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**BEFORE THE ARIZONA CORPORATION**

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ARIZONA CORPORATION COMMISSION  
DOCKET CONTROL

**COMMISSIONERS**

- KRISTIN K. MAYES, Chairman
- GARY PIERCE
- PAUL NEWMAN
- SANDRA D. KENNEDY
- BOB STUMP

IN THE MATTER OF THE APPLICATION OF BELLA VISTA WATER CO., INC., AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE FAIR VALUE OF ITS UTILITY PLANTS AND PROPERTY AND FOR INCREASES IN ITS WATER RATES AND CHARGES FOR UTILITY SERVICE BASED THEREON.

DOCKET NO. W-02465A-09-0411

IN THE MATTER OF THE APPLICATION OF NORTHERN SUNRISE WATER COMPANY, INC., AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE FAIR VALUE OF ITS UTILITY PLANTS AND PROPERTY AND FOR INCREASES IN ITS WATER RATES AND CHARGES FOR UTILITY SERVICE BASED THEREON.

DOCKET NO. W-20453A-09-0412

IN THE MATTER OF THE APPLICATION OF SOUTHERN SUNRISE WATER COMPANY, INC., AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE FAIR VALUE OF ITS UTILITY PLANTS AND PROPERTY AND FOR INCREASES IN ITS WATER RATES AND CHARGES FOR UTILITY SERVICE BASED THEREON.

DOCKET NO. W-20454A-09-0413

Arizona Corporation Commission  
**DOCKETED**

APR 14 2010

DOCKETED BY [Signature]

IN THE MATTER OF THE JOINT APPLICATION OF BELLA VISTA WATER CO., INC., NORTHERN SUNRISE WATER COMPANY, INC., AND SOUTHERN SUNRISE WATER COMPANY, INC. FOR APPROVAL OF AUTHORITY TO CONSOLIDATE OPERATIONS, AND FOR THE TRANSFER OF UTILITY ASSETS TO BELLA VISTA WATER CO., INC., PURSUANT TO ARIZONA REVISED STATUTES 4-285.

DOCKET NO. W-02465A-09-0414

DOCKET NO. W-20453A-09-0414

DOCKET NO. W-20454A-09-0414

**STAFF'S NOTICE OF FILING DIRECT TESTIMONY**

The Staff of the Arizona Corporation Commission ("Staff") hereby files the Direct Testimony of Staff Witnesses Crystal S. Brown, Pedro M. Chaves, and Marlin Scott, Jr. in the above-referenced matter.

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RESPECTFULLY SUBMITTED this 14<sup>th</sup> day of April, 2010.



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Original and thirteen (13) copies  
of the foregoing were filed this  
14<sup>th</sup> day of April, 2010 with:

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

Copies of the foregoing were mailed  
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**BEFORE THE ARIZONA CORPORATION COMMISSION**

KRISTIN K. MAYES  
Chairman  
GARY PIERCE  
Commissioner  
PAUL NEWMAN  
Commissioner  
SANDRA D. KENNEDY  
Commissioner  
BOB STUMP  
Commissioner

IN THE MATTER OF THE APPLICATION OF ) DOCKET NO. W-02465A-09-0411  
BELLA VISTA WATER CO., INC. AN ARIZONA )  
CORPORATION, FOR A DETERMINATION OF THE )  
FAIR VALUE OF ITS UTILITY PLANTS AND )  
PROPERTY AND FOR INCREASES IN ITS WATER )  
RATES AND CHARGES FOR UTILITY SERVICE )  
BASED THEREON. )

IN THE MATTER OF THE APPLICATION OF ) DOCKET NO. W-20453A-09-0412  
NORTHERN SUNRISE WATER COMPANY INC., AN )  
ARIZONA CORPORATION, FOR A )  
DETERMINATION OF THE FAIR VALUE OF ITS )  
UTILITY PLANTS AND PROPERTY AND FOR )  
INCREASES IN ITS WATER RATES AND CHARGES )  
FOR UTILITY SERVICE BASED THEREON. )

IN THE MATTER OF THE APPLICATION OF ) DOCKET NO. W-20454A-09-0413  
SOUTHERN SUNRISE WATER COMPANY INC., AN )  
ARIZONA CORPORATION, FOR A )  
DETERMINATION OF THE FAIR VALUE OF ITS )  
UTILITY PLANTS AND PROPERTY AND FOR )  
INCREASES IN ITS WATER RATES AND CHARGES )  
FOR UTILITY SERVICE BASED THEREON. )

IN THE MATTER OF BELLA VISTA WATER CO., ) DOCKET NO. W-02465A-09-0414  
INC., NORTHERN SUNRISE WATER COMPANY ) DOCKET NO. W-20453A-09-0414  
INC., AND SOUTHERN SUNRISE WATER ) DOCKET NO. W-20454A-09-0414  
COMPANY, INC.'S JOINT APPLICATION FOR )  
APPROVAL OF AUTHORITY TO CONSOLIDATE )  
OPERATIONS, AND FOR THE TRANSFER OF )  
UTILITY ASSETS TO BELLA VISTA WATER CO., )  
INC., PURSUANT TO ARIZONA REVISED )  
STATUTES 40-285. )

DIRECT

TESTIMONY

OF

CRYSTAL S. BROWN

PUBLIC UTILITIES ANALYST V

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

APRIL 14, 2010

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**EXECUTIVE SUMMARY**  
**BELLA VISTA WATER COMPANY, DOCKET NO. W-02465A-09-0411**  
**NORTHERN SUNRISE WATER COMPANY, DOCKET NO. W-20453A-09-0412**  
**SOUTHERN SUNRISE WATER COMPANY, DOCKET NO. W-20454A-09-0413**  
**BELLA VISTA WATER CO., INC., NORTHERN SUNRISE WATER COMPANY INC.,**  
**AND SOUTHERN SUNRISE WATER COMPANY, DOCKET NOS.**  
**W-02465A-09-0414, W-20453A-09-0414 AND W-20454A-09-0414**

Bella Vista Water Company, Inc. (“Bella Vista”), Northern Sunrise Water Company, Inc. (“Northern Sunrise”), Southern Sunrise Water Company, Inc. (“Southern Sunrise”), collectively “Algonquin Companies,” are certificated Arizona public service corporations that provided water service during 2009 in Cochise County, Arizona. The average number of customers per company during the test year was as follows: 7,500 for Bella Vista; 349 for Northern Sunrise; and 789 for Southern Sunrise.

On August 31, 2009, the Algonquin Companies filed applications for permanent rate increases, with a test year ending March 31, 2009. Bella Vista states that it experienced a \$94,521 test year operating income resulting in a 1.49 percent rate of return. Northern Sunrise states that it incurred an \$81,316 test year operating loss resulting in no rate of return. Southern Sunrise states that it experienced a \$6,042 test year operating income resulting in a 0.39 percent rate of return. The Algonquin Companies propose to use OCRB as its Fair Value Rate Base.

***Bella Vista***

Bella Vista proposed a \$958,701, or 27.19 percent revenue increase from \$3,526,033 to \$4,484,734. The proposed revenue increase would produce an operating income of \$683,175 for a 10.77 percent rate of return on an original cost rate base (“OCRB”) of \$6,343,311. Staff recommends a \$157,928 or 4.48 percent revenue decrease from \$3,526,033 to \$3,368,105. Staff’s recommended revenue decrease would produce an operating income of \$326,859 for an 8.60 percent rate of return on an OCRB of \$3,800,682.

***Northern Sunrise***

Northern Sunrise proposed a \$256,044, or 133.38 percent revenue increase from \$191,966 to \$448,011. The proposed revenue increase would produce an operating income of \$95,060 for a 12.80 percent rate of return on an OCRB of \$742,657. Staff recommends a \$128,232 or 66.80 percent revenue increase from \$191,966 to \$320,198. Staff’s recommended revenue increase would produce an operating income of \$39,335 for an 8.60 percent rate of return on an OCRB of \$457,384.

***Southern Sunrise***

Southern Sunrise proposed a \$309,085, or 69.59 percent, revenue increase from \$444,136 to \$753,222. The proposed revenue increase would produce an operating income of \$197,688 for a 12.80 percent rate of return on an OCRB of \$1,544,434. Staff recommends a \$40,604 or

9.14 percent revenue increase from \$444,136 to 484,740. Staff's recommended revenue increase would produce an operating income of \$62,534 for an 8.60 percent rate of return on an OCRB of \$727,139.

Staff's typical bill analysis information and recommendations concerning the Companies' proposed consolidation will be filed with Staff's Rate Design Testimony.

1 **INTRODUCTION**

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

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

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

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

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

15 A. I received a Bachelor of Science Degree in Business Administration from the University  
16 of Arizona and a Bachelor of Science Degree in Accounting from Arizona State  
17 University.

18  
19 Since joining the Commission in August 1996, I have participated in numerous rate cases  
20 and other regulatory proceedings involving electric, gas, water, and wastewater utilities. I  
21 have testified on matters involving regulatory accounting and auditing. Additionally, I  
22 have attended utility-related seminars sponsored by the National Association of  
23 Regulatory Utility Commissioners (“NARUC”) on ratemaking and accounting designed to  
24 provide continuing and updated education in these areas.

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

2 A. I am presenting Staff's analysis and recommendations in the areas of rate base and  
3 operating revenues, expenses, and rate design regarding the Bella Vista Water Company,  
4 Inc. ("Bella Vista"), Northern Sunrise Water Company, Inc. ("Northern Sunrise"), and  
5 Southern Sunrise Water Company, Inc. ("Southern Sunrise") (collectively "Algonquin  
6 Companies" or "Companies") applications for permanent rate increases. Staff witness  
7 Pedro Chaves is presenting Staff's cost of capital recommendations. Staff witness Marlin  
8 Scott, Jr. is presenting Staff's engineering analysis and recommendations.

9

10 **Q. What is the basis of your recommendations?**

11 A. I performed a regulatory audit of the Algonquin Companies' applications to determine  
12 whether sufficient, relevant, and reliable evidence exists to support the Companies'  
13 requested rate increases. The regulatory audit consisted of examining and testing the  
14 financial information, accounting records, and other supporting documentation and  
15 verifying that the accounting principles applied were in accordance with the Commission-  
16 adopted NARUC Uniform System of Accounts ("USOA").

17

18 **BACKGROUND**

19 **Q. Please review the background of these applications.**

20 A. The Algonquin Companies are certificated Arizona public service corporations that  
21 provided water service to customers in Cochise County, Arizona.

22

23 The Algonquin Companies are owned Algonquin Water Resources of America, Inc.  
24 ("AWRA"), now known as Liberty Water, Inc. AWRA is an indirect wholly owned  
25 subsidiary of Algonquin Power Income Fund ("APIF") which is publicly traded on the  
26 Toronto Stock Exchange. In October 2009, APIF converted to a corporation, Algonquin

1 Power & Utilities Corp. ("APUC"). APUC is publically traded on the Toronto Stock  
2 Exchange. The Algonquin Companies have no employees and are managed and operated  
3 by Algonquin Water Services dba Liberty Water during the test year.  
4

5 Bella Vista's current rates were authorized in Decision No. 65350, dated November 1,  
6 2002. That Decision authorized a \$237,837 revenue increase that provided an 8.08  
7 percent rate of return on a \$7,482,520 fair value rate base.  
8

9 Northern Sunrise's current rates were authorized in Decision No. 62886, dated June 29,  
10 2006. That Decision authorized Northern Sunrise's original Certificate of Convenience  
11 and Necessity.  
12

13 Southern Sunrise's current rates were authorized in Decision No. 62886, dated June 29,  
14 2006. That Decision authorized Southern Sunrise's original Certificate of Convenience  
15 and Necessity.  
16

17 **Q. What are the primary reasons for the Algonquin Companies' requested permanent**  
18 **rate increase?**

19 A. According to the Algonquin Companies, the primary reasons are to recover increased  
20 operating expenses and/or to earn its authorized rate of return on its rate base. Further, the  
21 Commission required that rate cases be filed for Northern Sunrise and Southern Sunrise  
22 using a December 31, 2008, test year. The test year was later extended to March 31, 2009  
23 by Decision No. 70985.  
24

1 **CONSUMER SERVICE**

2 **Q. Please provide a brief history of customer complaints received by the Commission**  
3 **regarding the Algonquin Companies.**

4 A. A brief history of customer complaints received by the Commission for each of the  
5 Algonquin Companies follows:

6  
7 *Bella Vista*

8 Staff reviewed the Commission's Consumer Services records for the period of January 1,  
9 2007, through March 16, 2010, and found:

10  
11 2007 – Five complaints: Two quality of service-response time, one deposit refunds, one  
12 new service-other, one constructions-schedule. No opinions.

13  
14 2008 – Seven complaints: one billing-high/low, two billing-other, one service refusal, one  
15 new service-main line extensions, one disconnect/termination-non pay, one  
16 rates/tariff-interpretation of. No opinions.

17  
18 2009 – Three complaints: two billing-disputed, one quality of service-cannot reach  
19 company. No opinions.

20  
21 2010 – Two complaints: one quality of service/cannot reach company, one billing dispute.  
22 Nine opinions have been filed in 2010 opposing the current proposed rate  
23 increase.

24  
25 All complaints prior to 2010 have been resolved and closed.  
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*Northern Sunrise*

Staff reviewed the Commission’s Consumer Services records for the period of January 1, 2007, through March 26, 2010, and found:

2007 – Eight complaints: one billing, two new service, one service, four quality of service. No opinions.

2008 – Eleven complaints: five billing, one new service, one service, one quality of service, one rates / tariffs, two other. No opinions.

2009 – Two complaints: one billing, one quality of service. Four opinions: four opposed to the rate case item.

2010 – No complaints. One opinion: one opposed to the rate case item.

All complaints have been resolved and closed.

*Southern Sunrise*

Staff reviewed the Commission’s Consumer Services records for the period of January 1, 2007, through March 26, 2010, and found:

2007 – Six complaints: one billing, one new service, one service, three quality of service. No opinions.

2008 – Three complaints: one deposit, one quality of service, one other. No opinions.

2009 – Three complaints: two billing, one quality of service. No opinions.



1 **Q. Please summarize Staff's recommended revenue.**

2 A. Staff recommends a revenue requirement of \$4,173,043 in aggregate. This represents an  
3 increase of \$10,908, or 0.26 percent. The amounts for each system are shown below.  
4

<b>Staff Recommended</b>	<b>Test Year</b>	<b>Staff</b>		
	<u>Per Staff</u>	<u>Recommended</u>	<u>\$ Increase</u>	<u>% Increase</u>
Bella Vista	\$3,526,033	\$3,368,105	(\$157,928)	-4.48%
Northern Sunrise	\$191,966	\$320,198	\$128,232	66.80%
Southern Sunrise	\$444,136	\$484,740	\$40,604	9.14%
Total / Overall	\$4,162,135	\$4,173,043	\$10,908	0.26%

5  
6 The above proposed and recommended revenue increases would apply to the customers of  
7 each of the Algonquin Companies as discussed below:  
8

9 *Bella Vista*

10 Bella Vista proposed a \$958,701, or 27.19 percent revenue increase from \$3,526,033 to  
11 \$4,484,734. The proposed revenue increase would produce an operating income of  
12 \$683,175 for a 10.77 percent rate of return on an original cost rate base ("OCRB") of  
13 \$6,343,311. Staff recommends a \$157,928 or 4.48 percent revenue decrease from  
14 \$3,526,033 to \$3,368,105. Staff's recommended revenue decrease would produce an  
15 operating income of \$326,859 for an 8.60 percent rate of return on an OCRB of  
16 \$3,800,682.  
17

18 *Northern Sunrise*

19 Northern Sunrise proposed a \$256,044, or 133.38 percent revenue increase from \$191,966  
20 to \$448,011. The proposed revenue increase would produce an operating income of  
21 \$95,060 for a 12.80 percent rate of return on an OCRB of \$742,657. Staff recommends a  
22 \$128,232 or 66.80 percent revenue increase from \$191,966 to \$320,198. Staff's

1 recommended revenue increase would produce an operating income of \$39,335 for an  
2 8.60 percent rate of return on an OCRB of \$457,384.

3  
4 *Southern Sunrise*

5 Southern Sunrise proposed a \$309,085, or 69.59 percent, revenue increase from \$444,136  
6 to \$753,222. The proposed revenue increase would produce an operating income of  
7 \$197,688 for a 12.80 percent rate of return on an OCRB of \$1,544,434. Staff recommends  
8 a \$40,604 or 9.14 percent revenue increase from \$444,136 to 484,740. Staff's  
9 recommended revenue increase would produce an operating income of \$62,534 for an  
10 8.60 percent rate of return on an OCRB of \$727,139.

11  
12 **Q. What test year did the Algonquin Companies use in this filing?**

13 A. The Algonquin Companies' rate filings are based on the twelve months ended March 31,  
14 2009 ("test year").

15  
16 **Q. Please summarize the rate base and operating income recommendations and  
17 adjustments addressed in your testimony for the Algonquin Companies.**

18 A. My testimony addresses the following issues:

19  
20 Post-Test Year Plant and Retirement – This adjustment is made for Bella Vista only and  
21 reflects updated cost information for the post-test year plant and its related retirement.  
22 The net adjustment increased plant in service by \$2,954.

23  
24 Inadequately Supported Plant Costs – This adjustment is made for all the Algonquin  
25 Companies to remove recorded plant costs that were not supported by invoices or other  
26 types of source documentation. The adjustments decrease plant in service as follows:

1           \$104,983 for Bella Vista; \$23,454 for Northern Sunrise; and \$44,673 for Southern  
2 Sunrise.

3  
4           Plant Retirements – This adjustment is made only to the rate base of Bella Vista and  
5 decreases plant in service by \$2,553,834.

6  
7           Regulatory Asset – This adjustment is made only to the rate bases of Northern Sunrise and  
8 Southern Sunrise. The adjustments decrease plant in service as follows: \$64,621 for  
9 Northern Sunrise; and \$235,381 for Southern Sunrise.

10  
11           Accumulated Depreciation – This adjustment is made for all the Algonquin Companies to  
12 reflect Staff's calculation of accumulated depreciation based on Staff's adjustments to  
13 plant. The adjustments decrease accumulated depreciation as follows: \$3,224,427 for  
14 Bella Vista; \$11,624 for Northern Sunrise; and \$40,856 for Southern Sunrise.

15  
16           Customer Deposits – This adjustment is made for all the Algonquin Companies to reflect  
17 the test year-end customer deposits balance. The adjustments decrease rate base as  
18 follows: \$175,850 for Bella Vista; \$7,972 for Northern Sunrise; and \$22,298 for Southern  
19 Sunrise.

20  
21           Accumulated Deferred Income Taxes ("ADITs") – This adjustment is made for all the  
22 Algonquin Companies to reflect Staff's calculation of the ADIT balance. The adjustments  
23 decrease rate base as follows: \$2,938,625 for Bella Vista; \$200,850 for Northern Sunrise;  
24 and \$555,800 for Southern Sunrise.

25

1            Corporate Expense Allocation – This adjustment is made for all the Algonquin Companies  
2            and decreases operating expenses to remove costs incurred related to the unregulated  
3            affiliate’s business operations as follows: \$123,982 for Bella Vista; \$2,129 for Northern  
4            Sunrise; and \$10,258 for Southern Sunrise.

5  
6            Outside Services, Other – This adjustment is made for all the Algonquin Companies and  
7            adjusts operating expenses to mitigate the effect of not using a competitive bidding  
8            process as follows: \$47,644 decrease for Bella Vista; \$21,332 decrease for Northern  
9            Sunrise; and \$21,043 increase for Southern Sunrise.

10  
11           Affiliate Increase – This adjustment is made for all the Algonquin Companies and  
12           decreases operating expenses to remove additional affiliate costs not incurred during the  
13           test year. The adjustments to operating expenses are as follows: \$29,388 for Bella Vista;  
14           \$2,313 for Northern Sunrise; and \$4,337 for Southern Sunrise.

15  
16           Transportation Expense – This adjustment is made only to the income statement of Bella  
17           Vista and decreases expenses by \$11,497 to reflect transportation expense at a normalized  
18           level.

19  
20           Rate Case Expense – This adjustment is made for all the Algonquin Companies and  
21           decreases operating expenses to reflect a reasonable level of rate case expense based upon  
22           Staff’s analysis. The adjustments are as follows: \$55,272 for Bella Vista; \$16,582 for  
23           Northern Sunrise; and \$27,636 for Southern Sunrise.

24  
25           Meals, Entertainment and Contributions – This adjustment is made for all the Algonquin  
26           Companies and decreases operating expenses to remove expenses that are not needed for

1 the provision of service as follows: \$5,681 for Bella Vista; \$610 for Northern Sunrise;  
2 and \$773 for Southern Sunrise.

3  
4 Depreciation Expense – This adjustment is made for all the Algonquin Companies to  
5 reflect Staff’s calculation of depreciation expense based upon Staff’s recommended plant  
6 balances. The adjustments are as follows: \$268,656 for Bella Vista; \$8,814 for Northern  
7 Sunrise; and \$23,612 for Southern Sunrise.

8  
9 Property Tax Expense – This adjustment is made for all the Algonquin Companies and  
10 decreases operating expenses to reflect Staff’s calculation of the property tax expense.  
11 The adjustments are as follows: \$13,735 for Bella Vista; \$4,104 for Northern Sunrise; and  
12 \$6,536 for Southern Sunrise.

13  
14 Income Tax Expense – This adjustment is made for all the Algonquin Companies and  
15 increases operating expenses to reflect the income tax obligation on Staff’s adjusted test  
16 year taxable income. The adjustments are: \$227,880 for Bella Vista; \$12,734 for  
17 Northern Sunrise; and \$20,172 for Southern Sunrise.

18  
19 **RATE BASE**

20 *Fair Value Rate Base*

21 **Q. Did the Algonquin Companies prepare schedules showing the elements of**  
22 **Reconstruction Cost New Rate Base?**

23 **A.** No, the Algonquin Companies did not. The Algonquin Companies requested that their  
24 OCRBs be treated as their fair value rate bases.

25

1 *Rate Base Summary*

2 **Q. Please summarize Staff's adjustments to the Algonquin Companies' rate bases**  
3 **shown on Schedules CSB-3 and CSB-4 of their respective schedules.**

4 A. A summary of the Algonquin Companies' proposed and Staff's recommended rate bases  
5 follows:

6

	TEST YEAR RATE BASE		
	<u>Per Company</u>	<u>Difference</u>	<u>Per Staff</u>
Bella Vista	\$6,343,311	(\$2,542,629)	\$3,800,682
Northern Sunrise	\$742,657	(\$285,273)	\$457,384
Southern Sunrise	\$1,544,434	(\$817,295)	\$727,139
Total	\$8,630,402	(\$3,645,197)	\$4,985,205

7  
8 *Rate Base Adjustment – Post-Test Year Plant and Retirement (Bella Vista)*

9 **Q. What amount of post-test year plant and related retirement is Bella Vista proposing**  
10 **to include in rate base?**

11 A. Bella Vista is proposing to include \$110,057 for post-test year plant and to remove  
12 \$12,000 for its related retirement, for a net post-test year plant addition of \$98,057.

13  
14 **Q. What is the post-test year plant?**

15 A. The post-test year plant is a main relocation project. According to Bella Vista (CSB 1-9),  
16 the water main was relocated at three separate locations to accommodate new storm  
17 culverts as part of a road widening and bike path construction project by the City of Sierra  
18 Vista. The new main was the same size as the old main. Further, the old main was  
19 installed approximately 15 years prior to the road construction.

1 **Q. Does Staff agree that it is appropriate to include the main relocation as post-test year**  
2 **plant?**

3 A. Yes, in this case. The cost of the plant is known and measurable, in service, and the  
4 related retirement has been reflected. Moreover, the new main is the same size as the old  
5 main; therefore, it was not constructed for growth and is revenue neutral. Also, the City of  
6 Sierra Vista's road construction, which was beyond the control of Bella Vista, brought  
7 about the need to relocate the main.

8

9 **Q. Did the Company provide updated cost information regarding the main relocation?**

10 A. Yes. In response to a data request from Staff's witness, Marlin Scott, Jr. (MSJ 5.2), Bella  
11 Vista indicated that the cost of the post test year plant is \$104,507 and its related  
12 retirement is \$3,496 for a net post-test year addition of \$101,011.

13

14 **Q. What is Staff's recommendation?**

15 A. Staff recommends increasing plant in service for Bella Vista by \$2,954 as shown on  
16 Schedules CSB-4 and CSB-5.

17

18 *Rate Base Adjustment – Inadequately Supported Plant (All Algonquin Companies)*

19 **Q. Is it a requirement that plant costs be supported?**

20 A. Yes. The Arizona Administrative Code R14-2-610 D.1 states, "Each utility shall keep  
21 general and auxiliary accounting records reflecting the cost of its properties . . . and all  
22 other accounting and statistical data necessary to give complete and authentic information  
23 as to its properties . . . ." (Emphasis added).

24

1 **Q. During the audit, did Staff identify plant costs which Bella Vista could not**  
2 **adequately support?**

3 A. Yes. Bella Vista did not provide invoices to support \$81,236 in pump additions and  
4 \$23,747 in services additions. Source documents are essential records for verifying plant  
5 costs. In the absence of supporting documentation, the Company's plant balances cannot  
6 be verified.

7

8 **Q. Did Staff have any concerns regarding the Northern Sunrise and Southern Sunrise**  
9 **plant costs?**

10 A. Yes. Northern Sunrise and Southern Sunrise did not adequately support \$23,454 and  
11 \$44,673, respectively for allowance for funds used during construction ("AFUDC") that  
12 were included in plant. The documentation provided by Northern Sunrise and Southern  
13 Sunrise showed that the construction work in progress balances on which the AFUDC was  
14 calculated were not the same plant balances to which the AFUDC costs were included.

15

16 **Q. Did Staff request additional information regarding the AFUDC?**

17 A. Yes. Staff sent a data request on February 26, 2010. On March 17, 2010, Southern  
18 Sunrise stated that "portions of the project additions were mistakenly added to the wrong  
19 schedules . . . ."

20

21 **Q. Should the inadequately supported plant costs be removed from rate base?**

22 A. Yes. It is the Company's responsibility to support its claimed costs. If unsupported costs  
23 are not removed, ratepayers are at risk of paying for non-existent or overstated costs.

1 **Q. What is Staff's recommendation?**

2 A. Staff recommends decreasing plant in service as shown on Schedules CSB-4 and CSB-5  
3 for each of the Algonquin Companies as follows:  
4

INADEQUATELY SUPPORTED PLANT				
	Reference:	Plant In Service Per Company	Staff's Adjustment	Plant In Service Per Staff
Bella Vista	Schedules CSB-4 & CSB-6	\$25,625,205	(\$104,983)	\$25,520,222
Northern Sunrise	Schedules CSB-4 & CSB-6	\$815,886	(\$23,454)	\$792,432
Southern Sunrise	Schedules CSB-4 & CSB-6	\$1,724,610	(\$44,673)	\$1,679,937

5

6 *Rate Base Adjustment – Plant Retirements (Bella Vista)*

7 **Q. What does the NARUC USOA state regarding plant accounts when a plant item is**  
8 **retired?**

9 A. Accounting Instruction No. 27, Paragraph B(2), of the NARUC USOA states, "When a  
10 retirement unit is retired from utility plant, with or without replacement, the book cost  
11 thereof shall be credited to the utility plant account in which it is included . . . ."

12

13 **Q. Did Bella Vista retire plant from service?**

14 A. Yes. In response to CSB 1-7, Bella Vista indicated that it took plant out of service;  
15 however, the response also indicated that it did not maintain a record or a separate break-  
16 out for such plant.

17

18 **Q. Did Bella Vista remove the related retirements from its plant in service records as**  
19 **required by the NARUC USOA?**

20 A. No, it did not, with the exception of the pro forma retirement related to the post-test year  
21 plant.

1 **Q. What is the primary effect of the Company not removing retirements from plant in**  
2 **service records?**

3 A. The primary effect in this case of not removing retirements from plant in service records is  
4 that depreciation expense is overstated. Also, in some instances, the cost of a plant item is  
5 not allocated equally over the plant's useful life. Additionally, the balances for plant and  
6 accumulated depreciation are overstated.

7  
8 **Q. Would you give an example of how the cost of a plant item was not allocated equally**  
9 **over the plant's useful life?**

10 A. Yes. Schedule B-2, page 3.9, of Bella Vista's application shows a 2009 adjusted plant  
11 addition in the amount of \$29,383 for Account No. 334, Meters. The schedule also shows  
12 depreciation expense in the amount of \$29,383 for Account No. 334, Meters. Since the  
13 Commission-approved depreciation rate for the meters account is currently 10 percent, no  
14 more than \$2,938 should have been calculated for this plant addition ( $\$29,383 \times .10 =$   
15  $\$2,938$ ). Calculating annual depreciation expense that equals the cost of the plant violates  
16 the matching principle and the NARUC USOA.

17  
18 **Q. Is there any way for Staff to determine which plant has actually been removed from**  
19 **service?**

20 A. No, since Bella Vista did not keep records, it would have to conduct a physical inventory  
21 of all plant in service.

22  
23 **Q. As an alternative, did Staff apply a methodology to identify certain plant that should**  
24 **be treated as retired?**

25 A. Yes, Staff identified all plant that was in service in 1998, that had a useful life of ten years  
26 or less, and that had reached the end of that useful life, i.e., had been fully depreciated.

1 On average, Staff would expect that most, if not all, of the 1998 plant would no longer be  
2 operational at the end of the ten years and thus, for ratemaking purposes, Staff treated the  
3 plant as if it were retired and removed the original cost from both plant in service and  
4 accumulated depreciation. Any plant additions after 1998, even if fully depreciated, were  
5 assumed to be still in service. This methodology results in the minimum amount of plant  
6 being treated as if retired.

7  
8 **Q. What is Staff's recommendation for Bella Vista?**

9 A. Staff recommends decreasing Bella Vista's plant in service by \$2,553,834 as shown on  
10 Schedules CSB-4 and CSB-7. A related adjustment is recommended for accumulated  
11 depreciation, below.

12  
13 **Q. Is Staff making similar recommendations for Northern Sunrise and Southern  
14 Sunrise?**

15 A. No. Northern Sunrise and Southern Sunrise have no plant that was placed in service prior  
16 to 2006 and no plant that is fully depreciated. Therefore, even though no plant items were  
17 recorded as retired, Staff assumed that all plant remained in service during the test year.

18  
19 *Rate Base Adjustment – Regulatory Assets (Northern Sunrise and Southern Sunrise)*

20 **Q. Did the Commission authorize Northern Sunrise and Southern Sunrise to recover  
21 certain acquisition costs?**

22 A. Yes. Decision No. 68826,<sup>1</sup> on page 35, beginning at line 1, states: "IT IS FURTHER  
23 ORDERED that the transaction costs shall be limited to \$300,000 and include the types of  
24 costs discussed in Finding of Fact No. 47."

25  

---

<sup>1</sup> Issued June 29, 2006, Docket No. W-20453A-06-0247 et al..

1 **Q. What were the types of costs discussed in Finding of Fact No. 47?**

2 A. Finding of Fact No. 47 on page 10 of Decision No. 68826 states:

3  
4 Northern and Southern have estimated acquisition costs of  
5 approximately \$300,000, broken down as follows: 1) approximately  
6 \$100,000 for reorganization costs including participation in  
7 bankruptcy proceedings, acquisition due diligence, interaction with  
8 regulatory agencies, etc.; 2) approximately \$100,000 for  
9 Commission related activities; and 3) approximately \$100,000 for  
10 transition costs such as support for interim operator, capitalized  
11 labor costs, etc.

12

13 **Q. What portion of the \$300,000 was allocated to Northern Sunrise and Southern**  
14 **Sunrise?**

15 A. Finding of Fact No. 50 on page 11 shows that Staff allocated \$64,619 to Northern Sunrise  
16 and \$235,381 to Southern Sunrise.

17

18 **Q. Did the Commission require that Northern Sunrise and Southern Sunrise provide**  
19 **support for these amounts?**

20 A. Yes. Finding of Fact No. 54 on page 12 at line 24 states:

21

22 In the next rate case, the Commission will need to consider whether  
23 the costs attributed to the acquisition and included in the Regulatory  
24 Asset Account were actually incurred in connection with this  
25 acquisition . . . .

26

27 **Q. Did Staff request documentation to substantiate the cost of the Northern Sunrise and**  
28 **Southern Sunrise acquisition?**

29 A. Yes. Staff requested the information for Northern Sunrise in data request CSB 3-5 on  
30 December 16, 2009, and for Southern Sunrise in data request CSB 4.5 on December 17,

1           2009. Staff also requested the information in data request CSB 10.3 on February 26,  
2           2010.

3  
4           **Q.    When did Northern Sunrise and Southern Sunrise provide documentation?**

5           A.    The Companies provided documentation on March 17, 2010.

6  
7           **Q.    Has Staff completed its review of the documentation?**

8           A.    No, because of the timing of the receipt of documentation from the Companies, Staff did  
9           not have sufficient time to review prior to the filing of its Direct Testimony. Staff will  
10          need to review the information provided and, in addition, may also need to send follow-up  
11          data requests and may make additional adjustments as warranted.

12  
13          **Q.    Should unverified costs be removed from plant in service?**

14          A.    Yes, they should. If unsupported costs are not removed, ratepayers are at risk of paying  
15          for non-existent or overstated costs. Therefore, Staff has removed the regulatory assets  
16          pending completion of its audit. Once the audit is complete, Staff will make any changes  
17          to its recommendation in Staff's Surrebuttal Testimony.

18  
19          **Q.    What is Staff's recommendation?**

20          A.    Staff recommends decreasing plant in service by \$64,621 for Northern Sunrise and  
21          \$235,381 for Southern Sunrise as shown on Schedules CSB-4 and CSB-6.

22  
23          *Rate Base Adjustment – Accumulated Depreciation (All Algonquin Companies)*

24          *Bella Vista*

25          **Q.    What amount of accumulated depreciation is Bella Vista proposing?**

26          A.    Bella Vista is proposing accumulated depreciation of \$11,909,440.

1 **Q. What is Staff's primary concern with Bella Vista's calculation of accumulated**  
2 **depreciation?**

3 A. Staff's main concern is that retirements are not removed from accumulated depreciation as  
4 required by the NARUC USOA.

5  
6 **Q. What does the NARUC USOA state regarding the accumulated depreciation account**  
7 **when a plant item is retired?**

8 A. Accounting Instruction No. 27, Paragraph F, of the NARUC USOA states, "The book cost  
9 less net salvage of depreciable utility plant retired shall be charged to account 108.1 –  
10 Accumulated Depreciation of Utility Plant In Service. . . ."

11  
12 **Q. Did Bella Vista retire any plant from service?**

13 A. Yes. In response to CSB 1-7, Bella Vista indicated that it took plant out of service;  
14 however, the response also indicated that it did not maintain a record or a separate break-  
15 out for such plant.

16  
17 **Q. Did Bella Vista remove the retirement from accumulated depreciation as required by**  
18 **the NARUC USOA?**

19 A. No, it did not, with the exception of the pro forma retirement related to the post-test year  
20 plant.

21  
22 **Q. Did Staff adjust accumulated depreciation?**

23 A. Yes, consistent with the discussion above regarding the Plant Retirements adjustment,  
24 Staff identified all plant that was in service in 1998, that had a useful life of ten years or  
25 less, and that had reached the end of that useful life, i.e., had been fully depreciated. Staff

1 then treated that plant as if it were retired and removed the original cost from both plant in  
2 service and accumulated depreciation.

3  
4 **Q. Did Staff make any other adjustments to accumulated depreciation?**

5 A. Yes. In addition to adjusting for plant retirements, Staff also removed the accumulated  
6 depreciation associated with Post-Test Year Plant and with plant disallowed for  
7 inadequate documentation. Staff's adjustment to accumulated depreciation also reflects  
8 application of Staff's methodology for calculating depreciation to Staff's recommended  
9 plant balances. Staff's methodology allocates the cost equally over the plant's useful life  
10 and does not calculate depreciation expense on fully depreciated plant. (See discussion  
11 below regarding Depreciation Expense adjustment).

12  
13 **Q. Please summarize Staff's adjustments to Bella Vista's Accumulated Depreciation.**

14 A. Staff decreased accumulated depreciation by \$3,224,427, as shown below :

15

Detail of Staff's Adjustment to Bella Vista's Accumulated Depreciation	
Post-Test Year Plant	(\$30)
Inadequately Supported Plant	(\$56,074)
Plant Retirements	(\$2,553,834)
Staff's Methodology	(\$614,489)
<b>Total</b>	<b>(\$3,224,427)</b>

16  
17  
18

19  
20 *Northern Sunrise and Southern Sunrise*

21 **Q. What amount of accumulated depreciation are Northern Sunrise and Southern**  
22 **Sunrise proposing?**

23 A. Northern Sunrise and Southern Sunrise are proposing accumulated depreciation of  
24 \$42,738 and \$105,733, respectively.

1 **Q. Did Staff adjust accumulated depreciation?**

2 A. Yes, Staff decreased accumulated depreciation by \$11,624 and \$40,856, respectively to  
3 reflect Staff's calculation of accumulated depreciation based on Staff's adjustments to  
4 plant in service. The detail of Staff's adjustments to Northern Sunrise and Southern  
5 Sunrise's accumulated depreciation are:

6

Detail of Staff's Adjustment to Accumulated Depreciation		
	Northern Sunrise	Southern Sunrise
Inadequately Supported Plant	\$(11,624)	\$(40,856)

7  
8

9 **Q. Please summarize Staff's recommendation for accumulated depreciation?**

10 A. Staff recommends decreasing accumulated depreciation for each of the Algonquin  
11 Companies as follows:

12

ACCUMULATED DEPRECIATION				
	Reference:	Accumulated Depreciation Per Company	Staff's Adjustment	Accumulated Depreciation Per Staff
Bella Vista	Schedules CSB-4 & CSB-8	\$11,909,440	\$(3,224,427)	\$8,685,013
Northern Sunrise	Schedules CSB-4 & CSB-7	\$42,738	\$(11,624)	\$31,114
Southern Sunrise	Schedules CSB-4 & CSB-7	\$105,733	\$(40,856)	\$64,877

13

14 *Rate Base Adjustment – Customer Deposits (All Algonquin Companies)*

15 **Q. Are the Algonquin Companies proposing to include customer deposits in the rate  
16 base calculation?**

17 A. No, they are not.

18

19 **Q. Are customer deposits normally treated as a deduction from rate base?**

20 A. Yes. Customer deposits are a deduction in the calculation of rate base.

21

1 **Q. Why are customer deposits normally deducted from rate base?**

2 A. Customer deposits are deducted from rate base in order to recognize capital provided by  
3 non-investors.

4  
5 **Q. What were the Companies' customer deposit balances at the end of the test year?**

6 A. The Companies' customer deposits balances were \$175,850 for Bella Vista; \$7,972 for  
7 Northern Sunrise, and \$22,298 for Southern Sunrise.

8  
9 **Q. What is Staff's recommendation?**

10 A. Staff recommends decreasing rate base as follows to reflect the test year-end customer  
11 deposit balance:

12

CUSTOMER DEPOSITS				
	Reference:	Customer Deposits Per Company	Staff's Adjustment	Customer Deposits Per Staff
Bella Vista	Schedules CSB-4 & CSB-9	\$0	\$175,850	\$175,850
Northern Sunrise	Schedules CSB-4 & CSB-8	\$0	\$7,972	\$7,972
Southern Sunrise	Schedules CSB-4 & CSB-8	\$0	\$22,298	\$22,298

13

14 *Rate Base Adjustment – Accumulated Deferred Income Taxes (All Algonquin Companies)*

15 **Q. What are ADITs?**

16 A. Accumulated deferred income taxes (“ADIT”) reflect the timing difference between when  
17 income taxes are calculated for ratemaking purposes and the actual federal and state  
18 income taxes paid by the Company.<sup>2</sup> ADITs are the accumulated computed tax differences  
19 between income taxes calculated for book purposes and the actual income taxes that a  
20 company pays to the United States Treasury and the State of Arizona. The primary cause

<sup>2</sup> Decision No. 69164 at 5.

1 of the income tax difference is the straight line depreciation method used for rate-making  
2 purposes and accelerated depreciation method used for Federal and State income tax  
3 reporting purposes. The Statement of Financial Accounting Standards (“SFAS”) No. 109,  
4 Accounting for Income Taxes, requires companies to use deferred tax accounting to  
5 recognize income tax timing differences.<sup>3</sup>

6  
7 **Q. What do the Companies propose for the ADIT component of rate base?**

8 A. The Companies propose to include the following: a net \$230,850 ADIT debit (i.e., an asset  
9 or addition to rate base) for Bella Vista; a net \$4,144 ADIT credit (i.e. a liability of  
10 deduction to rate base) for Northern Sunrise; and a net \$51,588 ADIT credit for Southern  
11 Sunrise.

12  
13 **Q. How does the Company calculate the ADIT debit?**

14 A. A simplified version of the Company’s calculation for Bella Vista, shown on Schedule B-  
15 2, Page 5, is presented below:

Company's Filing	[A]	[B]	[C]
	<u>Book Basis</u>	<u>Tax Basis</u>	Difference (i.e., Deprec. Exp) <u>Col [B] – Col [A]</u>
Plant In Service	\$ 25,625,205		
Accumulated Depreciation	\$ (11,909,440)		
CIAC Net	<u>\$ (496,445)</u>		
Net Plant	\$ 13,219,320	\$ 7,035,952	\$ (6,183,368)
Multiplied by Tax Rate			<u>38.60%</u>
Estimated ADIT Credit			\$ (2,386,711)
Unrefunded AIAC	\$ (6,781,443)	\$ 0	\$ 6,781,443
Multiplied by Tax Rate			<u>38.60%</u>
Estimated ADIT Debit			\$ 2,617,561
<b>Net ADIT Debit [\$(2,386,711) + \$2,617,561 = \$230,850]</b>			<b>\$ 230,850</b>

17  


---

<sup>3</sup> *Id.*

1 **Q. Are Federal and State income tax returns necessary in order to audit the Company's**  
2 **proposed ADIT?**

3 A. Yes. The Rate Case and Audit Manual prepared by the NARUC Staff Subcommittee on  
4 Accounting and Finance states the following:

5  
6 In looking at accumulated DIT, the auditor should look at the  
7 Schedule M of the federal (and possibly state) tax return, to  
8 determine the types of items that are different between the  
9 IRS/State computed taxes and taxes computed for regulatory  
10 purposes. One should then follow these through the records and  
11 adjustments to determine that they have been properly reflected in  
12 the accumulated DIT. One should look for large changes in the  
13 accounts and determine why these significant changes occurred, and  
14 whether they match other items reflected on the income statement.<sup>4</sup>

15  
16 **Q. Did Staff ask the Companies to provide the state and federal tax returns?**

17 A. Yes, in data requests CSB 1-10 for Bella Vista, CSB 3-30 for Northern Sunrise, and CSB  
18 4-30 for Southern Sunrise.

19  
20 **Q. Did the Companies provide the tax returns?**

21 A. Initially they did not. On April 12, 2010, the Companies by email provided certain tax  
22 schedules.

23  
24 **Q. Why did the Companies not provide the tax returns?**

25 A. The Companies initially stated that they did not believe that the tax returns were relevant  
26 and so declined to provide them.

---

<sup>4</sup> Page 25 of the Rate Case and Audit Manual prepared by the NARUC Staff subcommittee on Accounting and Finance (2003) (available at [http://www.naruc.org/publications/ratecase\\_manual.pdf](http://www.naruc.org/publications/ratecase_manual.pdf)).

1 **Q. Can Staff perform a complete audit of the tax basis of the plant without the tax**  
2 **returns?**

3 A. No, it cannot. Staff needs the information in order to trace the tax basis amounts into  
4 inclusion in the federal and possibly the state tax returns.

5  
6 **Q. What is Staff's recommendation?**

7 A. Because of the timing of the receipt of the tax schedules from the Company, Staff did not  
8 have enough time to review or audit this information prior to the filing of its Direct  
9 Testimony. If necessary, Staff will provide revisions in its Surrebuttal Testimony. In the  
10 interim, Staff recommends decreasing rate base as follows to reflect Staff's recommended  
11 ADIT for each of the Algonquin Companies as follows:  
12

ADIT				
	Reference:	ADIT Per Company	Staff's Adjustment	ADIT Per Staff
Bella Vista	Schedules CSB-4 & CSB-10	(\$230,850)	\$2,938,625	\$2,707,775
Northern Sunrise	Schedules CSB-4 & CSB-9	\$4,144	\$200,850	\$204,994
Southern Sunrise	Schedules CSB-4 & CSB-9	\$51,588	\$555,800	\$607,388

13  
14 **FAIRNESS-RELATED ISSUE CONCERNING THE COMPANY'S NON-RECOGNITION**  
15 **OF ADIT CUSTOMER-PROVIDED CAPITAL**

16 **Q. Has Staff identified a cogent issue concerning the transaction that creates the ADIT**  
17 **debit?**

18 A. Yes.

1 **Q. What is the issue?**

2 A. Staff has found that the Companies' proposal to include the ADIT debit represents  
3 recognition of only one side of the transaction that creates the ADIT debit. This one-sided  
4 view financially favors the Companies to the financial detriment of its customers.

5  
6 For example, Staff's analysis shows that, at the same time the customers are paying  
7 approximately \$341,735 in taxes to Bella Vista after the taxes are due and payable to the  
8 IRS, the customers are paying approximately \$854,463 in depreciation expense on  
9 unrefunded Advances in Aid of Construction ("AIAC") plant to Bella Vista before Bella  
10 Vista actually pays for the plant. The \$512,728 difference (i.e., \$854,463 - \$341,735) is  
11 cost-free capital that Bella Vista can use until such time as it refunds the AIAC.

12  
13 Nevertheless, Bella Vista ignores this customer-provided capital by not proposing  
14 recognition of the capital in rate base. Ignoring the impact of customer-provided capital is  
15 inequitable to customers because it results in higher rates.

16  
17 **Q. Please review Mr. Bourassa's explanation of how the ADIT debit is created.**

18 A. In previous testimony related to the creation of the ADIT, Mr. Bourassa states:

19  
20 The book-tax timing difference exists because depreciation on  
21 AIAC funded plant is recognized for book purposes, but not  
22 recognized for tax purposes. In other words, for book purposes, a  
23 lower taxable income is recognized because of the depreciation  
24 expense on AIAC funded plant. But because the Company cannot  
25 recognize a depreciation deduction for tax purposes, it pays higher  
26 income taxes as a result. Thus, a deferred tax asset is created by  
27 this book-tax timing difference. (Emphasis added).<sup>5</sup>  
28

---

<sup>5</sup> Docket No. SW-02361A-08-0609, Black Mountain, Bourassa Rejoinder testimony, page 9, beginning at line 5.

1 **Q. Does the revenue from the depreciation expense of the unrefunded AIAC flow**  
2 **through to the Company's taxable income?**

3 A. Yes. Bella Vista receives approximately \$284,821 in revenue (\$6,781,443 unrefunded  
4 AIAC x 4.2 percent composite depreciation rate) from unrefunded AIAC depreciation  
5 expense. As indicated by Mr. Bourassa, Bella Vista cannot deduct the depreciation  
6 expense on its IRS income tax return since it has no tax basis in the AIAC plant until it is  
7 refunded. The \$284,821 flows through to the Company's IRS taxable income as follows:  
8 \$284,821 revenue - \$0 unrefunded AIAC depreciation expense = \$284,821 in taxable  
9 income. The Company must pay income taxes on the \$284,821.

11 **Q. Does the Company's payment of income taxes on the unrefunded AIAC depreciation**  
12 **expense create the ADIT debit?**

13 A. Yes, as indicated by Mr. Bourassa's discussion, the book-tax timing difference creates the  
14 ADIT debit. The following example shows how paying taxes on the unrefunded AIAC  
15 depreciation expense creates the ADIT debit.

For Illustrative Purposes Only Company's Filing	Ratemaking Income Tax Calculation	Difference	IRS Income Tax Calculation
Company Proposed Revenue	\$4,484,734	\$0	\$4,484,734
Less: All Expenses Except Depreciation Expense and Income Taxes	-\$2,432,145	\$0	-\$2,432,145
Less: Depreciation Expense on Investor Funded Plant (\$1,009,435 - \$284,820)	-\$724,614	\$0	-\$724,614
Less: <b>Depreciation Expense on AIAC</b> Funded Plant (\$6,781,443 x 4.2% Co. composite rate)	<b>-\$284,821</b>	<b>-\$284,821</b>	<b>\$0</b>
Taxable Income	<u>\$1,043,154</u>	<u>-\$284,821</u>	<u>\$1,327,975</u>
Multiplied by Tax Rate	40%	40%	40%
<b>Income Taxes Paid</b>	\$417,262	<b>-\$113,928</b>	\$531,190
<b>Income Tax Timing Difference (ADIT debit)</b>		<b>-\$113,928</b>	

16



1 **Q. Please summarize why recognition of the ADIT debit in rate base is a one-sided view**  
2 **that financially favors the Companies to the financial detriment of its customers?**

3 A. As shown from the analysis above, customers will provide approximately \$512,728 in  
4 cost-free capital to Bella Vista in the form of depreciation expense on plant that Bella  
5 Vista has not yet paid for (i.e., unrefunded AIAC plant). The Company has ignored this  
6 cost-free capital by not recognizing it in rate base. This non-recognition of the customer  
7 provided cost free capital results in a windfall to Bella Vista and higher rates for the  
8 customers.

9  
10 **OPERATING INCOME**

11 *Operating Income Summary*

12 **Q. What are the results of Staff's analysis of test year revenues, expenses and operating**  
13 **income for the Algonquin Companies?**

14 A. Staff's analysis resulted in test year revenues, expenses, and operating income as follows:

15

Test Year	Bella Vista	Northern Sunrise	Southern Sunrise
	Sch CSB-11	Sch CSB-10	Sch CSB-10
Revenues	\$3,526,033	\$191,966	\$444,136
Expenses	\$3,103,536	\$230,133	\$406,157
Operating Income	\$422,497	\$(38,167)	\$37,979

16  
17 *Operating Income Adjustment – Corporate Expense Allocation*

18 **Q. What is the Algonquin Power Income Fund (“Fund” or “APIF”)?<sup>6</sup>**

19 A. The Fund, the ultimate parent of the Algonquin Companies, is an unregulated company  
20 whose primary business activity is the acquisition and ownership of generation and

<sup>6</sup> As noted above, APIF completed a conversion to the corporation, APUC. This conversion has not changed the corporate expense allocation methodology.

1 infrastructure companies through security investments. At year-end 2008, APIF owned  
2 the following types of companies:  
3

2008		
	Types of Facilities	No. of Facilities
1	Renewable Energy	42
2	Thermal Energy	11
3	Water and Wastewater	<u>17</u>
	<b>Total Number of Facilities</b>	<b>70</b>

4  
5 **Q. Please describe the position of the Algonquin Companies within APIF's**  
6 **organizational structure.**

7 A. According to the organizational chart provided in response to CSB 1-37, APIF owns  
8 Algonquin Holdco, who in turn, owns Algonquin Power Fund Canada, who in turn, owns  
9 Algonquin Power Income Fund, who in turn, owns Algonquin Power Fund America, who  
10 in turn, owns Algonquin Water Resources of America, who in turn, owns the Algonquin  
11 Companies.

12  
13 **Q. Would you give an example of the amounts of affiliate charges billed to one of the**  
14 **Algonquin Companies?**

15 A. Yes, for Bella Vista, who is the largest of the Algonquin Companies the affiliates billed as  
16 follows: Algonquin Power Systems billed \$293, Algonquin Power Trust billed \$137,054,  
17 and Algonquin Water Services billed \$994,927, for a total of \$1,132,274 in billings from  
18 affiliates (CSB 1-26).  
19

1 **Q. What is the primary goal of cost allocation between an unregulated affiliate and a**  
2 **regulated affiliate?**

3 A. The primary goal is the fair distribution of costs between the unregulated and regulated  
4 affiliate through proper allocations.

5  
6 **Q. What effect do improperly allocated costs have on rate payers?**

7 A. When costs incurred primarily for the benefit of an unregulated affiliate's business are  
8 improperly identified and allocated as overhead/common costs, then costs of the  
9 unregulated affiliate are shifted to the captive customers of the regulated utility. This cost  
10 shifting results in the captive customers of the regulated utility subsidizing the business  
11 operations of the unregulated affiliate. This harms customers by creating artificially  
12 higher rates. The costs of regulated utilities, such as the Algonquin Companies, should  
13 only include the lesser of actual costs or those costs that would have been incurred on a  
14 stand-alone basis.

15  
16 **Q. What is the definition of "stand-alone basis"?**

17 A. "Stand-alone basis" means reflecting the cost of services as if the regulated utility had  
18 acquired the services by itself. This helps to ensure that any subsidization of the  
19 unregulated business by the captive utility customers is eliminated.

20  
21 **Q. What is the amount of expense that was allocated from the APIF unregulated**  
22 **business operations to Bella Vista during the test year?**

23 A. Bella Vista was allocated \$127,114 during the test year (RUCO DR 3.01).

1 **Q. How was the allocation to Bella Vista made?**

2 A. First, \$3.7 million in expenses from the unregulated affiliate were allocated to the  
3 infrastructure division based on a single allocation factor of 26.98 percent. Those costs  
4 were then allocated to each company within the infrastructure division based upon  
5 customer count (RUCO DR 3.01).

6  
7 **Q. Did Staff review the amounts comprising the \$3.7 million of expenses allocated from  
8 the unregulated affiliate to Bella Vista?**

9 A. Yes.

10  
11 **Q. Does Staff agree that all of the \$3.7 million in costs are costs that should be allocated?**

12 A. No, Staff does not. Staff reviewed the underlying invoices for the costs and determined  
13 that the Company did not identify the costs as direct costs (i.e., costs that can be identified  
14 with a particular service) or indirect costs (costs that cannot be identified with a particular  
15 service) consistent with the NARUC Guidelines for Cost Allocation and Affiliate  
16 Transactions. These guidelines require that the costs primarily attributable to a business  
17 operation should be, to the extent appropriate, directly assigned to that business operation.

18  
19 **Q. What amount of the \$3.7 million did Staff determine was attributable to (i.e., direct  
20 costs of) APIF or an affiliate?**

21 A. Based upon review of the actual supporting invoices provided by the Companies, Staff  
22 determined that almost all of the costs were obviously attributable to the operations of the  
23 APIF or one of its affiliates; therefore, Staff assigned 90 percent of the costs to APIF. The  
24 remaining 10 percent recognizes that the other affiliates receive a benefit from the  
25 common costs and, therefore, should be allocated a percentage greater than zero.

26

1 **Q. Does Staff agree that all of the \$3.7 million of expenses allocated from the**  
2 **unregulated affiliate are allowable operating expenses?**

3 A. No, Staff does not. As shown on schedule CSB-12, Page 2, Staff identified \$123,829 in  
4 unallowable costs. For example, Staff identified costs for the purchase and installation of  
5 furniture, a Dell server and software, shelving, telephones, cabling, and a network. These  
6 costs should be capitalized and depreciated rather than expensed.

7  
8 **Q. Does Staff agree with the Companies' calculation of the factor to allocate common**  
9 **costs?**

10 A. No, Staff does not.

11  
12 **Q. What allocation formula did the Companies use to allocate common costs?**

13 A. The Company used the following formula: 17 utilities / 63 total facilities = 26.98%.

14  
15 **Q. Does Staff agree with the number of total facilities that the Companies used in its**  
16 **formula?**

17 A. No, Staff does not. Staff attempted to match the number used in the formula to the  
18 information in the 2007 and 2008 Algonquin Power Income Fund Annual Reports;  
19 however, the numbers did not agree. The information in the 2007 and 2008 annual reports  
20 is as follows:

21

Line No	Type of Facility	Year-End 2007	Year-End 2008	Average
1	Infrastructure (Water & Sewer)	17	17	17.0
2	All Other Types of Facilities	54	53	53.5
3	<b>Total Number of Facilities</b>	<b>71</b>	<b>70</b>	<b>70.5</b>
4	<b>Allocation Percentage (1 / L4)</b>	<b>1.41%</b>	<b>1.43%</b>	<b>1.42%</b>

22  
23  
24  
25  
26

1 **Q. What allocation percentage does Staff recommend?**

2 A. Staff recommends a 1.42 percent allocation percentage which is an average of the 2007  
3 and 2008 year-end data. Staff's allocation percentage allocates an equal amount of  
4 Corporate expense to each of APIF's companies.

5  
6 **Q. What is Staff's recommendation?**

7 A. Staff recommends decreasing operating expense as follows for all of the Algonquin  
8 Companies:

9

CORPORATE EXPENSE ALLOCATION				
	Reference:	Per Company	Staff's Adjustment	Per Staff
Bella Vista	Schedules CSB-12 & CSB-13	\$127,114	(\$123,982)	\$3,132
Northern Sunrise	Schedules CSB-11 & CSB-12	\$5,261	(\$2,129)	\$3,132
Southern Sunrise	Schedules CSB-11 & CSB-12	\$13,390	(\$10,258)	\$3,132

10

11 *Operating Income Adjustment – Outside Services, Other*

12 **Q. Do the Algonquin Companies have employees?**

13 A. No, the Algonquin Companies do not have employees. The Companies use an outside  
14 service that is owned and operated by its affiliate.

15

16 **Q. Did the Algonquin Companies select the affiliate through a competitive bidding  
17 process?**

18 A. No, it did not.

1 **Q. Is the affiliate an unregulated for-profit company?**

2 A. Yes. During the test year the Companies used Algonquin Water Services (“AWS”) which  
3 is an unregulated for-profit company that provides day-to-day services to operate and  
4 manage the Algonquin Companies.

5  
6 **Q. Is there a risk that the affiliate continually increase its price without fear of losing the  
7 Algonquin Companies as customers?**

8 A. Yes. One of Staff’s concerns is that the Algonquin Companies do not have the ability to  
9 negotiate arms length negotiation and as such, the price for services may not reflect  
10 market prices. In an open, competitive market, it is reasonable to assume that contract  
11 prices reflect market prices.

12  
13 **Q. In what account are the charges for the affiliate recorded?**

14 A. The charges for the affiliate are recorded in the “Outside Services – Other” account.

15  
16 **Q. How much did the expenses for the Outside Services – Other account increase from  
17 2008 to 2009?**

18 A. Bella Vista increased by 8.41 percent and the Northern Sunrise and Southern Sunrise  
19 systems increased by a net 2.36 percent as shown in the table below:

20

		Bella Vista	Northern Sunrise	Southern Sunrise	Net Increase for Northern & Southern
		Sch E-2	Sch E-2	Sch E-2	
1	2007	\$1,031,060	\$10,062	\$10,413	
2	2008	\$1,133,369	\$116,925	\$225,851	\$342,776
3	2009	\$1,228,657	\$159,589	\$175,090	\$334,679
4	<b>2008 to 2009 Incr/(Decr) (L3 – L2)</b>	<b>\$95,288</b>	<b>\$42,664</b>	<b>(\$50,761)</b>	<b>\$8,097</b>
5	<b>% Increase</b>	<b>8.41%</b>	<b>36.49%</b>	<b>-22.48%</b>	<b>2.36%</b>

1 **Q. What were the reasons for the increases?**

2 A. For Bella Vista, the \$95,222 increase was due to a project manager working on a new  
3 facility and increased cost passed along from the unregulated affiliate (CSB 1-26). For  
4 Northern Sunrise, the \$42,664 increase was due to the unregulated affiliate passing along  
5 increased costs (CSB 3-17); and for Southern Sunrise, the \$50,761 decrease was due to the  
6 unregulated affiliate passing along less costs (CSB 4-17).

7  
8 **Q. Please explain what constitutes a related-party transaction.**

9 A. In general, related party transactions are governed by certain accounting standards such as  
10 Financial Accounting Standards Board ("FASB") 57, Related Party transactions. FASB 57  
11 states that examples of related party transactions include transactions between (a) a parent  
12 company and its subsidiaries; (b) subsidiaries of a common parent; (c) an enterprise and  
13 trusts for the benefit of employees, such as pension and profit-sharing trusts that are  
14 managed by or under the trusteeship of the enterprise's management; (d) an enterprise and  
15 its principal owners, management, or members of their immediate families; and (e)  
16 affiliates.

17  
18 **Q. Should there be a higher level of scrutiny of related-party transactions that are not**  
19 **subject to a competitive bidding process?**

20 A. Yes. For related-party transactions, a mere showing that costs were incurred is not  
21 sufficient evidence to demonstrate that the costs are appropriately valued. This is because  
22 related party transactions have sometimes been recorded at inflated amounts. Using a  
23 competitive bidding process provides evidence that the best quality service at the lowest  
24 price is obtained. Also, a competitive bidding process provides incentive to the outside  
25 service to run as efficiently as possible in order to keep costs low.

26

1 **Q. Did Staff adjust the Outside Services - Other account?**

2 A. Yes.

3  
4 **Q. Why did Staff adjust the Outside Services - Other account?**

5 A. The Algonquin Companies have no employees and do not utilize the competitive bidding  
6 process to select the outside service that will manage and operate the Companies. Rather,  
7 the Companies' cost allocation model eliminates the price safeguard that a competitive bid  
8 would afford and contracted solely with their unregulated for-profit affiliate. There is a  
9 risk that the affiliate transaction may not properly reflect market prices.

10

11 The Algonquin Companies have not demonstrated purchasing policies and safeguards to  
12 ensure that ratepayers are not being disadvantaged. Therefore, in order to mitigate the  
13 effect of not using competitive bids, Staff averaged the 2008 and 2009 Outside Services -  
14 Other account balances.

15

16 **Q. What is Staff's recommendation?**

17 A. Staff recommends the following adjustments for the Outside Services – Other account:

18

OUTSIDE SERVICES - OTHER		
	Reference	Staff's Adjustment
Bella Vista	Schedules CSB-12 & CSB-13	(\$47,644)
Northern Sunrise	Schedules CSB-11 & CSB-13	(\$21,332)
Southern Sunrise	Schedules CSB-11 & CSB-13	\$21,043

1 *Operating Income Adjustment – General Office Allocation/Affiliate Increase*

2 **Q. Did the Algonquin Companies include increases to affiliate costs that were not**  
3 **incurred in the test year?**

4 A. Yes, the Companies propose to annualize increased salary costs of contract workers  
5 employed by the affiliate, AWS. The annualization would increase costs as follows:

6

	<u>Affiliate Increase</u>
Bella Vista	\$29,388
Northern Sunrise	\$2,313
Southern Sunrise	\$4,337

7

8 **Q. Are the Companies' proposed increases for affiliate costs justified?**

9 A. No, they are not. The Companies do not have employees; they use the services of contract  
10 personnel through the affiliate AWS. The AWS contract personnel can work on any one  
11 of seven Arizona regulated utilities owned by APIF. The Companies have not presented  
12 sufficient evidence for Staff to determine if these increases are justified or market based.  
13 Consequently, Staff has determined that the cost increase is not justified.

14

15 **Q. What is Staff's recommendation?**

16 A. Staff recommends decreasing operating expense for each of the Algonquin Companies as  
17 follows:

18

GENERAL OFFICE ALLOCATION / AFFILIATE INCREASE		
	<u>Reference:</u>	<u>Staff's Adjustment</u>
Bella Vista	Schedules CSB-12 & CSB-13	\$29,388
Northern Sunrise	Schedules CSB-11 & CSB-12	\$2,313
Southern Sunrise	Schedules CSB-11 & CSB-12	\$4,337

1 *Operating Income Adjustment – Rate Case Expense*

2 **Q. What is the proposed rate case expense for the Algonquin Companies?**

3 A. The proposed rate case expense is as follows:

4

<b>Rate Case Expense Estimates</b>	
Bella Vista	\$250,000
Northern Sunrise	\$ 75,000
Southern Sunrise	<u>\$125,000</u>
Total	\$450,000

5

6 **Q. What are the component costs of rate case expense?**

7 A. In general, the component costs of rate case expense include the following three  
8 categories:

- 9
- 10 1. Consultants – Includes costs such as, but not limited to, hourly fees for revenue  
11 requirement development, cost of capital, rate design, consolidation, schedules,  
12 direct testimony, testifying at hearings, etc.
  - 13 2. Outside Legal Counsel – Includes outside attorneys' and paralegal fees plus  
14 copying, etc.
  - 15 3. Miscellaneous expense – Includes costs such as, but not limited to, public notice,  
16 costs associated with public comment meetings, duplicating costs, etc.
- 17

18 **Q. What does Staff typically review in order to determine whether the component costs  
19 of rate case expense are reasonable?**

20 A. Since the proposed rate case expense is an estimate, Staff typically (1) reviews actual  
21 invoices incurred at a given date, (2) evaluates efforts made to minimize the component  
22 costs of rate case expense (i.e., consultant, outside legal, and miscellaneous expense), and

1 (3) compares the proposed rate case expense to that of comparable current rate case  
2 proceedings. Staff will discuss each of these areas separately.

3  
4 **Q. Did Staff review the invoices?**

5 A. Yes. Staff found that as of February 2010, the Companies had incurred \$82,256 in rate  
6 case expense.

7  
8 **Q. Did Staff review the Companies' efforts to minimize the component costs of rate case  
9 expense?**

10 A. Yes. The Algonquin Companies are part of a corporation that consists of approximately  
11 70 companies with 2008 earnings of approximately \$50 million. In the Companies'  
12 response to CSB 1-40 and CSB 1-41, Staff found that the parent Company used little, if  
13 any, of its internal resources to minimize the cost of legal services, revenue requirement  
14 testimony and cost of capital testimony in this case.

15  
16 **Q. Did Staff compare the proposed rate case expense to that of comparable current rate  
17 case proceedings of non-affiliates?**

18 A. Yes. Staff compared the Algonquin Companies to Arizona-American Water Company,  
19 Arizona Water Company, and Global Water Company:

20

COMPARISON OF THE AVERAGE COST OF RATE CASE EXPENSE				
Rate Case Expense as Requested By Company In Application	Docket Number	Estimated Rate Case Expense	Number of Systems, Companies, & Consolidations	Average Cost Per System/Company
Algonquin Companies	W-02465A-09-0411, et al	\$450,000	4	\$112,500
Arizona-American Water Company	W-01303A-08-0227	\$612,000	10	\$ 61,200
Arizona Water Company	W-01445A-08-0440	\$500,000	17	\$ 29,412
Global Water Company	SW-20445A-09-0077, et al	\$133,376	7	\$ 19,054

1 **Q. Did all of the companies used in Staff's analysis file simultaneous applications for**  
2 **multiple companies or systems?**

3 A. Yes, as shown in the table above, the Algonquin Companies filed for three companies and  
4 one consolidation; Arizona-American Water Company<sup>7</sup> filed for ten systems; Arizona  
5 Water Company filed for seventeen systems, and Global Water Company filed for six  
6 companies and one consolidation.

7  
8 **Q. In general, should the simultaneously filing of multiple rate applications result in**  
9 **cost savings?**

10 A. Yes. There are fewer internal meetings to attend because several rate cases can be  
11 discussed at the same meeting. There are fewer discussions with Staff because several  
12 rate cases can be discussed at one time. Also, there is generally only one Rebuttal and  
13 Rejoinder Testimony and brief filed for the multiple companies. Further, there is  
14 generally only one hearing and one open meeting to attend. Additionally, in response to  
15 data request CSB 1-41, the Companies have acknowledged that, because of their size, they  
16 have "received discount rates, which discounts result in lower rate case expense."

17  
18 **Q. Why does Staff believe the companies used in the comparison were able to mount a**  
19 **rate case for significantly less than the Algonquin Companies?**

20 A. Those companies were able to more efficiently use in-house resources and, thereby, pass  
21 on to their customers more of the savings of filing simultaneous rate cases.

---

<sup>7</sup> The 2009 Arizona-American rate case was not used in the analysis as it was significantly more costly due to the consolidation of 18 water systems.

1 **Q. Does the \$450,000 represent a reasonable and appropriate cost that customers should**  
2 **pay?**

3 A. Based upon Staff's analysis, it does not represent a reasonable cost that customers should  
4 pay. Other comparable non-affiliated companies have been able to lower rate case  
5 expense by more effectively using in-house resources.

6  
7 **Q. What is Staff's recommendation?**

8 A. Staff recommends rate case expense for each of the Algonquin Companies as follows:

9

RATE CASE EXPENSE		
	Reference	Rate Case Expense Per Staff
Bella Vista	Schedules CSB-12 & CSB-17	\$28,061
Northern Sunrise	Schedules CSB-11 & CSB-15	\$8,418
Southern Sunrise	Schedules CSB-11 & CSB-15	\$14,031

10

11 *Operating Income Adjustment – Depreciation Expense*

12 **Q. What are Bella Vista, Northern Sunrise, and Southern Sunrise proposing for**  
13 **depreciation expense?**

14 A. Bella Vista, Northern Sunrise, and Southern Sunrise are proposing depreciation expense of  
15 \$1,009,435, \$36,631, and \$76,419, respectively.

16

17 **Q. What adjustment did Staff make to depreciation expense?**

18 A. Staff adjusted depreciation expense to reflect application of the Staff-recommended  
19 depreciation rates to the Staff recommended plant balances.

20

21 **Q. What is Staff's recommendation?**

22 A. Staff recommends the following depreciation expense for Bella Vista, Northern Sunrise,  
23 and Southern Sunrise:

DEPRECIATION EXPENSE		
	Reference	Depreciation Expense Per Staff
Bella Vista	Schedules CSB-12 & CSB-17	\$740,778
Northern Sunrise	Schedules CSB-11 & CSB-15	\$27,817
Southern Sunrise	Schedules CSB-11 & CSB-15	\$52,807

1

2 *Operating Income Adjustment – Property Taxes*

3 **Q. What did the Companies propose for property tax expense?**

4 A. The Companies proposed the following: \$159,659 for Bella Vista; \$13,128 for Northern  
5 Sunrise; and \$26,765 for Southern Sunrise.

6

7 **Q. Did Staff make any adjustment to the property tax expense?**

8 A. Yes. Staff's adjustment reflects Staff's calculation of the property tax expense using  
9 Staff's recommended revenues.

10

11 **Q. What is Staff's recommendation?**

12 A. Staff recommends the following property tax expense for the Algonquin Companies:

13

14

PROPERTY TAX EXPENSE		
	Reference:	Property Tax Per Staff
Bella Vista	Schedules CSB-12 & CSB-20	\$145,924
Northern Sunrise	Schedules CSB-11 & CSB-18	\$9,025
Southern Sunrise	Schedules CSB-11 & CSB-18	\$20,230

15

16

17

18 *Operating Income Adjustment – Income Taxes*

19 **Q. What are the Algonquin Companies proposing for test year income tax expense?**

20 A. The Algonquin Companies are proposing income tax expense of (\$10,068), (\$36,727), and  
21 \$3,703 for Bella Vista, Northern Sunrise, and Southern Sunrise, respectively.

22

1 **Q. Did Staff make any adjustments to test year income tax expense?**

2 A. Yes. Staff's adjustment reflects Staff's calculation of the income tax expense based upon  
3 Staff's adjusted test year taxable income.

4  
5 **Q. What is Staff's recommendation?**

6 A. Staff recommends the following test year income tax expense for the Algonquin  
7 Companies:

8

INCOME TAX EXPENSE		
	Reference:	Income Tax Expense Per Staff
Bella Vista	Schedules CSB-12 & CSB-21	\$217,811
Northern Sunrise	Schedules CSB-11 & CSB-19	(\$23,993)
Southern Sunrise	Schedules CSB-11 & CSB-19	\$23,875

9

10 *Rate Consolidation*

11 **Q. Did Staff review the Algonquin Companies' proposal to consolidate rates for Bella  
12 Vista, Northern Sunrise, and Southern Sunrise?**

13 A. Yes. Staff reviewed the rate consolidation proposal.

14

15 **Q. Did Staff prepare a schedule showing the individual and consolidated revenue  
16 requirements, rate bases, and operating income statements for Bella Vista, Northern  
17 Sunrise, and Southern Sunrise?**

18 A. Yes, see Schedules CSB-1 through CSB-5 for the consolidated systems.

19

20 **Q. What are the primary reasons for consolidating the Algonquin Companies?**

21 A. According to the Companies' filing, the primary reasons for consolidation, are that  
22 Northern Sunrise and Southern Sunrise customers would receive a rate decrease and Bella

1 Vista customers would receive access to water supply through an existing interconnection  
2 between Northern Sunrise and Southern Sunrise.

3

4 **Q. Has Staff completed its analysis of the proposed consolidation?**

5 A. No, it has not.

6

7 **Q. When will Staff present its recommendation on the Companies request to consolidate**  
8 **rates?**

9 A. Staff will present its recommendations when it files its Rate Design Testimony.

10

11 **Q. Does this conclude your Direct Testimony related to the Algonquin Companies**  
12 **revenue requirement?**

13 A. Yes, it does.

**BELLA VISTA WATER  
COMPANY**

**REVENUE REQUIREMENT**

<u>LINE NO.</u>	<u>DESCRIPTION</u>	<u>[A] COMPANY ORIGINAL COST</u>	<u>[B] STAFF ORIGINAL COST</u>
1	Adjusted Rate Base	\$ 6,343,311	\$ 3,800,682
2	Adjusted Operating Income (Loss)	\$ 94,521	\$ 422,497
3	Current Rate of Return (L2 / L1)	1.49%	11.12%
4	Required Rate of Return	10.77%	8.60%
5	Required Operating Income (L4 * L1)	\$ 683,175	\$ 326,859
6	Operating Income Deficiency (L5 - L2)	\$ 588,653	\$ (95,638)
7	Gross Revenue Conversion Factor	1.62863	1.65130
8	Increase (Decrease) In Gross Revenue (L7 * L6)	\$ 958,701	\$ (157,928)
9	Adjusted Test Year Revenue	\$ 3,526,033	\$ 3,526,033
10	Proposed Annual Revenue (L8 + L9)	\$ 4,484,734	\$ 3,368,105
11	Required Increase/(Decrease in Revenue) (%) (L8/L9)	27.19%	-4.48%

References:

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

Column [B]: Staff Schedules CSB-2, CSB-3, & CSB-11

**GROSS REVENUE CONVERSION FACTOR**

LINE NO.	DESCRIPTION	(A)	(B)	(C)	(D)
<u>Calculation of Gross Revenue Conversion Factor:</u>					
1	Revenue	100.0000%			
2	Uncollectible Factor (Line 11)	0.0000%			
3	Revenues (L1 - L2)	100.0000%			
4	Combined Federal and State Income Tax and Property Tax Rate (Line 23)	39.4418%			
5	Subtotal (L3 - L4)	60.5582%			
6	<b>Revenue Conversion Factor (L1 / L5)</b>	<b>1.651303</b>			
<u>Calculation of Uncollectible Factor:</u>					
7	Unity	100.0000%			
8	Combined Federal and State Tax Rate (Line 17)	38.5989%			
9	One Minus Combined Income Tax Rate (L7 - L8)	61.4011%			
10	Uncollectible Rate	0.0000%			
11	Uncollectible Factor (L9 * L10)	0.0000%			
<u>Calculation of Effective Tax Rate:</u>					
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%			
13	Arizona State Income Tax Rate	6.9680%			
14	Federal Taxable Income (L12 - L13)	93.0320%			
15	Applicable Federal Income Tax Rate (Line 53)	34.0000%			
16	Effective Federal Income Tax Rate (L14 x L15)	31.6309%			
17	Combined Federal and State Income Tax Rate (L13 +L16)		38.5989%		
<u>Calculation of Effective Property Tax Factor</u>					
18	Unity	100.0000%			
19	Combined Federal and State Income Tax Rate (L17)	38.5989%			
20	One Minus Combined Income Tax Rate (L18-L19)	61.4011%			
21	Property Tax Factor (CSB-20, Col B, L24)	1.3727%			
22	Effective Property Tax Factor (L20*L21)		0.8429%		
23	Combined Federal and State Income Tax and Property Tax Rate (L17+L22)			39.4418%	
24	Required Operating Income (Schedule CSB-1, Line 5)	\$ 326,859			
25	Adjusted Test Year Operating Income (Loss) (Sch CSB-11, Col C, Line 34)	422,497			
26	Required Increase in Operating Income (L24 - L25)		\$ (95,638)		
27	Income Taxes on Recommended Revenue (Col. [C], L52)	\$ 157,690			
28	Income Taxes on Test Year Revenue (Col. [A], L52)	217,811			
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		(60,121)		
30	Recommended Revenue Requirement (Schedule CSB-1, Line 10)	\$ 3,368,105			
31	Uncollectible Rate (Line 10)	0.0000%			
32	Uncollectible Expense on Recommended Revenue (L30*L31)	\$ -			
33	Adjusted Test Year Uncollectible Expense	\$ -			
34	Required Increase in Revenue to Provide for Uncollectible Exp. (L32-L33)				
35	Property Tax with Recommended Revenue (CSB-20, Col B, L19)	\$ 143,756			
36	Property Tax on Test Year Revenue (CSB-20, Col A, L16)	145,924			
37	Increase in Property Tax Due to Increase in Revenue (L35-L36)		(2,168)		
38	Total Required Increase in Revenue (L26 + L29 + L34 + L37)		\$ (157,928)		
<u>Calculation of Income Tax:</u>					
		Test Year		Staff Recommended	
39	Revenue (Schedule CSB-11, Col. [C], Line 4 & Sch. CSB-1, Col. [D] Line	\$ 3,526,033	\$ (157,928)	\$ 3,368,105	
40	Operating Expenses Excluding Income Taxes	\$ 2,885,725	\$ (2,168)	\$ 2,883,557	
41	Synchronized Interest (L56)	\$ 76,014		\$ 76,014	
42	Arizona Taxable Income (L39 - L40 - L41)	\$ 564,295		\$ 408,535	
43	Arizona State Income Tax Rate	6.9680%		6.9680%	
44	Arizona Income Tax (L42 x L43)	\$ 39,320		\$ 28,467	
45	Federal Taxable Income (L42 - L44)	\$ 524,975		\$ 380,068	
46	Federal Tax on Income Bracket - Not Used	\$ -		\$ -	
47	Federal Tax on Income Bracket - Not Used	\$ -		\$ -	
48	Federal Tax on Income Bracket - Not Used	\$ -		\$ -	
49	Federal Tax on Income Bracket - Not Used	\$ -		\$ -	
50	Federal Tax on All Income (\$0 -\$10,000,000) @ 34%	\$ 178,491		\$ 129,223	
51	Total Federal Income Tax	\$ 178,491		\$ 129,223	
52	Combined Federal and State Income Tax (L44 + L51)	\$ 217,811		\$ 157,690	
53	Applicable Federal Income Tax Rate [Col. [C], L51 - Col. [A], L51] / [Col. [C], L45 - Col. [A], L45]			34.0000%	
<u>Calculation of Interest Synchronization:</u>					
54	Rate Base (Schedule CSB-3, Col. (C), Line 14)	\$ 3,800,682			
55	Weighted Average Cost of Debt	2.0000%			
56	Synchronized Interest (L45 X L46)	\$ 76,014			

**RATE BASE - ORIGINAL COST**

LINE NO.	(A) COMPANY AS FILED	(B) STAFF ADJUSTMENTS	ADJ NO.	(C) STAFF AS ADJUSTED
	1	\$ 25,625,205	\$ (2,655,863)	1, 2, 3
2	11,909,440	(3,224,427)	4	8,685,013
3	<u>\$ 13,715,765</u>	<u>\$ 568,564</u>		<u>\$ 14,284,329</u>
<u>LESS:</u>				
4	\$ 6,781,443	\$ -		\$ 6,781,443
5	\$ 556,325	\$ -		\$ 556,325
6	\$ 496,445	\$ -		\$ 496,445
7	230,909	-		230,909
8	<u>\$ 265,536</u>	<u>-</u>		<u>\$ 265,536</u>
9	\$ 7,603,304	\$ -		\$ 7,603,304
10	\$ -	\$ 175,850	5	\$ 175,850
11	\$ (230,850)	\$ 2,935,343	6	\$ 2,704,493
<u>ADD:</u>				
12	\$ -	\$ -		\$ -
13	\$ -	\$ -		\$ -
14	<u>\$ 6,343,311</u>	<u>\$ (2,542,629)</u>		<u>\$ 3,800,682</u>

References:

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



**RATE BASE ADJUSTMENT NO. 1 - POST TEST-YEAR PLANT AND RETIREMENT**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED (MSJ 5.2)
1	Acct. No. 331 Mains, Post-Test Year Plant	\$ 110,057	\$ (5,550)	\$ 104,507
2	Acct. No. 331 Mains, PTY Plant Retirements	\$ 12,000	\$ (8,504)	\$ 3,496
3	<b>Net Post-Test Year Plant (L1 - L3)</b>	<b>\$ 98,057</b>	<b>\$ 2,954</b>	<b>\$ 101,011</b>

References:

- Column [A]: Company Schedule B-2, Page 3
- Column [B]: Testimony, CSB; Data Request Response to Marlin Scott, Jr. (MSJ 5.2)
- Column [C]: Column [A] + Column [B]

**RATE BASE ADJUSTMENT NO. 2 - INADEQUATELY SUPPORTED PLANT COSTS**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		PLANT SELECTED IN SAMPLE	INADEQUATELY SUPPORTED COSTS	STAFF AS ADJUSTED
1	2002 Plant Addition, Acct No. 311 - Pumping Equipment	\$ 71,076	\$ (71,076)	\$ -
2	2003 Plant Addition, Acct No. 311 - Pumping Equipment	105,990	(10,160)	95,830
3	<b>Acct No. 311- Pumping Equipment Subtotal</b>	<b>\$ 177,066</b>	<b>\$ (81,236)</b>	<b>\$ 95,830</b>
4	2004 Plant Addition, Acct No. 333-Services	100,089	(23,747)	76,342
5	<b>Acct No. 380- Services Subtotal</b>	<b>\$ 100,089</b>	<b>\$ (23,747)</b>	<b>\$ 76,342</b>
6	<b>Total</b>	<b>\$ 277,155</b>	<b>\$ (104,983)</b>	<b>\$ 172,172</b>

References:

- Column A: Company Schedule B-2
- Column B: Testimony, CSB, Company Data Request Responses CSB 1-6
- Column C: Column [A] + Column [B]

**RATE BASE ADJUSTMENT NO. 3 - PLANT RETIREMENTS**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	311 Electric Pumping Equip	\$ 1,402,654	\$ (1,402,654)	\$ -
2	320 Water Treatment Equip	15,225	(15,225)	-
3	334 Meters	822,371	(822,371)	-
4	341 Transportation Equip	220,871	(220,871)	-
5	343 Tools & Work Equip	60,864	(60,864)	-
6	346 Communications Equip	31,850	(31,850)	-
7	<b>Plant Total</b>	<b>\$ 2,553,834</b>	<b>\$ (2,553,834)</b>	<b>\$ -</b>

References:

Column A: Company Schedule B-2

Column B: Testimony, CSB, Company Data Request Responses CSB 1-7

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

**RATE BASE ADJUSTMENT NO. 4 - ACCUMULATED DEPRECIATION**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Accumulated Depreciation	\$ 11,909,440	\$ (3,224,427)	\$8,685,013

References:

- Column A: Company Schedule C-1
- Column B: Testimony, CSB; Data Request Response CSB 1-7
- Column C: Column [A] + Column [B]

PLANT AND ACCUMULATED DEPRECIATION SCHEDULE

	Dec. 31, 2000	Dec. 31, 2000 Ending Original Cost (Dec. No. 65350)	Dec. 31, 2000 Ending Accumulated Depreciation (Dec. No. 65350)	Depr. Rates Effective on November 1, 2002 (Decision No. 65350)	2001		2001 Fully Depreciated	2001 Depr Exp	2001 Cost	2001 Acc Depr
	Original Cost (Dec. No. 65350)				2001 Additions / (Retirements)					
301 Organization Cost	\$0	\$0	\$0	0.00%	\$0	\$0	\$0	\$0	\$0	\$0
302 Franchise Cost	0	0	0	0.00%	0	0	0	0	0	0
303 Land & Land Rights	322,875	0	0	0.00%	0	0	0	322,875	0	0
304 Structures & Improv	822,687	207,134	207,134	2.50%	27,953	0	20,917	850,640	228,051	228,051
307 Wells & Springs	864,013	304,933	304,933	2.70%	48,775	0	23,987	912,788	328,920	328,920
311 Electric Pumping Equip	1,667,296	991,154	991,154	10.00%	62,820	0	169,871	1,730,116	1,161,025	1,161,025
320 Water Treatment Equip	17,938	9,739	9,739	10.00%	5,234	0	2,056	23,172	11,795	11,795
330 Dist. Resrvr & Stndpipe	1,321,238	498,098	498,098	2.50%	141,589	0	34,801	1,462,827	532,899	532,899
331 Trans. & Distr. Mains	7,056,631	2,450,915	2,450,915	2.00%	1,683,517	0	157,968	8,740,148	2,608,883	2,608,883
333 Services	829,747	660,025	660,025	2.00%	(20)	0	16,595	829,727	676,620	676,620
334 Meters	903,840	758,362	758,362	10.00%	37,895	0	92,279	941,735	850,641	850,641
335 Hydrants	457,210	177,863	177,863	2.00%	18,710	0	9,331	475,920	187,194	187,194
339 Other Plant and Misc Equip	0	0	0	10.00%	0	0	0	0	0	0
340 Office Furniture & Fixt	100,023	86,329	86,329	6.67%	6,994	0	6,905	107,017	93,234	93,234
340.1 Computers and Software	161,264	29,062	29,062	6.67%	0	0	10,756	161,264	39,818	39,818
341 Transportation Equip	190,168	108,206	108,206	14.29%	0	0	27,175	190,168	135,381	135,381
343 Tools & Work Equip	121,859	80,790	80,790	11.76%	1,197	0	14,401	123,056	95,191	95,191
345 Power Operated Equip	0	0	0	10.00%	0	0	0	0	0	0
346 Communications Equip	38,740	20,080	20,080	10.00%	0	0	3,874	38,740	23,954	23,954
347 Miscellaneous Equip	100,766	51,170	51,170	6.25%	0	0	6,298	100,766	57,468	57,468
<b>2000/2001 Totals</b>	<b>\$14,976,295</b>	<b>\$6,433,860</b>	<b>\$6,433,860</b>		<b>\$2,034,664</b>	<b>\$0</b>	<b>\$597,212</b>	<b>\$17,010,959</b>	<b>\$7,031,072</b>	<b>\$7,031,072</b>

PLANT AND ACCUMULATED DEPRECIATION SCHEDULE

	2002 Additions Cost	2002 Adj. - Inadequate Support		Fully Depreciated	2002 Depr. Expense	2002 Total Cost	2002 Accumulated Depreciation	2002 Net Book Value
		Cost Removal	Depreciation					
301 Organization Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
302 Franchise Cost	0	0	0	0	0	0	0	0
303 Land & Land Rights	0	0	0	0	0	322,875	0	322,875
304 Structures & Improv	0	0	0	0	21,266	850,640	249,317	601,323
307 Wells & Springs	0	0	0	0	24,645	912,788	353,565	559,223
311 Electric Pumping Equip	71,076	71,076	0	0	173,012	1,730,116	1,334,036	396,080
320 Water Treatment Equip	0	0	0	0	2,317	23,172	14,112	9,060
330 Dist. Resrvr & Stndpipe	0	0	0	0	36,571	1,462,827	569,469	893,358
331 Trans. & Distr. Mains	354,211	0	0	0	178,345	9,094,359	2,787,228	6,307,131
333 Services	42,378	0	0	0	17,018	872,105	693,638	178,467
334 Meters	29,053	0	0	0	95,626	970,788	946,267	24,521
335 Hydrants	43,354	0	0	0	9,952	519,274	197,146	322,128
339 Other Plant and Misc Equip	0	0	0	0	0	0	0	0
340 Office Furniture & Fixt	0	0	0	0	7,138	107,017	100,372	6,645
340.1 Computers and Software	0	0	0	0	10,756	161,264	50,575	110,689
341 Transportation Equip	4,844	0	0	0	27,521	195,012	162,902	32,110
343 Tools & Work Equip	0	0	0	0	14,471	123,056	109,662	13,394
345 Power Operated Equip	0	0	0	0	0	0	0	0
346 Communications Equip	0	0	0	0	3,874	38,740	27,828	10,912
347 Miscellaneous Equip	0	0	0	0	6,298	100,766	63,766	37,000
2002 Totals	\$544,916	\$71,076	\$0	\$0	\$628,811	\$17,484,799	\$7,659,883	\$9,824,916

PLANT AND ACCUMULATED DEPRECIATION SCHEDULE

	2003 Additions Cost	2003 Adj. - Inadequate Support		Fully Depreciated	2003 Depr. Expense	2003 Total Cost	2003 Accumulated Depreciation	2003 Net Book Value
		Cost Removal	Depreciation					
301 Organization Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
302 Franchise Cost	0	0	0	0	0	0	0	0
303 Land & Land Rights	0	0	0	0	0	322,875	0	322,875
304 Structures & Improv	0	0	0	0	21,266	850,640	270,583	580,057
307 Wells & Springs	21,972	0	0	0	24,942	934,760	378,507	556,253
311 Electric Pumping Equip	105,990	10,160	0	0	177,803	1,825,946	1,511,839	314,107
320 Water Treatment Equip	24,705	0	0	0	3,552	47,877	17,664	30,213
330 Dist. Resrvr & Stndpipe	106	0	0	0	36,572	1,462,933	606,041	856,892
331 Trans. & Distr. Mains	118,031	0	0	0	183,067	9,212,390	2,970,295	6,242,095
333 Services	18,726	0	0	0	17,629	890,831	711,267	179,564
334 Meters	47,302	0	0	276,210	71,823	1,018,090	1,018,090	0
335 Hydrants	4,242	0	0	0	10,428	523,516	207,574	315,942
339 Other Plant and Misc Equip	0	0	0	0	0	0	0	0
340 Office Furniture & Fixt	32,875	0	0	0	8,234	139,892	108,606	31,286
340.1 Computers and Software	0	0	0	0	10,756	161,264	61,331	99,933
341 Transportation Equip	8,623	0	0	0	28,483	203,635	191,385	12,250
343 Tools & Work Equip	0	0	9,165	0	13,394	123,056	123,056	0
345 Power Operated Equip	0	0	0	0	0	0	0	0
346 Communications Equip	0	0	0	0	3,874	38,740	31,702	7,038
347 Miscellaneous Equip	0	0	0	0	6,298	100,766	70,064	30,702
2003 Totals	\$382,572	\$10,160	\$0	\$285,375	\$618,123	\$17,857,211	\$8,278,005	\$9,579,206

PLANT AND ACCUMULATED DEPRECIATION SCHEDULE

2004 Additions Cost	2004 Adj. - Inadequate Support		Fully Depreciated	2004		2004 Total Cost	2004 Accumulated Depreciation	2004 Net Book Value
	Cost Removal	Depreciation		Depr. Expense	Depreciation			
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	322,875	0	0	322,875
15,322	0	0	0	21,458	865,962	292,040	292,040	573,922
99,307	0	0	0	26,579	1,034,067	405,086	405,086	628,981
97,537	0	0	0	187,471	1,923,483	1,699,311	1,699,311	224,172
0	0	0	0	4,788	47,877	22,452	22,452	25,425
1,500	0	0	0	36,592	1,464,433	642,634	642,634	821,799
459,511	0	0	0	188,843	9,671,901	3,159,138	3,159,138	6,512,763
100,089	23,747	0	0	18,580	967,173	729,847	729,847	237,326
112,553	0	0	1,018,090	5,628	1,130,643	1,023,717	1,023,717	106,926
55,861	0	0	0	11,029	579,377	218,603	218,603	360,774
0	0	0	0	0	0	0	0	0
31,854	0	0	0	10,393	171,746	118,999	118,999	52,747
0	0	0	0	10,756	161,264	72,087	72,087	89,177
77,639	0	0	0	34,647	281,274	226,032	226,032	55,242
0	0	0	123,056	0	123,056	123,056	123,056	0
0	0	0	0	0	0	0	0	0
8,868	0	0	0	4,317	47,608	36,019	36,019	11,589
0	0	0	0	6,298	100,766	76,362	76,362	24,405
2004 Totals	\$1,060,041	\$23,747	\$0	\$1,141,146	\$567,379	\$18,893,505	\$8,845,384	\$10,048,121

PLANT AND ACCUMULATED DEPRECIATION SCHEDULE

2005 Additions Cost	2005 Retirements		Fully Depreciated	2005		2005 Total Cost	2005 Accumulated Depreciation	2005 Net Book Value
	Cost	Depreciation		Depr. Expense	2005			
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	322,875	0	322,875
1,500	0	0	0	0	21,668	867,462	313,708	553,754
0	0	0	0	0	27,920	1,034,067	433,006	601,061
59,445	0	0	0	195,321	1,982,928	1,894,631	1,894,631	88,297
11,336	0	0	0	5,355	59,213	27,806	27,806	31,407
0	0	0	0	36,611	1,464,433	679,244	679,244	785,189
715,198	0	0	0	200,590	10,387,099	3,359,728	3,359,728	7,027,371
118,712	0	0	0	20,531	1,085,885	750,378	750,378	335,507
151,792	0	0	1,018,090	18,845	1,282,435	1,042,562	1,042,562	239,873
67,646	0	0	0	12,264	647,023	230,867	230,867	416,156
0	0	0	0	0	0	0	0	0
0	0	0	0	11,455	171,746	130,455	130,455	41,291
0	0	0	0	10,756	161,264	82,844	82,844	78,420
0	0	0	0	40,194	281,274	266,226	266,226	15,048
0	0	0	123,056	0	123,056	123,056	123,056	0
0	0	0	0	0	0	0	0	0
64,857	0	0	0	8,004	112,465	44,023	44,023	68,442
5,600	0	0	0	6,473	106,366	82,834	82,834	23,532
\$1,196,086	\$0	\$0	\$1,141,146	\$615,985	\$20,089,591	\$9,461,370	\$9,461,370	\$10,628,221

PLANT AND ACCUMULATED DEPRECIATION SCHEDULE

	2006 Additions Cost	2006 Retirements		Fully Depreciated	2006 Depr. Expense	2006 Total Cost	2006 Accumulated Depreciation	2006 Net Book Value
		Cost	Depreciation					
301 Organization Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
302 Franchise Cost	0	0	0	0	0	0	0	0
303 Land & Land Rights	0	0	0	0	0	322,875	0	322,875
304 Structures & Improv	0	0	0	0	21,687	867,462	335,394	532,068
307 Wells & Springs	0	0	0	0	27,920	1,034,067	460,926	573,141
311 Electric Pumping Equip	95,954	0	188,400	184,251	5,921	2,078,882	2,078,882	0
320 Water Treatment Equip	0	0	0	0	36,375	59,213	33,728	25,485
330 Dist. Resrvr & Stndpipe	(18,843)	0	0	0	218,808	1,445,590	715,620	729,970
331 Trans. & Distr. Mains	1,106,649	0	0	0	23,536	11,493,748	3,578,537	7,915,211
333 Services	181,795	0	0	0	31,885	1,267,680	773,914	493,766
334 Meters	109,008	0	1,018,090	14,104	1,391,443	1,074,447	1,074,447	316,996
335 Hydrants	116,306	0	0	0	763,329	244,971	518,358	0
339 Other Plant and Misc Equip	0	0	0	0	0	0	0	0
340 Office Furniture & Fixt	8,090	0	0	0	11,725	179,836	142,180	37,656
340.1 Computers and Software	0	0	0	0	10,756	161,264	93,600	67,664
341 Transportation Equip	0	220,871	65,536	15,048	0	60,403	60,403	0
343 Tools & Work Equip	0	0	123,056	0	0	123,056	123,056	0
345 Power Operated Equip	0	0	0	0	0	0	0	0
346 Communications Equip	148,115	0	0	18,652	260,580	62,675	62,675	197,905
347 Miscellaneous Equip	0	0	0	6,648	106,366	89,482	89,482	16,884
<b>2006 Totals</b>	<b>\$1,747,074</b>	<b>\$220,871</b>	<b>\$1,395,082</b>	<b>\$627,315</b>	<b>\$21,615,794</b>	<b>\$9,867,814</b>	<b>\$11,747,980</b>	

PLANT AND ACCUMULATED DEPRECIATION SCHEDULE

	2007		2007 Retirements		Fully		2007		2007 Accumulated		2007 Net	
	Additions	Cost	Cost	Depreciation	Depreciated	Depr. Expense	Total Cost	Depreciation	Total Cost	Depreciation	Book Value	Book Value
301 Organization Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
302 Franchise Cost	0	0	0	0	0	0	0	0	0	0	0	0
303 Land & Land Rights	4,524	0	0	0	0	0	327,399	0	327,399	0	327,399	327,399
304 Structures & Improv	46,661	0	0	0	0	22,270	914,123	357,664	1,281,786	357,664	556,459	556,459
307 Wells & Springs	22,357	0	0	0	0	28,222	1,056,424	489,147	1,545,571	489,147	567,277	567,277
311 Electric Pumping Equip	149,458	0	0	2,078,882	2,078,882	7,473	2,228,340	2,086,355	4,314,690	2,086,355	141,985	141,985
320 Water Treatment Equip	12,503	0	0	0	0	6,546	71,716	40,274	112,992	40,274	31,442	31,442
330 Dist. Resrvr & Stndpipe	0	0	0	0	0	36,140	1,445,590	751,759	2,197,340	751,759	693,831	693,831
331 Trans. & Distr. Mains	0	0	0	0	0	229,875	11,493,748	3,808,412	12,302,163	3,808,412	7,685,336	7,685,336
333 Services	16,451	0	0	0	0	25,518	1,284,131	799,432	2,073,569	799,432	484,699	484,699
334 Meters	9,790	0	0	1,018,090	1,018,090	37,825	1,401,233	1,112,272	2,419,108	1,112,272	288,961	288,961
335 Hydrants	66,561	0	0	0	0	15,932	829,890	260,903	1,105,822	260,903	568,987	568,987
339 Other Plant and Misc Equip	362	0	0	0	0	18	362	18	380	18	344	344
340 Office Furniture & Fixt	7,438	0	0	0	0	12,243	187,274	154,423	341,717	154,423	32,851	32,851
340.1 Computers and Software	0	0	0	0	0	10,756	161,264	104,356	265,620	104,356	56,908	56,908
341 Transportation Equip	0	0	0	60,403	60,403	0	60,403	60,403	120,806	60,403	0	0
343 Tools & Work Equip	1,412	0	0	123,056	123,056	83	124,468	123,139	247,606	123,139	1,329	1,329
345 Power Operated Equip	35,160	0	0	0	0	1,758	35,160	1,758	36,918	1,758	33,402	33,402
346 Communications Equip	3,141	0	0	0	0	26,215	263,721	88,890	351,916	88,890	174,831	174,831
347 Miscellaneous Equip	0	0	0	0	0	6,648	106,366	96,130	202,502	96,130	10,236	10,236
2007 Totals	\$375,818	\$0	\$0	\$3,280,431	\$3,280,431	\$467,522	\$21,991,612	\$10,335,336	\$21,656,276	\$10,335,336	\$11,656,276	\$11,656,276

PLANT AND ACCUMULATED DEPRECIATION SCHEDULE

2008 Additions	2008 Retirements		Fully Depreciated	2008		2008 Total Cost	2008 Accumulated Depreciation	2008 Net Book Value
	Cost	Depreciation		Depr. Expense	Expense			
301 Organization Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
302 Franchise Cost	0	0	0	0	0	0	0	0
303 Land & Land Rights	0	0	0	0	327,399	327,399	0	327,399
304 Structures & Improv	39,362	0	0	23,345	953,485	953,485	381,009	572,476
307 Wells & Springs	5,469	0	0	28,597	1,061,893	1,061,893	517,745	544,148
311 Electric Pumping Equip	110,982	0	2,078,882	20,495	2,339,322	2,339,322	2,106,850	232,472
320 Water Treatment Equip	5,764	0	0	7,460	77,480	77,480	47,734	29,746
330 Dist. Resrvr & Stndpipe	822,575	0	0	46,422	2,268,165	2,268,165	798,181	1,469,984
331 Trans. & Distr. Mains	779,446	0	0	237,669	12,273,194	12,273,194	4,046,081	8,227,113
333 Services	57,358	0	0	26,256	1,341,489	1,341,489	825,688	515,801
334 Meters	60,593	0	1,018,090	41,344	1,461,826	1,461,826	1,153,616	308,210
335 Hydrants	29,957	0	0	16,897	859,847	859,847	277,800	582,047
339 Other Plant and Misc Equip	69,189	0	0	3,496	69,551	69,551	3,514	66,037
340 Office Furniture & Fixt	9,033	0	0	12,792	196,307	196,307	167,216	29,091
340.1 Computers and Software	0	0	0	10,756	161,264	161,264	115,112	46,152
341 Transportation Equip	341	0	60,403	24	60,744	60,744	60,427	317
343 Tools & Work Equip	63	60,864	62,192	1,392	63,667	63,667	63,667	0
345 Power Operated Equip	(3,612)	0	0	3,335	31,548	31,548	5,093	26,455
346 Communications Equip	41,046	0	0	28,424	304,767	304,767	117,315	187,452
347 Miscellaneous Equip	2,805	0	0	6,736	109,171	109,171	102,866	6,305
<b>2008 Totals</b>	<b>\$2,030,371</b>	<b>\$60,864</b>	<b>\$3,219,567</b>	<b>\$515,442</b>	<b>\$23,961,119</b>	<b>\$23,961,119</b>	<b>\$10,789,914</b>	<b>\$13,171,205</b>

PLANT AND ACCUMULATED DEPRECIATION SCHEDULE

	2009 Additions Cost	2009 Retirements				January thru March 2009			2009 Total Cost	2009 Accumulated Depreciation	2009 Net Book Value
		Cost	Depreciation	Fully Depreciated	Depr. Expense	2009 Total Cost	2009 Accumulated Depreciation				
								Cost			
301 Organization Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
302 Franchise Cost	0	0	0	0	0	0	0	0	0	0	
303 Land & Land Rights	0	0	0	0	0	0	0	327,399	0	327,399	
304 Structures & Improv	358,631	0	0	0	0	0	7,080	1,312,116	388,089	924,027	
307 Wells & Springs	70,286	0	0	0	0	0	7,405	1,132,179	525,150	607,029	
311 Electric Pumping Equip	66,944	1,402,654	1,402,654	676,228	24,881	1,003,612	24,881	1,003,612	729,077	274,535	
320 Water Treatment Equip	32,159	15,225	15,225	0	2,149	94,414	2,149	94,414	34,658	59,756	
330 Dist. Resrvr & Stndpipe	75,469	0	0	0	14,412	2,343,634	14,412	2,343,634	812,593	1,531,041	
331 Trans. & Distr. Mains	431,339	3,496	3,496	0	62,436	12,701,037	62,436	12,701,037	4,105,021	8,596,016	
333 Services	34,545	0	0	0	6,794	1,376,034	6,794	1,376,034	832,482	543,552	
334 Meters	29,383	822,371	822,371	195,719	21,740	668,838	21,740	668,838	352,985	315,853	
335 Hydrants	32,598	0	0	0	4,381	892,445	4,381	892,445	282,181	610,264	
339 Other Plant and Misc Equip	0	0	0	0	1,739	69,551	1,739	69,551	5,253	64,298	
340 Office Furniture & Fixt	6,622	0	0	0	3,329	202,929	3,329	202,929	170,544	32,385	
340.1 Computers and Software	0	0	0	0	2,689	161,264	2,689	161,264	117,802	43,462	
341 Transportation Equip	13,609	0	0	60,403	255	74,353	255	74,353	60,683	13,670	
343 Tools & Work Equip	153	0	0	62,192	46	63,820	46	63,820	63,712	108	
345 Power Operated Equip	0	0	0	0	789	31,548	789	31,548	5,882	25,666	
346 Communications Equip	130,902	31,850	31,850	0	8,857	403,819	8,857	403,819	94,322	309,497	
347 Miscellaneous Equip	1,177	0	0	0	1,715	110,348	1,715	110,348	104,581	5,767	
<b>2009 Totals</b>	<b>\$1,283,817</b>	<b>\$2,275,596</b>	<b>\$2,275,596</b>	<b>\$994,542</b>	<b>\$170,695</b>	<b>\$22,969,340</b>	<b>\$170,695</b>	<b>\$22,969,340</b>	<b>\$8,685,013</b>	<b>\$14,284,327</b>	

**RATE BASE ADJUSTMENT NO. 5 - CUSTOMER DEPOSITS**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Customer Deposits	\$ -	\$ 175,850	\$ 175,850

References:

Column A: Company Schedule B-2

Column B: Testimony, CSB; Data Request Response CSB 1-15

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

**RATE BASE ADJUSTMENT NO. 6 - ACCUMULATED DEFERRED INCOME TAXES**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		PER COMPANY	ADJUSTMENT	PER STAFF
1	Tax Value of Fixed Assets	\$ 7,035,952	\$ (7,035,952)	\$ -
2	Less: Book Value Fixed Asset Value (From Line 22)	13,219,320	568,562	13,787,882
3	<b>Subtotal</b>	<b>\$ (6,183,368)</b>	<b>\$ (7,604,514)</b>	<b>\$ (13,787,882)</b>
4	Multiplied by	38.6%	38.6%	38.6%
5	Noncurrent Future Tax Asset/(Liability)	(2,386,780)	(2,935,343)	(5,322,123)
6				
7				
8	Tax Value of AIAC	\$ -	\$ -	\$ -
9	Less: Book Value of AIAC	(6,781,443)	-	(6,781,443)
10		\$ 6,781,443	\$ -	\$ 6,781,443
11	Multiplied by	38.6%	-	38.6%
12	Noncurrent Future Tax Asset/(Liability)	2,617,637	-	2,617,637
13				
14	<b>Net Asset/(Liability)</b>	<b>\$ 230,857</b>	<b>\$ (2,935,343)</b>	<b>\$ (2,704,486)</b>
15				
16				
17		Book Value		Book Value
18		Per Company	Adjustment	Staff
19	Plant-in-Service	\$ 25,625,205	\$ (2,655,865)	\$ 22,969,340
20	Accum. Deprec.	\$(11,909,440)	\$ 3,224,427	\$ (8,685,013)
21	CIAC	\$ (496,445)	\$ -	\$ (496,445)
22	Fixed Assets	\$ 13,219,320	\$ 568,562	\$ 13,787,882

References:

- Column A: Company Schedule B-2, page 5
- Column B: Testimony, CSB, Company Data Request Responses CSB 1-10 and 1-11
- Column C: Column [A] + Column [B]

**OPERATING INCOME - TEST YEAR AND STAFF RECOMMENDED**

LINE NO.	DESCRIPTION	[A] COMPANY TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF PROPOSED CHANGES	[E] STAFF RECOMMENDED
<u>REVENUES:</u>						
1	Metered Water Sales	\$ 3,400,892	\$ -	\$ 3,400,892	\$ (157,928)	\$ 3,242,964
2	Water Sales - Unmetered	-	-	-	-	-
3	Other Operating Revenues	125,141	-	125,141	-	125,141
4	<b>Total Revenues</b>	<u>\$ 3,526,033</u>	<u>\$ -</u>	<u>\$ 3,526,033</u>	<u>\$ (157,928)</u>	<u>\$ 3,368,105</u>
<u>EXPENSES:</u>						
7	Salaries and Wages	\$ -	\$ -	\$ -	\$ -	\$ -
8	Purchased Water	708	-	708	-	708
9	Purchased Power	561,094	-	561,094	-	561,094
10	Fuel for Power Production	-	-	-	-	-
11	Chemicals	4,273	-	4,273	-	4,273
12	Materials & Supplies	36,932	-	36,932	-	36,932
13	Outside Services	4,605	-	4,605	-	4,605
14	Outside Services- Legal	35,245	-	35,245	-	35,245
15	Outside Services- Other	1,258,045	(201,014) 1,2,3	1,057,031	-	1,057,031
16	Water Testing	18,805	-	18,805	-	18,805
17	Equipment Rental	-	-	-	-	-
18	Rents	60,600	-	60,600	-	60,600
19	Transportation Expenses	78,117	(11,497) 4	66,621	-	66,621
20	Insurance - General Liability	38,930	-	38,930	-	38,930
21	Insurance - Health and Life	7,290	-	7,290	-	7,290
22	Reg. Comm. Exp.	9,017	-	9,017	-	9,017
23	Reg. Comm. Exp. - Rate Case	83,333	(55,272) 5	28,061	-	28,061
24	Miscellaneous Expense	65,966	(5,681) 6	60,285	-	60,285
25	Bad Debt Expense	9,526	-	9,526	-	9,526
26	Depreciation Expense	1,009,435	(268,656) 7	740,778	-	740,778
27	Taxes Other Than Income	-	-	-	-	-
28	Property Taxes	159,659	(13,735) 8	145,924	(2,168)	143,756
29	Income Taxes	(10,068)	227,880 9	217,811	(60,121)	157,690
31		-	-	-	-	-
32	<b>Total Operating Expenses</b>	<u>\$ 3,431,512</u>	<u>\$ (327,976)</u>	<u>\$ 3,103,536</u>	<u>\$ (62,289)</u>	<u>\$ 3,041,247</u>
33						
34	<b>Operating Income (Loss)</b>	<u>\$ 94,521</u>	<u>\$ 327,976</u>	<u>\$ 422,497</u>	<u>\$ (95,638)</u>	<u>\$ 326,859</u>

References:

Column (A): Company Schedule C-1, Page 2  
Column (B): Schedule CSB-12  
Column (C): Column (A) + Column (B)  
Column (D): Schedules CSB-1 and CSB-2  
Column (E): Column (C) + Column (D)

**SUMMARY OF OPERATING INCOME ADJUSTMENTS - TEST YEAR**

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) ADJ #1 Corporate Allocation	(C) ADJ #2 Outside Services	(D) ADJ #3 Gen Office Alloc/ Increase	(E) ADJ #4 Transportation Expense	(F) ADJ #5 Rate Case Expense	(G) ADJ #6 Meals, Entertainment, & Contributions	(H) ADJ #7 Depreciation Expense	(I) ADJ #8 Property Taxes	(J) ADJ #9 Income Taxes	(K) ADJUSTED
1	REVENUES:											
2	Metered Water Sales	\$ 3,400,892										\$ 3,400,892
3	Water Sales - Unmetered	125,141										125,141
4	Other Operating Revenues											
5	<b>Total Revenues</b>	<b>\$ 3,526,033</b>										<b>\$ 3,526,033</b>
6	OPERATING EXPENSES:											
7	Salaries and Wages	\$ -										\$ -
8	Purchased Water	708										708
9	Purchased Power	561,094										561,094
10	Fuel for Power Production	-										-
11	Chemicals	4,273										4,273
12	Materials & Supplies	36,932										36,932
13	Outside Services	4,605										4,605
14	Outside Services- Legal	35,245										35,245
15	Outside Services- Other	1,258,045	(123,982)	(47,644)	(29,388)							1,057,031
16	Water Testing	18,805										18,805
17	Equipment Rental											
18	Rents	60,600										60,600
19	Transportation Expenses	78,117			(11,497)							66,621
20	Insurance - General Liability	38,930										38,930
21	Insurance - Health and Life	7,290										7,290
22	Reg. Comm. Exp.	9,017										9,017
23	Reg. Comm. Exp. - Rate Case	83,333										83,333
24	Miscellaneous Expense	65,966					(5,681)					60,285
25	Bad Debt Expense	9,526										9,526
26	Depreciation Expense	1,009,435						(268,656)				740,778
27	Taxes Other Than Income											
28	Property Taxes	159,659								(13,735)		145,924
29	Income Taxes	(10,068)									227,880	217,811
31												
32	<b>Total Operating Expenses</b>	<b>\$ 3,431,512</b>	<b>\$ (123,982)</b>	<b>\$ (47,644)</b>	<b>\$ (29,388)</b>	<b>\$ (11,497)</b>	<b>\$ (55,272)</b>	<b>\$ (5,681)</b>	<b>\$ (268,656)</b>	<b>\$ (13,735)</b>	<b>\$ 227,880</b>	<b>\$ 3,103,536</b>
33												
34	<b>Operating Income (Loss)</b>	<b>\$ 94,521</b>	<b>\$ 123,982</b>	<b>\$ 47,644</b>	<b>\$ 29,388</b>	<b>\$ 11,497</b>	<b>\$ 55,272</b>	<b>\$ 5,681</b>	<b>\$ 268,656</b>	<b>\$ 13,735</b>	<b>\$ (227,880)</b>	<b>\$ 422,497</b>

**OPERATING INCOME ADJUSTMENT NO. 1 - EXPENSE ALLOCATIONS  
FROM UNREGULATED AFFILIATE**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS (Col C - Col A)	STAFF AS ADJUSTED
1	Contractual Services - Other	\$ 1,130,931	\$ -	\$ 1,130,931
2	Corporate Expense Allocation	127,114	(123,982)	3,132
3	Total Contractual Services - Other	\$ 1,258,045	\$ (123,982)	\$ 1,134,063

LINE NO.	DESCRIPTION	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]
		Amount (Per RUCO 3.01)	Unallowable Costs (Sch CSB-6, P2)	Direct Costs of Unregulated Affiliate(s)	Allowable Common Costs Allocated to All 70 Companies	Allocation <sup>7</sup> %	Costs to be Allocated to Bella Vista (Col I x Col J)		
7	<b>COSTS TO BE ALLOCATED TO BELLA VISTA</b>								
12	Audit <sup>1</sup>	\$ 680,812	\$ -	\$ (612,730)	\$ 68,081	1.43%	\$ 972.59		
13	Tax Services <sup>2</sup>	\$ 469,804	\$ -	\$ (422,824)	\$ 46,980	1.43%	\$ 671.15		
14	Legal-General <sup>3</sup>	\$ 138,531	\$ -	\$ (124,678)	\$ 13,853	1.43%	\$ 197.90		
15	Other Professional Services <sup>4</sup>	\$ 452,202	\$ -	\$ (406,982)	\$ 45,220	1.43%	\$ 646.00		
16	Management Fee	\$ 563,803	\$ -	\$ (563,803)	\$ -	1.43%	\$ -		
17	Unit Holder Communications	\$ 145,658	\$ -	\$ (145,658)	\$ -	1.43%	\$ -		
18	Trustee Fees	\$ 127,116	\$ -	\$ (127,116)	\$ -	1.43%	\$ -		
19	Escrow and Transfer Fees	\$ 85,354	\$ -	\$ (85,354)	\$ -	1.43%	\$ -		
20	Rent	\$ 273,965	\$ -	\$ (273,965)	\$ -	1.43%	\$ -		
21	Licenses/Fees and Permits	\$ 14,565	\$ -	\$ (14,565)	\$ -	1.43%	\$ -		
22	Office Expenses <sup>5</sup>	\$ 555,759	\$ (123,829)	\$ (405,801)	\$ 26,129	1.43%	\$ 373.27		
23	Depreciation Expense <sup>6</sup>	\$ 189,797	\$ -	\$ (170,818)	\$ 18,980	1.43%	\$ 271.14		
24		\$ 3,697,367	\$ (123,829)	\$ (3,354,294)	\$ 219,244		\$ 3,132.05		

26 Foot Note 1: Audit - As the parent company's lenders require the APIF to have annual financial audits, Staff assigned the  
27 majority of the cost (i.e., 90 percent) to APIF and the remaining 10 percent to its 70 companies/interests.

29 Foot Note 2: Tax Services - Given the tax complexity of the APIF's many holdings and transactions, Staff assigned the  
30 majority of the cost (i.e., 90 percent) to APIF and the remaining 10 percent to its 70 companies/interests.

32 Foot Note 3: Legal, General - Staff reviewed the invoices and found that the very large majority of the cost  
33 (i.e., 90 percent) was directly related to APIF and the remaining 10 percent to its 70 companies/interests.

35 Foot Note 4: Other Professional Services - Staff reviewed the invoices and found that the very large majority of the cost  
36 (i.e., 90 percent) was directly related to APIF and the remaining 10 percent to its 70 companies/interests.

38 Foot Note 5: Office Expense - Staff reviewed the invoices and found that the very large majority of the cost  
39 (i.e., 90 percent) was directly related to APIF and the remaining 10 percent to its 70 companies/interests.

41 Foot Note 6: Depreciation Expense - Given that most of APIF's plant costs benefit primarily APIF, Staff assigned the  
42 majority of the cost (i.e., 90 percent) to APIF and the remaining 10 percent to its 70 companies/interests.

44 Foot Note 7: Allocation Percentage - Calculated as follows: 1 / 70 companies = 1.43%. The 70 companies represents  
45 the average of the year-end 2007, 71 companies, and year-end 2008, 70 companies.

References:

- Column A: Company Schedule C-2
- Column B: Testimony, CSB, Company Data Request Responses CSB 1.26, CSB 1.27, RUCO 3.01
- Column C: Column [A] + Column [B]

<b>LINE NO.</b>	<b>Category</b>	<b>Description of Unallowable Cost</b>	<b>Vendor</b>	<b>Invoice No.</b>	<b>Amount</b>
1					
2	Office Expenses	Furniture	Grand & Toy	612	\$12,530
3	Office Expenses	Furniture Installation	Grand & Toy	612	\$60,909
4	Office Expenses	Dell Server and Software	Dell		\$16,330
5	Office Expenses	Shelving	Stor-Tec Ltd.	JF-394	\$7,459
6	Office Expenses	Telephone System	Cableteck	10802	\$7,641
7	Office Expenses	Phones/Cabling/Network Install	Cableteck	11009820-0074	\$18,960
8		<b>Total for Office Expenses</b>			<b><u>\$123,829</u></b>

**OPERATING INCOME ADJUSTMENT NO. 2 - OUTSIDE SERVICES OTHER**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS (Col C - Col A)	STAFF AS ADJUSTED
1	Outside Services - Other	\$ 1,228,657	\$ (47,644)	\$ 1,181,013
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

		Outside Services Other	
	2008	\$ 1,133,369	Company Sch E-2
	2009	\$ 1,228,657	Company Sch E-2
		<u>\$ 2,362,026</u>	
	Divided by 2	<u>2</u>	
		\$ 1,181,013	

References:

- Column A: Company Schedule C-2
- Column B: Testimony, CSB; Company Data Request Responses to CSB 1-20, 1-21, & 1-26
- Column C: Column [A] + Column [B]

**OPERATING INCOME ADJUSTMENT NO. 3 - GENERAL OFFICE ALLOCATION / AFFILIATE INCREASE**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS (Col C - Col A)	STAFF AS ADJUSTED
1	Outside Services - Other	\$ 1,228,657	\$ -	\$ 1,228,657
2	Affiliate Increase	29,388	(29,388)	-
3	Total Outside Services - Other	\$ 1,258,045	\$ (29,388)	\$ 1,228,657
4				
5				
6				

References:

Column A: Company Schedule C-2

Column B: Testimony, CSB; Company Data Request Responses to CSB 1-20, 1-21, & 1-26

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

**OPERATING INCOME ADJUSTMENT NO. 4 - TRANSPORTATION EXPENSE**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Transportation Expense	78,117	\$ (11,497)	\$ 66,621

		Transportation Expense	
2008	\$	55,124	Company Sch E-2
2009	\$	78,117	Company Sch E-2
	\$	133,241	
Divided by 2		2	
	\$	66,621	

References:

- Column A: Company Schedule C-1 & E-2
- Column B: Testimony, CSB; Data Request CSB 1.29
- Column C: Column [A] + Column [B]

**OPERATING INCOME ADJUSTMENT NO. 5 - RATE CASE EXPENSE**

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENTS	[C] STAFF AS ADJUSTED
1	Rate Case Expense - Bella Vista	\$ 83,333	\$ (55,272)	\$ 28,061

2  
3  
4  
5

[D] Company Name	[E] Total Rate Case Expense Per Co.	[F] Percent of Total Expense	[G] Total Rate Case Exp Per Staff From Line 19	[H] Total Rate Case For Each Company Per Staff Col F x Col G	[I] Normalized Rate Case Expense Col H / 3 Years
<b>Bella Vista</b>	<b>\$250,000</b>	<b>55.56%</b>	<b>\$ 151,530</b>	<b>\$ 84,183</b>	<b>\$ 28,061</b>
Northern Sunrise	\$75,000	16.67%	\$ 151,530	\$ 25,255	\$ 8,418
Southern Sunrise	\$125,000	27.78%	\$ 151,530	\$ 42,092	\$ 14,031
<b>Total</b>	<b>\$450,000</b>	<b>100.00%</b>		<b>\$ 151,530</b>	

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Total Rate Case Exp.	
Average Cost	\$ 37,883 From Line 30
Multiplied by	4 Three Companies & 1 Consolidation
<b>Total Rate Case Expense-Per Staff</b>	<b>\$ 151,530</b>

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[J] Company Name	[K] Rate Case Exp Amount	[L] No. of Companies, Systems, and Consolidations	[M] Average Rate Case Expense Col K / Col L
Arizona-American Water Company <sup>1</sup>	\$ 456,275	7	\$ 65,182
Arizona Water Company <sup>1</sup>	\$ 500,000	17	\$ 29,412
Global Water Company <sup>1</sup>	\$ 133,376	7	\$ 19,054
Total			\$ 113,648
Divided by			3
Average Cost			\$ 37,883

<sup>1</sup> See Below for Docket Numbers

Name	Docket Numbers
Arizona-American Water Company	W-01303A-08-0227
Arizona Water Company	W-01445A-08-0440
Global Water Company	SW-20445A-09-0077, et al

References:

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

**OPERATING INCOME ADJUSTMENT NO. 6 - MEALS, ENTERTAINMENT, & CONTRIBUTIONS**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Miscellaneous Expense	\$ 65,966	\$ (5,681)	\$ 60,285

Meals, Entertainment, & Contributions		
Meals and Entertainment	\$ 5,181	CSB 1-32
Contributions	\$ 500	CSB 1-32
	<u>\$ 5,681</u>	

References:

- Column A: Company Schedule C-1 & E-2
- Column B: Testimony, CSB; Data Request CSB 1-32
- Column C: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 7 - DEPRECIATION EXPENSE ON TEST YEAR PLANT

LINE NO.	DESCRIPTION	[A] PLANT In SERVICE Per Staff	[B] NonDepreciable or Fully Depreciated PLANT	[C] DEPRECIABLE PLANT (Col A - Col B)	[D] DEPRECIATION RATE	[E] DEPRECIATION EXPENSE (Col C x Col D)
1	303 Land and Land Rights	\$ 327,399	\$ (327,399)	\$ 654,798	0.00%	\$ -
2	304 Structures and Improvements	1,312,116	-	1,312,116	3.33%	43,693
3	306 Lake, River, and Other Intakes	-	-	-	2.50%	-
4	307 Wells and Springs	1,132,179	-	1,132,179	3.33%	37,702
5	309 Supply Mains	-	-	-	2.00%	-
6	310 Power Generation Equipment	-	-	-	5.00%	-
7	311 Pumping Equipment	1,003,613	-	1,003,613	12.50%	125,452
8	320 Water Treatment Equipment	94,414	-	94,414	3.33%	3,144
9	330 Distribution Reservoirs and Standpipes	2,343,634	-	2,343,634	2.22%	52,029
10	331 Transmission and Distribution Mains	12,701,038	-	12,701,038	2.00%	254,021
11	333 Services	1,376,034	-	1,376,034	3.33%	45,822
12	334 Meters and Meter Installations	668,838	-	668,838	8.33%	55,714
13	335 Hydrants	892,445	-	892,445	2.00%	17,849
14	336 Backflow Prevention Devices	-	-	-	6.67%	-
15	339 Other Plant and Miscellaneous Equipment	69,551	-	69,551	6.67%	4,639
16	340 Office Furniture and Equipment	202,929	-	202,929	6.67%	13,535
17	341 Transportation Equipment	74,353	-	74,353	20.00%	14,871
	340.1 Computers and Software	161,264	-	161,264	20.00%	32,253
18	343 Tools, Shop, and Garage Equipment	63,819	-	63,819	5.00%	3,191
19	344 Laboratory Equipment	-	-	-	10.00%	-
20	345 Power Operated Equipment	31,548	-	31,548	5.00%	1,577
21	346 Communication Equipment	403,818	-	403,818	10.00%	40,382
22	347 Miscellaneous Equipment	110,348	-	110,348	10.00%	11,035
23	348 Other Tangible Equipment	-	-	-	10.00%	-
24	Total Plant	\$ 22,969,341	\$ -	\$ 23,296,740		\$ 756,908

31	Composite Depreciation Rate (Depr Exp / Depreciable Plant):	3.25%
32	CIAC: \$	496,445
33	Amortization of CIAC (Line 32 x Line 33): \$	16,129
34	Depreciation Expense Before Amortization of CIAC: \$	756,908
	Less Amortization of CIAC: \$	16,129
	Test Year Depreciation Expense - Staff: \$	740,779
	Depreciation Expense - Company:	1,009,435
	<b>Staff's Total Adjustment: \$</b>	<b>(268,656)</b>

References:

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

**OPERATING INCOME ADJUSTMENT NO. 7 - PROPERTY TAX EXPENSE**

LINE NO.	Property Tax Calculation	[A] STAFF AS ADJUSTED	[B] STAFF RECOMMENDED
1	Staff Adjusted Test Year Revenues	\$ 3,526,033	\$ 3,526,033
2	Weight Factor	2	2
3	Subtotal (Line 1 * Line 2)	7,052,066	\$ 7,052,066
4	Staff Recommended Revenue, Per Schedule CSB-1	3,526,033	\$ 3,368,105
5	Subtotal (Line 4 + Line 5)	10,578,099	10,420,171
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	3,526,033	\$ 3,473,390
8	Department of Revenue Mutilplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	7,052,066	\$ 6,946,781
10	Plus: 10% of CWIP -	37,989	37,989
11	Less: Net Book Value of Licensed Vehicles	3,305	\$ 3,305
12	Full Cash Value (Line 9 + Line 10 - Line 11)	7,086,750	\$ 6,981,465
13	Assessment Ratio	21.0%	21.0%
14	Assessment Value (Line 12 * Line 13)	1,488,218	\$ 1,466,108
15	Composite Property Tax Rate	9.8053%	9.8053%
			\$ -
16	Staff Test Year Adjusted Property Tax (Line 14 * Line 15)	\$ 145,924	
17	Company Proposed Property Tax	159,659	
18	Staff Test Year Adjustment (Line 16-Line 17)	\$ (13,735)	
19	Property Tax - Staff Recommended Revenue (Line 14 * Line 15)		\$ 143,756
20	Staff Test Year Adjusted Property Tax Expense (Line 16)		\$ 145,924
21	Increase in Property Tax Expense Due to Increase in Revenue Requirement		\$ (2,168)
22	Increase to Property Tax Expense		\$ (2,168)
23	Increase in Revenue Requirement		(157,928)
24	Increase to Property Tax per Dollar Increase in Revenue (Line19/Line 20)		1.372742%

**OPERATING INCOME ADJUSTMENT NO. 8 - TEST YEAR INCOME TAXES**

LINE NO.	DESCRIPTION	(A)	(B)
	<u>Calculation of Income Tax:</u>		
		<u>Test Year</u>	
1	Revenue	\$ 3,526,033	
2	Less: Operating Expenses - Excluding Income Taxes	\$ 2,885,725	
3	Less: Synchronized Interest (L17)	<u>76,014</u>	
4	Arizona Taxable Income (L1- L2 - L3)	\$ 564,295	
5	Arizona State Income Tax Rate	6.968%	
6	Arizona Income Tax (L4 x L5)		\$ 39,320
7	Federal Taxable Income (L4 - L6)	\$ 524,975	
8	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$ 7,500	
9	Federal Tax on Second Income Bracket (\$51,001 - \$75,000) @ 25%	\$ 6,250	
10	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	\$ 8,500	
11	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	\$ 91,650	
12	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	\$ 64,591	
13	Total Federal Income Tax		<u>\$ 178,491</u>
14	Combined Federal and State Income Tax (L6 + L13)		<u>\$ 217,811</u>
	 <u>Calculation of Interest Synchronization:</u>		
15	Rate Base (Schedule CSB-13, Col. (C), Line 16)	\$ 3,800,682	
16	Weighted Average Cost of Debt	<u>2.00%</u>	
17	Synchronized Interest (L16 x L17)	<u>\$ 76,014</u>	
18		Income Tax - Per Staff \$ 217,811	
19		Income Tax - Per Company \$ (10,068)	
20		<b>Staff Adjustment \$ 227,880</b>	

**NORTHERN SUNRISE  
WATER COMPANY**

**REVENUE REQUIREMENT**

<u>LINE NO.</u>	<u>DESCRIPTION</u>	<u>[A] COMPANY ORIGINAL COST</u>	<u>[B] STAFF ORIGINAL COST</u>
1	Adjusted Rate Base	\$ 742,657	\$ 457,384
2	Adjusted Operating Income (Loss)	\$ (81,316)	\$ (38,167)
3	Current Rate of Return (L2 / L1)	-10.95%	-8.34%
4	Required Rate of Return	12.80%	8.60%
5	Required Operating Income (L4 * L1)	\$ 95,060	\$ 39,335
6	Operating Income Deficiency (L5 - L2)	\$ 176,376	\$ 77,502
7	Gross Revenue Conversion Factor	1.4516941	1.6545626
8	Increase (Decrease) In Gross Revenue (L7 * L6)	\$ 256,044	\$ 128,232
9	Adjusted Test Year Revenue	\$ 191,966	\$ 191,966
10	Proposed Annual Revenue (L8 + L9)	\$ 448,011	\$ 320,198
11	Required Increase/(Decrease in Revenue) (%) (L8/L9)	133.38%	66.80%

References:

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

Column [B]: Staff Schedules CSB-2, CSB-3, & CSB-10

**GROSS REVENUE CONVERSION FACTOR**

LINE NO.	DESCRIPTION	(A)	(B)	(C)	(D)
<u>Calculation of Gross Revenue Conversion Factor:</u>					
1	Revenue	100.0000%			
2	Uncollectible Factor (Line 11)	0.0000%			
3	Revenues (L1 - L2)	100.0000%			
4	Combined Federal and State Income Tax and Property Tax Rate (Line 23)	39.5611%			
5	Subtotal (L3 - L4)	60.4389%			
6	<b>Revenue Conversion Factor (L1 / L5)</b>	<b>1.654563</b>			
<u>Calculation of Uncollectible Factor:</u>					
7	Unity	100.0000%			
8	Combined Federal and State Tax Rate (Line 17)	38.5989%			
9	One Minus Combined Income Tax Rate (L7 - L8)	61.4011%			
10	Uncollectible Rate	0.0000%			
11	Uncollectible Factor (L9 * L10)	0.0000%			
<u>Calculation of Effective Tax Rate:</u>					
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%			
13	Arizona State Income Tax Rate	6.9680%			
14	Federal Taxable Income (L12 - L13)	93.0320%			
15	Applicable Federal Income Tax Rate (Line 53)	34.0000%			
16	Effective Federal Income Tax Rate (L14 x L15)	31.6309%			
17	Combined Federal and State Income Tax Rate (L13 +L16)		38.5989%		
<u>Calculation of Effective Property Tax Factor</u>					
18	Unity	100.0000%			
19	Combined Federal and State Income Tax Rate (L17)	38.5989%			
20	One Minus Combined Income Tax Rate (L18-L19)	61.4011%			
21	Property Tax Factor (CSB-18, Col B, L24)	1.5670%			
22	Effective Property Tax Factor (L20*L21)		0.9622%		
23	Combined Federal and State Income Tax and Property Tax Rate (L17+L22)			39.5611%	
24	Required Operating Income (Schedule CSB-1, Line 5)	\$ 39,335			
25	Adjusted Test Year Operating Income (Loss) (Sch CSB-10, Col C, Line 34)	(38,167)			
26	Required Increase in Operating Income (L24 - L25)		\$ 77,502		
27	Income Taxes on Recommended Revenue (Col. [C], L52)	\$ 24,727			
28	Income Taxes on Test Year Revenue (Col. [A], L52)	(23,993)			
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		48,720		
30	Recommended Revenue Requirement (Schedule CSB-1, Line 10)	\$ 320,198			
31	Uncollectible Rate (Line 10)	0.0000%			
32	Uncollectible Expense on Recommended Revenue (L30*L31)	\$ -			
33	Adjusted Test Year Uncollectible Expense	\$ -			
34	Required Increase in Revenue to Provide for Uncollectible Exp. (L32-L33)		-		
35	Property Tax with Recommended Revenue (CSB-18, Col B, L19)	\$ 11,034			
36	Property Tax on Test Year Revenue (CSB-18, Col A, L16)	9,025			
37	Increase in Property Tax Due to Increase in Revenue (L35-L36)		2,009		
38	Total Required Increase in Revenue (L26 + L29 + L34 + L37)		<b>\$ 128,232</b>		
<u>Calculation of Income Tax:</u>					
39	Revenue (Schedule CSB-10, Col. [C], Line 4 & Sch. CSB-1, Col. [D] Line	\$ 191,966	\$ 128,232	\$ 320,198	
40	Operating Expenses Excluding Income Taxes	\$ 254,126	\$ 2,009	\$ 256,136	
41	Synchronized Interest (L56)	\$ -		\$ -	
42	Arizona Taxable Income (L39 - L40 - L41)	\$ (62,160)		\$ 64,062	
43	Arizona State Income Tax Rate	6.9680%		6.9680%	
44	Arizona Income Tax (L42 x L43)	\$ (4,331)		\$ 4,464	
45	Federal Taxable Income (L42 - L44)	\$ (57,828)		\$ 59,599	
46	Federal Tax on Income Bracket - Not Used	\$ -		\$ -	
47	Federal Tax on Income Bracket - Not Used	\$ -		\$ -	
48	Federal Tax on Income Bracket - Not Used	\$ -		\$ -	
49	Federal Tax on Income Bracket - Not Used	\$ -		\$ -	
50	Federal Tax on All Income (\$0 -\$10,000,000) @ 34%	\$ (19,662)		\$ 20,264	
51	Total Federal Income Tax	\$ (19,662)		\$ 20,264	
52	Combined Federal and State Income Tax (L44 + L51)	\$ (23,993)		\$ 24,727	
53	Applicable Federal Income Tax Rate [Col. [C], L51 - Col. [A], L51] / [Col. [C], L45 - Col. [A], L45]			34.0000%	
<u>Calculation of Interest Synchronization:</u>					
54	Rate Base (Schedule CSB-3, Col. (C), Line 14)	\$ 457,384			
55	Weighted Average Cost of Debt	0.0000%			
56	Synchronized Interest (L45 X L46)	\$ -			

**RATE BASE - ORIGINAL COST**

LINE NO.	(A) COMPANY AS FILED	(B) STAFF ADJUSTMENTS	ADJ NO.	(C) STAFF AS ADJUSTED
1	\$ 815,886	\$ (88,075)	1, 2	\$ 727,812
2	42,738	(11,624)	3	31,114
3	<u>\$ 773,148</u>	<u>\$ (76,451)</u>		<u>\$ 696,697</u>
<u>LESS:</u>				
4	\$ -	\$ -		\$ -
5	\$ 410	\$ -		\$ 410
6	\$ 26,000	\$ -		\$ 26,000
7	63	-		63
8	<u>\$ 25,937</u>	<u>-</u>		<u>\$ 25,937</u>
9	\$ 26,347	\$ -		\$ 26,347
10	\$ -	\$ 7,972	4	\$ 7,972
11	\$ 4,144	\$ 200,850	5	\$ 204,994
<u>ADD:</u>				
12	\$ -	\$ -		\$ -
13	\$ -	\$ -		\$ -
14	<u>\$ 742,657</u>	<u>\$ (285,273)</u>		<u>\$ 457,384</u>

References:

Column [A], Company Schedule B-1, Page 1

Column [B]: Schedule CSB-4

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

SUMMARY OF RATE BASE ADJUSTMENTS

LINE NO.	Acct.	[A] COMPANY AS FILED	[B] Adj No.1 Inadequately Supported Plant, AFUDC	[C] ADJ No. 2 Regulatory Asset	[D] ADJ No. 3 Accumulated Depreciation	[E] ADJ No. 4 Customer Deposits	[F] ADJ No. 5 ADIT	[G] STAFF AS ADJUSTED
<b>PLANT IN SERVICE</b>								
1	No. Plant Description							
2	301 Organization Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3	302 Franchise Cost	890	-	-	-	-	-	890
4	303 Land and Land Rights	23,926	-	-	-	-	-	23,926
5	304 Structures and Improvements	281,810	(4,413)	-	-	-	-	277,397
6	305 Collecting and Impounding Res.	51,378	-	-	-	-	-	51,378
7	307 Wells and Springs	34,064	-	-	-	-	-	34,064
8	309 Supply Mains	-	-	-	-	-	-	-
9	310 Power Generation Equipment	1,293	-	-	-	-	-	1,293
10	311 Electric Pumping Equipment	92,122	(19,041)	-	-	-	-	73,081
11	320 Water Treatment Equipment	-	-	-	-	-	-	-
12	330 Distribution Reservoirs & Standpipe	102,018	-	-	-	-	-	102,018
13	331 Transmission and Distribution Mains	36,763	-	-	-	-	-	36,763
14	333 Services	30,106	-	-	-	-	-	30,106
15	334 Meters	8,244	-	-	-	-	-	8,244
16	335 Hydrants	59,298	-	-	-	-	-	59,298
17	336 Backflow Prevention Devices	-	-	-	-	-	-	-
18	339 Other Plant and Miscellaneous Equipment	23,472	-	-	-	-	-	23,472
19	340 Office Furniture and Fixtures	-	-	-	-	-	-	-
20	340.1 Computers and Software	-	-	-	-	-	-	-
21	341 Transportation Equipment	-	-	-	-	-	-	-
22	343 Tools and Work Equipment	-	-	-	-	-	-	-
23	344 Laboratory Equipment	-	-	-	-	-	-	-
24	345 Power Operated Equipment	-	-	-	-	-	-	-
25	346 Communications Equipment	5,881	-	-	-	-	-	5,881
26	347 Miscellaneous Equipment	-	-	-	-	-	-	-
27	348 Other Tangible Plant	64,621	-	(64,621)	-	-	-	-
28	Rounding	-	-	-	-	-	-	-
29	Total Plant in Service	\$ 815,886	\$ (23,454)	\$ (64,621)	\$ -	\$ -	\$ -	\$ 727,812
30	Less: Accumulated Depreciation	\$ 42,738	\$ -	\$ -	\$ (11,624)	\$ -	\$ -	\$ 31,114
31	Net Plant in Service	\$ 773,148	\$ (23,454)	\$ (64,621)	\$ 11,624	\$ -	\$ -	\$ 696,697
32								
33	<b>LESS:</b>							
34	Advances in Aid of Construction (AIAC)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
35	Service Line and Meter Advances	\$ 410	-	-	-	-	-	\$ 410
37	Contributions in Aid of Construction (CIAC)	\$ 26,000	-	-	-	-	-	\$ 26,000
38	Less: Accumulated Amortization of CIAC	\$ 63	-	-	-	-	-	\$ 63
39	Net CIAC	\$ 25,937	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 25,937
40								
41	Total Advances and Net Contributions	\$ 26,347	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 26,347
42								
43	Customer Deposits	\$ -	-	-	-	7,972	-	\$ 7,972
44	Accumulated Deferred Taxes	\$ 4,144	-	-	-	-	200,850	\$ 204,994
45								
46	<b>ADD:</b>							
47	Working Capital Allowance	\$ -	-	-	-	-	-	\$ -
48		\$ -	-	-	-	-	-	\$ -
49	<b>Total Rate Base</b>	\$ 742,657	\$ (23,454)	\$ (64,621)	\$ 11,624	\$ (7,972)	\$ (200,850)	\$ 457,384

**RATE BASE ADJUSTMENT NO. 1 - INADEQUATELY SUPPORTED PLANT, AFUDC**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		PLANT SELECTED IN SAMPLE	INADEQUATELY SUPPORTED AFUDC COSTS	STAFF AS ADJUSTED
1	2009 Plant Addition, Acct No. 304 - Structures and Improvements	\$ 52,523	\$ (4,413)	\$ 48,110
2	2009 Plant Addition, Acct No. 311 - Pumping Equipment	23,996	(19,041)	95,830
3	<b>Total</b>	\$ 76,519	\$ (23,454)	\$ 143,940

References:

- Column A: Company Schedule B-2
- Column B: Testimony, CSB, Company Data Request Responses CSB 3.5
- Column C: Column [A] + Column [B]

**RATE BASE ADJUSTMENT NO. 2 - REGULATORY ASSET**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Other Tangible Plant - Regulatory Asset	\$ 64,621	\$ (64,621)	\$ -

References:

Column A: Company Schedule B-2

Column B: Testimony, CSB; Data Request Response CSB 3-5 and CSB 10-3

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

**RATE BASE ADJUSTMENT NO. 3 - ACCUMULATED DEPRECIATION**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Accumulated Depreciation	\$ 42,738	\$ (11,624)	\$31,114

References:

- Column A: Company Schedule C-1
- Column B: Testimony, CSB; Data Request Response CSB 3-6
- Column C: Column [A] + Column [B]

23454

PLANT AND ACCUMULATED DEPRECIATION SCHEDULE

	Plant 31-Dec-06 Original Cost	31-Dec-06 Accumulated Depreciation	Depr. Rates Effective on 31-Dec-06 (Dec. No. 68412)	2007		2007		2007	
				Additions	2007 Retirements Cost Removal	2007 Depr. Expense	Total Cost	2007 Accumulated Depreciation	
301 Organization Cost	\$0	\$0	0.00%	\$0	\$0	\$0	\$0	\$0	\$0
302 Franchise Cost	0	0	0.00%	0	0	0	0	0	0
303 Land & Land Rights	23,926	0	0.00%	0	0	0	23,926	0	0
304 Structures & Improv	335	0	3.33%	0	0	\$11	335	11	11
305 Collecting & Impounding Res.	0	0	2.50%	46,603	0	\$583	46,603	583	583
307 Wells & Springs	0	0	3.33%	25,209	0	\$420	25,209	420	420
310 Power Generation Equip	0	0	5.00%	531	0	\$13	531	13	13
311 Electric Pumping Equip	24,594	0	12.50%	6,698	0	\$3,493	31,292	3,493	3,493
320 Water Treatment Equip	0	0	3.33%	0	0	0	0	0	0
330 Dist. Resrvr & Stndpipe	4,680	0	2.22%	0	0	\$104	4,680	104	104
331 Trans. & Distr. Mains	36,984	0	2.00%	0	0	\$740	36,984	740	740
333 Services	1,065	0	3.33%	9,381	0	\$192	10,446	192	192
334 Meters	0	0	8.33%	2,354	0	\$98	2,354	98	98
335 Hydrants	0	0	2.00%	57,373	0	\$574	57,373	574	574
339 Other Plant and Misc Equip	0	0	6.67%	9,370	0	\$312	9,370	312	312
340 Office Furniture & Fixt	0	0	6.67%	0	0	0	0	0	0
340.1 Computers and Software	0	0	20.00%	0	0	0	0	0	0
341 Transportation Equip	0	0	20.00%	0	0	0	0	0	0
343 Tools & Work Equip	0	0	5.00%	0	0	0	0	0	0
345 Power Operated Equip	0	0	5.00%	0	0	0	0	0	0
346 Communications Equip	0	0	10.00%	2,502	0	\$125	2,502	125	125
348 Other Tangible Equipment	0	0	10.00%	64,621	64,621	0	0	0	0
<b>2006/2007 Totals</b>	<b>\$91,584</b>	<b>\$0</b>		<b>\$224,642</b>	<b>\$64,621</b>	<b>\$6,664</b>	<b>\$251,605</b>	<b>\$6,664</b>	<b>\$6,664</b>

PLANT AND ACCUMULATED DEPRECIATION SCHEDULE

2008 Additions	2008 Retirements		2008		2008 Total Cost	2008 Accumulated Depreciation	2008 Net Book Value
	Cost Removal	Depreciation	Fully Depreciated	Depr. Expense			
Cost							
301 Organization Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0
302 Franchise Cost	0	0	0	0	0	0	0
303 Land & Land Rights	0	0	0	0	23,926	0	23,926
304 Structures & Improv	229,294	0	0	3,829	229,629	3,840	225,789
305 Collecting & Impounding Res.	308	0	0	1,169	46,911	1,751	45,160
307 Wells & Springs	6,629	0	0	950	31,838	1,370	30,468
310 Power Generation Equip	763	0	0	46	1,294	59	1,235
311 Electric Pumping Equip	38,521	0	0	6,319	69,813	9,812	60,001
320 Water Treatment Equip	0	0	0	0	0	0	0
330 Dist. Resrvr & Stndpipe	90,679	0	0	1,110	95,359	1,214	94,145
331 Trans. & Distr. Mains	(221)	0	0	737	36,763	1,477	35,286
333 Services	10,637	0	0	525	21,083	717	20,366
334 Meters	1,095	0	0	242	3,449	340	3,109
335 Hydrants	1,925	0	0	1,167	59,298	1,740	57,558
339 Other Plant and Misc Equip	14,102	0	0	1,095	23,472	1,408	22,064
340 Office Furniture & Fixt	0	0	0	0	0	0	0
340.1 Computers and Software	0	0	0	0	0	0	0
341 Transportation Equip	0	0	0	0	0	0	0
343 Tools & Work Equip	0	0	0	0	0	0	0
345 Power Operated Equip	0	0	0	0	0	0	0
346 Communications Equip	3,379	0	0	419	5,881	544	5,337
348 Other Tangible Equipment	0	0	0	0	0	0	0
2008 Totals	\$397,111	\$0	\$0	\$17,608	\$648,716	\$24,272	\$624,444

6,980

PLANT AND ACCUMULATED DEPRECIATION SCHEDULE

2009 Additions Cost	January through March 2009				2009 Total Cost	2009 Accumulated Depreciation	2009 Net Book Value
	2009 Retirements Cost Removal - Depreciation	Fully Depreciated	2009 Depr. Expense	2009 Total Cost			
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
890	0	0	0	890	0	890	890
0	0	0	0	23,926	0	23,926	23,926
52,181	4,413	0	2,110	277,397	5,951	271,446	271,446
4,466	0	0	307	51,377	2,059	49,318	49,318
2,226	0	0	274	34,064	1,644	32,420	32,420
0	0	0	16	1,294	75	1,219	1,219
22,309	19,041	0	2,233	73,081	12,045	61,036	61,036
0	0	0	0	0	0	0	0
6,659	0	0	548	102,018	1,762	100,256	100,256
0	0	0	184	36,763	1,661	35,102	35,102
9,023	0	0	213	30,106	930	29,176	29,176
4,795	0	0	122	8,244	461	7,783	7,783
0	0	0	296	59,298	2,037	57,261	57,261
0	0	0	391	23,472	1,799	21,673	21,673
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	147	5,881	691	5,190	5,190
0	0	0	0	0	0	0	0
\$102,549	\$23,454	\$0	\$6,842	\$727,811	\$31,114	\$696,697	\$696,697

2009 Totals

**RATE BASE ADJUSTMENT NO. 4 - CUSTOMER DEPOSITS**

		[A]	[B]	[C]
LINE NO.	DESCRIPTION	COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Customer Deposits	\$ -	\$ 7,972	\$ 7,972

References:

- Column A: Company Schedule B-2
- Column B: Testimony, CSB; Data Request Response CSB 3-8
- Column C: Column [A] + Column [B]

**RATE BASE ADJUSTMENT NO. 5 - ACCUMULATED DEFERRED INCOME TAXES**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		PER COMPANY	ADJUSTMENT	PER STAFF
1	Tax Value of Fixed Assets	\$ 733,894	\$ (733,894)	\$ -
2	Less: Book Value Fixed Asset Value (From Line 23)	747,211	(88,075)	659,136
3	<b>Subtotal</b>	\$ (13,317)	\$ (645,819)	\$ (659,136)
4	Multiplied by	31.1%	31.1%	31.1%
5	Noncurrent Future Tax Asset/(Liability)	(4,142)	(200,850)	(204,991)
6	Reconciling Amount	-	-	-
7		\$ (4,142)		\$ (204,991)
8				
9	Tax Value of AIAC	\$ -	\$ -	\$ -
10	Less: Book Value of AIAC	-	-	-
11		\$ -	\$ -	\$ -
12	Multiplied by	38.0%	0	38.6%
13	Noncurrent Future Tax Asset/(Liability)	-	-	-
14				
15	<b>Net Asset/(Liability)</b>	\$ (4,142)	\$ (200,850)	\$ (204,991)
16				
17				
18		Book Value		Book Value
19		Per Company	Adjustment	Staff
20	Plant-in-Service	\$ 815,886	\$ (88,075)	\$ 727,811
21	Accum. Deprec.	\$ (42,738)	\$ -	\$ (42,738)
22	CIAC	\$ (25,937)	\$ -	\$ (25,937)
23	Fixed Assets	\$ 747,211	\$ (88,075)	\$ 659,136

References:

- Column A: Company Schedule B-2, page 5
- Column B: Testimony, CSB, Company Data Request Responses CSB 3-30
- Column C: Column [A] + Column [B]

**OPERATING INCOME - TEST YEAR AND STAFF RECOMMENDED**

LINE NO.	DESCRIPTION	[A] COMPANY TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	ADJ NO.	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF PROPOSED CHANGES	[E] STAFF RECOMMENDED
<u>REVENUES:</u>							
1	Metered Water Sales	\$ 188,672	\$ -		\$ 188,672	\$ 128,232	\$ 316,904
2	Water Sales - Unmetered	-	-		-	-	-
3	Other Operating Revenues	3,294	-		3,294	-	3,294
4	<b>Total Revenues</b>	<u>\$ 191,966</u>	<u>\$ -</u>		<u>\$ 191,966</u>	<u>\$ 128,232</u>	<u>\$ 320,198</u>
5							
<u>EXPENSES:</u>							
7	Salaries and Wages	\$ -	\$ -		\$ -	\$ -	\$ -
8	Purchased Water	-	-		-	-	-
9	Purchased Power	16,012	-		16,012	-	16,012
10	Fuel for Power Production	-	-		-	-	-
11	Chemicals	178	-		178	-	178
12	Materials & Supplies	5,094	-		5,094	-	5,094
13	Outside Services	-	-		-	-	-
14	Outside Services- Legal	1,302	-		1,302	-	1,302
15	Outside Services- Other	161,902	(25,774)	1,2,3	136,128	-	136,128
16	Water Testing	3,787	-		3,787	-	3,787
17	Equipment Rental	140	-		140	-	140
18	Rents	-	-		-	-	-
19	Transportation Expenses	21,524	-		21,524	-	21,524
20	Insurance - General Liability	9,692	-		9,692	-	9,692
21	Insurance - Health and Life	-	-		-	-	-
22	Reg. Comm. Exp.	587	-		587	-	587
23	Reg. Comm. Exp. - Rate Case	25,000	(16,582)	4	8,418	-	8,418
24	Miscellaneous Expense	11,726	(610)	5	11,116	-	11,116
25	Bad Debt Expense	3,306	-		3,306	-	3,306
26	Depreciation Expense	36,631	(8,814)	6	27,817	-	27,817
27	Taxes Other Than Income	-	-		-	-	-
28	Property Taxes	13,128	(4,104)	7	9,025	2,009	11,034
29	Income Taxes	(36,727)	12,734	8	(23,993)	48,720	24,727
31							
32	<b>Total Operating Expenses</b>	<u>\$ 273,282</u>	<u>\$ (43,149)</u>		<u>\$ 230,133</u>	<u>\$ 50,730</u>	<u>\$ 280,863</u>
33							
34	<b>Operating Income (Loss)</b>	<u>\$ (81,316)</u>	<u>\$ 43,149</u>		<u>\$ (38,167)</u>	<u>\$ 77,502</u>	<u>\$ 39,335</u>

References:

Column (A): Company Schedule C-1, Page 2  
Column (B): Schedule CSB-10  
Column (C): Column (A) + Column (B)  
Column (D): Schedules CSB-1 and CSB-2  
Column (E): Column (C) + Column (D)

Northern Sunrise Water Company  
 Docket No. W-02453A-09-0412  
 Test Year Ended March 31, 2009

**SUMMARY OF OPERATING INCOME ADJUSTMENTS - TEST YEAR**

LINE NO.	[A] COMPANY AS FILED	[B] ADJ #1 Corporate Expense Allocation Ref. Sch CSB-12	[C] ADJ #2 Outside Services Other Ref. Sch CSB-13	[D] ADJ #3 Gen Office Alloc/ Affiliate Increase Ref. Sch CSB-14	[E] ADJ #4 Rate Case Expense Ref. Sch CSB-15	[F] ADJ #5 Meals, Entertainment, & Contributions Ref. Sch CSB-16	[G] ADJ #6 Depreciation Expense Ref. Sch CSB-17	[H] ADJ #7 Property Taxes Ref. Sch CSB-18	[I] ADJ #8 Income Taxes Ref. Sch CSB-19	[J] STAFF ADJUSTED	
1	Metered Water Revenues	\$ 188,672	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 188,672	
2	Unmetered Water Revenues	-	-	-	-	-	-	-	-	-	
3	Other Water Revenues	3,294	-	-	-	-	-	-	-	3,294	
4	<b>Total Revenues</b>	<b>\$ 191,966</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 191,966</b>	
5	<b>OPERATING EXPENSES:</b>										
6	Salaries and Wages	-	-	-	-	-	-	-	-	-	
7	Purchased Water	-	-	-	-	-	-	-	-	-	
8	Purchased Power	16,012	-	-	-	-	-	-	-	16,012	
9	Fuel for Power Production	-	-	-	-	-	-	-	-	-	
10	Chemicals	178	-	-	-	-	-	-	-	178	
11	Materials & Supplies	5,094	-	-	-	-	-	-	-	5,094	
12	Outside Services	-	-	-	-	-	-	-	-	-	
13	Outside Services- Legal	1,302	-	-	-	-	-	-	-	1,302	
14	Outside Services- Other	161,902	(2,129)	(2,313)	-	-	-	-	-	136,128	
15	Water Testing	3,787	-	-	-	-	-	-	-	3,787	
16	Equipment Rental	140	-	-	-	-	-	-	-	140	
17	Rents - Building	-	-	-	-	-	-	-	-	-	
18	Transportation Expenses	21,524	-	-	-	-	-	-	-	21,524	
19	Insurance - General Liability	9,692	-	-	-	-	-	-	-	9,692	
20	Insurance - Health and Life	-	-	-	-	-	-	-	-	-	
21	Reg. Comm. Exp.	587	-	-	-	-	-	-	-	587	
22	Reg. Comm. Exp. - Rate Case	25,000	-	-	-	-	-	-	-	25,000	
23	Miscellaneous Expense	11,726	-	-	(610)	-	-	-	-	11,116	
24	Bad Debt Expense	3,306	-	-	-	-	-	-	-	3,306	
25	Depreciation Expense	36,631	-	-	-	(8,814)	-	-	-	27,817	
26	Taxes Other Than Income	-	-	-	-	-	-	-	-	-	
27	Property Taxes	13,128	-	-	-	-	(4,104)	-	-	9,025	
28	Income Tax	(36,727)	-	-	-	-	-	12,734	-	(23,993)	
29	<b>Total Operating Expenses</b>	<b>\$ 273,282</b>	<b>\$ (2,129)</b>	<b>\$ (2,313)</b>	<b>\$ (16,582)</b>	<b>\$ (610)</b>	<b>\$ (8,814)</b>	<b>\$ (4,104)</b>	<b>\$ 12,734</b>	<b>\$ 230,133</b>	
30	<b>Operating Income (Loss)</b>	<b>\$ (81,316)</b>	<b>\$ 2,129</b>	<b>\$ 2,313</b>	<b>\$ 16,582</b>	<b>\$ 610</b>	<b>\$ 8,814</b>	<b>\$ 4,104</b>	<b>\$ (12,734)</b>	<b>\$ (38,167)</b>	

**OPERATING INCOME ADJUSTMENT NO. 1 - EXPENSE ALLOCATIONS  
FROM UNREGULATED AFFILIATE**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS (Col C - Col A)	STAFF AS ADJUSTED
1	Contractual Services - Other	\$ 156,641	\$ -	\$ 156,641
2	Corporate Expense Allocation	5,261	(2,129)	3,132
3	Total Contractual Services - Other	\$ 161,902	\$ (2,129)	\$ 159,773

[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]
COSTS TO BE ALLOCATED TO NORTHERN SUNRISE							
Description	Amount (Per RUCO 3.01)	Unallowable Costs (Sch CSB-6, P2)	Direct Costs of Unregulated Affiliate(s)	Allowable Common Costs Allocated to All 70 Companies	Allocation <sup>7</sup> %	Costs to be Allocated to Northern (Col I x Col J)	
12	Audit <sup>1</sup>	\$ 680,812	\$ -	\$ (612,730)	\$ 68,081	1.43%	\$ 972.59
13	Tax Services <sup>2</sup>	\$ 469,804	\$ -	\$ (422,824)	\$ 46,980	1.43%	\$ 671.15
14	Legal-General <sup>3</sup>	\$ 138,531	\$ -	\$ (124,678)	\$ 13,853	1.43%	\$ 197.90
15	Other Professional Services <sup>4</sup>	\$ 452,202	\$ -	\$ (406,982)	\$ 45,220	1.43%	\$ 646.00
16	Management Fee	\$ 563,803	\$ -	\$ (563,803)	\$ -	1.43%	\$ -
17	Unit Holder Communications	\$ 145,658	\$ -	\$ (145,658)	\$ -	1.43%	\$ -
18	Trustee Fees	\$ 127,116	\$ -	\$ (127,116)	\$ -	1.43%	\$ -
19	Escrow and Transfer Fees	\$ 85,354	\$ -	\$ (85,354)	\$ -	1.43%	\$ -
20	Rent	\$ 273,965	\$ -	\$ (273,965)	\$ -	1.43%	\$ -
21	Licenses/Fees and Permits	\$ 14,565	\$ -	\$ (14,565)	\$ -	1.43%	\$ -
22	Office Expenses <sup>5</sup>	\$ 555,759	\$ (123,829)	\$ (405,801)	\$ 26,129	1.43%	\$ 373.27
23	Depreciation Expense <sup>6</sup>	\$ 189,797	\$ -	\$ (170,818)	\$ 18,980	1.43%	\$ 271.14
24		\$ 3,697,367	\$ (123,829)	\$ (3,354,294)	\$ 219,244		\$ 3,132.05

26 Foot Note 1: Audit - As the parent company's lenders require the APIF to have annual financial audits, Staff assigned the  
27 majority of the cost (i.e., 90 percent) to APIF and the remaining 10 percent to its 70 companies/interests.

29 Foot Note 2: Tax Services - Given the tax complexity of the APIF's many holdings and transactions, Staff assigned the  
30 majority of the cost (i.e., 90 percent) to APIF and the remaining 10 percent to its 70 companies/interests.

32 Foot Note 3: Legal, General - Staff reviewed the invoices and found that the very large majority of the cost  
33 (i.e., 90 percent) was directly related to APIF and the remaining 10 percent to its 70 companies/interests.

35 Foot Note 4: Other Professional Services - Staff reviewed the invoices and found that the very large majority of the cost  
36 (i.e., 90 percent) was directly related to APIF and the remaining 10 percent to its 70 companies/interests.

38 Foot Note 5: Office Expense - Staff reviewed the invoices and found that the very large majority of the cost  
39 (i.e., 90 percent) was directly related to APIF and the remaining 10 percent to its 70 companies/interests.

41 Foot Note 6: Depreciation Expense - Given that most of APIF's plant costs benefit primarily APIF, Staff assigned the  
42 majority of the cost (i.e., 90 percent) to APIF and the remaining 10 percent to its 70 companies/interests.

44 Foot Note 7: Allocation Percentage - Calculated as follows: 1 / 70 companies = 1.43%. The 70 companies represents  
45 the average of the year-end 2007, 71 companies, and year-end 2008, 70 companies.

References:

- Column A: Company Schedule C-2
- Column B: Testimony, CSB, Company Data Request Responses CSB 1.26, RUCO 3.01
- Column C: Column [A] + Column [B]

LINE NO.
-------------

1	Category	Description of Unallowable Cost	Vendor	Invoice No.	Amount
2	Office Expenses	Furniture	Grand & Toy	612	\$12,530
3	Office Expenses	Furniture Installation	Grand & Toy	612	\$60,909
4	Office Expenses	Dell Server and Software	Dell		\$16,330
5	Office Expenses	Shelving	Stor-Tec Ltd.	JF-394	\$7,459
6	Office Expenses	Telephone System	Cableteck	10802	\$7,641
7	Office Expenses	Phones/Cabling/Network Install	Cableteck	11009820-0074	\$18,960
8		<b>Total for Office Expenses</b>			<b><u>\$123,829</u></b>

**OPERATING INCOME ADJUSTMENT NO. 2 - OUTSIDE SERVICES OTHER**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS (Col C - Col A)	STAFF AS ADJUSTED
1	Outside Services - Other	\$ 159,589	\$ (21,332)	\$ 138,257
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

		Outside Services Other	
2008	\$	116,925	Company Sch E-2
2009	\$	159,589	Company Sch E-2
		\$ 276,514	
	Divided by 2	2	
		\$ 138,257	

References:

Column A: Company Schedule C-2

Column B: Testimony, CSB; Company Data Request Responses to CSB 3-17

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

**OPERATING INCOME ADJUSTMENT NO. 3 - GENERAL OFFICE ALLOCATION / AFFILIATE INCREASE**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS (Col C - Col A)	STAFF AS ADJUSTED
1	Outside Services - Other	\$ 159,589	\$ -	\$ 159,589
2	Affiliate Increase	2,313	(2,313)	-
3	Total Outside Services - Other	\$ 161,902	\$ (2,313)	\$ 159,589
4				
5				
6				

References:

- Column A: Company Schedule C-2
- Column B: Testimony, CSB; Company Data Request Responses to CSB 3-12 & 3-13
- Column C: Column [A] + Column [B]

**OPERATING INCOME ADJUSTMENT NO. 4 - RATE CASE EXPENSE**

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENTS	[C] STAFF AS ADJUSTED
1	Rate Case Expense - Northern Sunrise	\$ 25,000	\$ (16,582)	\$ 8,418
2				
3				
4				

[D] Company Name	[E] Total Rate Case Expense Per Co.	[F] Percent of Total Expense	[G] Total Rate Case Exp Per Staff From Line 19	[H] Total Rate Case For Each Company Per Staff Col F x Col G	[I] Normalized Rate Case Expense Col H / 3 Years
Bella Vista	\$250,000	55.56%	\$ 151,530	\$ 84,183	\$ 28,061
<b>Northern Sunrise</b>	<b>\$75,000</b>	<b>16.67%</b>	<b>\$ 151,530</b>	<b>\$ 25,255</b>	<b>\$ 8,418</b>
Southern Sunrise	\$125,000	27.78%	\$ 151,530	\$ 42,092	\$ 14,031
<b>Total</b>	<b>\$450,000</b>	<b>100.00%</b>		<b>\$ 151,530</b>	

15  
16  
17  
18  
19  
20

Total Rate Case Exp.	\$ 37,883	From Line 30
Average Cost	4	Multiplied by
Total Rate Case Expense-Per Staff	\$ 151,530	Three Companies & 1 Consolidation

[J] Company Name	[K] Rate Case Exp Amount	[L] No. of Companies, Systems, and Consolidations	[M] Average Rate Case Expense Col K / Col L
Arizona-American Water Company <sup>1</sup>	\$ 456,275	7	\$ 65,182
Arizona Water Company <sup>1</sup>	\$ 500,000	17	\$ 29,412
Global Water Company <sup>1</sup>	\$ 133,376	7	\$ 19,054
		Total	\$ 113,648
		Divided by	3
		Average Cost	\$ 37,883

<sup>1</sup> See Below for Docket Numbers

Name	Docket Numbers
Arizona-American Water Company	W-01303A-08-0227
Arizona Water Company	W-01445A-08-0440
Global Water Company	SW-20445A-09-0077, et al

References:

- Column A: Company Schedule C-1
- Column B: Testimony, CSB; CSB 3-28
- Column C: Column [A] + Column [B]

**OPERATING INCOME ADJUSTMENT NO. 6 - MEALS, ENTERTAINMENT, & CONTRIBUTIONS**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Miscellaneous Expense	\$ 65,966	\$ (610)	\$ 65,356

Meals, and Entertainment,
---------------------------------

\$ 610 CSB 3-20

References:

- Column A: Company Schedule C-1 & E-2
- Column B: Testimony, CSB; Data Request CSB 3-20
- Column C: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 6 - DEPRECIATION EXPENSE ON TEST YEAR PLANT

LINE NO.	DESCRIPTION	[A] PLANT In SERVICE Per Staff	[B] NonDepreciable or Fully Depreciated PLANT	[C] DEPRECIABLE PLANT (Col A - Col B)	[D] DEPRECIATION RATE	[E] DEPRECIATION EXPENSE (Col C x Col D)
1	302 Franchise Cost	\$ 890	\$ 890	\$ -	0.00%	\$ -
	303 Land and Land Rights	23,926	23,926	-	0.00%	-
2	304 Structures and Improvements	277,397	-	277,397	3.33%	9,237
3	305 Collecting and Impounding Res.	51,378	-	51,378	2.50%	1,284
4	307 Wells and Springs	34,064	-	34,064	3.33%	1,134
5	309 Supply Mains	-	-	-	2.00%	-
6	310 Power Generation Equipment	1,293	-	1,293	5.00%	65
7	311 Pumping Equipment	73,081	-	73,081	12.50%	9,135
8	320 Water Treatment Equipment	-	-	-	3.33%	-
9	330 Distribution Reservoirs and Standpipes	102,018	-	102,018	2.22%	2,265
10	331 Transmission and Distribution Mains	36,763	-	36,763	2.00%	735
11	333 Services	30,106	-	30,106	3.33%	1,003
12	334 Meters and Meter Installations	8,244	-	8,244	8.33%	687
13	335 Hydrants	59,298	-	59,298	2.00%	1,186
14	336 Backflow Prevention Devices	-	-	-	6.67%	-
15	339 Other Plant and Miscellaneous Equipment	23,472	-	23,472	6.67%	1,566
16	340 Office Furniture and Equipment	-	-	-	6.67%	-
17	341 Transportation Equipment	-	-	-	20.00%	-
18	343 Tools, Shop, and Garage Equipment	-	-	-	5.00%	-
19	344 Laboratory Equipment	-	-	-	10.00%	-
20	345 Power Operated Equipment	-	-	-	5.00%	-
21	346 Communication Equipment	5,881	-	5,881	10.00%	588
22	347 Miscellaneous Equipment	-	-	-	10.00%	-
23	348 Other Tangible Equipment	-	-	-	10.00%	-
24	Total Plant	\$ 727,812	\$ -	\$ 702,996		\$ 28,885
25						
29						
30						
31	Composite Depreciation Rate (Depr Exp / Depreciable Plant):	4.11%				
32	CIAC: \$	26,000				
33	Amortization of CIAC (Line 32 x Line 33): \$	1,068				
34						
	Depreciation Expense Before Amortization of CIAC: \$	28,885				
	Less Amortization of CIAC: \$	1,068				
	Test Year Depreciation Expense - Staff: \$	27,817				
	Depreciation Expense - Company:	36,631				
	<b>Staff's Total Adjustment: \$</b>	<b>(8,814)</b>				

References:

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

**OPERATING INCOME ADJUSTMENT NO. 7 - PROPERTY TAX EXPENSE**

LINE NO.	Property Tax Calculation	[A] STAFF AS ADJUSTED	[B] STAFF RECOMMENDED
1	Staff Adjusted Test Year Revenues	\$ 191,966	\$ 191,966
2	Weight Factor	<u>2</u>	<u>2</u>
3	Subtotal (Line 1 * Line 2)	383,933	\$ 383,933
4	Staff Recommended Revenue, Per Schedule CSB-1	<u>191,966</u>	<u>\$ 320,198</u>
5	Subtotal (Line 4 + Line 5)	575,899	704,131
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	191,966	\$ 234,710
8	Department of Revenue Multiplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	383,933	\$ 469,421
10	Plus: 10% of CWIP -	-	-
11	Less: Net Book Value of Licensed Vehicles	-	\$ -
12	Full Cash Value (Line 9 + Line 10 - Line 11)	383,933	\$ 469,421
13	Assessment Ratio	21.0%	21.0%
14	Assessment Value (Line 12 * Line 13)	80,626	\$ 98,578
15	Property Tax Rate	<u>11.1932%</u>	<u>11.1932%</u>
			\$ -
16	Staff Test Year Adjusted Property Tax (Line 14 * Line 15)	\$ 9,025	
17	Company Proposed Property Tax	<u>13,128</u>	
18	Staff Test Year Adjustment (Line 16-Line 17)	<u>\$ (4,104)</u>	
19	Property Tax - Staff Recommended Revenue (Line 14 * Line 15)		\$ 11,034
20	Staff Test Year Adjusted Property Tax Expense (Line 16)		\$ 9,025
21	Increase in Property Tax Expense Due to Increase in Revenue Requirement		<u>\$ 2,009</u>
22	Increase to Property Tax Expense		\$ 2,009
23	Increase in Revenue Requirement		128,232
24	Increase to Property Tax per Dollar Increase in Revenue (Line 19/Line 20)		1.567048%

**OPERATING INCOME ADJUSTMENT NO. 8 - TEST YEAR INCOME TAXES**

LINE NO.	DESCRIPTION	(A)	(B)
	<u>Calculation of Income Tax:</u>		
		<u>Test Year</u>	
1	Revenue	\$ 191,966	
2	Less: Operating Expenses - Excluding Income Taxes	\$ 254,126	
3	Less: Synchronized Interest (L17)	\$ -	
4	Arizona Taxable Income (L1- L2 - L3)	\$ (62,160)	
5	Arizona State Income Tax Rate	6.968%	
6	Arizona Income Tax (L4 x L5)		\$ (4,331)
7	Federal Taxable Income (L4 - L6)	\$ (57,828)	
8	Federal Tax on Income Bracket - Not Used	\$ -	
9	Federal Tax on Income Bracket - Not Used	\$ -	
10	Federal Tax on Income Bracket - Not Used	\$ -	
11	Federal Tax on Income Bracket - Not Used	\$ -	
12	Federal Tax on All Income (\$0 - \$10,000,000) @ 34%	\$ (19,662)	
13	Total Federal Income Tax		\$ (19,662)
14	Combined Federal and State Income Tax (L6 + L13)		<u>\$ (23,993)</u>
	<u>Calculation of Interest Synchronization:</u>		
15	Rate Base (Schedule CSB-13, Col. (C), Line 16)	\$ 457,384	
16	Weighted Average Cost of Debt	0.00%	
17	Synchronized Interest (L16 x L17)	<u>\$ -</u>	
18		Income Tax - Per Staff \$ (23,993)	
19		Income Tax - Per Company \$ (36,727)	
20		<b>Staff Adjustment \$ 12,734</b>	

**SOUTHERN SUNRISE  
WATER COMPANY**

**REVENUE REQUIREMENT**

<u>LINE NO.</u>	<u>DESCRIPTION</u>	<u>[A] COMPANY ORIGINAL COST</u>	<u>[B] STAFF ORIGINAL COST</u>
1	Adjusted Rate Base	\$ 1,544,434	\$ 727,139
2	Adjusted Operating Income (Loss)	\$ 6,042	\$ 37,979
3	Current Rate of Return (L2 / L1)	0.39%	5.22%
4	Required Rate of Return	12.80%	8.60%
5	Required Operating Income (L4 * L1)	\$ 197,688	\$ 62,534
6	Operating Income Deficiency (L5 - L2)	\$ 191,645	\$ 24,555
7	Gross Revenue Conversion Factor	1.6127997	1.6535915
8	Increase (Decrease) In Gross Revenue (L7 * L6)	\$ 309,085	\$ 40,604
9	Adjusted Test Year Revenue	\$ 444,136	\$ 444,136
10	Proposed Annual Revenue (L8 + L9)	\$ 753,222	\$ 484,740
11	Required Increase/(Decrease in Revenue) (%) (L8/L9)	69.59%	9.14%

References:

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

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

**GROSS REVENUE CONVERSION FACTOR**

LINE NO.	DESCRIPTION	(A)	(B)	(C)	(D)
<u>Calculation of Gross Revenue Conversion Factor:</u>					
1	Revenue	100.0000%			
2	Uncollectible Factor (Line 11)	0.0000%			
3	Revenues (L1 - L2)	100.0000%			
4	Combined Federal and State Income Tax and Property Tax Rate (Line 23)	39.5256%			
5	Subtotal (L3 - L4)	60.4744%			
6	<b>Revenue Conversion Factor (L1 / L5)</b>	<b>1.653591</b>			
<u>Calculation of Uncollectible Factor:</u>					
7	Unity	100.0000%			
8	Combined Federal and State Tax Rate (Line 17)	38.5989%			
9	One Minus Combined Income Tax Rate (L7 - L8)	61.4011%			
10	Uncollectible Rate	0.0000%			
11	Uncollectible Factor (L9 * L10)	0.0000%			
<u>Calculation of Effective Tax Rate:</u>					
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%			
13	Arizona State Income Tax Rate	6.9680%			
14	Federal Taxable Income (L12 - L13)	93.0320%			
15	Applicable Federal Income Tax Rate (Line 53)	34.0000%			
16	Effective Federal Income Tax Rate (L14 x L15)	31.6309%			
17	Combined Federal and State Income Tax Rate (L13 +L16)		38.5989%		
<u>Calculation of Effective Property Tax Factor</u>					
18	Unity	100.0000%			
19	Combined Federal and State Income Tax Rate (L17)	38.5989%			
20	One Minus Combined Income Tax Rate (L18-L19)	61.4011%			
21	Property Tax Factor (CSB-18, Col B, L24)	1.5092%			
22	Effective Property Tax Factor (L20*L21)		0.9267%		
23	Combined Federal and State Income Tax and Property Tax Rate (L17+L22)			39.5256%	
24	Required Operating Income (Schedule CSB-1, Line 5)	\$ 62,534			
25	Adjusted Test Year Operating Income (Loss) (Sch CSB-10, Col C, Line 34)	37,979			
26	Required Increase in Operating Income (L24 - L25)		\$ 24,555		
27	Income Taxes on Recommended Revenue (Col. [C], L52)	\$ 39,311			
28	Income Taxes on Test Year Revenue (Col. [A], L52)	23,875			
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		15,436		
30	Recommended Revenue Requirement (Schedule CSB-1, Line 10)	\$ 484,740			
31	Uncollectible Rate (Line 10)	0.0000%			
32	Uncollectible Expense on Recommended Revenue (L30*L31)	\$ -			
33	Adjusted Test Year Uncollectible Expense	\$ -			
34	Required Increase in Revenue to Provide for Uncollectible Exp. (L32-L33)				
35	Property Tax with Recommended Revenue (CSB-18, Col B, L19)	\$ 20,842			
36	Property Tax on Test Year Revenue (CSB-18, Col A, L16)	20,230			
37	Increase in Property Tax Due to Increase in Revenue (L35-L36)		613		
38	<b>Total Required Increase in Revenue (L26 + L29 + L34 + L37)</b>		<b>\$ 40,604</b>		
<u>Calculation of Income Tax:</u>					
39	Revenue (Schedule CSB-10, Col. [C], Line 4 & Sch. CSB-1, Col. [D] Line	Test Year \$ 444,136	Staff Recommended \$ 40,604	\$ 484,740	
40	Operating Expenses Excluding Income Taxes	\$ 382,282	\$ 613	\$ 382,895	
41	Synchronized Interest (L56)	\$ -		\$ -	
42	Arizona Taxable Income (L39 - L40 - L41)	\$ 61,854		\$ 101,845	
43	Arizona State Income Tax Rate	6.9680%		6.9680%	
44	Arizona Income Tax (L42 x L43)	\$ 4,310		\$ 7,097	
45	Federal Taxable Income (L42 - L44)	\$ 57,544		\$ 94,748	
46	Federal Tax on Income Bracket - Not Used	\$ -		\$ -	
47	Federal Tax on Income Bracket - Not Used	\$ -		\$ -	
48	Federal Tax on Income Bracket - Not Used	\$ -		\$ -	
49	Federal Tax on Income Bracket - Not Used	\$ -		\$ -	
50	Federal Tax on All Income (\$0 -\$10,000,000) @ 34%	\$ 19,565		\$ 32,214	
51	Total Federal Income Tax	\$ 19,565		\$ 32,214	
52	Combined Federal and State Income Tax (L44 + L51)	\$ 23,875		\$ 39,311	
53	Applicable Federal Income Tax Rate [Col. [C], L51 - Col. [A], L51] / [Col. [C], L45 - Col. [A], L45]			34.0000%	
<u>Calculation of Interest Synchronization:</u>					
54	Rate Base (Schedule CSB-3, Col. (C), Line 14)	\$ 727,139			
55	Weighted Average Cost of Debt	0.0000%			
56	Synchronized Interest (L45 X L46)	\$ -			

**RATE BASE - ORIGINAL COST**

LINE NO.	(A) COMPANY AS FILED	(B) STAFF ADJUSTMENTS	ADJ NO.	(C) STAFF AS ADJUSTED
1	\$ 1,724,610	\$ (280,054)	1, 2	\$ 1,444,557
2	105,733	(40,856)	3	64,877
3	<u>\$ 1,618,877</u>	<u>\$ (239,198)</u>		<u>\$ 1,379,680</u>
<u>LESS:</u>				
4	\$ 2,870	\$ -		\$ 2,870
5	\$ -	\$ -		\$ -
6	\$ 20,000	\$ -		\$ 20,000
7	15	-		15
8	<u>\$ 19,985</u>	<u>-</u>		<u>\$ 19,985</u>
9	\$ 22,855	\$ -		\$ 22,855
10	\$ -	\$ 22,298	4	\$ 22,298
11	\$ 51,588	\$ 555,800	5	\$ 607,388
<u>ADD:</u>				
12	\$ -	\$ -		\$ -
13	\$ -	\$ -		\$ -
14	<u>\$ 1,544,434</u>	<u>\$ (817,296)</u>		<u>\$ 727,139</u>

References:

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

**SUMMARY OF RATE BASE ADJUSTMENTS**

LINE NO.	ACCT. PLANT IN SERVICE	[A]	[B]		[C]	[D]	[E]	[F]	[G]
		COMPANY AS FILED	Adj No. 1 Inadequately Supported Plant, AFUDC & Other		ADJ No. 2 Regulatory Asset	ADJ No. 3 Accumulated Depreciation	ADJ No. 4 Customer Deposits	ADJ No. 5 ADIT	STAFF AS ADJUSTED
			Ref. Sch CSB-5	Ref. Sch CSB-6	Ref. Sch CSB-7	Ref. Sch CSB-8	Ref. Sch CSB-9		
1	No. Plant Description								
2	301 Organization Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
3	302 Franchise Cost	71	-	-	-	-	-	71	
4	303 Land and Land Rights	336,686	-	-	-	-	-	336,686	
5	304 Structures and Improvements	335,501	(25,311)	-	-	-	-	310,190	
	305 Collecting and Impounding Res.	-	-	-	-	-	-	-	
8	307 Wells and Springs	133,969	-	-	-	-	-	133,969	
10	309 Supply Mains	3,798	-	-	-	-	-	3,798	
11	310 Power Generation Equipment	-	-	-	-	-	-	-	
12	311 Electric Pumping Equipment	197,625	(13,875)	-	-	-	-	183,750	
13	320 Water Treatment Equipment	-	-	-	-	-	-	-	
16	330 Distribution Reservoirs & Standpipe	263,512	-	-	-	-	-	263,512	
19	331 Transmission and Distribution Mains	85,865	(5,487)	-	-	-	-	80,378	
20	333 Services	70,365	-	-	-	-	-	70,365	
21	334 Meters	18,257	-	-	-	-	-	18,257	
22	335 Hydrants	18,416	-	-	-	-	-	18,416	
23	336 Backflow Prevention Devices	-	-	-	-	-	-	-	
24	339 Other Plant and Miscellaneous Equipm	21,516	-	-	-	-	-	21,516	
25	340 Office Furniture and Fixtures	-	-	-	-	-	-	-	
26	340.1 Computers and Software	-	-	-	-	-	-	-	
27	341 Transportation Equipment	-	-	-	-	-	-	-	
29	343 Tools and Work Equipment	270	-	-	-	-	-	270	
	344 Laboratory Equipment	-	-	-	-	-	-	-	
31	345 Power Operated Equipment	-	-	-	-	-	-	-	
32	346 Communications Equipment	3,379	-	-	-	-	-	3,379	
33	347 Miscellaneous Equipment	-	-	-	-	-	-	-	
34	348 Other Tangible Plant	235,381	-	(235,381)	-	-	-	-	
35	Rounding	-	-	-	-	-	-	-	
36	Total Plant in Service	\$ 1,724,610	\$ (44,673)	\$ (235,381)	\$ -	\$ -	\$ -	\$ 1,444,557	
37	Less: Accumulated Depreciation	\$ 105,733	\$ -	\$ -	\$ (40,856)	\$ -	\$ -	\$ 64,877	
38	Net Plant in Service	\$ 1,618,877	\$ (44,673)	\$ (235,381)	\$ 40,856	\$ -	\$ -	\$ 1,379,680	
39									
40	<u>LESS:</u>								
41	Advances in Aid of Construction (AIAC)	\$ 2,870	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,870	
42	Service Line and Meter Advances	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
44	Contributions in Aid of Construction (CIAC)	\$ 20,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 20,000	
45	Less: Accumulated Amortization of CIAC	\$ 15	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15	
46	Net CIAC	\$ 19,985	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 19,985	
47									
48	Total Advances and Net Contributions	\$ 22,855	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 22,855	
49									
50	Customer Deposits	\$ -	\$ -	\$ -	\$ -	22,298	\$ -	\$ 22,298	
51	Accumulated Deferred Taxes	\$ 51,588	\$ -	\$ -	\$ -	\$ -	555,800	\$ 607,388	
52									
53	<u>ADD:</u>								
54	Working Capital Allowance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
55		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
56	<b>Total Rate Base</b>	\$ 1,544,434	\$ (44,673)	\$ (235,381)	\$ 40,856	\$ (22,298)	\$ (555,800)	\$ 727,139	

**RATE BASE ADJUSTMENT NO. 1 - INADEQUATELY SUPPORTED PLANT, AFUDC**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		PER COMPANY SCH B-2, P3	ADJUSTMENT	STAFF AS ADJUSTED
1	Acct No. 304 - Structures and Improvements	\$ 335,501	\$ (25,311)	\$ 310,190
2				
3	Acct No. 311 - Pumping Equipment	197,625	(13,875)	183,750
4				
5	Acct No. 331 - Transmission & Distribution Mains	85,865		85,865
6	Staff Adjustment - AFUDC		(5,002)	(5,002)
7	Staff Adjustment - Inadequately Supported Plant	-	(485)	(485)
8	Subtotal for Acct No. 331 Trans & Distrib Mains	\$ 85,865	\$ (5,487)	\$ 80,378
9				
10	<b>TOTAL</b>	<b>\$ 618,991</b>	<b>\$ (44,673)</b>	<b>\$ 574,318</b>

	PLANT SELECTED IN SAMPLE	INADEQUATELY SUPPORTED AFUDC COSTS	STAFF AS ADJUSTED
16	2009 Plant Addition, Acct No. 304 - Structures and Improvements	\$ 28,259	\$ (25,311) \$ 2,948
17	2009 Plant Addition, Acct No. 311 - Pumping Equipment	14,613	(13,875) 738
18	2009 Plant Addition, Acct No. 331 - Transmission & Distrib Mains	5,002	(5,002) 95,830
19		\$ 47,874	\$ (44,188) \$ 99,516

	PLANT PER SCH B-2, P3	INADEQUATELY SUPPORTED PLANT COSTS	PLANT PER SCH B-2, P3.3
25	Acct No. 331 - Trans & Distrib Mains	\$ 85,865	\$ (485) \$ 85,380

References:

- Column A: Company Schedule B-2
- Column B: Testimony, CSB, Company Data Request Responses CSB 4.5
- Column C: Column [A] + Column [B]

**RATE BASE ADJUSTMENT NO. 2 - REGULATORY ASSET**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Other Tangible Plant - Regulatory Asset	\$ 235,381	\$ (235,381)	\$ -

References:

Column A: Company Schedule B-2

Column B: Testimony, CSB; Data Request Response CSB 3-5 and CSB 10-3

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

**RATE BASE ADJUSTMENT NO. 3 - ACCUMULATED DEPRECIATION**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Accumulated Depreciation	\$ 105,733	\$ (40,856)	\$64,877

References:

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

PLANT AND ACCUMULATED DEPRECIATION SCHEDULE

	Plant 31-Dec-06 Original Cost	31-Dec-06 Accumulated Depreciation	Depr. Rates Effective on 31-Dec-06 (Dec. No. 68412)	2007		2007		2007		2007 Total Cost	2007 Accumulated Depreciation
				2007 Additions	2007 Retirements Cost Removal	2007 Depreciation	2007 Depr. Expense				
301 Organization Cost	\$0	\$0	0.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
302 Franchise Cost	0	0	0.00%	0	0	0	0	0	0	0	0
303 Land & Land Rights	336,686	0	0.00%	0	0	0	0	336,686	0	336,686	0
304 Structures & Improv	1,287	0	3.33%	0	0	0	43	1,287	43	1,287	43
305 Collecting & Impounding Res.	0	0	2.50%	0	0	0	0	0	0	0	0
307 Wells & Springs	26,825	0	3.33%	25,315	0	0	1,315	52,140	1,315	52,140	1,315
309 Supply Mains	0	0	2.00%	2,706	0	0	27	2,706	27	2,706	27
310 Power Generation Equip	0	0	5.00%	0	0	0	0	0	0	0	0
311 Electric Pumping Equip	42,847	0	12.50%	63,528	0	0	9,326	106,375	9,326	106,375	9,326
320 Water Treatment Equip	0	0	3.33%	0	0	0	0	0	0	0	0
330 Dist. Resnvr & Stndpipe	125,556	0	2.22%	2,079	0	0	2,810	127,635	2,810	127,635	2,810
331 Trans. & Distr. Mains	71,667	0	2.00%	3,263	0	0	1,466	74,930	1,466	74,930	1,466
333 Services	0	0	3.33%	22,618	0	0	377	22,618	377	22,618	377
334 Meters	0	0	8.33%	2,997	0	0	125	2,997	125	2,997	125
335 Hydrants	300	0	2.00%	4,701	0	0	53	5,001	53	5,001	53
339 Other Plant and Misc Equip	0	0	6.67%	9,370	0	0	312	9,370	312	9,370	312
340 Office Furniture & Fixt	0	0	6.67%	0	0	0	0	0	0	0	0
340.1 Computers and Software	0	0	20.00%	0	0	0	0	0	0	0	0
341 Transportation Equip	0	0	20.00%	0	0	0	0	0	0	0	0
343 Tools & Work Equip	0	0	5.00%	0	0	0	0	0	0	0	0
345 Power Operated Equip	0	0	5.00%	0	0	0	0	0	0	0	0
346 Communications Equip	0	0	10.00%	0	0	0	0	0	0	0	0
348 Other Tangible Equipment	0	0	10.00%	235,381	235,381	0	0	235,381	0	235,381	0
2006/2007 Totals	\$605,168	\$0		\$371,958	\$235,381	\$15,854	\$741,745	\$15,854	\$15,854	\$741,745	\$15,854

PLANT AND ACCUMULATED DEPRECIATION SCHEDULE

2008 Additions Cost	2008 Retirements		Fully Depreciated	2008		2008 Total Cost	2008 Accumulated Depreciation	2008 Net Book Value
	Cost Removal	Depreciation		Depr. Expense	2008 Total Cost			
301 Organization Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
302 Franchise Cost	0	0	0	0	0	0	0	0
303 Land & Land Rights	0	0	0	0	336,686	336,686	0	336,686
304 Structures & Improv	305,955	0	0	5,137	307,242	307,242	5,180	302,062
305 Collecting & Impounding Res.	0	0	0	0	0	0	0	0
307 Wells & Springs	75,969	0	0	3,001	128,109	128,109	4,316	123,793
309 Supply Mains	550	0	0	60	3,256	3,256	87	3,169
310 Power Generation Equip	0	0	0	0	0	0	0	0
311 Electric Pumping Equip	76,636	0	0	18,087	183,011	183,011	27,413	155,598
320 Water Treatment Equip	0	0	0	0	0	0	0	0
330 Dist. Resvrv & Stndpipe	130,916	0	0	4,287	258,551	258,551	7,097	251,454
331 Trans. & Distr. Mains	3,976	0	0	1,538	78,906	78,906	3,004	75,902
333 Services	35,148	0	0	1,338	57,766	57,766	1,715	56,051
334 Meters	12,866	0	0	786	15,863	15,863	910	14,953
335 Hydrants	13,415	0	0	234	18,416	18,416	287	18,129
339 Other Plant and Misc Equip	12,146	0	0	1,030	21,516	21,516	1,343	20,173
340 Office Furniture & Fixt	0	0	0	0	0	0	0	0
340.1 Computers and Software	0	0	0	0	0	0	0	0
341 Transportation Equip	0	0	0	0	0	0	0	0
343 Tools & Work Equip	125	0	0	3	125	125	3	122
345 Power Operated Equip	0	0	0	0	0	0	0	0
346 Communications Equip	3,379	0	0	169	3,379	3,379	169	3,210
348 Other Tangible Equipment	0	0	0	0	0	0	0	0
<b>2008 Totals</b>	<b>\$671,081</b>	<b>\$0</b>	<b>\$0</b>	<b>\$35,670</b>	<b>\$1,412,826</b>	<b>\$1,412,826</b>	<b>\$51,524</b>	<b>\$1,361,302</b>

19,044

PLANT AND ACCUMULATED DEPRECIATION SCHEDULE

2009 Additions Cost	2009 Adj. - Inadequate Support		2009 Total Cost	2009 Depr. Expense	2009 Accumulated Depreciation	2009 Net Book Value
	Cost Removal	Depreciation				
301 Organization Cost	\$0	\$0	\$0	\$0	\$0	\$0
302 Franchise Cost	71	0	71	0	0	71
303 Land & Land Rights	0	0	336,686	0	0	336,686
304 Structures & Improv	28,259	(25,311)	360,812	2,781	7,961	352,851
305 Collecting & Impounding Res.	0	0	0	0	0	0
307 Wells & Springs	5,858	0	133,967	1,091	5,407	128,560
309 Supply Mains	542	0	3,798	18	104	3,694
310 Power Generation Equip	0	0	0	0	0	0
311 Electric Pumping Equip	14,613	(13,875)	211,499	6,164	33,577	177,922
320 Water Treatment Equip	0	0	0	0	0	0
330 Dist. Resvr & Stndpipe	4,961	0	263,512	1,449	8,546	254,966
331 Trans. & Distr. Mains	6,474	(5,487)	90,867	424	3,429	87,438
333 Services	12,598	0	70,364	533	2,248	68,116
334 Meters	2,395	0	18,258	355	1,266	16,992
335 Hydrants	0	0	18,416	92	379	18,037
339 Other Plant and Misc Equip	0	0	21,516	359	1,701	19,815
340 Office Furniture & Fixt	0	0	0	0	0	0
340.1 Computers and Software	0	0	0	0	0	0
341 Transportation Equip	0	0	0	0	0	0
343 Tools & Work Equip	144	0	269	2	6	263
345 Power Operated Equip	0	0	0	0	0	0
346 Communications Equip	0	0	3,379	84	253	3,126
348 Other Tangible Equipment	0	0	0	0	0	0
2009 Totals	\$75,915	(\$44,673)	\$1,533,414	\$13,353	\$64,877	\$1,468,537

**RATE BASE ADJUSTMENT NO. 4 - CUSTOMER DEPOSITS**

		[A]	[B]	[C]
LINE NO.	DESCRIPTION	COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Customer Deposits	\$ -	\$ 22,298	\$ 22,298

References:

- Column A: Company Schedule B-2
- Column B: Testimony, CSB; Data Request Response CSB 4-8
- Column C: Column [A] + Column [B]

**RATE BASE ADJUSTMENT NO. 5 - ACCUMULATED DEFERRED INCOME TAXES**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		PER COMPANY	ADJUSTMENT	PER STAFF
1	Tax Value of Fixed Assets	\$ 1,463,108	\$ (1,463,108)	\$ -
2	Less: Book Value Fixed Asset Value (From Line 23)	1,598,877	(488)	1,598,389
3	<b>Subtotal</b>	<b>\$ (135,769)</b>	<b>\$ (1,462,620)</b>	<b>\$ (1,598,389)</b>
4	Multiplied by	38.0%	38.0%	38.0%
5	Noncurrent Future Tax Asset/(Liability)	(51,592)	(555,796)	(607,388)
6	Reconciling Amount	4	(4)	-
7		<b>\$ (51,588)</b>		<b>\$ (607,388)</b>
8				
9	Tax Value of AIAC	\$ -	\$ -	\$ -
10	Less: Book Value of AIAC	-	-	-
11		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
12	Multiplied by	38.0%	0	38.6%
13	Noncurrent Future Tax Asset/(Liability)	-	-	-
14				
15	<b>Net Asset/(Liability)</b>	<b>\$ (51,588)</b>	<b>\$ (555,800)</b>	<b>\$ (607,388)</b>
16				
17				
18		Book Value		Book Value
19		Per Company	Adjustment	Staff
20	Plant-in-Service	\$ 1,724,610	\$ (488)	\$ 1,724,122
21	Accum. Deprec.	\$ (105,733)	\$ 0	\$ (105,733)
22	CIAC	\$ (20,000)	\$ -	\$ (20,000)
23	Fixed Assets	<b>\$ 1,598,877</b>	<b>\$ (488)</b>	<b>\$ 1,598,389</b>

References:

- Column A: Company Schedule B-2, page 5
- Column B: Testimony, CSB, Company Data Request Responses CSB 1-10 and 1-11
- Column C: Column [A] + Column [B]

**OPERATING INCOME - TEST YEAR AND STAFF RECOMMENDED**

LINE NO.	DESCRIPTION	[A] COMPANY TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	ADJ NO.	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF PROPOSED CHANGES	[E] STAFF RECOMMENDED
<u>REVENUES:</u>							
1	Metered Water Sales	\$ 433,457	\$ -		\$ 433,457	\$ 40,604	\$ 474,061
2	Water Sales - Unmetered	-	-		-	-	-
3	Other Operating Revenues	10,679	-		10,679	-	10,679
4	<b>Total Revenues</b>	<u>\$ 444,136</u>	<u>\$ -</u>		<u>\$ 444,136</u>	<u>\$ 40,604</u>	<u>\$ 484,740</u>
5							
<u>EXPENSES:</u>							
7	Salaries and Wages	\$ -	\$ -		\$ -	\$ -	\$ -
8	Purchased Water	-	-		-	-	-
9	Purchased Power	32,354	-		32,354	-	32,354
10	Fuel for Power Production	-	-		-	-	-
11	Chemicals	1,265	-		1,265	-	1,265
12	Materials & Supplies	7,972	-		7,972	-	7,972
13	Outside Services	91	-		91	-	91
14	Outside Services- Legal	5,390	-		5,390	-	5,390
15	Outside Services- Other	179,427	6,448	1,2,3	185,876	-	185,876
16	Water Testing	5,592	-		5,592	-	5,592
17	Equipment Rental	-	-		-	-	-
18	Rents	-	-		-	-	-
19	Transportation Expenses	25,481	-		25,481	-	25,481
20	Insurance - General Liability	10,788	-		10,788	-	10,788
21	Insurance - Health and Life	-	-		-	-	-
22	Reg. Comm. Exp.	1,024	-		1,024	-	1,024
23	Reg. Comm. Exp. - Rate Case	41,667	(27,636)	4	14,031	-	14,031
24	Miscellaneous Expense	14,810	(773)	5	14,037	-	14,037
25	Bad Debt Expense	5,346	-		5,346	-	5,346
26	Depreciation Expense	76,419	(23,612)	6	52,807	-	52,807
27	Taxes Other Than Income	-	-		-	-	-
28	Property Taxes	26,765	(6,536)	7	20,230	613	20,842
29	Income Taxes	3,703	20,172	8	23,875	15,436	39,311
31		-	-		-	-	-
32	<b>Total Operating Expenses</b>	<u>\$ 438,094</u>	<u>\$ (31,937)</u>		<u>\$ 406,157</u>	<u>\$ 16,049</u>	<u>422,206</u>
33							
34	<b>Operating Income (Loss)</b>	<u>\$ 6,042</u>	<u>\$ 31,937</u>		<u>\$ 37,979</u>	<u>\$ 24,555</u>	<u>\$ 62,534</u>

References:

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

**SUMMARY OF OPERATING INCOME ADJUSTMENTS - TEST YEAR**

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJ #1 Corporate Expense Allocation Ref: Sch CSB-12	[C] ADJ #2 Outside Services Other Ref: Sch CSB-13	[D] ADJ #3 Gen Office Alloc/ Affiliate Increase Ref: Sch CSB-14	[E] ADJ #4 Rate Case Expense Ref: Sch CSB-15	[F] ADJ #5 Meals, Entertainment, & Contributions Ref: Sch CSB-16	[G] ADJ #6 Depreciation Expense Ref: Sch CSB-17	[H] ADJ #7 Property Taxes Ref: Sch CSB-18	[I] ADJ #8 Income Taxes Ref: Sch CSB-19	[J] STAFF ADJUSTED
1	Metered Water Revenues	\$ 433,457	-	-	-	-	-	-	-	-	\$ 433,457
2	Unmetered Water Revenues	-	-	-	-	-	-	-	-	-	-
3	Other Water Revenues	10,679	-	-	-	-	-	-	-	-	10,679
4	Total Revenues	\$ 444,136	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 444,136
5											
6	<u>OPERATING EXPENSES:</u>										
7	Salaries and Wages	\$ -	-	-	-	-	-	-	-	-	\$ -
8	Purchased Water	-	-	-	-	-	-	-	-	-	-
9	Purchased Power	32,354	-	-	-	-	-	-	-	-	32,354
10	Fuel for Power Production	-	-	-	-	-	-	-	-	-	-
11	Chemicals	1,265	-	-	-	-	-	-	-	-	1,265
12	Materials & Supplies	7,972	-	-	-	-	-	-	-	-	7,972
13	Outside Services	91	-	-	-	-	-	-	-	-	91
14	Outside Services- Legal	5,390	-	-	-	-	-	-	-	-	5,390
15	Outside Services- Other	179,427	(10,258)	21,043	(4,337)	-	-	-	-	-	185,876
16	Water Testing	5,592	-	-	-	-	-	-	-	-	5,592
17	Equipment Rental	-	-	-	-	-	-	-	-	-	-
18	Rents - Building	-	-	-	-	-	-	-	-	-	-
19	Transportation Expenses	25,481	-	-	-	-	-	-	-	-	25,481
20	Insurance - General Liability	10,788	-	-	-	-	-	-	-	-	10,788
21	Insurance - Health and Life	-	-	-	-	-	-	-	-	-	-
22	Reg. Comm. Exp.	1,024	-	-	-	-	-	-	-	-	1,024
23	Reg. Comm. Exp. - Rate Case	41,667	-	-	-	(27,636)	-	-	-	-	14,031
24	Miscellaneous Expense	14,810	-	-	-	-	(773)	-	-	-	14,037
25	Bad Debt Expense	5,346	-	-	-	-	-	-	-	-	5,346
26	Depreciation Expense	76,419	-	-	-	-	-	(23,612)	-	-	52,807
27	Taxes Other Than Income	-	-	-	-	-	-	-	(6,536)	-	-
28	Property Taxes	26,765	-	-	-	-	-	-	-	-	20,230
29	Income Tax	3,703	-	-	-	-	-	-	-	20,172	23,875
31											
32	Total Operating Expenses	\$ 438,094	\$ (10,258)	\$ 21,043	\$ (4,337)	\$ (27,636)	\$ (773)	\$ (23,612)	\$ (6,536)	\$ 20,172	\$ 406,157
33											
34	Operating Income (Loss)	\$ 6,042	\$ 10,258	\$ (21,043)	\$ 4,337	\$ 27,636	\$ 773	\$ 23,612	\$ 6,536	\$ (20,172)	\$ 37,979

**OPERATING INCOME ADJUSTMENT NO. 1 - EXPENSE ALLOCATIONS  
FROM UNREGULATED AFFILIATE**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS (Col C - Col A)	STAFF AS ADJUSTED
1	Contractual Services - Other	\$ 166,037	\$ -	\$ 166,037
2	Corporate Expense Allocation	13,390	(10,258)	3,132
3	Total Contractual Services - Other	\$ 179,427	\$ (10,258)	\$ 169,169

LINE NO.	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]
	Description	Amount (Per RUCO 3.01)	Unallowable Costs (Sch CSB-6, P2)	Direct Costs of Unregulated Affiliate(s)	Allowable Common Costs Allocated to All 70 Companies	Allocation <sup>7</sup> %	Costs to be Allocated to Southern (Col I x Col J)	
<b>COSTS TO BE ALLOCATED TO SOUTHERN SUNRISE</b>								
12	Audit <sup>1</sup>	\$ 680,812	\$ -	\$ (612,730)	\$ 68,081	1.43%	\$ 972.59	
13	Tax Services <sup>2</sup>	\$ 469,804	\$ -	\$ (422,824)	\$ 46,980	1.43%	\$ 671.15	
14	Legal-General <sup>3</sup>	\$ 138,531	\$ -	\$ (124,678)	\$ 13,853	1.43%	\$ 197.90	
15	Other Professional Services <sup>4</sup>	\$ 452,202	\$ -	\$ (406,982)	\$ 45,220	1.43%	\$ 646.00	
16	Management Fee	\$ 563,803	\$ -	\$ (563,803)	\$ -	1.43%	\$ -	
17	Unit Holder Communications	\$ 145,658	\$ -	\$ (145,658)	\$ -	1.43%	\$ -	
18	Trustee Fees	\$ 127,116	\$ -	\$ (127,116)	\$ -	1.43%	\$ -	
19	Escrow and Transfer Fees	\$ 85,354	\$ -	\$ (85,354)	\$ -	1.43%	\$ -	
20	Rent	\$ 273,965	\$ -	\$ (273,965)	\$ -	1.43%	\$ -	
21	Licenses/Fees and Permits	\$ 14,565	\$ -	\$ (14,565)	\$ -	1.43%	\$ -	
22	Office Expenses <sup>5</sup>	\$ 555,759	\$ (123,829)	\$ (405,801)	\$ 26,129	1.43%	\$ 373.27	
23	Depreciation Expense <sup>6</sup>	\$ 189,797	\$ -	\$ (170,818)	\$ 18,980	1.43%	\$ 271.14	
24		\$ 3,697,367	\$ (123,829)	\$ (3,354,294)	\$ 219,244		\$ 3,132.05	

26 Foot Note 1: Audit - As the parent company's lenders require the APIF to have annual financial audits, Staff assigned the  
27 majority of the cost (i.e., 90 percent) to APIF and the remaining 10 percent to its 70 companies/interests.

29 Foot Note 2: Tax Services - Given the tax complexity of the APIF's many holdings and transactions, Staff assigned the  
30 majority of the cost (i.e., 90 percent) to APIF and the remaining 10 percent to its 70 companies/interests.

32 Foot Note 3: Legal, General - Staff reviewed the invoices and found that the very large majority of the cost  
33 (i.e., 90 percent) was directly related to APIF and the remaining 10 percent to its 70 companies/interests.

35 Foot Note 4: Other Professional Services - Staff reviewed the invoices and found that the very large majority of the cost  
36 (i.e., 90 percent) was directly related to APIF and the remaining 10 percent to its 70 companies/interests.

38 Foot Note 5: Office Expense - Staff reviewed the invoices and found that the very large majority of the cost  
39 (i.e., 90 percent) was directly related to APIF and the remaining 10 percent to its 70 companies/interests.

41 Foot Note 6: Depreciation Expense - Given that most of APIF's plant costs benefit primarily APIF, Staff assigned the  
42 majority of the cost (i.e., 90 percent) to APIF and the remaining 10 percent to its 70 companies/interests.

44 Foot Note 7: Allocation Percentage - Calculated as follows: 1 / 70 companies = 1.43%. The 70 companies represents  
45 the average of the year-end 2007, 71 companies, and year-end 2008, 70 companies.

References:

- Column A: Company Schedule C-2
- Column B: Testimony, CSB, Company Data Request Responses CSB 1.26, RUCO 3.01
- Column C: Column [A] + Column [B]

LINE  
NO.

1	Category	Description of Unallowable Cost	Vendor	Invoice No.	Amount
2	Office Expenses	Furniture	Grand & Toy	612	\$12,530
3	Office Expenses	Furniture Installation	Grand & Toy	612	\$60,909
4	Office Expenses	Dell Server and Software	Dell		\$16,330
5	Office Expenses	Shelving	Stor-Tec Ltd.	JF-394	\$7,459
6	Office Expenses	Telephone System	Cableteck	10802	\$7,641
7	Office Expenses	Phones/Cabling/Network Install	Cableteck	11009820-0074	\$18,960
8		<b>Total for Office Expenses</b>			<b><u>\$123,829</u></b>

**OPERATING INCOME ADJUSTMENT NO. 2 - OUTSIDE SERVICES OTHER**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS (Col C - Col A)	STAFF AS ADJUSTED
1	Outside Services - Other	\$ 179,427	\$ 21,043	\$ 200,471
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

			Outside Services Other	
	2008	\$ 225,851		Company Sch E-2
	2009	\$ 175,090		Company Sch E-2
		\$ 400,941		
	Divided by 2		2	
		\$ 200,471		

References:

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

**OPERATING INCOME ADJUSTMENT NO. 3 - GENERAL OFFICE ALLOCATION / AFFILIATE INCREASE**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Outside Services - Other	\$ 175,090	\$ -	\$ 175,090
2	Affiliate Increase	4,337	(4,337)	-
3	Total Outside Services - Other	\$ 179,427	\$ (4,337)	\$ 175,090
4				
5				
6				

References:

Column A: Company Schedule C-2

Column B: Testimony, CSB

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

**OPERATING INCOME ADJUSTMENT NO. 4 - RATE CASE EXPENSE**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Rate Case Expense - Southern Sunrise	\$ 41,667	\$ (27,636)	\$ 14,031
2				
3				
4				

[D]	[E]	[F]	[G]	[H]	[I]
Company Name	Total Rate Case Expense Per Co.	Percent of Total Expense	Total Rate Case Exp Per Staff From Line 19	Total Rate Case For Each Company Per Staff Col F x Col G	Normalized Rate Case Expense Col H / 3 Years
Bella Vista	\$250,000	55.56%	\$ 151,530	\$ 84,183	\$ 28,061
Northern Sunrise	\$75,000	16.67%	\$ 151,530	\$ 25,255	\$ 8,418
<b>Southern Sunrise</b>	<b>\$125,000</b>	<b>27.78%</b>	<b>\$ 151,530</b>	<b>\$ 42,092</b>	<b>\$ 14,031</b>
<b>Total</b>	<b>\$450,000</b>	<b>100.00%</b>		<b>\$ 151,530</b>	

			Total Rate Case Exp.	
	Average Cost	\$ 37,883	From Line 30	
	Multiplied by	4	Three Companies & 1 Consolidation	
	Total Rate Case Expense-Per Staff	\$ 151,530		

[J]	[K]	[L]	[M]
Company Name	Rate Case Exp Amount	No. of Companies, Systems, and Consolidations	Average Rate Case Expense Col K / Col L
Arizona-American Water Company <sup>1</sup>	\$ 456,275	7	\$ 65,182
Arizona Water Company <sup>1</sup>	\$ 500,000	17	\$ 29,412
Global Water Company <sup>1</sup>	\$ 133,376	7	\$ 19,054
		Total	\$ 113,648
		Divided by	3
		Average Cost	\$ 37,883

<sup>1</sup> See Below for Docket Numbers

Name	Docket Numbers
Arizona-American Water Company	W-01303A-08-0227
Arizona Water Company	W-01445A-08-0440
Global Water Company	SW-20445A-09-0077, et al

References:

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

**OPERATING INCOME ADJUSTMENT NO. 6 - MEALS, ENTERTAINMENT, & CONTRIBUTIONS**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Miscellaneous Expense	\$ 14,810	\$ (773)	\$ 14,037

Meals, and Entertainment,
---------------------------------

\$ 773 CSB 4-20

References:

- Column A: Company Schedule C-1 & E-2
- Column B: Testimony, CSB; Data Request CSB 4-20
- Column C: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 6 - DEPRECIATION EXPENSE ON TEST YEAR PLANT

LINE NO.	DESCRIPTION	[A]	[B]	[C]	[D]	[E]
		PLANT In SERVICE Per Staff	NonDepreciable or Fully Depreciated PLANT	DEPRECIABLE PLANT (Col A - Col B)	DEPRECIATION RATE	DEPRECIATION EXPENSE (Col C x Col D)
1	301 Organization Cost	\$ -	\$ -	\$ -	0.00%	\$ -
2	302 Franchise Cost	71	71	-	0.00%	-
3	303 Land and Land Rights	336,686	-	336,686	0.00%	-
4	304 Structures and Improvements	310,190	-	310,190	3.33%	10,329
6	309 Supply Mains	3,798	-	3,798	2.00%	76
7	310 Power Generation Equipment	133,969	-	133,969	5.00%	6,698
8	311 Electric Pumping Equipment	183,750	-	183,750	12.50%	22,969
9	330 Distribution Reservoirs & Standpipe	263,512	-	263,512	2.22%	5,850
12	331 Transmission and Distribution Mains	80,378	-	80,378	2.00%	1,608
13	333 Services	70,365	-	70,365	3.33%	2,343
14	334 Meters	18,257	-	18,257	8.33%	1,521
15	335 Hydrants	18,416	-	18,416	2.00%	368
16	336 Backflow Prevention Devices	-	-	-	6.67%	-
17	339 Other Plant and Miscellaneous Equipment	21,516	-	21,516	6.67%	1,435
18	343 Tools and Work Equipment	270	-	270	5.00%	13
20	345 Power Operated Equipment	-	-	-	5.00%	-
21	346 Communications Equipment	3,379	-	3,379	10.00%	338
22	347 Miscellaneous Equipment	-	-	-	10.00%	-
23	348 Other Tangible Plant	-	-	-	10.00%	-
24	Total Plant	\$ 1,444,557	\$ -	\$ 1,444,486		\$ 53,549

25						
29						
30						
31	Composite Depreciation Rate (Depr Exp / Depreciable Plant):	3.71%				
32	CIAC: \$	20,000				
33	Amortization of CIAC (Line 32 x Line 33): \$	741				
34						
	Depreciation Expense Before Amortization of CIAC: \$	53,549				
	Less Amortization of CIAC: \$	741				
	Test Year Depreciation Expense - Staff: \$	52,807				
	Depreciation Expense - Company:	76,419				
	<b>Staff's Total Adjustment: \$</b>	<b>(23,612)</b>				

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

**OPERATING INCOME ADJUSTMENT NO. 7 - PROPERTY TAX EXPENSE**

LINE NO.	Property Tax Calculation	[A] STAFF AS ADJUSTED	[B] STAFF RECOMMENDED
1	Staff Adjusted Test Year Revenues	\$ 444,136	\$ 444,136
2	Weight Factor	2	2
3	Subtotal (Line 1 * Line 2)	888,272	\$ 888,272
4	Staff Recommended Revenue, Per Schedule CSB-1	444,136	\$ 484,740
5	Subtotal (Line 4 + Line 5)	1,332,409	1,373,012
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	444,136	\$ 457,671
8	Department of Revenue Mutiplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	888,272	\$ 915,341
10	Plus: 10% of CWIP -	5,318	5,318
11	Less: Net Book Value of Licensed Vehicles	-	\$ -
12	Full Cash Value (Line 9 + Line 10 - Line 11)	893,590	\$ 920,659
13	Assessment Ratio	21.0%	21.0%
14	Assessment Value (Line 12 * Line 13)	187,654	\$ 193,338
15	Property Tax Rate	10.7803%	10.7803%
16	Staff Test Year Adjusted Property Tax (Line 14 * Line 15)	\$ 20,230	\$ -
17	Company Proposed Property Tax	26,765	
18	Staff Test Year Adjustment (Line 16-Line 17)	<u>\$ (6,536)</u>	
19	Property Tax - Staff Recommended Revenue (Line 14 * Line 15)		\$ 20,842
20	Staff Test Year Adjusted Property Tax Expense (Line 16)		\$ 20,230
21	Increase in Property Tax Expense Due to Increase in Revenue Requirement		<u>\$ 613</u>
22	Increase to Property Tax Expense		\$ 613
23	Increase in Revenue Requirement		40,604
24	Increase to Property Tax per Dollar Increase in Revenue (Line19/Line 20)		1.509242%

**OPERATING INCOME ADJUSTMENT NO. 8 - TEST YEAR INCOME TAXES**

LINE NO.	DESCRIPTION	(A)	(B)
	<u>Calculation of Income Tax:</u>		
		<u>Test Year</u>	
1	Revenue	\$ 444,136	
2	Less: Operating Expenses - Excluding Income Taxes	\$ 382,282	
3	Less: Synchronized Interest (L17)	\$ -	
4	Arizona Taxable Income (L1- L2 - L3)	\$ 61,854	
5	Arizona State Income Tax Rate	6.968%	
6	Arizona Income Tax (L4 x L5)		\$ 4,310
7	Federal Taxable Income (L4 - L6)	\$ 57,544	
8	Federal Tax on Income Bracket - Not Used	\$ -	
9	Federal Tax on Income Bracket - Not Used	\$ -	
10	Federal Tax on Income Bracket - Not Used	\$ -	
11	Federal Tax on Income Bracket - Not Used	\$ -	
12	Federal Tax on All Income (\$0 - \$10,000,000) @ 34%	\$ 19,565	
13	Total Federal Income Tax		\$ 19,565
14	Combined Federal and State Income Tax (L6 + L13)		<u>\$ 23,875</u>
	<u>Calculation of Interest Synchronization:</u>		
15	Rate Base (Schedule CSB-13, Col. (C), Line 16)	\$ 727,139	
16	Weighted Average Cost of Debt	0.00%	
17	Synchronized Interest (L16 x L17)	<u>\$ -</u>	
18		Income Tax - Per Staff \$ 23,875	
19		Income Tax - Per Company \$ 3,703	
20		<b>Staff Adjustment \$ 20,172</b>	

**CONSOLIDATED SYSTEMS  
(BELLA VISTA, NORTHERN SUNRISE,  
SOUTHERN SUNRISE)**

**REVENUE REQUIREMENT**

LINE NO.	DESCRIPTION	Bella Vista	Northern Sunrise	Southern Sunrise	Consolidated
1	Adjusted Rate Base	\$ 3,800,682	\$ 457,384	\$ 727,139	\$ 4,985,205
2	Adjusted Operating Income (Loss)	\$ 422,497	\$ (38,167)	\$ 37,979	\$ 433,378
3	Current Rate of Return (L2 / L1)	11.12%	-8.34%	5.22%	8.69%
4	Required Rate of Return	8.60%	8.60%	8.60%	8.60%
5	Required Operating Income (L4 * L1)	\$ 326,859	\$ 39,335	\$ 62,534	\$ 428,728
6	Operating Income Deficiency (L5 - L2)	\$ (95,638)	\$ 77,502	\$ 24,555	\$ (4,650)
7	Gross Revenue Conversion Factor	1.65130	1.65456	1.65359	1.65170
8	Increase (Decrease) In Gross Revenue (L7 * L6)	\$ (157,928)	\$ 128,232	\$ 40,604	\$ (7,681)
9	Adjusted Test Year Revenue	\$ 3,526,033	\$ 191,966	\$ 444,136	\$ 4,162,136
10	Proposed Annual Revenue (L8 + L9)	\$ 3,368,105	\$ 320,198	\$ 484,740	\$ 4,154,455
11	Required Increase/Decrease in Revenue (%) (L8/L9)	-4.48%	66.80%	9.14%	-0.18%
12	Number of Customers	7,500	349	789	8,638

**GROSS REVENUE CONVERSION FACTOR**

LINE NO.	DESCRIPTION	(A)	(B)	(C)	(D)
<i>Calculation of Gross Revenue Conversion Factor:</i>					
1	Revenue	100.0000%			
2	Uncollectible Factor (Line 11)	0.0000%			
3	Revenues (L1 - L2)	100.0000%			
4	Combined Federal and State Income Tax and Property Tax Rate (Line 23)	39.4562%			
5	Subtotal (L3 - L4)	60.5438%			
6	<b>Revenue Conversion Factor (L1 / L5)</b>	<b>1.651696</b>			
<i>Calculation of Uncollectible Factor:</i>					
7	Unity	100.0000%			
8	Combined Federal and State Tax Rate (Line 17)	38.5989%			
9	One Minus Combined Income Tax Rate (L7 - L8 )	61.4011%			
10	Uncollectible Rate	0.0000%			
11	Uncollectible Factor (L9 * L10 )	0.0000%			
<i>Calculation of Effective Tax Rate:</i>					
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%			
13	Arizona State Income Tax Rate	6.9680%			
14	Federal Taxable Income (L12 - L13)	93.0320%			
15	Applicable Federal Income Tax Rate (Line 53)	34.0000%			
16	Effective Federal Income Tax Rate (L14 x L15)	31.6309%			
17	Combined Federal and State Income Tax Rate (L13 +L16)		38.5989%		
<i>Calculation of Effective Property Tax Factor</i>					
18	Unity	100.0000%			
19	Combined Federal and State Income Tax Rate (L17)	38.5989%			
20	One Minus Combined Income Tax Rate (L18-L19)	61.4011%			
21	Property Tax Factor (Schedule CSB-5)	1.3962%			
22	Effective Property Tax Factor (L20*L21)		0.8573%		
23	Combined Federal and State Income Tax and Property Tax Rate (L17+L22)			39.4562%	
24	Required Operating Income (Schedule CSB-1, Line 5)	\$ 428,728			
25	Adjusted Test Year Operating Income (Loss) (Schedule CSB-4)	433,378			
26	Required Increase in Operating Income (L24 - L25)		\$ (4,650)		
27	Income Taxes on Recommended Revenue (Col. [C], L52)	\$ 203,702			
28	Income Taxes on Test Year Revenue (Col. [B], L52)	206,625			
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		(2,923)		
30	Recommended Revenue Requirement (Schedule CSB-1, Line 10)	\$ 4,154,455			
31	Uncollectible Rate (Line 10)	0.0000%			
32	Uncollectible Expense on Recommended Revenue (L30*L31)	\$ -			
33	Adjusted Test Year Uncollectible Expense	\$ -			
34	Required Increase in Revenue to Provide for Uncollectible Exp. (L32-L33)		-		
35	Property Tax with Recommended Revenue (CSB-5)	\$ 175,071			
36	Property Tax on Test Year Revenue (CSB-5)	175,178			
37	Increase in Property Tax Due to Increase in Revenue (L35-L36)		(107)		
38	Total Required Increase in Revenue (L26 + L29 + L34 + L37)		\$ (7,681)		

	Test Year		Staff Recommended
39	Revenue (Schedule CSB-4, Col. [C], Line 5 & Sch. CSB-1, Col. [D] Line 10)	\$ 4,162,136	\$ (7,681) \$ 4,154,455
40	Operating Expenses Excluding Income Taxes	\$ 3,522,133	\$ (107) \$ 3,522,026
41	Synchronized Interest (L56)	\$ 104,689	\$ 104,689
42	Arizona Taxable Income (L39 - L40 - L41)	\$ 535,313	\$ 527,740
43	Arizona State Income Tax Rate	6.9680%	6.9680%
44	Arizona Income Tax (L42 x L43)	\$ 37,301	\$ 36,773
45	Federal Taxable Income (L42 - L44)	\$ 498,013	\$ 490,967
46	Federal Tax on Income Bracket - Not Used	\$ -	\$ -
47	Federal Tax on Income Bracket - Not Used	\$ -	\$ -
48	Federal Tax on Income Bracket - Not Used	\$ -	\$ -
49	Federal Tax on Income Bracket - Not Used	\$ -	\$ -
50	Federal Tax on All Income (\$0 -\$10,000,000) @ 34%	\$ 169,324	\$ 166,929
51	Total Federal Income Tax	\$ 169,324	\$ 166,929
52	Combined Federal and State Income Tax (L44 + L51)	\$ 206,625	\$ 203,702

53 Applicable Federal Income Tax Rate [Col. [C], L51 - Col. [A], L51] / [Col. [C], L45 - Col. [A], L45] 34.0000%

<i>Calculation of Interest Synchronization:</i>	
54	Rate Base (Schedule CSB-3, Col. (C), Line 14) \$ 4,985,204
55	Weighted Average Cost of Debt 2.1000%
56	Synchronized Interest (L45 X L46) \$ 104,689

<b>RATE BASE</b>
------------------

LINE NO.	Acct. No. - F Plant Description	Bella Vista	Northern Sunrise	Southern Sunrise	Total
1	301 Organization Cost	\$ -	\$ -	\$ -	-
2	302 Franchise Cost		890	71	961
3	303 Land and Land Rights	327,399	23,926	336,686	688,011
4	304 Structures and Improvements	1,312,116	277,397	310,190	1,899,704
5	305 Collecting and Impounding Res.	-	51,378	-	51,378
6	307 Wells and Springs	1,132,179	34,064	133,969	1,300,212
7	309 Supply Mains	-	-	3,798	3,798
8	310 Power Generation Equipment	-	1,293	-	1,293
9	311 Pumping Equipment	1,003,613	73,081	183,750	1,260,444
10	320 Water Treatment Equipment	94,414	-	-	94,414
11	330 Distribution Reservoirs and Standpipes	2,343,634	102,018	263,512	2,709,164
12	331 Transmission and Distribution Mains	12,701,038	36,763	80,378	12,818,179
13	333 Services	1,376,034	30,106	70,365	1,476,505
14	334 Meters and Meter Installations	668,838	8,244	18,257	695,340
15	335 Hydrants	892,445	59,298	18,416	970,159
16	336 Backflow Prevention Devices	-	-	-	-
17	339 Other Plant and Miscellaneous Equipment	69,551	23,472	21,516	114,539
18	340 Office Furniture and Equipment	202,929	-	-	202,929
19	340.1 Computers and Software	161,264	-	-	161,264
20	341 Transportation Equipment	74,353	-	-	74,353
21	343 Tools, Shop, and Garage Equipment	63,819	-	270	64,089
22	344 Laboratory Equipment	-	-	-	-
23	345 Power Operated Equipment	31,548	-	-	31,548
24	346 Communication Equipment	403,818	5,881	3,379	413,078
25	347 Miscellaneous Equipment	110,348	-	-	110,348
26	348 Other Tangible Equipment	-	-	-	-
27	Total Plant in Service - Actual	\$ 22,969,341	\$ 727,812	\$ 1,444,557	\$ 25,141,709
28	Less: Accumulated Depreciation	\$ 8,685,013	\$ 31,114	\$ 64,877	\$ 8,781,005
29	Net Plant in Service	\$ 14,284,328	\$ 696,697	\$ 1,379,680	\$ 16,360,705
31	<u>LESS:</u>				
32	Advances in Aid of Construction (AIAC)	\$ 6,781,443	\$ -	\$ 2,870	\$ 6,784,313
33	Service Line and Meter Advances	\$ 556,325	\$ 410	\$ -	\$ 556,735
34					
35	Contributions in Aid of Construction (CIAC)	\$ 496,445	\$ 26,000	\$ 20,000	\$ 542,445
36	Less: Accumulated Amortization of CIAC	230,909	63	15	230,987
37	Net CIAC	265,536	25,937	19,985	311,458
39	Total Advances and Net Contributions	\$ 7,603,304	\$ 26,347	\$ 22,855	\$ 7,652,506
41	Customer Deposits	175,850	7,972	22,298	206,120
42	Accumulated Deferred Taxes	2,704,493	204,994	607,388	3,516,874
44	<u>ADD:</u>				
45	Working Capital Allowance	\$ -	\$ -	\$ -	\$ -
46					
47	<b>Total Rate Base</b>	<b>\$ 3,800,681</b>	<b>\$ 457,384</b>	<b>\$ 727,139</b>	<b>\$ 4,985,204</b>

**OPERATING INCOME - TEST YEAR AND STAFF RECOMMENDED**

LINE NO.	DESCRIPTION	(A) Bella Vista Staff		(B) Northern Sunrise Staff		(C) Southern Sunrise Staff		(D) Consolidation Adjustments	(E) TOTAL STAFF TEST YEAR AS ADJUSTED	(F) STAFF PROPOSED CHANGES	(G)
		Test Year As Adjusted	Test Year As Adjusted	Test Year As Adjusted	Test Year As Adjusted	Test Year As Adjusted	Test Year As Adjusted				
<b>REVENUES:</b>											
1	Metered Water Sales	\$ 3,400,892	\$ 188,672	\$ 433,457	\$ -	\$ -	\$ -	\$ -	\$ 4,023,022	\$ (7,681)	\$ 4,015,341
2	Unmetered Water Sales	-	-	-	-	-	-	-	-	-	-
3	Other Operating Revenues	125,141	3,294	10,679	-	-	-	-	139,114	-	139,114
4	<b>Total Revenues</b>	<b>\$ 3,526,033</b>	<b>\$ 191,966</b>	<b>\$ 444,136</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 4,162,136</b>	<b>\$ (7,881)</b>	<b>\$ 4,154,455</b>
<b>EXPENSES:</b>											
7	Salaries and Wages	-	-	-	-	-	-	-	-	-	-
8	Purchased Water	708	-	-	-	-	-	-	708	-	708
9	Purchased Power	561,094	16,012	32,354	-	-	-	-	609,459	-	609,459
10	Fuel for Power Production	-	-	-	-	-	-	-	-	-	-
11	Chemicals	4,273	178	1,265	-	-	-	-	5,715	-	5,715
12	Materials & Supplies	36,932	5,094	7,972	-	-	-	-	49,998	-	49,998
13	Outside Services	4,605	-	91	-	-	-	-	4,696	-	4,696
14	Outside Services- Legal	35,245	1,302	5,390	-	-	-	-	41,937	-	41,937
15	Outside Services- Other	1,057,031	136,128	185,876	-	-	-	-	1,379,035	-	1,379,035
16	Water Testing	18,805	3,787	5,592	-	-	-	-	28,184	-	28,184
17	Equipment Rental	-	140	-	-	-	-	-	140	-	140
18	Rents	60,600	-	-	-	-	-	-	60,600	-	60,600
19	Transportation Expenses	66,621	21,524	25,481	-	-	-	-	113,626	-	113,626
20	Insurance - General Liability	38,930	9,692	10,788	-	-	-	-	59,410	-	59,410
21	Insurance - Health and Life	7,290	-	-	-	-	-	-	7,290	-	7,290
22	Reg. Comm. Exp.	9,017	587	1,024	-	-	-	-	10,628	-	10,628
23	Reg. Comm. Exp. - Rate Case	28,061	8,418	14,031	-	-	-	-	50,510	-	50,510
24	Miscellaneous Expense	60,285	11,116	14,037	-	-	-	-	85,438	-	85,438
25	Bad Debt Expense	9,526	3,306	5,346	-	-	-	-	18,178	-	18,178
26	Depreciation Expense	740,778	27,817	52,807	-	-	-	-	821,402	-	821,402
27	Taxes Other Than Income	-	-	-	-	-	-	-	-	-	-
29	Taxes Other Than Income-Property Taxes	145,924	9,025	20,230	-	-	-	-	175,178	(107)	175,071
31	Income Taxes	217,811	(23,993)	23,875	(11,068)	1	(11,068)	1	206,625	(2,923)	203,702
32	<b>Total Operating Expenses</b>	<b>\$ 3,103,536</b>	<b>\$ 230,133</b>	<b>\$ 406,157</b>	<b>\$ (11,068)</b>	<b>\$ (11,068)</b>	<b>\$ (11,068)</b>	<b>\$ (11,068)</b>	<b>\$ 3,728,758</b>	<b>\$ (3,030)</b>	<b>\$ 3,725,727</b>
33											
34	<b>Operating Income (Loss)</b>	<b>\$ 422,497</b>	<b>\$ (38,167)</b>	<b>\$ 37,979</b>	<b>\$ -</b>	<b>\$ (4,650)</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 433,378</b>	<b>\$ (4,650)</b>	<b>\$ 428,728</b>
35											

**Note 1**

Adj. No. 1	Consolidated Income Tax	Decrease In Tax Due to Synchronized Interest Deduction
Bella Vista Income Tax	\$ 217,811	\$ 3,767
Northern Sunrise Income Tax	\$ (23,993)	\$ 5,894
Southern Sunrise Income Tax	\$ 23,875	\$ (60)
Less: Consolidated Income Tax	\$ 206,625	\$ 9,601
	\$ 11,068	

Sch CSB-2, Line 52  
 See Note 1

Adj. No. 2 Schedule CSB-5, Line 39  
 Adj. No. 3 Schedule CSB-2, Line 29

References:  
 Column (A): Schedule CSB-5 for Bella Vista  
 Column (B): Schedule CSB-5 for Northern Sunrise  
 Column (C): Schedule CSB-7 for Southern Sunrise  
 Column (D): Line 43, Schedule CSB-2, Line 42  
 Column (E): Col (A) + Col (B) + Col (C) + Col (D)  
 Column (F): Schedule CSB-1  
 Column (G): Col (E) + Col (F)

LINE NO.	Property Tax Calculation	Bella Vista	Northern	Southern	Total
1	Staff Adjusted Test Year Revenues	\$ 3,526,033	\$ 191,966	\$ 444,136	\$ 4,162,136
2	Weight Factor	2	2	2	2
3	Subtotal (Line 1 * Line 2)	7,052,066	383,933	888,272	8,324,271
4	Staff Recommended Revenue (Test Year), Per Schedule CSB-1	3,526,033	191,966	444,136	4,162,136
5	Subtotal (Line 4 + Line 5)	10,578,099	575,899	1,332,409	12,486,407
6	Number of Years	3	3	3	3
7	Three Year Average (Line 5 / Line 6)	3,526,033	191,966	444,136	4,162,136
8	Department of Revenue Mutilplier	2	2	2	2
9	Revenue Base Value (Line 7 * Line 8)	7,052,066	383,933	888,272	8,324,271
10	Plus: 10% of CWIP -	37,989	-	5,318	43,307
11	Less: Net Book Value of Licensed Vehicles	3,305	-	-	3,305
12	Full Cash Value (Line 9 + Line 10 - Line 11)	7,086,750	383,933	893,590	8,364,273
13	Assessment Ratio	21.0%	21.0%	21.0%	21.0%
14	Assessment Value (Line 12 * Line 13)	1,488,218	80,626	187,654	1,756,497
15	Composite Property Tax Rate	9.8053%	11.1932%	10.7803%	9.9732%
16	Staff Test Year Adjusted Property Tax (Line 14 * Line 15)	\$ 145,924	\$ 9,025	\$ 20,230	\$ 175,178
17	Company Proposed Property Tax	\$ -	\$ -	\$ -	\$ -
18	Staff Test Year Adjustment (Line 16-Line 17)	\$ 145,924	\$ 9,025	\$ 20,230	\$ 175,178

	Bella Vista	Northern	Southern	Total	
19	Staff Adjusted Test Year Revenues	\$ 3,526,033	\$ 191,966	\$ 444,136	\$ 4,162,136
20	Weight Factor	2	2	2	2
21	Subtotal (Line 19 * Line 20)	7,052,066	383,933	888,272	8,324,271
22	Staff Recommended Revenue, Per Schedule CSB-1	\$ 3,368,105	\$ 320,198	\$ 484,740	\$ 4,154,455
23	Subtotal (Line 21 + Line 22)	10,420,171	704,131	1,373,012	12,478,726
24	Number of Years	3	3	3	3
25	Three Year Average (Line 23 / Line 24)	3,473,390	234,710	457,671	4,159,575
26	Department of Revenue Mutilplier	2	2	2	2
27	Revenue Base Value (Line 25 * Line 26)	6,946,781	469,421	915,341	8,319,151
28	Plus: 10% of CWIP -	37,989	-	5,318	43,307
29	Less: Net Book Value of Licensed Vehicles	3,305	-	-	3,305
30	Full Cash Value (Line 27 + Line 28 - Line 29)	6,981,465	469,421	920,659	8,359,153
31	Assessment Ratio	21.0%	21.0%	21.0%	21.0%
32	Assessment Value (Line 30 * Line 31)	1,466,108	98,578	193,338	1,755,422
33	Composite Property Tax Rate	9.8053%	11.1932%	10.7803%	9.9732%
34					
35					
36	Property Tax - Staff Recommended Rev (Line 34)	\$ 143,756	\$ 11,034	\$ 20,842	\$ 175,071
37	Staff Test Year Adjusted Property Tax Expense (Line 18)	\$ 145,924	\$ 9,025	\$ 20,230	\$ 175,178
38	Increase in Prop Tax Exp Due to Incr in Rev Requ (Line 36 - Line 37)	\$ (2,168)	\$ 2,009	\$ 613	\$ (107)
39	Increase to Property Tax Expense (Line 38)	\$ (2,168)	\$ 2,009	\$ 613	\$ (107)
40	Increase in Revenue Requirement (Line 22 - Line 19)	(157,928)	128,232	40,604	(7,681)
41	Increase to Property Tax per Dollar Increase in Rev (Line39/Line 40)	1.372742%	1.567048%	1.509242%	1.396244%



**BEFORE THE ARIZONA CORPORATION COMMISSION**

KRISTIN K. MAYES

Chairman

GARY PIERCE

Commissioner

PAUL NEWMAN

Commissioner

SANDRA D. KENNEDY

Commissioner

BOB STUMP

Commissioner

IN THE MATTER OF THE APPLICATION OF )  
BELLA VISTA WATER CO., INC. AN ARIZONA )  
CORPORATION, FOR A DETERMINATION OF THE )  
FAIR VALUE OF ITS UTILITY PLANTS AND )  
PROPERTY AND FOR INCREASES IN ITS WATER )  
RATES AND CHARGES FOR UTILITY SERVICE )  
BASED THEREON. )

DOCKET NO. W-02465A-09-0411

IN THE MATTER OF THE APPLICATION OF )  
NORTHERN SUNRISE WATER COMPANY INC., AN )  
ARIZONA CORPORATION, FOR A )  
DETERMINATION OF THE FAIR VALUE OF ITS )  
UTILITY PLANTS AND PROPERTY AND FOR )  
INCREASES IN ITS WATER RATES AND CHARGES )  
FOR UTILITY SERVICE BASED THEREON. )

DOCKET NO. W-20453A-09-0412

IN THE MATTER OF THE APPLICATION OF )  
SOUTHERN SUNRISE WATER COMPANY INC., AN )  
ARIZONA CORPORATION, FOR A )  
DETERMINATION OF THE FAIR VALUE OF ITS )  
UTILITY PLANTS AND PROPERTY AND FOR )  
INCREASES IN ITS WATER RATES AND CHARGES )  
FOR UTILITY SERVICE BASED THEREON. )

DOCKET NO. W-20454A-09-0413

IN THE MATTER OF BELLA VISTA WATER CO., ) DOCKET NO. W-02465A-09-0414  
INC., NORTHERN SUNRISE WATER COMPANY ) DOCKET NO. W-20453A-09-0414  
INC., AND SOUTHERN SUNRISE WATER ) DOCKET NO. W-20454A-09-0414  
COMPANY, INC.'S JOINT APPLICATION FOR )  
APPROVAL OF AUTHORITY TO CONSOLIDATE )  
OPERATIONS, AND FOR THE TRANSFER OF )  
UTILITY ASSETS TO BELLA VISTA WATER CO., )  
INC., PURSUANT TO ARIZONA REVISED )  
STATUTES 40-285. )

DIRECT

TESTIMONY

OF

PEDRO M. CHAVES

PUBLIC UTILITIES ANALYST III

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

APRIL 14, 2010

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**EXECUTIVE SUMMARY**  
**BELLA VISTA WATER COMPANY, INC.**  
**NORTHERN SUNRISE WATER COMPANY, INC., AND**  
**SOUTHERN SUNRISE WATER COMPANY**  
**DOCKET NOS. W-02465A-09-0411, ET AL**

The direct testimony of Staff witness Pedro M. Chaves addresses the following issues:

Capital Structure – Staff recommends that the Commission adopt a capital structure for Bella Vista Water Company, Inc., Northern Sunrise Water Company, Inc., and Southern Sunrise Water Company, Inc., (collectively “Applicants”) for this proceeding consisting of 32.2 percent debt and 67.8 percent equity.

Cost of Equity – Staff recommends that the Commission adopt a 9.8 percent return on equity (“ROE”) for the Applicants. Staff’s estimated ROE for the Applicants is based on cost of equity estimates for the sample companies ranging from 9.7 percent for the discounted cash flow method (“DCF”) to 10.6 percent for the capital asset pricing model (“CAPM”). Staff’s ROE recommendation includes a 0.4 percent downward adjustment to reflect a lower financial risk in the Applicants’ capital structure compared to that of the sample companies.

Cost of Debt – Staff recommends that the Commission adopt a 6.3 percent cost of debt.

Overall Rate of Return – Staff recommends that the Commission adopt an overall rate of return (“ROR”) of 8.6 percent.

Mr. Bourassa’s Testimony – The Commission should reject the Company-proposed 12.5 percent ROE for the following reasons:

Mr. Bourassa’s DCF estimates rely primarily on analysts’ forecasts.

Mr. Bourassa’s DCF constant-growth analysis does not include dividend growth.

Mr. Bourassa’s firm-specific risk adjustment is not consistent with modern financial theory.

1 **I. INTRODUCTION**

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

3 A. My name is Pedro M. Chaves. I am a Public Utilities Analyst employed by the Arizona  
4 Corporation Commission (“Commission”) in the Utilities Division (“Staff”). My business  
5 address is 1200 West Washington Street, Phoenix, Arizona 85007.

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

8 A. In my position as a Public Utilities Analyst, I perform studies to estimate the cost of  
9 capital component of the overall revenue requirement calculation in rate filings. I also  
10 analyze requests for financing authorization, analyze and examine accounting, financial,  
11 statistical and other information and prepare reports based on my analyses that present  
12 Staff’s recommendations to the Commission on utility revenue requirements, rate base,  
13 rate design and other financial regulatory matters.

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

16 A. I am a graduate of Arizona State University and received a Bachelor of Science degree in  
17 Global Business with a specialization in finance. My course of studies included classes in  
18 corporate and international finance, investments, accounting, statistics, and economics. I  
19 began employment as a Staff Public Utilities Analyst in December 2005.

20  
21 **Q. What is the scope of your testimony in this case?**

22 A. I provide Staff’s recommended capital structure, cost of debt, return on equity (“ROE”)  
23 and rate of return (“ROR”) in this case. I discuss the appropriate capital structure, cost of  
24 debt, ROE and ROR for establishing the revenue requirement for Bella Vista Water  
25 Company, Inc., Northern Sunrise Water Company, Inc., and Southern Sunrise Water  
26 Company, Inc., (collectively “Applicants”).

1 **Q. Please provide a brief description of the Applicants and their relation to affiliates.**

2 A. The Applicants are Subchapter "C" corporations and are owned by Algonquin Water  
3 Resources of America, Inc. ("AWRA"), now known as Liberty Water, Inc. AWRA is an  
4 indirect wholly owned subsidiary of Algonquin Power Income Fund ("APIF") which is  
5 publicly traded on the Toronto Stock Exchange. In October 2009, APIF converted to a  
6 corporation, Algonquin Power & Utilities Corp. ("APUC"). APUC is publically traded on  
7 the Toronto Stock Exchange. The Applicants are sister companies to other public service  
8 corporations regulated by the Commission including: Black Mountain Sewer Corporation,  
9 Litchfield Park Service Company, Gold Canyon Sewer Company and Rio Rico Utilities,  
10 Inc.

11  
12 **Summary of Testimony and Recommendations**

13 **Q. Briefly summarize how Staff's cost of capital testimony is organized.**

14 A. Staff's cost of capital testimony is presented in ten sections. Section I is this introduction.  
15 Section II discusses the concept of weighted average cost of capital ("WACC"). Section  
16 III presents the concept of capital structure and presents Staff's recommended capital  
17 structure for the Applicants in this proceeding. Section IV discusses the concepts of ROE  
18 and risk. Section V presents the methods employed by Staff to estimate the Applicants'  
19 ROE. Section VI presents the findings of Staff's ROE analysis. Section VII presents  
20 Staff's final cost of equity estimates for the Applicants. Section VIII presents Staff's ROR  
21 recommendation. Section IX presents Staff's comments on the Direct Testimony of the  
22 Applicants' witness, Mr. Thomas J. Bourassa. Finally, Section X presents the  
23 conclusions.

1 **Q. Have you prepared any exhibits to accompany your testimony?**

2 A. Yes. I prepared nine schedules (PMC-1 to PMC-9) that support Staff's cost of capital  
3 analysis.

4  
5 **Q. What is Staff's recommended rate of return for the Applicants?**

6 A. Staff recommends an 8.6 percent overall ROR as presented in Schedule PMC-1. Staff's  
7 ROR recommendation is based on cost of equity estimates for the Applicants that range  
8 from 9.7 percent for the discounted cash flow method ("DCF") to 10.6 percent for the  
9 capital asset pricing model ("CAPM"). Staff's ROE recommendation includes a 0.4  
10 percent downward adjustment due to the lower financial risk reflected in the Applicants'  
11 capital structure in relation to that of the sample companies.

12  
13 **Applicants' Proposed Overall Rate of Return**

14 **Q. Briefly summarize the Applicants' proposed capital structure, cost of debt, return on  
15 equity and overall rate of return for this proceeding.**

16 A. Table 1 summarizes the Applicants' proposed capital structure, cost of debt, return on  
17 equity and overall cost of capital and ROR in this proceeding:<sup>1</sup>

18 **Table 1**

	<b>Weight</b>	<b>Cost</b>	<b>Weighted Cost</b>
Debt	21.1%	6.3%	1.3%
Common Equity	78.9%	12.5%	<u>9.9%</u>
<b>Cost of Capital</b>			<b>11.2%</b>

19

20 The Applicants are proposing an overall ROR of 11.2 percent.

<sup>1</sup> The consolidated Docket Nos. W-20465A-09-0411, W-20453A-09-0412,, W-20454A-09-0413, W-20465A-09-0414, W-20453A-09-0414 and W-20454A-09-0414.

1 **II. THE WEIGHTED AVERAGE COST OF CAPITAL**

2 **Q. Please define the cost of capital concept.**

3 A. The cost of capital is the opportunity cost represented by anticipated returns or earnings  
4 that are foregone by choosing one investment over others with equivalent risk. In other  
5 words, the cost of capital is the return that stakeholders expect for investing their financial  
6 resources in a determined business venture over another business venture.

7  
8 **Q. What is the overall cost of capital?**

9 A. The cost of capital to a company issuing a variety of securities (i.e., stock and  
10 indebtedness) is an average of the cost rates on all issued securities adjusted to reflect the  
11 relative amounts for each security in the company's entire capital structure. Thus, the  
12 overall cost of capital is the weighted average cost of capital ("WACC").

13  
14 **Q. How is the WACC calculated?**

15 A. The WACC is calculated by adding the weighted expected returns of a firm's securities.  
16 Equation 1 that follows presents the WACC as a mathematical expression.

17 Equation 1.

18  
19 
$$\text{WACC} = \sum_{i=1}^n W_i * r_i$$
  
20  
21

22 In this equation,  $W_i$  is the weight given to the  $i^{\text{th}}$  security (the proportion of the  $i^{\text{th}}$  security  
23 relative to the portfolio) and  $r_i$  is the expected return on the  $i^{\text{th}}$  security.

1 **Q. Can you provide an example demonstrating application of Equation 1?**

2 A. Yes. For this example, assume that an entity has a capital structure composed of 35  
3 percent debt and 65 percent equity. Also, assume that the embedded cost of debt is 6.0  
4 percent and the expected return on equity, i.e. the cost of equity, is 10.0 percent.  
5 Calculation of the WACC is as follows:

6 
$$\text{WACC} = (35\% * 6.0\%) + (65\% * 10.0\%)$$

7 
$$\text{WACC} = 2.10\% + 6.50\%$$

8 
$$\text{WACC} = 8.60\%$$

9  
10 The weighted average cost of capital in this example is 8.60 percent. The entity in this  
11 example would need to earn an overall rate of return of 8.60 percent to cover its cost of  
12 capital.

13  
14 **III. CAPITAL STRUCTURE**

15 **Background**

16 **Q. Please explain the capital structure concept.**

17 A. The capital structure of a firm is the relative proportions of short-term debt, long-term debt  
18 (including capital leases), preferred stock and common stock that are used to finance the  
19 firm's assets.

20  
21 **Q. How is the capital structure expressed?**

22 A. The capital structure of a company is expressed as the percentage of each component of  
23 the capital structure (capital leases,<sup>2</sup> short-term debt, long-term debt, preferred stock and  
24 common stock) relative to the total capital (the total sum of all the components of the  
25 capital structure).

---

<sup>2</sup> Capital leases are a specific form of long-term debt.

1 For instance, the capital structure for an entity that is financed by \$5,000 of short-term  
2 debt, \$15,000 of capital leases, \$30,000 of long-term debt, \$10,000 of preferred stock and  
3 \$40,000 of common stock is shown in Table 2, below.

4  
5 **Table 2**

<b>Component</b>			<b>%</b>
Short-Term Debt	\$5,000	(\$5,000/\$100,000)	5.0%
Capital Leases	\$15,000	(\$15,000/\$100,000)	15.0%
Long-Term Debt	\$30,000	(\$30,000/\$100,000)	30.0%
Preferred Stock	\$10,000	(\$10,000/\$100,000)	10.0%
Common Stock	\$40,000	(\$40,000/\$100,000)	40.0%
<b>Total</b>	<b>\$100,000</b>		<b>100%</b>

6  
7 The capital structure in this example is composed of 5.0 percent short-term debt, 15.0  
8 percent capital leases, 30.0 percent long-term debt, 10.0 percent preferred stock and 40.0  
9 percent common stock.

10  
11 **Applicants' Capital Structure**

12 **Q. What capital structure do the Applicants propose?**

13 A. The Applicants propose a consolidated capital structure composed of 21.1 percent debt  
14 and 78.9 percent common equity. The Applicants have also proposed the following stand-  
15 alone capital structures in the event that the Commission does not adopt their proposal to  
16 consolidate the Northern Sunrise Water Company and Southern Sunrise Water Company  
17 with Bella Vista Water Company: Bella Vista Water – 27.8 percent debt and 72.2 percent  
18 equity; Northern Sunrise Water - 0.0 percent debt and 100.0 percent equity; and Southern  
19 Sunrise Water - 0.0 percent debt and 100.0 percent equity.

1 **Q. What capital structure does Staff recommend?**

2 A. Staff recommends a consolidated capital structure of 32.2 percent debt and 67.8 percent  
3 equity, to reflect Applicant's most recent debt and equity positions, as displayed in  
4 Schedule PMC-9 and summarized in Table 3 below.

5  
6 **Table 3**

<b>Bella Vista Water Company, Inc., et al.</b>			
<b>Capitalization</b>			
	<u>Amount outstanding</u>	<u>Percentage of</u>	
	<u>as of 12/31/2009</u>	<u>Capital Structure</u>	
<b>Total Debt</b>	\$ 1,580,636	32.2%	
<b>Total Equity</b> <sup>3</sup>	\$ 3,329,745	67.8%	
<b>Total Capitalization</b>	\$ 4,910,381	100.0%	

7  
8 Staff recommended use of a consolidated capital structure as opposed to stand-alone  
9 capital structures for each of the three systems under review in this consolidated docket to  
10 recognize their ownership and operating commonalities.

11  
12 **Q. How does the Applicants' consolidated actual capital structure compare to capital**  
13 **structures of publicly-traded water utilities?**

14 A. Staff recommended capital structure is composed of 32.2 percent debt and 67.8 percent  
15 equity. Schedule PMC-3 shows the capital structures of six publicly traded water  
16 companies ("sample water companies") as of September 30, 2009.<sup>4</sup> The average capital

<sup>3</sup> Total equity reflects adjustments to: (1) accumulated depreciation in the amount of \$625,324; (2) contributions in aid of construction in the amount of negative \$27,772; and (3) accumulated deferred income tax in the amount of negative \$3,623,106.

<sup>4</sup> Value Line Summary & Index. January 22, 2010.

1 structure for the sample water utilities is comprised of approximately 51.0 percent debt  
2 and 49.0 percent equity.

3  
4 **IV. RETURN ON EQUITY**

5 **Background**

6 **Q. Please define the term “cost of equity capital.”**

7 A. The cost of equity capital is determined by the market. It is the rate of return that  
8 investors expect to earn on their equity investment in an entity given its risk. In other  
9 words, the cost of equity to an entity is the collective-investors’ expected rate of return on  
10 other investments of similar risk. Thus, the rate of return expected by individual investors,  
11 institutional investors, rate analysts and public utility commissions has no direct effect on  
12 the cost of equity except to the extent those individuals or organizations represent a small  
13 segment of the universe of collective-investors.

14  
15 **Q. Is there any relationship between interest rates and the cost of equity capital?**

16 A. Yes. The cost of equity tends to move in the same direction as interest rates. This  
17 relationship is integral to the CAPM formula. The CAPM is a market-based model used  
18 for estimating the cost of equity capital that is discussed in Section V of this testimony.  
19 Therefore, a comparison of current interest rates to historical interest rates provides insight  
20 for how the current cost of equity capital might be compared to the cost of equity capital  
21 historically.

22  
23 **Q. What has been the general trend of interest rates in recent years?**

24 A. A chronological chart of interest rates is a good tool to show interest rate history and  
25 identify trends. Chart 1 graphs intermediate U.S. treasury rates from February 2000 to  
26 February 2010.

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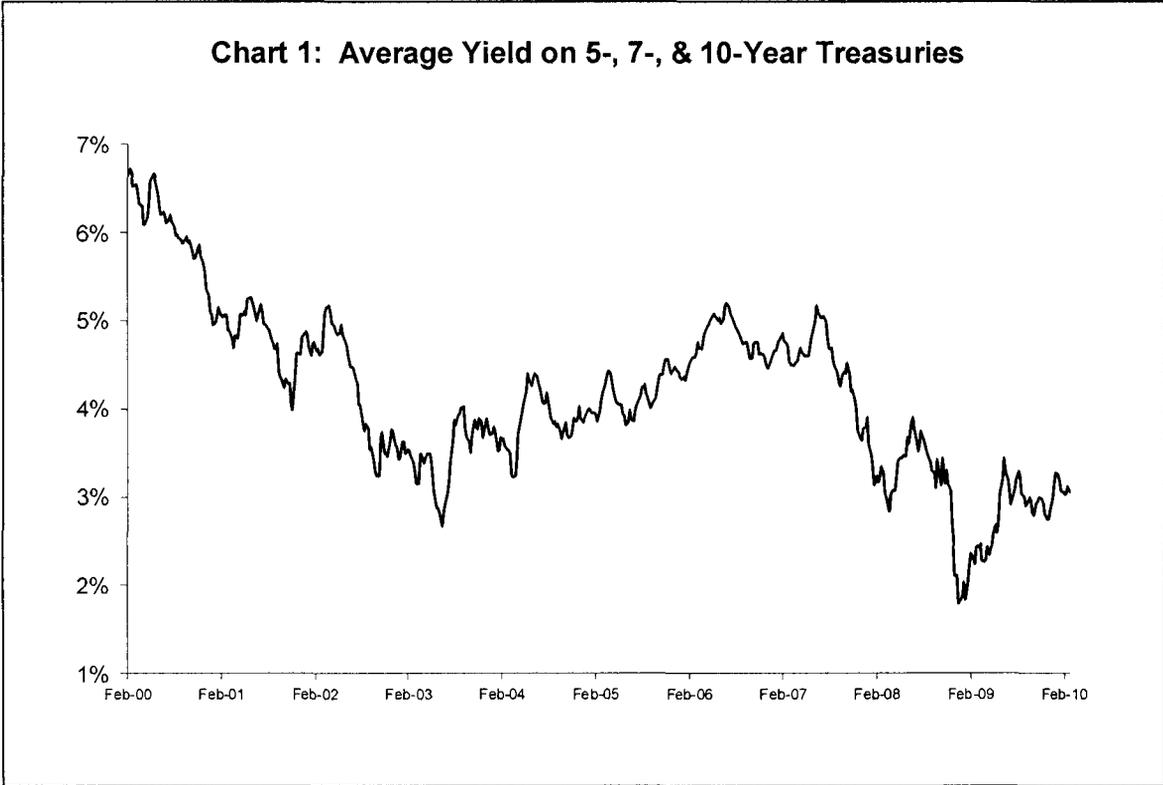
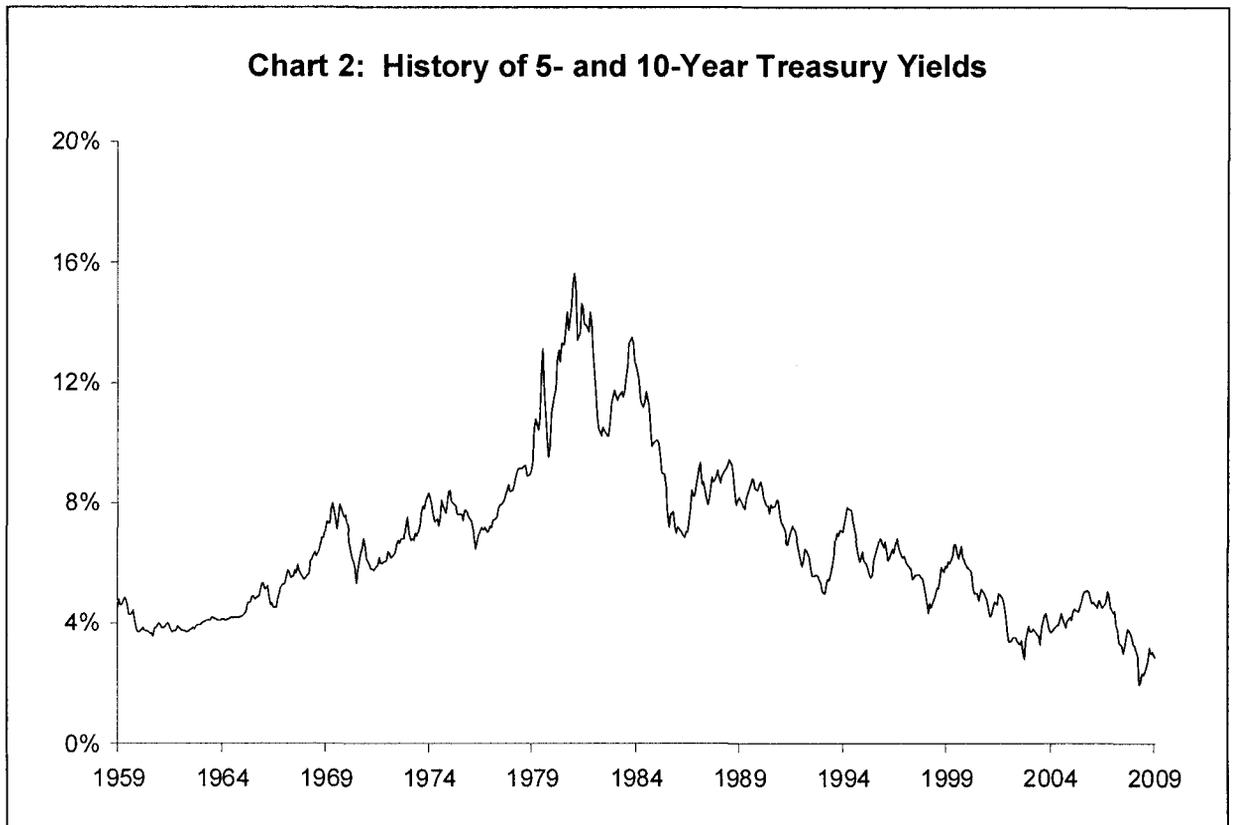


Chart 1 shows that intermediate interest rates trended downward from 2000 to mid-2003; then, trended upward to mid-2006; subsequently, remained relatively steady at about 5 percent to mid-2007; and have trended downward since then.

**Q. How do current interest rates compare to a longer term history of interest rates, and what does it suggest for capital costs?**

A. Chart 2 shows that interest rates have trended downward in the immediate past period of approximately 30 years. It also shows that interest rates over the past 40 years have been higher than currently. In fact, interest rates are currently hovering near historically low levels. The inference from the relationship between interest rates and the cost of equity capital is that current capital costs are low in comparison to historical capital costs.



14  
15 **Q. Do actual returns represent the cost of equity?**

16 A. No. The cost of equity represents investors' *expected* returns not realized accounting  
17 returns.

18  
19 **Q. Is there any information available that leads to an understanding of the relationship  
20 between the equity returns required for a regulated water utility versus the market?**

21 A. Yes. A comparison of betas, a component of the CAPM discussed in Section V, for the  
22 water utility industry and the market provides insight into this relationship. The average  
23 beta (0.79)<sup>5</sup> for a water utility is lower than the theoretical average beta for all stocks (1.0).  
24 According to the CAPM formula, the cost of equity capital moves in the same direction as  
25 beta. Since the beta for the water utility industry is about the same as the beta for the

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<sup>5</sup> See Schedule PMC-6

1 market, the implication is that the required return on equity for a regulated water utility is  
2 below the average required return on the market.

3  
4 **Risk**

5 **Q. Please define risk.**

6 A. Risk, as it relates to an investment, is generally recognized as the variability or uncertainty  
7 of the returns on the investment. Risk is often separated into two components. Those  
8 components are market risk (systematic risk) and non-market risk (unique risk).

9  
10 **Q. What is market risk?**

11 A. Market risk or systematic risk is the risk that changes in the stock market as a whole will  
12 cause changes in the stock price of a particular entity. Market risk is related to the  
13 economy-wide perils that affect all business such as inflation, interest rates, and general  
14 business cycles. Market risk affects all stocks and it cannot be eliminated by  
15 diversification, i.e., it is non-diversifiable. However, the impact on each entity is not  
16 necessarily the same. Accordingly, market risk is the only risk that affects the cost of  
17 equity.

18  
19 **Q. Is there a measure for market risk?**

20 A. Yes. Market risk is measured by the beta. Beta reflects both the business risk and  
21 financial risk of an entity.

22  
23 **Q. How are business and financial risks defined?**

24 A. Business risk is that risk which is associated with the fluctuation in earnings due to the  
25 basic nature of an entity's business. Financial risk is that risk which affects shareholders  
26 due to a firm's use of fixed obligation (i.e., debt) financing.

1 **Q. Is the cost of equity affected by both business and financial risk?**

2 A. Yes.

3  
4 **Q. What is the relationship between the capital structure of a firm and its financial**  
5 **risk?**

6 A. As previously discussed, the relative proportions of short-term debt, long-term debt  
7 (including capital leases), preferred stock and common stock used to finance an entity's  
8 assets represent its capital structure. Financial risk increases as an entity includes a greater  
9 proportion of fixed obligation financing in its capital structure (i.e., as it becomes more  
10 leveraged). An increase in financial risk is reflected in the market risk measured by beta  
11 resulting in an increase in an entity's cost of equity.

12  
13 **Q. How does the Applicants' financial risk compare to the sample water companies'**  
14 **financial risk from the perspective of an investor?**

15 A. From an investor's perspective, the Applicants' capital structure is composed of  
16 approximately 32.2 percent debt and 67.8 percent equity. Schedule PMC-3 shows the  
17 capital structures of six publicly traded water companies ("sample water companies") as  
18 of September 30, 2009, as well as the Applicants' actual capital structure. As of  
19 September 30, 2009, the sample water utilities were capitalized with approximately 51.0  
20 percent debt and 49.0 percent equity, while Staff recommended capital structure consists  
21 of approximately 32.2 percent debt and 67.8 percent equity. Consequently, the  
22 Applicants' shareholders bear less financial risk than the shareholders of the sample water  
23 companies.

1 **Q. Is a financial risk adjustment warranted in this proceeding?**

2 A. Yes. Since the Applicants do have access to the capital markets, a financial risk  
3 adjustment is warranted.

4  
5 **Q. What is non-market risk?**

6 A. Non-market (unique risk) is risk related to an individual entity. There is no correlation  
7 among entities for unique risk; accordingly, it can be eliminated through diversification.  
8 Specifically, investors can eliminate unique risk by holding a diversified investment  
9 portfolio.

10  
11 **Q. Is unique risk measured by beta?**

12 A. No. Unique risk is not measured by beta.

13  
14 **Q. Is the cost of equity affected by unique risk?**

15 A. No. Since unique or firm-specific risk can be eliminated through diversification, it does  
16 not affect the cost of equity capital.

17  
18 **Q. What additional return can investors expect to account for unique risk?**

19 A. None. Investors who hold diversified portfolios can eliminate unique risk, and  
20 consequently do not require any related additional return. Since investors who choose to  
21 be less than fully diversified must compete in the market with fully diversified investors,  
22 the former cannot expect to be compensated for unique risk.

1 **V. ESTIMATING THE COST OF EQUITY**

2 **Introduction**

3 **Q. Did Staff directly estimate the cost of equity for the Applicants?**

4 A. No. Staff did not directly estimate the Applicants' cost of equity for two reasons. First,  
5 the Applicants' stock is not publicly traded; therefore, its cost of equity cannot be  
6 estimated because the required information is not available to perform the analysis.  
7 Second, using an average of a representative sample group reduces the potential for  
8 random fluctuations resulting in a more reliable estimate, vis-à-vis relying on a single  
9 entity.

10  
11 **Q. What companies did Staff select as proxies or comparables for the Applicants'?**

12 A. Staff selected six publicly-traded water utilities shown in Schedule PMC-3. Staff chose  
13 these six entities because they derive most of their earnings from regulated operations, and  
14 they are currently analyzed by *The Value Line Investment Survey Small and Mid Cap*  
15 *Edition* ("Value Line Small Cap") and *The Value Line Investment Survey* ("Value Line")  
16 making available the necessary information to perform a cost of capital estimation for the  
17 Applicants.

18  
19 **Q. What models did Staff implement to estimate the Applicants' cost of equity?**

20 A. The cost of equity is determined by the market; therefore, Staff used two market-based  
21 models to estimate the cost of equity for the Applicants: the DCF and the CAPM.

22  
23 **Q. Explain why Staff chose the DCF and CAPM?**

24 A. Staff chose to use the DCF and CAPM because they are widely recognized as appropriate  
25 market-based models and have been used extensively to estimate the cost of equity. A  
26 description of the DCF and then the CAPM begins immediately below.

1 **Discounted Cash Flow Model Analysis**

2 **Q. Please provide a brief summary of the theory underlying use of the DCF to estimate**  
3 **the cost of equity.**

4 A. The theory underlying use of the DCF to estimate the cost of capital is that the cost of  
5 equity is that discount rate which equates the current market price to all future cash flows  
6 expected by investors. That is, the cost of equity is the rate that future expected cash  
7 flows (primarily dividends) must be discounted to equal a given market price.

8 In the 1960s, Professor Myron Gordon pioneered the use of the DCF method to estimate  
9 the cost of capital for a public utility. The DCF model has become widely used due to its  
10 theoretical merit and its simplicity.

11

12 **Q. How is the DCF model applied?**

13 A. The DCF model is applied via a mathematical formula where the current market price, the  
14 expected dividend, and projected dividend growth rate are inputs, while the discount rate  
15 (cost of equity) is the result. The formula can be applied to a sample of companies that  
16 exhibit similar risk to the entity whose cost of equity is being estimated and the results  
17 averaged to arrive at an estimate of the cost of equity for the subject entity.

18

19 **Q. Did Staff apply more than one version of the DCF?**

20 A. Yes. Staff applied two versions of the DCF: the constant-growth DCF and the multi-stage  
21 or non-constant growth DCF. The constant-growth DCF assumes that an entity will grow  
22 indefinitely at the same rate. Alternately, the non-constant growth DCF does not assume  
23 one constant, indefinite dividend growth rate.

1 *The Constant-Growth DCF*

2 **Q. What is the mathematical formula used in Staff's constant-growth DCF analysis?**

3 A. The constant-growth DCF formula used in Staff's analysis is:

Equation 2 :

$$K = \frac{D_1}{P_0} + g$$

where :     $K$     = the cost of equity  
               $D_1$     = the expected annual dividend  
               $P_0$     = the current stock price  
               $g$      = the expected infinite annual growth rate of dividends

4

5 Equation 2 assumes that the entity has a constant earnings retention rate and that its  
6 earnings are expected to grow at a constant rate. According to Equation 2, a stock with a  
7 current market price of \$10 per share, an expected annual dividend of \$0.39 per share and  
8 an expected dividend growth rate of 4.0 percent per year has a cost of equity to the entity  
9 of 7.9 percent reflected by the sum of the dividend yield ( $\$0.39 / \$10 = 3.9$  percent) and the  
10 4.0 percent annual dividend growth rate.

11

12 **Q. How did Staff calculate the dividend yield component ( $D_1/P_0$ ) of the constant-growth**  
13 **DCF formula?**

14 A. Staff calculated the yield component of the DCF formula by dividing the expected annual  
15 dividend<sup>6</sup> ( $D_1$ ) by the spot stock price ( $P_0$ ) after the close of the market February 24, 2010,  
16 as reported by the *MSN money* website.

---

<sup>6</sup> Value Line Summary & Index. 1-22-10

1 **Q. Why did Staff use the February 24, 2010, spot price rather than a historical average**  
2 **stock price to calculate the dividend yield component of the DCF formula?**

3 A. Use of the current market stock price (spot stock price) is consistent with finance theory,  
4 i.e., the efficient market hypothesis. This hypothesis asserts that the current stock price  
5 reflects information investors use to form expectations of future returns. Use of a  
6 historical average of stock prices illogically discounts the most recent information in favor  
7 of less recent information. The latter is stale and is representative of underlying  
8 conditions that may have changed.

9  
10 **Q. How did Staff estimate the dividend growth (g) component of the constant-growth**  
11 **DCF model represented by Equation 2?**

12 A. The dividend growth component for Staff's constant-growth DCF model is the average of  
13 six different estimation methods, as shown in Schedule PMC-7. Staff computed both  
14 historical and projected growth estimates on dividend-per-share ("DPS"),<sup>7</sup> earnings-per-  
15 share ("EPS")<sup>8</sup> and sustainable growth bases.

16  
17 **Q. Why did Staff examine EPS growth to estimate the dividend growth component of**  
18 **the constant-growth DCF model?**

19 A. Staff examined EPS growth (both historical and projected) because dividends are  
20 dependent on earnings. Dividend distribution in excess of earnings results in capital  
21 contraction. Continued capital contraction is not sustainable in the long run, and it is  
22 inconsistent with the constant-growth DCF model. Therefore, EPS growth is an  
23 appropriate consideration for estimating expected dividend growth.

---

<sup>7</sup> Derived from information provided by *Value Line*

<sup>8</sup> Derived from information provided by *Value Line*

1 **Q. How did Staff estimate historical DPS growth?**

2 A. Staff estimated historical DPS growth by calculating the average rate of growth in DPS of  
3 the sample water companies from 1998 to 2008. The results of that calculation are shown  
4 in Schedule PMC-4. Staff calculated an average historical DPS growth rate of 3.1 percent  
5 for the sample water utilities for the period 1998 to 2008.

6  
7 **Q. How did Staff estimate the projected DPS growth?**

8 A. Staff calculated an average of the projected DPS growth rates for the sample water utilities  
9 from *Value Line*. The average projected DPS growth rate is 4.0 percent, as shown in  
10 Schedule PMC-4.

11  
12 **Q. How did Staff calculate the historical EPS growth rate?**

13 A. Staff estimated historical EPS growth by calculating the average rate of growth in EPS of  
14 the sample water companies from 1998 to 2008. The results of that calculation are shown  
15 in Schedule PMC-4. Staff calculated an average historical EPS growth rate of 3.3 percent  
16 for the sample water utilities for the period 1998 to 2008.

17  
18 **Q. How did Staff estimate the projected EPS growth?**

19 A. Staff calculated an average of the projected EPS growth rates for the sample water utilities  
20 from *Value Line*. The average projected EPS growth rate is 9.6 percent, as shown in  
21 Schedule PMC-4.

22  
23 **Q. How did Staff calculate its historical and projected sustainable growth rates?**

24 A. Staff's historical and projected sustainable growth rates were calculated by adding their  
25 respective retention growth rate terms (br) to their respective stock financing growth rate  
26 terms (vs), as shown in Schedule PMC-5.

1 **Q. What is retention growth?**

2 A. Retention growth is the growth in dividends due to the retention of earnings. Viewed  
3 differently, an entity cannot expect to grow dividends if it does not retain any earnings.  
4 Retention growth is dependent on the percentage of earnings retained (retention ratio) and  
5 the value of earnings. Mathematically, the retention growth rate is the product of the  
6 retention ratio and the book/accounting return on equity.

7  
8 **Q. What is the formula for the retention growth rate?**

9 A. The retention growth rate formula is:

10 Equation 3 :

$$\text{Retention Growth Rate} = br$$

where :  $b$  = the retention ratio (1 – dividend payout ratio)  
 $r$  = the accounting/book return on common equity

11

12 **Q. How did Staff calculate the average historical retention growth rate (br) for the**  
13 **sample water utilities?**

14 A. First, Staff calculated the retention growth rate for each of the sample water companies  
15 from 1999 to 2008. Then Staff calculated the mean of those results. The historical  
16 average retention (br) growth for the sample water utilities is 3.0 percent, as shown in  
17 Schedule PMC-5.

1    **Q.    How did Staff determine projected retention growth rate (br) for the sample water**  
2    **utilities?**

3    A.    Staff used the retention growth projections for the sample water utilities for the period  
4    2012 to 2014 from *Value Line*. The projected average retention growth rate for the sample  
5    water utilities is 6.0 percent, as shown in Schedule PMC-5.

6  
7    **Q.    When can retention growth provide a reasonable estimate of future dividend**  
8    **growth?**

9    A.    The retention growth rate is a reasonable estimate of future dividend growth when the  
10   retention ratio is reasonably constant and the entity's market price to book value ("market-  
11   to-book ratio") is expected to be 1.0. The average retention ratio has been reasonably  
12   constant in recent years. However, the market-to-book ratio for the sample water utilities  
13   is 1.8, notably higher than 1.0, as shown in Schedule PMC-6.

14  
15   **Q.    Is there any financial implication of a market-to-book ratio greater than 1.0?**

16   A.    Yes. A market-to-book ratio greater than 1.0 implies that investors expect an entity to  
17   earn an accounting/book return on its equity that exceeds its cost of equity. The  
18   relationship between required returns and expected cash flows is readily observed in the  
19   fixed securities market. For example, assume an entity contemplating issuance of bonds  
20   with a face value of \$10 million at either 5 percent or 7 percent, and thus, paying annual  
21   interest of \$500,000 or \$700,000, respectively. Regardless of investors' required return on  
22   similar bonds, investors will be willing to pay more for the bonds if issued at 7 percent  
23   than if the bonds are issued at 5 percent. For example, if the current interest rate required  
24   by investors is 5 percent, then they would bid \$10 million for the 5 percent bonds and  
25   more than \$10 million for the 7 percent bonds. Similarly, if equity investors require a 7  
26   percent return and expect an entity to earn accounting/book returns of 11 percent, the

1 market will bid up the price of the entity's stock to provide the required return of 7  
2 percent.

3  
4 **Q. How has Staff generally recognized a market-to-book ratio exceeding 1.0 in its cost of  
5 equity analyses in recent years?**

6 A. First, Staff has assumed that investors expect the market-to-book ratio to remain greater  
7 than 1.0. Given that assumption, Staff has added a stock financing growth rate (vs) term  
8 to the retention ratio (br) term to calculate its historical and projected sustainable growth  
9 rates.

10  
11 **Q. Do the historical and projected sustainable growth rates Staff uses to develop its  
12 DCF cost of equity in this case continue to include a stock financing growth rate  
13 term?**

14 A. Yes.

15  
16 **Q. What is stock financing growth?**

17 A. Stock financing growth is the growth in an entity's dividends due to the sale of stock by  
18 that entity. Stock financing growth is a concept derived by Myron Gordon and discussed  
19 in his book *The Cost of Capital to a Public Utility*.<sup>9</sup> Stock financing growth is the product  
20 of the fraction of the funds raised from the sale of stock that accrues to existing  
21 shareholders (v) and the fraction resulting from dividing the funds raised from the sale of  
22 stock by the existing common equity (s).

23  
24 **Q. What is the mathematical formula for the stock financing growth rate?**

25 A. The mathematical formula for stock financing growth is:

---

<sup>9</sup> Gordon, Myron J. *The Cost of Capital to a Public Utility*. MSU Public Utilities Studies, Michigan, 1974. pp 31-35.

Equation 4 :

$$\text{Stock Financing Growth} = vs$$

where :  $v$  = Fraction of the funds raised from the sale of stock that accrues to existing shareholders

$s$  = Funds raised from the sale of stock as a fraction of the existing common equity

1

2 **Q. How is the variable  $v$  presented above calculated?**

3 A. Variable  $v$  is calculated as follows:

4

Equation 5 :

$$v = 1 - \left( \frac{\text{book value}}{\text{market value}} \right)$$

5

6 For example, assume that a share of stock has a \$40 book value and is selling for \$50.

7 Then, to find the value of  $v$ , the formula is applied:

$$v = 1 - \left( \frac{40}{50} \right)$$

8

9 In this example,  $v$  is equal to 0.20.

10

11 **Q. How is the variable  $s$  presented above calculated?**

12 A. Variable  $s$  is calculated as follows:

13

14

15

Equation 6:

$$s = \frac{\text{Funds raised from the issuance of stock}}{\text{Total existing common equity before the issuance}}$$

1 For example, assume that an entity has \$100 in existing equity, and it sells \$10 of stock.  
2 Then, to find the value of  $s$ , the formula is applied:

$$s = \left( \frac{10}{100} \right)$$

3  
4 In this example,  $s$  is equal to 10.0 percent.

6 **Q. What is the  $vs$  term when the market-to-book ratio is equal to 1.0?**

7 A. A market-to-book ratio equal to 1.0 reflects that investors expect an entity to earn a  
8 book/accounting return on their equity investment equal to the cost of equity. When the  
9 market-to-book ratio is equal to 1.0, none of the funds raised from the sale of stock by the  
10 entity accrues to the benefit of existing shareholders, i.e., the term  $v$  is equal to zero (0.0).  
11 Consequently, the  $vs$  term is also equal to zero (0.0). When stock financing growth is  
12 zero, dividend growth depends solely on the  $br$  term.

14 **Q. What is the effect of the  $vs$  term when the market-to-book ratio is greater than 1.0?**

15 A. A market-to-book ratio greater than 1.0 reflects that investors expect an entity to earn a  
16 book/accounting return on their equity investment greater than the cost of equity.  
17 Equation 5 shows that when the market-to-book ratio is greater than 1.0 the  $v$  term is also  
18 greater than zero. The excess by which new shares are issued and sold over book value  
19 per share of outstanding stock is a contribution that accrues to existing stockholders in the  
20 form of a higher book value. The resulting higher book value leads to higher expected  
21 earnings and dividends. Continued growth from the  $vs$  term is dependent upon the  
22 continued issuance and sale of additional shares at a price that exceeds book value per  
23 share.

24

1 **Q. What vs estimate did Staff calculate from its analysis of the sample water utilities?**

2 A. Staff estimated an average stock financing growth of 2.1 percent for the sample water  
3 utilities, as shown in Schedule PMC-5.

4

5 **Q. What would occur if an entity had a market-to-book ratio greater than 1.0 due to**  
6 **investors expecting earnings to exceed the cost of equity capital and the entity**  
7 **subsequently experienced newly authorized rates equal to its cost of equity capital?**

8 A. There would be downward pressure on the entity's stock price to reflect the change in  
9 future expected cash flows because, in theory, the market-to-book ratio should decline to  
10 1.0.

11

12 **Q. What is implied by Staff's continued use of the vs term in the historical and projected**  
13 **sustainable growth rates Staff uses to develop its DCF cost of equity in this case?**

14 A. The implication is that there are expectations regarding the market-to-book ratio  
15 continuing to exceed 1.0, and that the water utilities will continue to issue and sell stock at  
16 prices exceeding book value to provide benefits to existing shareholders. If the authorized  
17 ROEs for water utilities are established at the cost of equity capital, the market-to-book  
18 ratio should decline to 1.0. If that occurs, the stock financing term would no longer be  
19 necessary. If investors expect the average market-to-book ratio of the sample water  
20 utilities to fall to 1.0 due to authorized ROEs equaling the cost of equity capital, then  
21 Staff's inclusion of the vs term in its constant-growth DCF analysis might result in an over  
22 estimate of its sustainable dividend growth rate and the resulting DCF ROE estimate.

23

24 **Q. What are Staff's historical and projected sustainable growth rates?**

25 A. Staff's estimated historical sustainable growth rate is 5.2 percent based on an analysis of  
26 earnings retention for the sample water companies. Staff's projected sustainable growth

1 rate is 9.1 percent based on retention growth projected by *Value Line*. Schedule PMC-5  
2 presents Staff's estimates of the sustainable growth rate.

3  
4 **Q. What is Staff's expected infinite annual growth rate in dividends?**

5 A. Staff averaged historical and projected DPS, EPS, and sustainable growth estimates to  
6 calculate the expected infinite annual growth rate in dividends. Schedule PMC-7 presents  
7 the calculation of the expected infinite annual growth rate in dividends. Staff's estimate is  
8 5.7 percent.

9  
10 **Q. What is Staff's constant-growth DCF estimate?**

11 A. Staff's constant-growth DCF estimate is 9.3 percent, which is shown in Schedule PMC-2.

12  
13 *The Multi-Stage DCF*

14 **Q. Why did Staff implement the multi-stage DCF to estimate the Applicants' cost of**  
15 **equity?**

16 A. As previously stated, Staff used the multi-stage DCF to consider the assumption that  
17 dividends may not grow at a constant rate. Staff's multi-stage DCF incorporates two  
18 growth rates: a near-term growth rate and a long-term growth rate.

19  
20 **Q. What is the mathematical formula for the multi-stage DCF?**

21 A. The multi-stage DCF formula is shown in the following equation:

Equation 7 :

$$P_0 = \sum_{t=1}^n \frac{D_t}{(1+K)^t} + \frac{D_n(1+g_n)}{K-g_n} \left[ \frac{1}{(1+K)} \right]^n$$

Where :  $P_0$  = current stock price  
 $D_t$  = dividends expected during stage 1  
 $K$  = cost of equity  
 $n$  = years of non – constant growth  
 $D_n$  = dividend expected in year n  
 $g_n$  = constant rate of growth expected after year n

1  
2 As mentioned above, Staff incorporated two growth rates. This assumes that investors  
3 expect dividends to grow at a one rate in the near-term (“Stage-1 growth”) and another  
4 rate in the long-term (“Stage-2 growth”).

5  
6 **Q. What steps did Staff take to implement its multi-stage DCF cost of equity model?**

7 A. First, Staff projected a stream of dividends for each of the sample water utilities using  
8 near-term and long-term growth rates. Second, Staff calculated the rate (cost of equity)  
9 which equates the present value of the forecasted stream of dividends to the current stock  
10 price for each of the sample water utilities. Then, Staff calculated an average of the  
11 individual sample company cost of equity estimates.

12  
13 **Q. How did Staff calculate near-term (stage-1) growth?**

14 A. Staff projected four years of dividends for each of the sample water utilities. Projections  
15 for the first twelve months, to the extent available, were from *Value Line*. The dividend  
16 projections for the remainder of stage 1 reflect the average dividend growth rate calculated  
17 in Staff’s constant growth DCF analysis, or 5.7 percent, as shown in Schedule PMC-7.

1 **Q. How did Staff estimate long-term (stage-2) growth?**

2 A. Staff used the arithmetic average rate of growth in gross domestic product (“GDP”) from  
3 1929 to 2009.<sup>10</sup> Using the GDP growth rate assumes that the water utility industry is  
4 expected to grow at the same rate as the overall economy.

5  
6 **Q. What is the historical GDP growth rate that Staff used to estimate stage-2 growth?**

7 A. Staff used 6.6 percent to estimate the stage-2 growth rate.

8  
9 **Q. What is Staff’s multi-stage DCF estimate?**

10 A. Staff’s multi-stage DCF estimate is 10.1 percent, as shown in Schedule PMC-8.

11  
12 **Q. What is Staff’s overall DCF estimate?**

13 A. Staff’s overall DCF estimate is 9.7 percent. Staff calculated the overall DCF estimate by  
14 averaging the constant growth DCF (9.3 percent) and multi-stage DCF (10.1 percent)  
15 estimates, as shown in Schedule PMC-2.

16  
17 **Capital Asset Pricing Model**

18 **Q. Please describe the Capital Asset Pricing Model.**

19 A. The CAPM is concerned with the determination of the prices of capital assets in a  
20 competitive market. The CAPM model describes the relationship between a security’s  
21 investment risk and its market rate of return. This relationship identifies the expected rate  
22 of return which investors expect a security to earn so that its market return is comparable  
23 with the market returns earned by other securities of similar risk.<sup>11</sup> The CAPM model  
24 assumes that investors require a return that is commensurate with the level of risk  
25 associated with a particular security. The model also assumes that investors will

---

<sup>10</sup> www.bea.gov

<sup>11</sup> David C. Purcell; Cost of Capital – A Practitioner’s Guide Pg. 6-1.

1 sufficiently diversify their investments to eliminate any non-systematic or unique risk.<sup>12</sup>

2 In 1990, Professors Harry Markowitz, William Sharpe, and Merton Miller earned the  
3 Nobel Prize in Economic Sciences for their contribution to the development of the CAPM.

4  
5 **Q. What sample did Staff use to compute the CAPM to estimate the Applicants' cost of  
6 equity?**

7 A. Staff used the same sample water utilities for its CAPM computation that it used for its  
8 DCF analysis.

9  
10 **Q. What is the mathematical formula for the CAPM?**

11 A. The mathematical formula for the CAPM is:

12  
Equation 8:

$$K = R_f + \beta (R_m - R_f)$$

where:  $R_f$  = risk free rate  
 $R_m$  = return on market  
 $\beta$  = beta  
 $R_m - R_f$  = market risk premium  
 $K$  = expected return

13  
14 The equation shows that the expected return (K) on a risky asset is equal to the risk-free  
15 interest rate ("R<sub>f</sub>") plus the product of the market risk premium ("Rp") ( $R_m - R_f$ )  
16 multiplied by beta ( $\beta$ ) where beta represents the riskiness of the investment relative to the  
17 market.

---

<sup>12</sup> The CAPM makes the following assumptions: 1. single holding period 2. perfect and competitive securities market  
3. no transaction costs 4. no restrictions on short selling or borrowing 5. the existence of a risk-free rate 6.  
homogeneous expectations.

1 **Q. What is the risk free rate?**

2 A. The risk free rate is the rate of return of an investment with zero risk.

3  
4 **Q. What did Staff use as an estimate for the risk-free rate of interest in its historical  
5 market risk premium CAPM method?**

6 A. Staff calculated an estimate of the risk-free rate of interest by averaging three (five-,  
7 seven- and ten-year) intermediate-term U.S. Treasury securities' spot rates on February  
8 24, 2010, to correspond with the date Staff selected the sample companies' stock spot  
9 market prices. Staff's estimated risk-free rate for use in its historical market risk premium  
10 CAPM method is 3.1 percent<sup>13</sup> as shown in Schedule PMC-2.

11  
12 **Q. What did Staff use as an estimate for the risk-free rate of interest in its current  
13 market risk premium CAPM method?**

14 A. Staff used the February 24, 2010, spot rate on 30-year U.S. Treasury notes, as presented in  
15 the U.S. Treasury Department website.

16  
17 **Q. Why do U.S. Treasury security spot rates provide an appropriate representation of  
18 the risk-free rate?**

19 A. U.S. Treasury spot rates represent a good estimate of a risk free rate because they have  
20 virtually no chance of default and are backed by the U.S. Government. Besides, they are  
21 verifiable, objective and readily available.

22  
23 **Q. What does beta measure?**

24 A. Beta measures the systematic risk of a particular entity's stock relative to the market's  
25 beta which is 1.0. Systematic risk is the only risk that cannot be diversified away;

---

<sup>13</sup> Average yield on 5-, 7-, and 10-year Treasury notes according to the U.S. Treasury Department website at [www.ustreas.gov](http://www.ustreas.gov): 2.40%, 3.14% and 3.70%, respectively.

1           therefore, it is the only risk that is relevant when estimating an entity's required return.  
2           Since the market's beta is 1.0, a security with a beta higher than 1.0 is riskier than the  
3           market and a security with a beta lower than 1.0 is less risky than the market.

4  
5           **Q.    How did Staff estimate a proxy for the Applicants' beta?**

6           A.    Staff averaged the *Value Line* betas of the sample water utilities and used this average as a  
7           proxy for the Applicants' beta. Schedule PMC-6 shows the *Value Line* betas for each of  
8           the sample water utilities. Staff's estimated beta for the Applicants is 0.79.

9  
10          **Q.    What is a descriptive explanation for the expected market risk premium ( $R_m - R_f$ )?**

11          A.    Descriptively, the expected market risk premium is the expected return on all common  
12          stocks minus the risk free rate. It is the additional amount of return over the risk-free rate  
13          that investors expect to receive from investing in the market (or an average-risk security).  
14          Staff used two approaches to calculate the market risk premium: the historical market risk  
15          premium approach and the current market risk premium approach.

16  
17          **Q.    What is the historical market risk premium estimate approach used by Staff?**

18          A.    The historical market risk premium estimate approach assumes that if the long-run  
19          average market risk premium is used consistently to estimate the expected market risk  
20          premium, it should, on average, yield the correct premium. In this approach, Staff  
21          assumed that the average historical market risk premium estimate is a reasonable estimate  
22          of the expected market risk premium.

23  
24          **Q.    How did Staff calculate an estimate for the historical market risk premium?**

25          A.    Staff calculated the historical market risk premium by averaging the historical arithmetic  
26          differences between the S&P 500 and the intermediate-term government bond income

1 returns published in Morningstar's<sup>14</sup> *Ibbotson Stocks, Bonds, Bills, and Inflation 2008*  
2 *Classic Yearbook* for the period 1926-2008. Staff's historical market risk premium  
3 estimate is 6.9 percent, as shown in Schedule PMC-2.

4  
5 **Q. What is Staff's historical market risk premium CAPM estimate?**

6 A. Staff's historical market risk premium CAPM estimate is 8.6 percent, as shown in  
7 Schedule PMC-2.

8  
9 **Q. How did Staff calculate the current market risk premium estimate?**

10 A. Staff first derived a DCF ROE of 14.6 (2.1 + 12.47<sup>15</sup>) percent using the expected dividend  
11 yield (2.1 percent over the next twelve months) and the annual per share growth rate  
12 (12.47 percent) that *Value Line* projects for all dividend-paying stocks under its review  
13 (March 5, 2010) as inputs. Then, Staff used the DCF-derived ROE (14.57 percent), the  
14 current long-term risk-free rate (4.63 percent 30-year Treasury note) and the market's  
15 average beta of 1.0. Staff calculated the current market risk premium as 9.9 percent.<sup>16</sup>

16  
17 **Q. What is Staff's historical market risk premium CAPM estimate?**

18 A. Staff's historical market risk premium CAPM estimate is 12.5 percent, as shown in  
19 Schedule PMC-2.

20  
21 **Q. What is Staff's overall CAPM estimate?**

22 A. Staff's overall CAPM estimate is 10.6 percent. Staff's overall CAPM estimate is the  
23 average of the historical market risk premium CAPM (8.6 percent) and the current market  
24 risk premium CAPM (12.5 percent) estimates, as shown in Schedule PMC-2.

---

<sup>14</sup> Formerly published by Ibbotson Associates.

<sup>15</sup> The three to five year price appreciation is 60%.  $1.60^{0.25} - 1 = 12.47\%$

<sup>16</sup>  $14.57\% = 4.63 + (1) (9.94)$

1 **VI. SUMMARY OF STAFF'S COST OF EQUITY ANALYSIS**

2 **Q. What is the result of Staff's constant-growth DCF analysis to estimate of the cost of**  
3 **equity to the sample water utilities?**

4 A. Schedule PMC-2 shows the result of Staff's constant-growth DCF analysis. The result of  
5 Staff's constant-growth DCF analysis is as follows:

6  $k = \text{Dividend yield} + \text{Expected dividend growth}$

7  $k = 3.6\% + 5.7\%$

8  
9  $k = 9.3\%$

10  
11 Staff's constant-growth DCF estimate of the cost of equity to the sample water utilities is  
12 9.3 percent.

13  
14 **Q. What is the result of Staff's multi-stage DCF analysis to estimate the cost of equity**  
15 **for the sample utilities?**

16 A. Schedule PMC-8 shows the result of Staff's multi-stage DCF analysis. The result of  
17 Staff's multi-stage DCF analysis is:

18	<b>Company</b>	<b>Equity Cost</b>
19		<b>Estimate (k)</b>
20		
21	American States Water	9.7%
22	California Water	9.9%
23	Aqua America	10.0%
24	Connecticut Water	10.5%
25	Middlesex Water	10.8%
26	SJW Corp	<u>9.6%</u>
27		
28	<b>Average</b>	<b>10.1%</b>

29  
30 Staff's multi-stage DCF estimate of the cost of equity for the sample water utilities is 10.1  
31 percent.

1 **Q. What is Staff's overall DCF estimate of the cost of equity for the sample utilities?**

2 A. Staff's overall DCF estimate of the cost of equity for the sample utilities is 9.7 percent.  
3 Staff's overall DCF estimate was calculated by averaging Staff's constant growth DCF  
4 (9.3 percent) and Staff's multi-stage DCF (10.1 percent) estimates, as shown in Schedule  
5 PMC-2.

6  
7 **Q. What is the result of Staff's historical market risk premium CAPM analysis to  
8 estimate of the cost of equity for the sample utilities?**

9 A. Schedule PMC-2 shows the result of Staff's CAPM analysis using the historical risk  
10 premium estimate. The result is as follows:

11  
$$K = R_f + \beta (R_m - R_f)$$

12  
$$K = 3.1\% + 0.79 * 6.9\%$$

13  
$$K = 8.6\%$$

14  
15  
16 Staff's CAPM estimate (using the historical market risk premium) of the cost of equity to  
17 the sample water utilities is 8.6 percent.

18  
19 **Q. What is the result of Staff's current market risk premium CAPM analysis to  
20 estimate the cost of equity for the sample utilities?**

21 A. Schedule PMC-2 shows the result of Staff's CAPM Analysis using the current market risk  
22 premium estimate. The result is:

$$K = R_f + \beta (R_m - R_f)$$

23  
$$K = 4.6\% + 0.79 * 9.9\%$$

$$K = 12.5\%$$

1 Staff's CAPM estimate (using the current market risk premium) of the cost of equity to the  
2 sample water utilities is 12.5 percent.

3  
4 **Q. What is Staff's overall CAPM estimate of the cost of equity for the sample utilities?**

5 A. Staff's overall CAPM estimate for the sample utilities is 10.6 percent. Staff's overall  
6 CAPM estimate is the average of the historical market risk premium CAPM (8.6 percent)  
7 and the current market risk premium CAPM (12.5 percent) estimates, as shown in  
8 Schedule PMC-2.

9  
10 **Q. Please summarize the results of Staff's cost of equity analysis for the sample utilities.**

11 A. The following table shows the results of Staff's cost of equity analysis:

12  
13 **Table 4**

<b>Method</b>	<b>Estimate</b>
Average DCF Estimate	9.7%
Average CAPM Estimate	10.6%
<b>Overall Average</b>	<b>10.2%</b>

14  
15 Staff's average estimate of the cost of equity to the sample water utilities is 10.2 percent.

16  
17 **VII. FINAL COST OF EQUITY ESTIMATES FOR THE APPLICANTS**

18 **Q. Do the Applicants' loans affect its cost of equity?**

19 A. Yes. An entity's financial risk increases with increased leverage placing upward pressure  
20 on its cost of equity, regardless of the rate-making recovery mechanism. The average  
21 capital structure for the sample water utilities is composed of 49.0 percent equity and 51.0  
22 percent debt, as shown on Staff Schedule PMC-3. The Applicants' consolidated actual  
23 capital structure is composed of 67.8 percent equity and 32.2 percent debt. In this case,

1 since the Applicants' capital structure is less leveraged than that of the average sample  
2 water utilities' capital structure, its stockholders bear less financial risk than the sample  
3 water utilities. Accordingly, the Applicants' cost of equity is lower than the sample water  
4 utilities.

5  
6 **Q. What method does Staff use to calculate the effect on the cost of equity capital of the**  
7 **different financial risks posed by the Applicants versus the sample companies?**

8 A. Staff uses the methodology developed by Professor Robert Hamada of the University of  
9 Chicago ("Hamada method"), which incorporates capital structure theory with the CAPM,  
10 to estimate the effect of the Applicants' capital structure on their cost of equity. Using the  
11 Hamada method, Staff calculated a financial risk adjustment for the Applicants of negative  
12 40 basis points (0.4 percent). The Applicants' cost of equity adjusted for financial risk is  
13 9.8 percent. It can be calculated by subtracting the financial risk adjustment from Staff's  
14 average estimate of the cost of equity to the sample water utilities (10.2 percent - 0.4  
15 percent = 9.8 percent).

16  
17 **Q. Does Staff's 40 basis point downward financial risk adjustment to the cost of equity**  
18 **reflect the full downward measure to the cost of equity due to difference in financial**  
19 **risk in the Applicants' capital structure compared to the sample water utilities?**

20 A. No. Staff calculated its recommended 40 basis point downward financial risk adjustment  
21 using the Applicants' consolidated actual capital structure composed of 67.8 percent  
22 equity and 32.2 percent debt and assumed that the sample companies had a capital  
23 structure comprised of 60 percent equity and 40 percent debt instead of the actual average  
24 capital structure for the sample companies. If Staff had measured the financial risk  
25 adjustment using the actual average capital structure for the sample companies, the

1 downward financial risk adjustment would have been 90 basis points.<sup>17</sup> Staff measured  
2 the financial risk adjustment assuming the 60 percent equity for the sample companies to  
3 recognize that a capital structure composed of 60 percent equity and 40 percent debt is  
4 reasonable, even though it is less leveraged than that of the sample companies, and to  
5 encourage the Applicants to maintain a healthy capital structure.

6  
7 **Q. What is Staff's ROE estimate for the Applicants?**

8 A. Staff determined an ROE estimate of 10.2 percent for the Applicants based on cost of  
9 equity estimates for the sample companies ranging from 9.7 percent for the DCF to 10.6  
10 percent for the CAPM. Staff is recommending adoption of a 40 basis point downward  
11 financial risk adjustment to 9.8 percent.

12  
13 **VIII. RATE OF RETURN RECOMMENDATION**

14 **Q. What overall rate of return did Staff determine for the Applicants?**

15 A. Staff determined a 8.6 percent ROR for the Applicants, as shown in Schedule PMC-1 and  
16 the following table:

17  
18 **Table 5**

19

	<b>Weight</b>	<b>Cost</b>	<b>Weighted Cost</b>
Long-term Debt	32.2%	6.3%	2.0%
Common Equity	67.8%	9.8%	<u>6.6%</u>
<b>Overall ROR</b>			<b><u>8.6%</u></b>

<sup>17</sup> Equity levels are directly related to the financial risk adjustment (i.e. the financial risk adjustment will be higher if equity is higher and vice-versa.)

1 **IX. STAFF RESPONSE TO APPLICANTS' COST OF CAPITAL WITNESS MR.**  
2 **THOMAS J. BOURASSA**

3 **Q. Please summarize Mr. Bourassa's analyses and recommendations.**

4 A. Mr. Bourassa recommends a 12.5 percent ROE based on analyses for single and multi-  
5 stage DCF models, as well as historical and current market risk premium CAPM for the  
6 same sample of water companies selected by Staff. Mr. Bourassa also asserts that the  
7 Applicants face additional risks not captured by the market models, such as regulatory and  
8 financial risk, and he concludes that 12.5 percent ROE presents a reasonable balance  
9 resulting from his analyses. Mr. Bourassa proposes a 9.9 percent for the overall ROR and  
10 a capital structure consisting of 78.9 percent equity and 21.1 percent debt.

11  
12 Constant-Growth DCF

13 **Q. Does Staff have any comments on Mr. Bourassa's exclusive reliance on analysts'**  
14 **forecasts to estimate DPS growth in his constant growth DCF estimates?**

15 A. Yes. Generally, analysts' forecasts are known to be overly optimistic. Sole use of  
16 analysts' forecasts to calculate the growth in dividends (g) causes inflated growth, and  
17 consequently, inflated cost of equity estimates. Also, relying only on analysts' forecasts  
18 of earnings growth to forecast DPS is inappropriate because it assumes that investors do  
19 not look at other relevant information such as past dividend and earnings growth.

20

1 **Q. Does Staff have any comments on the study cited by Mr. Bourassa, conducted by**  
2 **David A. Gordon, Myron J. Gordon and Lawrence I. Gould,<sup>18</sup> that he asserts**  
3 **supports primary use of analysts' forecasts in the DCF model?**

4 A. Yes. The article cited by Mr. Bourassa does not conclude that investors ignore past  
5 growth when pricing stocks. Additionally, the article does not support the conclusion that  
6 these forecasts should be used alone.

7  
8 **Q. Does Professor Gordon recommend relying exclusively on analysts' forecasts as the**  
9 **measure of growth in the DCF model?**

10 A. No. Subsequent to the study cited by Mr. Bourassa,<sup>19</sup> Professor Gordon provided the  
11 keynote address at the 30th Financial Forum of the Society of Utility and Regulatory  
12 Financial Analysts, in which he stated:

13  
14 *I understand that companies coming before regulatory agencies*  
15 *liked and advocated the high growth rates in security analyst*  
16 *forecasts for arriving at their cost of equity capital. Instead of*  
17 *rejecting these forecasts, I understand that FERC and other*  
18 *regulatory agencies have decided to compromise with them. In*  
19 *particular, in arriving at the cost of equity for company X, the*  
20 *FERC has decided to arrive at the growth rate in my dividend*  
21 *growth model by using an average of two growth rates. One is*  
22 *security analysts forecast of the short-term growth rate in earnings*  
23 *provided by IBES or Value Line and the other a more long run and*  
24 *typically lower figure such as the past growth in GNP.*

25 *Such an average can be questioned on various grounds. However,*  
26 *my judgment is that between the short-term forecast alone and its*  
27 *average with the past growth rate in GNP, the latter may be a*  
28 *more reasonable figure.<sup>20</sup> (Emphasis added)*

---

<sup>18</sup> Gordon, David A., Myron J. Gordon, Lawrence I. Gould. "Choice Among Methods of Estimating Share Yield." *The Journal of Portfolio Management*. Spring 1989. pp. 50-55. (Direct Testimony of Mr. Thomas J. Bourassa, filed under Docket No. W-02465A-09-0411, page 28, footnote 3.)

<sup>19</sup> Ibid.

<sup>20</sup> Gordon, M. J. Keynote Address at the 30<sup>th</sup> Financial Forum of the Society of Utility and Regulatory Financial Analysts. May 8, 1998. Transparency 3.

1           Simply stated, Professor Gordon would temper the typically higher analysts' forecasts  
2           with the typically lower GNP growth rate by averaging the two.

3  
4       **Q.    How does Staff respond to Mr. Bourassa's statement, "Logically, in estimating future**  
5       **growth, financial institutions and analyst have taken into account all relevant**  
6       **historical information on a company as well as other more recent information. To**  
7       **the extent that past results provide useful indications of future growth prospects,**  
8       **analysts' forecasts would already incorporate that information."**<sup>21</sup>?

9       A.    The appropriate growth rate to use in the DCF formula is the dividend growth rate  
10       expected by *investors*, not by analysts. Therefore, while analysts may have considered  
11       historical measures of growth, it is reasonable to assume that investors rely to some extent  
12       on past growth as well. This calls for consideration of both analysts' forecasts and past  
13       growth.

14  
15       **Q.    Does Staff have any other evidence to support its assertion that heavy reliance on**  
16       **analysts' forecasts of earnings growth in the DCF model would result in inflated cost**  
17       **of equity estimates?**

18       A.    Yes. Experts in the financial community have commented on the optimism in analysts'  
19       forecasts of future earnings.<sup>22</sup> A study cited by David Dreman in his book *Contrarian*  
20       *Investment Strategies: The Next Generation* found that *Value Line* analysts were  
21       optimistic in their forecasts by 9 percent annually, on average, for the 1987 – 1989 period.

---

<sup>21</sup> Direct Testimony of Mr. Thomas J. Bourassa, filed under Docket No. W-02465A-09-0411, Page 28, lines 2-5.  
Direct Testimony of Mr. Thomas J. Bourassa, filed under Docket No. W-20453A-09-0412, Page 28, lines 2-5  
Direct Testimony of Mr. Thomas J. Bourassa, filed under Docket No. W-20454A-09-0413, Page 28, lines 2-5.

<sup>22</sup> See Seigel, Jeremy J. *Stocks for the Long Run*. 2002. McGraw-Hill. New York. p. 100. Dreman, David.  
*Contrarian Investment Strategies: The Next Generation*. 1998. Simon & Schuster. New York. pp. 97-98. Malkiel,  
Burton G. *A Random Walk Down Wall Street*. 2003. W.W. Norton & Co. New York. p. 175.  
Testimony of Professors Myron J. Gordon and Lawrence I. Gould, consultant to the Trial Staff (Common Carrier  
Bureau), FCC Docket 79-63, p. 95.

1 Another study conducted by David Dreman found that, between 1982 and 1997, analysts  
2 overestimated the growth of earnings of companies in the S&P 500 by 188 percent.

3 Also, Burton Malkiel of Princeton University studied the one-year and five-year earnings  
4 forecasts made by some of the most respected names in the investment business. His  
5 results showed that the five-year estimates of professional analysts, when compared with  
6 actual earnings growth rates, were much more inaccurate than the predictions from several  
7 naïve forecasting models, such as the long-run rate of growth of national income. In the  
8 following excerpt from Professor Malkiel's book *A Random Walk Down Wall Street*, he  
9 discusses the results of his study:

10  
11 *When confronted with the poor record of their five-year growth*  
12 *estimates, the security analysts honestly, if sheepishly, admitted*  
13 *that five years ahead is really too far in advance to make reliable*  
14 *projections. They protested that although long-term projections*  
15 *are admittedly important, they really ought to be judged on their*  
16 *ability to project earnings changes one year ahead. Believe it or*  
17 *not, it turned out that their one-year forecasts were even worse*  
18 *than their five-year projections.*

19 *The analysts fought back gamely. They complained that it was*  
20 *unfair to judge their performance on a wide cross section of*  
21 *industries, because earnings for high-tech firms and various*  
22 *"cyclical" companies are notoriously hard to forecast. "Try us on*  
23 *utilities," one analyst confidently asserted. At the time they were*  
24 *considered among the most stable group of companies because of*  
25 *government regulation. So we tried it and they didn't like it. Even*  
26 *the forecasts for the stable utilities were far off the mark.*<sup>23</sup>  
27 (Emphasis added)

<sup>23</sup> Malkiel, Burton G. *A Random Walk Down Wall Street*. 2003. W.W. Norton & Co. New York. p. 175

1 **Q. Are investors aware of the problems related to analysts' forecasts?**

2 A. Yes. In addition to books, there are numerous published articles appearing in *The Wall*  
3 *Street Journal* and other financial publications that cast doubt as to how accurate research  
4 analysts are in their forecasts.<sup>24</sup> Investors, being keenly aware of these inherent biases in  
5 forecasts, will use other methods to assess future growth.

6  
7 **Q. Should DPS growth be considered in a DCF analysis?**

8 A. Yes. As previously stated in Section V of this testimony, the current market price of a  
9 stock is equal to the present value of all expected future dividends, not future earnings.

10 Professor Jeremy Siegel from the Wharton School of Finance stated:

11  
12 *Note that the price of the stock is always equal to the present value*  
13 *of all future dividends and not the present value of future earnings.*  
14 *Earnings not paid to investors can have value only if they are paid*  
15 *as dividends or other cash disbursements at a later date. Valuing*  
16 *stock as the present discounted value of future earnings is*  
17 *manifestly wrong and greatly overstates the value of the firm.*<sup>25</sup>  
18

19 In other words, investors pay attention to earnings as long as they are paid as dividends.  
20 Earnings can easily be overstated, but if investors do not receive dividends or other cash  
21 disbursement at a later date, then such earnings are meaningless.

---

<sup>24</sup> See Smith, Randall & Craig, Suzanne. "Big Firms Had Research Ploy: Quiet Payments Among Rivals." *The Wall Street Journal*. April 30, 2003. Brown, Ken. "Analysts: Still Coming Up Rosy." *The Wall Street Journal*. January 27, 2003. p. C1. Karmin, Craig. "Profit Forecasts Become Anybody's Guess." *The Wall Street Journal*. January 21, 2003. p. C1. Gasparino, Charles. "Merrill Lynch Investigation Widens." *The Wall Street Journal*. April 11, 2002. p. C4. Elstein, Aaron. "Earnings Estimates Are All Over the Map." *The Wall Street Journal*. August 2, 2001. p. C1. Dreman, David. "Don't Count on those Earnings Forecasts." *Forbes*. January 26, 1998. p. 110.

<sup>25</sup> Siegel, Jeremy J. *Stocks for the Long Run*. 2002. McGraw-Hill. New York. P. 93.

1 Multi-Stage DCF

2 **Q. Does Staff have any comments on Mr. Bourassa's primary reliance on forecasted**  
3 **earnings growth for the near-term ("Stage -1 growth") in his multi-stage DCF?**

4 A. Yes. As previously discussed, heavy reliance on forecasted earnings growth for the near-  
5 term (Stage-1 growth) is inappropriate since analysts forecasts of earnings growth are  
6 known to be overly optimistic. Reliance on forecasted earnings growth, to the exclusion  
7 of historic EPS and historical and projected DPS, likely results in inflated cost of equity  
8 estimates.

9  
10 Firm-Specific Risk

11 **Q. What is Staff's response to Mr. Bourassa's contention that the market data provided**  
12 **by the sample water utilities does not capture all of the market risk associated with**  
13 **the Applicants due to Arizona regulatory requirements, use of historical test years**  
14 **with limited out of period adjustment recognition and lack of adjustor**  
15 **mechanisms?<sup>26</sup>**

16 A. The examples cited by Mr. Bourassa are examples of firm-specific or unique risks. All  
17 companies have firm-specific risk. Accordingly, the existence of firm-specific risk does  
18 not lead to the conclusion that a company with firm specific risk has more total risk than  
19 others. A valid comparison of total risk between companies would require identification  
20 and quantification of all of their unique risks - an exhausting endeavor at best.  
21 Fortunately, such an analysis is unnecessary since, as previously discussed, the market  
22 does not compensate investors for firm-specific risk because that risk can be eliminated  
23 through diversification.

24  

---

<sup>26</sup> Direct Testimony of Mr. Thomas J. Bourassa, filed under Docket No. W-02465A-09-0411, Page 36, lines 18-20.  
Direct Testimony of Mr. Thomas J. Bourassa, filed under Docket No. W-20453A-09-0412, Page 36, lines 18-20.  
Direct Testimony of Mr. Thomas J. Bourassa, filed under Docket No. W-20454A-09-0413, Page 36, lines 18-20.

1 **Q. Does Staff have a response to Mr. Bourassa's assertion that a good argument can be**  
2 **made that the Applicants are not comparable to the six publicly traded water utilities**  
3 **in the sample group due to a difference in size?<sup>27</sup>**

4 A. The Commission has previously ruled that firm size does not warrant recognition of a risk  
5 premium. In Decision No. 64282, dated December 28, 2001, for Arizona Water, the  
6 Commission stated, "We do not agree with the Company's proposal to assign a risk  
7 premium to Arizona Water based on its size relative to other publicly traded water  
8 utilities...." In Decision No. 64727, dated April 17, 2002, for Black Mountain Gas, the  
9 Commission agreed with Staff that "the 'firm size phenomenon' does not exist for  
10 regulated utilities, and that therefore there is no need to adjust for risk for small firm size  
11 in utility rate regulation." Further, as previously noted, the Applicants' ultimate parent,  
12 Algonquin Power Income Fund, has access to the capital markets.

13  
14 **X. CONCLUSION**

15 **Q. Please summarize Staff's recommendations.**

16 A. Staff recommends that the Commission adopt an 8.6 percent WACC for the Applicants in  
17 this proceeding based on capital structure composed of 32.2 percent debt (at 6.3 percent)  
18 and 67.8 percent equity (at 9.8 percent).

19  
20 **Q. Does this conclude your direct testimony?**

21 A. Yes, it does.

---

<sup>27</sup> Direct Testimony of Mr. Thomas J. Bourassa, filed under Docket No. W-02465A-09-0411, Page 36, lines 10-18.  
Direct Testimony of Mr. Thomas J. Bourassa, filed under Docket No. W-20453A-09-0412, Page 36, lines 10-18.  
Direct Testimony of Mr. Thomas J. Bourassa, filed under Docket No. W-20454A-09-0413, Page 36, lines 10-18.

**Bella Vista Water Company, Inc., et al.**  
 Capital Structure  
 And Weighted Average Cost of Capital  
 Staff Recommended and Company Proposed

[A] <u>Description</u>	[B] <u>Weight (%)</u>	[C] <u>Cost</u>	[D] <u>Weighted Cost</u>
Staff Recommended Structure	32.2%	6.3%	2.0%
Debt			<del>6.6%</del>
Common Equity	67.8%	9.8%	<b>8.6%</b>
Weighted Average Cost of Capital			
Company Proposed Structure	21.1%	6.3%	1.3%
Debt			<del>9.9%</del>
Common Equity	78.9%	12.5%	<b>11.2%</b>
Weighted Average Cost of Capital			

[D] : [B] x [C]  
 Supporting Schedules: PMC-2 and PMC-3.

Bella Vista Water Company, Inc., et al.  
Average Capital Structure of Sample Water Utilities

[A]	[B]	[C]	[D]
<u>Company</u>	<u>Debt</u>	<u>Common Equity</u>	<u>Total</u>
American States Water	50.2%	49.8%	100.0%
California Water	47.4%	52.6%	100.0%
Aqua America	53.6%	46.4%	100.0%
Connecticut Water	53.3%	46.7%	100.0%
Middlesex Water	53.0%	47.0%	100.0%
SJW Corp	<u>48.3%</u>	<u>51.7%</u>	<u>100.0%</u>
Average Sample Water Utilities	<b>51.0%</b>	<b>49.0%</b>	<b>100.0%</b>
Applicants Current Capital Structure <sup>1</sup>	<b>32.2%</b>	<b>67.8%</b>	<b>100.0%</b>

Source:

Sample Water Companies from Value Line  
Supporting Schedule: PMC-9

<sup>1</sup> As of August 31, 2009.

Bella Vista Water Company, Inc., et al.  
Sustainable Growth  
Sample Water Utilities

[A]	[B]	[C]	[D]	[E]	[F]
Company	Retention Growth 1999 to 2008 <u>br</u>	Retention Growth Projected <u>br</u>	Stock Financing Growth <u>vs</u>	Sustainable Growth 1999 to 2008 <u>br + vs</u>	Sustainable Growth Projected <u>br + vs</u>
American States Water	3.0%	6.3%	1.3%	4.3%	7.5%
California Water	2.0%	6.4%	4.0%	6.0%	10.4%
Aqua America	4.8%	5.4%	3.8%	8.6%	9.2%
Connecticut Water	2.6%	No Projection	0.8%	3.4%	No Projection
Middlesex Water	1.4%	No Projection	2.9%	4.3%	No Projection
SJW Corp	4.5%	<u>No Projection</u>	<u>0.1%</u>	<u>4.6%</u>	<u>No Projection</u>
Average Sample Water Utilities	<b>3.0%</b>	<b>6.0%</b>	<b>2.1%</b>	<b>5.2%</b>	<b>9.1%</b>

[B]: Value Line  
 [C]: Value Line  
 [D]: Value Line and MSN Money  
 [E]: [B]+[D]  
 [F]: [C]+[D]

Bella Vista Water Company, Inc., et al.  
 Calculation of Expected Infinite Annual Growth in Dividends  
 Sample Water Utilities

[A]	[B]
<u>Description</u>	g
DPS Growth - Historical <sup>1</sup>	3.1%
DPS Growth - Projected <sup>1</sup>	4.0%
EPS Growth - Historical <sup>1</sup>	3.3%
EPS Growth - Projected <sup>1</sup>	9.6%
Sustainable Growth - Historical <sup>2</sup>	5.2%
<u>Sustainable Growth - Projected<sup>2</sup></u>	<u>9.1%</u>
Average	<b>5.7%</b>

1 Schedule PMC-4

2 Schedule PMC-5

<b>Bella Vista Water Company, Inc., et al.</b>			
<b>Capitalization</b>			
		<u>Amount outstanding</u> <u>as of 12/31/2009</u>	<u>Percentage of</u> <u>Capital Structure</u>
<b>Total Debt</b>	\$	1,580,636	32.2%
<b>Total Equity <sup>1</sup></b>	\$	3,329,745	67.8%
<b>Total Capitalization</b>	\$	4,910,381	100.0%

<sup>1</sup> Adjustments to Equity

Applicants Equity as of 12/31/2009	\$	6,355,299
Accumulated Depreciation Adjustment (a)	\$	3,179,158
CIAC Adjustment (Bella Vista Water Company-Consolidated, Schedule D-1)	\$	(27,772)
Accumulated Deferred Income Tax Adjustment (b)	\$	(3,623,106)
Plant Retirements (Direct Testimony of Crystal Brown for Bella Vista, Schedule CSB-4)	\$	<u>(2,553,834)</u>

Total Equity	\$	<u>3,329,745</u>
--------------	----	------------------

## (a) Accumulated Depreciation Adjustment

Bella Vista Water Company (Consolidated) Schedule D-1	\$	(106,253)
Direct Testimony of Crystal Brown for Bella Vista, Schedule CSB-4	\$	3,232,931
Direct Testimony of Crystal Brown for Northern Sunrise, Schedule CSB-4	\$	11,624
Direct Testimony of Crystal Brown for Southern Sunrise, Schedule CSB-4	\$	40,856
Total Accumulated Depreciation Adjustment	\$	<u>3,179,158</u>

## (b) Accumulated Deferred Income Tax Adjustment

Bella Vista Water Company (Consolidated) Schedule D-1	\$	72,169
Direct Testimony of Crystal Brown for Bella Vista, Schedule CSB-4	\$	(2,938,625)
Direct Testimony of Crystal Brown for Northern Sunrise, Schedule CSB-4	\$	(200,850)
Direct Testimony of Crystal Brown for Southern Sunrise, Schedule CSB-4	\$	(555,800)
Total Accumulated Deferred Income Tax Adjustment	\$	<u>(3,623,106)</u>

**BEFORE THE ARIZONA CORPORATION COMMISSION**

KRISTIN K. MAYES

Chairman

GARY PIERCE

Commissioner

PAUL NEWMAN

Commissioner

SANDRA D. KENNEDY

Commissioner

BOB STUMP

Commissioner

IN THE MATTER OF THE APPLICATION OF )  
BELLA VISTA WATER CO., INC. AN ARIZONA )  
CORPORATION, FOR A DETERMINATION OF )  
THE FAIR VALUE OF ITS UTILITY PLANTS )  
AND PROPERTY AND FOR INCREASES IN ITS )  
WATER RATES AND CHARGES FOR UTILITY )  
SERVICE BASED THEREON. )

---

DOCKET NO. W-02465A-09-0411

IN THE MATTER OF THE APPLICATION OF )  
NORTHERN SUNRISE WATER CO., INC., )  
AN ARIZONA CORPORATION, FOR A )  
DETERMINATION OF THE FAIR VALUE OF ITS )  
UTILITY PLANTS AND PROPERTY AND FOR )  
INCREASES IN ITS WATER RATES AND )  
CHARGES FOR UTILITY SERVICE BASED )  
THEREON. )

---

DOCKET NO. W-20453A-09-0412

IN THE MATTER OF THE APPLICATION OF )  
SOUTHERN SUNRISE WATER CO., INC., )  
AN ARIZONA CORPORATION, FOR A )  
DETERMINATION OF THE FAIR VALUE OF ITS )  
UTILITY PLANTS AND PROPERTY AND FOR )  
INCREASES IN ITS WATER RATES AND )  
CHARGES FOR UTILITY SERVICE BASED )  
THEREON. )

---

DOCKET NO. W-20454A-09-0413

IN THE MATTER OF THE JOINT APPLICATION ) DOCKET NO. W-02465A-09-0414  
OF BELLA VISTA WATER CO., INC., ) DOCKET NO. W-20453A-09-0414  
NORTHERN SUNRISE WATER CO., INC. ) DOCKET NO. W-20454A-09-0414  
AND SOUTHERN SUNRISE WATER CO., INC. )  
FOR APPROVAL OF AUTHORITY TO )  
CONSOLIDATE OPERATIONS, AND FOR THE )  
TRANSFER OF UTILITY ASSETS TO BELLA )  
VISTA WATER CO., INC., PURSUANT TO )  
ARIZONA REVISED STATUTES 40-285. )  
\_\_\_\_\_ )

DIRECT  
TESTIMONY  
OF  
MARLIN SCOTT JR  
UTILITIES ENGINEER  
UTILITIES DIVISION  
ARIZONA CORPORATION COMMISSION

APRIL 14, 2010

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1 **INTRODUCTION**

2 **Q. Please state your name, place of employment and job title.**

3 A. My name is Marlin Scott, Jr. My place of employment is the Arizona Corporation  
4 Commission ("Commission"), Utilities Division, 1200 West Washington Street, Phoenix,  
5 Arizona 85007. My job title is Utilities Engineer.

6  
7 **Q. How long have you been employed by the Commission?**

8 A. I have been employed by the Commission since November 1987.

9  
10 **Q. Please list your duties and responsibilities.**

11 A. As a Utilities Engineer, specializing in water and wastewater engineering, my  
12 responsibilities include: the inspection, investigation, and evaluation of water and  
13 wastewater systems; preparing reconstruction cost new and/or original cost studies,  
14 reviewing cost of service studies and preparing investigative reports; providing technical  
15 recommendations and suggesting corrective action for water and wastewater systems; and  
16 providing written and oral testimony on rate applications and other cases before the  
17 Commission.

18  
19 **Q. How many cases have you analyzed for the Utilities Division?**

20 A. I have analyzed approximately 540 cases covering various responsibilities for the Utilities  
21 Division.

22  
23 **Q. Have you previously testified before this Commission?**

24 A. Yes, I have testified in 77 proceedings before this Commission.

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

2 A. I graduated from Northern Arizona University in 1984 with a Bachelor of Science degree  
3 in Civil Engineering Technology.  
4

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

6 A. Prior to my employment with the Commission, I was Assistant Engineer for the City of  
7 Winslow, Arizona, for about two years. Prior to that, I was a Civil Engineering  
8 Technician with the U.S. Public Health Service in Winslow for approximately six years.  
9

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

11 A. I am a member of the National Association of Regulatory Utility Commissioners  
12 (“NARUC”) Staff Subcommittee on Water.  
13

14 **PURPOSE OF TESTIMONY**

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

16 A. My assignment was to provide Staff’s engineering evaluations for Bella Vista Water  
17 Company, Inc. (“Bella Vista”), Northern Sunrise Water Company, Inc. (“Northern  
18 Sunrise”) and Southern Sunrise Water Company, Inc. (Southern Sunrise”) in this  
19 consolidated rate proceeding.  
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 operations for Bella Vista,  
23 Northern Sunrise and Southern Sunrise. The findings are contained in the Engineering  
24 Reports that I have prepared for this proceeding and are included as Exhibit MSJ in this  
25 direct testimony.

1 **ENGINEERING REPORTS**

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

4 A. After reviewing the applications for Bella Vista, Northern Sunrise and Southern Sunrise, I  
5 physically inspected the water systems to evaluate their operation and to determine if any  
6 plant items were not used and useful. I obtained information from the water companies  
7 regarding plant facilities, water testing expenses, water usage data, and I analyzed that  
8 information. I also contacted the Arizona Department of Water Resources ("ADWR") to  
9 determine if the water systems were in compliance with the ADWR's requirements  
10 governing water providers. Based on all the above, I prepared the attached Engineering  
11 Reports.

12  
13 **Q. Do you provide summaries for each water company contained in the Engineering**  
14 **Reports.**

15 A. Yes, these summaries contain Staff's engineering conclusions and recommendations at the  
16 beginning of each Exhibit.

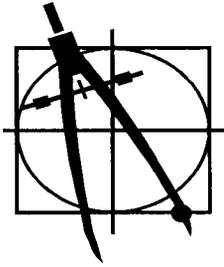
17  
18 **Q. Does this conclude your direct testimony?**

19 A. Yes, it does.

Engineering Report

For

Bella Vista Water Company, Inc.



**Engineering Report**

**For**

**Bella Vista Water Company, Inc.**

**Docket No. W-02465A-09-0411 (Rates)**

**March 3, 2010**

**SUMMARY**

CONCLUSIONS

- A. Bella Vista Water Company, Inc. ("Bella Vista") operates two independent water systems and each system has adequate well and storage capacities to serve their present customer base and reasonable growth.
- B. The Arizona Department of Environmental Quality has reported that Bella Vista's two water systems are currently delivering water that meets the water quality standards.
- C. Bella Vista is not located in any Active Management Area. According to the Arizona Department of Water Resources ("ADWR"), Bella Vista is in compliance with ADWR's requirements governing water providers and/or community water systems.
- D. A check of the Utilities Division Compliance database showed that Bella Vista had no delinquent Commission compliance items.
- E. Bella Vista has approved curtailment tariffs for its City and South Systems with effective dates of January 20, 2005 and August 18, 2003, respectively.
- F. Bella Vista has an approved backflow prevention tariff with an effective date of June 1, 1999.

RECOMMENDATIONS

- 1. Bella Vista's City and South Systems have questionable and/or high water losses. For this reason, Staff recommends that Bella Vista monitor both of its systems for a 12-month period to prepare a water loss report. Bella Vista should coordinate when it reads the production meters each month with customer monthly meter readings so that an accurate accounting can be made. If the reported water loss is greater than 10 percent, Bella Vista shall submit the water loss reduction report containing a detailed analysis and plan to reduce the water loss to 10 percent or less. If Bella Vista believes it is not cost effective to reduce the water loss to less than 10 percent, it should submit a detailed cost benefit analysis to support its opinion. In no case shall Bella Vista allow water loss to be greater

than 15 percent. The water loss reduction report or the detailed analysis, whichever is submitted, shall be docketed as a compliance item within 18 months from the effective date of an order issued in this proceeding.

2. Staff concludes that the requested post-test year plant item, a water main relocation project on Charleston Road, is used and useful for the provision of service to customers and recommends an adjusted amount totaling to \$104,507, with an adjusted retirement amount of \$3,496.
3. Staff recommends the adoption of Bella Vista's annual water testing expense of \$3,920 be used for purposes of this application.
4. Staff recommends that Bella Vista adopt Staff's typical and customary depreciation rates and further recommends that Bella Vista use these depreciation rates delineated in Table H-1.
5. Staff recommends the approval of its proposed Service Line and Meter Installation Charges as delineated in Table J-1.
6. Staff recommends the denial of Bella Vista's request for a Water Hook-Up Fee Tariff.

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**A. LOCATION OF BELLA VISTA WATER COMPANY, INC. (“BELLA VISTA”)**

Bella Vista serves the City of Sierra Vista and its surrounding area. Figure A-1 shows the location of Bella Vista within Cochise County and Figure A-2 shows the approximate 22.0 square-miles of certificated area. In Decision No. 61730 (June 4, 1999), Bella Vista was granted approval to merge/consolidate system operation with Nicksville Water Co., Inc. (“Nicksville”). Nicksville has approximately 1.5 square-miles of certificated area and when combined with Bella Vista’s area, the total becomes approximately 23.5 square-miles.

**B. DESCRIPTION OF WATER SYSTEMS**

Bella Vista operates two water systems; the City System and South System. These water systems were field inspected on December 15, 2009, by Marlin Scott, Jr., Staff Utilities Engineer, in the accompaniment of Martin Garland and David Stewart, representing Bella Vista.

City System

The current operation of the City System consists of 18 wells, 18 storage tanks, 16 booster stations and a distribution system, with several pressure zones, serving approximately 7,700 active metered customers as of March 2009.

South System

The current operation of the South System consists of 13 wells, 17 storage tanks, 12 booster stations and a distribution system, with several pressure zones, serving approximately 670 active metered customers as of March 2009. The South System is also interconnected with the Southern Sunrise Water Company – Cochise/Horseshoe Ranch System by a 2-inch master-meter.

A detailed plant facility description for each water system is as follows:

Table 1. Well Data

Well # or Name	ADWR ID No.	Pump Hp (Submersible)	Flow Rate (GPM)	Casing Size & Depth	Meter Size	Year Drilled
<b>City System</b>						
#1	55-610120	40	240	12" x 640'	4"	1956
#2	55-610121	50	300	12" x 649'	4"	1958
#3	55-610122	50	200	12" x 605'	6"	1968
#5	55-610123	50	300	14" x 620'	4"	1972
#7	55-610125	100	470	16" x 475'	6"	1968
#8	55-610126	60	350	12" x 645'	6"	1954
#9	55-610127	15	65	8" x 618"	3"	1954
#10	55-610128	15	40	10" x 630'	3"	1956
#11	55-610129	60	300	12" x 696'	4"	1956
#12	55-610130	60	200	16" x 805'	4"	1972
#13	55-610131	75	230	16" x 867'	6"	1968
#14	55-610132	75	450	16" x 600'	6"	1972
#15	55-610133	50	300	16" x 700"	4"	1972
#16	55-610134	50	300	12" x 501'	4"	1960
* #18	55-518083	250 - Turbine	1,200	16" x 1000'	10"	1987
#19	55-519004	125 - Turbine	700	16" x 1000'	8"	1987
#VV1	55-560741	15	200	8" x 400'	4"	1997
#VV2	55-560742	15	200	8" x 385"	4"	1997
		TOTAL:	6,045 GPM			
* Powered by natural gas.						
<b>South System</b>						
Stump	55-610119	5	25	6" x 250'	2"	1982
Ash	55-805652	5	40	8" x 80'	2"	1989
RO #1	55-536074	1	15	8" x 160'	5/8x3/4"	1992
Wild Horse	55-553209	7-1/2	25	12" x 608'	3"	1997
RO #2	55-597128	1-1/2	20	6" x 305'	1-1/2"	2003
RO #3	55-583389	5	25	8" x 500'	1-1/2"	2001
NV16	55-508962	5	30	6" x 215"	2"	1984
NV15	55-507217	5	40	6" x 205'	2"	1984
NV3	55-642087	3	20	6" x 243'	1"	1958
NV9	55-624091	3	12	6" x 287'	3/4"	1959
NV17	55-200402	7-1/2	17	8" x 790'	2-1/2"	2004
Fairfield	55-203881	15	70	8" x 800'	2-1/2"	2004
NV10	55-641821	2	17	4" x 154"	1"	1998
		TOTAL:	356 GPM			

Table 2. Storage Tanks

Capacity (Gallons)	Quantity (Each)	Location
<b>City System</b>		
1,500,000	2	Wells #18 & #19
400,000	4	Wells #7 & #8
285,000	1	Well #9
200,000	9	Wells #1, #2 (2 each), #3, #5, #11, #12, #14 & #VV1
100,000	1	At Well #5 for Well #16
32,000	1	Well #15
Total: 6.817 MG	18	
(MG = million gallons)		
<b>South System</b>		
200,000	1	Booster Station ("BS") #1
100,000	2	Well RO #1 & Well Wild Horse
80,000	1	Well NV16
50,000	2	"On hillside tank" & Well NV10
32,000	1	Apache Pointe BS
16,000	1	BS #3 (Broken Arrow)
12,000	3	Triple Tanks
10,000	1	Well NV10
7,500	1	BS #4 (Nichol)
5,200	1	Well NV9
5,000	2	Well Stump
3,000	1	BS #2
Total: 699,700 gallons	17	

Table 3. Booster Systems

Location	Booster Systems	Storage Tanks (From Table 2)
<b>City System</b>		
Well #5	Two 20-Hp booster pumps 5,000 gal. pressure tank	200,000 gal. storage tank (for Well #5)
	&	
	Two 20-Hp booster pumps 5,000 gallon pressure tank	100,000 gal. storage tank (from Well #16)
Well #VV1	Two 25-Hp booster pumps 5,000 gal. pressure tank	200,000 gal. storage tank
Well #14	Two 20-Hp booster pumps 5,000 gal. pressure tank	200,000 gal. storage tank
Well #15	15 & 20-Hp booster pumps 5,000 gal. pressure tank	32,000 gal. storage tank
Well #19	Two 30-Hp booster pumps 5,000 gal. pressure tank	1.5 MG storage tank
Well #1	Two 20-Hp booster pumps 5,000 gal. pressure tank	200,000 gal. storage tank
Well #3	Two 20-Hp booster pumps 5,000 gal. pressure tank	200,000 gal. storage tank
Well #2	Two 20-Hp booster pumps 5,000 gal. pressure tank	200,000 gal. storage tank
Well #7	Two 20-Hp booster pumps 5,000 gal. pressure tank	400,000 gal. storage tank
Well #8	Two 20-Hp booster pumps 5,000 gal. pressure tank	400,000 gal. storage tank
Well #9 & #10	Two 15-Hp booster pumps 5,000 gal. pressure tank	285,000 gal. storage tank

Well #12	Two 20-Hp booster pumps 5,000 gal. pressure tank	200,000 gal. storage tank
Well #11	Two 20-Hp booster pumps 5,000 gal. pressure tank	200,000 gal. storage tank
Well #18	Four 30-Hp booster pumps Two 5,000 gal. pressure tanks	1.5 MG storage tank
Totals:	32 booster pumps & 16 pressure tanks	
<b>South System</b>		
Well RO#3	70 gal. bladder tank	
Apache Pt. BS	5-Hp booster pump 1,000 gal. pressure tank	32,000 gal. storage tank
Well RO#1 & RO#2	Two 5-Hp booster pumps 5,000 gal. pressure tank	100,000 gal. storage tank
Booster Station #1	Two 10-Hp booster pumps Two 25-Hp booster pumps Two 5,000 gal. pressure tanks	200,000 gal. storage tank
Booster Station #2	Two 15-Hp booster pumps 1,000 gal. pressure tank	3,000 gal. storage tank
Well NV16	Two 25-Hp booster pumps 1,500 gal. pressure tank	80,000 gal. storage tank
Booster Station #3	Two 2-Hp booster pumps Two 70 gal. bladder tanks	16,000 gal. storage tank
Well NV9	Two 2-Hp booster pumps 1,000 gal. pressure tank	5,200 gal. storage tank
Booster Station #4	Two 2-Hp booster pumps 70 gal. bladder tank	7,500 gal. storage tank
Well NV10	Two 2-Hp booster pumps 6,000 gal. pressure tank	50,000 & 10,000 gal. storage tank

Well Stump	Two 5-Hp booster pumps 1,000 gal. pressure tank	Two 5,000 gal. storage tanks
Well Wild Horse	Two 15-Hp booster pumps 5,000 gal. pressure tank	100,000 gal. storage tank
Well Fairfield	1,000 gal. pressure tank	
Totals:	23 booster pumps, 11 pressure tanks & 4 bladder tanks	

Table 4. Water Mains

Diameter	Material	Length, ft.
2-inch	Galvanized	27,000
2-inch	Steel	9,000
3-inch	AC	16,000
4-inch	AC	86,500
6-inch	AC	180,600
8-inch	AC	118,895
10-inch	AC	3,300
12-inch	Steel	600
2-inch	PVC	2,935
3-inch	PVC	175
4-inch	PVC	1,330
6-inch	PVC	5,052
8-inch	PVC	11,810
12-inch	PVC	15,000
4-inch	Ductile	154
6-inch	Ductile	851
8-inch	Ductile	3,189
12-inch	Ductile	1,000
	Bella Vista Total:	483,391 ft. or 91.6 miles

Table 5. Customer Meters

Size	City System	South System
5/8 x 3/4-inch	7,232	703
3/4-inch	37	2
1- inch	150	8
1-1/2-inch	91	-
2-inch	282	-
3-inch	26	21
4-inch	120	-
6-inch	26	-
8-inch	2	-
System Total:	7,966 (with 7,700 active)	734 (with 670 active)
Bella Vista Total:	8,700 (with 8,370 active meters)	

Table 6. Fire Hydrants

Size	Quantity
Standard	668

Table 7. Treatment Equipment & Structures

Treatment Equipment & Structures	
<b>City System</b>	
Liquid chlorination units at City System Wells #1, #7, #8, #16, #VV1 & #VV2	
Tablet chlorination units at City System Wells #13 & #19	
Structures – Storage building and garage at Well #5, Storage building at Well #8, Treatment building at Wells #13 & #19, Site building at Well #18, 4’x6’ chlorinator shed at Wells #16, #VV1, #7 & #8, & Fencing around all sites.	
<b>South System</b>	
Liquid chlorination units at South System Wells Stump, Ash & NV16	
Tablet chlorination units at South System Wells Wild Horse, RO#2, RO#3, NV15, NV3, NV9 & NV10	
Structures – Well houses at Wells NV3 & NV9, 4’x6’ chlorinator shed at Wells #16, Stump & Ash & Fencing around all sites.	

**C. WATER USE**

Water Sold

Based on the information provided by Bella Vista, water uses for the test year ending March 2009 are presented in Figures C-1 and C-2. For the City System, customer consumption experienced a high monthly average water use of 437 gallons per day (“GPD”) per connection in June 2008 and a low monthly average water use of 261 GPD per connection in March 2009 for a monthly average use of 339 GPD per connection.

For the South System, customer consumption experienced a high monthly average water use of 327 GPD per connection in July 2008 and a low monthly average water use of 160 GPD per connection in February 2009 for a monthly average use of 219 GPD per connection.

Non-Account Water

Non-account water should be 10 percent or less. For the City System, Bella Vista reported 1,041,650,430 gallons pumped and 946,923,288 gallons sold during the test year, resulting in a difference of 9.1 percent. (This 9.1 percent is questionable, see discussion below.)

For the South System, Bella Vista reported 64,498,703 gallons pumped and 54,423,341 gallons sold during the test year, resulting in a difference of 15.6 percent. In response to Staff’s Data Request MSJ 5-1, Bella Vista stated that while the pumped production numbers are based on a calendar month, the sold numbers are based on meter read dates, resulting in a mismatch of the meter reading data. Bella Vista also further stated unaccounted-for water needs to be looked at as a long term average and that the Water Use Data Sheet does not account for water that is lost through leaks, flushing or other accounted-for water. Also included in response to Data Request MSJ 5-1, Bella Vista provided a spreadsheet for years 2008 and 2009 that considered the “accounted-for water” amounts. As a result, the revised test year data is 64,498,703 gallons pumped and 56,087,541 gallons of “accounted-for water”, resulting in 13.04 percent revised water loss:

Table C-1. Revised Water Loss

System	Water Loss (1/08 to 12/08)	Water Loss (4/08 to 3/09)	Water Loss (1/09 to 12/09)
City	-	9.1%	-
South	13.86%	13.04%	2.58%

As shown above, the meter reading data makes the “true” water loss calculation questionable. In fact, the City System’s 9.1 percent becomes questionable. As a result, it appears

that Bella Vista is a good candidate to conduct a water audit to determine the “true” water loss for both of its systems.

For this reason, Staff recommends that Bella Vista monitor both of its systems for a 12-month period to prepare a water loss report. Bella Vista should coordinate when it reads the production meters each month with customer monthly meter readings so that an accurate accounting can be made. If the reported water loss is greater than 10 percent, Bella Vista shall submit the water loss reduction report containing a detailed analysis and plan to reduce the water loss to 10 percent or less. If Bella Vista believes it is not cost effective to reduce the water loss to less than 10 percent, it should submit a detailed cost benefit analysis to support its opinion. In no case shall Bella Vista allow water loss to be greater than 15 percent. The water loss reduction report or the detailed analysis, whichever is submitted, shall be docketed as a compliance item within 18 months from the effective date of an order issued in this proceeding.

### System Analysis

The City System’s current well capacity of 6,045 GPM and storage capacity of 6,817,000 gallons is adequate to serve the present customer base and reasonable growth.

The South System’s current well capacity of 356 GPM and storage capacity of 699,700 gallons is adequate to serve the present customer base and reasonable growth.

## **D. GROWTH**

Figures D-1 and D-2 depicts the customer growth, per total and active meters, using linear regression analysis for the City and South Systems. The number of metered customers was obtained from Bella Vista per its response to Staff’s Data Request MSJ 5-1. During the test year ending March 2009:

- The City System had approximately 7,966 total meters and 7,694 active meters. It is projected that the City System could have approximately 8,150 active meters by October 2014.
- The South System had approximately 734 total meters and 672 active meters. At this time, the system is losing customers. If this trend continues, it is projected that the South System could have approximately 650 active meters by October 2014.

## **E. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (“ADEQ”) COMPLIANCE**

### Compliance

According to ADEQ Compliance Status Reports, dated August 6, 2009, ADEQ has determined that Bella Vista’s City and South Systems, Public Water System (“PWS”) No. 02-

010 and PWS No. 02-007, respectively, are currently delivering water that meets water quality standards required by 40 CFR 141/Arizona Administrative Code, Title 18, Chapter 4.

Water Testing Expense

Bella Vista reported its water testing expense at \$18,805 by combining its City and South Systems. Staff has reviewed Bella Vista’s reported expense amount and recommends that Bella Vista’s water testing expense of \$18,805 be adopted for this proceeding.

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

Bella Vista is not located in any Active Management Area (“AMA”). According to ADWR compliance status reports, dated January 8, 2010, Bella Vista’s City and South Systems are in compliance with ADWR’s requirements governing water providers and/or community water systems.

**G. ARIZONA CORPORATION COMMISSION (“ACC”) COMPLIANCE**

According to the Utilities Division Compliance database, Bella Vista has no delinquent ACC compliance items.

**H. POST-TEST YEAR PLANT**

In its application, Bella Vista requested a post-test year (“PTY”) plant adjustment in the amount of \$110,057 (with a retirement amount of \$12,000) for the relocation of approximately 600 feet of water main for the State/City project known as the Charleston Road widening project. Through Bella Vista data responses, Bella Vista provided the following updated data and cost:

Table H-1. Post-Test Year Plant

Acct. No.	Plant items for Main Relocation	Original Cost
331	Transmission & Distribution Mains - New 250 feet of 8-inch DIP and valves with one air relief. - Installed 22-inch casing sleeve.	\$104,507
331	Transmission & Distribution Mains - Retirement of old 250 feet of 8-inch ACP, installed in 1968.	(\$3,496)
	<b>Total:</b>	<b>\$101,011</b>

On June 15, 2009, the City of Sierra Vista ("City") issued a Certificate of Approval to Construct for the construction of this water main relocation project. On August 28, 2009, the new water main was placed back into service. On January 14, 2010, the City issued the Certificate of Approval of Construction for this project. Based on these approvals, along with Staff's field inspection to confirm this water main operation, Staff concludes that the requested PTY item is used and useful for the provision of service to customers with the above plant adjustments shown in Table H-1.

## **I. DEPRECIATION RATES**

In the prior 2001 rate case, Bella Vista was authorized to use a set of different depreciation rates. In this current proceeding, Bella Vista has adopted Staff's typical and customary depreciation rates. These Staff rates are presented in Table I-1 and it is recommended that Bella Vista use these depreciation rates by individual National Association of Regulatory Utility Commissioners category.

## **J. SERVICE LINE AND METER INSTALLATION CHARGES**

Bella Vista has requested changes to its service line and meter installation charges. These installation charges are refundable advances. For all meter sizes, Bella Vista is requesting to charge these installation charges "at cost". According to Bella Vista, the reason for the "at cost" request is that it "places the cost of growth directly on the party causing the cost so it is not borne by the existing customers".

In Staff's Data Request MSJ-5-3, Staff requested Bella Vista to provide example costs of installation charges for 5/8 x 3/4-inch, 1-inch, 2-inch and 4-inch meters. Bella Vista responded by submitting incomplete data for the 5/8 x 3/4-inch and 1-inch meter sizes and not providing costs for 2-inch and 4-inch meter sizes.

It is Staff's position that for small meter sizes, typically residential, established installation charges should be provided in order for these potential customers to have an idea of the installation charges. Therefore, using the submitted data request responses along with Staff's additional data, Staff has established and recommends installation charges for the 5/8 x 3/4-inch, 3/4-inch and 1-inch meters. For 1-1/2-inch and larger size meters, Staff recommends the "at cost" charges apply. In addition, Staff recommends that the actual cost be incurred when road crossing is required.

Since Bella Vista may at times install meters on existing service lines, it would be appropriate for some customers to only be charged for the meter installation. Therefore, Staff recommends approval of its charges as shown in Table J-1, with separate installation charges for the service line and meter installations.

**K. CURTAILMENT TARIFF**

Bella Vista has approved curtailment tariffs for its City and South Systems with effective dates of January 20, 2005 and August 18, 2003, respectively.

**L. BACKFLOW PREVENTION TARIFF**

Bella Vista has an approved backflow prevention tariff on file with the ACC with an effective date of June 1, 1999.

**M. OFF-SITE HOOK-UP FEE TARIFF**

Bella Vista currently does not have an approved Hook-Up Fee ("HUF") Tariff. In its rate application, Bella Vista requested a Water HUF Tariff starting at \$1,600 for a 5/8 x 3/4-inch meter. HUFs are used for plant facilities that will benefit the entire water system; well and storage facilities are the main plant items that meets this HUF requirement. Since the City System and South System each have adequate well and storage capacities to serve its own customer base and growth, it is Staff's opinion that these systems are not good candidates for the implementation of HUF Tariffs. In addition, each system serves its customer base using different pressure zones and any additional plant capacity may not benefit the entire water systems. Therefore, Staff recommends denial of the request for a HUF Tariff for Bella Vista.

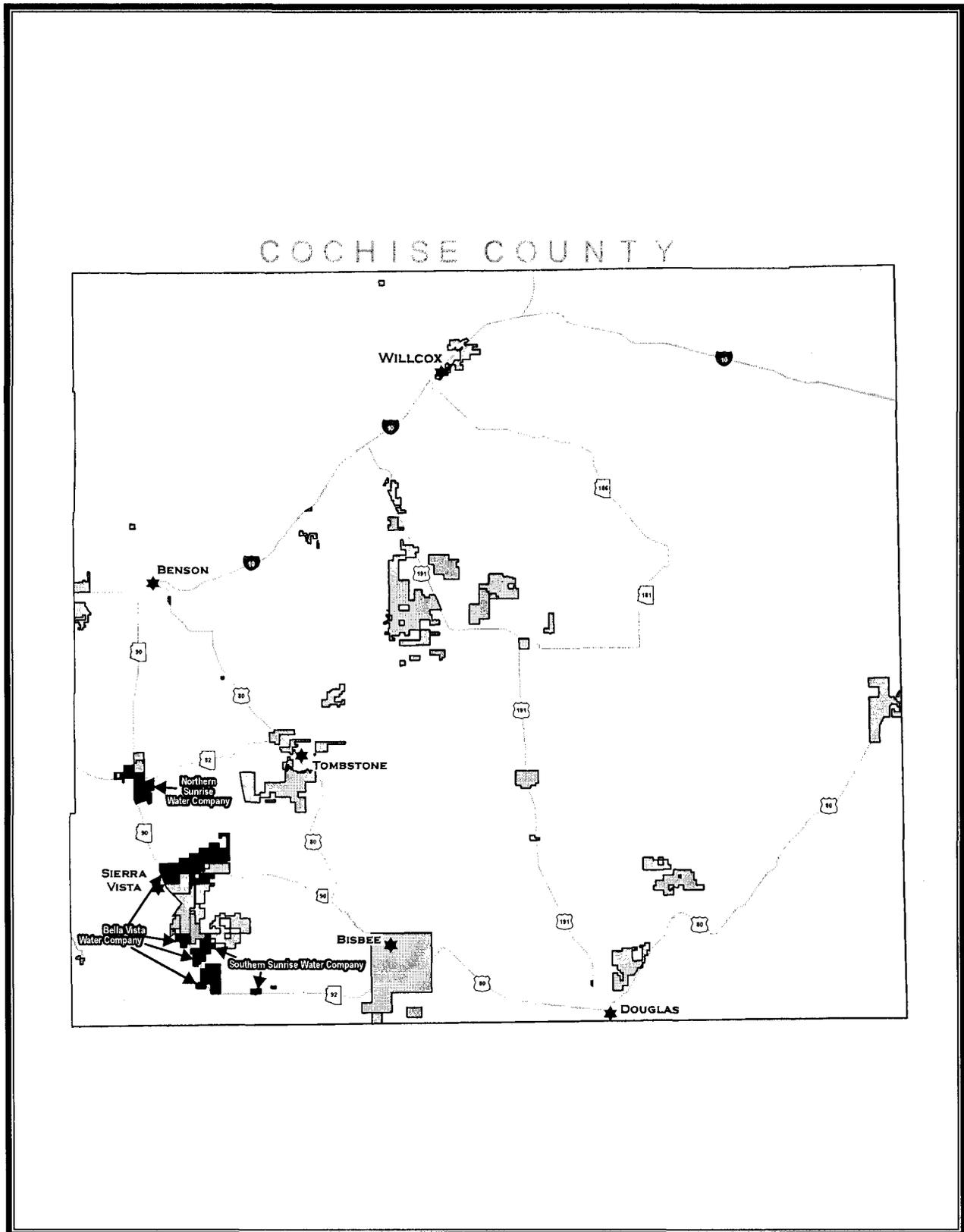


Figure A-1. Cochise County Map

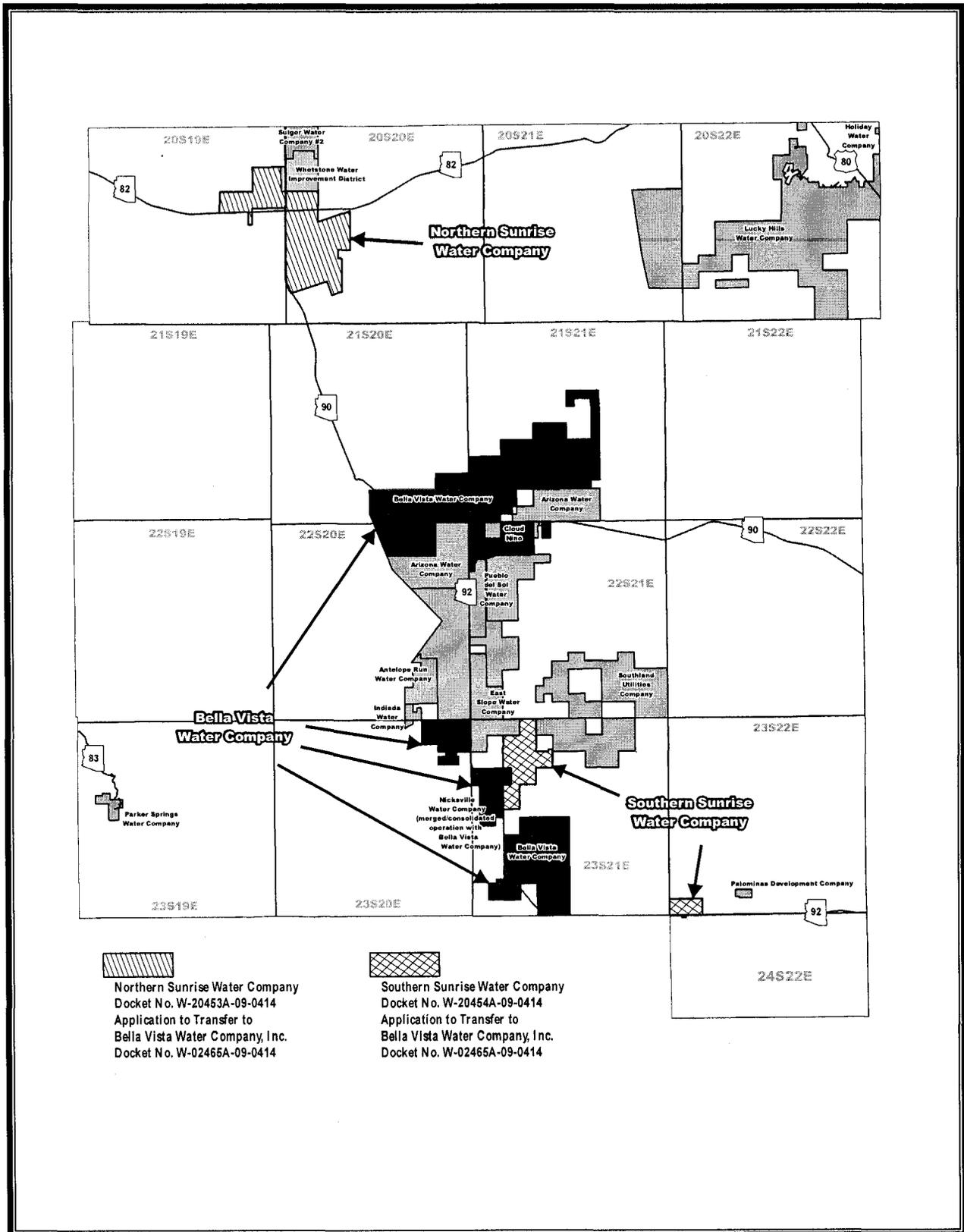


Figure A-2. Certificated Areas

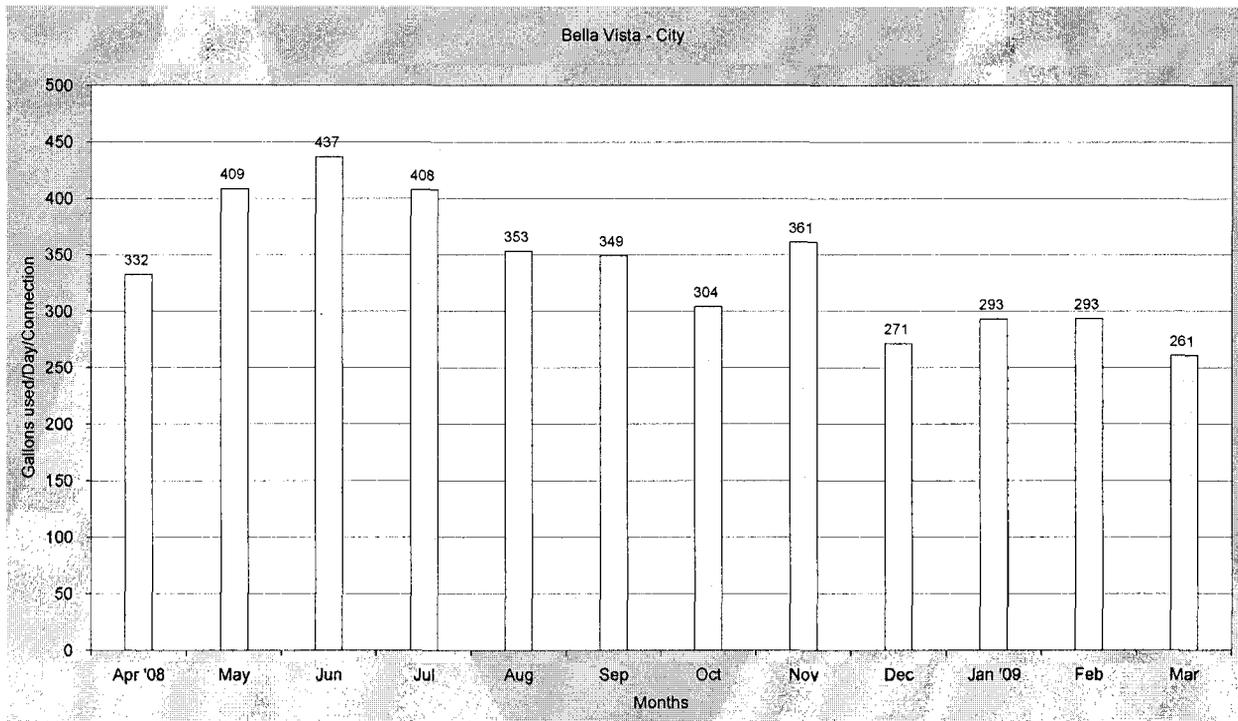


Figure C-1. City System Water Use

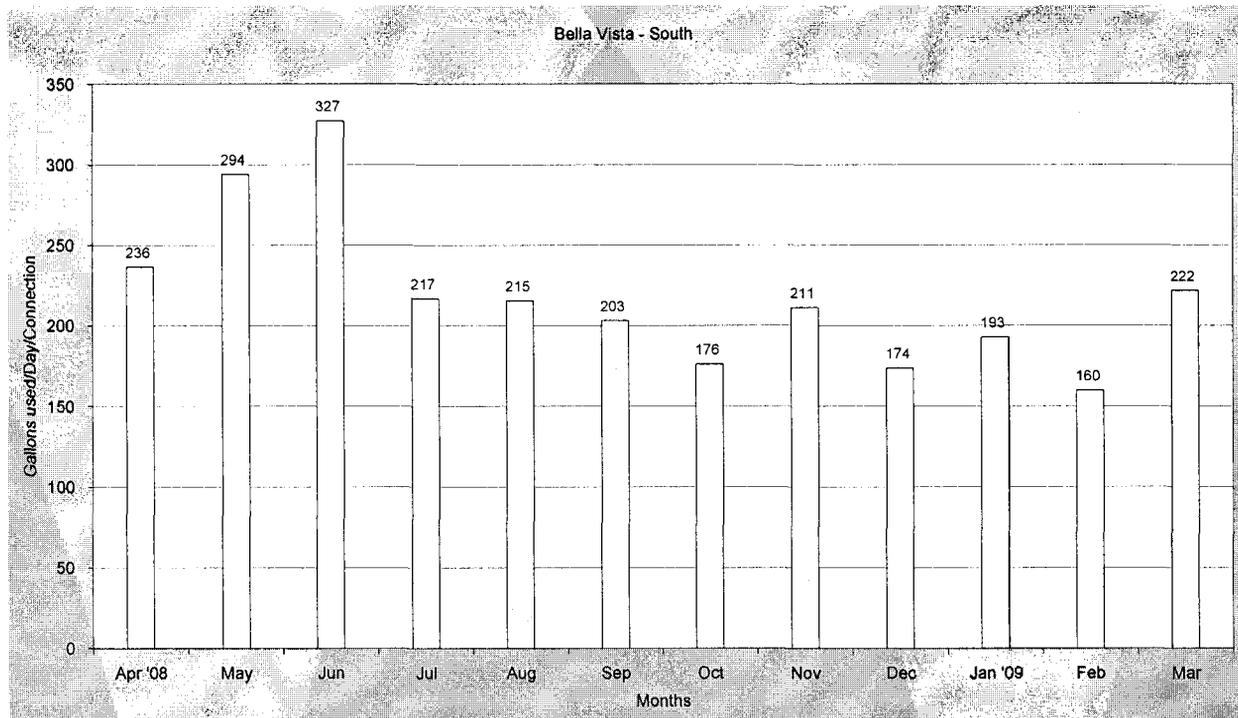


Figure C-2. South System Water Use

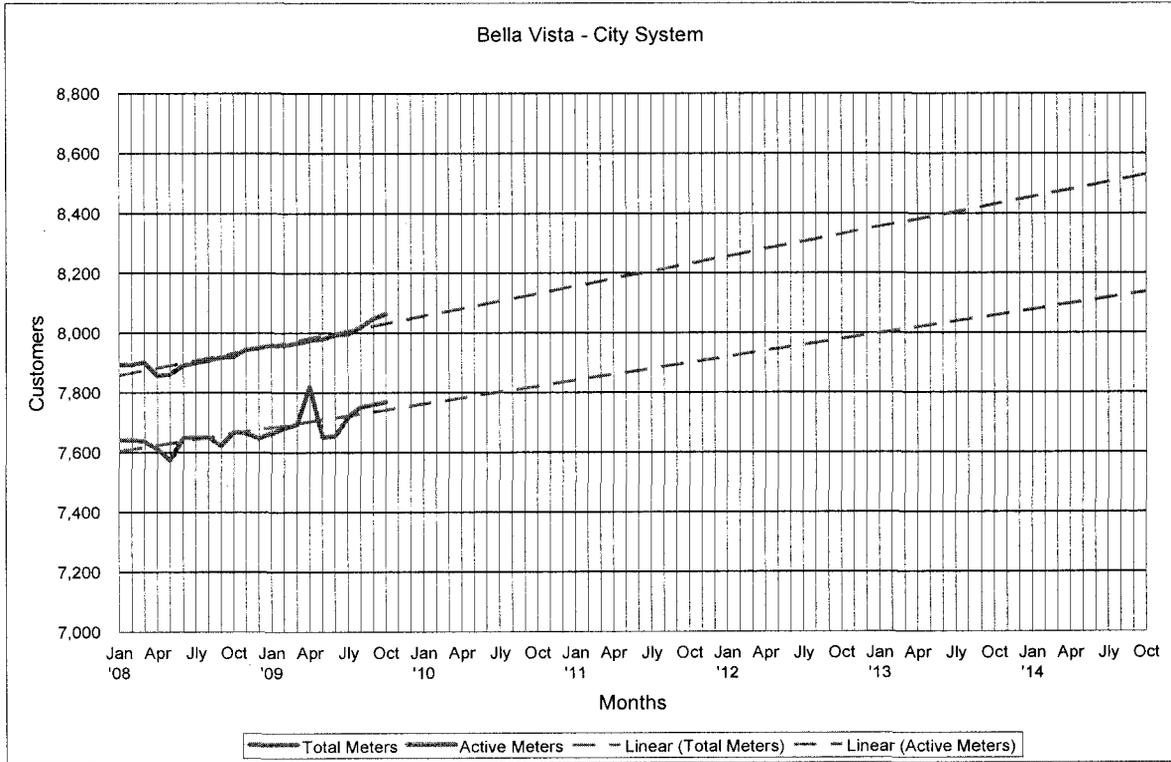


Figure D-1. City System Growth

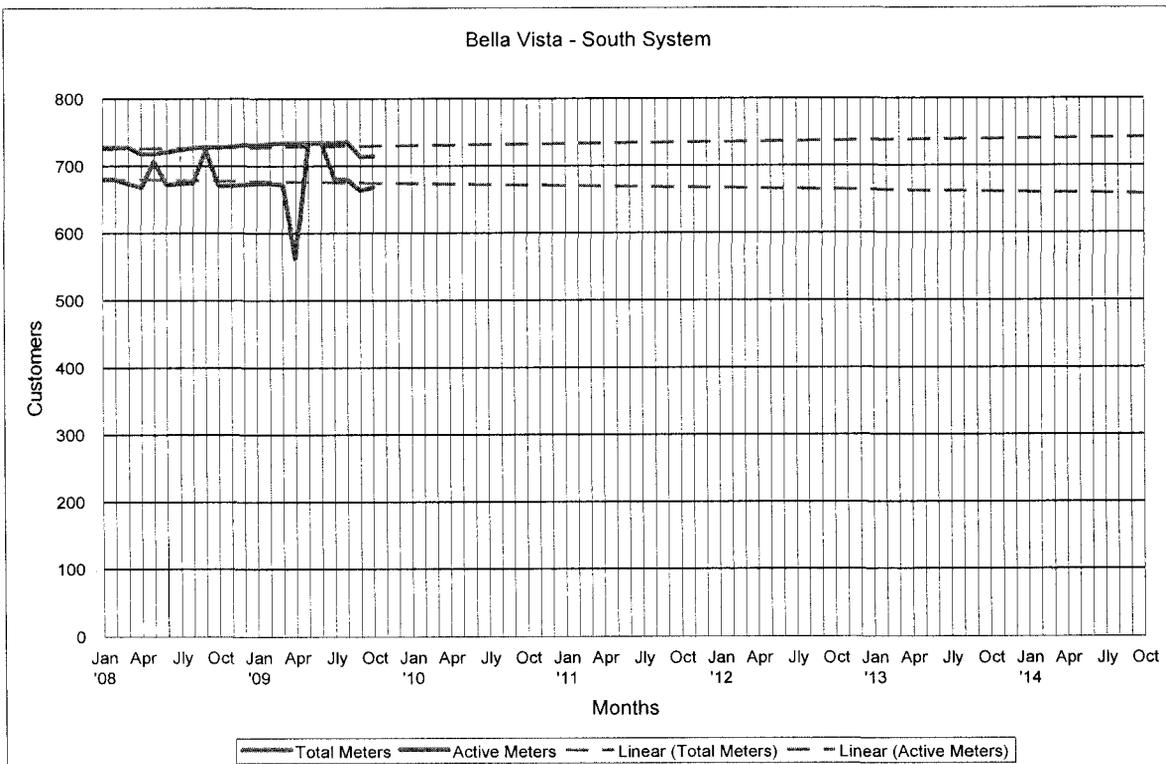


Figure D-2. South System Growth

Table I-1. Bella Vista Depreciation Rates

NARUC Acct. No.	Depreciable Plant	Current Rates (%)	Proposed Rates (%)
304	Structures & Improvements	2.5	3.33
305	Collecting & Impounding Reservoirs	-	2.50
306	Lake, River, Canal Intakes	-	2.50
307	Wells & Springs	2.7	3.33
308	Infiltration Galleries	-	6.67
309	Raw Water Supply Mains	-	2.00
310	Power Generation Equipment	-	5.00
311	Pumping Equipment	10.0	12.50
320	Water Treatment Equipment		
320.1	Water Treatment Plants	10.0	3.33
320.2	Solution Chemical Feeders	-	20.00
330	Distribution Reservoirs & Standpipes		
330.1	Storage Tanks	2.5	2.22
330.2	Pressure Tanks	-	5.00
331	Transmission & Distribution Mains	2.0	2.00
333	Services	2.0	3.33
334	Meters	10.0	8.33
335	Hydrants	2.0	2.00
336	Backflow Prevention Devices	-	6.67
339	Other Plant & Misc Equipment	10.0	6.67
340	Office Furniture & Equipment	6.67	6.67
340.1	Computers & Software	6.67	20.00
341	Transportation Equipment	14.29	20.00
342	Stores Equipment	-	4.00
343	Tools, Shop & Garage Equipment	11.76	5.00
344	Laboratory Equipment	-	10.00
345	Power Operated Equipment	10.0	5.00
346	Communication Equipment	10.0	10.00
347	Miscellaneous Equipment	6.25	10.00
348	Other Tangible Plant	-	10.00

Table J-1. Service Line and Meter Installation Charges

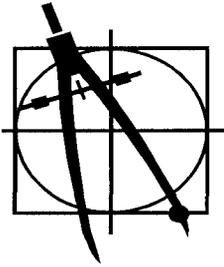
Meter Size	Bella Vista's Current Charges	Bella Vista's Proposed Charges	Staff's Recommended Service Line Charges **	Staff's Recommended Meter Charges	Staff's Recommended Total Charges
5/8 x 3/4"	\$350	At Cost	\$1,765	\$105	\$1,870
3/4"	\$350	At Cost	\$1,765	\$180	\$1,945
1"	\$400	At Cost	\$1,765	\$240	\$2,005
1-1/2"	\$500	At Cost	At Cost	At Cost	At Cost
2" Turbine	\$997.50	At Cost	At Cost	At Cost	At Cost
2" Compound	\$1,487.50	At Cost	At Cost	At Cost	At Cost
3" Turbine	\$1,377.50	At Cost	At Cost	At Cost	At Cost
3" Compound	\$1,927.50	At Cost	At Cost	At Cost	At Cost
4" Turbine	\$2,207.50	At Cost	At Cost	At Cost	At Cost
4" Compound	\$2,822.50	At Cost	At Cost	At Cost	At Cost
6" Turbine	\$4,217.50	At Cost	At Cost	At Cost	At Cost
6" Compound	\$5,497.50	At Cost	At Cost	At Cost	At Cost
8" and larger	NT	At Cost	At Cost	At Cost	At Cost

\*\* Note: To include the actual cost incurred when road crossing is required.

# Engineering Report

For

Northern Sunrise Water Company, Inc.

**Engineering Report****For****Northern Sunrise Water Company, Inc.****Docket No. W-20453A-09-0412 (Rates)****March 3, 2010****SUMMARY**CONCLUSIONS

- A. Northern Sunrise Water Company, Inc. ("Northern Sunrise") operates three water systems and each water system has adequate well and storage capacities to serve their present customer base and reasonable growth.
- B. The Arizona Department of Environmental Quality has reported that Northern Sunrise's three water systems are currently delivering water that meets the water quality standards.
- C. Northern Sunrise is not located in any Active Management Area. According to the Arizona Department of Water Resources ("ADWR"), Northern Sunrise is in compliance with ADWR's requirements governing water providers and/or community water systems.
- D. A check of the Utilities Division Compliance database showed that Northern Sunrise had no delinquent Commission compliance items.
- E. Northern Sunrise has an approved curtailment tariff with an effective date of April 4, 2007.
- F. Northern Sunrise has an approved backflow prevention tariff with an effective date of April 4, 2007.

RECOMMENDATIONS

- 1. Northern Sunrise's three water systems have questionable and/or high water losses. For this reason, Staff recommends that Northern Sunrise monitor its three systems for a 12-month period to prepare a water loss report. Northern Sunrise should coordinate when it reads the production meters each month with customer monthly meter readings so that an accurate accounting can be made. If the reported water loss is greater than 10 percent, Northern Sunrise shall submit the water loss reduction report containing a detailed analysis and plan to reduce the water loss to 10 percent or less. If Northern Sunrise believes it is not cost effective to reduce the water loss to less than 10 percent, it should submit a detailed cost benefit analysis to support its opinion. In no case shall Northern Sunrise allow water loss to be greater than 15 percent. The water loss reduction report or

the detailed analysis, whichever is submitted, shall be docketed as a compliance item within 18 months from the effective date of an order issued in this proceeding.

2. Staff recommends the adoption of Northern Sunrise's annual water testing expense of \$3,920 be used for purposes of this application.
3. Staff recommends that Northern Sunrise continue to use Staff's typical and customary depreciation rates as delineated in Table H-1.
4. Staff recommends the approval of its proposed Service Line and Meter Installation Charges as delineated in Table I-1.
5. Staff recommends the approval of Northern Sunrise's request for revised Water Hook-Up Fees starting at \$1,600 and the adoption of the specific and updated tariff language contained in Attachment – HUF Tariff.

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**A. LOCATION OF NORTHERN SUNRISE WATER COMPANY, INC. (“NORTHERN SUNRISE”)**

Northern Sunrise serves the community of Whetstone, which is located approximately three miles north of Huachuca City. Figure A-1 shows the location of Northern Sunrise within Cochise County and Figure A-2 shows the approximate 6.5 square-miles of certificated area.

**B. DESCRIPTION OF WATER SYSTEMS**

Northern Sunrise operates three water systems; the Mustang/Crystal System, Sierra Sunset System and Coronado Estates System. These water systems were field inspected on December 16, 2009, by Marlin Scott, Jr., Staff Utilities Engineer, in the accompaniment of Martin Garland, representing Northern Sunrise.

Mustang/Crystal System

The current operation of the Mustang/Crystal System consists of two wells, one storage tank, one booster station and a distribution system serving approximately 121 active meters as of March 2009.

Sierra Sunset System

The current operation of the Sierra Sunset System consists of one well, two bladder tanks, and a distribution system serving approximately 24 active meters as of March 2009. This Sierra Sunset System is also interconnected with the Coronado Estates System by a 2-inch water main. This interconnection is currently valved-off and only used in an emergency.

Coronado Estates System

The current operation of the Coronado Estates System consists of one well, five storage tanks, one booster station and a distribution system serving approximately 189 active meters as of March 2009.

A detailed plant facility description for each water system is as follows:

Table 1. Well Data

Well # or Name	ADWR ID No.	Pump Hp (Submersible)	Flow Rate (GPM)	Casing Size & Depth	Meter Size	Year Drilled
<b>Mustang/Crystal System</b>						
#1-Mustang	55-807770	20	95	8" x 438'	2"	1972
#2-Crystal	55-807774	5	28	6" x 272'	1"	1971
		TOTAL:	123 GPM			
<b>Sierra Sunset System</b>						
#1	55-807772	5	35	8" x 342'	1-1/2"	1960
<b>Coronado Estates System</b>						
#1	55-807773	10	110	8" x 450'	2"	1958

Table 2. Storage Tanks & Booster Systems

Location	Booster Systems	Storage Tanks
<b>Mustang/Crystal System</b>		
Well #1-Mustang	Two 15-Hp booster pumps	100,000 gal. storage tank
Well #2-Crystal	1,000 gal. pressure tank	
<b>Sierra Sunset System</b>		
Well #1	Two 120 gallon bladder tanks	
<b>Coronado Estates System</b>		
Well #1	7-1/2 & 10-Hp booster pumps & 1,000 gal. pressure tank	Five 5,000 gal. storage tanks

Table 3. Water Mains

Diameter	Material	Length, ft.
2-inch	PVC	Unknown
3-inch	PVC	Unknown
4-inch	PVC & AC	Unknown
6-inch	AC	Unknown

Table 4. Customer Meters

Size	Mustang/Crystal System	Sierra Sunset System	Coronado Estates System
5/8 x 3/4-inch	130	26	196
3/4-inch	-	-	1
System Total:	130 (with 121 active meters)	26 (with 24 active meters)	197 (with 189 active meters)

Table 5. Treatment Equipment & Structures

Treatment Equipment & Structures
<b>Mustang/Crystal System</b>
Treatment – Liquid chlorination units at Well #1-Mustang and Well #2-Crystal.
Structures – Chlorinator sheds at Well #1-Mustang and Well #2-Crystal. Chain link fencing around Well #1 and Well #2.
<b>Sierra Sunset System</b>
Treatment – Liquid chlorination unit at Well #1.
Structures – Chlorinator shed at Well #1. Chain Link fencing around Well #1.
<b>Coronado Estates System</b>
Treatment – Liquid chlorination unit at Well #1.
Structures – Chlorinator shed at Well #1. Chain link fencing around Well #1.

**C. WATER USE**

Water Usage

Based on the information provided by Northern Sunrise, the water usages for all three systems during the test year are presented in Figure C-1. Below is a table summary of each water system’s highest, lowest and average water use:

Table C-1. Water Use (in GPD per connection)

System	Highest Monthly Average Use	Lowest Monthly Average Use	Average Annual Use
Mustang/Crystal	286 in July	31 in December	195
Sierra Sunset	369 in July	129 in March	234
Coronado Estates	246 in July	126 in March	192

Non-Account Water

Non-account water should be 10 percent or less. For Northern Sunrise's three systems, Northern Sunrise reported the gallons pumped and gallons sold during the test year as shown in the table below:

Table C-2. Water Difference

System	Gallons Pumped	Gallons Sold	Difference
Mustang/Crystal	10,950,790	8,937,163	18.4%
Sierra Sunset	2,007,600	2,124,530	-5.8%
Coronado Estates	16,291,900	13,220,171	18.9%

In response to Staff's Data Request MSJ 5-1, Northern Sunrise stated that while the pumped production numbers are based on a calendar month, the sold numbers are based on meter read dates, resulting in a mismatch of meter reading data. Northern Sunrise also further stated unaccounted-for water needs to be looked at as a long term average and that the Water Use Data Sheet does not account for water that is lost through leaks, flushing or other accounted-for water. Also included in response to Data Request MSJ 5-1, Northern Sunrise provided a spreadsheet from June 2008 to December 2009 that included revised water loss percentages with the "accounted-for water" as follows:

Table C-3. Revised Water Loss

System	Water Loss (6/08 to 12/08)	Water Loss (1/09 to 12/09)	Water Loss (6/08 to 12/09)
Mustang/Crystal	-5.49%	12.34%	6.08%
Sierra Sunset	-20.11%	1.98%	-5.17%
Coronado Estates	-3.96%	21.27%	12.34%

As shown above, the meter reading data makes the “true” water loss calculation questionable. As a result, it appears that the Northern Sunrise is a good candidate to conduct a water audit to determine the “true” water loss for all three of its systems.

For this reason, Staff recommends that Northern Sunrise monitor all three of its systems for a 12-month period to prepare a water loss report. Northern Sunrise should coordinate when it reads the production meters each month with customer monthly meter readings so that an accurate accounting can be made. If the reported water loss is greater than 10 percent, Northern Sunrise shall submit the water loss reduction report containing a detailed analysis and plan to reduce the water loss to 10 percent or less. If Northern Sunrise believes it is not cost effective to reduce the water loss to less than 10 percent, it should submit a detailed cost benefit analysis to support its opinion. In no case shall Northern Sunrise allow water loss to be greater than 15 percent. The water loss reduction report or the detailed analysis, whichever is submitted, shall be docketed as a compliance item within 18 months from the effective date of an order issued in this proceeding.

#### System Analysis

The Mustang/Crystal System’s current well capacity of 123 GPM and storage capacity of 100,000 gallons is adequate to serve the present customer base and reasonable growth.

The Sierra Sunset System’s current well capacity of 35 GPM and bladder tank capacity of 240 gallons is adequate to serve the present 24 customer base.

The Coronado Estates System’s current well capacity of 110 GPM and storage capacity of 25,000 gallons is adequate to serve up to approximately 100 customers. The present customer base is approximately 189 customers. Since this system has an interconnection with the Sierra Sunset System, the combined well capacity of 145 GPM and storage capacity of 25,000 gallons would be adequate to serve the combined customer base of 213 (=24+189) and reasonable growth.

## D. GROWTH

Figures D-1, D-2 and D-3 depict the customer growth, per total and active meters, using linear regression analysis for the Mustang/Crystal, Sierra Sunset and Coronado Estates Systems. The number of customers was obtained from Northern Sunrise per its response to Staff's Data Request MSJ 5-1. During the test year ending March 2009:

- The Mustang/Crystal System had approximately 130 total meters and 121 active meters. This system has very little growth and it is projected that the Mustang/Crystal System could have approximately 120 active meters by October 2014.
- The Sierra Sunset System had approximately 26 total meters and 24 active meters. This system also has very little growth and it is projected that the Sierra Sunset System could have approximately 24 active meters by October 2014.
- The Coronado Estates System had approximately 197 total meters and 189 active meters. At this time, the system is losing customers. If this trend continues, it is projected that the Coronado Estates System could have approximately 165 active meters by October 2014.

## E. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY ("ADEQ") COMPLIANCE

### Compliance

According to ADEQ Compliance Status Reports, dated August 7, 2009, ADEQ has determined that Northern Sunrise's Mustang/Crystal, Sierra Sunset and Coronado Estates Systems, PWS Nos. 02-054, 02-055 and 02-013, respectively, are currently delivering water that meets water quality standards required by 40 CFR 141/Arizona Administrative Code, Title 18, Chapter 4.

### Water Testing Expense

Northern Sunrise reported its water testing expense at \$3,787 for the test year. Staff has reviewed Northern Sunrise's reported expense amount and recommends that Northern Sunrise's water testing expense of \$3,787 be adopted for this proceeding.

## F. ARIZONA DEPARTMENT OF WATER RESOURCES ("ADWR") COMPLIANCE

Northern Sunrise is not located in any Active Management Area. According to ADWR compliance status reports, dated January 10, 2010, Northern Sunrise's Mustang/Crystal, Sierra Sunset and Coronado Estates Systems are in compliance with its requirements governing water providers and/or community water systems.

## **G. ARIZONA CORPORATION COMMISSION (“ACC”) COMPLIANCE**

According to the Utilities Division Compliance database, Northern Sunrise has no delinquent ACC compliance items.

## **H. DEPRECIATION RATES**

In the 2006 CC&N transfer case, Northern Sunrise was authorized to use Staff’s typical and customary depreciation rates. These depreciation rates are presented in Table H-1 and it is recommended that Northern Sunrise continue to use these depreciation rates by individual National Association of Regulatory Utility Commissioners category.

## **I. SERVICE LINE AND METER INSTALLATION CHARGES**

Northern Sunrise has requested changes to its service line and meter installation charges. These installation charges are refundable advances. For all meter sizes, Northern Sunrise is requesting to charge these installation charges “at cost”. According to Northern Sunrise, the reason for the “at cost” request is that it “places the cost of growth directly on the party causing the cost so it is not borne by the existing customers”.

In Staff’s Data Request MSJ-5-3, Staff requested Northern Sunrise to provide example costs of installation charges for 5/8 x 3/4-inch, 1-inch, 2-inch and 4-inch meters. Northern Sunrise responded by submitting incomplete data for the 5/8 x 3/4-inch and 1-inch meter sizes and not providing costs for 2-inch and 4-inch meter sizes.

It is Staff’s position that for small meter sizes, typically residential, established installation charges should be provided in order for these potential customers to have an idea of the installation charges. Based on responded portions to the data request, along with Staff’s revision, Staff will adopt a portion of Northern Sunrise’s requested charges by establishing charges for the 5/8 x 3/4-inch, 3/4-inch and 1-inch meters and will recommend the installation charges for larger meter sizes to be “at cost”. In addition, Staff will recommend that the actual cost be incurred when road crossing is required.

Since Northern Sunrise may at times install meters on existing service lines, it would be appropriate for some customers to only be charged for the meter installation. Therefore, Staff recommends approval of the charges as shown in Table I-1 below, with separate installation charges for the service line and meter installations. In addition, Staff will recommend that the actual cost be incurred when road crossing is required.

## **J. CURTAILMENT TARIFF**

Northern Sunrise has an approved curtailment tariff with an effective date of April 4, 2007.

**K. BACKFLOW PREVENTION TARIFF**

Northern Sunrise has an approved backflow prevention tariff with an effective date of April 4, 2007.

**L. OFF-SITE HOOK-UP FEE TARIFF**

Northern Sunrise currently has an approved Hook-Up Fee (“HUF”) Tariff starting at \$1,000. In its rate application, Northern Sunrise requested a Water HUF Tariff starting at \$1,600 for a 5/8 x 3/4-inch meter. The proposed \$1,600 is based on the Northern Sunrise’s proposed construction of a deep well/storage tank/booster station project totaling to \$1,437,500, resulting to fee of \$3,443 per service connection. Northern Sunrise however selected a lesser amount of \$1,600 to be adopted for its revised HUF Tariff.

Northern Sunrise also submitted its HUF Tariff that had different language than in Staff’s updated HUF Tariff template. Staff has reviewed Northern Sunrise’s proposed language changes and will accept some of Northern Sunrise’s language changes that are shaded in Attachment – HUF Tariff.

Therefore, Staff recommends the approval of the revised fee starting at \$1,600 and the adoption of the specific and updated tariff language contained in Attachment – HUF Tariff.

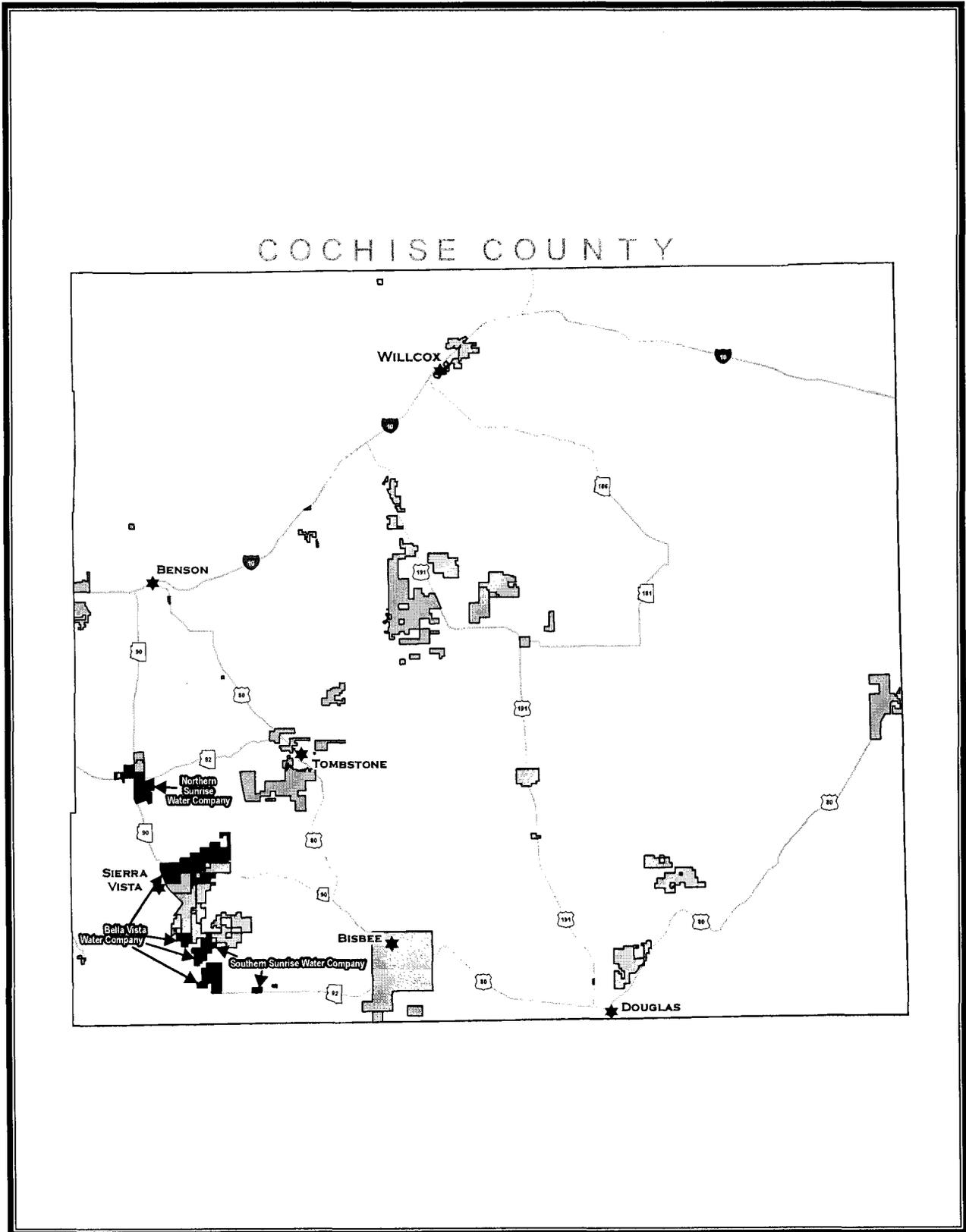


Figure A-1. Cochise County Map

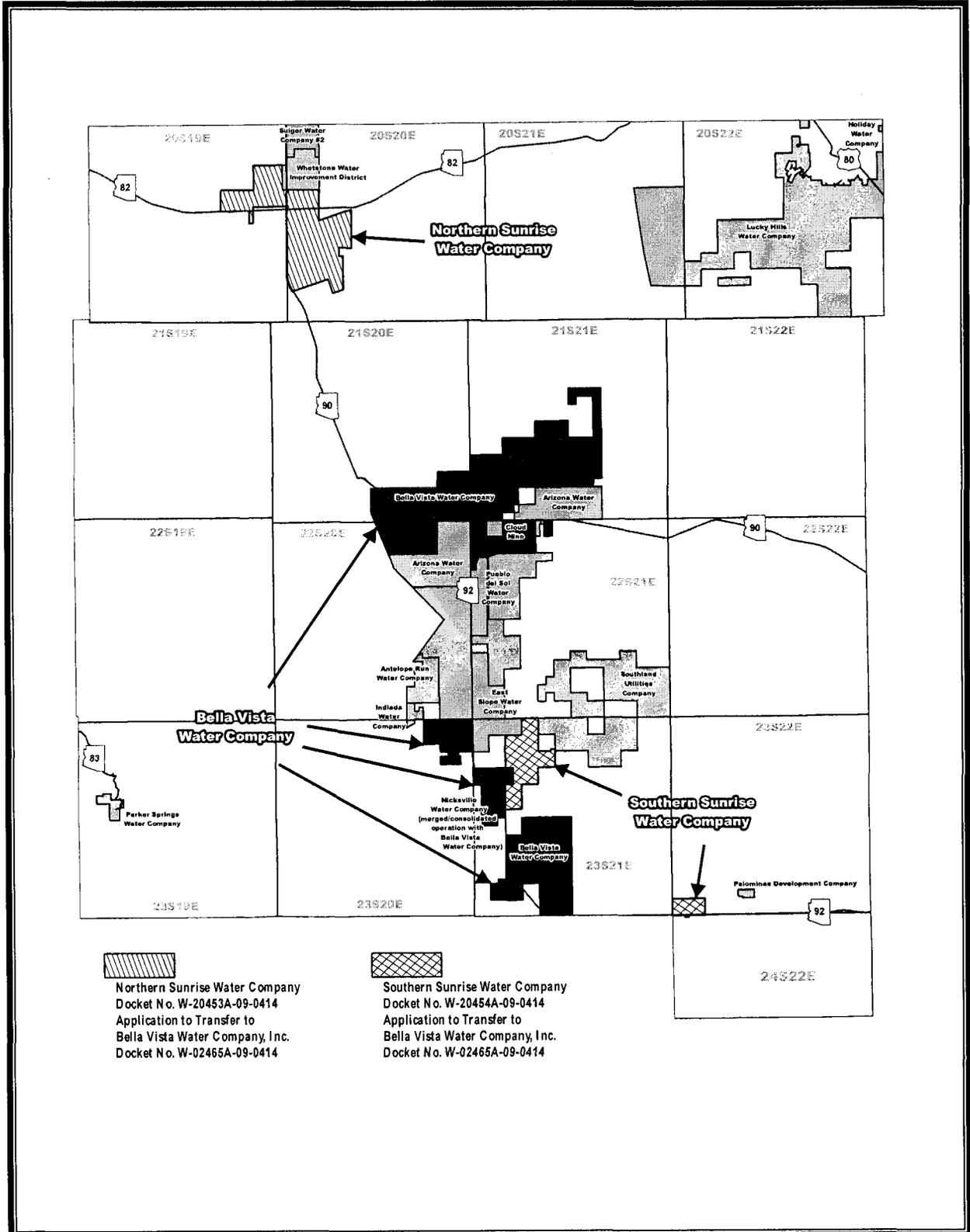


Figure A-2. Certificated Areas

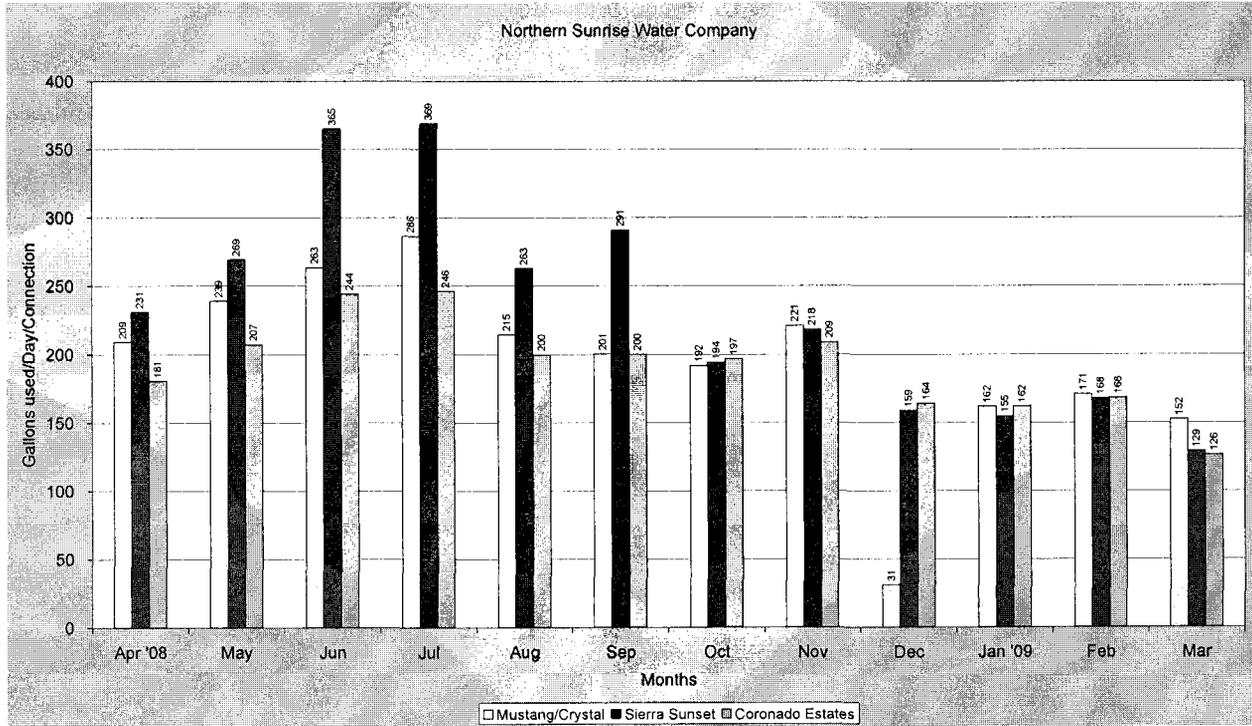


Figure C-1. Water Use

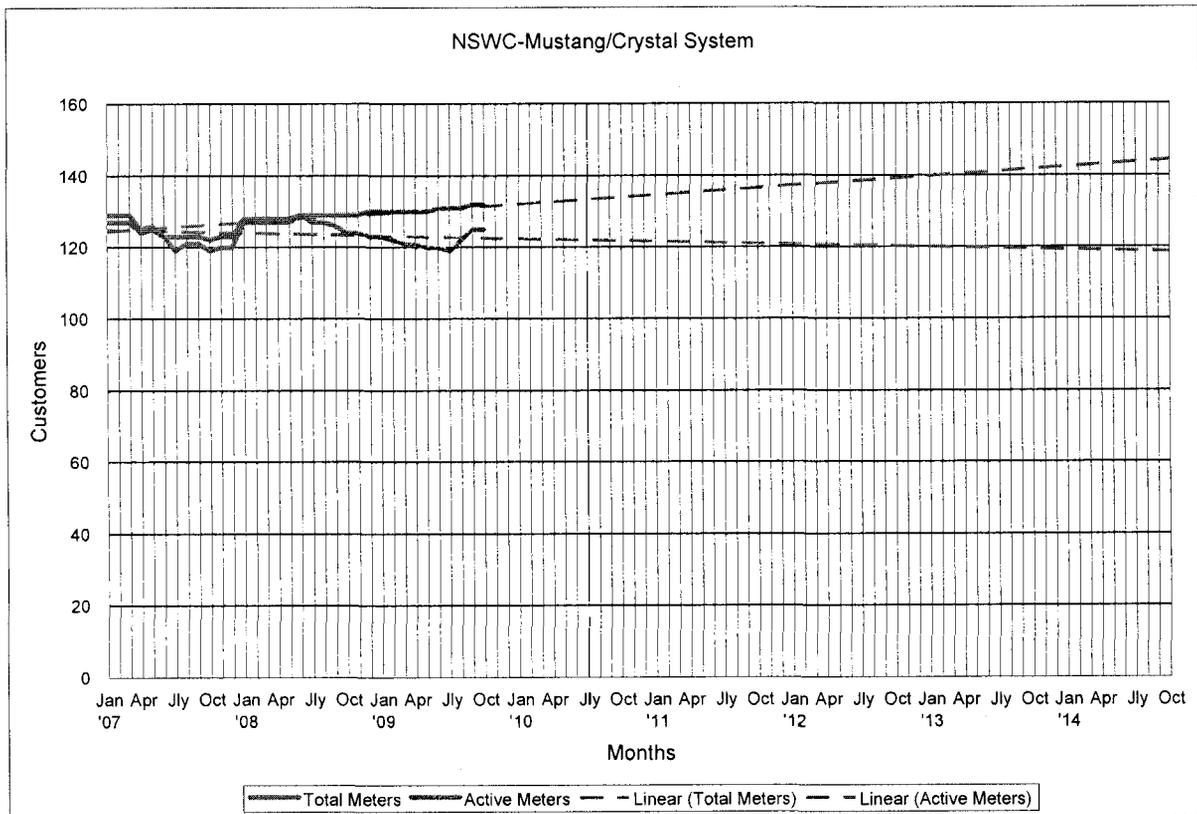


Figure D-1. Mustang/Crystal System Growth

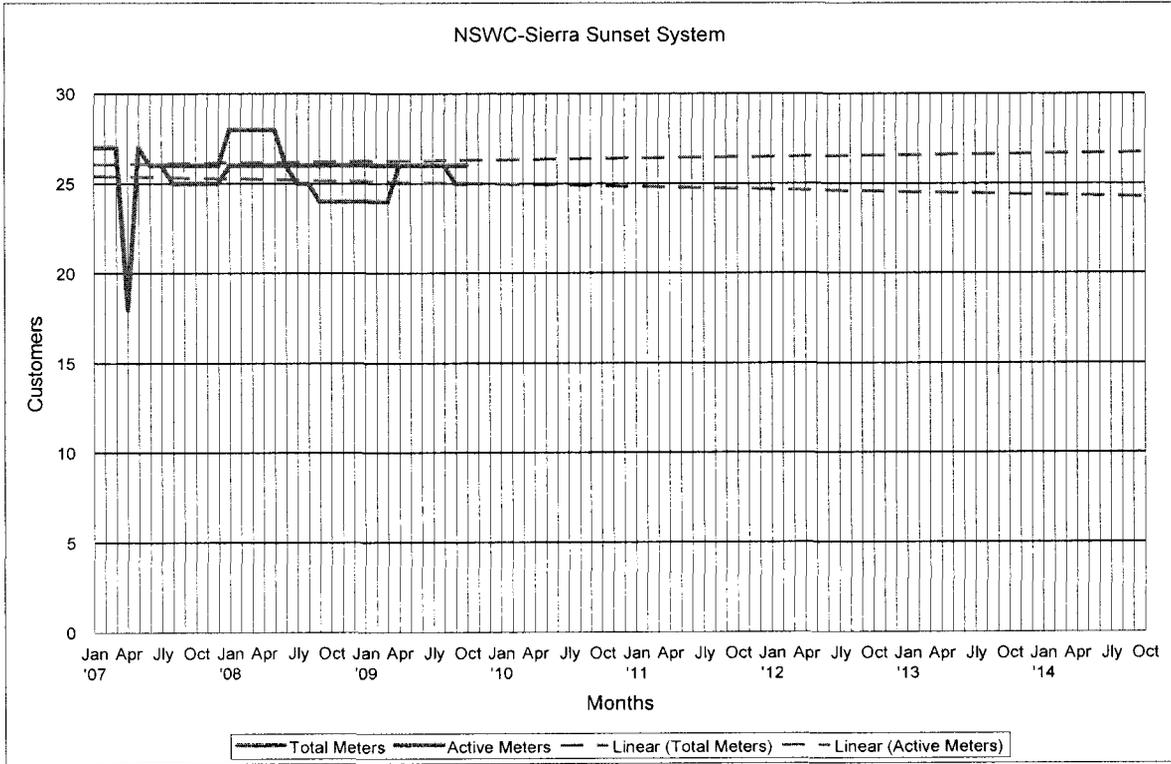


Figure D-2. Sierra Sunset System Growth

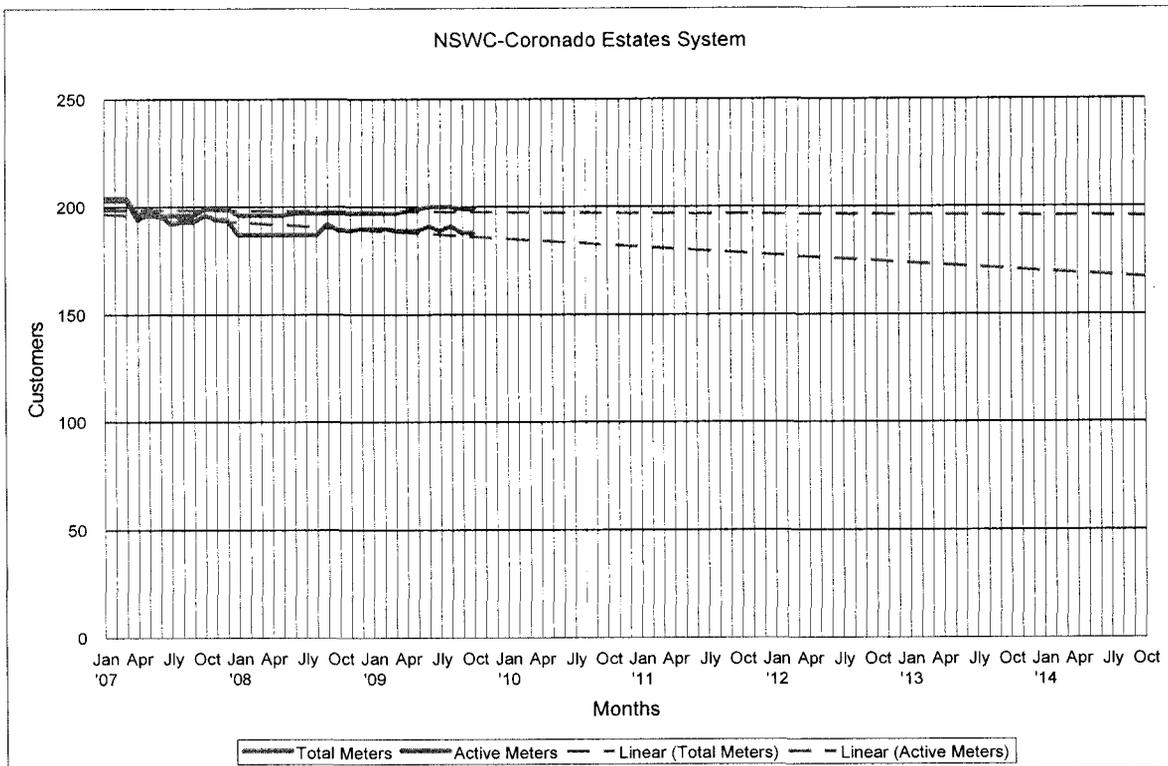


Figure D-3. Coronado Estates System Growth

Table H-1. Northern Sunrise Depreciation Rates

NARUC Acct. No.	Depreciable Plant	Current Rates (%)	Proposed Rates (%)
304	Structures & Improvements	3.33	3.33
305	Collecting & Impounding Reservoirs	2.50	2.50
306	Lake, River, Canal Intakes	2.50	2.50
307	Wells & Springs	3.33	3.33
308	Infiltration Galleries	6.67	6.67
309	Raw Water Supply Mains	2.00	2.00
310	Power Generation Equipment	5.00	5.00
311	Pumping Equipment	12.50	12.50
320	Water Treatment Equipment		
320.1	Water Treatment Plants	3.33	3.33
320.2	Solution Chemical Feeders	20.00	20.00
330	Distribution Reservoirs & Standpipes		
330.1	Storage Tanks	2.22	2.22
330.2	Pressure Tanks	5.00	5.00
331	Transmission & Distribution Mains	2.00	2.00
333	Services	3.33	3.33
334	Meters	8.33	8.33
335	Hydrants	2.00	2.00
336	Backflow Prevention Devices	6.67	6.67
339	Other Plant & Misc Equipment	6.67	6.67
340	Office Furniture & Equipment	6.67	6.67
340.1	Computers & Software	20.00	20.00
341	Transportation Equipment	20.00	20.00
342	Stores Equipment	4.00	4.00
343	Tools, Shop & Garage Equipment	5.00	5.00
344	Laboratory Equipment	10.00	10.00
345	Power Operated Equipment	5.00	5.00
346	Communication Equipment	10.00	10.00
347	Miscellaneous Equipment	10.00	10.00
348	Other Tangible Plant	10.00	10.00

Table I-1. Service Line and Meter Installation Charges

Meter Size	Northern Sunrise's Current Charges	Northern Sunrise's Proposed Charges	Staff's Recommended Service Line Charges **	Staff's Recommended Meter Charges	Staff's Recommended Total Charges
5/8 x 3/4"	\$410	At Cost	\$1,765	\$105	\$1,870
3/4"	\$410	At Cost	\$1,765	\$180	\$1,945
1"	\$520	At Cost	\$1,765	\$240	\$2,005
1-1/2"	\$660	At Cost	At Cost	At Cost	At Cost
2" Turbine	\$1,155	At Cost	At Cost	At Cost	At Cost
2" Compound	\$1,720	At Cost	At Cost	At Cost	At Cost
3" Turbine	\$1,625	At Cost	At Cost	At Cost	At Cost
3" Compound	\$2,260	At Cost	At Cost	At Cost	At Cost
4" Turbine	\$2,500	At Cost	At Cost	At Cost	At Cost
4" Compound	\$3,200	At Cost	At Cost	At Cost	At Cost
6" Turbine	\$4,500	At Cost	At Cost	At Cost	At Cost
6" Compound	\$6,300	At Cost	At Cost	At Cost	At Cost
8" and larger	\$8,200	At Cost	At Cost	At Cost	At Cost

\*\* Note: To include the actual cost incurred when road crossing is required.

**NORTHERN SUNRISE WATER COMPANY, INC.  
WATER HOOK-UP FEE TARIFF**

I. Purpose and Applicability

The purpose of the off-site hook-up fees payable to **Northern Sunrise Water Company, Inc.** (“NSWC” or “the Company”) pursuant to this tariff is to equitably apportion the costs of constructing additional off-site facilities **necessary** to provide water production, delivery, storage and pressure among all new service connections. These charges are applicable to all new service connections **undertaken via Main Extension Agreements or requests for service not requiring a Main Extension Agreement entered into** established after the effective date of this tariff. The charges are one-time charges and are payable as a condition to Company’s establishment of service, as more particularly provided below.

II. Definitions

Unless the context otherwise requires, the definitions set forth in R-14-2-401 of the Arizona Corporation Commission’s (“Commission”) rules and regulations governing water utilities shall apply **in** interpreting this tariff schedule.

“Applicant” means any party entering into an agreement with Company for the installation of water facilities to serve new service connections, and may include Developers and/or Builders of new residential subdivisions **and/or commercial and industrial properties**.

“NSWC or Company” means **Northern Sunrise Water Company, Inc.**

“Main Extension Agreement” means any agreement whereby an Applicant, Developer and/or Builder agrees to advance the costs of the installation of water facilities **necessary** to the Company to serve new service connections **within a development**, or installs **such** water facilities **necessary** to serve new service connections and transfers ownership of such water facilities to the Company, which agreement shall require the approval of the Commission pursuant to A.A.C. R-14-2-406, and shall have the same meaning as “Water Facilities Agreement” or “Line Extension Agreement.”

“Off-site Facilities” means wells, storage tanks and related appurtenances necessary for proper operation, including engineering and design costs. Offsite facilities may also include booster pumps, pressure tanks, transmission mains and related appurtenances necessary for proper operation if these facilities are not for the exclusive use of the applicant and will benefit the entire water system.

“Service Connection” means and includes all service connections for single-family residential, **commercial, industrial** or other uses, regardless of meter size.

### III. Water Hook-up Fee

For each new service connection, the Company shall collect a Hook-Up Fee derived as follows:

OFF-SITE WATER HOOK-UP FEE TABLE		
METER SIZE	SIZE FACTOR	TOTAL FEE
5/8" x 3/4"	1	\$1,600
3/4"	1.5	\$2,400
1"	2.5	\$4,000
1-1/2"	5	\$8,000
2"	8	\$12,800
3"	16	\$25,600
4"	25	\$40,000
6" or larger	50	\$80,000

### IV. Terms and Conditions

(A) Assessment of One Time Off-Site Hook-up Fee: The off-site hook-up fee may be assessed only once per parcel, service connection, or lot within a subdivision (similar to meter and service line installation charge).

(B) Use of Off-Site Hook-up Fee: Off-site hook-up fees may only be used to pay for capital items of off-site facilities, or for repayment of loans obtained to fund the cost of installation of off-site facilities. Off-site hook-up fees shall not be used to cover repairs, maintenance, or operational costs.

(C) Time of Payment:

- 1) For those requiring a Main Extension Agreement: In the event that the person or entity that will be constructing improvements ("Applicant", "Developer" or "Builder") is otherwise required to enter into a Main Extension Agreement, whereby the Applicant, Developer or Builder agrees to advance the costs of installing mains, valves, fittings, hydrants and other on-site improvements in order to extend service in accordance with R-14-2-406(B), payment of the Hook-Up Fees required hereunder shall be made by the Applicant, Developer or Builder no later than within 15 calendar days after receipt of notification from the Company that the Utilities Division of the Arizona Corporation Commission has approved the Main Extension Agreement in accordance with R-14-2-406(M).
- 2) For those connecting to an existing main: In the event that the Applicant, Developer or Builder for service is not required to enter into a Main Extension Agreement, the Hook-Up Fee charges hereunder shall be due and payable at the time the meter and service line installation fee is due and payable.

(D) Off-Site Facilities Construction By Developer: Company and Applicant, Developer, or Builder may agree to construction of off-site facilities necessary to serve a particular development by Applicant, Developer or Builder, which facilities are then conveyed to Company. In that event, Company shall credit the total cost of such off-site facilities as an offset to off-site hook-up fees due under this Tariff. If the total cost of the off-site facilities constructed by Applicant, Developer or Builder and conveyed to Company is less than the applicable off-site hook-up fees under this Tariff, Applicant, Developer or Builder shall pay the remaining amount of off-site hook-up fees owed hereunder. If the total cost of the off-site facilities contributed by Applicant, Developer or Builder and conveyed to Company is more than the applicable off-site hook-up fees under this Tariff, Applicant, Developer or Builder shall be refunded the difference upon acceptance of the off-site facilities by the Company.

(E) Failure to Pay Charges; Delinquent Payments: The Company will not be obligated to make an advance commitment to provide or actually provide water service to any Developer, Builder or other applicant for service in the event that the Developer, Builder or other applicant for service has not paid in full all charges hereunder. Under no circumstances will the Company set a meter or otherwise allow service to be established if the entire amount of any payment due hereunder has not been paid.

(F) Large Subdivision Projects: In the event that the Applicant, Developer or Builder is engaged in the development of a residential subdivision containing more than 150 lots, the Company may, in its discretion, agree to payment of off-site hook-up fees in installments. Such installments may be based on the residential subdivision development's phasing, and should attempt to equitably apportion the payment of charges hereunder based on the Applicant's, Developer's or Builder's construction schedule and water service requirements.

(G) Off-Site Hook-Up Fees Non-refundable: The amounts collected by the Company as Hook-Up Fees pursuant to the off-site hook-up fee tariff shall be non-refundable contributions in aid of construction.

(H) Use of Off-Site Hook-Up Fees Received: All funds collected by the Company as off-site hook-up fees shall be deposited into a separate interest bearing trust account and used solely for the purposes of paying for the costs of installation of off-site facilities, including repayment of loans obtained for the installation of off-site facilities that will benefit the entire water system.

(I) Off-Site Hook-up Fee in Addition to On-site Facilities: The off-site hook-up fee shall be in addition to any costs associated with the construction of on-site facilities under a Main Extension Agreement.

(J) Disposition of Excess Funds: After all necessary and desirable off-site facilities are constructed utilizing funds collected pursuant to the off-site hook-up fees, or if the off-site hook-up fee has been terminated by order of the Commission, any funds remaining in the trust shall be refunded. The manner of the refund shall be determined by the Commission at the time a refund becomes necessary.

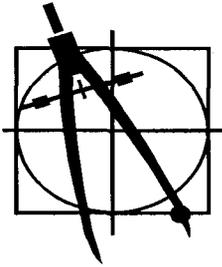
(K) Fire Flow Requirements: In the event the applicant for service has fire flow requirements that require additional facilities beyond those facilities whose costs were included in the off-site hook-up fee, and which are contemplated to be constructed using the proceeds of the off-site hook-up Fee, the Company may require the applicant to install such additional facilities as are required to meet those additional fire flow requirements, as a non-refundable contribution, in addition to the off-site hook-up fee.

(L) Status Reporting Requirements to the Commission: The Company shall submit a calendar year Off-Site Hook-Up Fee status report each January to Docket Control for the prior twelve (12) month period, beginning January 2011, 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 physical property in respect of which such fee was paid, the amount of money spent from the account, the amount of interest earned on the funds within the tariff account, and an itemization of all facilities that have been installed using the tariff funds during the 12 month period.

**Engineering Report**

**For**

**Southern Sunrise Water Company, Inc.**

**Engineering Report****For****Southern Sunrise Water Company, Inc.****Docket No. W-20454A-09-0413 (Rates)****March 3, 2010****SUMMARY**CONCLUSIONS

- A. Southern Sunrise Water Company, Inc. ("Southern Sunrise") operates two independent water systems and each water system has adequate well and storage capacities to serve their present customer base and reasonable growth.
- B. The Arizona Department of Environmental Quality has reported that Southern Sunrise's two water systems are currently delivering water that meets the water quality standards.
- C. Southern Sunrise is not located in any Active Management Area. According to the Arizona Department of Water Resources ("ADWR"), Southern Sunrise is in compliance with ADWR's requirements governing water providers and/or community water systems.
- D. A check of the Utilities Division Compliance database showed that Southern Sunrise had no delinquent Commission compliance items.
- E. Southern Sunrise has an approved curtailment tariff with an effective date of April 4, 2007.
- F. Southern Sunrise has an approved backflow prevention tariff with an effective date of April 4, 2007.

RECOMMENDATIONS

- 1. Southern Sunrise's two water systems have questionable and/or high water losses. For this reason, Staff recommends that Southern Sunrise monitor its three systems for a 12-month period to prepare a water loss report. Southern Sunrise should coordinate when it reads the production meters each month with customer monthly meter readings so that an accurate accounting can be made. If the reported water loss is greater than 10 percent, Southern Sunrise shall submit the water loss reduction report containing a detailed analysis and plan to reduce the water loss to 10 percent or less. If Southern Sunrise believes it is not cost effective to reduce the water loss to less than 10 percent, it should submit a detailed cost benefit analysis to support its opinion. In no case shall Southern Sunrise allow water loss to be greater than 15 percent. The water loss reduction report or

the detailed analysis, whichever is submitted, shall be docketed as a compliance item within 18 months from the effective date of an order issued in this proceeding.

2. Staff recommends the adoption of Southern Sunrise's annual water testing expense of \$3,920 be used for purposes of this application.
3. Staff recommends that Southern Sunrise continue to use Staff's typical and customary depreciation rates as delineated in Table H-1.
4. Staff recommends the approval of its proposed Service Line and Meter Installation Charges as delineated in Table I-1.
5. Staff recommends the approval of Southern Sunrise's request for revised Water Hook-Up Fees starting at \$1,600 and the adoption of the specific and updated tariff language as contained in Northern Sunrise's Attachment – HUF Tariff.

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Table I-1 - Service Line and Meter Installation Charges.....64

**A. LOCATION OF SOUTHERN SUNRISE WATER COMPANY, INC. (“SOUTHERN SUNRISE”)**

Southern Sunrise serves the communities surrounding Nicksville and Miracle Valley, which are approximately 8 miles south and 15 miles southwest of Sierra Vista, respectively. Figure A-1 shows the location of Southern Sunrise within Cochise County and Figure A-2 shows the approximate 2.8 square-miles of certificated area.

**B. DESCRIPTION OF WATER SYSTEMS**

Southern Sunrise operates two water systems; the Cochise/Horseshoe Ranch System and Miracle Valley System. These water systems were field inspected on December 16, 2009, by Marlin Scott, Jr., Staff Utilities Engineer, in the accompaniment of Martin Garland, representing Southern Sunrise.

Cochise/Horseshoe Ranch System

The current operation of the Cochise/Horseshoe Ranch System consists of four wells, four storage tanks, three booster systems and a distribution system serving approximately 552 active meters as of March 2009. This system is also interconnected with the Bella Vista – South System by a 2-inch master-meter.

Miracle Valley System

The current operation of the Miracle Valley System consists of two wells, one storage tank, one booster system, and a distribution system serving approximately 241 active meters as of March 2009.

A detailed plant facility description for each water system is as follows:

Table 1. Well Data

Well # or Name	ADWR ID No.	Pump Hp (Submersible)	Flow Rate (GPM)	Casing Size & Depth	Meter Size	Year Drilled
<b>Cochise/Horseshoe Ranch System</b>						
#1	55-563118	5	75	8" x 150'	2"	1997
#2	55-550951	5	45	10" x 144'	2"	1995
#3	55-563117	5	45	8" x 145'	2"	1997
#4	55-630887	(Not in service)		8" x 458'		1973
Jaxel	55-805546	5	35	8" x 180'	1-1/2"	1989
		TOTAL:	200 GPM			
<b>Miracle Valley System</b>						
#1	55-630018	40	150	16" x 524'	2"	1959
#2	55-527262	10	110	8" x 298'	4"	1990
		TOTAL:	260 GPM			

Table 2. Storage Tanks & Booster Systems

Location	Booster Systems	Storage Tanks
<b>Cochise/Horseshoe Ranch System</b>		
Wells #1, #2 & #3	Two 5-Hp booster pumps with a 5,000 gallon pressure tank	170,000 gal. storage tank
	and	
	Two 10-Hp booster pumps with two 70 gallon bladder tanks to transfer water to Horseshoe Ranch.	
Well Jaxel	Two 5-Hp booster pumps with a 1,000 gallon pressure tank	10,000 gal. storage tank
Horseshoe Ranch	Two 10-Hp booster pumps with a 3,000 gallon pressure tank	10,000 gal. & 22,500 gal. storage tanks
<b>Miracle Valley System</b>		
Well #1	Two 15-Hp booster pumps	150,000 gal. storage tank
Well #2	1,000 gal. pressure tank	

Table 3. Water Mains

Diameter	Material	Length, ft.
2-inch	PVC	Unknown
3-inch	PVC	Unknown
4-inch	PVC	Unknown
6-inch	PVC	Unknown

Table 4. Customer Meters

Size	Cochise/Horseshoe Ranch System	Miracle Valley System
5/8 x 3/4-inch	582	259
3/4-inch	-	-
System Total:	582 (with 552 active meters)	259 (with 241 active meters)

Table 5. Treatment Equipment & Structures

Treatment Equipment & Structures	
<b>Cochise/Horseshoe Ranch System</b>	
Treatment –	Liquid chlorination units at Well #1 and Well Jaxel.
Structures –	Chlorinator sheds at Well #1 and Well Jaxel. Chain link fencing around Well #1, Well Jaxel and Horseshoe Ranch. Storage building at Horseshoe Ranch.
<b>Miracle Valley System</b>	
Treatment –	Liquid chlorination unit at Well #1.
Structures –	Chlorinator shed at Well #1. Chain link fencing around Well #1 and Well #2.

**C. WATER USE**

Water Sold

Based on the information provided by Southern Sunrise, water uses for the test year ending March 2009 are presented in Figures C-1 and C-2. For the Cochise/Horseshoe Ranch System, customer consumption experienced a high monthly average water use of 267 gallons per

day (“GPD”) per connection in June 2008 and a low monthly average water use of 152 GPD per connection in December 2009 for a monthly average use of 193 GPD per connection.

For the Miracle Valley System, customer consumption experienced a high monthly average water use of 245 GPD per connection in June 2008 and a low monthly average water use of 132 GPD per connection in March 2009 for a monthly average use of 169 GPD per connection.

Non-Account Water

Non-account water should be 10 percent or less. For Southern Sunrise’s two systems, Southern Sunrise reported the gallons pumped and gallons sold during the test year as shown in the table below:

Table C-2. Water Difference

System	Gallons Pumped	Gallons Sold	Difference
Cochise/Horseshoe Ranch	51,340,200	38,947,888	24.1%
Miracle Valley	21,315,330	14,295,156	32.9%

In response to Staff’s Data Request MSJ 5-1, Southern Sunrise stated that while the pumped production numbers are based on a calendar month, the sold numbers are based on meter read dates, resulting in a mismatch of the meter reading data. Southern Sunrise also further stated unaccounted-for water needs to be looked at as a long term average and that the Water Use Data Sheet does not account for water that is lost through leaks, flushing or other accounted-for water. Also included in response to Data Request MSJ 5-1, Southern Sunrise provided a spreadsheet from June 2008 to December 2009 that included revised water loss percentage with the “accounted-for water” as follows:

Table C-3. Revised Water Loss

System	Water Loss (6/08 to 12/08)	Water Loss (1/09 to 12/09)	Water Loss (6/08 to 12/09)
Cochise/Horseshoe Ranch	3.72%	13.92%	10.23%
Miracle Valley	31.01%	25.21%	27.36%

As shown above, the meter reading data makes the “true” water loss calculation questionable. As a result, it appears that the Southern Sunrise is a good candidate to conduct a water audit to determine the “true” water loss for all two of its systems.

For this reason, Staff recommends that Southern Sunrise monitor both of its systems for a 12-month period to prepare a water loss report. Southern Sunrise should coordinate when it reads the production meters each month with customer monthly meter readings so that an accurate accounting can be made. If the reported water loss is greater than 10 percent, Southern Sunrise shall submit the water loss reduction report containing a detailed analysis and plan to reduce the water loss to 10 percent or less. If Southern Sunrise believes it is not cost effective to reduce the water loss to less than 10 percent, it should submit a detailed cost benefit analysis to support its opinion. In no case shall Southern Sunrise allow water loss to be greater than 15 percent. The water loss reduction report or the detailed analysis, whichever is submitted, shall be docketed as a compliance item within 18 months from the effective date of an order issued in this proceeding.

### System Analysis

The Cochise/Horseshoe Ranch System's current well capacity of 200 GPM and storage capacity of 212,500 gallons is adequate to serve the present customer base and reasonable growth.

The Miracle Valley System's current well capacity of 260 GPM and storage capacity of 150,000 gallons is adequate to serve the present customer base and reasonable growth.

## **D. GROWTH**

Figures D-1 and D-2 depicts the customer growth, per total and active meters, using linear regression analysis for the Cochise/Horseshoe Ranch and Miracle Valley Systems. The number of customers was obtained from Southern Sunrise per its response to Staff's Data Request MSJ 5-1. During the test year ending March 2009:

- The Cochise/Horseshoe Ranch System had approximately 582 total meters and 552 active meters. At this time, this system is losing customers. If this trend continues, it is projected that the Cochise/Horseshoe Ranch System could have approximately 530 active meters by October 2014.
- The Miracle Valley System had approximately 259 total meters and 241 active meters. At this time, this system is also losing customers. If this trend continues, it is projected that the Miracle Valley System could have approximately 235 active meters by October 2014.

## **E. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY ("ADEQ") COMPLIANCE**

### Compliance

According to ADEQ Compliance Status Reports, dated August 7, 2009, ADEQ has determined that Southern Sunrise's Cochise/Horseshoe Ranch and Miracle Valley Systems, PWS

Nos. 02-011 and 02-023, respectively, are currently delivering water that meets water quality standards required by 40 CFR 141/Arizona Administrative Code, Title 18, Chapter 4.

#### Water Testing Expense

Southern Sunrise reported its water testing expense at \$5,592 for the test year. Staff has reviewed Southern Sunrise's reported expense amount and recommends that Southern Sunrise's water testing expense of \$5,592 be adopted for this proceeding.

#### **F. ARIZONA DEPARTMENT OF WATER RESOURCES ("ADWR") COMPLIANCE**

Southern Sunrise is not located in any Active Management Area. According to ADWR compliance status reports, dated January 10, 2010, Southern Sunrise's Cochise/Horseshoe Ranch and Miracle Valley Systems are in compliance with its requirements governing water providers and/or community water systems.

#### **G. ARIZONA CORPORATION COMMISSION ("ACC") COMPLIANCE**

According to the Utilities Division Compliance database, Southern Sunrise has no delinquent ACC compliance items.

#### **H. DEPRECIATION RATES**

In the 2006 CC&N transfer case, Southern Sunrise was authorized to use Staff's typical and customary depreciation rates. These depreciation rates are presented in Table H-1 and it is recommended that Southern Sunrise continue to use these depreciation rates by individual National Association of Regulatory Utility Commissioners category.

#### **I. SERVICE LINE AND METER INSTALLATION CHARGES**

Southern Sunrise has requested changes to its service line and meter installation charges. These installation charges are refundable advances. For all meter sizes, Southern Sunrise is requesting to charge these installation charges "at cost". According to Southern Sunrise, the reason for the "at cost" request is that it "places the cost of growth directly on the party causing the cost so it is not borne by the existing customers".

In Staff's Data Request MSJ-5-3, Staff requested Southern Sunrise to provide example costs of installation charges for 5/8 x 3/4-inch, 1-inch, 2-inch and 4-inch meters. Southern Sunrise responded by submitting incomplete data for the 5/8 x 3/4-inch and 1-inch meter sizes and not providing costs for 2-inch and 4-inch meter sizes.

It is Staff's position that for small meter sizes, typically residential, established installation charges should be provided in order for these potential customers to have an idea of the installation charges. Therefore, using the submitted data request responses along with Staff's

additional data, Staff has established and recommends installation charges for the 5/8 x 3/4-inch, 3/4-inch and 1-inch meters. For 1-1/2-inch and larger size meters, Staff recommends the "at cost" charges apply. In addition, Staff recommends that the actual cost be incurred when road crossing is required.

Since Southern Sunrise may at times install meters on existing service lines, it would be appropriate for some customers to only be charged for the meter installation. Therefore, Staff recommends approval of its charges as shown in Table I-1, with separate installation charges for the service line and meter installations.

#### **J. CURTAILMENT TARIFF**

Southern Sunrise has an approved curtailment tariff with an effective date of April 4, 2007.

#### **K. BACKFLOW PREVENTION TARIFF**

Southern Sunrise has an approved backflow prevention tariff with an effective date of April 4, 2007.

#### **L. OFF-SITE HOOK-UP FEE TARIFF**

Southern Sunrise currently has an approved Hook-Up Fee ("HUF") Tariff starting at \$1,000. In its rate application, Southern Sunrise requested a Water HUF Tariff starting at \$1,600 for a 5/8 x 3/4-inch meter. The proposed \$1,600 is based on the Southern Sunrise's proposed construction of a deep well/storage tank/booster station project totaling to \$1,437,500, resulting to fee of \$3,443 per service connection. Southern Sunrise however selected a lesser amount of \$1,600 to be adopted for its revised HUF Tariff.

Southern Sunrise also submitted its HUF Tariff that had different language than in Staff's updated HUF Tariff template. Staff has reviewed Southern Sunrise's proposed language changes and will accept some of Southern Sunrise's language changes, which is the same as the Northern Sunrise HUF Tariff.

Therefore, Staff recommends the approval of Southern Sunrise's revised HUF Tariff starting at \$1,600 and the adoption of the specific and updated tariff language contained in the same HUF Tariff of Northern Sunrise's report.

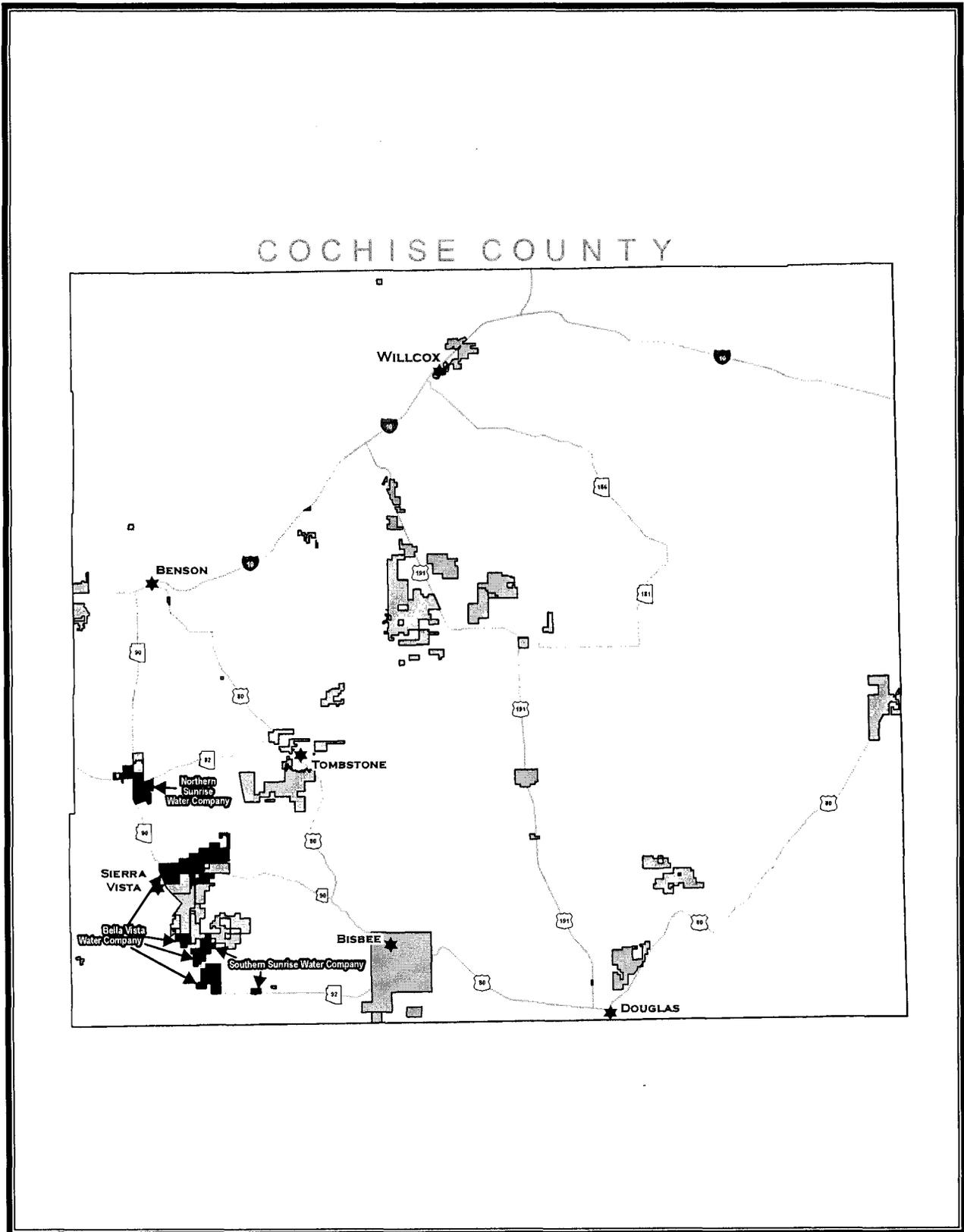


Figure A-1. Cochise County Map

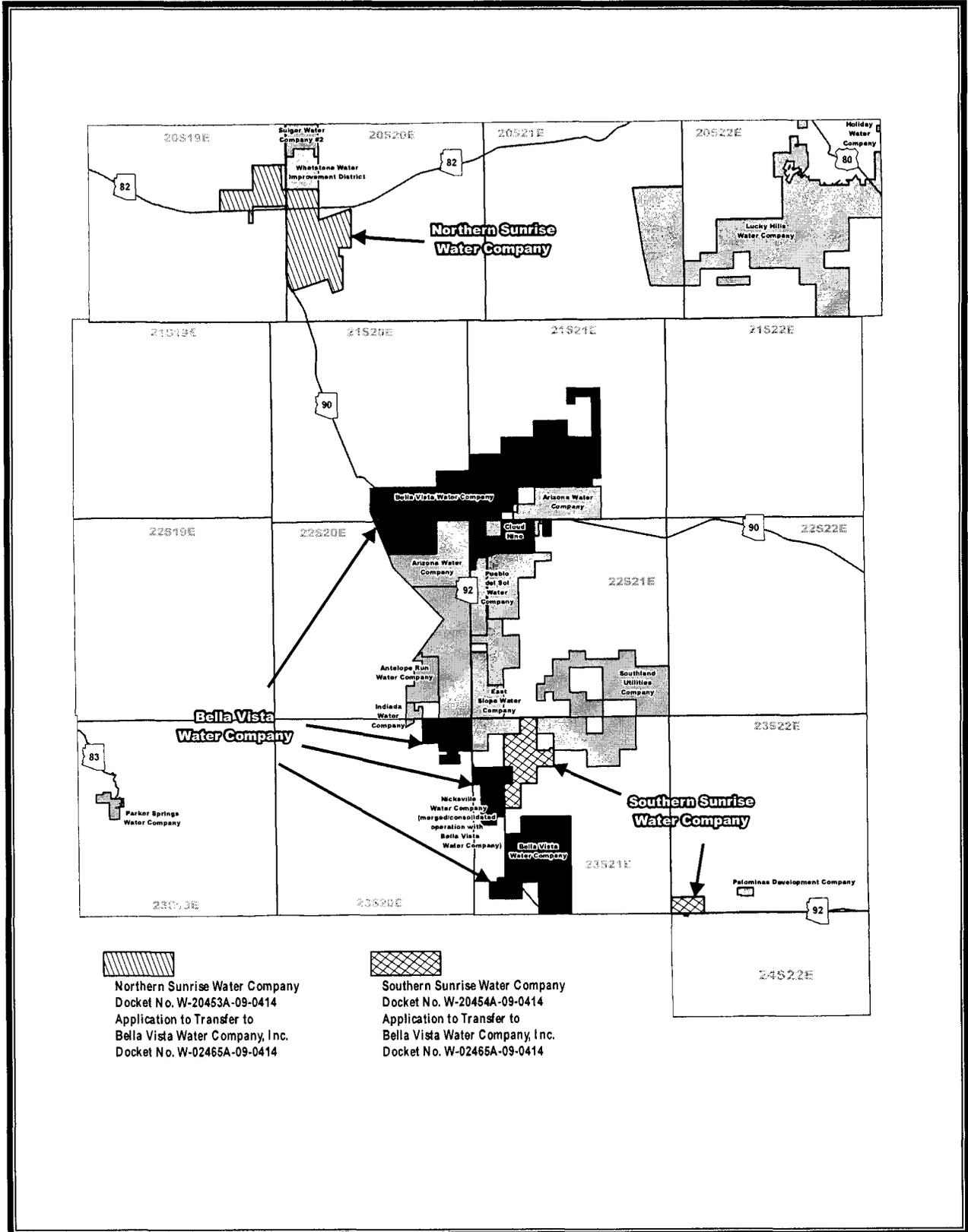


Figure A-2. Certificated Areas

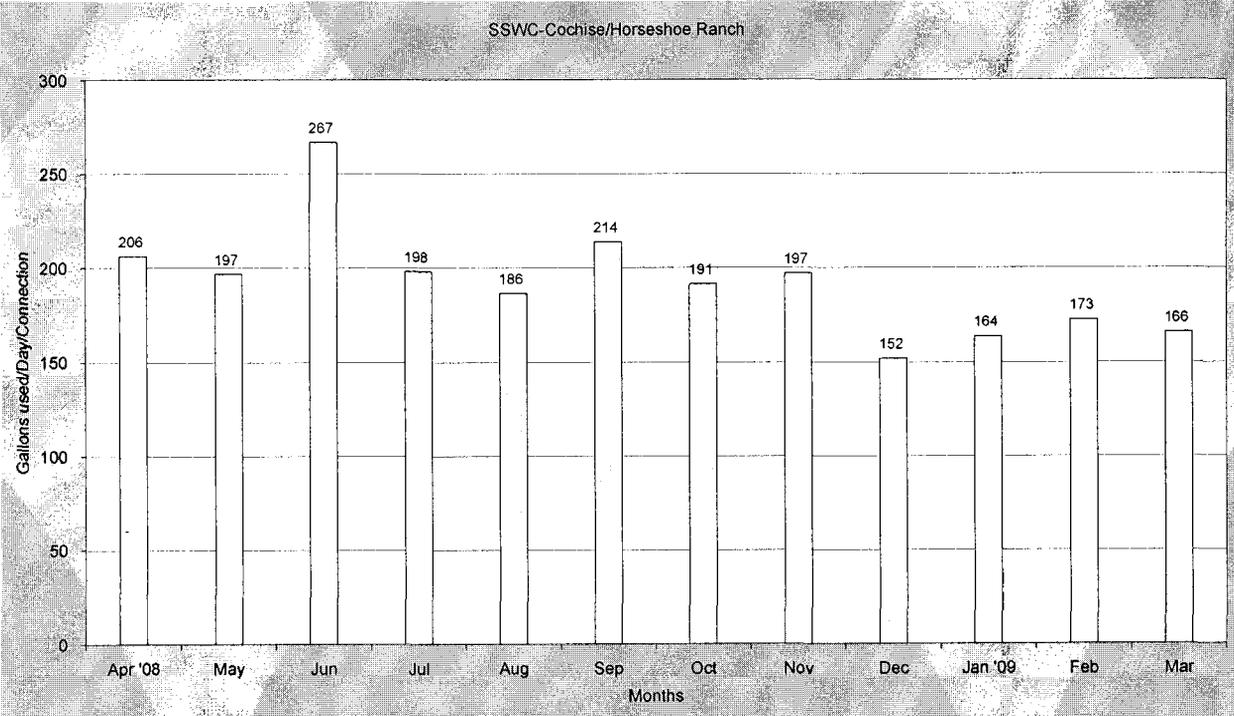


Figure C-1. Cochise/Horseshoe Ranch System Water Use

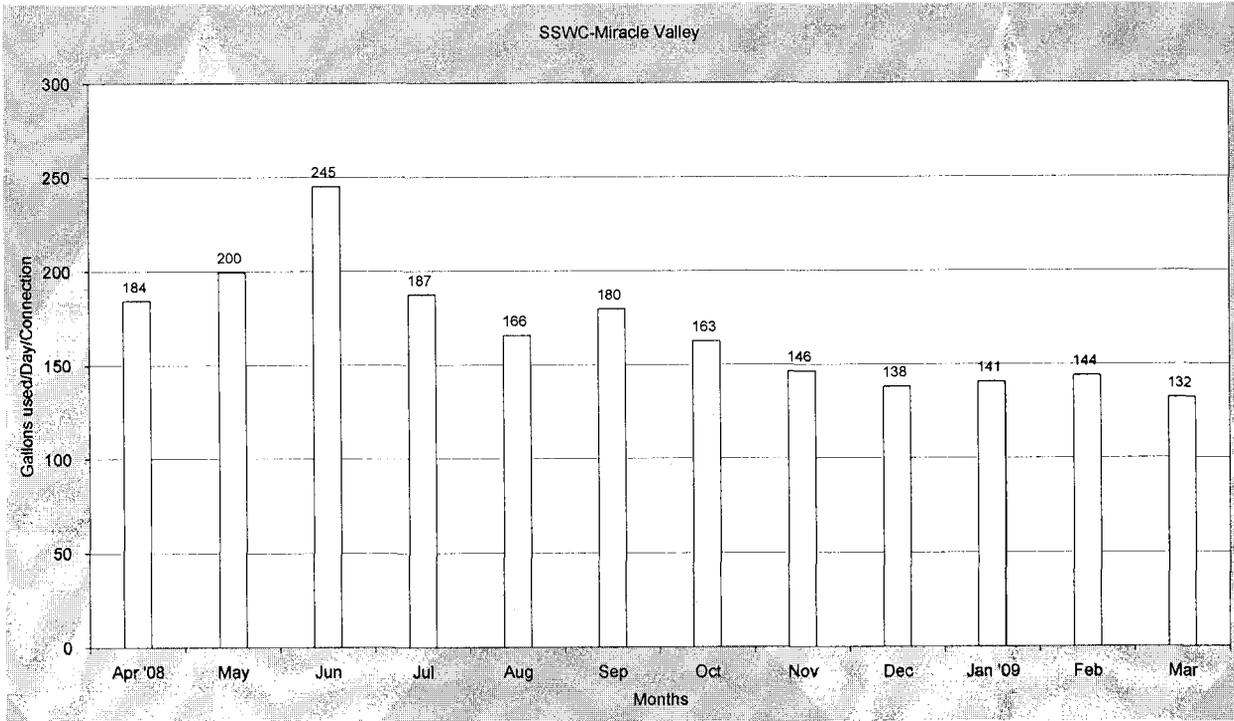


Figure C-2. Miracle Valley System Water Use

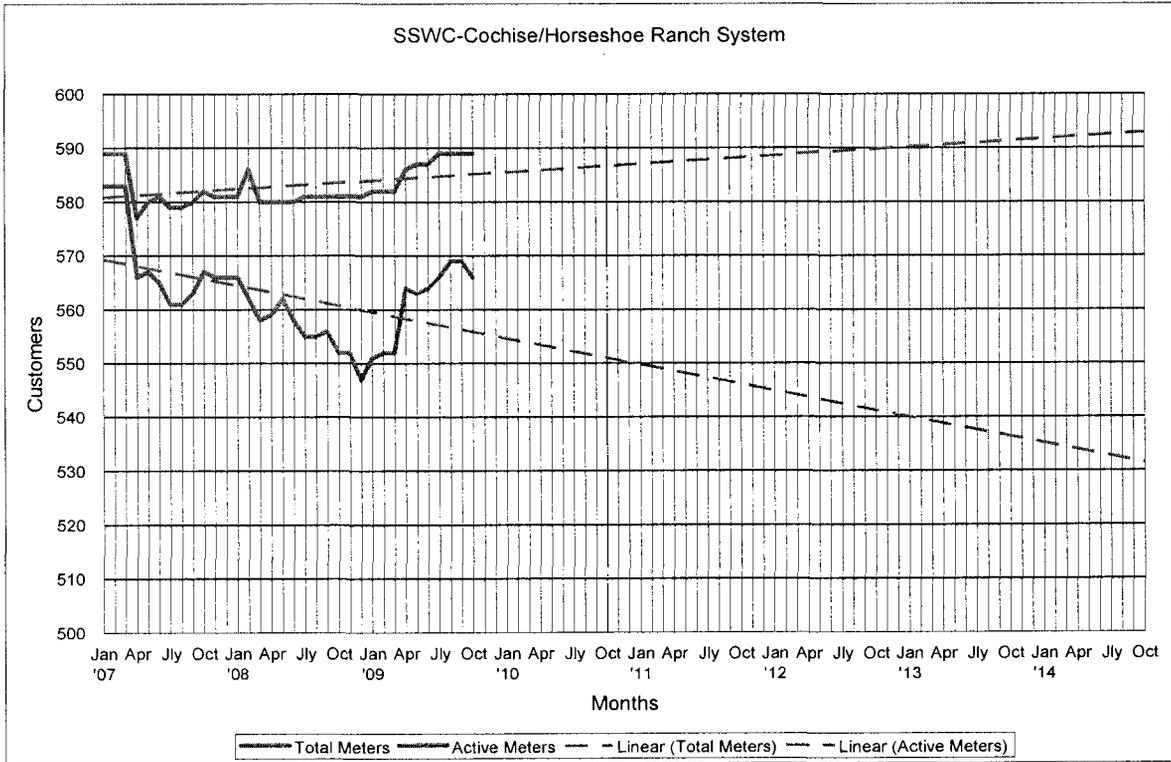


Figure D-1. Cochise/Horseshoe Ranch System Growth

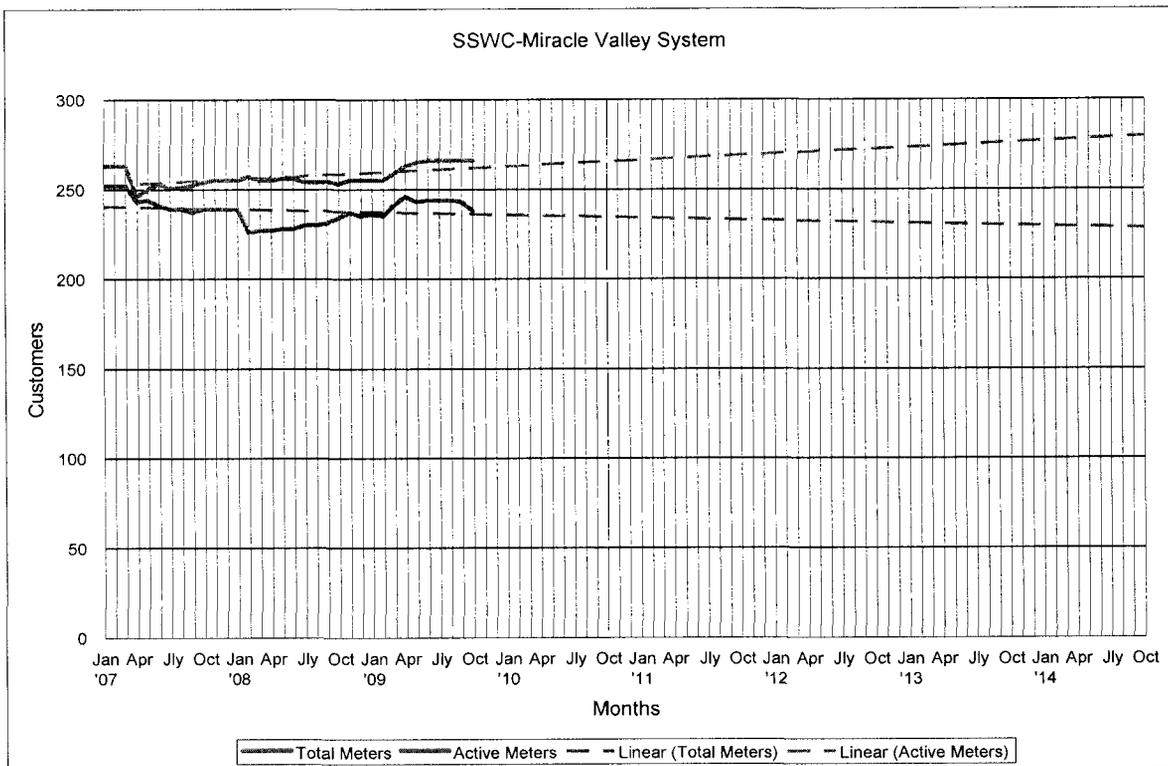


Figure D-2. Miracle Valley System Growth

Table H-1. Southern Sunrise Depreciation Rates

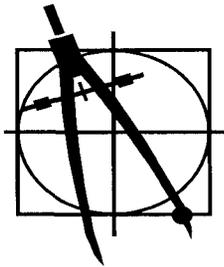
NARUC Acct. No.	Depreciable Plant	Current Rates (%)	Proposed Rates (%)
304	Structures & Improvements	3.33	3.33
305	Collecting & Impounding Reservoirs	2.50	2.50
306	Lake, River, Canal Intakes	2.50	2.50
307	Wells & Springs	3.33	3.33
308	Infiltration Galleries	6.67	6.67
309	Raw Water Supply Mains	2.00	2.00
310	Power Generation Equipment	5.00	5.00
311	Pumping Equipment	12.50	12.50
320	Water Treatment Equipment		
320.1	Water Treatment Plants	3.33	3.33
320.2	Solution Chemical Feeders	20.00	20.00
330	Distribution Reservoirs & Standpipes		
330.1	Storage Tanks	2.22	2.22
330.2	Pressure Tanks	5.00	5.00
331	Transmission & Distribution Mains	2.00	2.00
333	Services	3.33	3.33
334	Meters	8.33	8.33
335	Hydrants	2.00	2.00
336	Backflow Prevention Devices	6.67	6.67
339	Other Plant & Misc Equipment	6.67	6.67
340	Office Furniture & Equipment	6.67	6.67
340.1	Computers & Software	20.00	20.00
341	Transportation Equipment	20.00	20.00
342	Stores Equipment	4.00	4.00
343	Tools, Shop & Garage Equipment	5.00	5.00
344	Laboratory Equipment	10.00	10.00
345	Power Operated Equipment	5.00	5.00
346	Communication Equipment	10.00	10.00
347	Miscellaneous Equipment	10.00	10.00
348	Other Tangible Plant	10.00	10.00

Table J-1. Service Line and Meter Installation Charges

Meter Size	Southern Sunrise's Current Charges	Southern Sunrise's Proposed Charges	Staff's Recommended Service Line Charges **	Staff's Recommended Meter Charges	Staff's Recommended Total Charges
5/8 x 3/4"	\$410	At Cost	\$1,765	\$105	\$1,870
3/4"	\$410	At Cost	\$1,765	\$180	\$1,945
1"	\$520	At Cost	\$1,765	\$240	\$2,005
1-1/2"	\$660	At Cost	At Cost	At Cost	At Cost
2" Turbine	\$1,155	At Cost	At Cost	At Cost	At Cost
2" Compound	\$1,720	At Cost	At Cost	At Cost	At Cost
3" Turbine	\$1,625	At Cost	At Cost	At Cost	At Cost
3" Compound	\$2,260	At Cost	At Cost	At Cost	At Cost
4" Turbine	\$2,500	At Cost	At Cost	At Cost	At Cost
4" Compound	\$3,200	At Cost	At Cost	At Cost	At Cost
6" Turbine	\$4,500	At Cost	At Cost	At Cost	At Cost
6" Compound	\$6,300	At Cost	At Cost	At Cost	At Cost
8" and larger	\$8,200	At Cost	At Cost	At Cost	At Cost

\*\* Note: To include the actual cost incurred when road crossing is required.

Summary  
of  
Engineering Reports  
For  
Consolidate Operations  
And  
Transfer of Utility Assets



**Summary of Engineering Reports  
For  
Consolidate Operations and Transfer of Utility  
Assets**

**Docket No. W-02465A-09-0414**

**Docket No. W-20453A-09-0414**

**Docket No. W-20454A-09-0414**

**March 3, 2010**

**SUMMARY**

CONCLUSIONS

- A. Bella Vista, Northern Sunrise and Southern Sunrise (all as "BVWC") operate seven independent water systems and all these water systems have adequate well and storage capacities to serve their present customer base and reasonable growth.
- B. Arizona Department of Environmental Quality ("ADEQ") has reported all of BVWC's seven water systems are currently delivering water that meets the water quality standards.
- C. BVWC is not located in any Arizona Department of Water Resources ("ADWR") Active Management Area. According to the ADWR, BVWC is in compliance with ADWR's requirements governing water providers and/or community water systems.
- D. A check of the Utilities Division Compliance database showed that BVWC had no delinquent Commission compliance items.
- E. All of BVWC's water systems have approved curtailment tariffs.
- F. All of BVWC's water systems have an approved backflow prevention tariffs.

RECOMMENDATIONS

- 1. BVWC operates the below seven water systems with water losses that exceed the 10 percent allowable limit:

System	Water Loss			
	During Test Year	From 6/08 to 12/08	From 1/09 to 12/09	From 6/08 to 12/09
City	9.1% (questionable)			
South	13.86% in 2008 13.04% in TY 2.58 in 2009			
Mustang/Crystal		-5.49%	12.34%	6.08%
Sierra Sunset		-20.11%	1.98%	-5.17%
Coronado Estates		-3.96%	21.27%	12.34%
Cochise/Horseshoe Ranch		3.72%	13.92%	10.23%
Miracle Valley		31.01%	25.21%	27.36%

As shown above, the meter reading data makes the “true” water loss calculation questionable. As a result, it appears that BVWC is a good candidate to conduct a water audit to determine the “true” water loss for all of its seven water systems.

For this reason, Staff recommends that BVWC monitor its seven water systems for a 12-month period to prepare a water loss report. BVWC should coordinate when it reads the production meters each month with customer monthly meter readings so that an accurate accounting can be made. If the reported water loss is greater than 10 percent, BVWC shall submit the water loss reduction report containing a detailed analysis and plan to reduce the water loss to 10 percent or less. If BVWC believes it is not cost effective to reduce the water loss to less than 10 percent, it should submit a detailed cost benefit analysis to support its opinion. In no case shall BVWC allow water loss to be greater than 15 percent. The water loss reduction report or the detailed analysis, whichever is submitted, shall be docketed as a compliance item within 18 months from the effective date of an order issued in this proceeding.

- 2. Staff recommends the adoption of BVWC’s annual water testing expense totaling to \$28,184 as follows:

BVWC Systems	Water Testing Expense
Bella Vista	\$18,805
Northern Sunrise	\$3,787
Southern Sunrise	\$5,592
Total:	\$28,184

3. Staff concludes that the requested post-test year item for the Bella Vista – City System is used and useful for the provision of service to customers. Staff recommends that the post-test year item be adjusted as follows:

Acct. No.	Plant items for Main Relocation	Original Cost
331	Transmission & Distribution Mains - New 250 feet of 8-inch DIP and valves with one air relief. - Installed 22-inch casing sleeve.	\$104,507
331	Transmission & Distribution Mains - Retirement of old 250 feet of 8-inch ACP, installed in 1968.	(\$3,496)
<b>Total:</b>		<b>\$101,011</b>

4. Staff recommends that BVWC adopt Staff’s typical and customary depreciation rates and further recommends that BVWC use these depreciation rates delineated in the attached Table X – BVWC Depreciation Rates.
5. Staff recommends the approval of Staff’s proposed Service Line and Meter Installation Charges as delineated in the attached Table XX – BVWC Service Line & Meter Installation Charges.
6. Staff recommends denial of the request for a Hook-Up Fee Tariff for Bella Vista. For Northern Sunrise and Southern Sunrise, Staff further recommends the approval of the revised fee starting at \$1,600 and the adoption of the specific and updated tariff language contained in the attached Water HUF Tariff.
7. Staff recommends that if the BVWC water systems are consolidated, BVWC be required to continue reporting the data and information separately for each of its individual systems by ADEQ Public Water System, including but not limited to plant description and water use data, in future Annual Reports and rate case filings.

Table X – BVWC Depreciation Rates.

NARUC Acct. No.	Depreciable Plant	Recommended Rates (%)
304	Structures & Improvements	3.33
305	Collecting & Impounding Reservoirs	2.50
306	Lake, River, Canal Intakes	2.50
307	Wells & Springs	3.33
308	Infiltration Galleries	6.67
309	Raw Water Supply Mains	2.00
310	Power Generation Equipment	5.00
311	Pumping Equipment	12.50
320	Water Treatment Equipment	
320.1	Water Treatment Plants	3.33
320.2	Solution Chemical Feeders	20.00
330	Distribution Reservoirs & Standpipes	
330.1	Storage Tanks	2.22
330.2	Pressure Tanks	5.00
331	Transmission & Distribution Mains	2.00
333	Services	3.33
334	Meters	8.33
335	Hydrants	2.00
336	Backflow Prevention Devices	6.67
339	Other Plant & Misc Equipment	6.67
340	Office Furniture & Equipment	6.67
340.1	Computers & Software	20.00
341	Transportation Equipment	20.00
342	Stores Equipment	4.00
343	Tools, Shop & Garage Equipment	5.00
344	Laboratory Equipment	10.00
345	Power Operated Equipment	5.00
346	Communication Equipment	10.00
347	Miscellaneous Equipment	10.00
348	Other Tangible Plant	10.00

Table XX – BVWC Service Line & Meter Installation Charges

Meter Size	Staff's Recommended Service Line Charges **	Staff's Recommended Meter Charges	Staff's Recommended Total Charges
5/8 x 3/4"	\$1,765	\$105	\$1,870
3/4"	\$1,765	\$180	\$1,945
1"	\$1,765	\$240	\$2,005
1-1/2"	At Cost	At Cost	At Cost
2" Turbine 2" Compound	At Cost	At Cost	At Cost
3" Turbine 3" Compound	At Cost	At Cost	At Cost
4" Turbine 4" Compound	At Cost	At Cost	At Cost
6" Turbine 6" Compound	At Cost	At Cost	At Cost
8" and larger	At Cost	At Cost	At Cost

\*\* Note: To include the actual cost incurred when road crossing is required.

**NORTHERN SUNRISE WATER COMPANY, INC.  
&  
SOUTHERN SUNRISE WATER COMPANY, INC.  
WATER HOOK-UP FEE TARIFF**

I. Purpose and Applicability

The purpose of the off-site hook-up fees payable to **Northern and Southern Sunrise Water Companies** (“the Company”) pursuant to this tariff is to equitably apportion the costs of constructing additional off-site facilities **necessary** to provide water production, delivery, storage and pressure among all new service connections. These charges are applicable to all new service connections **undertaken via Main Extension Agreements or requests for service not requiring a Main Extension Agreement entered into** established after the effective date of this tariff. The charges are one-time charges and are payable as a condition to Company’s establishment of service, as more particularly provided below.

II. Definitions

Unless the context otherwise requires, the definitions set forth in R-14-2-401 of the Arizona Corporation Commission’s (“Commission”) rules and regulations governing water utilities shall apply **in** interpreting this tariff schedule.

“Applicant” means any party entering into an agreement with Company for the installation of water facilities to serve new service connections, and may include Developers and/or Builders of new residential subdivisions **and/or commercial and industrial properties**.

“Company” means **Northern and Southern Sunrise Water Companies**.

“Main Extension Agreement” means any agreement whereby an Applicant, Developer and/or Builder agrees to advance the costs of the installation of water facilities **necessary** to the Company to serve new service connections **within a development**, or installs **such** water facilities **necessary** to serve new service connections and transfers ownership of such water facilities to the Company, which agreement shall require the approval of the Commission pursuant to A.A.C. R-14-2-406, and shall have the same meaning as “Water Facilities Agreement” or “Line Extension Agreement.”

“Off-site Facilities” means wells, storage tanks and related appurtenances necessary for proper operation, including engineering and design costs. Offsite facilities may also include booster pumps, pressure tanks, transmission mains and related appurtenances necessary for proper operation if these facilities are not for the exclusive use of the applicant and will benefit the entire water system.

“Service Connection” means and includes all service connections for single-family residential, **commercial, industrial** or other uses, regardless of meter size.

### III. Water Hook-up Fee

For each new service connection, the Company shall collect a Hook-Up Fee derived as follows:

OFF-SITE WATER HOOK-UP FEE TABLE		
METER SIZE	SIZE FACTOR	TOTAL FEE
5/8" x 3/4"	1	\$1,600
3/4"	1.5	\$2,400
1"	2.5	\$4,000
1-1/2"	5	\$8,000
2"	8	\$12,800
3"	16	\$25,600
4"	25	\$40,000
6" or larger	50	\$80,000

### IV. Terms and Conditions

(A) Assessment of One Time Off-Site Hook-up Fee: The off-site hook-up fee may be assessed only once per parcel, service connection, or lot within a subdivision (similar to meter and service line installation charge).

(B) Use of Off-Site Hook-up Fee: Off-site hook-up fees may only be used to pay for capital items of off-site facilities, or for repayment of loans obtained to fund the cost of installation of off-site facilities. Off-site hook-up fees shall not be used to cover repairs, maintenance, or operational costs.

(D) Time of Payment:

- 3) For those requiring a Main Extension Agreement: In the event that the person or entity that will be constructing improvements ("Applicant", "Developer" or "Builder") is otherwise required to enter into a Main Extension Agreement, whereby the Applicant, Developer or Builder agrees to advance the costs of installing mains, valves, fittings, hydrants and other on-site improvements in order to extend service in accordance with R-14-2-406(B), payment of the Hook-Up Fees required hereunder shall be made by the Applicant, Developer or Builder no later than within 15 calendar days after receipt of notification from the Company that the Utilities Division of the Arizona Corporation Commission has approved the Main Extension Agreement in accordance with R-14-2-406(M).
- 4) For those connecting to an existing main: In the event that the Applicant, Developer or Builder for service is not required to enter into a Main Extension Agreement, the Hook-Up Fee charges hereunder shall be due and payable at the time the meter and service line installation fee is due and payable.

(G) Off-Site Facilities Construction By Developer: Company and Applicant, Developer, or Builder may agree to construction of off-site facilities necessary to serve a particular development by Applicant, Developer or Builder, which facilities are then conveyed to Company. In that event, Company shall credit the total cost of such off-site facilities as an offset to off-site hook-up fees due under this Tariff. If the total cost of the off-site facilities constructed by Applicant, Developer or Builder and conveyed to Company is less than the applicable off-site hook-up fees under this Tariff, Applicant, Developer or Builder shall pay the remaining amount of off-site hook-up fees owed hereunder. If the total cost of the off-site facilities contributed by Applicant, Developer or Builder and conveyed to Company is more than the applicable off-site hook-up fees under this Tariff, Applicant, Developer or Builder shall be refunded the difference upon acceptance of the off-site facilities by the Company.

(H) Failure to Pay Charges; Delinquent Payments: The Company will not be obligated to make an advance commitment to provide or actually provide water service to any Developer, Builder or other applicant for service in the event that the Developer, Builder or other applicant for service has not paid in full all charges hereunder. Under no circumstances will the Company set a meter or otherwise allow service to be established if the entire amount of any payment due hereunder has not been paid.

(I) Large Subdivision Projects: In the event that the Applicant, Developer or Builder is engaged in the development of a residential subdivision containing more than 150 lots, the Company may, in its discretion, agree to payment of off-site hook-up fees in installments. Such installments may be based on the residential subdivision development's phasing, and should attempt to equitably apportion the payment of charges hereunder based on the Applicant's, Developer's or Builder's construction schedule and water service requirements.

(G) Off-Site Hook-Up Fees Non-refundable: The amounts collected by the Company as Hook-Up Fees pursuant to the off-site hook-up fee tariff shall be non-refundable contributions in aid of construction.

(H) Use of Off-Site Hook-Up Fees Received: All funds collected by the Company as off-site hook-up fees shall be deposited into a separate interest bearing trust account and used solely for the purposes of paying for the costs of installation of off-site facilities, including repayment of loans obtained for the installation of off-site facilities that will benefit the entire water system.

(I) Off-Site Hook-up Fee in Addition to On-site Facilities: The off-site hook-up fee shall be in addition to any costs associated with the construction of on-site facilities under a Main Extension Agreement.

(J) Disposition of Excess Funds: After all necessary and desirable off-site facilities are constructed utilizing funds collected pursuant to the off-site hook-up fees, or if the off-site hook-up fee has been terminated by order of the Arizona Corporation Commission, any funds remaining in the trust shall be refunded. The manner of the refund shall be determined by the Commission at the time a refund becomes necessary.

(K) Fire Flow Requirements: In the event the applicant for service has fire flow requirements that require additional facilities beyond those facilities whose costs were included in the off-site hook-up fee, and which are contemplated to be constructed using the proceeds of the off-site hook-up Fee, the Company may require the applicant to install such additional facilities as are required to meet those additional fire flow requirements, as a non-refundable contribution, in addition to the off-site hook-up fee.

(L) Status Reporting Requirements to the Commission: The Company shall submit a calendar year Off-Site Hook-Up Fee status report each January to Docket Control for the prior twelve (12) month period, beginning January 2011, 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 physical property in respect of which such fee was paid, the amount of money spent from the account, the amount of interest earned on the funds within the tariff account, and an itemization of all facilities that have been installed using the tariff funds during the 12 month period.