

ORIGINAL



0000059278

RECEIVED

MEMORANDUM

AUG 27 P 2:35

Arizona Corporation Commission

DOCKETED

AUG 27 2003

DOCUMENT CONTROL

TO: Docket Control
FROM: Ernest G. Johnson
Director
Utilities Division

DOCKETED BY	<i>CR</i>
-------------	-----------

DATE: August 27, 2003

RE: STAFF REPORT FOR CHAPARRAL WATER COMPANY RATE INCREASE APPLICATION (DOCKET NO. W-02393A-03-0312)

Attached is the Staff Report for Chaparral Water Company application for a permanent rate increase. Staff recommends approval of the application using Staff's recommended rates and charges.

EGJ:ENZ:rdp

Originator: Elena Zestrijan

Attachment: Original and sixteen Copies

Service List for: Chaparral Water Company
Docket No. W-02393A-03-0312

Mr. Richard L. Sallquist, Esq.
Sallquist & Drummond P.C.
2525 E. Arizona Biltmore Circle
Suite 117
Phoenix, Arizona 85016

Chief, Legal Division
Christopher C. Kempley
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

Director, Utilities Division
Ernest G. Johnson
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

Chief, Hearing Division
Lyn Farmer
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

**STAFF REPORT
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION**

CHAPARRAL WATER COMPANY

DOCKET NO. W-02393A-03-0312

**APPLICATION FOR A
PERMANENT RATE INCREASE**

AUGUST 2003

STAFF ACKNOWLEDGMENT

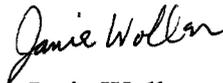
The Staff Report for Chaparral Water Company, Docket No. W-02393A-03-0312 was the responsibility of the Staff members listed below. Elena Zestrijan was responsible for the review and analysis of the Company's application, recommended revenue requirements, rate base and rate design. Lyndon Hammon was responsible for the engineering and technical analysis. Janie Woller was responsible for reviewing the Commission's records on the Company, determining compliance with Commission policies/rules and reviewing customer complaints filed with the Commission.



Elena Zestrijan
Public Utility Rate Analyst III



Lyndon Hammon
Utilities Engineer



Janie Woller
Public Utilities Consumer Analyst II

**EXECUTIVE SUMMARY
CHAPARRAL WATER COMPANY
DOCKET NO. W-02393A-03-0312**

Chaparral Water Company ("Company") is engaged in the business of providing utility water service exclusively to Arizona customers in Maricopa County. The Company is located about 1 mile west of Grand Avenue near Patton Road and 203rd Avenue in the Phoenix Metropolitan area, and it provides service to approximately 318 customers within a one-square-mile certificated area. The Company's existing rates were approved by this Commission in Decision No. 59260 dated August 30, 1995.

The Company's rate application requested an increase in revenues of \$50,556 or a 37.79 percent increase over adjusted test year revenues of \$133,771. The Company proposed rates will produce revenues of \$184,327, an operating income of \$32,465, for an 11.95 percent rate of return on an Original Cost Rate Base of \$271,589. The Company's requested rates would increase the typical residential bill with a median usage of 9,397 gallons by \$12.03 or 48.90 percent.

Staff is recommending a revenue level of \$156,048 for an increase in revenues of \$22,277 or 16.65 percent over adjusted test year revenues of \$133,771. Staff recommended revenues result in a 10.07 percent rate of return on an Original Cost Rate Base of \$220,826.

Staff's recommended rates would increase the typical residential bill with a median usage of 9,397 gallons from \$24.61 to \$29.84 for an increase of \$5.23 or 21.30 percent.

Staff recommends approval of its recommended rates and charges as presented on Schedule 4 of this report.

TABLE OF CONTENTS

	<u>PAGE</u>
FACT SHEET	1
<i>Rates:</i>	1
<i>Customers:</i>	2
<i>Complaints:</i>	2
<i>Notification:</i>	2
SUMMARY OF FILING	3
BACKGROUND	3
CONSUMERS SERVICES	3
ENGINEERING ANALYSIS	4
COMPLIANCE	4
RATE BASE	5
OPERATING REVENUES	5
OPERATING EXPENSES	6
RATE OF RETURN	6
REVENUE REQUIREMENTS	6
RATE DESIGN	7
STAFF RECOMMENDATIONS	7

SCHEDULES

SUMMARY OF FILING	Schedule 1
RATE BASE	Schedule 2
STATEMENT OF OPERATING INCOME	Schedule 3
RATE DESIGN	Schedule 4
TYPICAL BILL ANALYSIS	Schedule 5
LIST OF REFUNDS DUE	Schedule 6

Attachment

Engineering Report

FACT SHEET

Current rates: Decision No. 59260, dated August 30, 1995.

Type of ownership: "C" Corporation

Location: The Company is located about 1 mile west of Grand Avenue, near Patton Road and 203rd Avenue, in the Phoenix metropolitan area. The Company serves approximately 314 customers within a one square mile certificated area within Maricopa County. The water system is located in an Active Management Area ("AMA").

Rates:

Permanent rate increase application filed: May 14, 2003

Current Test Year Ended: December 31, 2002

Current Rates: Effective August 30, 1995

	<u>Current Rates</u>	<u>Company Proposed Rates</u>	<u>Staff Proposed Rates</u>
Monthly Minimum Charge Based on 5/8 X 3/4 - inch meter	\$9.50	\$15.50	\$11.90
Gallons in Minimum	1,000	0	0
Commodity Charge			
Excess of minimum, per 1,000 gallons:			
From 1,001 to 20,000 gallons	\$1.80	N/A	N/A
From 0 to 20,000 gallons	N/A	\$2.25	N/A
From 0 to 9,000 gallons	N/A	N/A	\$1.80
From 20,001 to 50,000 gallons	\$2.25	\$2.50	N/A
From 9,001 to 25,000 gallons	N/A	N/A	\$2.00
In excess of 50,000 gallons	\$2.70	\$2.75	N/A
In excess of 25,000 gallons	N/A	N/A	\$2.46
Standpipe Flat Rate per Month	\$2.50	\$4.00	\$3.25
Typical residential bill (Based on median usage of 9,397 gallons)	\$24.61	\$36.64	\$29.84

Customers:

Average number of customers in current Test Year: 318

Current Test Year customers by meter size:

5/8 X3/4 - inch 316

1-inch metered 2

Complaints:

Numbers of customers concerns since rate application filed: 1

Percentage of complaints to customer base: .3%

Notification:

Customer notification was mailed on May 16, 2003.

Summary of Filing

Based on test year results as adjusted by Utilities Division Staff ("Staff"), Chaparral Water Company ("Company") realized an operating income of \$3,189 on an Original Cost Rate Base ("OCRB") of \$220,826 for a rate of return of 1.44 percent as shown on Schedule 1.

Chaparral Water Company's proposed rates would produce Operating Revenues of \$184,327 and Operating Income of \$32,465 for an 11.95 percent rate of return on an OCRB of \$271,589. The Company's proposed rates would increase the typical residential bill with a median usage of 9,397 gallons from \$24.61 to \$36.64, for an increase of \$12.03 or 48.9 percent.

Staff's recommended rates would produce a revenue level of \$156,048 and an Operating Income of \$22,241, for a 10.07 percent rate of return on an OCRB of \$220,826. Staff's recommended rates would increase the typical residential bill with a median usage of 9,397 gallons from \$24.61 to \$29.84, for an increase of \$5.23 or 21.3 percent.

Background

On September 3, 2002, Chaparral Water Company filed an application for a permanent rate increase with the Arizona Corporation Commission ("Commission"). The application was deficient. Company used a stale Test Year (December 31, 2001). On February 18, 2003, Staff requested the Docket be administratively closed. Staff advised the Company to resubmit an application using a December 31, 2002 Test Year. On May 14, 2003, the Company submitted the instant application. On June 13, 2003, the application was deemed sufficient. The Company served approximately 318 customers in the Test Year.

Chaparral Water Company indicated that a rate increase is needed because the Company has not requested rate increases in the last nine years. In addition capital expenditures since the last rate case and increased operating expenses have not allowed the Company to earn a fair rate of return.

Consumers Services

A review of Commission's records found that the Company has a backflow/cross connection tariff on file, but no curtailment tariff. Their customer bill is in compliance with the Arizona Administrative Code R14-2-409 B.2. Four opinions in 2002 and one in 2003 were filed as a result of the rate increase application. The opinions received were against the Company proposed rate increase.

Engineering Analysis

Staff inspected the Company's plant facilities on June 26, 2003. A complete discussion of Staff Engineering's findings, recommendations, and description of the water system is provided in the attached Engineering Report.

Water testing expenses are based upon participation in the Arizona Department of Environmental Quality ("ADEQ") Monitoring Assistance Program. Annual testing expenses (part of the Repairs and Maintenance) should be adjusted to an annual expense of \$1,559 as described in Table 1 of Attachment A to the Engineering Report.

Staff recommends that the Company change its depreciation rates to specific depreciation rates for the National Association of Regulatory Utility Commissioners ("NARUC") plant equipment category as shown in Exhibit 3 of the attached report.

The Company's water system consists of three well sites. Each site consists of a well or wells, which pump into a storage tank, followed by booster pumps and a pressure tank. The Company reported 11.7 percent water loss. The Company believes that much of the water loss is attributed to the old age of the water meters. During the Staff's interview with the water system operator, it was discovered that the Company experienced some water main leaks during the test year. Because the leaks were repaired, Staff became concerned that the water loss data was no longer representative and requested newer water use data. Unfortunately, the new data was even more erratic, and Staff concluded that the water loss problem still exists.

Therefore, Staff recommends that within 180 days of a decision in this case, the Company submit a detailed plan to the Utilities Division Director demonstrating how the Company will reduce its water loss to less than 10 percent. If the Company finds that reduction of water loss to less than 10 percent is not cost-effective, then the Company shall submit a detailed cost analysis and explanation demonstrating why a water loss reduction to less than 10 percent is not cost effective.

Compliance

The Company is current on its property and sales tax payments.

Chaparral Water Company is within an Active Management Area ("AMA"), and it is subject to the Arizona Department of Water Resources ("ADWR") monitoring and reporting requirements. ADWR indicated that the Company is in compliance.

Maricopa County Environmental Services Department (MCESD) could not certify that Chaparral Water Company is delivering water which meets the standards required by the Arizona Administrative Code, Title 18 Chapter 4. The County identified operation/maintenance, monitoring, and reporting deficiencies. However, of particular concern was the lack of an approved microbiological site sampling plan. A microbiological site sampling plan is required to insure that the procedure, quantity, and location of coliform sampling will truly represent the biological quality within a water distribution system. The MCESD compliance status report states, "Total coliform samples have not been taken in distribution, as required," and "System is performing total coliform monitoring inappropriately". Consequently 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 MCESD is in compliance with its rules and is delivering water which meets the water quality standards required by the Arizona Administrative Code.

The U.S. Environmental Protection Agency ("EPA") reduced the arsenic maximum contaminant level ("MCL") in drinking water from 50 micrograms per liter (" $\mu\text{g/l}$ ") to 10. The most recent laboratory analysis indicates that the arsenic levels are 5.0 $\mu\text{g/l}$, at each well. Based on this data, the Company is in compliance with the new arsenic MCL.

Rate Base

As shown on Schedule 2, page 1, Staff recommends a rate base of \$220,826. This rate base represents a decrease of \$50,763 from the Company's proposed \$271,589 rate base, primarily due to Staff's adjustment increase to accumulated depreciation.

Accumulated Depreciation was calculated by adding depreciation expense at the approved rates for the intervening years to the approved balance in Decision No. 59260 of \$80,441. This account was also decreased for plant retirements to arrive at the Accumulated Depreciation balance of \$209,244 resulting in an increase of \$49,053 as shown in schedule 2, page 3.

Adjustment B as shown in Schedule 2, page 1, increased working capital by \$14, due to Staff's adjustment to purchase power.

Adjustment C reflects a reduction in Operating and Maintenance cash working capital component of \$1,724 due to Staff adjustments to operating expense.

Operating Revenues

Staff increased Metered Water revenues by \$2,146 to remove the Company pro-forma adjustment decrease. The Company's annualization reflects a decrease in revenues. However, that is contrary to the trend reflected by the number of customers at the beginning and the end of the test year of 299 and 318, respectively.

Operating Expenses

Staff adjustments to operating expenses resulted in a decrease of \$12,641 from \$143,223 to \$130,582, as shown on Schedule 3, page 1. The adjustments are discussed below.

Adjustment B increased Purchased Power by \$345 to remove the Company's pro-forma adjustment decrease, due to the reduction in revenues as a result of Staff's audit findings.

Adjustment C reduced Repairs and Maintenance by \$4,090. The first part of this adjustment reduced water testing expense from the Company's expense level of \$4,090 to Staff's recommended level of \$1,559 for a reduction of \$2,531.

Adjustment D, second part of adjustment C, reclassified water testing expense of \$1,559 to the appropriate expense account.

Adjustment E reduced Rent Expense by \$8,400. The office space is shared between the Company and other businesses managed/owned by Carioca Company (the parent company). The Company's pro-forma adjustment of \$12,000 reflects 1,000 square feet of office space for two part time employees. According to the Company this adjustment also includes office equipment such as postage machine, copier, fax machine and utilities. Staff's recommended Rent Expense reflects 300 square feet of office space (300 sq. ft. x \$12.00 + \$3,600). However, the Company's application reflects Office Expense of \$5,034.

Adjustment F decreased Rate Case Expense by \$2,859. The Company filed a rate increase application on September 3, 2002 which was found deficient due to the use of a stale test year. Staff only considered the expense related to the instant application of \$3,000 amortized over three years or \$1,000 annually.

Adjustment G decreased Depreciation Expense, by \$40 to reflect half year convention due to plant additions in the test year.

Adjustment H increased Income Tax expense by \$844 to reflect the appropriate expense level consistent with Staff's adjustments to revenues and expenses.

Rate of Return

Staff's proposed rates and charges result in a 10.07 percent rate of return on rate base. This rate of return would provide a positive cash flow of approximately \$40,989 and a 14.25 percent operating margin.

Revenue Requirements

The Company is requesting an increase in revenues of \$50,556 or 37.79 percent over adjusted test year revenues of \$133,771. This increase would result in a rate of return of 11.95 percent and an operating margin of 17.61 percent.

Staff recommended rates would result in operating revenues of \$156,048 for an increase of \$22,277 or 16.65 percent. Staff proposed revenues would result in a rate of return of 10.07 and an operating margin of 14.25 percent. In Staff's opinion its recommended revenues would allow the Company to meet its obligations and provide a cushion for contingencies.

Rate Design

The Company's current rate structure consists of three tiers and includes 1,000 gallons in the monthly minimum charge. The Company proposed and Staff recommended rate design consists of three tiers and no gallons included in the monthly minimum charge. The difference between the Company and Staff proposed rate designs other than the commodity rates is the tier breaks. The Company requested a first tier break at the 20,000 gallon range, the second tier break at 50,000 gallons and the third tier applies to consumption in excess of 50,000 gallons.

The residential customer class served through a 5/8 x 3/4-inch meter used 99 percent of the total water sold. The 1-inch meter consumed 1 percent of the total water sold. Consequently, Staff's proposed rate structure was designed primarily based on the 5-8 x 3/4-inch meter.

Staff's proposed rate design set the first tier break at 9,000 gallons. This tier would apply to 48 percent of the residential bills that used 15 percent of the water sold. The second tier at the 25,000 gallon range would apply to 42 percent of the bills which consumed 50 percent of the water sold. The third tier in excess of 25,000 gallons would apply to 10 percent of the bills that consumed 35 percent of the water sold in the residential customer class.

As a result of the changes recommended to the existing tier breaks, the typical bill analysis reflects a lesser percentage increase as consumption increases. However, this trend is only the result of the change in the gallons included in Staff's proposed tiered-breaks.

Staff Recommendations

Staff recommends approval of its recommended rates and charges as presented on Schedule 4 of this report.

Staff further recommends the Company adopt the depreciation rates shown on Exhibit 3 of the attached Engineering Report.

Staff further 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 MCESD is in compliance with its rules and is delivering water which meets the

water quality standards required by the Arizona Administrative Code, Title 18, Chapter 4, and has an approved microbiological site sampling plan.

Staff further recommends that the Company file an amended curtailment tariff within 30 days after the effective date of any decision and order pursuant to this application and that the amended curtailment shall contain the following provision:

If a customer believes he/she has been disconnected in error, the customer may contact the Commission's Consumer Services Section at 1-800-222-7000 to initiate an investigation.

Non-account water for the Company was calculated to be 11.7 percent on an overall basis for 2002. Staff recommends that within 180 days of a Decision in this case, the Company submit a detailed plan to the Utilities Division Director demonstrating how the Company will reduce its water loss to less than 10 percent. If the Company finds that reduction of water loss to less than 10 percent is not cost-effective, the Company shall submit a detailed cost analysis and explanation demonstrating why a water loss reduction to less than 10 percent is not cost-effective.

Staff further recommends that the proposed order in this matter shall contain the following two directives to the Company:

1. Chaparral Water Company shall notify its customers of this new curtailment tariff as part of its next regularly scheduled billing after the effective date of the curtailment tariff but no later than sixty (60) days after the effective date of the tariff; and,
2. Chaparral Water Company shall provide a copy of the curtailment tariff to any customer, upon request.

Staff further recommends that the Company file with the Commission a schedule of its approved rates and charges within 30 days after the decision in this matter is issued.

Staff further recommends that, in addition to the collection of the Company's regular rates and charges, Chaparral Water Company shall collect from its customers their proportionate share of any privilege, sales or use tax as provided for in A.A.C. R14-2-409(D).

SUMMARY OF FILING

	-- Present Rates --		-- Proposed Rates --	
	Company as Filed	Staff as Adjusted	Company as Filed	Staff as Adjusted
Revenues:				
Metered Water Revenue	\$131,016	\$133,162	\$183,718	\$155,439
Unmetered Water Revenue	0	0	0	0
Other Water Revenues	609	609	609	609
Total Operating Revenue	\$131,625	\$133,771	\$184,327	\$156,048
Operating Expenses:				
Operation and Maintenance	\$114,711	\$101,266	\$114,711	\$101,266
Depreciation	20,603	20,563	18,135	18,748
Property & Other Taxes	7,909	7,909	9,421	7,909
Income Tax	0	844	9,595	5,885
Total Operating Expense	\$143,223	\$130,582	\$151,862	\$133,807
Operating Income/(Loss)	(\$11,598)	\$3,189	\$32,465	\$22,241
Rate Base O.C.L.D.	\$271,589	\$220,826	\$271,589	\$220,826
Rate of Return - O.C.L.D.	-4.27%	1.44%	11.95%	10.07%
Times Interest Earned Ratio (Pre-Tax)	N/A	N/M	N/A	N/A
Debt Service Coverage Ratio (Pre-Tax)	N/A	N/M	N/A	N/A
Operating Margin	-8.81%	2.38%	17.61%	14.25%

RATE BASE

	----- Original Cost -----		Staff
	Company	Adjustment	
Plant in Service	\$429,063	\$0	\$429,063
Less:			
Accum. Depreciation	160,191	49,053 (A)	209,244
Net Plant	\$268,872	(\$49,053)	\$219,819
Less:			
Advances in Aid of Construction	\$0	\$0	\$0
Meter Deposits (Meter & Service Line)	9,956	0	9,956
Total Advances	\$9,956	\$0	\$9,956
Contributions Gross	\$0	\$0	\$0
Less:			
Amortization of CIAC	0	0	0
Net CIAC	\$0	\$0	\$0
Total Deductions	\$9,956	\$0	\$9,956
Plus:			
1/24 Power	\$833	\$14 (B)	\$848
1/8 Operation & Maint.	11,840	(1,724) (C)	10,116
Inventory	0	0	0
Prepayments	0	0	0
Total Additions	\$12,673	(\$1,709)	\$10,963
Rate Base	\$271,589	(\$50,762)	\$220,826

Explanation of Adjustment:

- A - See Schedule 2, page 3.
- B - Based on Staff adjustments to operating expenses.
- C - Based on Staff adjustments to operating expenses.

PLANT ADJUSTMENT

	Company Exhibit	Adjustment	Staff Adjusted
301 Organization	\$0	\$0	\$0
302 Franchises	0	0	0
303 Land & Land Rights	17,000	0	17,000
304 Structures & Improvements	73,989	0	73,989
307 Wells & Springs	36,106	0	36,106
311 Pumping Equipment	60,333	0	60,333
320 Water Treatment Equipment	749	0	749
330 Distribution Reservoirs & Standpipes	116,118	0	116,118
331 Transmission & Distribution Mains	55,010	0	55,010
333 Services	44,646	0	44,646
334 Meters & Meter Installations	13,856	0	13,856
335 Hydrants	0	0	0
336 Backflow Prevention Devices	0	0	0
339 Other Plant and Misc. Equipment	0	0	0
340 Office Furniture & Equipment	0	0	0
341 Transportation Equipment	1,979	0	1,979
343 Tools Shop & Garage Equipment	0	0	0
344 Laboratory Equipment	0	0	0
345 Power Operated Equipment	0	0	0
346 Communication Equipment	0	0	0
347 Miscellaneous Equipment	8,006	0	8,006
348 Other Tangible Plant	0	0	0
105 C.W.I.P.	1,271	0	1,271
TOTALS	\$429,063	\$0	\$429,063

ACCUMULATED DEPRECIATION ADJUSTMENT

	<u>Amount</u>
Accumulated Depreciation - Per Company	\$ 160,191
Accumulated Depreciation - Per Staff	209,244
Total Adjustment	<u>\$ 49,053</u>

Explanation of Adjustment:

A - Accumulated Depreciation balance per Decision No. 59260, dated August 30, 1995.	\$ 80,441
Plus:	
Depreciation Expense 1995	16,055
Depreciation Expense 1996	16,533
Depreciation Expense 1997	17,705
Depreciation Expense 1998	20,522
Depreciation Expense 1999	20,522
Depreciation Expense 2000	20,522
Depreciation Expense 2001	20,522
Depreciation Expense 2002	20,564
Retirements	<u>(24,142)</u>
Staff Balance as of December 31, 2000	<u><u>209,244</u></u>

STATEMENT OF OPERATING INCOME

	Company Exhibit	Staff Adjustments	Staff Adjusted
Revenues:			
461 Metered Water Revenue	\$131,016	\$2,146 (A)	\$133,162
460 Unmetered Water Revenue	0	0	0
474 Other Water Revenues	609	0	609
Total Operating Revenue	\$131,625	\$2,146	\$133,771
Operating Expenses:			
601 Salaries and Wages	\$0	\$0	\$0
610 Purchased Water	0	0	0
615 Purchased Power	19,995	345 (B)	20,340
618 Chemicals	0	0	0
620 Repairs and Maintenance	14,939	(4,090) (C)	10,849
621 Office Supplies & Expense	5,034	0	5,034
630 Outside Services	56,400	0	56,400
635 Water Testing	0	1,559 (D)	1,559
641 Rents	12,000	(8,400) (E)	3,600
650 Transportation Expenses	0	0	0
657 Insurance - General Liability	2,484	0	2,484
659 Insurance - Health and Life	0	0	0
666 Regulatory Commission Expense - Rate Case	3,859	(2,859) (F)	1,000
675 Miscellaneous Expense	0	0	0
403 Depreciation Expense	20,603	(40) (G)	20,563
408 Taxes Other Than Income	0	0	0
408.11 Property Taxes	7,909	0	7,909
409 Income Tax	0	844 (H)	844
Total Operating Expenses	\$143,223	(\$12,641)	\$130,582
OPERATING INCOME/(LOSS)	(\$11,598)	\$14,787	\$3,189
Other Income/(Expense):			
419 Interest and Dividend Income	\$0	\$0	\$0
421 Non-Utility Income	0	0	0
427 Interest Expense	0	0	0
426 Miscellaneous Non-Utility Expense	0	0	0
Total Other Income/(Expense)	\$0	\$0	\$0
NET INCOME/(LOSS)	(\$11,598)	\$14,787	\$3,189

STAFF ADJUSTMENTS

(A) -	METERED WATER REVENUE - Per Company	\$131,016	
	Per Staff	133,162	\$2,146
	To record disallowance of annualized negative revenue due to end of year customers.		
(B) -	PURCHASED POWER - Per Company	\$19,995	
	Per Staff	20,340	\$345
	To disallow company proposed proforma decrease due to annualization of customers.		
(C) -	REPAIRS AND MAINTENANCE - Per Company	\$14,939	
	Per Staff	10,849	(\$4,090)
	To reduce water testing expense by \$2,531 and to reclassify \$1,559 to Water Testing Expense.		
(D) -	WATER TESTING - Per Company	\$0	
	Per Staff	1,559	\$1,559
	To reclassify from Repairs and Maintenance Expense.		
(E) -	RENTS - Per Company	\$12,000	
	Per Staff	3,600	(\$8,400)
	To adjust to Staff recommended expense level.		

STAFF ADJUSTMENTS (Cont.)

(F) -	REGULATORY COMMISSION EXPENSE - Per Company	\$3,859	
	Per Staff	1,000	<u>(\$2,859)</u>

To record Test Year 2002 Regulatory Commission Expense in the amount of \$3,000 amortized over three years.

(G) -	DEPRECIATION - Per Company	\$20,603	
	Per Staff	20,563	<u>(\$40)</u>

To adjust depreciation expense to Staff's calculation.

Pro Forma Annual Depreciation Expense:

Plant in Service	\$429,063
Less: Non Depreciable Plant	18,271
Fully Depreciated Plant	0
Depreciable Plant	<u>\$410,792</u>
Times: Staff Proposed Depreciation Rate	5.00%
Credit to Accumulated Depreciation	<u>\$20,563</u>
Less: Amort. of CIAC* @ 5.00%	0
Pro Forma Annual Depreciation Expense	<u>\$20,563</u>

(H)	INCOME TAX - Per Company	0	
	Per Staff	844	<u>\$844</u>

To record Staff's allocation of Corporate Income Tax Expense.

RATE DESIGN

Monthly Usage Charge	Present	-Proposed Rates-	
	Rates	Company	Staff
5/8" x 3/4" Meter	\$ 9.50	\$ 15.50	\$ 12.85
3/4" Meter	14.00	23.25	19.28
1" Meter	20.00	38.75	30.70
1 1/2" Meter	40.00	77.50	64.25
2" Meter	60.00	124.00	102.80
3" Meter	100.00	248.00	192.75
4" Meter	160.00	387.50	321.25
6" Meter	300.00	775.00	642.50
Gallons Included in Minimum	1,000	0	0
Excess of Minimum - per 1,000 Gallons (1001-20,000 Gallons)	\$ 1.80	N/A	N/A
Excess of Minimum - per 1,000 Gallons (0-20,000 Gallons)	N/A	\$ 2.25	N/A
Excess of Minimum - per 1,000 Gallons (0-9,000 Gallons)	N/A	N/A	\$ 1.80
Excess of Minimum - per 1,000 Gallons (20,001-50,000 Gallons)	2.25	2.50	N/A
Excess of Minimum - per 1,000 Gallons (9,001-25,000 Gallons)	N/A	N/A	2.00
Excess of Minimum - per 1,000 Gallons (Over 50,000 Gallons)	2.70	2.75	N/A
Excess of Minimum - per 1,000 Gallons (Over 25,000 Gallons)	N/A	N/A	2.46
Standpipe Flat Rate per Month	2.50	4.00	2.50
Service Line and Meter Installation Charges			
5/8" x 3/4" Meter	\$ 310.00	\$ 500.00	\$500.00
3/4" Meter	350.00	575.00	575.00
1" Meter	400.00	660.00	660.00
1 1/2" Meter	610.00	900.00	900.00
2" Meter (compound)	1,025.00	1,525.00	1,525.00
3" Meter (compound)	1,405.00	2,165.00	2,165.00
4" Meter (compound)	2,240.00	3,360.00	3,360.00
6" Meter (turbo)	4,345.00	6,035.00	6,035.00
Service Charges			
Establishment	\$30.00	\$30.00	\$30.00
Establishment (After Hours)	45.00	45.00	45.00
Reconnection (Delinquent)	30.00	30.00	30.00
Meter Test (If Correct)	25.00	25.00	25.00
Deposit	*	*	*
Deposit Interest	6.00%	3.00%	*
Re-Establishment (Within 12 Months)	**	**	**
NSF Check	15.00	25.00	15.00
Deferred Payment	1.50%	1.50%	1.50%
Meter Re-Read (If Correct)	10.00	10.00	10.00
Late Payment Penalty (per month)	N/A	1.5%	1.5%
Main Extension	Cost	Cost	Cost
Monthly Service Charge for Fire Sprinkler			
4" or Smaller	\$0.00	\$0.00	***
6"	0.00	0.00	***
8"	0.00	0.00	***
10"	0.00	0.00	***
Larger than 10"	0.00	0.00	***

* Per Commission Rules (R14-2-403.B)

** Months off system times the minimum (R14-2-403.D)

*** 1.00% of Monthly Minimum for a Comparable Sized Meter Connection, but no less than \$5.00 per month. The Service Charge for Fire Sprinklers is only applicable for service lines separate and distinct from the primary water service line.

TYPICAL BILL ANALYSIS
General Service 1 - 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	18,000	\$50.60	\$79.25	\$28.65	56.6%
Median Usage	16,000	\$47.00	\$74.75	\$27.75	59.0%
<u>Staff Proposed</u>					
Average Usage	18,000	\$50.60	\$64.90	\$14.30	28.3%
Median Usage	16,000	\$47.00	\$60.90	\$13.90	29.6%

Present & Proposed Rates (Without Taxes)
General Service 1 - 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	\$20.00	\$38.75	93.8%	\$30.70	53.5%
1,000	20.00	41.00	105.0%	32.50	62.5%
2,000	21.80	43.25	98.4%	34.30	57.3%
3,000	23.60	45.50	92.8%	36.10	53.0%
4,000	25.40	47.75	88.0%	37.90	49.2%
5,000	27.20	50.00	83.8%	39.70	46.0%
6,000	29.00	52.25	80.2%	41.50	43.1%
7,000	30.80	54.50	76.9%	43.30	40.6%
8,000	32.60	56.75	74.1%	45.10	38.3%
9,000	34.40	59.00	71.5%	46.90	36.3%
10,000	36.20	61.25	69.2%	48.90	35.1%
15,000	45.20	72.50	60.4%	58.90	30.3%
20,000	54.20	83.75	54.5%	68.90	27.1%
25,000	65.45	96.25	47.1%	78.90	20.6%
50,000	121.70	158.75	30.4%	140.40	15.4%
75,000	189.20	227.50	20.2%	201.90	6.7%
100,000	256.70	296.25	15.4%	263.40	2.6%
125,000	324.20	365.00	12.6%	324.90	0.2%
150,000	391.70	433.75	10.7%	386.40	-1.4%
175,000	459.20	502.50	9.4%	447.90	-2.5%
200,000	526.70	571.25	8.5%	509.40	-3.3%

TYPICAL BILL ANALYSIS

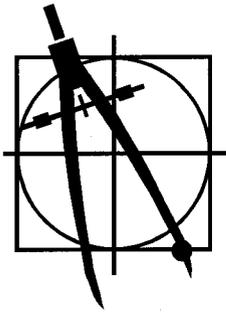
General Service 5/8 X 3/4 - Inch Meter

Average Number of Customers: 316

<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	13,967	\$32.84	\$46.93	\$14.09	42.9%
Median Usage	9,397	\$24.61	\$36.64	\$12.03	48.9%
<u>Staff Proposed</u>					
Average Usage	13,967	\$32.84	\$38.98	\$6.14	18.7%
Median Usage	9,397	\$24.61	\$29.84	\$5.23	21.3%

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	\$9.50	\$15.50	63.2%	\$12.85	35.3%
1,000	9.50	17.75	86.8%	14.65	54.2%
2,000	11.30	20.00	77.0%	16.45	45.6%
3,000	13.10	22.25	69.8%	18.25	39.3%
4,000	14.90	24.50	64.4%	20.05	34.6%
5,000	16.70	26.75	60.2%	21.85	30.8%
6,000	18.50	29.00	56.8%	23.65	27.8%
7,000	20.30	31.25	53.9%	25.45	25.4%
8,000	22.10	33.50	51.6%	27.25	23.3%
9,000	23.90	35.75	49.6%	29.05	21.5%
10,000	25.70	38.00	47.9%	31.05	20.8%
15,000	34.70	49.25	41.9%	41.05	18.3%
20,000	43.70	60.50	38.4%	51.05	16.8%
25,000	54.95	73.00	32.8%	61.05	11.1%
50,000	111.20	135.50	21.9%	122.55	10.2%
75,000	178.70	204.25	14.3%	184.05	3.0%
100,000	246.20	273.00	10.9%	245.55	-0.3%
125,000	313.70	341.75	8.9%	307.05	-2.1%
150,000	381.20	410.50	7.7%	368.55	-3.3%
175,000	448.70	479.25	6.8%	430.05	-4.2%
200,000	516.20	548.00	6.2%	491.55	-4.8%



**Engineering Report
For
Chaparral
Water Company**

**Docket No. W-02393A-03-0312
(Rates)**

RECOMMENDATIONS

- I. Maricopa County Environmental Services Department (MCESD) could not certify that Chaparral Water Company is delivering water which meets the standards required by the Arizona Administrative Code, Title 18 Chapter 4. (Arizona's Drinking Water Rules). (See §D of this report for discussion and details about the compliance deficiencies.)

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 Maricopa County Environmental Services Department that the Chaparral Water Company is delivering water which meets the water quality standards required by the Arizona Administrative Code, Title 18, Chapter 4, and has an approved microbiological site sampling plan.

- II. Non-account water for the Company was calculated to be 11.7% on an overall basis for 2002. Engineering Staff recommends that within 180 days of a Decision in this case, the Company submit a detailed plan to the Utilities Division Director demonstrating how the Company will reduce its water loss to less than 10%. If the Company finds that reduction of water loss to less than 10% is not cost-effective, the Company shall submit a detailed cost analysis and explanation demonstrating why a water loss reduction to less than 10% is not cost effective.
- III. Staff recommends that the Company file an amended curtailment tariff within 30 days after the effective date of any decision and order pursuant to this application and that amended curtailment shall contain the following provision:

“If a customer believes he/she has been disconnected in error, the customer may contact the Commission’s Consumer Services Section at 1-800-222-7000 to initiate an investigation.

Staff further recommends that the proposed order in this matter shall contain the following two directives to the Company:

1. Chaparral Water Company shall notify its customers of this new curtailment tariff as part of its next regularly scheduled billing after the effective of the curtailment tariff but no later than sixty (60) days after the effective date of the tariff, and
 2. Chaparral Water Company shall provide a copy of the curtailment tariff to any customer, upon request.
- IV. Staff recommends that Chaparral Water Company change its depreciation rate from an overall composite rate of 5.0% to specific depreciation rates by NARUC category. (See §J and Exhibit 3 for a discussion and a tabulation of the recommended rates.)

TABLE OF CONTENTS

A. LOCATION OF COMPANY1

B. DESCRIPTION OF WATER SYSTEM.....1

C. ARSENIC2

D. DEQ COMPLIANCE2

E. ACC COMPLIANCE3

F. DWR COMPLIANCE3

G. WATER TESTING EXPENSE3

H. WATER USE.....4

I. GROWTH.....5

J. DEPRECIATION RATES6

K. CURTAILMENT TARIFF6

EXHIBITS

CERTIFICATED AREA AND LOCATION OF COMPANYEXHIBIT 1

PROCESS SCHEMATIC EXHIBIT 2 A, & B

DEPRECIATION RATESEXHIBIT 3

A. LOCATION OF COMPANY

Chaparral Water Company (herein also "Company" or "Chaparral"), consists of four wells at three separate well sites. Chaparral is located about 1 mile west of Grand Ave, near Patton Road and 203rd Ave, in the Phoenix metropolitan area. Chaparral serves approximately 312 customers within a one square mile certificated area. Exhibit 1 describes the certificated area of the water company within Maricopa County.

B. DESCRIPTION OF THE WATER SYSTEM

The plant facilities were visited on June 26, 2003, by Lyndon Hammon, and Elena Zestrijan in the accompaniment of Mr. Robert Gonzales, the on-site operator of the water system.

The facilities follow typical configurations found in small water systems, Each site consists of a well or wells, which pump into a storage tank, followed by booster pumps and a pressure tank.

The water systems have adequate storage and well production. Exhibits 2A and 2 B provide process schematics for the water system.

Well Data & Plant Summary

	Well Site #1	Well Site #2	Well Site #3	
ADWR ID No.	55-619217	55-619218	55-619219	55-558536
Casing Size	8 inch	8 inch	8 inch	12 inch
Casing Depth	600 ft	825	557 feet	720 feet
Pump Type	Submersible	Submersible	Submersible	Submersible
Pump Size	15 Hp	15 Hp	5 Hp,	25 Hp
Pump Yield	90 gal/min	90 gal/min	50 gpm	140 gal/min
Chlorinator	yes	yes	yes	
Storage	37,000 gal 36,000 gal 22,000 gal	10,000 gal 10,000 gal	165,000 gallons	
Booster Pumps	Two 10 Hp, parallel	One 7.5 Hp One 10 Hp	Two 10 Hp, parallel	
Pressure Tanks	5,000 gal	2,000 gal (old) 1,500 gal (new)	10,000 gallons	
Distribution Mains	Material		Quantity	
4 Inch	PVC		1,800 lineal ft	
6 Inch	PVC		48,000 lineal ft	
Meters	5/8 x 3/4 inch 1 inch		310 (in test year) 2	

C. ARSENIC

The U.S. Environmental Protection Agency (EPA) has reduced the arsenic maximum contaminant level (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 analyses indicate that the arsenic levels are 5.0 $\mu\text{g/l}$ at each well. Based on this data, the Company is in compliance with the new arsenic MCL.

D. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY COMPLIANCE (DEQ)

Maricopa County Environmental Services Department (MCESD) could not certify that Chaparral Water Company is delivering water which meets the standards required by the Arizona Administrative Code, Title 18 Chapter 4. The County identified operation/maintenance, monitoring, and reporting deficiencies. However, of particular concern was the lack of an approved Microbiological Site Sampling Plan. A microbiological site sampling plan is required by State rule and is intended to insure that the procedure, quantity, and location of coliform sampling will truly represent the biological quality within a water distribution system. The compliance status reports state, "Total coliform samples have not been taken in distribution, as required.", and "System is performing total coliform monitoring inappropriately." Chaparral Water Company is not far from Rose Valley Water Company, which may be implicated in the infection from the *Naegleria fowleri* amoeba. Effective chlorination and monitoring for chlorine residuals and bacteria within the distribution system should eliminate significant risks from the *N. fowleri* amoeba and other pathogens. Normally when water quality problems surface during a rate case, Staff recommends that the Company correct the deficiencies and obtain a statement from the environmental agency that the water company is meeting water quality standards. In this case Staff will also recommend that the Company submit evidence of an approved microbiological site sampling plan before the new rates become effective.

In summary, 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 Maricopa County Environmental Services Department that the Chaparral Water Company is delivering water which meets the water quality standards required by the Arizona Administrative Code, Title 18, Chapter 4, and has an approved microbiological site sampling plan.

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

Chaparral Water Company is within the Phoenix Active Management Area. Since the water company supplies less than 250 acre-feet per year for non-irrigation use, it is considered a "small provider" and is not subject to the gallons per capita per day (GPCD) limit and conservation rules, and is only required to monitor and report water use. DWR indicated that the Chaparral Water Company is in compliance with its monitoring and reporting requirements.

G. WATER TESTING EXPENSE

On December 8, 1998, DEQ adopted rules which provide for a monitoring assistance program (MAP). The MAP program was fully implemented in 1999. On October 16, 2001, rule amendments were promulgated which changed the fee structure and some sampling protocol. Starting January 1, 2002, water companies began paying a fixed \$250 per year fee, plus an additional fee of \$2.57 per service connection, regardless of meter size for participation in the MAP program. Participation in the MAP program is mandatory for water systems which serve less than 10,000 persons, (approximately 3,300 service connections), and Chaparral is subject to the MAP program.

Water testing costs were calculated, based on the following assumptions:

- MAP will do baseline testing on all parameters except copper, lead, nitrates, and coliform bacteria.
- DEQ testing is performed in 3 year compliance cycles. Therefore, monitoring costs are estimated for a 3 year compliance period and then presented as a *pro forma* expense on an annualized basis.
- Expenses are included for a complete inorganic analyses at each well. This will provide important aesthetic and water quality information for the Company and the consumer (i.e., hardness, salinity, iron, manganese, alkalinity).
- All monitoring expenses are based on Staff's best knowledge of lab costs and methodology and one point of entry for each water system.
- The estimated water testing expenses represent a minimum cost based on no "hits", and assumes the Company has qualified for reduced lead and copper sampling. If any constituents were found, then the testing costs would dramatically increase.

Water testing expenses should be adjusted to the annual expense amount shown in the table below.

Water Testing Cost

Monitoring – 2 wells (Tests per 3 years, unless noted.)	Cost per test	No. of tests per 3 years	Total 3 year cost	Annual Cost
Bacteriological – monthly	\$ 20	108	2160	0 (a)
Inorganics (& secondary)	\$240	4	960	320
Nitrates – annual	\$ 25	12	300	100
Lead & Copper – annual	\$ 25	10	250	83
MAP fees (based on 312 services at end of TY)				\$1056
				\$
Total				\$1,559

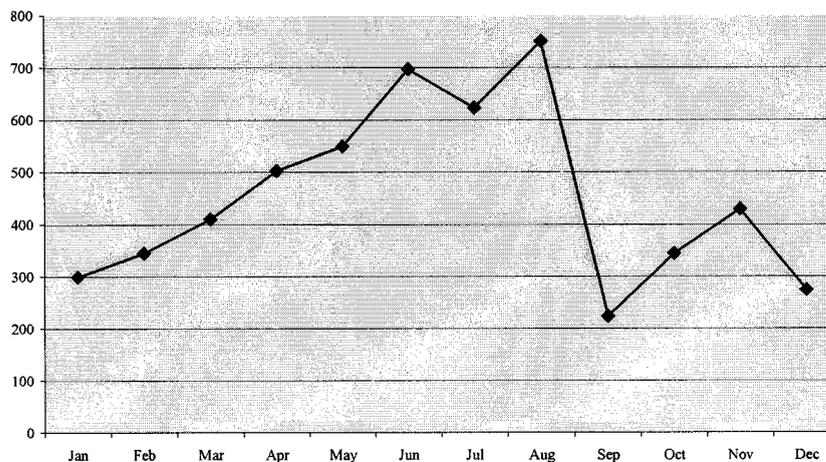
(a) bacteriological testing is billed by the contract certified operator and is included in the expenses for professional and outside services.

H. WATER USE

Water Sold

Based on the information provided by the Company, water use for the year 2002 is presented below. For Chaparral Water Company, the high monthly domestic water use was 750 gal/day-service in August, and the low monthly domestic water use was 223 gal/day-service in April. The average annual use was 454 gal/day-service. Monthly water use during the test year is shown in the figure below:

Chaparral Water Company
 Water Use (gal/day-service)



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. Non-account water for the Company was calculated to be 11.7% on an overall basis for 2002.

During the interview with the water system operator, it was discovered that the Company experienced some water main leaks during the test year. Because the leaks were repaired, Staff became concerned that the water loss data was no longer representative and requested newer water use data. Unfortunately, the new data was even more erratic, and Staff concluded that the water loss problem still exists.

Therefore, Staff recommends that within 180 days of a Decision in this case, the Company submit a detailed plan to the Utilities Division Director demonstrating how the Company will reduce its water loss to less than 10%. If the Company finds that reduction of water loss to less than 10% is not cost-effective, the Company shall submit a detailed cost analysis and explanation demonstrating why a water loss reduction to less than 10% is not cost effective. The analysis might consider the following:

- A water audit which identifies, measures, and verifies sources, users and losses. For example, the estimation of flushing or construction amounts may bring some system losses within an acceptable range. (Such losses are really not lost water, but "non-metered, non-revenue" water.)
- In this case, significant losses might also be found in a malfunctioning well meter(s) or the losses could be the result of poor co-ordination and timing between the reading of the well meters and the customer meters.
- The cost to implement or improve a meter testing and replacement program.
- The cost (including personnel and equipment) to identify leaks, and the cost to repair or replace mains after the leaks are found.

I. GROWTH

Chaparral Water Company has historically averaged growth at about 3 service connections per year. There is no reason to expect a dramatic change and this rate would be a reasonable prediction for the Company's growth.

J. DEPRECIATION RATES

In recent orders, the Commission has been shifting away from the use of composite rates in favor of individual depreciation rates by NARUC category. (NARUC is an acronym for National Association of Regulatory Utility Commissioners.)

Staff has developed typical and customary depreciation rates within a range of anticipated equipment life. These rates are presented in Exhibit 3, and were used to re-calculate the annual depreciation expense for the Company. It is recommended that the Company use depreciation rates by individual NARUC category, as delineated in Exhibit 3.

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. Chaparral Water Company does not have a curtailment tariff, but has wisely chosen this rate application process to prepare and file such a tariff. The proposed curtailment tariff closely follows recommended language and conditions, with a minor exception, which involves customer notification of the right for a review by the Commission's Consumer Services Section, of the Company's disconnect action. Therefore, Staff recommends that the Company file an amended curtailment tariff within 30 days after the effective date of any decision and order pursuant to this application and that amended curtailment shall contain the following provision:

"If a customer believes he/she has been disconnected in error, the customer may contact the Commission's Consumer Services Section at 1-800-222-7000 to initiate an investigation.

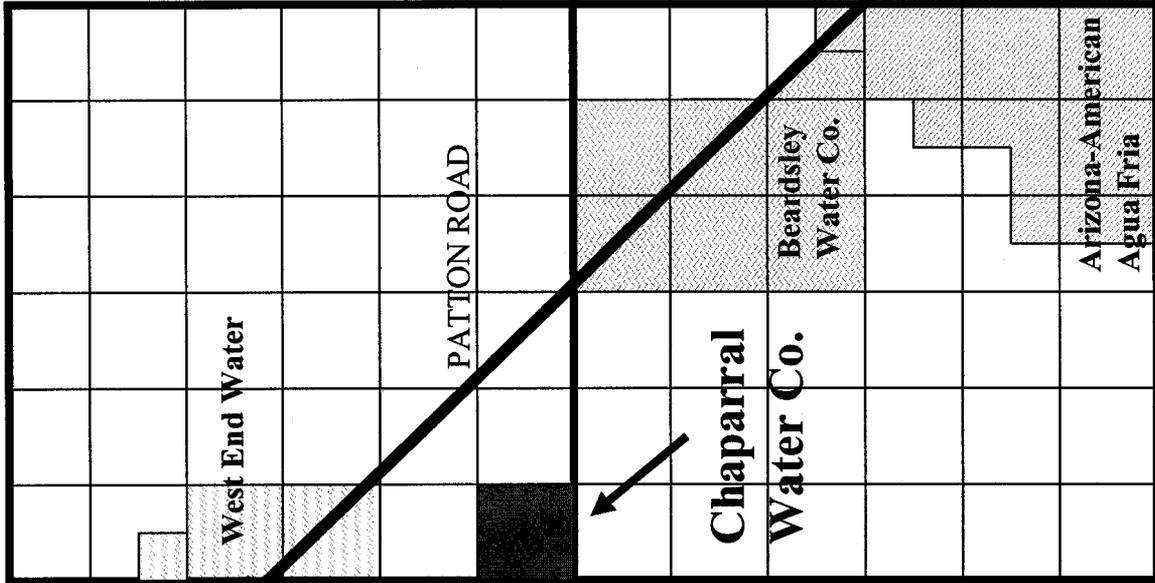
Staff also recommends that the proposed order in this matter shall contain the following two directives to the Company:

1. Chaparral Water Company shall notify its customers of this new curtailment tariff as part of its next regularly scheduled billing after the effective of the curtailment tariff but no later than sixty (60) days after the effective date of the tariff, and
2. Chaparral Water Company shall provide a copy of the curtailment tariff to any customer, upon request.

LOCATION & CERTIFICATED AREA OF CHAPARRAL WATER COMPANY

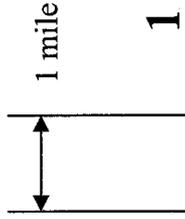
2 West

5 North



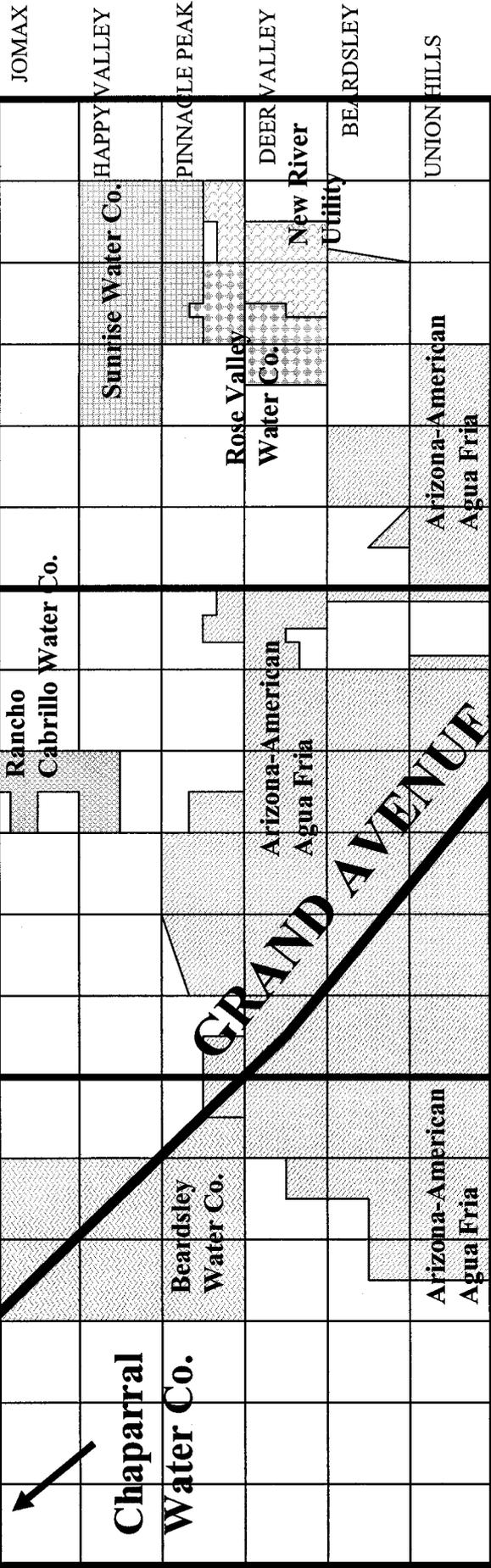
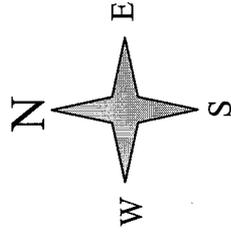
LITCHFIELD ROAD

1 West



1 East

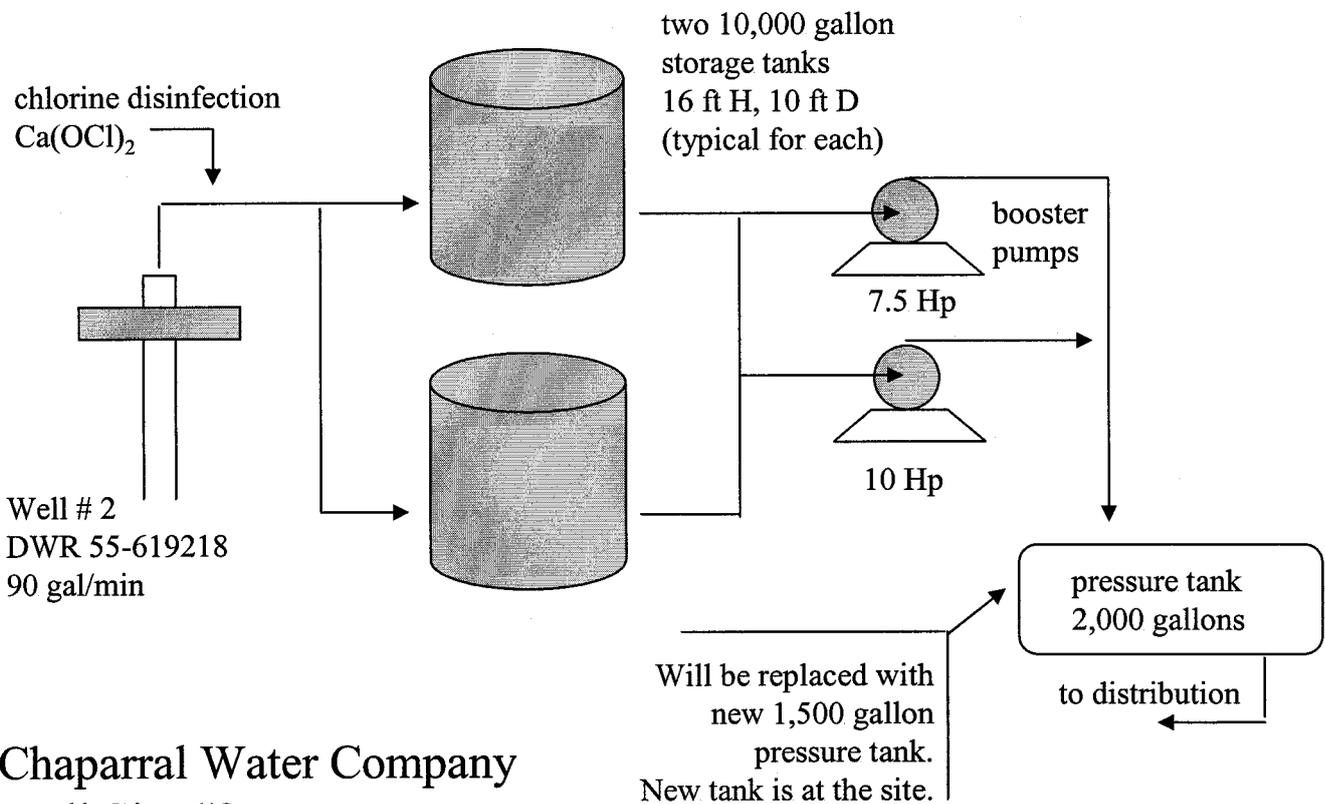
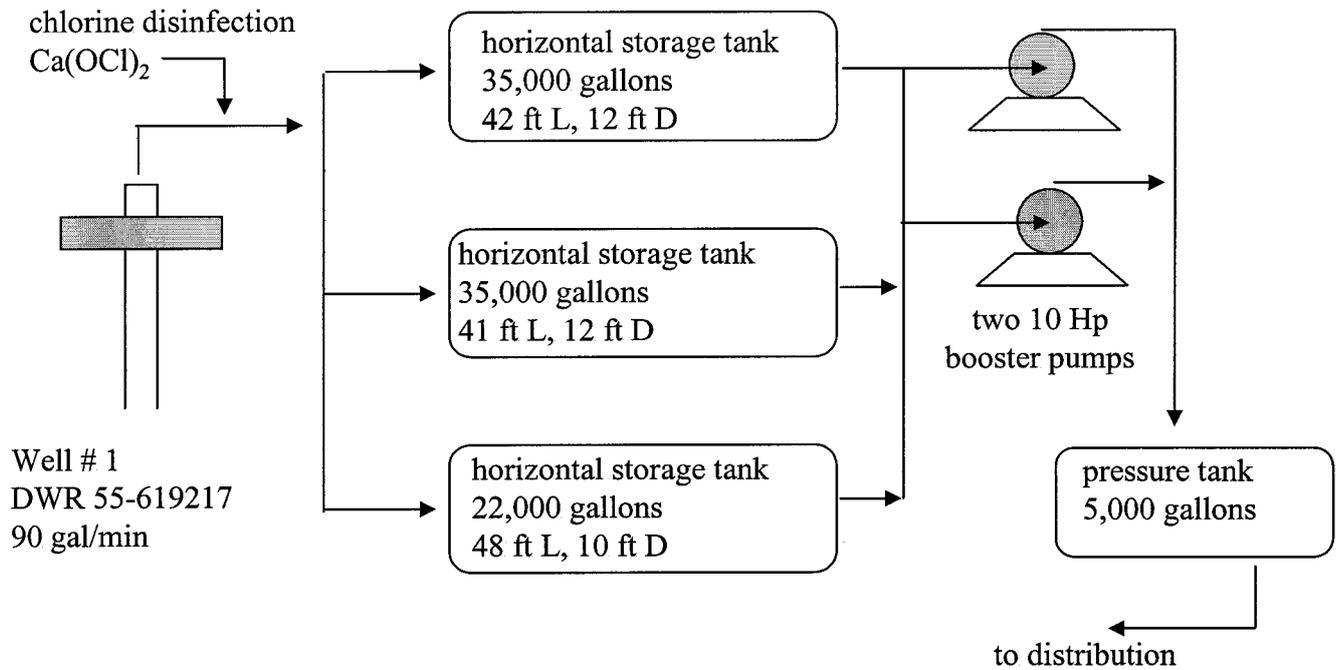
91 ST AVENUE



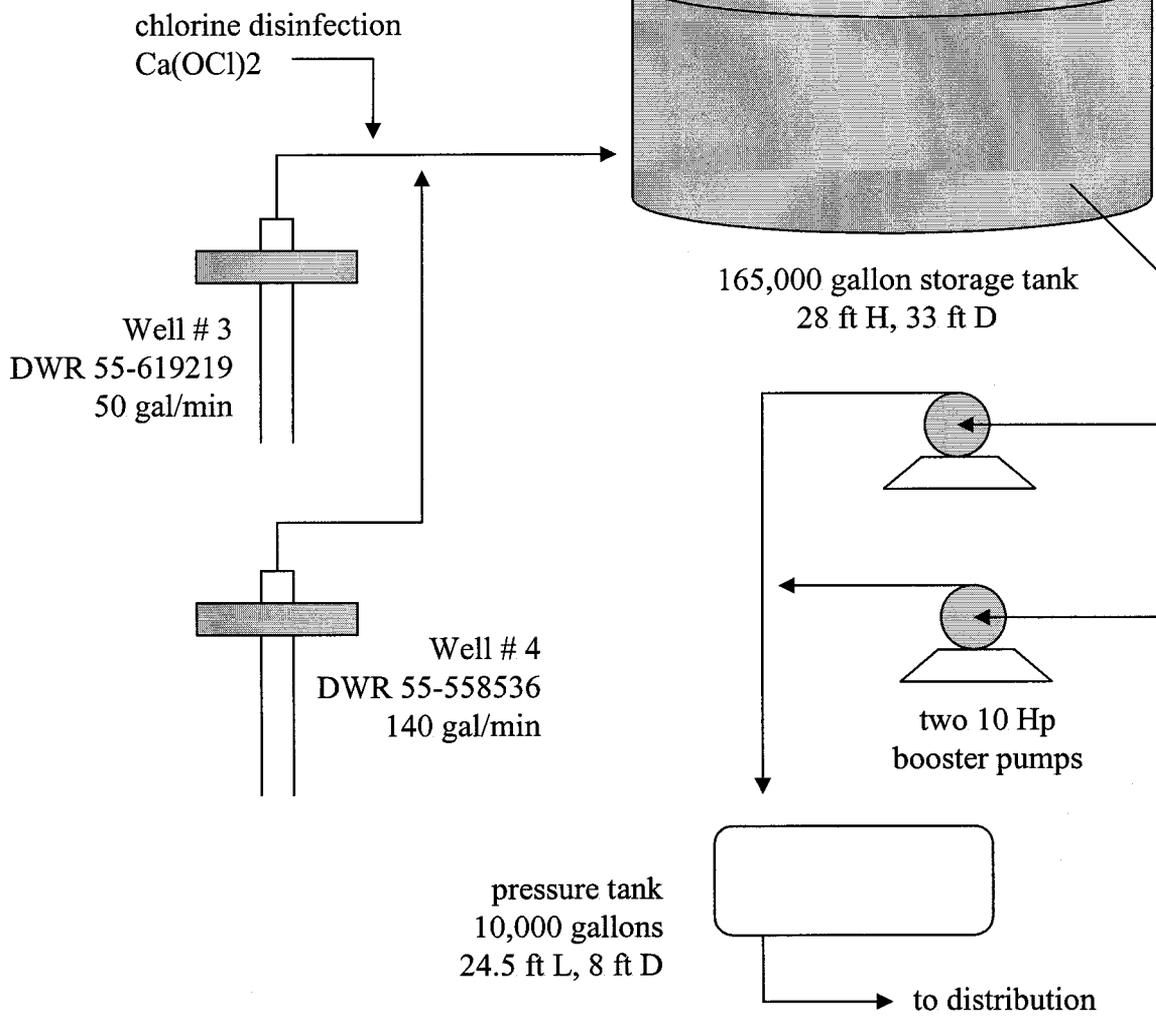
BELL ROAD

4 North

Chaparral Water Company Well Site #1



**Chaparral Water Company
Well Site #2**



Chaparral Water Company
Well Site #3

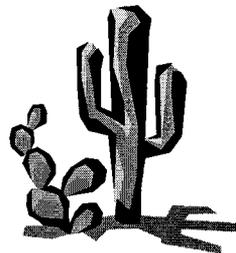


EXHIBIT 3
TYPICAL DEPRECIATION RATES FOR WATER COMPANIES

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.