

ORIGINAL



0000065147

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

BEFORE THE ARIZONA CORPORATION COMMISSION

32D

COMMISSIONERS

- JEFF HATCH-MILLER, Chairman
- WILLIAM A. MUNDELL
- MIKE GLEASON
- KRISTIN K. MAYES
- GARY PIERCE

IN THE MATTER OF THE APPLICATION OF
AVRA WATER CO-OP, INC. FOR A RATE
INCREASE.

DOCKET NO. W-02126A-06-0234

NOTICE OF FILING DIRECT TESTIMONY

Staff of the Arizona Corporation Commission hereby files the Direct Testimony of Charles R. Myhlhousen and Dorothy Hains, in the above-referenced matter.

RESPECTFULLY SUBMITTED this 3rd day of January, 2007.



 Kevin O. Torrey
 Attorney, Legal Division
 Arizona Corporation Commission
 1200 West Washington Street
 Phoenix, Arizona 85007
 (602) 542-6031

Original and thirteen (13) copies
of the foregoing were filed this
3rd day of January 2007 with:

Docket Control
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

Copy of the foregoing mailed this
3rd day of January 2007 to:

Richard L. Sallquist, Esq.
Sallquist, Drummond & O'Connor, P.C.
4500 S. Lakeshore Drive, Suite 339
Tempe, AZ 85282



Arizona Corporation Commission

DOCKETED

JAN 03 2007

DOCKETED BY 

AZ CORP COMMISSION
DOCUMENT CONTROL

2007 JAN -3 P 3:01

RECEIVED

**DIRECT
TESTIMONY
OF
CHARLES R. MYHLHOUSEN
DOROTHY HAINS**

DOCKET NO. W-02126A-06-0234

**IN THE MATTER OF THE APPLICATION OF
AVRA WATER COOPERATIVE, INC. FOR A
PERMANENT RATE INCREASE**

JANUARY 3, 2007

BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER
Chairman
WILLIAM A. MUNDELL
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner
GARY PIERCE
Commissioner

IN THE MATTER OF THE APPLICATION OF)
AVRA WATER COOPERATIVE, INC. FOR A)
PERMANENT RATE INCREASE.)
_____)

DOCKET NO. W-02126A-06-0234

DIRECT
TESTIMONY
OF
CHARLES R. MYHLHOUSEN
PUBLIC UTILITIES ANALYST III
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION

JANUARY 3, 2007

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION.....	1
BACKGROUND.....	3
CONSUMER SERVICE.....	4
SUMMARY OF TESTIMONY AND RECOMMENDATIONS.....	4
RATE BASE.....	5
OPERATING INCOME.....	7
REVENUE REQUIREMENT.....	8
BASIS FOR OPERATING INCOME DETERMINATION.....	9
RATE DESIGN.....	10
RECOMMENDATIONS.....	11

SCHEDULES

Revenue Requirement.....	CRM-1
Purposely Omitted	CRM-2
Rate Base – Original Cost.....	CRM-3
Summary of Original Cost Rate Base Adjustments.....	CRM-4
Original Cost Rate Base Adjustment # 1 Land and Land Rights	CRM-5
Original Cost Rate Base Adjustment # 2 Collecting and Impounding Res.	CRM-6
Original Cost Rate Base Adjustment # 3 Wells and Springs.....	CRM-7
Original Cost Rate Base Adjustment # 4 Transmission and Distribution Mains	CRM-8
Original Cost Rate Base Adjustment # 5 Electric Pumping Equipment.....	CRM-9
Original Cost Rate Base Adjustment # 6 Accumulated Depreciation	CRM-10
Original Cost Rate Base Adjustment # 7 Contributions-In-Aid-Of-Construction.....	CRM-11

Original Cost Rate Base Adjustment #8 Cash Working Capital	CRM-12
Operating Income Test Year and Staff Recommended	CRM-13
Summary of Operating Income Adjustments –Test Year.....	CRM-14
Operating Adjustment # 1- Water Testing Expense	CRM-15
Operating Adjustment # 2- Depreciation Expense	CRM-16
Operating Adjustment # 3- Property Tax.....	CRM-17
Rate Design.....	CRM-18
Typical Bill Analysis	CRM-19

EXECUTIVE SUMMARY
AVRA WATER COOPERATIVE, INC.
DOCKET NO. W-02126A-06-0234

Avra Water Cooperative, Inc. ("AVRA" or "Co-op") is a community owned domestic water provider in Avra Valley, Pima County, Arizona. The Co-op is located west of the Tucson Mountains adjacent to the Saguaro National Park on the northwest side of the Tucson metropolitan area. The Co-op's service area of 12.48 square miles is composed of four noncontiguous but closely spaced areas, all located within unincorporated Pima County. The Co-op served approximately 2,529 customers during the test year ended August 31, 2005. The Co-op's current rates were approved in Decision No. 64008, dated September 4, 2001.

The Co-op proposes rates that would produce operating revenue of \$1,675.38 resulting in operating income of \$318,323 for a 19.00 percent operating margin. The Co-op's proposal would increase annual operating revenue by \$328,217 or 24.36 percent over adjusted test year revenues of \$1,347,170. Under the Co-op's proposed rates, the typical residential 5/8 inch meter customer consuming the median of 6,500 gallons per month would experience an \$8.45 or 24.73 percent increase in their monthly bill from \$34.15 to \$42.59.

Staff recommends rates that would produce total operating revenue of \$1,593,925 resulting in operating income of \$335,486 for a 21.05 percent operating margin. Staff's recommended revenue represents an increase of \$246,755 or 18.32 percent over test year revenue of \$1,347,170. Under Staff's recommended rates, the typical residential 5/8 inch meter customer consuming the median of 6,500 gallons per month would experience an \$8.45 or 24.73 percent increase in their monthly bill from \$34.15 to \$42.59, the same as the Co-op.

1 **INTRODUCTION**

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

3 A. My name is Charles R. Myhlhousen. I am a Public Utilities Analyst III employed by the
4 Arizona Corporation Commission ("ACC" or "Commission") in the Utilities Division
5 ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.
6

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

8 A. I am responsible for the examination and verification of financial and statistical
9 information included in utility rate applications, developing revenue requirements,
10 designing rates, preparing written reports and/or testimonies and related schedules that
11 present Staff's recommendations to the Commission. I am also responsible for testifying
12 at formal hearing on these matters.
13

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

15 A. I received a Bachelor of Sociology with an emphasis in business from Bellevue University
16 located in Bellevue, Nebraska. In the ensuing years, I have taken various accounting
17 courses. I have participated in multiple rate cases and other regulatory proceedings. I
18 attended the National Association of Regulatory Utility Commission Utilities Rate School,
19 and have attended seminars and courses in utility regulation and utility accounting.
20

21 I began employment with the Commission as a utilities regulatory analyst in October
22 2000. Prior to joining the Commission, I worked at the Internal Revenue Service as a
23 Revenue Agent for over twenty years.

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

2 A. I am presenting Staff's analysis and recommendations regarding Avra Water Co-op, Inc's.
3 ("Avra" or "Co-op") application for a permanent rate increase in the areas of rate base,
4 operating income, revenue requirement, and rate design. Staff Witness Ms. Dorothy
5 Hains is presenting Staff's engineering analysis and recommendations.

6
7 **Q. When was the application for a rate increase filed by the Co-op?**

8 A. The original application was filed on April 7, 2006, but Staff found the application
9 insufficient. The Co-op amended it and Staff found the application sufficient on July 7,
10 2006.

11
12 **Q. What is the basis of Staff's recommendations?**

13 A. Staff performed a regulatory audit of the Co-op's applications and records. The regulatory
14 audit consisted of examining and testing financial information, accounting records, and
15 other supporting documentation. Staff also verified that the accounting principles applied
16 were in accordance with the Commission adopted National Association of Regulatory
17 Utility Commissioners ("NARUC") Uniform System of Accounts ("USoA").

18
19 **Q. What test year was used by the Co-op in the filing?**

20 A. The Co-op used the twelve months ending August 31, 2005.

21
22 **Q. Did Staff accept the test year proposed by the Co-op?**

23 A. Yes. The August 31, 2005, test year selected was the most recent fiscal year available and
24 should present a fairly accurate representation of the Co-op's financial operations for the
25 determination of appropriate rates and charges.

1 **BACKGROUND**

2 **Q. Please briefly describe the Co-op background.**

3 A. The Co-op is a community-owned domestic water provider located in Avra Valley, Pima
4 County, Arizona. Avra is located west of the Tucson Mountains adjacent to the Saguaro
5 National Park on the northwest side of the Tucson metropolitan area. The Co-op service
6 area of 12.48 square miles is composed of four noncontiguous but closely spaced areas, all
7 located within unincorporated Pima County. The Co-op served approximately 2,529
8 customers during the test year ended August 31, 2005.

9
10 On April 7, 2006, the Co-op filed an application for a permanent rate increase. On July 7,
11 2006, Staff filed a letter declaring the application sufficient.

12
13 The Commission's Decision No. 64008, dated September 4, 2001 approved the Co-op's
14 current rates and charges.

15
16 **Q. What are the primary reasons stated by the Co-op for requesting a permanent rate
17 increase?**

18 A. The Co-op's rates for water utility service have not been increased since 2001. The rate
19 increase is needed to fund debt repayment the Co-op has incurred in changing the supply
20 and distribution system to comply with the new Arsenic rules. Additionally, storage is
21 lacking within the water system, which effects system reliability during peak demands or
22 in the case of a well outage. Fuel cost for the Co-op's vehicles and increase in purchased
23 power rates is also taxing the operating budget.

1 **CONSUMER SERVICE**

2 **Q. Please provide a brief history of customer complaints, customers responses to the**
3 **proposed rate increase, the Co-op's corporate standing with the Corporation**
4 **Division and government impositions.**

5 A. Staff reviewed the Commission's records from year 2003 through 2006 and found in year
6 2003, two complaints concerning billing; in year 2004, one complaint concerning new
7 service; in year 2005, one complaint concerning rates/tariffs. In year 2006, there were two
8 complaints concerning billing, three inquires concerning deposits, rates/tariffs and one
9 opinion opposing the rate case filing. All complaints and the opinions have been resolved.
10 The Co-op is in good standing with the Corporation Division. The Co-op is current on all
11 property and sales taxes.

12
13 **SUMMARY OF TESTIMONY AND RECOMMENDATIONS**

14 **Q. Please summarize the Co-op's filing.**

15 A. The Co-op proposes rates that would produce operating revenue of \$1,675,387 and
16 operating income of \$318,323 for a 19.00 percent operating margin. The Co-op's
17 proposal would increase annual operating revenues by \$328,217 or 24.36 percent over test
18 year revenues of \$1,347,170.

19
20 **Q. Please summarize Staff's recommendations.**

21 A. Staff recommends total annual operating revenue of \$1,593,925 and operating income of
22 \$335,486 for a 21.05 percent operating margin. Staff's recommended revenue represents
23 an increase of \$246,755 or 18.32 percent over test year revenue of \$1,347,170. See
24 Schedule CRM-1.

1 **RATE BASE**

2 **Q. Please review the rate base recommendations addressed in this testimony.**

3 A. The Co-op as filed, proposes a rate base of \$7,011,440. Staff recommends a rate base
4 \$2,417,645, see Schedule CRM-3. For a detailed account of Staff's recommended
5 adjustments, see Schedule CRM-4.

6
7 **Q. Please review the rate base adjustments.**

8 A. My testimony addresses the following rate base issues.

9 Adjustment No.1, Land and Land Rights – Staff's adjustment decreases land and land
10 rights by \$93,669 from \$206,695 to \$113,026. The Co-op made this proforma adjustment
11 as part of the estimated cost of post-test year plant. The post-test year plant is not
12 completed nor used or useful. The Co-op estimated date of completion is April or May of
13 year 2007 at the earliest, which is approximately twenty-one months after the end of the
14 rate case test year of August 31, 2005. See Schedule CRM-5.

15
16 Adjustment No. 2, Collecting and Impounding Reservoirs – Staff's adjustment decreases
17 collecting and impounding reservoirs in the amount of \$325,242 from \$362,191 to
18 \$36,949. The Co-op made this proforma adjustment as part of the estimated cost of post-
19 test year plant. The post-test year plant is not completed nor used or useful. The Co-op
20 estimated date of completion is April or May of year 2007 at the earliest, which is
21 approximately twenty-one months after the end of the rate case test year of August 31,
22 2005. See Schedule CRM-6.

23
24 Adjustment No. 3, Wells and Springs – Staff's adjustment decreases wells and springs in
25 the amount \$1,436,243 from \$2,855,026 to \$1,418,783. The Co-op made this proforma
26 adjustment as part of the estimated cost of post-test year plant. The post-test year plant is

1 not completed nor used or useful. The Co-op's estimated date of completion is April or
2 May of year 2007 at the earliest, which is approximately twenty-one months after the end
3 of the rate case test year of August 31, 2005. See Schedule CRM-7.

4
5 Adjustment No. 4, Transmission and Distribution Lines – Staff's adjustment decreases
6 transmission and distribution lines by \$3,290,000 from \$6,407,186 to \$3,117,186. The
7 Co-op made this proforma adjustment as part of the estimated cost of post-test year plant.
8 The post-test year plant is not completed nor used or useful. The Co-op's estimated date
9 of completion is April or May of year 2007 at the earliest, which is approximately twenty-
10 one months after the end of the rate case test year of August 31, 2005. See Schedule
11 CRM-8.

12
13 Adjustment No. 5, Electric Pumping Equipment – Staff's adjustment decreases electric
14 pumping equipment by \$306,481 from \$724,276 to \$417,795. The Co-op made this
15 proforma adjustment as part of the estimated cost of post-test year plant. The post-test
16 year plant is not completed nor used or useful. The Co-op's estimated date of completion
17 is April or May of year 2007 at the earliest, which is approximately twenty-one months
18 after the end of the rate case test year of August 31, 2005. See Schedule CRM-9.

19
20 Adjustment No. 6, Accumulated Depreciation – Staff's adjustment increases accumulated
21 depreciation by \$405,775 from \$3,062,037 to \$3,467,812. The Co-op made this proforma
22 adjustment as part of the retirement of old plant still in use which will be replaced by the
23 post-test year plant when it is completed. See Schedule B-2 page 5 of the rate case
24 application. The post-test year plant is not completed nor used or useful. The Co-op's
25 estimated date of completion is April or May of year 2007, which is the time these plant

1 items would be retired. This date is approximately twenty-one months after the end of the
2 rate case test year of August 31, 2005. See Schedule CRM-10.

3
4 Adjustment No. 7, Contributions in Aid of Construction ("CIAC") – Staff's adjustment
5 decreases CIAC in the amount of \$1,365,750 from \$2,309,080 to \$942,330. The Co-op
6 made this proforma adjustment for a grant received from Rural Development which will
7 be used to offset part of the post-test year plant cost. The post-test year plant is not
8 complete nor used or useful. The Co-op's estimated date of completion is April or May of
9 year 2007 at the earliest, which is approximately twenty-one months after the end of the
10 rate case test year of August 31, 2005. See Schedule CRM-11

11
12 Adjustment No. 8, Cash Working Capital – Staff's adjustment decreases cash working
13 capital by \$102,138 from \$102,138 to zero. Staff typically only allows cash working
14 capital allowances calculated by the formula method for small class D and E utilities. The
15 formula method always produces a positive cash working capital need. Utilities classified
16 as A, B, or C are much larger and Staff believes that the formula method does not
17 accurately reflect the related cash working capital needs. Typically Staff finds that proper
18 lead/lag studies usually produce a negative cash working capital need. Staff recommends
19 disallowance of any cash working capital allowance in this case. See Schedule CRM-12.

20
21 **OPERATING INCOME**

22 **Q. What are the results of Staff's analysis of test year revenues, expenses and operating**
23 **income/loss?**

24 A. Staff's analysis reflects unadjusted test year revenues of \$1,347,170, expenses of
25 \$1,357,063 and an operating loss of \$9,893 as shown on Schedules CRM-13 and CRM-14.
26 Staff made three adjustments to operating expenses.

1 **Q. Please review the Staff adjustments to operating expenses.**

2 A. My testimony addresses the following issues:

3 Adjustment No. 1- Water Testing – Staff’s adjustment increased this expense by \$8,821
4 from \$8,609 to \$17,430 to allow for Staff’s estimated water testing expense. See Staff’s
5 engineering testimony. See Schedule CRM-15.

6

7 Adjustment No. 2 – Depreciation Expense - Staff’s adjustment decreased this expense by
8 \$105,406 from \$328,927 to \$223,521 as shown on Schedule CRM-16. The Co-op
9 included depreciation of post-test year plant. The post-test year plant is not complete nor
10 used or useful. The Co-op’s estimated date of completion is April or May of year 2007 at
11 the earliest, which is approximately twenty-one months after the end of the rate case test
12 year of August 31, 2005.

13

14 Adjustment No. 3 – Property Tax - Staff’s adjustment decreased this expense by \$2,039
15 from \$105,356 to \$103,317 as shown on schedule CRM-17, to reflect Staff’s adjusted test
16 year and recommended revenues and using the calculation for the modified Arizona
17 Department of revenue property tax method.

18

19 **REVENUE REQUIREMENT**

20 **Q. Would you please summarize the Co-op’s proposed revenue requirement?**

21 A. The Co-op’s rate filing proposes annual revenues of \$1,675,387, an increase of \$328,217
22 or 24.36 percent over test year adjusted revenues of \$1,347,170, as shown on Schedule
23 CRM-1.

1 **Q. Would you please summarize Staff's recommended revenue requirement?**

2 A. Staff recommends annual revenue of \$1,593,925, an increase of \$246,755 or 18.32 percent
3 over test year adjusted revenues of \$1,347,170, as shown on Schedule CRM- 13.

4

5 **BASIS FOR OPERATING INCOME DETERMINATION**

6 **Q. What is the appropriate method to determine the Co-op's operating income and**
7 **revenue requirement?**

8 A. Operating income should be calculated by applying the recommended operating margin.
9 Operating margin equals operating income divided by revenue, expressed as a percentage.
10 The percentage represents the amount of each dollar of revenue that results in operating
11 income.

12

13 **Q. What is the appropriate operating margin?**

14 A. The appropriate operating margin is 21.05 percent. This will produce sufficient revenue to
15 cover operating expenses and the interest and principle on long-term debt.

16

17 **RATE DESIGN**

18 **Q Have you prepared a schedule summarizing the present, Co-op proposed, and Staff**
19 **recommended rates and service charges?**

20 A. Yes. A summary of the present, Co-op proposed, and Staff recommended rates and
21 service charges are provided on Schedule CRM-18.

22

23 **Q. Would you please summarize the current rate design?**

24 A. The present monthly minimum charges by meter sizes are as follows: 5/8 x 3/4 inch
25 \$22.90; 3/4 inch \$22.90; 1 inch \$57.25; 1 1/2 inch \$114.50; 2 inch \$183.20; 3 inch \$366.40;
26 4 inch \$572.50; 6 inch \$1,145.00. The present commodity rate has three tiers. Tier one is

1 1 gallon to 10,000 gallons at the commodity rate of \$1.73 per 1,000 gallons. Tier two is
2 10,001 gallons to 18,000 gallons at the commodity rate of \$1.87 per 1,000 gallons. Tier
3 three is all gallons of 18,001 and over at the commodity rate of \$1.94 per 1,000 gallons.

4
5 **Q. Would you please summarize the Co-op's proposed rate design?**

6 A. The Co-op's proposed monthly minimum charges by meter size are as follows: 5/8 x3/4
7 inch \$28.29; 3/4 inch \$42.44; 1 inch \$70.73; 1 1/2 inch \$141.46; 2 inch \$226.34; 3 inch
8 \$452.69; 4 inch \$707.32; 6 inch \$1,414.65. No gallons are included in the minimum
9 charge. The Co-op proposes a three-tier commodity rate, with different break over points
10 for 5/8 x 3/4 inch meters, and a three-tier commodity rate, with different break over points
11 for all other meter sizes. The first, second and third tier rates for the 5/8 x3/4 inch meter
12 are \$2.20, \$2.35 and \$2.50 per thousand gallons.

13
14 For construction, standpipe and bulk the rate is \$4.00 per 1,000 gallons with no minimum
15 monthly charge.

16
17 **Q. Would you please summarize Staff's recommended rate design?**

18 A. Staff recommends an inverted tier rate design that consists of three-tiers for the 5/8 x 3/4
19 inch meter and the 3/4 inch meter and two-tiers for all others. No gallons are included in
20 the minimum charge. Staff recommends a three-tier commodity rate, with different break
21 over points for the 5/8 x3/4 inch meter, and the 3/4 inch meter and a two-tier commodity
22 rate, with different break over points for all other meter sizes. The first, second and third
23 tier rates are \$1.94, \$3.13 and \$4.21 per thousand gallons. Efficiency in water use is
24 encouraged by producing a higher customer bill with increased consumption or use of a
25 larger meter. Construction, bulk and standpipe rate has been increased to \$4.21 per
26 thousand gallons. See schedule CRM-18. A typical bill analysis is provided for the

1 average and median use under Co-op's present, Co-op proposed, and Staff recommended
2 rates as presented on Schedule CRM-19.

3
4 **Q. What is the rate impact on a typical 5/8 x 3/4 inch meter residential customer?**

5 A. The median usage of residential 5/8 x 3/4 inch meter customers is 6,500 gallons per month.
6 The median residential 5/8 x 3/4 inch-meter customers would experience an \$8.45 or 24.73
7 percent increase in their monthly bill from \$34.15 to \$42.59 under the Company's
8 proposed rates and a \$8.45 or 24.73 percent increase in their monthly bill from \$34.15 to
9 \$42.59 under Staff's recommended rates.

10
11 Staff recommends approval of the Co-op's proposed services charges.

12
13 **RECOMMENDATIONS:**

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

15 A. Staff recommends a provision be included in the Co-op's tariff to allow for the flow-
16 through of all appropriate state and local taxes as provided for in A.A.C. Rule 14-2-
17 409(D)(5).

18
19 Staff further recommends approval of its rates and charges as shown on Schedule CRM-
20 18.

21
22 **Q. Does this conclude your direct testimony?**

23 A. Yes, it does.

ARVA WATER CO-OP, INC.
Docket No. W-02126A-06-0234
Test Year Ended August 31, 2005
DIRECT TESTIMONY OF CHARLES R. MYHLHOUSEN

TABLE OF CONTENTS

SCHEDULES

CRM-1	Revenue Requirement
CRM-2	Purposely Omitted
CRM-3	Rate Base - Original Cost
CRM-4	Summary of Original Cost Rate Base Adjustments
CRM-5	Original Cost Rate Base Adjustment #1 - Land and Land Rights
CRM-6	Original Cost Rate Base Adjustment #2 - Collecting and Impounding Res.
CRM-7	Original Cost Rate Base Adjustment #3 - Wells and Springs
CRM-8	Original Cost Rate Base Adjustment #4 - Transmission and Distribution Mains
CRM-9	Original Cost Rate Base Adjustment #5 - Electric Pumping Equipment
CRM-10	Original Cost Rate Base Adjustment #6 - Accumulated Depreciation
CRM-11	Original Cost Rate Base Adjustment #7 - Contributions-Aid -of -Construction
CRM-12	Original Cost Rate Base Adjustment #8 - Cash Working Capital
CRM-13	Operating Income - Test Year and Staff Recommended
CRM-14	Summary of Operating Income Adjustments - Test Year
CRM-15	Operating Adjustment #1 - Water Testing Expense
CRM-16	Operating Adjustment #2 - Depreciation Expense
CRM-17	Operating Adjustment #3 - Property Taxes
CRM-18	Rate Design
CRM-19	Typical Bill Analysis

REVENUE REQUIREMENT

<u>LINE NO.</u>	<u>DESCRIPTION</u>	(A) COMPANY ORIGINAL COST	(B) COMPANY FAIR VALUE	(C) STAFF ORIGINAL COST	(D) STAFF FAIR VALUE
1	Adjusted Rate Base	\$ 7,011,440	\$ 7,011,440	\$ 2,417,645	\$ 2,417,645
2	Adjusted Operating Income (Loss)	\$ (9,893)	\$ (9,893)	\$ 88,731	\$ 88,731
3	Current Rate of Return (L2 / L1)	N/A	N/A	N/A	N/A
4	Required Operating Margin	19.00%	19.00%	21.05%	21.05%
5	Required Operating Margin	\$ 318,323	\$ 318,323	\$ 335,486	\$ 335,486
6	Operating Income Deficiency (L5 - L2)	\$ 328,217	\$ 328,217	\$ 246,755	\$ 246,755
7	Gross Revenue Conversion Factor	1.0000	1.0000	1.0000	1.0000
8	Required Revenue Increase (L7 * L6)	\$ 328,217	\$ 328,217	\$ 246,755	\$ 246,755
9	Adjusted Test Year Revenue	\$ 1,347,170	\$ 1,347,170	\$ 1,347,170	\$ 1,347,170
10	Proposed Annual Revenue (L8 + L9)	\$ 1,675,387	\$ 1,675,387	\$ 1,593,925	\$ 1,593,925
11	Required Increase in Revenue (%)	24.36%	24.36%	18.32%	18.32%

References:

Column (A): Company Schedule B-1

Column (B): Company Schedule B-1

Column (C): Staff Schedules CRM-2, CRM-3, CRM-13

Column (D): Staff Schedules CRM-2, CRM-3, CRM-13

AVRA WATER CO-OP, INC.
Docket No. W-2126A-06-0234
Test Year Ended August 31, 2005

Schedule CRM-2

PURPOSELY LEFT BLANK

RATE BASE - ORIGINAL COST

LINE NO.	(A) CO-OP AS FILED	(B) STAFF ADJUSTMENTS	REF	(C) STAFF AS ADJUSTED
1	Plant in Service	\$ 13,072,425		\$ 7,620,793
2	Less: Accumulated Depreciation	3,062,037		3,467,812
3	Net Plant in Service	<u>\$ 10,010,388</u>	1,2,3,4,5 6	<u>\$ 4,152,981</u>
<u>LESS:</u>				
4	Net CIAC	2,309,080		943,330
5	Advances in Aid of Construction (AIAC)	798,549		798,549
6	Customer Deposits	45,636		45,636
<u>ADD:</u>				
7	Unamortized Finance Charges	-		-
8	Deferred Tax Assets	-		-
9	Materials & Supplies Inventories	28,755		28,755
10	Prepayments	23,423		23,423
11	Working Capital	102,138		-
12	Original Cost Rate Base	<u>\$ 7,011,440</u>		<u>\$ 2,417,645</u>
		<u>\$ (4,593,795)</u>	8	

References:

Column (A): Co-op Schedule B-1 (TAB RB~ADJ)
Column (B): Schedule CRM-4
Column (C): Column (A) + Column (B)

SUMMARY OF ORIGINAL COST RATE BASE ADJUSTMENTS

AVRA WATER CO-OP, INC.
 Docket No. W-02126A-06-0234
 Test Year Ended August 31, 2005

LINE NO.	PLANT IN SERVICE	DESCRIPTION	(A) CO-OP AS FILED	(B) ADJ.#1	(C) ADJ.#2	(D) ADJ.#3	(D) ADJ.#4	(D) ADJ.#5	(D) ADJ.#6	(D) ADJ.#7	(E) ADJ.#8	(F) STAFF ADJUSTED
1	301	Organization	\$ 8,685									\$ 8,685
2	302	Franchise Costs	-									-
3	303	Land and Land Rights	208,695	(93,669)								113,026
4	304	Structures and Improvements	208,917									208,917
5	305	Collecting and Impounding Res.	362,191		(325,242)							36,949
6	306	Lake, River and Other Intakes	-									-
7	307	Wells & Springs	-									-
8	308	Infiltration Galleries and Tunnels	2,855,026		(1,436,243)							1,418,783
9	309	Supply Mains	-									-
10	310	Power Generation Equipment	-									-
11	311	Electric Pumping Equipment	724,276				(306,481)					417,795
12	312	Water Treatment Equipment	9,335									9,335
13	320	Distribution Reservoirs & Standpipe	1,110,699									1,110,699
14	330	Transmission & Distribution Mains	6,407,186		(3,290,000)							3,117,186
15	331	Services	471,158									471,158
16	333	Meters	266,742									266,742
17	334	Hydrants	27,244									27,244
18	335	Backflow Prevention Devices	-									-
19	336	Other Plant and Miscellaneous Equipment	-									-
20	339	Office Furniture & Fixtures	151,120									151,120
21	340	Transportation Equipment	113,217									113,217
22	341	Stores Equipment	-									-
23	342	Tools and Work Equipment	108,281									108,281
24	343	Laboratory Equipment	-									-
25	344	Power Operated Equipment	-									-
26	345	Communications Equipment	41,656									41,656
27	346	Miscellaneous Equipment	-									-
28	347	Other Tangible Plant	-									-
29	348		-									-
30		Total Plant in Service	\$ 13,072,425									\$ 7,620,793
31		Less: Accumulated Depreciation	3,062,037						405,775			3,467,812
32		Net Plant in Service (L59 - L 60)	\$ 10,010,388									\$ 4,152,981
33		LESS:										
34		Net CIAC (L25 - L26)	2,309,080						(1,365,750)			943,330
35		Advances in Aid of Construction (AIAC)	798,549									798,549
36		Customer Meter Deposits	45,636									45,636
37		ADD:										
38		Unamortized Finance Charges	-									-
39		Deferred Tax Assets	-									-
40		Materials and Supplies Inventories	28,755									28,755
41		Prepayments	23,423									23,423
42		Working Capital	102,138									102,138
43		Original Cost Rate Base	\$ 7,011,440									\$ 2,417,845

ADJ.#	Reference:
1	Land and Land Rights
2	Collecting and Impounding Res.
3	Wells and Springs
4	Transmission and Distribution Mains
5	Electric Pumping Equipment
6	Accumulated Depreciation
7	Contributions in Aid of Construction
8	Cash Working Capital

#REF!

ORIGINAL COST RATE BASE ADJUSTMENT #1 - LAND AND LAND RIGHTS

<u>Line No.</u>	<u>Land and Land Rights</u>		
1	Co-op post-test year land and land rights proforma adjustment	\$	93,669
2	Staff recommended post-test year proforma		-
3	Total Staff recommended increase/(decrease) to Land & Land Rights	\$	<u>(93,669)</u>

ORIGINAL COST RATE BASE ADJUSTMENT #2 - COLLECTING AND IMPOUNDING RES.

Line Line No.	<u>Collecting and Impounding Res.</u>	
1	Co-op post-test year collecting and impounding res. proforma adjustment	\$ 325,242
2	Staff recommended post-test year proforma	<u>-</u>
3	Total Staff recommended increase/(decrease) to collecting and impounding res.	<u>\$ (325,242)</u>

ORIGINAL COST RATE BASE ADJUSTMENTS #3 - WELLS AND SPRINGS

<u>Line</u> <u>No.</u>	<u>Wells and Springs</u>		
1	Co-op post test year wells and springs proforma adjustment	\$	1,436,243
2	Staff recommended post-test year proforma		<u>-</u>
3	Total Staff recommended increase/(decrease) wells and springs	\$	<u>(1,436,243)</u>

ORIGINAL COST RATE BASE ADJUSTMENTS #4 - TRANSMISSION AND DISTRIBUTION MAINS

<u>Line No.</u>	<u>Transmission and Distribution Mains</u>		
1	Co-op post-test year transmission and distribution mains proforma adjustment	\$	3,290,000
2	Staff recommended post-test year proforma		<u>-</u>
3	Total Staff recommended increase/(decrease) to transmission and distribution mains	\$	<u>(3,290,000)</u>

ORIGINAL COST RATE BASE ADJUSTMENTS #5 - ELECTRIC PUMPING EQUIPMENT

Line No.	<u>Electric Pumping Equipment</u>		
1	Co-op post-test year electric pumping equipment proforma adjustment	\$	306,481
2	Staff recommended pos- test year proforma		<u>-</u>
3	Total Staff recommended increase/(decrease) to electric pumping equipment	\$	<u>(306,481)</u>

ORIGINAL COST RATE BASE ADJUSTMENTS #6 - ACCUMULATED DEPRECIATION

Line No.	Accumulated Depreciation	
1	Co-op post-test year accumulated depreciation proforma adjustment	\$ 405,775
2	Staff recommended post-test year proforma reversal	-
3	To reverse removal of retired plant not yet retired	
	Total Staff recommended increase/(decrease) to accumulated depreciation	<u>\$ 405,775</u>

ORIGINAL COST RATE BASE ADJUSTMENTS #7 - CONTRIBUTIONS IN AID OF CONSTRUCTION

Line No.	<u>Contributions in Aid of Construction</u>		
1	Co-op post- test year contributions in aid of construction proforma adjustment	\$	1,365,750
2	Staff recommended post-test year proforma		<u>-</u>
3	Total Staff recommended increase/(decrease) to contributions in aid of construction	\$	<u><u>(1,365,750)</u></u>

ORIGINAL COST RATE BASE ADJUSTMENTS #8 - (CASH) WORKING CAPITAL

Line No.	<u>Cash Working Capital</u>	
1	Co-op post-test year working capital proforma adjustment	\$ 102,138
2	Staff recommended post-test year proforma	<u>-</u>
3	Total Staff recommended increase/(decrease) to cash working capital	<u><u>\$(102,138)</u></u>

OPERATING INCOME STATEMENT - ADJUSTED TEST YEAR AND STAFF RECOMMENDED

LINE NO.	DESCRIPTION	[A] CO-OP ADJUSTED TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF PROPOSED CHANGES	[E] STAFF RECOMMENDED
1	REVENUES:					
2	Metered Water Sales	\$ 1,287,685	\$ -	\$ 1,287,685	\$ 246,755	\$ 1,534,440
3	Water Sales - Unmetered	-	-	-	-	-
4	Other Operating Revenue	59,485	-	59,485	-	59,485
5	Total Operating Revenues	<u>\$ 1,347,170</u>	<u>\$ -</u>	<u>\$ 1,347,170</u>	<u>\$ 246,755</u>	<u>\$ 1,593,925</u>
6	OPERATING EXPENSES:					
7	Salaries and Wages	\$ 349,611	\$ -	\$ 349,611	\$ -	\$ 349,611
8	Employee Pensions and Benefits	62,091	-	62,091	-	62,091
9	Purchased Water	-	-	-	-	-
10	Purchased Power	158,515	-	158,515	-	158,515
11	Chemicals	4,529	-	4,529	-	4,529
12	Materials and Supplies	28,442	-	28,442	-	28,442
13	Office Supplies and Expenses	-	-	-	-	-
14	Contractual Services - Engineering	5,602	-	5,602	-	5,602
15	Contractual Services - Accounting	36,017	-	36,017	-	36,017
16	Contractual Services - Legal	13,246	-	13,246	-	13,246
17	Contractual Services - Other	44,697	-	44,697	-	44,697
18	Water Testing	8,609	8,821	17,430	-	17,430
19	Rents	11,864	-	11,864	-	11,864
20	Transportation Expense	67,841	-	67,841	-	67,841
21	Insurance - Vehicle	7,050	-	7,050	-	7,050
22	Insurance - General Liability	2,169	-	2,169	-	2,169
23	Insurance - Workers Comp	3,648	-	3,648	-	3,648
24	Insurance - Other	6,017	-	6,017	-	6,017
25	Regulatory Commission Expense - Rate Case	25,000	-	25,000	-	25,000
26	Advertising Expense	2,447	-	2,447	-	2,447
27	Water Resource Conservation	2,340	-	2,340	-	2,340
28	Bad Debt Expense	3,782	-	3,782	-	3,782
29	Miscellaneous Expense	48,440	-	48,440	-	48,440
30	Depreciation Expense	328,927	(105,406)	223,521	-	223,521
31	Taxes Other than Income	30,823	-	30,823	-	30,823
32	Property Taxes	105,356	(2,039)	103,317	-	103,317
33	Income Tax	-	-	-	-	-
34	Total Operating Expenses	<u>\$ 1,357,063</u>	<u>\$ (98,624)</u>	<u>\$ 1,258,439</u>	<u>\$ -</u>	<u>\$ 1,258,439</u>
35	Operating Income (Loss)	<u>\$ (9,893)</u>	<u>\$ 98,624</u>	<u>\$ 88,731</u>	<u>\$ 246,755</u>	<u>\$ 335,486</u>

References:

Column (A): Co-op Schedule C-1 (TAB IS~ADJ)
Column (B): Schedule CRM-14
Column (C): Column (A) + Column (B)
Column (D): Schedules CRM-1 and CRM-2
Column (E): Column (C) + Column (D)

SUMMARY OF OPERATING INCOME STATEMENT ADJUSTMENTS - TEST YEAR

LINE NO.	DESCRIPTION	[A] CO-OP AS FILED	[B] Water Testing ADJ #1	[C] Depr. Expense ADJ #2	[D] Property Tax ADJ #3	[E] STAFF ADJUSTED
1 REVENUES:						
2	Metered Water Sales	\$ 1,287,685	\$ -	\$ -	\$ -	\$ 1,287,685
3	Water Sales - Unmetered	-	-	-	-	-
4	Other Operating Revenue	59,485	-	-	-	59,485
5	Total Operating Revenues	\$ 1,347,170	\$ -	\$ -	\$ -	\$ 1,347,170
6 OPERATING EXPENSES:						
7	Salaries and Wages	\$ 349,611	\$ -	\$ -	\$ -	\$ 349,611
8	Employee Pensions and Benefits	62,091	-	-	-	62,091
9	Purchased Water	-	-	-	-	-
10	Purchased Power	158,515	-	-	-	158,515
11	Chemicals	4,529	-	-	-	4,529
12	Materials and Supplies	28,442	-	-	-	28,442
13	Office Supplies and Expenses	-	-	-	-	-
14	Contractual Services - Engineering	5,602	-	-	-	5,602
15	Contractual Services - Accounting	36,017	-	-	-	36,017
16	Contractual Services - Legal	13,246	-	-	-	13,246
17	Contractual Services - Other	44,697	-	-	-	44,697
18	Water Testing	8,609	8,821	-	-	17,430
19	Rents	11,864	-	-	-	11,864
20	Transportation Expense	67,841	-	-	-	67,841
21	Insurance - Vehicle	7,050	-	-	-	7,050
22	Insurance - General Liability	2,169	-	-	-	2,169
23	Insurance - Workers Comp	3,648	-	-	-	3,648
24	Insurance - Other	6,017	-	-	-	6,017
25	Regulatory Commission Expense - Rate Case	25,000	-	-	-	25,000
26	Advertising Expense	2,447	-	-	-	2,447
27	Water Resource Conservation	2,340	-	-	-	2,340
28	Bad Debt Expense	3,782	-	-	-	3,782
29	Miscellaneous Expense	48,440	-	-	-	48,440
30	Depreciation Expense	328,927	-	(105,406)	-	223,521
31	Taxes Other than Income	30,823	-	-	-	30,823
32	Property Taxes	105,356	-	-	(2,039)	103,317
33	Income Tax	-	-	-	-	-
34	Total Operating Expenses	\$ 1,357,063	\$ 8,821	\$ (105,406)	\$ (2,039)	1,258,439
35	Operating Income (Loss)	\$ (9,893)	\$ (8,821)	\$ 105,406	\$ 2,039	\$ 88,731

ADJ #		References:
1	Water Testing Expense	CRM-15
2	Depreciation Expense	CRM-16
3	Property Taxes	CRM-17

OPERATING INCOME ADJUSTMENT #1 - WATER TESTING

<u>LINE NO.</u>	<u>Water Testing Expense</u>	
1	Amount claimed in rate application	\$ 8,609
2	Amount recommended by Staff engineer	(17,430)
3	Increase/ (decrease) to water testing expense	<u>\$ 8,821</u>

OPERATING INCOME ADJUSTMENT #2 - DEPRECIATION EXPENSE

<u>LINE NO.</u>	<u>Depreciation Expesne</u>		
1	Amount claimed in rate application	\$	328,927
2	Amount recommended by Staff		<u>223,521</u>
3	Increase/ (decrease) to depreciation expense	\$	<u><u>(105,406)</u></u>

OPERATING INCOME ADJUSTMENT #3 - PROPERTY TAXES

LINE		[A]	(B)
LINE NO.	Property Tax Calculation	CO-OP AS FILED	STAFF AS ADJUSTED
1	Staff Adjusted Test Year Revenues - Ty Adj. 8/31/2005	\$ 1,347,170	\$ 1,347,170
2	Weight Factor		2
3	Subtotal (Line 1 * Line 2)		2,694,340
4	Staff Recommended Revenue, Per Schedule CRM-1		1,593,925
5	Subtotal (Line 4 + Line 5)		4,288,265
6	Number of Years		3
7	Three Year Average (Line 5 / Line 6)		1,429,422
8	Department of Revenue Mutilplier		2
9	Revenue Base Value (Line 7 * Line 8)		2,858,843
10	Plus: 10% of CWIP		-
11	Less: Net Book Value of Licensed Vehicles		113,217
12	Full Cash Value (Line 9 + Line 10 - Line 11)		2,745,626
13	Assessment Ratio - Average of 2006 and 2007 Rate		0.2350
14	Assessment Value (Line 12 * Line 13)		645,222
15	Composite Property Tax Rate (Per Company Schedule C-2, Page 10)		15.9722000%
16	Staff Proposed Property Tax Expense (Line 14 * Line 15) (plus \$261 tax on parcels)	\$	103,317
17	Company Proposed Property Tax		105,356
18	Increase/(Decrease) to Property Tax Expense	\$	(2,039)

RATE DESIGN

Monthly Usage Charge	Present Rates	Co-op Proposed Rates	Staff Recommended Rates
5/8 x 3/4" Meter	\$ 22.90	\$ 28.29	\$ 27.00
3/4" Meter	22.90	42.44	\$ 27.00
1" Meter	57.25	70.73	67.50
1½" Meter	114.50	141.46	135.00
2" Meter	183.20	226.34	216.00
3" Meter	366.40	452.69	432.00
4" Meter	572.50	707.32	675.00
6" Meter	1,145.00	1,414.65	1,350.00
Commodity Rates			
All meter sizes			
Tier 1 zero gallon to 10,000 gallons	\$ 1.73	n/a	n/a
Tier 2 from 10,001 gallons to 18,000 gallons	1.87	n/a	n/a
Tier 3 All gallons over 18,000 gallons	1.94	n/a	n/a
5/8 x3/4 Inch Meter			
Tier 1 zero gallon to 8,500 gallons	n/a	2.20	n/a
Tier 2 8,501 gallons to 16,500 gallons	n/a	2.35	n/a
Tier 3 All gallons over 16,500 gallons	n/a	2.50	n/a
Tier 1 zero gallon to 4,000 gallons	n/a	n/a	1.94
Tier 2 4,001 gallons to 9,000 gallons	n/a	n/a	3.13
Tier 3 All gallons over 9,000 gallons	n/a	n/a	4.21
3/4 Inch Meter			
Tier 1 zero gallon to 8,500 gallons	n/a	\$ 2.20	n/a
Tier 2 8,501 gallons to 16,500 gallons	n/a	2.35	n/a
Tier 3 All gallons over 16,500 gallons	n/a	2.50	n/a
Tier 1 zero gallon to 4,000 gallons	n/a	n/a	1.94
Tier 2 4,001 gallons to 9,000 gallons	n/a	n/a	3.13
Tier 3 All gallons over 9,000 gallons	n/a	n/a	4.21
1 Inch Meter			
Tier 1 zero gallon to 20,000 gallons	n/a	\$ 2.20	n/a
Tier 2 20,001 gallons to 40,000 gallons	n/a	2.35	n/a
Tier 3 All gallons over 40,000 gallons	n/a	2.50	n/a
Tier 1 zero gallon to 15,000 gallons	n/a	n/a	3.13
Tier 2 All gallons over 15,000 gallons	n/a	n/a	4.21
1.5 Inch Meter			
Tier 1 zero gallon to 20,000 gallons	n/a	\$ 2.20	n/a
Tier 2 20,001 gallons to 40,000 gallons	n/a	2.35	n/a
Tier 3 All gallons over 40,000 gallons	n/a	2.50	n/a
Tier 1 zero gallon to 50,000 gallons	n/a	n/a	3.13
Tier 2 All gallons over 50,000 gallons	n/a	n/a	4.21
2 Inch Meter			
Tier 1 zero gallon to 20,000 gallons	n/a	\$ 2.20	n/a
Tier 2 20,001 gallons to 40,000 gallons	n/a	2.35	n/a
Tier 3 All gallons over 40,000 gallons	n/a	2.50	n/a
Tier 1 zero gallon to 80,000 gallons	n/a	n/a	3.13
Tier 2 All gallons over 80,000 gallons	n/a	n/a	4.21
3 Inch Meter			
Tier 1 zero gallon to 20,000 gallons	n/a	\$ 2.20	n/a
Tier 2 20,001 gallons to 40,000 gallons	n/a	2.35	n/a
Tier 3 All gallons over 40,000 gallons	n/a	2.50	n/a
Tier 1 zero gallon to 150,000 gallons	n/a	n/a	3.13
Tier 2 All gallons over 150,000 gallons	n/a	n/a	4.21

RATE DESIGN

4 Inch Meter			
Tier 1 zero gallon to 20,000 gallons	n/a	\$ 2.20	n/a
Tier 2 20,001 gallons to 40,000 gallons	n/a	2.35	n/a
Tier 3 All gallons over 40,000 gallons	n/a	2.50	n/a
Tier 1 zero gallon to 250,000 gallons	n/a	n/a	3.13
Tier 2 All gallons over 250,000 gallons	n/a	n/a	4.21
6 Inch Meter			
Tier 1 zero gallon to 20,000 gallons	n/a	\$ 2.20	n/a
Tier 2 20,001 gallons to 40,000 gallons	n/a	2.35	n/a
Tier 3 All gallons over 40,000 gallons	n/a	2.50	n/a
Tier 1 zero gallon to 500,000 gallons	n/a	n/a	3.13
Tier 2 All gallons over 500,000 gallons	n/a	n/a	4.21
Construction, Bulk, Standpipe per 1,000 gallons	n/a	4.00	4.21
Service Line and Meter Installation Charges			
5/8" x 3/4" Meter	\$ 410.00	\$ 410.00	\$ 410.00
3/4" Meter	455.00	455.00	455.00
1" Meter	520.00	520.00	520.00
1½" Meter	740.00	740.00	740.00
2" Turbine Meter	1,235.00	1,235.00	1,235.00
2" Compound Meter	1,800.00	1,800.00	1,800.00
3" Turbine Meter	1,705.00	1,705.00	1,705.00
3" Compound Meter	2,340.00	2,340.00	2,340.00
4" Turbine Meter	2,700.00	2,700.00	2,700.00
4" Compound Meter	3,405.00	3,405.00	3,405.00
6" Turbine Meter	5,035.00	5,035.00	5,035.00
6" Compound Meter	6,510.00	6,510.00	6,510.00
Service Charges			
Establishment	\$ 25.00	\$ 25.00	\$ 25.00
Establishment (After Hours)	50.00	50.00	50.00
Reconnection (Delinquent)	50.00	50.00	50.00
Reconnection (After Hours)	75.00	75.00	75.00
Disconnection (Requested)	n/a	20.00	20.00
Meter Test (Calibration or leak dection)	50.00	50.00	50.00
Meter Test- Remove Meter & Test (Customer requested)	35.00	35.00	35.00
Meter Test (if Correct)	-	-	-
Deposit Requirement(Residential/ Commercial)	(a)	(a)	(a)
Deposit Interest (a)	6.00%	6.00%	6.00%
Re-Establishment (Within 12 Months)	(b)	(b)	(b)
NSF Check	25.00	25.00	25.00
Defered Payment Per Month	1.50%	1.50%	1.50%
Meter Re-Read (If Correct)	-	-	-
Charge of Moving Customer Meter- Customer Request	Cost	Cost	Cost
Late Charge oer Month	(C)	(C)	(C)
Hourly Charge for After Hours Service	n/a	Cost	Cost
Water Line Crossing Paved Road	n/a	(d)	(d)
charges for Emergency Service Not Caused by Company	n/a	Cost	Cost
Line extension Agreement	Cost	Cost	Cost
Sprinkler Rate	n/a	(e)	(e)
Master Metering	(f)	(g)	(g)
Meter Installation tampering (Cutting Lock or Angle Meter Stops)	n/a	Cost	Cost
Offsite Hook-Up Fee			
Meter Size			
5/8 x 3/4 Inch	\$ 1,875	\$ 1,875	\$ 1,875
3/4 Inch	2,250	2,250	2,250
1 Inch	3,750	3,750	3,750
1.5 Inch	7,500	7,500	7,500
2 Inch	12,000	12,000	12,000
3 Inch	22,500	22,500	22,500
4 Inch	37,500	37,500	37,500
6 Inch	75,000	75,000	75,000

RATE DESIGN

- (a) Per Rule R14-2-403B
- (b) Per Rule R14-2-403D. Monthly Minimum times the number of months off the system.
- (c) Greater of \$5.00 or 1.5 % of unpaid balance
- (d) Customer Expense to be done via contractor with no responsibility to the Water Co-op
- (e) 1% of Monthly Minimum for a comparable Meter Connection, but no less than \$7.00 per month
- (f) Multiple Dwelling on one meter. All dwellings, beyond direct connection which cross property lines, will be charged 100% of monthly minimum, and/or are required to have their own meter. If meter serves more than one dwelling property, second connection and each additional connection each pay 50% of monthly minimum for 5/8 inch meter. Responsibility for payment remains with master meter customer.
- (g) Multiple Dwellings on one meter. All dwellings, beyond direct connection which cross property lines, will be charged 100% of monthly minimum, and/or are required to have their own meter. If meter serves more than one dwelling on property, second and each additional connection each pay 50% of monthly minimum for the size meter. Responsibility for payment remains with master meter customer.

Typical Bill Analysis
General Service 5/8 x 3/4-Inch Meter

Co-op Proposed	Gallons	Present Rates	Proposed Rates	Dollar Increase	Percent Increase
Average Usage	9,825	\$ 39.90	\$ 50.10	\$ 10.21	25.58%
Median Usage	6,500	34.15	42.59	\$ 8.45	24.73%
Staff Recommended					
Average Usage	9,825	\$ 39.90	\$ 53.88	\$ 13.99	35.06%
Median Usage	6,500	34.15	42.59	\$ 8.45	24.73%

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

Gallons	Co-op Present Rates	Co-op Proposed Rates	% Increase	Staff Recommended Rates	% Increase
-	\$ 22.90	\$ 28.29	23.54%	\$ 27.00	17.90%
1,000	24.63	30.49	23.79%	28.94	17.50%
2,000	26.36	32.69	24.01%	30.88	17.15%
3,000	28.09	34.89	24.21%	32.82	16.84%
4,000	29.82	37.09	24.38%	34.76	16.57%
5,000	31.55	39.29	24.53%	37.89	20.10%
6,000	33.28	41.49	24.67%	41.02	23.26%
7,000	35.01	43.69	24.79%	44.15	26.11%
8,000	36.74	45.89	24.90%	47.28	28.69%
9,000	38.47	48.17	25.20%	50.41	31.04%
9,825	39.90	50.10	25.58%	53.88	35.06%
10,000	40.20	50.52	25.66%	54.62	35.87%
11,000	42.07	52.87	25.66%	58.83	39.84%
12,000	43.94	55.22	25.66%	63.04	43.47%
13,000	45.81	57.57	25.66%	67.25	46.80%
14,000	47.68	59.92	25.66%	71.46	49.87%
15,000	49.55	62.27	25.66%	75.67	52.71%
16,000	51.42	64.62	25.66%	79.88	55.35%
17,000	53.29	67.04	25.80%	84.09	57.80%
18,000	55.16	69.54	26.07%	88.30	60.08%
19,000	57.10	72.04	26.16%	92.51	62.01%
20,000	59.04	74.54	26.25%	96.72	63.82%
25,000	68.74	87.04	26.62%	117.77	71.33%
30,000	78.44	99.54	26.90%	138.82	76.98%
35,000	88.14	112.04	27.12%	159.87	81.38%
40,000	97.84	124.54	27.29%	180.92	84.91%
45,000	107.54	137.04	27.43%	201.97	87.81%
50,000	117.24	149.54	27.55%	223.02	90.23%
75,000	165.74	212.04	27.94%	328.27	98.06%
100,000	214.24	274.54	28.15%	433.52	102.35%

BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER
Chairman
WILLIAM A. MUNDELL
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner
GARY PIERCE
Commissioner

IN THE MATTER OF THE APPLICATION OF) DOCKET NO. W-02126A-06-0234
AVRA WATER COOP, INC.)
AN ARIZONA CORPORATION, FOR A RATE)
INCREASE)

DIRECT TESTIMONY

OF

DOROTHY HAINS

UTILITIES ENGINEER

UTILITIES DIVISION

January 3, 2007

TABLE OF CONTENTS

	<u>PAGE</u>
INTRODUCTION	1
PURPOSE OF TESTIMONY	2
ENGINEERING REPORT	3
CONCLUSIONS AND RECOMMENDATIONS	3

SCHEDULES

ENGINEERING REPORT FOR AVRA WATER COMPANY	EXHIBIT-1
---	-----------

1 **INTRODUCTION**

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

3 A. My name is Dorothy Hains. My business address is 1200 West Washington Street,
4 Phoenix, Arizona 85007.

5
6 **Q. By whom and in what position are you employed?**

7 A. I am employed by the Arizona Corporation Commission ("Commission" "ACC") as a
8 Utilities Engineer - Water/Wastewater in the Utilities Division.

9
10 **Q. How long have you been employed by the Commission?**

11 A. I have been employed by the Commission since January 1998.

12
13 **Q. What are your responsibilities as a Utilities Engineer - Water/Wastewater?**

14 A. My main responsibilities are to inspect, investigate and evaluate water and wastewater
15 systems. This includes obtaining data, preparing reconstruction cost new and/or original
16 cost studies, cost of service studies and investigative reports, interpreting rules and
17 regulations, and to suggest corrective action and provide technical recommendations on
18 water and wastewater system deficiencies. I also provide written and oral testimony in
19 rate cases and other cases before the Commission.

20
21 **Q. How many companies have you analyzed for the Utilities Division?**

22 A. I have analyzed more than 90 companies covering these various responsibilities for
23 Utilities Division Staff ("Staff").

24
25 **Q. Have you previously testified before this Commission?**

26 A. Yes, I have testified before this Commission.

1 **Q. What is your educational background?**

2 A. I graduated from Alabama University in Birmingham in 1987 with a Bachelor of Science
3 degree in Civil Engineering.

4

5 **Q. Briefly describe your pertinent work experience.**

6 A. Before my employment with the Commission, I was an Environmental Engineer for the
7 Arizona Department of Environmental Quality, for ten years. Prior to that time, I was an
8 Engineering Technician with C. F. Hains, Hydrology in Northport, Alabama for
9 approximately five years.

10

11 **Q. Please state your professional membership, registrations, and licenses.**

12 A. I am a member of the American Society of Civil Engineering ("ASCE") and American
13 Water Works Association ("AWWA"). I am a registered Civil Engineer in Arizona since
14 1990.

15

16 **PURPOSE OF TESTIMONY**

17 **Q. What was your assignment in this rate proceeding?**

18 A. My assignment was to provide Staff's engineering evaluation of the Avra Water Coop,
19 Inc. ("Avra" or "Company").

20

21 **Q. What is the purpose of your testimony in this proceeding?**

22 A. To present the findings of Staff's engineering evaluation of Avra's operation. Those
23 findings are contained in the Engineering Report that I have prepared for this proceeding.
24 This report is included as Exhibit-1, in this pre-filed testimony.

1 **ENGINEERING REPORT**

2 **Q. Would you briefly describe what was involved in preparing the Engineering Report**
3 **for the water operations in this rate proceeding?**

4 A. After reviewing Avra's rate application, I physically inspected the water system to
5 evaluate its operations and to determine which plant items were or were not used and
6 useful. I contacted the Arizona Department of Environmental Quality ("ADEQ") and the
7 Arizona Department of Water Resources ("ADWR") to determine if the system was in
8 compliance with ADEQ and ADWR requirements. I obtained information from Avra
9 regarding water testing and water usage and analyzed that information. Based on this
10 data, I made my evaluations and prepared the Engineering Report attached as Exhibit 1.

11
12 **Q. Please describe the information contained in Exhibit 1.**

13 A. Exhibit 1 is the Engineering Report for Avra's operation, this Report is divided into three
14 general sections: 1) *Executive Summary*; 2) *Engineering Report Discussion*, and 3)
15 *Engineering Report Exhibits*. The *Discussions* section can be further divided into twelve
16 subsections: A) Purpose of Report; B) Location of System; C) Description of System; D)
17 Arsenic; E) Water Usage; F) Growth Projection; G) ADEQ Compliance; H) ADWR
18 Compliance; I) Arizona Corporation Commission ("ACC") Compliance; J) Water Testing
19 Expenses; K) Depreciation Rates; and L) Other Issues. These subsections provide
20 information about the Avra water systems.

21
22 **CONCLUSIONS AND RECOMMENDATIONS**

23 **Q. What are Staff's conclusions and recommendations regarding Avra's operation?**

24 A. Based upon Staff's engineering evaluation of Avra's operation, Staff concludes the
25 following about the Company:

26
27 1) The U.S. Environmental Protection Agency ("EPA") has reduced the arsenic
28 maximum contaminant level ("MCL") in drinking water from 50 micrograms per liter

1 (“µg/l”) or parts per billion (“ppb”) to 10 µg/l. The most recent lab analysis provided by
2 Avra indicates that the arsenic levels in all wells except Well #4 (DWR #55-626905) used
3 by the Company exceed the new arsenic MCL. The Company plans to blend water
4 produced by new wells to help it meet the new standard. Because the Company is not
5 certain at this time that its blending plan will provide water that meets the new standard
6 the Company also has plans to install an arsenic treatment facility. Staff concludes the
7 Company’s estimated cost of 1.2 million dollars to install an arsenic treatment facility is
8 reasonable.

9
10 2) Avra is located in the ADWR Tucson Active Management Area. ADWR reported
11 that the Company is in compliance with its monitoring and reporting requirements.

12
13 3) According to the Utilities Division Compliance Section, Avra has no delinquent
14 ACC compliance issues.

15
16 4) Avra is in compliance with ADEQ requirements and is delivering water that meets
17 water quality standards required by Arizona Administrative Code, Title 18, Chapter 4.

18
19 5) Avra has adequate storage and production capacities.

20
21 6) Non-account water for Avra was calculated to be 9.16 percent during the test year,
22 which is within acceptable limits.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21

7) During its inspection Staff found that the following items, listed in the Table below, had been completed and were in service.

Description	In service
New 500,000 gallon storage tank at the Rudasill Reservoir Site	yes
12-inch transmission connecting Rudasill Reservoir Site to the Zone C distribution system	yes
Noel Booster Station Upgrades	yes

Staff concludes that the items listed above were used and useful at the time of Staff's inspection on July 12, 2006. During its inspection Staff also observed that two wells (referred to as Well Nos. 10 and 11) had been drilled. Construction of these wells had not been completed and they were not in service

Staff recommends the following four provisions be part of any Commission order on this application:

- 1) Staff recommends approval of the depreciation rates listed in Exhibit 6.
- 2) Staff recommends approval of meter and service line installation charges as shown in Table 8.
- 3) Water testing expenses are based upon participation in the Arizona Department of Environmental Quality Monitoring Assistance Program ("MAP"). Annual testing expenses should be adjusted to \$17,430.

1 4) Staff recommends that the Company be required to file annual Off-Site Hook-Up
2 fee status reports with the Commission. Staff further recommends that the Company's
3 existing Off-Site Facilities Hook-up Fee Tariff be amended to include this Status
4 Reporting Requirement. An amended tariff shall be filed as a compliance item in this
5 Docket within 45 days of the effective date of the Commission's order.

6

7 **Q. Does this conclude your pre-filed testimony?**

8 **A. Yes, it does.**

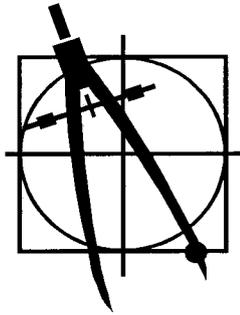
EXHIBIT 1

ENGINEERING REPORT FOR AVRA WATER COMPANY

BY DOROTHY HAINS, P. E.

JANUARY 3, 2007

ATTACHMENT 1



ENGINEERING REPORT FOR AVRA WATER COOP, INC. Docket No. W-02126A-06-0234 (Rates)

By Dorothy Hains, P. E.
January 3, 2007

EXECUTIVE SUMMARY

Recommendations:

1. Staff recommends approval of the depreciation rates listed in Exhibit 6. (See §K of report for discussion and details.)
2. Staff recommends approval of meter and service line installation charges as shown in Table 8. (See §M of report for discussion and details.)
3. Water testing expenses are based upon participation in the Arizona Department of Environmental Quality ("ADEQ") Monitoring Assistance Program ("MAP"). Annual testing expenses should be adjusted to \$17,430.
4. Staff recommends that the Company be required to file annual Off-Site Hook-Up fee status reports with the Commission. Staff further recommends that the Company's existing Off-Site Facilities Hook-up Fee Tariff be amended to include this Status Reporting Requirement. An amended tariff shall be filed as a compliance item in this Docket within 45 days of the effective date of the Commission's order. (See §K of report for discussion and details.)

Conclusions:

1. The U.S. Environmental Protection Agency ("EPA") has reduced the arsenic maximum contaminant level ("MCL") in drinking water from 50 micrograms per liter (" $\mu\text{g}/\text{l}$ ") or parts per billion ("ppb") to 10 $\mu\text{g}/\text{l}$. The most recent lab analysis provided by Avra Water Company ("Avra" or "the Company") indicates that the arsenic levels in all wells except Well #4 (DWR #55-626905) used by the Company exceed the new arsenic MCL.

The Company plans to blend water produced by new wells to help it meet the new standard. Because the Company is not certain at this time that its blending plan will

provide water that meets the new standard the Company also has plans to install an arsenic treatment facility. Staff concludes the Company's estimated cost of 1.2 million dollars to install an arsenic treatment facility is reasonable.

2. Avra is located in the Arizona Department of Water Resources ("ADWR") Tucson Active Management Area. ADWR reported that the Company is in compliance with its monitoring and reporting requirements.
3. According to the Utilities Division Compliance Section, Avra has no delinquent Arizona Corporation Commission compliance issues.
4. Avra is in compliance with ADEQ requirements and is delivering water that meets water quality standards required by Arizona Administrative Code, Title 18, Chapter 4. (See §G of report for discussion and details.)
5. Avra has adequate storage and production capacities. (See §C of report for discussion and details.)
6. Non-account water for Avra was calculated to be 9.16 percent during the test year, which is within acceptable limits. (See §E of report for discussion and details.)
7. During its inspection Staff found that the following items, listed in the Table below, had been completed and were in service.

Description	In service
New 500,000 gallon storage tank at the Rudasill Reservoir Site	yes
12-inch transmission connecting Rudasill Reservoir Site to the Zone C distribution system	yes
Noel Booster Station Upgrades	yes

Staff concludes that the items listed above were used and useful at the time of Staff's inspection on July 12, 2006. During its inspection Staff also observed that two wells (referred to as Well Nos. 10 and 11) had been drilled. Construction of these wells had not been completed and they were not in service.

TABLE OF CONTENTS

	PAGE
INTRODUCTION	1
PURPOSE OF TESTIMONY	2
ENGINEERING REPORT	3
CONCLUSIONS AND RECOMMENDATIONS	3
A. PURPOSE OF REPORT	1
B. LOCATION OF SYSTEM	1
C. DESCRIPTION OF SYSTEM	1
System Description	1
System Analysis	4
D. ARSENIC	4
E. WATER USAGE	4
Water Sold	5
Non-account Water	5
F. GROWTH PROJECTION	5
G. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (“ADEQ”) COMPLIANCE	6
H. ARIZONA DEPARTMENT OF WATER RESOURCES (“ADWR”) COMPLIANCE	6
I. ARIZONA CORPORATION COMMISSION (“ACC”) COMPLIANCE	6
J. WATER TESTING EXPENSES	6
K. DEPRECIATION RATES	7
L. OTHER ISSUES	8
I. Service Line and Meter Installation Charges	8
II. Curtailment Tariff	8
III. Water Plant Improvements and Arsenic Removal Plan	9
IV. Off-Site Hook-up Fee Tariff	10
EXHIBIT 1 Avra Certificate Service Area	11
EXHIBIT 2 LOCATION OF AVRA WATER COMPANY SERVICE AREA	12
EXHIBIT 3A SYSTEMATIC DRAWING	13

EXHIBIT 3B SYSTEMATIC DRAWING	14
EXHIBIT 3C SYSTEMATIC DRAWING	15
EXHIBIT 3D SYSTEMATIC DRAWING	16
EXHIBIT 4 WATER USAGE ON THE AVRA WATER COMPANY SERVICE AREA	17
EXHIBIT 5 ACTUAL AND PROJECTED GROWTH IN AVRA WATER COMPANY SERVICE AREA.....	18
EXHIBIT 6 WATER DEPRECIATION RATES.....	19

**ENGINEERING REPORT
FOR
AVRA WATER COOP, INC.
DOCKET NO. W-02860A-06-0234 (RATES)**

A. PURPOSE OF REPORT

This report was prepared in response to the application of Avra Water Company. ("Avra" or "Company") for a rate increase. An inspection and evaluation of the Company's water systems was conducted by Dorothy Hains, Utilities Engineer, in the accompaniment of Chris Ward, the Company's Field Manager, on July 12, 2006.

B. LOCATION OF SYSTEM

The Company is located approximately a half mile south of Marana Municipal Airport which is approximately two and a half miles north of the City of Tucson, in Pima County. Attached Exhibits 1 and 2 detail the location of the service area in relation to other Commission regulated companies in Pima County and in the immediate area. The Company serves an area approximately thirteen square miles in size that includes all or a portion of Sections 33, 34 and 35 of Township 12 South, Range 11 East and a portion of Sections 1, 3, 4, 7, 8, 9, 10, 11, 12, 16, 18, 19 and 20 of Township 13 South, Range 11 East.

C. DESCRIPTION OF SYSTEM

System Description

The Company owns and operates a water system that consists of eight well sites, four storage tank sites and one booster station. The Company serves over 2,500 metered customers; the majority of them are residential users. The Public Water System ("PWS") number for this system is PWS #10-006. Exhibits 3A, 3B, 3C and 3D are schematic drawings of the water systems. A detailed listing of the Company's water system facilities are as follows:

Table 1 Well Data

Well #-	ADWR ID No. (55-xxxxxx)	Pump (HP)	Yield (GPM)	Casing Size (in inches) & Depth (in ft)	(Meter Size inches)	Year drilled
1	626902	20	90	8" x 604'	4	1969
2	626903	25	130	8" x 635'	4	1969
4	626905	50	310	12" x 605'	4	1972
5	511639	60	280	8" x 700'	4	1985
6	623953	30	130	8" x 604'	4	1978
8	557354	60	200	12" x 800'	4	1996
9	564890	60	270	12" x 800'	4	1998
		TOTAL:	1,410			

Table 1A Plant Not Used and Useful

Well #	ADWR ID No. (55-xxxxxx)	Pump (HP)	Yield (GPM)	Casing Size (in inches) & Depth (in ft)	(Meter Size inches)	Year Abandoned	Year drilled
3	626904	N/A	N/A	8" x 504'	N/A	1998	1997
7	539973	20	25	12" x 613'	N/A	2002	1993
		TOTAL:	25				

Table 2 Storage Tanks

Capacity (Gallons)	Quantity	Location
28,000	1	Well Site #4
50,000	1	Picture Rocks Reservoir Site
500,000	1	Rudasill Reservoir Site
500,000	1	Van Ark Reservoir Site
500,000	1	Noel Reservoir Site
Total: 1,578,000 gallons		

Table 3 Distribution Mains

Diameter (inches)	Material	Length (feet)
2	polyvinyl chloride ("PVC")	10,800
3	PVC	11,050
4	PVC	44,605
6	PVC	276,213
8	PVC	30,923
12	PVC	15,470

Table 4 Meters

Size (inches)	Quantity
5/8 x 3/4	2,775
3/4	5
1	9
1 1/2	2
2	4
4 (Comp)	1
Total	2,795

System Analysis

The system has adequate production and storage capacity.

D. ARSENIC

The U.S. Environmental Protection Agency ("EPA") has reduced the arsenic maximum contaminant level ("MCL") in drinking water from 50 micrograms per liter (" $\mu\text{g/l}$ ") or parts per billion ("ppb") to 10 $\mu\text{g/l}$. The most recent lab analysis provided by the Company indicates that the arsenic levels in all wells except Well #4 (DWR #55-626905) used by the Company exceed the new arsenic MCL. The Company plans to abandon all wells except Well #4 and drill two new wells (Well #10 and Well #11) to replace the six existing wells. More discussion of this plan is in §L below.

E. WATER USAGE

Table 5 summarizes water usage in the Company's CC&N area. Exhibit 4 is a graph that shows water consumption data in gallons per day per connection for the system for the period of September 2004 through September 2005.

Table 5 Water Usage in the System

Month	Number of Customers	Water Sold (gallons)	Water pumped (gallons)	Water purchased (gallons)	Daily Average (gal/day/customer)
Sep 04	2,526	33,417,518	40,413,100	0	441
Oct 04	2,534	29,281,602	29,096,200	0	373
Nov 04	2,549	23,305,874	22,420,500	0	305
Dec 04	2,550	18,194,894	14,378,694	0	230
Jan 05	2,518	18,193,188	18,196,200	0	233
Feb 05	2,527	18,458,168	16,568,800	0	261
Mar 05	2,530	16,779,412	21,965,800	0	214
Apr 05	2,538	15,833,123	31,031,400	0	208
May 05	2,537	24,202,354	38,875,100	0	308
Jun 05	2,548	31,083,906	43,288,600	0	407
Jul 05	2,548	37,387,561	43,291,200	0	473
Aug 05	2,545	42,949,549	29,993,500	0	544
Sep 05	2,525	31,263,890	25,143,000	0	413
Total		340,351,039	374,662,094	0	
Average					339

Water Sold

Based on information provided by the Company, during the test year the Company experienced an overall daily average use of 339 gallons per day (“gpd”) per customer, a high use of 544 gpd per customer and a low use of less than 208 gpd per customer. The highest total monthly use occurred in August, when total of 42,949,549 gallons were sold to 2,545 customers. The lowest total monthly use occurred in April, when 15,833,123 gallons were sold to 2,538 customers.

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 9.16 percent during the test year, which is within acceptable limits.

F. GROWTH PROJECTION

Based on the service meter data contained in the Company’s annual reports, the number of customers increased from 2,194 at the end of 1997 to 2,513 by the end of 2005, with an average growth rate of 42 customers per year from 1997 to 2005. Based on the linear regression analysis, the Company could have approximately 2,778 customers by the end of 2010. The following table summarizes actual and projected growth in the Company’s existing certificated service area.

Table 6 Actual and Projected Growth

Year	Nos. of Customers	
1997	2,194	Reported
1998	2,262	Reported
1999	2,314	Reported
2000	2,381	Reported
2001	2,416	Reported
2002	2,418	Reported
2003	2,553	Reported
2004	2,514	Reported
2005	2,513	Reported
2006	2,608	Estimated
2007	2,651	Estimated
2008	2,693	Estimated
2009	2,736	Estimated
2010	2,778	Estimated

G. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (“ADEQ”) COMPLIANCE

Staff received a compliance status report from ADEQ dated June 1, 2006, in which ADEQ stated that the system has no major deficiencies. ADEQ has determined that the system is currently delivering water that meets the water quality standards required by Arizona Administrative Code, Title 18, Chapter 4.

H. ARIZONA DEPARTMENT OF WATER RESOURCES (“ADWR”) COMPLIANCE

Avra Water Company is located in the ADWR Tucson Active Management Area (“AMA”). ADWR reported that the Company is in compliance with its monitoring and reporting requirements.

I. ARIZONA CORPORATION COMMISSION (“ACC”) COMPLIANCE

According to the Utilities Division Compliance Section, the Company has no outstanding ACC compliance issues.

J. WATER TESTING EXPENSES

Avra is subject to mandatory participation in the ADEQ Monitoring Assistance Program (“MAP”). Staff calculated the testing costs based on the following assumptions:

1. MAP will do baseline testing on everything except copper, lead, nitrates, and bacteria.

2. ADEQ 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.
3. MAP fees were calculated from the ADEQ MAP rules.
4. All monitoring expenses are based on Staff's best knowledge of lab costs and methodology and two points of entry.
5. The estimated water testing expenses represent a minimum cost based on no "hits" other than lead and copper, and assume compositing of well samples. If any constituents were found, then the testing costs would dramatically increase.

Table 7 shows the estimated annual monitoring expense, assuming participation in the MAP program. Water testing expenses should be adjusted to the annual expense amount shown in Table 7, which totals \$ 17,430.

Table 7 Water Testing Cost

Monitoring – 7 wells (Tests per 3 years, unless noted.)	Cost per test	No. of tests per three year period	Total cost per three year period	Annual Cost
Bacteriological – monthly	\$25	252	\$6,300	\$2,100
Inorganics (& secondary)	\$300	7	\$2,100	\$700
Radiochemical – (1/ 4 yr)	\$60	5¼	\$315	MAP
IOC's, SOC's, VOC's	\$2,805	7	\$19,635	MAP
Nitrites	\$20	7	\$140	MAP
Nitrates – annual	\$40	252	\$10,080	\$3,360
Asbestos – per 9 years	\$180	2⅓	\$420	MAP
Lead & Copper – annual	\$45	120	\$5,400	\$1,800
TTHM	\$150	21	\$3,150	\$1,050
HAAS	\$250	21	\$5,250	\$1,750
MAP fees (annual)				\$6,669.86
Total				\$17,430

K. DEPRECIATION RATES

Staff has developed typical and customary depreciation rates within the range of anticipated equipment life. These rates are presented in Exhibit 6, and should be used to calculate the annual

depreciation expense for the Company in this application. It is also recommended that the Company use depreciation rates by individual National Association of Regulatory Utility Commissioners (“NARUC”) category, as delineated in Exhibit 6, in the future.

L. OTHER ISSUES

I. Service Line and Meter Installation Charges

The Company is proposing to maintain its current meter and service line installation charges that are within Staff’s experience of what are reasonable and customary charges; Staff does not object to the Company’s proposal.

Table 8 Service Line and Meter Installation Charges

Meter Size	Current Charges	Proposed Charges	Staff Recommendation
5/8 x 3/4-inch	\$410	\$410	\$410
3/4-inch	\$455	\$455	\$455
1-inch	\$520	\$520	\$520
1½-inch	\$740	\$740	\$740
2-inch (Turbo)	\$1,235	\$1,235	\$1,235
2-inch (Compound)	\$1,800	\$1,800	\$1,800
3-inch (Turbo)	\$1,705	\$1,705	\$1,705
3-inch (Compound)	\$2,340	\$2,340	\$2,340
4-inch (Turbo)	\$2,700	\$2,700	\$2,700
4-inch (Compound)	\$3,405	\$3,405	\$3,405
6-inch (Turbo)	\$5,035	\$5,035	\$5,035
6-inch (Compound)	\$6,510	\$6,510	\$6,510

II. Curtailment Tariff

The Company has an approved curtailment tariff on file with the Commission.

III. Water Plant Improvements and Arsenic Removal Plan

The Commission in Decision No. 67159, dated August 10, 2004, approved an 8.05 million dollar financing to fund Avra's master expansion plan for water plant improvements. These improvements were to include a new production well, new storage tanks, new mains, arsenic treatment facility, new booster pump station and booster station upgrade.

During its inspection Staff found that the following items, listed in the Table below, had been completed and were in service.

Description	In service
New 500,000 gallon storage tank at the Rudasill Reservoir Site	yes
-12-inch transmission connecting Rudasill Reservoir Site to the Zone C distribution system	yes
Noel Booster Station Upgrades	yes

The items listed above were used and useful at the time of Staff's inspection on July 12, 2006. During its inspection Staff also observed that two wells (referred to as Well Nos. 10 and 11) had been drilled. Construction of these wells had not been completed and they were not in service.

The Company plans to abandon several of its existing wells which produce water with arsenic levels that exceed the new arsenic standard of 10 parts per billion.¹ Well #4 would remain in service because it is producing water that meets the new arsenic standard. The Company plans to blend water produced by the new wells to help it meet the new standard. Because the Company is not certain at this time that its blending plan will provide water that meets the new standard the Company also has plans to install an arsenic treatment facility.

In its Application Avra proposed that a surcharge be implemented to recover the future cost of an arsenic treatment facility and other plant improvements the Company plans to undertake. The only plant improvements that were in service at the time of Staff's inspection are listed in the table above. Avra estimated that an arsenic treatment facility would cost 1.2 million dollars, if one is needed. Using ADEQ's Arsenic Master Plan, Staff has calculated that the capital cost of arsenic removal to meet the new standard using the 1,100 gpm flow from the six existing wells would cost in excess of 1.1 million dollars. Therefore, Staff concludes the Company's estimated cost to install an arsenic treatment facility is reasonable. This conclusion however should not be used to assume any particular treatment of this plant in a future rate proceeding.

¹ Two wells among the wells the Company plans to abandon also produce water that is hotter than what is normally experienced. While staff understands that these temperatures don't exceed ADEQ standards the water could have a significant adverse impact on the performance of the water system plant over time.

IV. Off-Site Hook-up Fee Tariff

The Company has an approved Off-Site Hook-up Fee Tariff on file with the Commission. In Decision No. 64008, effective September 4, 2001, the Commission approved a Hook-up Fee Charge of \$1,875 for all new service connections using $\frac{5}{8}$ x $\frac{3}{4}$ inch meter. Revenues are to be used for the purchase and installation of new production, storage, pressure and fire flow improvements.

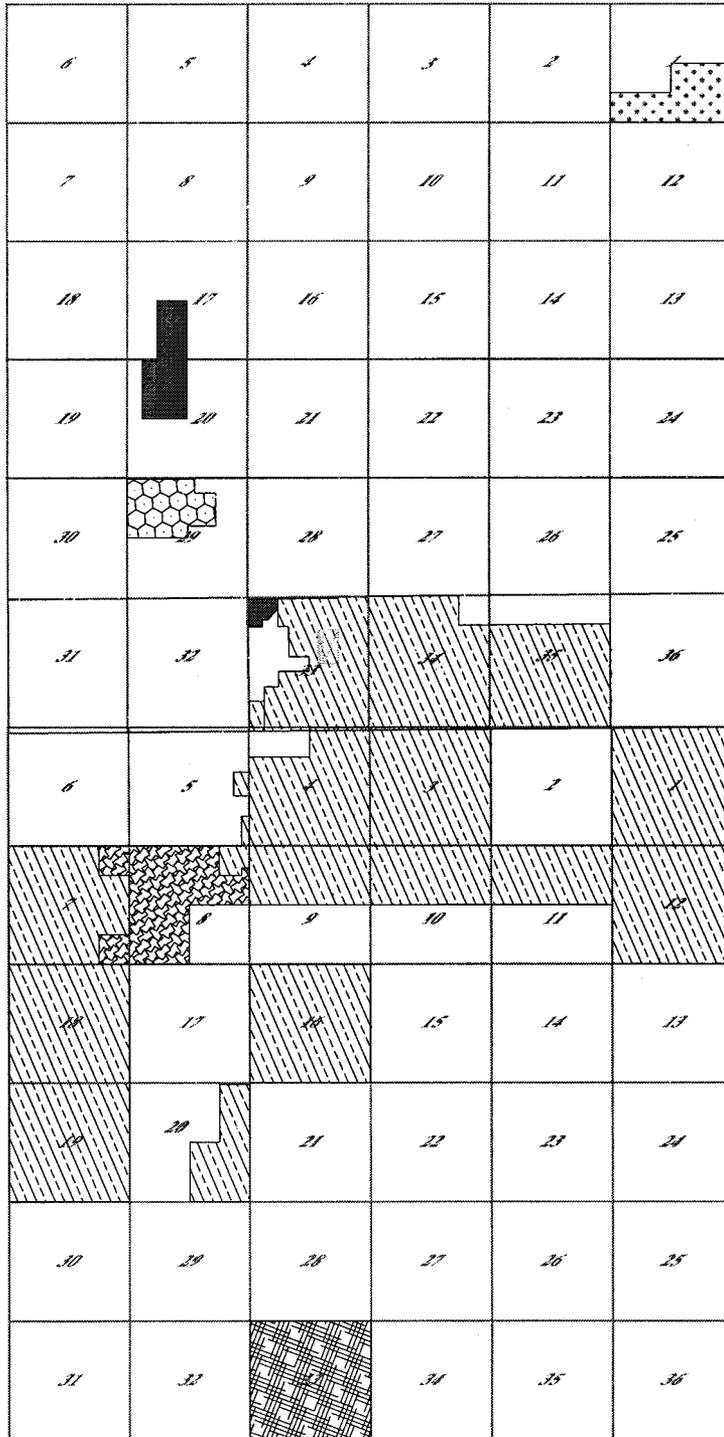
However, as originally approved the Off-Site Hook-Up Fee Tariff did not include a reporting requirement, therefore, Staff is recommending in this case that the Company be required to file annual Off-Site Hook-Up Fee status reports with the Commission. A status report shall be filed each January 31st for the prior twelve (12) month period, beginning January 31, 2008, and continuing until the hook-up fee tariff is no longer in effect. The Company shall file the status report with Docket Control as a compliance item in this Docket. Each status report shall contain a list of all customers that have paid the hook-up fee tariff, the amount each has paid, the amount of money spent from the account, the amount of interest earned on the tariff account, and a list of all facilities that have been installed with the tariff funds during the 12 month period. Staff further recommends that the Company's existing Off-Site Facilities Hook-up Fee Tariff be amended to include this Status Reporting Requirement. An amended tariff including the following language shall be filed as a compliance item in this Docket within 45 days of the effective date of the Commission's order:

Status Reporting Requirements to the Commission: The Company shall submit a calendar year Off-Site Hook-up Fee status report each January 31st to Docket Control for the prior twelve (12) month period, beginning January 31, 2008, until the hook-up fee tariff is no longer in effect. This status report shall contain a list of all customers that have paid the hook-up fee tariff, the amount each has paid, the amount of money spent from the account, the amount of interest earned on the tariff account, and a list of all facilities that have been installed with the tariff funds during the 12 month period.

EXHIBIT 1 Avra Certificate Service Area

COUNTY: *Pima*

RANGE 11 East



TOWNSHIP 12 South

TOWNSHIP 13 South

-  W-2126 (2)
Avra Water Cooperative, Inc.
-  W-4236 (1)
Tierra Linda Homeowners Association, Inc.
-  (4)
Cortaro-Marana Irrigation District
-  (4)
Town of Marana (Nonjurisdictional)
(Palo Verde System)
- 
Anway Manville, LLC
Docket No. W-3233-05-355
Application for Extension

-  W-2126 (2)
Avra Water Co-op, Inc.
-  W-2102 (1)
Rancho Del Conejo Water Community Co-op
-  W-1831 (2)
Sandario Water Company, Inc.

**EXHIBIT 2
LOCATION OF AVRA WATER COMPANY SERVICE AREA**

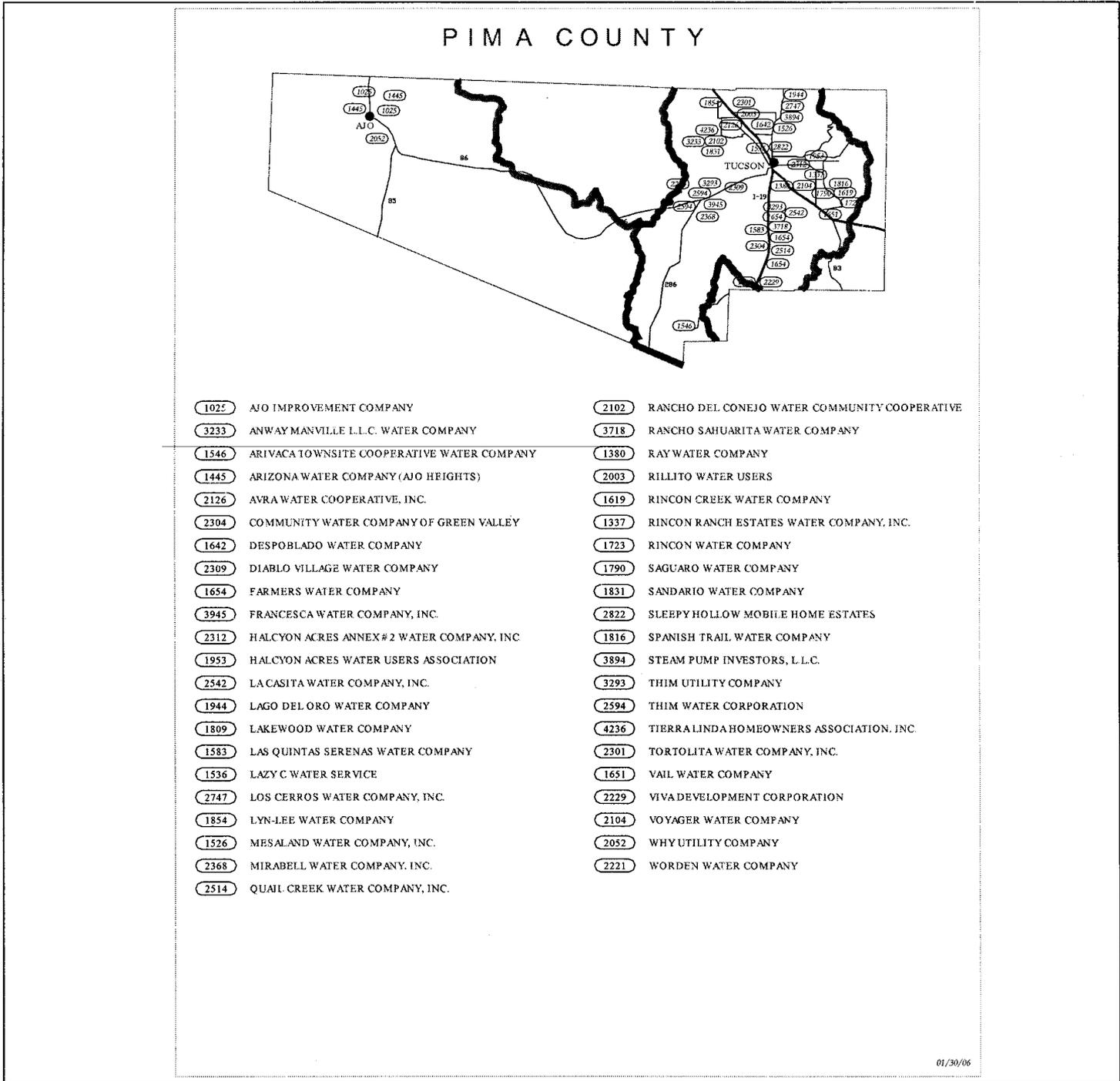


EXHIBIT 3A
SYSTEMATIC DRAWING

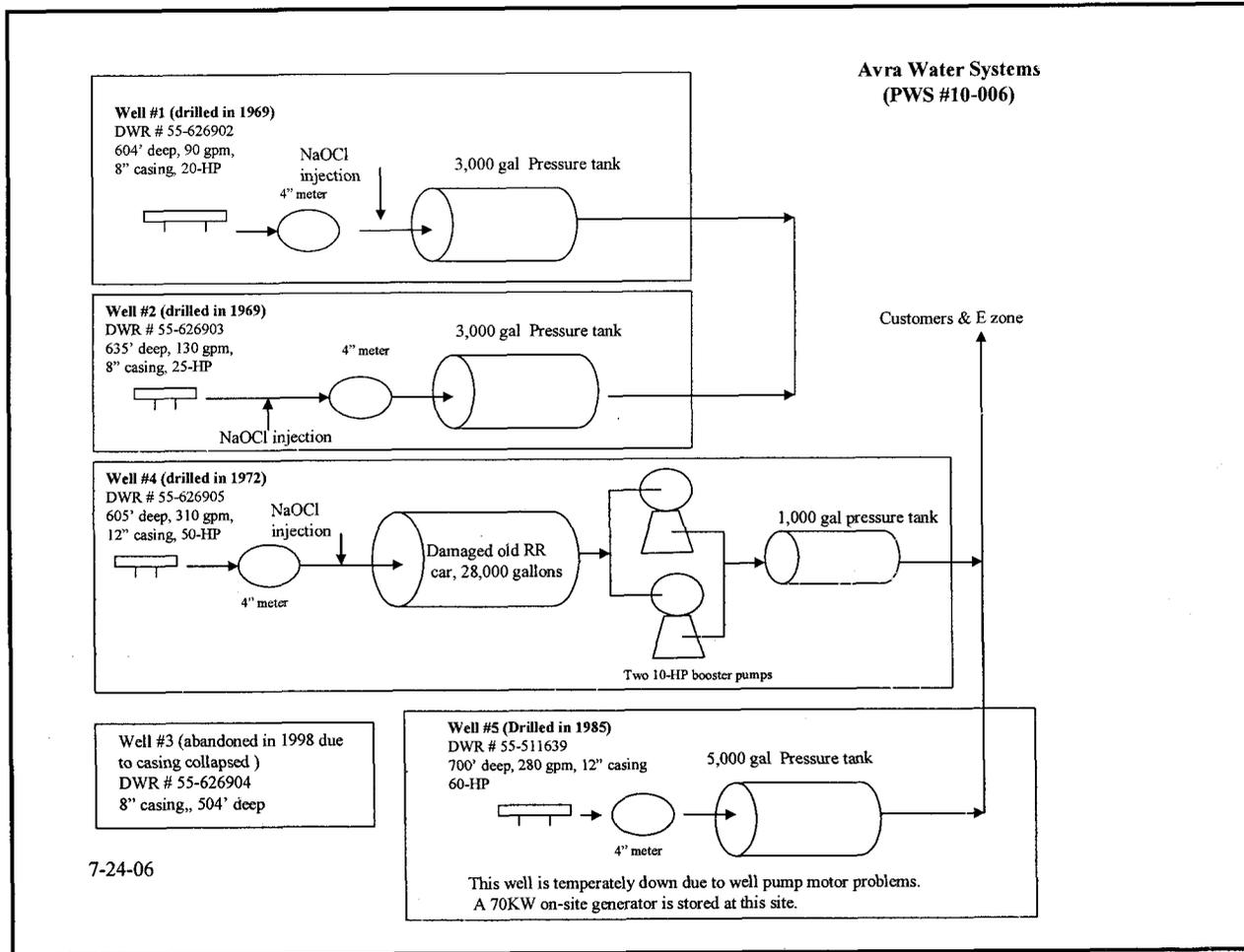


EXHIBIT 3B
SYSTEMATIC DRAWING

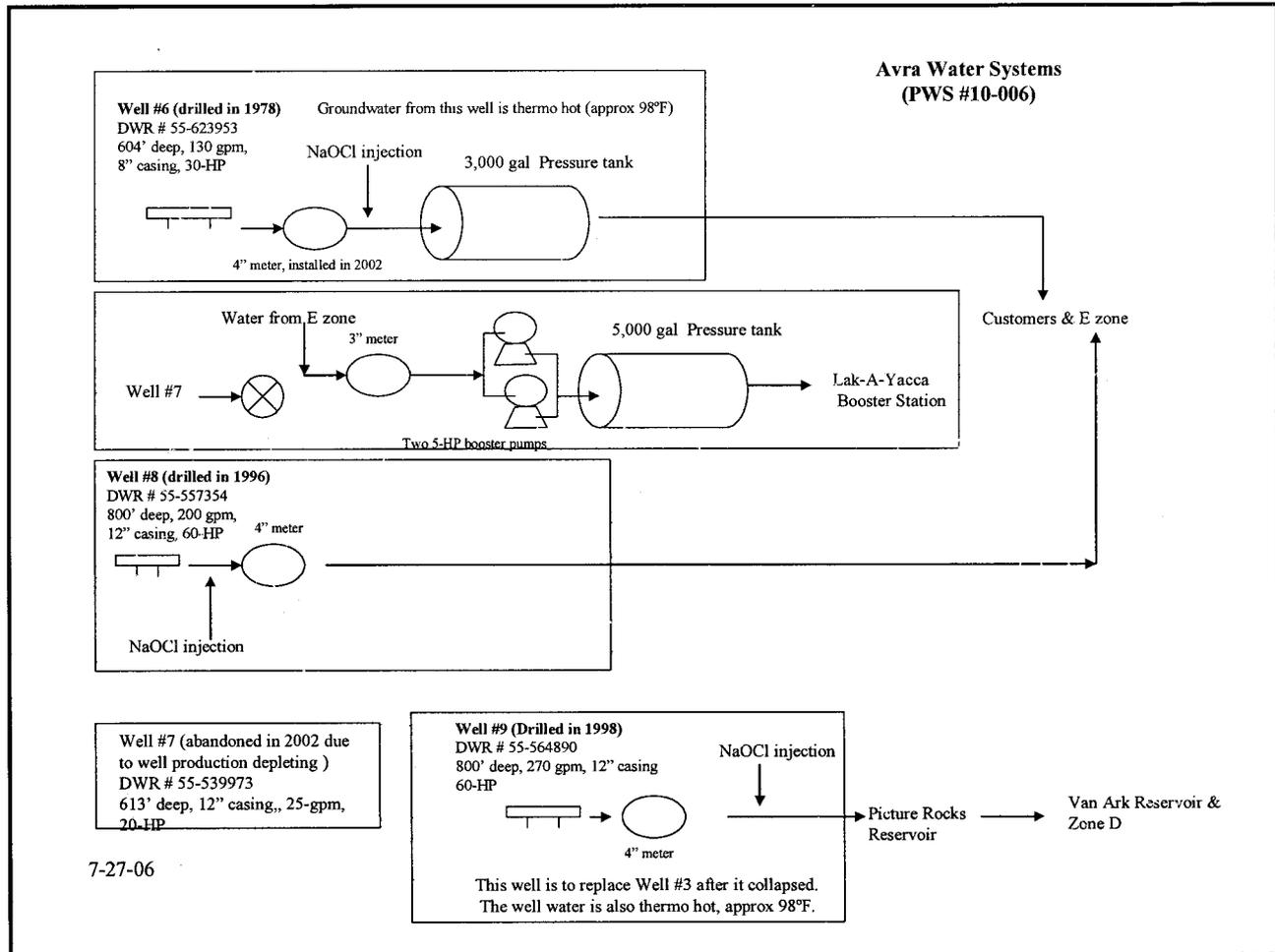


EXHIBIT 3C
SYSTEMATIC DRAWING

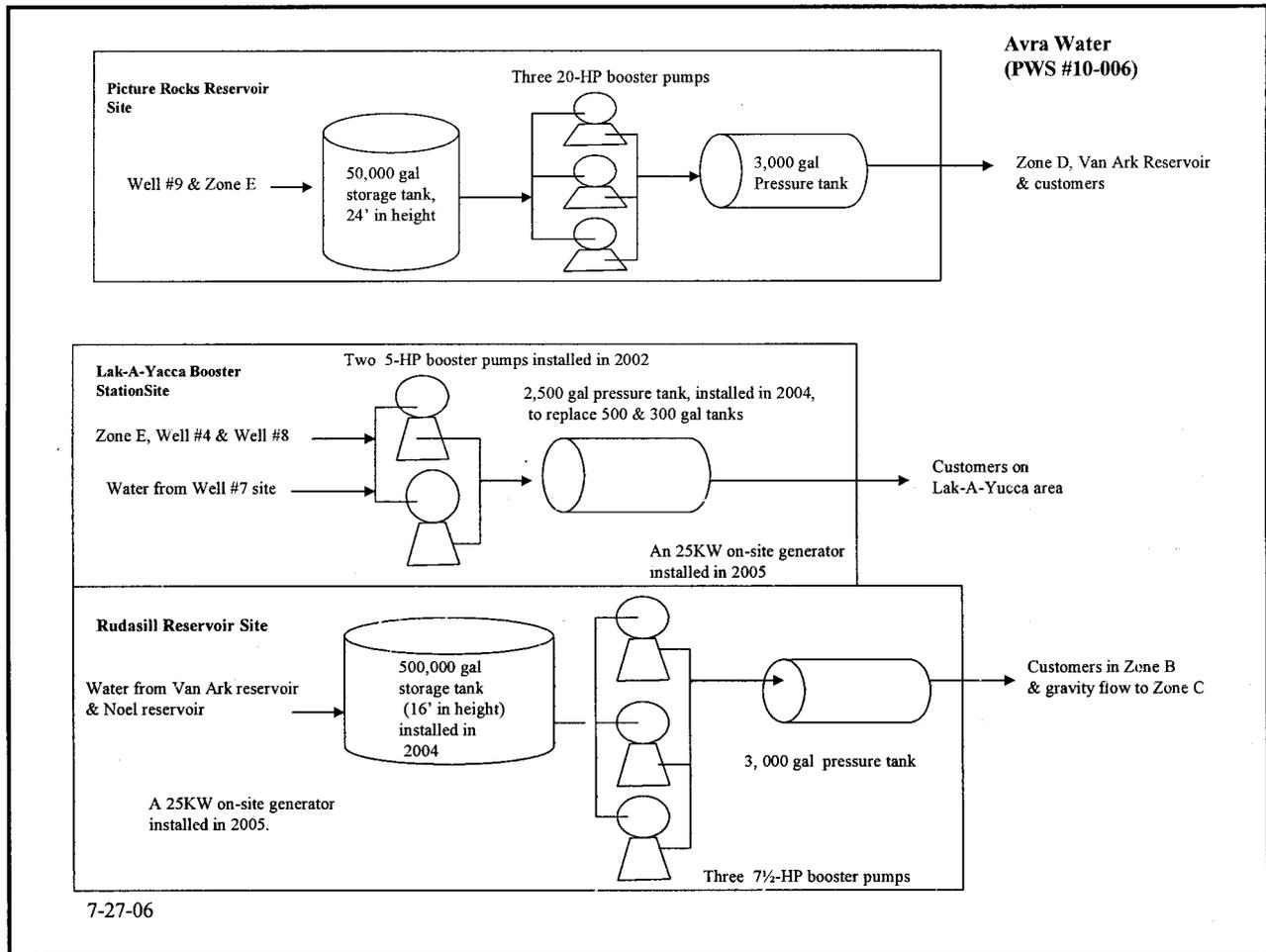


EXHIBIT 3D
SYSTEMATIC DRAWING

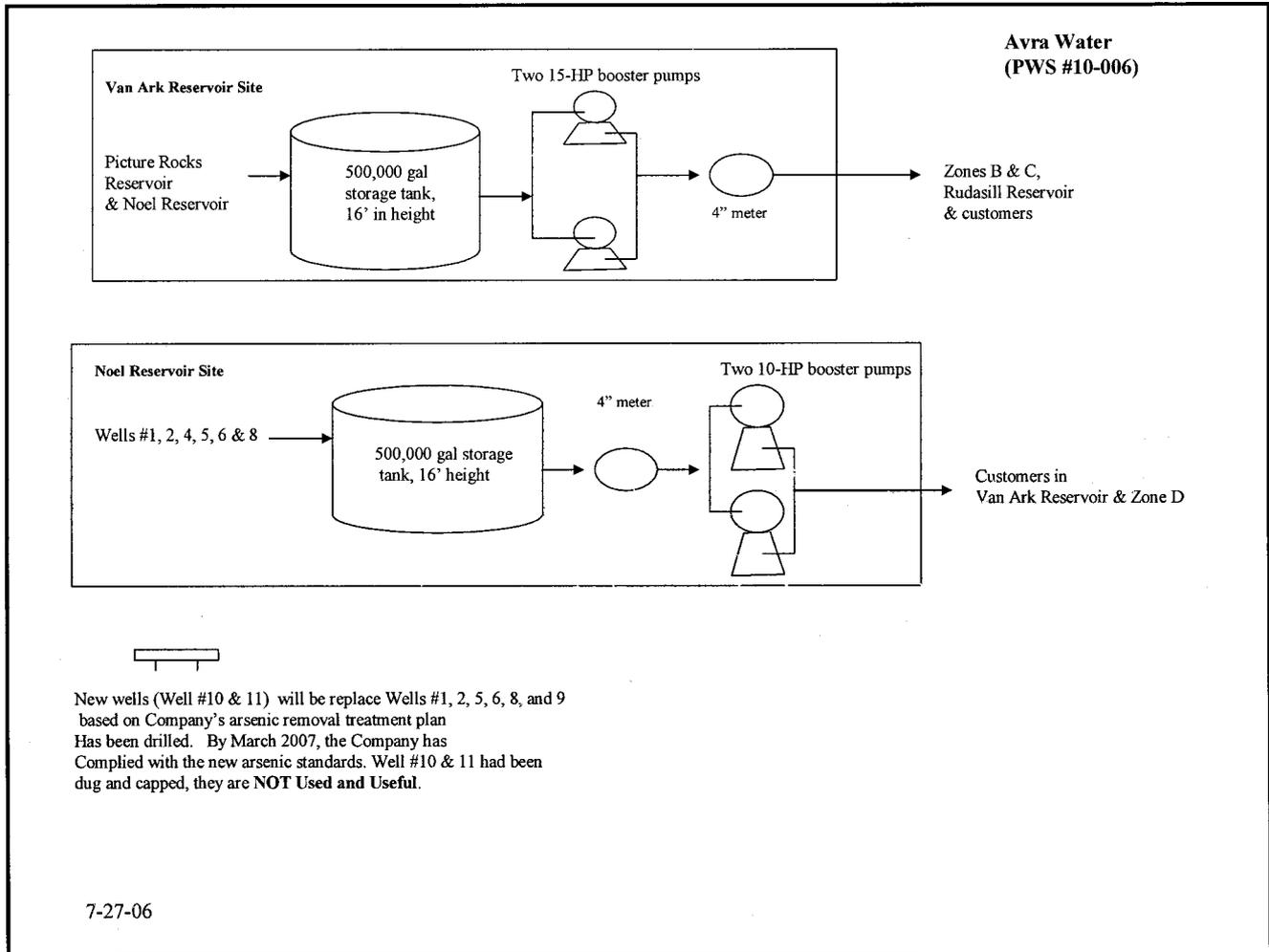


EXHIBIT 4

WATER USAGE ON THE AVRA WATER COMPANY SERVICE AREA

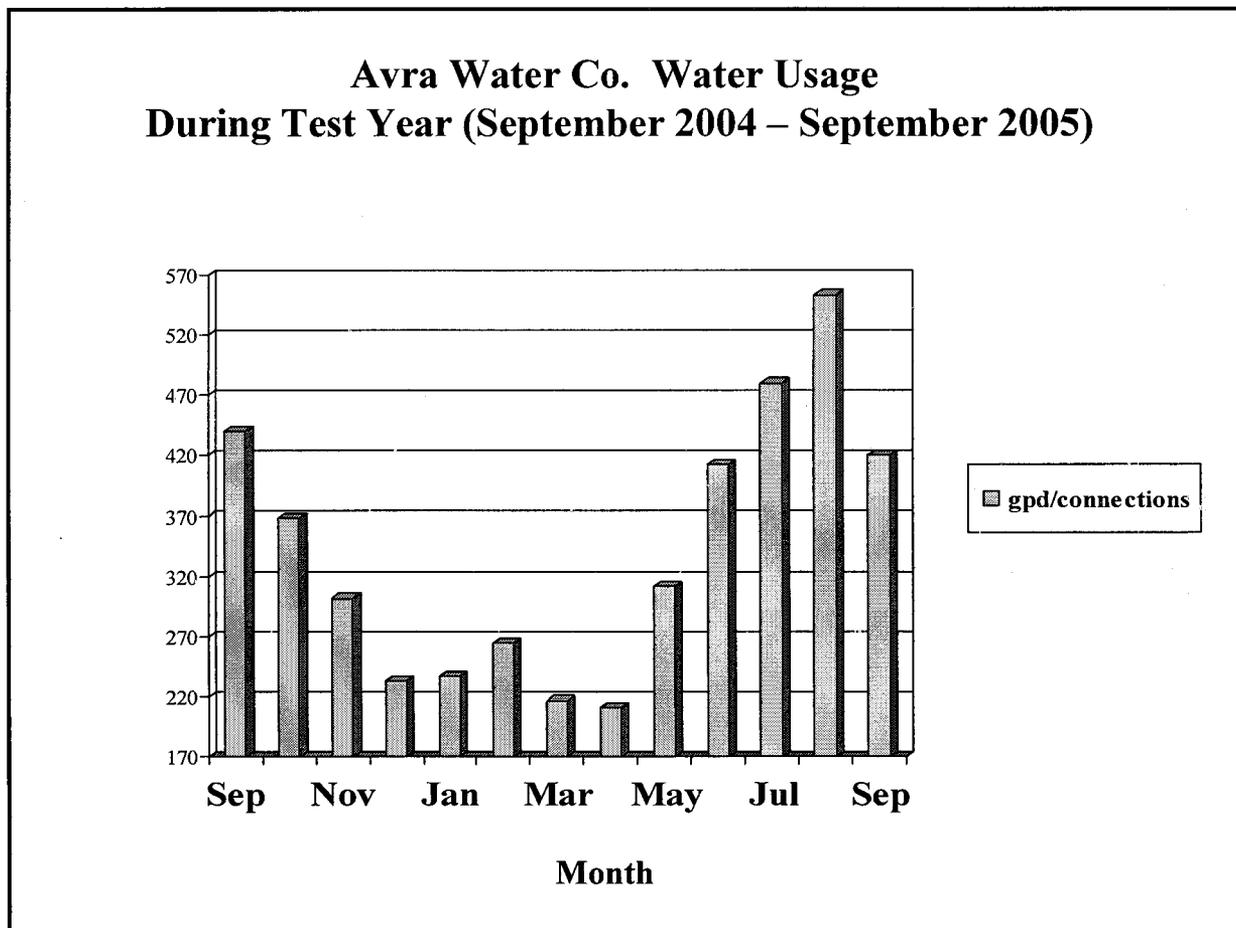


EXHIBIT 5

ACTUAL AND PROJECTED GROWTH IN AVRA WATER COMPANY SERVICE AREA

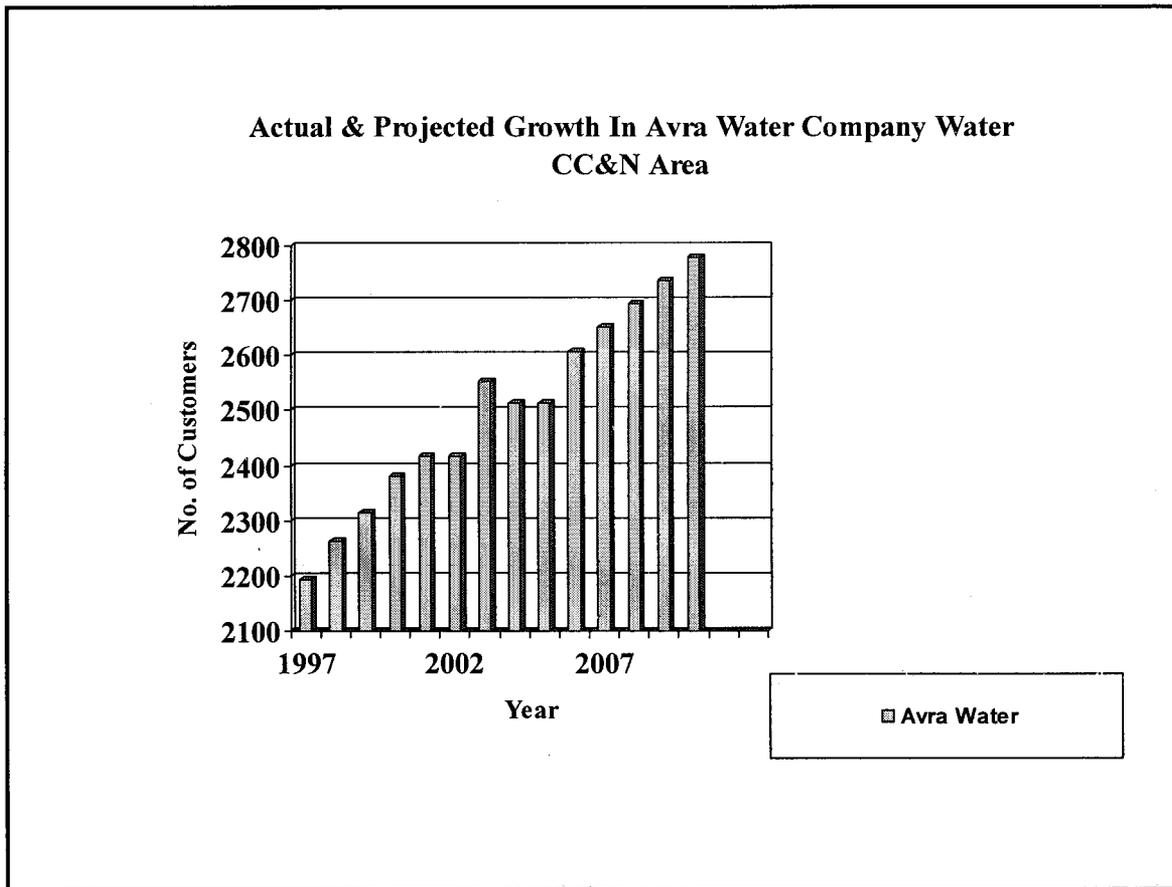


EXHIBIT 6

WATER DEPRECIATION RATES

Acct. 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	----	----