANDERSON WATER COMPANY, INC. | 1408 | MT. LEMMON COOPERATIVE WATER COMPANY, INC. |
| 3233 | ANWAY MANVILLE L.L.C. WATER COMPANY | 2514 | QUAIL CREEK WATER COMPANY, INC. |
| 1546 | ARIVACA TOWNSITE COOPERATIVE WATER COMPANY | 2102 | RANCHO DEL CONEJO WATER COMMUNITY COOPERATIVE |
| 1745 | ARIZONA WATER COMPANY (AJO HEIGHTS) | 3718 | RANCHO SAHUARITA WATER COMPANY |
| 2126 | AVRA WATER COOPERATIVE, INC. | 1880 | RAY WATER COMPANY |
| 2304 | COMMUNITY WATER COMPANY OF GREEN VALLEY | 2003 | RILLITO WATER USERS |
| 1642 | DESPOBLADO WATER COMPANY | 1819 | RINCON CREEK WATER COMPANY |
| 2309 | DIABLO VILLAGE WATER COMPANY | 1937 | RINCON RANCH ESTATES WATER COMPANY, INC. |
| 1754 | FARMERS WATER COMPANY | 1725 | RINCON WATER COMPANY |
| 1777 | FORTY-NINER WATER COMPANY | 1790 | SAGUARO WATER COMPANY |
| 3345 | FRANCESCA WATER COMPANY, INC. | 1831 | SANDARIO WATER COMPANY |
| 2025 | GREEN VALLEY WATER COMPANY | 2827 | SLEEPY HOLLOW MOBILE HOME ESTATES |
| 2312 | HALCYON ACRES ANNEX # 2 WATER COMPANY, INC. | 1816 | SPANISH TRAIL WATER COMPANY |
| 1953 | HALCYON ACRES WATER USERS ASSOCIATION | 3894 | STEAM PUMP INVESTORS, L.L.C. |
| 2342 | LA CASITA WATER COMPANY, INC. | 3293 | THIM UTILITY COMPANY |
| 1744 | LAGO DEL ORO WATER COMPANY | 2594 | THIM WATER CORPORATION |
| 1109 | LAKEWOOD WATER COMPANY | 2682 | TIERRA LINDA HOMEOWNERS ASSOCIATION, INC. |
| 1582 | LAS QUINTAS SERENAS WATER COMPANY | 2301 | TORTOLITA WATER COMPANY, INC. |
| 1133 | LAZY C WATER SERVICE | 1631 | VAIL WATER COMPANY |
| 2247 | LOS CERROS WATER COMPANY, INC. | 2229 | VIVA DEVELOPMENT CORPORATION |
| 1854 | LYN-LEE WATER COMPANY | 2104 | VOYAGER WATER COMPANY |
| 1126 | MESALAND WATER COMPANY, INC. | 2052 | WHY UTILITY COMPANY |
| 2173 | MIDVALE FARMS WATER COMPANY | 2221 | WORDEN WATER COMPANY |

Exhibit 2

COUNTY: *Pima*

RANGE 6 West

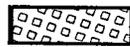


TOWNSHIP 11 South



(2)

Five Acres Water Corporation
(Nonjurisdictional)



E-1025 (3)

Ajo Improvement Company



U-1445 (4)

Arizona Water Company (Ajo Heights)

Exhibit 3

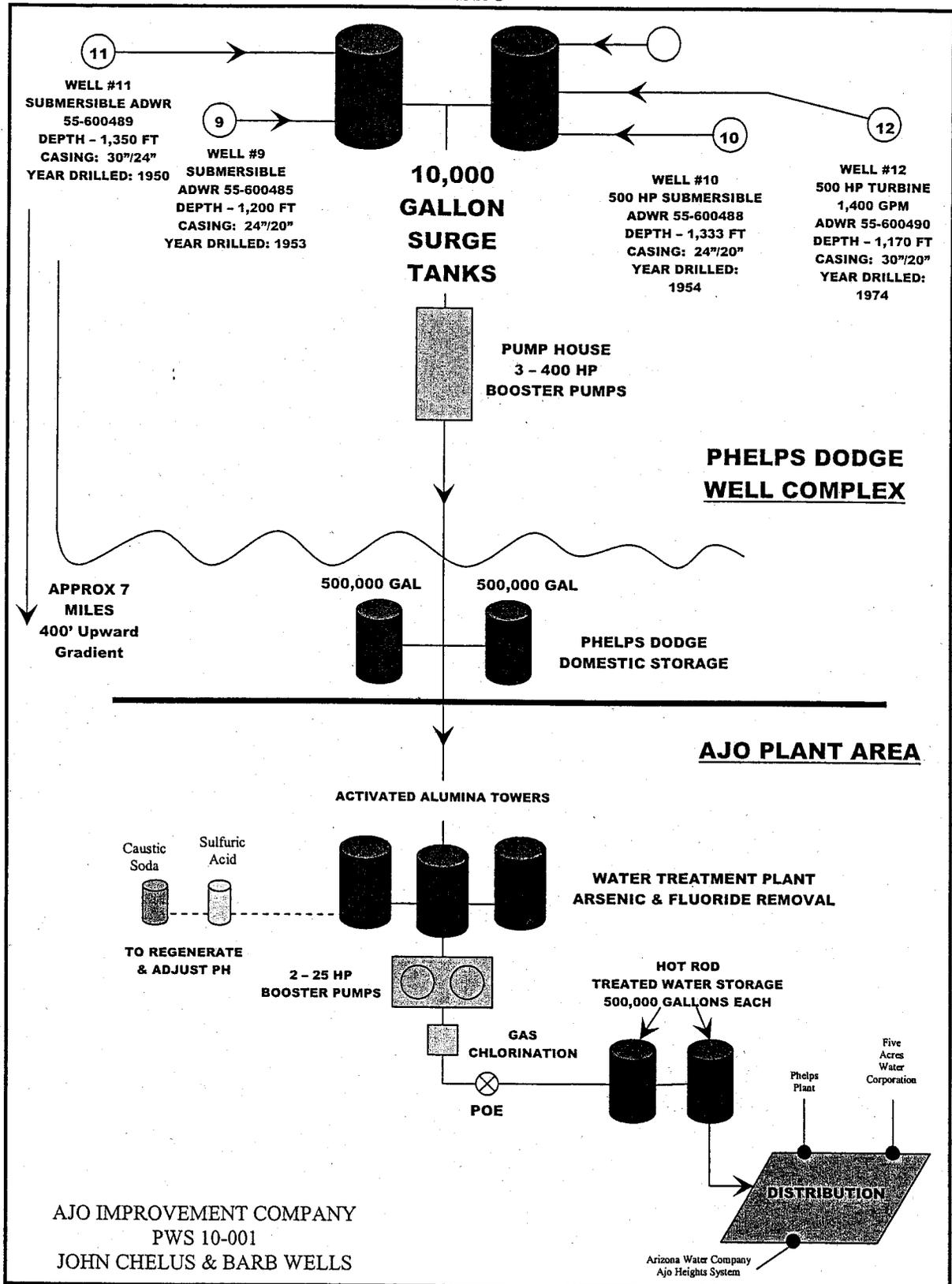
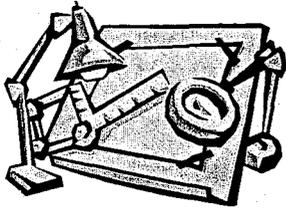


Exhibit 4
TYPICAL DEPRECIATION RATES FOR WATER COMPANIES

NARUC Account No.	Depreciable Plant	Average Service Life (Years)	Annual Accrual Rate (%)
304	Structures & Improvements	30	3.33
305	Collecting & Impounding Reservoirs	40	2.50
306	Lake, River, Canal Intakes	40	2.50
307	Wells & Springs	30	3.33
308	Infiltration Galleries	15	6.67
309	Raw Water Supply Mains	50	2.00
310	Power Generation Equipment	20	5.00
311	Pumping Equipment	8	12.5
320	Water Treatment Equipment		
320.1	Water Treatment Plants	30	3.33
320.2	Solution Chemical Feeders	5	20.0
330	Distribution Reservoirs & Standpipes		
330.1	Storage Tanks	45	2.22
330.2	Pressure Tanks	20	5.00
331	Transmission & Distribution Mains	50	2.00
333	Services	30	3.33
334	Meters	12	8.33
335	Hydrants	50	2.00
336	Backflow Prevention Devices	15	6.67
339	Other Plant & Misc Equipment	15	6.67
340	Office Furniture & Equipment	15	6.67
340.1	Computers & Software	5	20.00
341	Transportation Equipment	5	20.00
342	Stores Equipment	25	4.00
343	Tools, Shop & Garage Equipment	20	5.00
344	Laboratory Equipment	10	10.00
345	Power Operated Equipment	20	5.00
346	Communication Equipment	10	10.00
347	Miscellaneous Equipment	10	10.00
348	Other Tangible Plant	----	----

NOTES:

1. These depreciation rates represent average expected rates. Water companies may experience different rates due to variations in construction, environment, or the physical and chemical characteristics of the water.
2. Acct. 348, Other Tangible Plant may vary from 5% to 50%. The depreciation rate would be set in accordance with the specific capital items in this account.



**ENGINEERING REPORT FOR
AJO IMPROVEMENT COMPANY
WASTEWATER DIVISION (RATES)
Docket No. WS-01025A-03-0350
By John A. Chelus
January 9, 2004**

A. LOCATION OF COMPANY

Ajo Improvement Company - Wastewater Division ("Ajo Sewer or Company") serves approximately 1,130 customers in Ajo, Arizona, Pima County. Ajo is approximately 110 miles southwest of downtown Phoenix. Exhibit 1 describes the location of the Company within Pima County, and Exhibit 2 describes the certificated area of the Company within Pima County.

B. DESCRIPTION OF THE WASTEWATER SYSTEM

The plant facilities were visited on September 25, 2003, by John A. Chelus, Utilities Engineer, in the accompaniment of Mike Lane, Operations Manager for Phelps Dodge Corporation (Phelps Dodge). The wastewater lagoons are located on Phelps Dodge Mining Company property between Well Road and the Phelps Dodge tailing pond. The plant is owned and operated by the Ajo Improvement Company.

The wastewater treatment facilities consist of a newly completed 0.6 million gallon per day (MGD) three cell lined aerated lagoon system. The facilities were completed in 2001. This replaced an 11 acre wastewater stabilization lagoon. See Exhibit 3 for a schematic of the facilities. The major components and process is as follows:

1. The first, or primary cell includes a 171,000 cubic foot (cu-ft) anoxic fermentation pit in the center of the cell which is surrounded by 323,000 cu-ft biomass maintained in an aerobic environment separated by a floating baffle. Aeration is provided by two 7.5 horsepower floating aerators.
2. The secondary cell includes a 204,700 cu ft. anoxic fermentation pit in the center of the cell surrounded by 323,000 cu ft of biomass maintained in an aerobic environment separated by a floating baffle. Aeration is supplied by the use of two 7.5 horsepower floating aerators.
3. The third cell is a facultative "maturation" pond which allows for final treatment and flow surge containment and consists of 133,200 cu ft of storage volume.
4. The effluent from the "maturation" pond flows through a sluice gate into the effluent lift station.
5. The effluent lift station consists of an effluent surge tank with 6,000 gallons of capacity and two 55 hp pumps, each with a capacity of 834 gallons per minute. The effluent is pumped into the adjacent North Dam tailings impoundment for disposal.
6. A recycle pump is located after the effluent station which returns effluent to the primary pond.

7. All cells are lined with a 60 mil HDPE (synthetic rubber) liner.
8. There is no disinfection or solids removal.

Wastewater Treatment Plant

Treatment Facilities

Aerated Lagoon	Three cells 0.6 mgd capacity
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Lift Stations

Location Name	Horsepower per Pump	Quantity of Pumps	Capacity Per Pump (gpm)	Wet Well Capacity (gals)
11 th Street	7.5 hp	2	125	47,000

Collection Mains

Size	Material	Length (feet)	Size	Material	Length (feet)
4"	Clay Tile	3,200	10"	A/C	9,300
6"	Clay Tile	25,200	10"	Clay Tile	1,000
6"	A/C	2,100	12"	Clay Tile	2,800
8"	Clay Tile	4,000	15"	A/C	800
8"	A/C	36,900			

Manholes	
Type	Quantity
Standard	232

Cleanouts (Qty)
None

Force Mains		
Size	Material	Length (Feet)
4-inch	Steel	2,000

Services

Size	Material	Quantity
4"	Red Clay & Transite	1,200

C. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY COMPLIANCE (ADEQ)

ADEQ reported NON-COMPLIANCE with the state aquifer protection rules. The Aquifer Protection Permit P-101678, reporting requirements and monitoring results which have been submitted and the most recent facility inspection indicate this facility is not in compliance based on the current information that is available to ADEQ. The following information details the reason for Non-Compliance:

1. Exceedance of Total Fluoride on April 28, 2003, Monitoring Point 15494.
2. Exceedance of Total Arsenic on April 28, 2003, Monitoring Point 15494.
3. Missing data for daily average flow, all weekends, 2nd Quarter of 2003.
4. Exceedance of Freeboard, 2nd Quarter of 2003, Monitoring point 15498

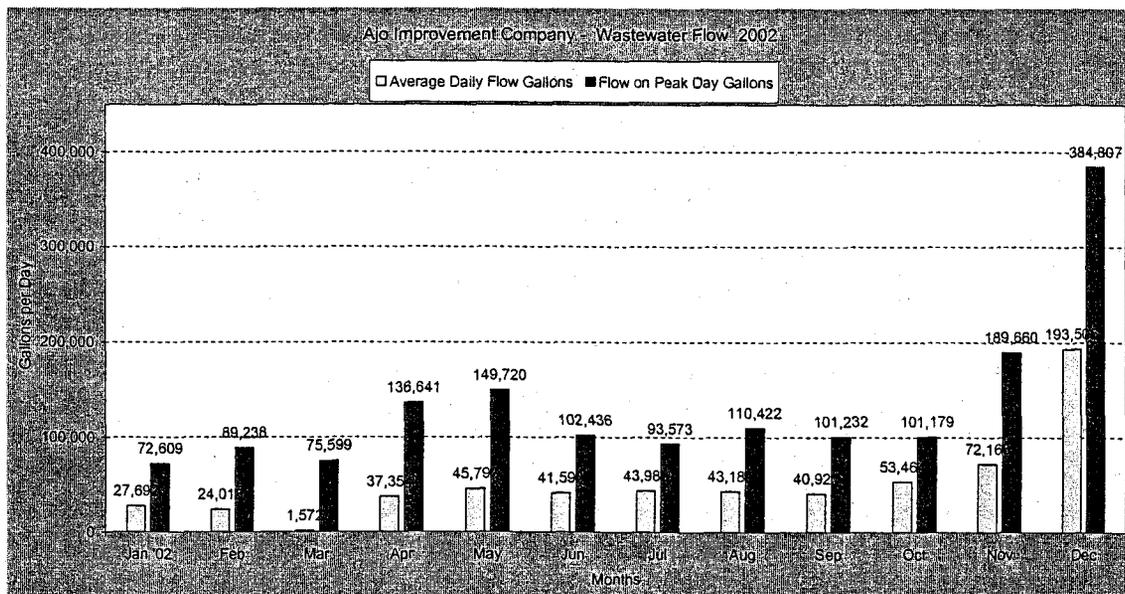
Staff recommends that any permanent rates and charges in this matter shall become effective on the first day of the month after the Director of the Utilities Division receives notice from the Arizona Department of Environmental Quality that Ajo Improvement Company – Wastewater Division meets the standards required by the Arizona Administrative Code.

D. ARIZONA CORPORATION COMMISSION COMPLIANCE

A check with the Utilities Division Compliance Unit showed no outstanding compliance issues.

E. WASTEWATER FLOW

The wastewater treatment plant has a capacity of 600,000 gallons per day. In the year 2002, the highest average daily flow occurred in the month of December, when an average of 193,505 gallons was treated. The lowest average daily flow during the year 2002 was 1,572 gallons, which occurred in March. The highest peak daily flow for the year occurred in February when 384,807 gallons was treated in one day.



F. GROWTH

Based on information provided by Ajo Sewer in its annual reports, the Company has grown from 1,087 customers in 1999 to 1,089 customers in 2002. There are no indications this slow growth rate will change in the near future.

G. DEPRECIATION RATES

Staff has developed typical and customary depreciation rates within a range of anticipated equipment life. These rates are presented in Exhibit 4. It is recommended that the Company use depreciation rates by individual National Association of Regulatory Utilities Commissioners (NARUC) category, as delineated in Exhibit 4.

EXHIBITS

LOCATION OF AJO IMPROVEMENT COMPANY EXHIBIT 1

CERTIFICATED AREA OF AJO IMPROVEMENT COMPANY EXHIBIT 2

PROCESS SCHEMATIC EXHIBIT 3

DEPRECIATION RATES EXHIBIT 4

Exhibit 1

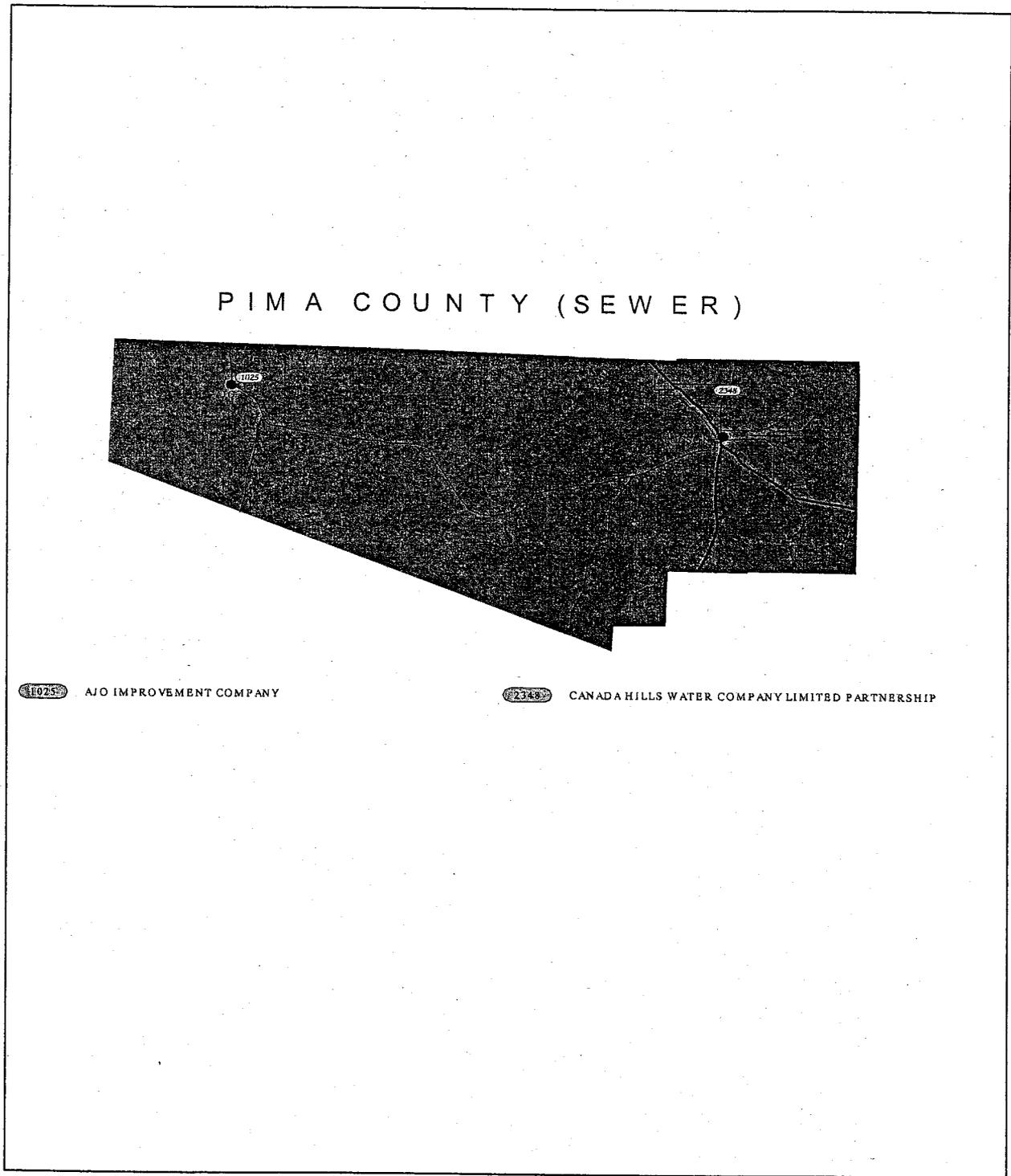
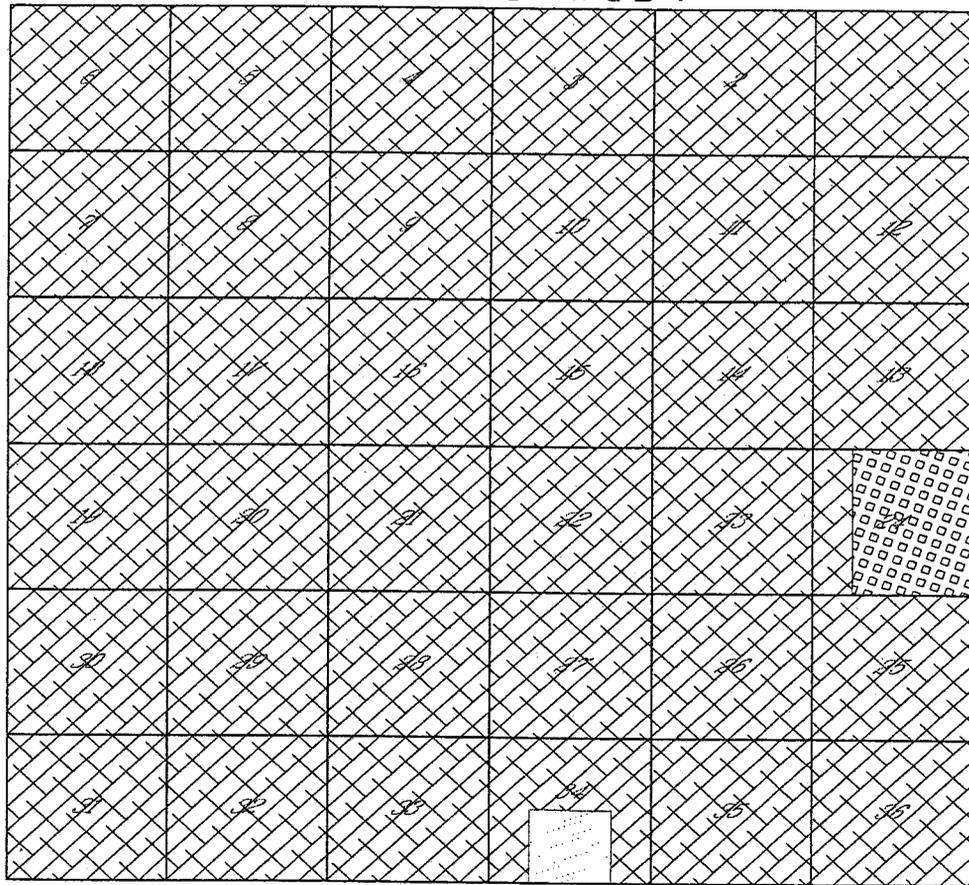


Exhibit 2

COUNTY: *Pima*

RANGE 6 West



TOWNSHIP 11 South

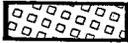
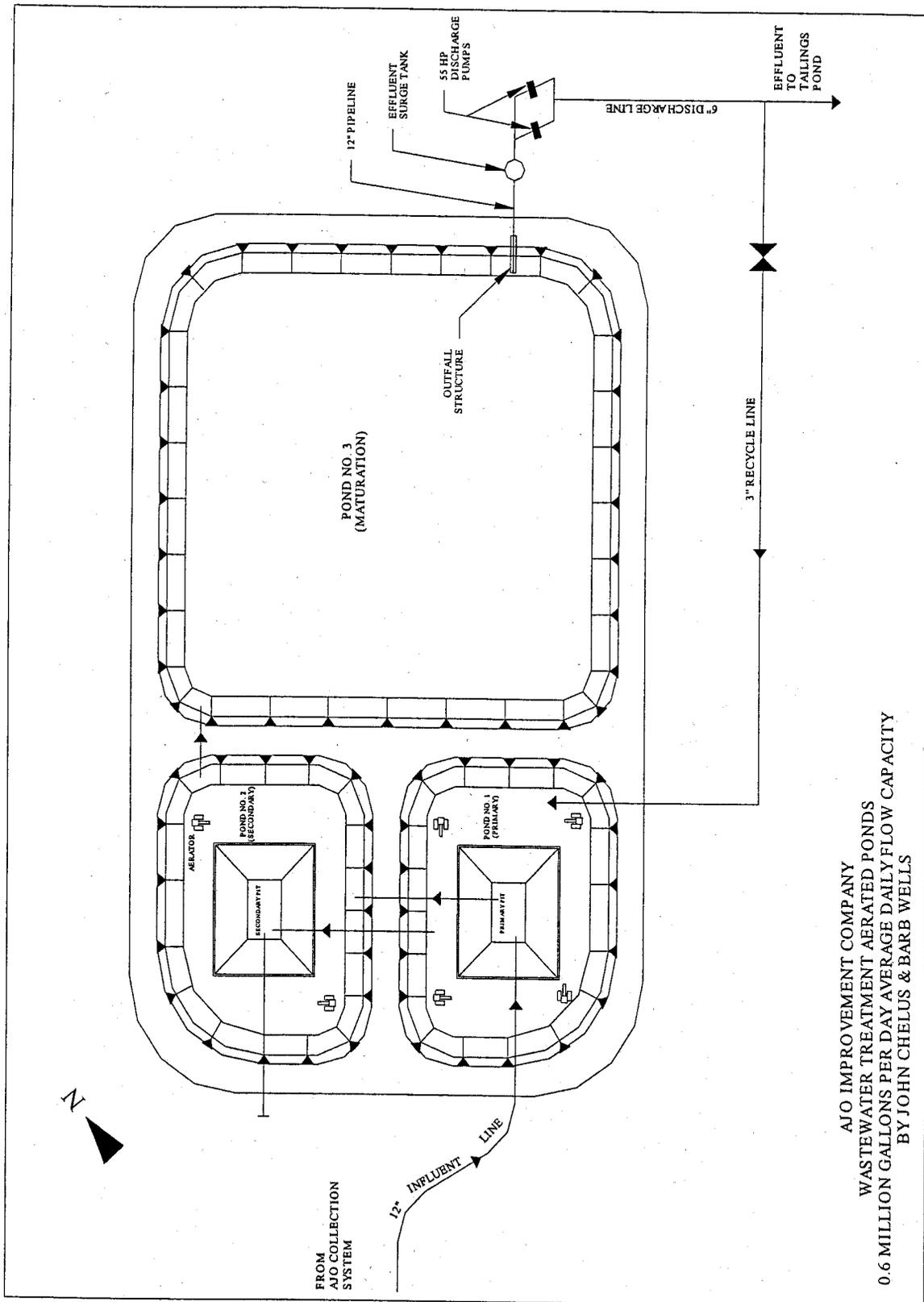
- | | |
|---|---|
|  (2)
Five Acres Water Corporation
(Non-jurisdictional) |  E-1025 (3)
Ajo Improvement Company |
| |  U-1445 (4)
Arizona Water Company (Ajo Heights) |

Exhibit 3



AJO IMPROVEMENT COMPANY
WASTEWATER TREATMENT AERATED PONDS
0.6 MILLION GALLONS PER DAY AVERAGE DAILY FLOW CAPACITY
BY JOHN CHELUS & BARB WELLS

EXHIBIT 4
TYPICAL DEPRECIATION RATES FOR WASTEWATER COMPANIES

NARUC Account No.	Depreciable Plant	Average Service Life (Years)	Annual Accrual Rate (%)
354	Structures & Improvements	30	3.33
355	Power Generation Equipment	30	3.33
360	Collection Sewers – Force	50	2.0
361	Collection Sewers- Gravity	50	2.0
362	Special Collecting Structures	50	2.0
363	Services to Customers	50	2.0
364	Flow Measuring Devices	10	10.0
365	Flow Measuring Installations	20	5.00
366	Reuse Services	50	2.00
367	Reuse Meters and Meter Installations	30	3.33
370	Receiving Wells	30	3.33
371	Pumping Equipment	10	10.0
374	Reuse Distribution Reservoirs	40	2.50
375	Reuse Transmission and Distribution System	50	2.0
380	Treatment and Disposal Equipment	20	5.0
381	Plant Sewers	20	5.0
382	Outfall Sewer Lines	25	4.0
389	Other Plant & Miscellaneous Equipment	15	6.67
390	Office Furniture & Equipment	15	6.67
390.1	Computers & Software	5	20.0
391	Transportation Equipment	5	20.0
392	Stores Equipment	25	4.0
393	Tools, Shop & Garage Equipment	20	5.0
394	Laboratory Equipment	10	10.0
395	Power Operated Equipment	20	5.0
396	Communication Equipment	10	10.0
397	Miscellaneous Equipment	10	10.0
398	Other Tangible Plant	----	----

NOTES:

1. These depreciation rates represent average expected rates. Wastewater companies may experience different rates due to variations in construction, environment, or the physical and chemical characteristics of the water.
2. Acct. 348, Other Tangible Plant may vary from 5% to 50%. The depreciation rate would be set in accordance with the specific capital items in this account.