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BEFORE THE ARIZONA CORPORATION COMMISSION

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8 IN THE MATTER OF THE APPLICATION OF  
LIBERTY UTILITIES (BLACK MOUNTAIN  
SEWER) CORP., AN ARIZONA  
9 CORPORATION, FOR AUTHORITY TO  
ISSUE EVIDENCE OF INDEBTEDNESS IN  
10 AN AMOUNT NOT TO EXCEED \$3,400,000.

Docket No. SW-02361A-15-0206

11 IN THE MATTER OF THE APPLICATION OF  
LIBERTY UTILITIES (BLACK MOUNTAIN  
SEWER) CORP., AN ARIZONA  
12 CORPORATION, FOR A DETERMINATION  
OF THE FAIR VALUE OF ITS UTILITY  
13 PLANTS AND PROPERTY AND FOR  
INCREASES IN ITS WASTEWATER RATES  
14 AND CHARGES FOR UTILITY SERVICE  
BASED THEREON.

Docket No. SW-02361A-15-0207

Arizona Corporation Commission

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**RUCO'S NOTICE OF FILING**

17 The Residential Utility Consumer Office ("RUCO") hereby provides notice of filing the  
18 Direct Testimony of Timothy Coley and John Cassidy, in the above-referenced matter.

19 RESPECTFULLY SUBMITTED this 2nd day of December, 2015.

21

22 Daniel W. Pozefsky  
23 Chief Counsel

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LIBERTY UTILITIES CORP.  
(BLACK MOUNTAIN SEWER)  
DOCKET NOS. SW-02361A-15-0206 and SW-02361A-15-0207

DIRECT TESTIMONY  
OF  
TIMOTHY J. COLEY

ON BEHALF OF THE  
RESIDENTIAL UTILITY CONSUMER OFFICE

DECEMBER 2, 2015

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**EXECUTIVE SUMMARY  
LIBERTY BLACK MOUNTAIN SEWER  
DOCKET NO. SW-02361A-15-0206 ET AL.**

Liberty Black Mountain Sewer is an Arizona public service corporation (“Liberty Black Mountain” or “Company”), formerly known as Black Mountain Sewer Corporation. The wastewater utility is engaged in providing wastewater utility services in portions of Maricopa County, Arizona. The Company’s system is located in and around the Cities of Cave Creek, Carefree, and Scottsdale, Arizona. The Company served approximately 2,053 customers during the test year ended December 31, 2014. The Company’s current rates were approved in Decision No. 71865 (September 1, 2010) using a test year ending June 30, 2008. The Company does not provide water utility service for the area. The Cities of Cave Creek, Carefree, and Scottsdale provide water utility services for the jurisdiction of Liberty Black Mountain Sewer.

Rate Application:

The Company-proposed rates, as filed, produce total operating revenue of \$2,296,777, an increase of \$56,929 or 2.54 percent, over adjusted test year revenue of \$2,239,848. The Company-proposed revenue will provide operating income of \$294,082 and an 8.62 percent rate of return on its proposed \$3,412,024 fair value rate base (“FVRB”), which is its original cost rate base (“OCRB”).

The Residential Utility Consumer Office (“RUCO”) recommends rates that produce total operating revenue of \$1,956,556, a decrease of \$284,244 or a negative 12.68 percent, from the RUCO-adjusted test year revenue of \$2,240,800. RUCO’s recommended revenue will provide operating income of \$236,994 and a 7.32 percent return on the \$3,235,735 RUCO-adjusted FVRB / OCRB rate base.

Rate Design:

The Company proposes a substantial change to the commercial customers based on a flat monthly minimum and, in part, on water usage while maintaining the current flat monthly rate for its residential customers. The commercial customers had previously been charged according to Engineering Bulletin 12, which was designed by the Arizona Department of Environmental Quality (“ADEQ”) whenever water usage data was not available. The Company has one effluent customer, Boulders Resort, and proposes the same current charge of \$150 per acre foot, or .46051 cents per 1,000 gallons of effluent water, produced from the wastewater treatment plant. The base rate’s monthly residential bill would experience an increase of \$13.96, or 21.40 percent, from \$65.24 to \$79.20. The reason for a 21.40 percent monthly increase in residential customers’ bills is due to eliminating the use of the ADEQ Bulletin 12 and shifting revenues from the commercial to the residential customers.

RUCO recommends the same flat monthly rate design for residential customers, and a monthly minimum charge plus a monthly water usage rate design for the commercial customers. RUCO recommends the present \$150 per acre foot for the one effluent customer. The recommended rate structure conforms to those regularly adopted by the Commission in recent years. There is not any current water usage data to express the change that will be experienced by the commercial customers. However, by eliminating the use of Bulletin 12 and introducing water usage as the basis of billing commercial customers, they will see a substantial decrease, based on water usage, as has been the direction given by the Arizona Corporation Commission (“ACC”).

Direct Testimony of Timothy J. Coley  
Docket No. SW-02361A-15-0206 et al.

RUCO's analyst, John Cassidy, will provide testimony and recommendations filed under separate cover that supports RUCO's recommended cost of capital for this case.

1 **I. INTRODUCTION**

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

3 A. My name is Timothy J. Coley. I am a Public Utilities Analyst V employed by the  
4 Residential Utility Consumer Office ("RUCO"). My business address is 1110 West  
5 Washington Street, Suite 220, Phoenix, Arizona 85007.

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

9 A. In my capacity as a Public Utilities Analyst V, I am responsible for analyzing and  
10 examining accounting, financial, statistical and other information to prepare reports  
11 based on my analyses that present RUCO's recommendations to the Arizona  
12 Corporation Commission ("Commission" or "ACC") on utility revenue requirements,  
13 rate design and other matters in the interests for fair and reasonable rates for  
14 residential utility ratepayers. I also provide expert testimony on these same  
15 matters.

16  
17 **Q. Please state your educational background and qualifications in the utility  
18 regulatory field.**

19 A. Appendix 1, which is attached to this testimony, describes my educational  
20 background and includes a list of the rate cases and regulatory matters in which I  
21 have participated.

22

23

1 **Q. Please state the purpose of your testimony.**

2 A. The purpose of my testimony is to present RUCO's recommendations regarding  
3 Liberty Black Mountain Sewer's ("Liberty Black Mountain" or "Company"), formerly  
4 known as Black Mountain Sewer Corporation, rate Application for a determination  
5 of the current fair value of its utility plant and property for a determination of a  
6 permanent increase or decrease in its rates and charges based thereon for utility  
7 service. The test year utilized by the Company in connection with the preparation  
8 of this Application is the 12-month period that ended December 31, 2014 ("Test  
9 Year" or "TY").

10  
11 **Q. What is the basis of your testimony in this case?**

12 A. I performed a regulatory audit of the Company's application and current and past  
13 records. The regulatory audit consisted of examining and testing financial  
14 information, accounting records, and other supporting documentation and verifying  
15 that the accounting principles applied were in accordance with the Commission-  
16 adopted NARUC Uniform System of Accounts ("USOA").

17  
18 **Q. How is your testimony organized?**

19 A. My testimony is presented in eight sections. Section I is this introduction. Section  
20 II provides a background of the Company's requested revenue requirements.  
21 Section III is a summary of the Company's filing and RUCO's over-all  
22 recommendations. Section IV presents the summary of RUCO's recommended  
23 rate base and operating income adjustments. Section V presents RUCO's

1 summary of other issues. Section VI presents RUCO's recommended rate base  
2 adjustments 1 -10. Section VII presents RUCO's recommended operating income  
3 adjustments 1 – 17. Section VIII presents RUCO's recommended positions on  
4 other issues requested by the Company in this proceeding.

5  
6 **II. BACKGROUND**

7 **Q. Please provide an overall background as it relates to this Application.**

8 A. Liberty Black Mountain Sewer is an Arizona public service corporation regulated by  
9 the Commission. The Company is engaged in providing wastewater utility service  
10 in a portion of Maricopa County in and around the Cave Creek, Carefree, and north  
11 Scottsdale area. It served approximately 2,053 customers during the TY ended  
12 December 31, 2014. The Company's current rates were approved in Commission  
13 Decision No. 71865 (September 1, 2010) utilizing a TY ending June 30, 2008. The  
14 present rates went into effect on September 1, 2010.

15  
16 An overwhelming majority of the residential ratepayers have been complaining of  
17 odor problems emanating from or around the Company's wastewater treatment  
18 plant for the past ten-years. The Company said it has tried everything that is  
19 feasibly possible from an engineering perspective to mitigate the odor problems.  
20 The Commission ordered the Company to close and decommission the wastewater  
21 treatment plant with certain conditions as stated on pages 11-12 in Decision No.  
22 73885 dated May 8, 2013. However, one of the five Commission conditions set

1           forth in Decision No. 73885 referenced above prior to actual plant closure and  
2           diverting the wastewater flows to the City of Scottsdale is as follows:

3  
4                   c. Successful renegotiation of the Effluent Agreement with the  
5                   Boulders Resort to allow termination of the agreement with little  
6                   to no cost to BMSC upon closure of the treatment plant;

7  
8           Over the course of this proceeding, it appears that Liberty Black Mountain Sewer,  
9           Boulders Resort, and other interested parties have reached an agreement. The  
10          principles of which are incorporated in a "Memorandum of Understanding ("MOU")."  
11          RUCO fully supports its constituents - residential ratepayers - desire to close the  
12          said wastewater treatment plant and for the Company to move forward in  
13          decommissioning the plant and diverting the wastewater flows to the City of  
14          Scottsdale for treatment. Although RUCO supports Black Mountain's ratepayers  
15          desire to close the plant, it does not change RUCO's revenue requirement  
16          recommendations, which will be discussed throughout the remainder of my  
17          testimony.

18  
19       **III. SUMMARY OF COMPANY FILING AND RUCO OVER-ALL**  
20       **RECOMMENDATIONS:**

21       **Q. Please summarize the Company's proposals in its filing.**

22       A. The Company-proposed rates, as filed, will produce total operating revenue of  
23       \$2,296,777, an increase of \$56,929 in base rates, or 2.54 percent, over adjusted

1 test year revenue of \$2,239,848. The Company-proposed revenue will provide  
2 operating income of \$294,082 and an 8.62 percent rate of return on its proposed  
3 \$3,412,024 fair value rate base ("FVRB") which it requested to be its original cost  
4 rate base ("OCRB") in this proceeding.

5  
6 In addition to the Company-proposed \$56,929 base rate increase, it is proposing  
7 four-surcharge mechanisms as highlighted below:

- 8 1. Plant Closure Surcharge - \$8.57<sup>1</sup> per month for each customer;
- 9 2. Rate Case Expense Surcharge - \$6.09<sup>2</sup> per month for each  
10 customer;
- 11 3. Purchased Power Adjuster Mechanism ("PPAM"); and
- 12 4. Property Tax Adjuster Mechanism ("PTAM").

13 RUCO recommends the Commission deny all four of the Company's proposed  
14 surcharges shown above.

15  
16 **Q. Please summarize RUCO's recommendations for Liberty Black Mountain in**  
17 **this filing.**

18 **A.** RUCO recommends rates for Liberty Black Mountain that produce total operating  
19 revenue of \$1,956,557, a decrease of \$284,244 or (12.68) percent, from the RUCO-  
20 adjusted test year revenue of \$2,240,800. RUCO's recommended revenue will

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<sup>1</sup> The Company-proposed surcharges #1 and #2 are estimated costs and does not represent actual costs.  
<sup>2</sup> Ibid.

1 provide operating income of \$236,994 and a 7.32 percent return on the \$3,235,735  
2 RUCO-adjusted FVRB and OCRB.

3  
4 RUCO normalized a fair and reasonable amount of rate case expense in base rates,  
5 which will be discussed in detail later in this testimony, and recommends the costs  
6 related and found allowable for plant closure be placed in base rates as two  
7 separate utility plant in service ("UPIS") accounts and depreciated over 25-years  
8 and 20-years respectively. RUCO recommends that the plant closure costs less  
9 the additional Scottsdale capacity required to be purchased be depreciated over  
10 25-years or at 4 percent. The additional Scottsdale capacity of 120,000 gallons per  
11 day be depreciated over the life of the Scottsdale agreement. At this time, RUCO  
12 is not certain of the length of the new agreement between the Company and City of  
13 Scottsdale.

14  
15 RUCO's recommended treatment is similar to the third-allotment of treatment  
16 capacity acquired from the City of Scottsdale, which is reflected in Company  
17 Schedule B-2 on page 3 at line 31. However, due to the recent MOU reached  
18 between the interested parties regarding plant closure costs, RUCO did not rate  
19 base any actual costs incurred by the Company for plant closure. The MOU, as  
20 previously referenced, shifted costs among the various interested parties.  
21 Therefore, it would be premature to include a cost for plant closure at this juncture  
22 of the proceeding. However, RUCO estimated the plant closure costs incurred to  
23 the most recent available to RUCO and from information shared at a meeting

1 between the Company and RUCO to determine an approximate impact on the  
2 revenue requirements recommended by RUCO at this stage of the proceeding.

3  
4 The Company informed RUCO that an agreement has been reached between the  
5 interested parties to close the plant. RUCO will reflect the plant closure costs  
6 derived during the negotiation of the MOU and reflect the amounts in its rebuttal  
7 filing. However, Phase II of Commission Decision No. 73885 set forth some  
8 parameters of the plant closure surcharge that will require the Commission to  
9 reopen that Decision via Section 40-252 of the Arizona Revised Statutes. One of  
10 those parameters in Decision No. 73885 on page 23 at lines 25-26 stated, "Only a  
11 single surcharge filing request will be permitted and no additional "true-ups" will be  
12 permitted until the Company's post-completion rate case." Another parameter set  
13 forth in that Decision on page 24 at lines 4-6 stated, "The closure surcharge shall  
14 not exceed \$15 per month, per customer, and shall be discontinued upon issuance  
15 of a Decision in the Company's first rate case following completion of the closure  
16 project." RUCO does not view the current Company's plant closure meeting either  
17 one of those parameters as set forth in Phase II of Decision No. 73885. Therefore,  
18 RUCO is not including any amounts in its revenue requirements at this time.

19  
20 RUCO is also encouraged by discussions with Company representatives that this  
21 proceeding can be settled between the parties without any further rate case  
22 expense to either the Company or ratepayers. This case begs the question of,  
23 "Why did this Company file this rate case to begin with?" From what RUCO can

1 tell, the Company had to scratch and claw to get its revenue requirement to reflect  
2 a positive increase rather than RUCO's recommended decrease to the overall  
3 revenue requirement.

4  
5 **Q. What test year did the Company use in this filing?**

6 A. The Company's rate filing is based on the twelve months ended December 31, 2014  
7 ("TY").

8  
9 **IV. SUMMARY OF RUCO RECOMMENDED RATE BASE AND OPERATING**  
10 **INCOME ADJUSTMENTS:**

11 **Q. Please briefly summarize the rate base adjustments addressed in your**  
12 **testimony before providing more detail and rationale for each adjustment**  
13 **later in your testimony.**

14 A. RUCO recommends and summarizes its nine recommended rate base  
15 adjustments, which decrease rate base by \$176,288 below as follows:

16  
17 **RUCO Rate Base Adjustments:**

- 18 1. Utility Plant in Service ("UPIS") and Accumulated Depreciation ("A/D")  
19 Reconstruction - This adjustment reflects RUCO's recommended TY end UPIS  
20 and A/D balances since the last rate case for Liberty Black Mountain Sewer. I  
21 began with the last Commission approved UPIS and A/D balances per Decision  
22 No. 71865 dated August 25, 2010. I then reconstructed all plant additions,  
23 retirements, and adjustments at the approved depreciation rates to the instant

1 case TY end using the half-year depreciation methodology for plant additions,  
2 adjustments, and retirements. The adjustment produces a zero affect to UPIS  
3 but increases A/D by \$58,209 for a net decrease to rate base of \$58,209.

4 2. Plant Account Reclassifications – This adjustment reclassifies plant additions  
5 that were originally recorded to one account but at the recommendation of  
6 various Commission Staff data requests (“DR”) in DH-3 the Company agreed to  
7 reclassify certain costs to more appropriate accounts. In addition, there were a  
8 few duplicate invoices recorded twice and plant additions that should have been  
9 charged to other sister companies (i.e., LPSCO, Gold Canyon, and/or Rio Rico).  
10 The adjustment decreases UPIS by \$7,683 and increases A/D by \$46,245 for a  
11 net decrease to rate base of \$53,928.

12 3. Remove Three Allocated Corporate Accounts UPIS & A/D Balances – This  
13 adjustment removes three allocated corporate accounts from the Company’s  
14 UPIS and A/D balances. These are new Company-proposed allocations that  
15 should already be included in the corporate allocations being charged down to  
16 the subsidiaries like Liberty Black Mountain Sewer. The adjustment decreases  
17 UPIS by \$97,465 and decreases A/D by \$2,208 for a net decrease to rate base  
18 of \$95,257.

19 4. Correct Allowance for Funds Used During Construction (“AFUDC”) Rate  
20 Approved in Prior Commission Decision No. 71865 – This adjustment makes a  
21 correction to the AFUDC rate as filed in this proceeding. The adjustment  
22 decreases UPIS by \$317 and de minimis affect to A/D for a net decrease to rate  
23 base of \$317 per Company response to RUCO DR 1.33.

- 1           5. Advances in Aid of Construction ("AIAC") – This adjustment converts expired  
2           AIAC or Line Extension Agreements ("LXA") to CIAC per the Arizona  
3           Administrative Code ("AAC") in Section R14-2-606. The adjustment decreases  
4           AIAC by \$1,129,184 and increases CIAC by the same amount in the period in  
5           which it was converted from AIAC to CIAC. The impact to rate base is zero in  
6           the period converted from AIAC to CIAC.
- 7           6. Contributions in Aid of Construction ("CIAC") & CIAC Accumulated Amortization  
8           ("AA") - This adjustment is directly tied to the previous AIAC adjustment briefly  
9           explained above and is also per the Arizona Administrative Code ("AAC") in  
10          Section R14-2-606. The adjustment increases CIAC by \$983,517 and  
11          increases CIAC accumulated amortization by \$375,838 for a net decrease to  
12          rate base of \$607,679.
- 13          7. True-up of Scottsdale Capacity Agreement Loan(s) Costs per Loan Notes - This  
14          adjustment establishes a regulatory liability for the amount ratepayers were  
15          overcharged during the Scottsdale Capacity Agreement, which is from January  
16          1, 1997 through June 30, 2016 or 19 ½-years when the new rates are estimated  
17          to become effective for the current rate case. The loan notes to acquire the  
18          Scottsdale wastewater treatment capacity clearly indicates monthly payments  
19          due at the end of each month for the 20-year notes made by the parent  
20          Company. The Company has calculated the annual payments as a capitalized  
21          lease, which the Company vehemently denies in response to several data  
22          requests and RUCO agrees. The adjustment establishes a gross regulatory

1 liability of \$51,451 and amortizes it over 2 ½-years (\$20,581) or at a 40 percent  
2 per annum rate. The net impact decreases rate base by \$30,871.

3 8. Intentionally Left Blank

4 9. Accumulated Deferred Income Taxes ("ADIT") – This adjustment is largely  
5 driven by the previous AIAC and CIAC adjustments. The previous UPIS, A/D,  
6 and AIAC converted to CIAC adjustments produce an increase to the ADIT  
7 liability balance by \$377,821, which is a reduction to rate base.

8 10. Allowance for Working Capital – This adjustment reduces rate base by \$81,391.

9 It is comprised of two components. The first component is cash working capital  
10 or the lead/lag study, which results in a \$78,098 decrease to rate base. The  
11 second component is prepayments, which reduces rate base by another \$3,293  
12 for a total decrease to rate base of \$81,391 ( $\$3,293 + \$78,098 = \$81,391$ ).

13  
14 **Q. Please briefly summarize the operating revenue and expense adjustments**  
15 **addressed in your testimony before providing more detail and rationale for**  
16 **each adjustment later in your testimony.**

17 A. RUCO recommends and summarizes its nine recommended operating revenue  
18 and expense adjustments, which increase total operating income by \$153,968, as  
19 shown below:

20 **RUCO Operating Income Adjustments:**

21 1. Depreciation Expense – This adjustment decreases depreciation expense by  
22 \$253,139.

- 1           2. Property Tax Expense – This adjustment decreases property taxes by \$311 to
- 2           adjust property taxes to RUCO's adjusted TY amount.
- 3           3. Intentionally Left Blank
- 4           4. Revenue Accrual Fix – This adjustment increases revenues by \$952 to true-up
- 5           bill count revenues to the amount the Company accrued in the TY.
- 6           5. Miscellaneous Expense – This adjustment removes an expense related to
- 7           Liberty Utilities Canada and decreases miscellaneous expense by \$268.
- 8           6. Intentionally Left Blank
- 9           7. Scottsdale Capacity Expense – This adjustment decreases the Scottsdale
- 10          Capacity Agreement loan expense amount by \$2,702.
- 11          8. Intentionally Left Blank
- 12          9. Chemicals Expense – This adjustment increases chemical expense by \$4,773,
- 13          which RUCO partially agrees with. This will be discussed later in this testimony.
- 14          10. Intentionally Left Blank
- 15          11. Intentionally Left Blank
- 16          12. Intentionally Left Blank
- 17          13. Algonquin Power Utilities Corporation ("APUC") Allocations – This adjustment
- 18          decreases the APUC allocations by \$27,147 per Decision No. 71865, which was
- 19          the last Black Mountain Sewer rate case.
- 20          14. Intentionally Left Blank
- 21          15. Intentionally Left Blank

1           16. Rate Case Expense – This adjustment decreases the Company’s total rate case  
2           expense requested by \$350,000 and normalizes the expense in base rates  
3           rather than a surcharge as proposed by the Company.

4           17. Income Tax Expense – This adjustment increases income tax expense by  
5           \$92,444.

6  
7           **V. SUMMARY OF OTHER ISSUES:**

8           **Q. Please summarize RUCO’s positions on the other issues as requested in the**  
9           **Company’s filing.**

10          A. RUCO summarized its positions in the Summary Section III of this testimony earlier  
11          on the other issues as requested by the Company in its filing. The other issues  
12          pertained to the Company’s request of the following four issues:

- 13           1. Plant Closure Surcharge - \$8.57<sup>3</sup> per month for each customer;
- 14           2. Rate Case Expense Surcharge - \$6.09<sup>4</sup> per month for each  
15           customer;
- 16           3. Purchased Power Adjuster Mechanism (“PPAM”); and
- 17           4. Property Tax Adjuster Mechanism (“PTAM”).

18          Again, RUCO recommends the Commission deny the Company’s four surcharge  
19          mechanisms above, which will be discussed in more detail later in this testimony.

20  

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<sup>3</sup> The Company-proposed surcharges #1 and #2 are estimated costs and does not represent actual costs.

<sup>4</sup> Ibid.

1 **Q. Does that complete RUCO's summary of the overall revenue requirements,**  
2 **rate base and operating income adjustments, and position on the other**  
3 **issues as filed by the Company in this proceeding?**

4 A. Yes.

5  
6 **Q. Please continue to RUCO's rate base adjustment recommendations.**

7 A. The next section of RUCO's testimony will address each rate base adjustment that  
8 RUCO recommends in this proceeding below:

9  
10 **VI. RUCO RECOMMENDED RATE BASE ADJUSTMENTS 1 - 10:**

11 Rate Base Adjustment #1 – Reconstruction of Utility Plant in Service (“UPIS”) and  
12 Accumulated Depreciation (“A/D”) Balances:

13 **Q. Has the Company proposed a new UPIS depreciation methodology in this**  
14 **case?**

15 A. Yes. The Company has proposed the vintage group depreciation methodology in  
16 this rate filing. The vintage group depreciation methodology groups assets per  
17 NARUC plant accounts by the vintage year that the asset was placed into service.  
18 For this particular rate filing, the Company utilizes eight vintage year periods for  
19 UPIS and depreciates each group of assets by vintage year period separately. The  
20 first of the eight vintage year periods assumes that all UPIS that was approved in  
21 the Company's last rate case, which utilized a TY end of June 30, 2008, is placed  
22 into the first vintage year group. The second vintage group includes all the plant  
23 additions and retirements that took place during the period of July 1, 2008 through

1 December 31, 2008. The last six vintage periods include all plant additions and  
2 retirements that took place in each of the subsequent years of 2009, 2010, 2011,  
3 2012, 2013, and TY end 2014. Once any of the eight vintage asset groups are fully  
4 depreciated, the depreciation process ceases for that vintage year group because  
5 depreciation is the process of allocating the cost of an asset to depreciation  
6 expense “over its useful life in a rational and systematic process.”<sup>5</sup>

7  
8 When the original cost of assets equals the accumulated depreciation balance for  
9 the same vintage year group of assets, that group of assets are fully depreciated  
10 with a net book value of zero (i.e., Cost of Asset \$100 – Accumulated Depreciation  
11 Balance \$100 = Net Book Value \$0.00). Thus, in that example, the Company has  
12 recovered its cost of the asset. The depreciation process ceases as defined by the  
13 earlier referenced textbook definition of depreciation. The depreciation process is  
14 further exemplified in the Arizona Administrative Code (“AAC”) in Section R14-2-  
15 102 that states, “Depreciation means an accounting process which will permit the  
16 recovery of the original cost of an asset less its net salvage over the service life.”  
17 The depreciation process allows for recovery of the original cost.

18  
19  
20  

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<sup>5</sup> Intermediate Accounting, Tenth Edition, D Kieso, J Weygandt, T Warfield; page 81.

1 **Q. Did RUCO utilize the same vintage group depreciation methodology, as**  
2 **proposed by the Company, when reconstructing its UPIS and accumulated**  
3 **depreciation (“A/D”) balances since the last approved balances in Decision**  
4 **No. 71865?**

5 A. Yes and no. Yes, RUCO utilized the same eight Company-proposed vintage year  
6 groupings as discussed earlier, but no, RUCO did not utilize the Company's  
7 depreciation calculation process or formulae to depreciate assets on a going  
8 forward basis in reaching its recommended TY end accumulated depreciation  
9 balances for each group of assets.

10  
11 **Q. Please explain why RUCO did not use the Company's depreciation**  
12 **calculation process or formulae as utilized by the Company in its filing.**

13 A. As stated earlier from the two sources and references, the Intermediate Accounting  
14 text and Arizona Administrative Code, the depreciation process must be a “rational  
15 and systematic” process. The Company's formulae for calculating depreciation on  
16 a going forward basis produce results that are neither “rational” nor “systematic.”

17  
18 **Q. Why aren't the Company's depreciation formulae neither rational nor**  
19 **systematic?**

20 A. The first six-months, July 2008 through December 2008, clearly identifies that a  
21 flaw exists in the Company's formulae that fails the “rational” test. Upon RUCO's  
22 initial review of the Company's B-2 Plant Schedules on page 3.6, the Company's  
23 depreciation expense column for the six-month period of July through December

1           2008 uses an argument in its formulae of 8/12<sup>th</sup>'s. The 8/12<sup>th</sup>'s supposed to  
2           represent the number of months remaining in calendar year 2008 to depreciate the  
3           assets. The Company's last TY in 2008 ended on June 30, 2008, which leaves  
4           only 6/12<sup>th</sup>'s or six-months of twelve months to depreciate through the end of 2008.  
5           Since 8/12 is greater than 6/12, that one revision by itself to correct the errant 8/12<sup>th</sup>  
6           to 6/12<sup>th</sup> fraction should generate less depreciation. The exact opposite occurs as  
7           shown in Exhibit 1 on pages 1 and 2. Page 1 of the exhibit shows the Company's  
8           result using the errant 8/12<sup>th</sup> calculation as filed. Page 2 of the exhibit shows the  
9           Company's result using the correct 6/12<sup>th</sup> calculation as corrected. Once this error  
10          was pointed out to the Company's rate consultant, Mr. Bourassa corrected it and  
11          sent RUCO a revised schedule reflecting the change. Rather than the accumulated  
12          depreciation balance showing a lesser amount for the correction of the 8/12<sup>th</sup> to  
13          6/12<sup>th</sup>, the accumulated depreciation balance increased by approximately \$61,000  
14          as shown in the exhibit. It is a simple conclusion to reach that the Company's  
15          depreciation formulae are producing irrational rather than "rational" results.

16  
17          The Company's depreciation formula also fails the second and last criteria of  
18          depreciation, which is the "systematic" criterion for depreciation. Generally, the  
19          Company utilizes the half-year convention for plant additions and retirements. The  
20          definition for half-year convention is to "charge one-half year's depreciation in the  
21          year of acquisition and in the year of disposal."<sup>6</sup> The half-year year convention

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<sup>6</sup> Intermediate Accounting, Tenth Edition, D Kieso, J Weygandt, T Warfield; page 559.

1 essentially assumes all annual periods' plant additions and retirements are made  
2 at the mid-point of the year.

3  
4 The Company's depreciation expense calculation for plant additions and  
5 retirements is predicated on the lesser or minimum of what would have been  
6 normally depreciated had the previous vintage year group of assets not been fully  
7 depreciated. The Company's depreciation formula often depreciates the full  
8 amount of the plant addition in the year acquired. This depreciation method is  
9 haphazard at best and fails the "systematic" approach as well as the "rational"  
10 criteria defined by depreciation itself.

11  
12 **Q. Does RUCO's recommended depreciation process and expense formula**  
13 **remedy the Company's flawed formula the produces results that are neither**  
14 **"systematic" nor "rational?"**

15 **A.** Yes. RUCO's recommended depreciation formulae results in both a "systematic"  
16 and "rational" depreciation process that is easily quantifiable in all scenarios, when  
17 utilizing the half-year convention for depreciation, and eliminates the Company's  
18 haphazard depreciation process and results discussed earlier.

1 **Q. What adjustments does RUCO recommend to UPIS and A/D to adhere to the**  
2 **definition and process of depreciation referenced in the Arizona**  
3 **Administrative Code as well as the textbooks?**

4 A. RUCO did not make any adjustments to UPIS in this particular reconstruction  
5 exercise. Therefore, RUCO recommends no adjustment here for UPIS. Although,  
6 for all the reasons mentioned earlier and flaws inherently found and discussed in  
7 the Company's depreciation formulae, RUCO recommends increasing the A/D  
8 balance by \$58,209 to implement a rational and systematic depreciation process  
9 and result.

10  
11 Rate Base Adjustment #2 – Plant Reclassifications per Staff Data Request (“DR”  
12 DH-3, Remove Duplicate Invoices, and Remove Plant Items Erroneously Charged  
13 to Black Mountain Sewer:

14 **Q. Please describe RUCO rate base adjustment #2.**

15 A. This is just a conforming adjustment that Staff raised in DR DH-3 that questioned a  
16 number of plant classifications the Company had made in its filing. It also identified  
17 a few invoices that were either double-counted or erroneously charged to Black  
18 Mountain rather than to the appropriate Gold Canyon Sewer system. RUCO made  
19 the appropriate adjustments identified in the Company's response to RUCO DR  
20 6.03. That DR response summarized the plant reclassifications to which the  
21 Company had agreed with Staff. RUCO made a separate adjustment utilizing a  
22 copy of its plant reconstruction schedules in order to obtain an A/D adjustment to

1 properly account for the different depreciation rates due to reclassifying assets from  
2 one account to another.

3  
4 **Q. What adjustments does RUCO recommend to UPIS and A/D to account for**  
5 **this conforming plant reclassifications, double-count of invoices, and assets**  
6 **charged to the wrong Liberty Utilities system?**

7 A. RUCO recommends an adjustment that reduces UPIS by \$7,683 and to increase  
8 the A/D balance by \$46,245 to account for the plant reclassifications, double-count  
9 of invoices, and assets charged to the wrong Liberty Utilities system. I will note that  
10 RUCO did not accept reclassifying all of the active carbon media previously  
11 capitalized by the Company and was recommended to be expensed by Staff in DR  
12 3.7 for \$7,143. While on the field inspection with Company representatives on  
13 October 16, 2015, RUCO was informed by Company personnel that the active  
14 carbon media for the treatment plant had a life of two-years rather than a one-year  
15 life, which makes half of the \$7,143 expenditure an annual expense while the  
16 remaining half should remain as a capitalized item.

17  
18 Rate Base Adjustment #3 – Removal of Allocated Corporate Plant:

19 **Q. Please explain this adjustment that removes three allocated corporate**  
20 **accounts for land, structures and improvements, and computers and**  
21 **software from Company Schedule B-2 on page 3 at lines 34-36.**

22 A. During my experience working on Liberty Utilities' rate cases, I cannot recall having  
23 encountered previous corporate plant allocations being included in the UPIS

1 accounts. I did not see any accounting support, such as invoices, that supports the  
2 plant. Therefore, I removed the plant accordingly.

3  
4 **Q. Did RUCO request accounting support, such as invoices, for the corporate**  
5 **plant?**

6 A. Yes. In RUCO DR 3.11, RUCO asked why there was no A/D recorded on Schedule  
7 B-2 on page 4 for the computers and software account. The Company stated it was  
8 an "oversight" and that \$264 should be recorded for the A/D balance in that account.  
9 During the course of getting a formal response to RUCO DR 3 in general, RUCO  
10 again asked the Company for the support for the \$264 A/D oversight in its filing.  
11 RUCO was initially told by the Company that it would send the support with the rest  
12 of the responses to RUCO DR 3. Despite numerous requests the Company has  
13 not provided the requested support.

14  
15 **Q. What adjustment was necessary to remove the three accounts identified as**  
16 **allocated corporate plant?**

17 A. RUCO decreased UPIS by \$97,465 for the three allocated plant accounts. After  
18 adding the Company's oversight of the A/D balance for computers and software, it  
19 was also necessary to remove \$2,208 of A/D that was said to be related to the same  
20 plant in question.

1           Rate Base Adjustment #4 – Allowance for Funds Used During Construction

2           ("AFUDC"):

3           **Q. Please describe RUCO's AFUDC recommended adjustment #4.**

4           A. In response to RUCO DR 1.33, the Company identified that it had "erroneously  
5           used a 9.6 percent WACC in its application schedules." The Company further  
6           stated, "The Company agrees that this needs to be corrected in the AFUDC  
7           calculation to reflect a 9.41 percent WACC," which was the correct overall rate  
8           return authorized in the prior Commission Decision No. 71865.

9  
10          **Q. What adjustment was necessary to correct the AFUDC rate, which was**  
11          **authorized in Commission Decision No. 71865, used by the Company in its rate**  
12          **Application from the erroneous 9.6 percent to the authorized rate of 9.41**  
13          **percent?**

14          A. The necessary adjustment to account for the correct AFUDC rate authorized in  
15          Decision No. 71865 decreased the UPIS balance by \$317. The impact to A/D is de  
16          minimis and was not calculated due to the lack of detailed information provided by  
17          the Company to RUCO DR 1.33. If the Company wishes to propose an adjustment  
18          to A/D in its rebuttal testimony, RUCO will review the Company's calculation for the  
19          A/D at that time for the appropriateness of it and will reflect the appropriate  
20          adjustment to A/D in RUCO's surrebuttal testimony.

1           Rate Base Adjustment #5 – Advances in Aid of Construction (“AIAC”):

2       **Q.    Please describe RUCO’s Advances in Aid of Construction (“AIAC”)**  
3       **adjustment #5.**

4       A.    There were four AIAC or Line Extension Agreements (“LXA”) that were expired  
5           under the contractual terms provided in the Company’s response to Staff BAB 1.15  
6           and by the Arizona Administrative Code (hereafter referred to as the “Code”) in  
7           Section R14-2-606. The Code states the following regarding LXA:

8                        If after five years from the utility’s receipt of the advance, the advance  
9                        has not been totally refunded, the advance shall be considered a  
10                      contribution in aid of construction and shall no longer be refundable.

11  
12       **Q.    Did RUCO adhere to the five-year rule as stated in the Code and convert the**  
13       **AIAC to CIAC at the end of fifth year?**

14       A.    No. RUCO adhered to the actual contractual terms as stated in the LXA’s. When  
15           the stated contractual period ended, RUCO converted the AIAC to CIAC at that  
16           point in time.

17  
18       **Q.    What adjustment was necessary to AIAC to appropriately convert the AIAC to**  
19       **CIAC as dictated by the Company’s own contractual terms with the**  
20       **developers that is further supported by the Code in Section R14-2-606?**

21       A.    It was necessary to decrease the Company’s AIAC balance by \$1,129,184 for two  
22           reasons. The first reason was to properly recognize and account for a \$254,251  
23           double-count of a LXA that was originally filed in the Application. The second

1 reason was to adhere to the expired LXA's contractual terms. The reduction to  
2 AIAC simply shifts the same \$1,129,184 to CIAC in the same time periods. Thus,  
3 there is no rate base impact at the time of converting AIAC to CIAC since both items  
4 are a reduction to rate base. However, the conversion of the AIAC to CIAC does  
5 impact depreciation expense on a going forward basis at TY end in 2014, which will  
6 be discussed in the operating income adjustments' section of this testimony later.

7  
8 Rate Base Adjustment #6 – Contributions in Aid of Construction (“CIAC”) and  
9 Accumulated Amortization (“A/A”):

10 **Q. Please explain RUCO's Contributions in Aid of Construction (“CIAC”) and**  
11 **Accumulated Amortization (“A/A”) adjustments #6.**

12 **A.** RUCO's CIAC and A/A adjustments are companion adjustments to RUCO's AIAC  
13 adjustment #5 previously discussed. The \$983,517 of AIAC that RUCO converted  
14 to gross CIAC shows up here in this adjustment. The \$145,667 difference between  
15 RUCO's previous gross AIAC adjustment #5 of \$1,129,184 and RUCO's CIAC  
16 adjustment #6 here of \$983,517 is due to the Company's inclusion of a double count  
17 of a LXA. The \$145,667 difference is reflected on RUCO Schedule TJC-5 in  
18 adjustment #1 on that schedule. Otherwise, the AIAC and gross CIAC adjustments  
19 would both reflect a decrease of \$983,517 to AIAC and an increase to gross CIAC  
20 for the same \$983,517.

21  
22 An additional A/A adjustment is necessary to account for the CIAC amortization  
23 between the years of 2008 through 2014 once the AIAC was converted to CIAC.

1 CIAC is amortized in much the same way that plant is depreciated on an annual  
2 basis. To account for the additional amortization, it was necessary to add an  
3 additional \$375,838 to the CIAC's A/A balance. This CIAC adjustment and the  
4 previous AIAC adjustments have no impact to rate base, since both AIAC and CIAC  
5 are a reduction to rate base. However, there is a significant impact to depreciation  
6 expense as a result of converting AIAC to CIAC, which will be discussed in the  
7 operating income section of this testimony later.

8  
9 Rate Base Adjustment #7 – True-up of Scottsdale Capacity Agreement Loan(s)

10 Costs per Loan Notes:

11 **Q. Please explain RUCO's true-up of costs between the Scottsdale Capacity**  
12 **Agreement acquisition and the parent Company loan(s) that financed the**  
13 **Company's payment to Scottsdale to secure the treatment capacity in**  
14 **adjustment #7.**

15 **A.** This adjustment establishes a regulatory liability for the amount the ratepayers were  
16 overcharged during the time period of the Scottsdale Wastewater Treatment  
17 Agreement. The Scottsdale Wastewater Treatment Agreement was entered into  
18 and signed by the parties on April 1, 1996. The former owner of Black Mountain  
19 Sewer, aka Boulders Carefree Sewer, had to secure a loan to pay the City of  
20 Scottsdale for the right to the treatment capacity.

21  
22 As described in Commission Decision No. 59944 dated December 26, 1996,  
23 Boulders Carefree Sewer was granted approval of a loan by CoBank with an

1 interest rate of prime plus 1 percent. In 1996, the prime rate of interest was  
2 extremely high at 8.25 percent. The CoBank interest rate for the loan was set as  
3 an adjusting variable interest rate loan at that time as 9.25 percent (Prime 8.25% +  
4 1% = 9.25%) for 20-years. At the eleventh hour prior to signing the CoBank loan,  
5 the parent Company of Boulders Carefree Sewer, Boulders Joint Venture, stepped  
6 up and offered a loan at a fixed interest rate of 9.40 percent, which equated to the  
7 prime rate, 8.25 percent, plus 1.15 percent. The Commission viewed the fixed rate  
8 loan as superior to a variable rate loan, which provided the Company more “stability  
9 in the Company’s cash flow” at such a high-inflationary economic period in time.  
10

11 Commission Decision No. 59944 granted new rates to be effective January 1, 1997  
12 to cover the cost of the loan among other reasons for the revenue increase  
13 authorized. The final terms of the loan with the parent was a fixed interest rate of  
14 9.40 percent over 20-years with payments due “the last day of each calendar month  
15 in each year” as shown in Exhibit 2 on page(s) 2. Both loan notes to acquire the  
16 Scottsdale wastewater treatment capacity clearly indicates monthly payments are  
17 due at “the last day of each calendar month in each year” for the 20-year notes  
18 made by the parent Company. However, the Company has calculated the annual  
19 payments as a capitalized lease payment due at the last day of each year, which  
20 the Company vehemently denies that the Agreement be referred to as either a  
21 “capitalized” or “operating” lease in response to several RUCO and Staff data  
22 requests. RUCO agrees with the Company that the Agreement is neither a  
23 capitalized or operating lease even though the Company calls the Agreement an

1 "Operating Lease" on both its C-1 and C-2 Schedules but fails to calculate the  
2 payments accordingly. Capitalized lease payments are calculated as though there  
3 is only one annual payment being made on the last day at the end of the year rather  
4 than monthly payments. Thus, the Company's calculation includes additional  
5 interest being unfairly charged to ratepayers as a profit over and above the actual  
6 costs dictated by the terms of the loan(s). An operating lease is calculated in the  
7 same manner that any other loan with monthly payments being made on the last  
8 day of each month. In short, the Company has built a profit into the loan(s) to  
9 charge ratepayers. The NARUC Cost Allocation Manual Guidelines clearly states  
10 that a non-regulated affiliate can pass only the actual cost of an item to a regulated  
11 affiliate such as Liberty Black Mountain Sewer.

12  
13 **Q. What adjustment is necessary to remove the non-regulated affiliate profit**  
14 **from the actual cost of the loan(s) and make ratepayers whole?**

15 A. First, there was a second loan with the same terms as just described for the first  
16 loan, which an excerpt of that loan is also included in Exhibit 2. The second loan  
17 had to be obtained just months after the first loan was obtained due to the Company  
18 exceeding its original purchased capacity limit from Scottsdale. RUCO synched the  
19 actual costs of the two loans with the revenues received by the Company, which  
20 included the profit built into both loans that were charged to ratepayers, to  
21 determine the amount of the Company's over-collection from ratepayers. RUCO  
22 estimated this rate case to be decided on June 30, 2016 in determining the amount  
23 of revenues to have been collected from ratepayers through that June 2016 date.

1 RUCO established a gross regulatory liability of \$51,451, which represents the  
2 amount of profit charged to ratepayers over and above the actual costs and terms  
3 of the loans. A two and half-year amortization period, \$20,581 or 40 percent per  
4 annum, was established for a net regulatory liability of \$30,871 to remove the profit  
5 from the actual loan costs collected over 19 ½- years.

6  
7 Rate Base Adjustment #8 – Intentionally Left Blank

8  
9 Rate Base Adjustment #9 – Accumulated Deferred Income Taxes (“ADIT”):

10 **Q. Please explain RUCO’s ADIT adjustment #9?**

11 A. This adjustment is driven by the UPIS, A/D, and CIAC balances recommended by  
12 RUCO. RUCO’s recommended balances for those rate base item were discussed  
13 earlier.

14  
15 **Q. What adjustment was necessary to reflect those rate base items in  
16 determining RUCO’s ADIT adjustment?**

17 A. It was necessary to increase the Company’s ADIT balance by \$377,821 from  
18 \$75,116 to \$452,937, which is a reduction to rate base.

19  
20 Rate Base Adjustment #10 – Allowance for Working Capital:

21 **Q. Please explain RUCO’s working capital adjustment #10.**

22 A. This adjustment uses RUCO’s levels of cash operating expenses, adds the  
23 component for interest expense proposed by the Company in its financing

1 application, and removes the rate case expense included by the Company as an  
2 expense that is not on-going in nature. I also removed \$3,293 for a rental expense  
3 prepayment as the Company no longer occupies that property per response to Staff  
4 DR 6.12. Prepayments are a component to working capital and required an  
5 adjustment to reflect that fact.

6  
7 **Q. What adjustment to working capital does RUCO recommend?**

8 A. RUCO recommends decreasing working capital by \$78,098 and decreasing  
9 prepayments by \$3,293 for a total adjustment of \$81,391, which is a reduction to  
10 rate base.

11  
12 **Q. Does that complete RUCO's recommended rate base adjustments in this  
13 proceeding?**

14 A. Yes.

15  
16 **Q. Please continue to RUCO's operating income adjustment recommendations.**

17 A. The next section of RUCO's testimony will address each operating income  
18 adjustment that RUCO recommends in this proceeding below:  
19  
20  
21  
22  
23

1 **VII. RUCO OPERATING INCOME ADJUSTMENTS 1 – 17:**

2 Operating Income Adjustment #1 – Depreciation Expense:

3 **Q. During RUCO's review of the Company's filing and schedules prepared for**  
4 **this proceeding, did RUCO find any items that raised concerns?**

5 A. Yes.

6  
7 **Q. Please describe what initially raised concerns for RUCO upon reviewing the**  
8 **Company's Application.**

9 A. The Company's Schedules C-1 and C-2 reflected that depreciation expense more  
10 than doubled from the test year book results to the adjusted TY end as filed. The  
11 2014 test year book results for depreciation expense was \$229,669 while the  
12 adjusted TY depreciation expense was \$484,271, which increased depreciation  
13 expense by \$254,602 or a 111 percent increase over the test year book results of  
14 only \$229,669. The Company's proforma depreciation expense adjustment was  
15 \$254,602 in addition to the test year book amount of \$229,669 for a total adjusted  
16 TY depreciation expense of \$484,271.

17  
18 **Q. Had Liberty Black Mountain Sewer doubled its UPIS due to some exponential**  
19 **customer growth that required more than twice the amount of investment in**  
20 **plant and thus created a reason for depreciation expense to more than**  
21 **double?**

22 A. No. In fact, customer growth had slightly decreased since the last rate Application,  
23 which utilized a TY ending on June 30, 2008. The Company's last rate Application

1 listed approximately 2,100 customers whereas this current rate Application reflects  
2 approximately 2,053 customers. When I reviewed the Company's B Schedules, I  
3 did not identify that many plant additions that would warrant depreciation expense  
4 more than a doubling. At that point, I continued reviewing the Company's C  
5 Schedules before finding a cause for the exponential increase to the depreciation  
6 expense. It did not take too long going through the detailed C Schedules to find the  
7 cause of the astronomical increase to depreciation expense. Company Schedule  
8 C-2 on page 2 provided all the detail necessary to identify the cause of the steep  
9 increase for depreciation expense.

10  
11 **Q. What did Company Schedule C-2 on page 2 reflect that gave rise to more than**  
12 **twice the test year book results for depreciation expense?**

13 A. Since the Company was only requesting a base rate increase of \$56,929, the  
14 Company's entire case resided on Schedule C-2 page 2. That schedule reflected  
15 that the CIAC had ultimately been amortized away over the years, which essentially  
16 eliminated any deduction to depreciation expense for non-investor supplied capital  
17 for UPIS.

18

1 **Q. Have you as an analyst ever seen this scenario play out and coincide to where**  
2 **there is no longer any CIAC, non-investor supplied capital, to offset the**  
3 **depreciation expense and is it a legitimate scenario?**

4 A. To answer the first question, no, I have never seen or worked on a case before  
5 where I have seen depreciation expense more than double the test year book  
6 results or where CIAC had become practically amortized away before either. To  
7 answer the second question, accounting is often times heavily weighted on timing  
8 issues. So, it is fair to say it is possible for CIAC to be zero but highly improbable  
9 at the same time. Under normal conditions, new CIAC normally follows the old  
10 CIAC. In other words, the CIAC that is amortized away is usually replaced with new  
11 developer advancements or older expired AIAC converts to CIAC per the Arizona  
12 Administrative Code ("Code") in Section R14-2-606 for sewer utilities specifically.  
13 This section of the Code is attached as Exhibit 3 on pages 1 and 2. The next logical  
14 question raised in an analysts mind is what is happening with the AIAC that  
15 generally converts to CIAC after a point in time because there was approximately  
16 \$1.7M of AIAC on the Company's books and schedules as filed.

17  
18 **Q. Did RUCO examine the status of the AIAC balances and Line Extension**  
19 **Agreements ("LXA") at that point in time in its audit?**

20 A. Yes.  
21  
22

1 **Q. What was the result of RUCO's analysis regarding the status of the AIAC or**  
2 **LXA as provided by the Company in response to Staff DR BAB 1.15?**

3 A. RUCO's analysis of the LXA's determined clearly that the Company apparently was  
4 neither adhering to the rules set forth in the Code, attached as Exhibit 3, for LXAs  
5 nor its own contracts with the developers who are signatory parties to the LXAs. To  
6 begin providing support for those statements, the following are excerpts from the  
7 Code, which is the authoritative source for accounting for LXAs.

8  
9 **R14-2-606. Collection main extension agreements**

10 **A. General requirements**

- 11 1. Each utility entering into a main extension agreement  
12 shall comply with the provisions of this rule, which  
13 specifically defines the conditions governing collection  
14 main extensions.

15 2.

16 **Q. Did RUCO ask the Company if it was following the rules set forth in the Code**  
17 **in Section R14-2-606 for collection main extension agreements?**

18 A. RUCO did not ask the Company that specific question. However, suffice to say we  
19 did ask the Company in RUCO DR 3.01 the following questions ("Q") with the  
20 Company's responses ("A") provided below:

21 **Q. Main Extension Agreement(s) ("MXA") - For clarity and understanding**  
22 **purposes, when the Company signs a MXA with any party (i.e.,**  
23 **Applicant, Developer, or Builder), please provide descriptive**

1           **responses beyond a simple yes or no when possible to the following**  
2           **requests:**

3           **a. Can the MXA be classified as either an Advance-in-Aid-of-**  
4           **Construction (“AIAC”) or a Contribution-in-Aid-of-Construction**  
5           **(“CIAC”)?**

6           A. “Main extension agreements are not classified as AIAC or CIAC. Whether  
7           a developer contribution or advance is classified as AIAC or CIAC depends  
8           on classification of the facilities under the Company’s tariffs, NARUC, and/or  
9           Commission rules. With this in mind, developer advances or contributions  
10          can be classified as AIAC or CIAC, or a combination of each.”

11  
12          **b. Does the Company or Developer determine whether it is classified as**  
13          **AIAC or CIAC?**

14          A. “See the Company’s response to Data Request 3.01(a). Generally, the  
15          Company makes that determination based on Commission rules and the  
16          Company’s tariffs.”

17  
18          **d. If it is classified as AIAC, who determines the percentage (i.e., 10% or**  
19          **20%) of total gross revenues to be refunded annually?**

20          A. “Currently, the Company refunds developer advances in aid of construction  
21          at 20 percent for 5 years. Under prior tariffs, the Company generally  
22          refunded developer advances at 10 percent for 10 years.”

23

1           **h. At the expiration of a MXA contractual period that has been classified**  
2           **as AIAC, does the Company convert the non-refunded AIAC amount**  
3           **to CIAC?**

4           A. "Generally, yes."

5  
6           **f. Which party to the MXA determines the contractual period (i.e., number**  
7           **of years) if it is classified as AIAC?**

8           A. "Currently, the Company refunds developer advances in aid of construction at  
9           20 percent for 5 years. Under prior tariffs, the Company generally refunded  
10          developer advances at 10 percent for 10 years."

11  
12          RUCO staff members visited Liberty Utilities home office in Avondale and met with  
13          Company representatives from the accounting, engineering, and legal staff to  
14          discuss the issues of AIAC, CIAC, hook-up fees, and MXAs raised in RUCO DR  
15          3.01. RUCO's discussion with the Company staff led RUCO that those issues were  
16          being accounted for and recorded per the Company's and Commission's tariffs and  
17          rules accordingly. RUCO spent approximately 2-3 hours asking questions and  
18          receiving answers on those issues. The cited DR responses earlier indicated the  
19          Company recorded all MXAs according to its tariffs and Commission rules. RUCO  
20          DR 3.01 is attached as Exhibit 4 to this testimony. RUCO DR 12 is being issued to  
21          the Company at the time of this writing for it to further clarify time periods associated  
22          with the responses to RUCO DR 3.01 (i.e., "currently" and "prior tariffs").  
23

1 **Q. Doesn't the Code specifically state in Article 6 for sewer utilities that any**  
2 **non-refunded AIAC be converted to CIAC at the end of five years?**

3 A. Yes. To be more specific with the language in the Code, I will quote the section  
4 and subsection of the Code that addresses that question below:

5 **Arizona Administrative Code**

6  
7 **ARTICLE 6. SEWER UTILITIES, Section R14-2-606. Collection main extension**  
8 **agreements, Subsection C. 5 states the following:**

9  
10 If after five years from the utility's receipt of the advance, the advance  
11 has not been totally refunded, the advance shall be considered a  
12 contribution in aid of construction and shall no longer be refundable.

13  
14 **Q. Does Liberty Black Mountain Sewer have any main extension agreements or**  
15 **AIAC on its books that exceed the five-year time period after receipt of the**  
16 **advance as stated in the Code above?**

17 A. Yes. To answer that question in another way, the Company does not have any  
18 main extension agreements that are less than or equal to five-years old. I have  
19 attached a copy of an Excel summary spreadsheet that was provided by the  
20 Company in response to Staff DR BAB 1.15 identified as Exhibit 5. The  
21 spreadsheet was reformatted to fit on one page. It shows the LXA date, number,

1 developer, original contract amount, contract / refund %, refund, and balance for  
2 each of the thirteen<sup>7</sup> LXAs at TY end in the current proceeding.

3  
4 As can be seen in Exhibit 5, all of the LXAs should have been converted to CIAC,  
5 according to the rules in the Code, before the current TY utilized in this case. After  
6 reading each of the twelve LXAs, it became obvious that the Company generally  
7 entered into these contractual developer agreements under ten-year refundable  
8 agreements<sup>8</sup> rather than the five-year period as stated in the Code for sewer  
9 utilities.

10  
11 **Q. Did RUCO convert the expired LXAs per the Code or by each contractual**  
12 **expiration date as identified specifically to each agreement?**

13 A. RUCO converted any non-refunded portion of the LXA or AIAC per the contractual  
14 terms of the collection main extension agreement stated in each of the twelve  
15 agreements. Those adjustments are reflected in RUCO rate base adjustments #5  
16 and #6. RUCO rate base adjustment #5 removed the non-refunded portion from  
17 AIAC and converted (i.e., transferred) them to non-refundable CIAC in rate base  
18 adjustment #6. Those two rate base adjustments were discussed earlier in the rate  
19 base section of this testimony.

---

<sup>7</sup> RUCO's testimony earlier indicated there were twelve LXAs. This is due to one of the Company's thirteen LXAs listed in Exhibit 6 being a double-count and thus needed to be removed in its rebuttal filing from the Company's AIAC balance as filed in this case.

<sup>8</sup> There was one LXA agreement that stated it was a 15-year agreement and any remaining non-refunded balance would become non-refundable, which under normal circumstances converts to CIAC at the expiration of the contractual agreement.

1 **Q. Why didn't RUCO convert the non-refunded portion of the collection main**  
2 **extension agreements original cost per the five-year rule in the Code?**

3 A. RUCO found itself stuck between the dichotomy of the rules set forth in the Code  
4 and contractual legalities established in the terms of the contracts between the  
5 Company and developers themselves, which are the signatory parties to the LXAs.  
6 RUCO could have recommended adhering strictly to the rules set forth in the Code  
7 that clearly states for sewer utilities, "If after five years from the utility's receipt of  
8 the advance, the advance has not been totally refunded, the advance shall be  
9 considered a contribution in aid of construction and shall no longer be refundable."  
10 RUCO chose to follow the contractual arrangements rather than the rules in the  
11 Code. If RUCO had chosen or found that the rules of the Code trumped that of the  
12 LXA's contractual terms set forth between the Company and the developers, one  
13 could make a valid argument that the rules found in the Code took precedent over  
14 the LXA's contractual terms. RUCO chose the contractual terms in the LXAs in this  
15 instance. Regardless of which one of the two alternatives one chooses between  
16 these dichotomous situations, the Company's treatment of converting the LXAs  
17 from AIAC to CIAC appears to violate both the rules of the Code and its own  
18 contractual terms established in the LXAs.

1 **Q. What impact does it have in determining fair and reasonable rates if AIAC is**  
2 **not properly converted from AIAC to CIAC in a timely manner since both AIAC**  
3 **and CIAC is a reduction to rate base?**

4 A. Proper timing for conversion of AIAC to CIAC is tremendously important in  
5 determining fair and reasonable rates. That is true because of the consequences  
6 to depreciation expense, which can easily be seen in either the Company or  
7 RUCO's depreciation expense adjustments reflected in the respective operating  
8 income schedules. The Company's failure to properly convert AIAC to CIAC in a  
9 timely manner changes the Company's proposed approximate **\$57,000** revenue  
10 increase to an approximate **negative \$200,000** rate reduction in base rates in this  
11 case.

12  
13 **Q. How does converting AIAC to CIAC in a timely manner alone impact rates**  
14 **more than \$250,000 in this case when both AIAC and CIAC reduces rate base?**

15 A. The principles of ratemaking allow the Company to record and collect depreciation  
16 expense associated with AIAC when the plant is placed in service. That is the very  
17 reason why RUCO said earlier that the origination of the LXA itself establishes the  
18 vintage year of plant not when AIAC is converted to CIAC. The Company  
19 determined its vintage year of CIAC at the time when AIAC is converted to CIAC in  
20 this case. On the other hand, principles of ratemaking do not allow a Company to  
21 recover depreciation expense on CIAC in the revenue requirement formula. The

1 amortization<sup>9</sup> of CIAC is a reduction to depreciation expense, which can easily be  
2 seen on RUCO's depreciation expense schedule.

3  
4 **Q. If both AIAC and CIAC are reductions to rate base, why do ratemaking**  
5 **principles allow a utility to recover depreciation expense on AIAC in base**  
6 **rates but not allow recovery of amortization expense of CIAC?**

7 A. AIAC is a refundable element of rate base whereas CIAC is a non-refundable  
8 element of rate base. Ratemaking principles allow the utility recovery of  
9 depreciation expense for AIAC in order to offset the utility's costs of the refunds  
10 made payable to the developer during the time period set forth per the Code and  
11 agreements found in LXA. The utility should be in compliance with the rules of the  
12 Code and contractual agreements. The LXA agreements should also comply with  
13 the Code.

14  
15 **Q. Please explain any other peculiarities that RUCO identified during its analysis**  
16 **of UPIS, AIAC, CIAC, and depreciation expense since those ratemaking**  
17 **elements tend to go hand-in-hand.**

18 A. As RUCO discussed earlier and elaborated quite extensively in RUCO rate base  
19 adjustment #1 labeled "UPIS and A/D Reconstruction Adjustment," the Company-  
20 proposed vintage year group depreciation methodology. That depreciation  
21 methodology is also utilized in accounting for CIAC in the Company's filing.

---

<sup>9</sup> The accounting terms depreciation and amortization are synonymous in nature. The term "depreciation" is used for tangible assets whereas the term "amortization" is the accounting term used for intangible assets.

1           However, the Company errs when assigning vintage year 2014 when it converted  
2           AIAC to CIAC in 2014.

3  
4           **Q.    How does the Company err when assigning the vintage year of 2014 to the**  
5           **CIAC when it converted it from AIAC in 2014?**

6           A.    It errs because the Company is using the point in time of the actual conversion of  
7           the AIAC to CIAC as the vintage year of the non-investor supplied plant or assets.  
8           That isn't the proper vintage year to group the CIAC into once converted from AIAC.  
9           The vintage year of the conversion of AIAC to CIAC was determined when the LXA  
10           was originally signed between the Company and developer and placed into service.  
11           The LXA establishes the vintage year of plant when it is placed into service. Thus,  
12           the vintage year of the CIAC was determined when the developers advance was  
13           placed into gross utility plant in service and not when AIAC is converted to CIAC as  
14           the Company has done in this instance and case.

15  
16           **Q.    What adjustment is necessary to properly recognize the appropriate timing**  
17           **and conversion of AIAC to CIAC?**

18           A.    That adjustment was already discussed in RUCO rate base adjustments #5 and #6  
19           and has been implemented in those schedules accordingly.  
20  
21

1 **Q. What adjustment is necessary to depreciation expense to recognize that the**  
2 **vintage year of CIAC was already established when the developers advance**  
3 **for plant was originally placed into service?**

4 A. RUCO's recommended adjustment decreases depreciation expense by \$253,139  
5 or essentially reverses the Company's \$254,602 proforma adjustment that  
6 increased depreciation expense.

7  
8 **Q. Since AIAC, CIAC, and depreciation expense are closely related, does RUCO**  
9 **have any additional recommendations regarding the Company's failure to**  
10 **convert AIAC to CIAC in a timely manner per the five-year rule in the Code?**

11 A. Yes. RUCO will recommend in its surrebuttal testimony that the AIAC be converted  
12 to CIAC at the end of the five-year period per the rules set forth in the Code. While  
13 RUCO has calculated the adjustment based on the contractual terms in its direct  
14 testimony, RUCO now understands that the rules in the Code supersede the  
15 contractual agreements. Therefore, RUCO's surrebuttal testimony  
16 recommendations will adhere to the five-year rule to convert AIAC to CIAC  
17 accordingly.

18  
19 Operating Income Adjustment #2 – Property Tax Expense:

20 **Q. Please explain RUCO's recommended property tax expense adjustment.**

21 A. RUCO's recommended property tax expense adjustment utilizes the same  
22 methodology used in the Company's filing. The expense is largely driven by the  
23 recommended revenues, assessment ratio, and property tax rate. RUCO has

1           accepted the Company's inputs with the exception of RUCO's proposed level of  
2           revenues and a small revenue accrual fix adjustment that will be discussed in this  
3           section in adjustment #4.

4  
5           **Q.    What adjustment is necessary to property taxes to account for those two**  
6           **items identified above?**

7           A.    RUCO's adjustment reduces the adjusted TY property tax expense by \$311.  
8           RUCO's recommended decrease in revenues reduces property tax expense by  
9           \$2,095 on a going forward basis.

10  
11           Operating Income Adjustment #3 – Intentionally Left Blank

12  
13           Operating Income Adjustment #4 – Revenue Accrual Fix:

14           **Q.    Please explain RUCO's revenue accrual fix adjustment.**

15           A.    This adjustment is the difference between the revenues generated using the billing  
16           determinates from the bill count and the amount recorded in the general ledger. It  
17           simply trues-up any under or over accruing of revenues.

18  
19           **Q.    What adjustment is necessary to true-up the revenue accruals with that**  
20           **generated using the billing determinates to proof out revenues?**

21           A.    It was necessary to increase revenues by \$952, which is also reflected on the  
22           Company's Schedule H-1 in the "Present Revenues" column.

1           Operating Income Adjustment #5 – Miscellaneous Expense:

2       **Q.    What adjustment does RUCO recommend to miscellaneous expense?**

3       A.    RUCO removed \$268 for a Liberty Utilities Canada charge. The Company had  
4           included it and credited it back out only to include it again. RUCO does not see a  
5           benefit to Arizona ratepayers from a Liberty Utilities Canada miscellaneous charge.

6  
7           Operating Income Adjustment #6 – Intentionally Left Blank

8  
9           Operating Income Adjustment #7 – Scottsdale Capacity Expense:

10       **Q.    Please explain RUCO's adjustment to reduce the Scottsdale Capacity**  
11           **Agreement expense.**

12       A.    This adjustment was discussed in detail in RUCO rate base adjustment #7. The  
13           adjustment trues-up the actual expense per the loan documents' terms and properly  
14           calculates the resulting annual expense by the same documents as opposed to the  
15           Company's calculation as a capitalized lease. The agreement between the  
16           Company and City of Scottsdale has nothing to do with determining the true costs  
17           associated with the acquisition of the wastewater treatment capacity. The costs are  
18           between the Company and its parent or an affiliate, which one party or the other  
19           has built a profit component into its calculation. This is easily determinable by  
20           reviewing the loan documents.

1 **Q. What adjustment is necessary to remove the profit component embedded in**  
2 **the Company's method of calculating the expense as though it was a**  
3 **capitalized lease as you stated in RUCO rate base adjustment #7?**

4 A. It is necessary to reduce the Scottsdale Capacity expense by \$2,702 as the terms  
5 of the loans dictate in the loan notes.

6  
7 Operating Income Adjustment #8 – Intentionally Left Blank

8  
9 Operating Income Adjustment #9 – Media Reclassification from Capitalized  
10 Expenditure to O&M Chemical Expense:

11 **Q. Please explain this adjustment that reclassifies items that the Company**  
12 **initially capitalized and agreed with Staff in various data requests in DR DH 3.**

13 A. This adjustment reclassifies various capitalized expenditures to either other plant  
14 accounts or O&M expenses. Specifically, this adjustment reclassifies one-half of  
15 the active carbon media expense identified in Staff DR DH 3.7 rather than the entire  
16 amount because the Company stated to RUCO during the October 16<sup>th</sup> field  
17 inspection that the active carbon media is replaced once every two-years. RUCO  
18 left the other one-half in the capitalized plant account. In addition, Staff  
19 recommended in DR DH 3.10 and the Company agreed that the expense identified  
20 in that DR should be expensed to O&M rather than capitalized to a plant account.

21

1 **Q. What adjustment is necessary to charge one-half of the active carbon**  
2 **expense to O&M and to charge the expenditure recorded as a capitalized**  
3 **expense to O&M?**

4 A. RUCO increased the chemical expense by \$4,773 to reclassify those two items as  
5 discussed above.

6  
7 Operating Income Adjustment #10 – Intentionally Left Blank

8  
9 Operating Income Adjustment #11 – Intentionally Left Blank

10  
11 Operating Income Adjustment #12 – Intentionally Left Blank

12  
13 Operating Income Adjustment #13 – Algonquin Power & Utilities Corporation  
14 (“APUC”) Cost Allocations

15 **Q. Please describe RUCO’s adjustment to the APUC cost allocations.**

16 A. This adjustment adheres to Commission Decision No. 71865 at page 25 that found  
17 four categories of the APUC cost allocations beneficial to Arizona ratepayers. The  
18 four categories allowed in that Decision included legal, tax, audit, and depreciation  
19 expense. The Commission found those expense categories to have some benefit  
20 to Arizona ratepayers. I have included three of the four expense categories and  
21 was unable to determine the allowable depreciation expense with the Company’s  
22 response provided to Staff DR 6.1.

23

1 In a Rio Rico rate case, Commission Decision No. 72059 at pages 21-23 reached  
2 a similar conclusion regarding the APUC cost allocations. That decision stated the  
3 following:

4 "Although shared services models can be an efficient method to  
5 operate utilities and can provide benefits to utility ratepayers that  
6 might not be able to be obtained if the utility were operating on a  
7 stand alone basis, it is important that the Commission carefully  
8 review the shared costs that are being sought from ratepayers. The  
9 utility is a captive of its parent, and may not have recourse to dispute  
10 charges incurred at the parental level and allocated to it, just as  
11 ratepayers are the captives of the utility. The Commission must  
12 scrutinize the common costs and allow only those costs which  
13 provide a benefit to the utility ratepayers. As we noted in the Black  
14 Mountain Sewer rate case, the standard for what the utility would  
15 have incurred as a stand alone entity may not necessarily be the  
16 standard for allowing the recovery of common costs. The common  
17 costs must be reasonable based on the size of the utility. The entity  
18 seeking recovery must show that the type of cost and the amount  
19 allocated to the utility are reasonable and reasonably necessary for  
20 the provision of utility service. What the utility would need to pay on  
21 a stand alone basis may provide a check on the reasonableness of  
22 the expense."  
23

24  
25 **Q. Did RUCO intervene and file testimony in the Rio Rico case cited above?**

26 **A.** Yes. In fact, I was the rate analyst assigned to the revenue requirement portion of  
27 the Rio Rico rate case and filed testimony on the APUC cost allocations in that  
28 case.  
29

1 **Q. Didn't you file a wages and labor study of various stand-alone utilities in the**  
2 **State of Arizona for comparing a Liberty Utilities utility with those of stand-**  
3 **alone utilities?**

4 A. Yes. The last sentence above written by the Administrative Law Judge ("ALJ") in  
5 the Rio Rico rate case somewhat goes to the heart of what the study provided in  
6 that case. The study revealed that Liberty Utilities parent's, APUC, cost allocations  
7 added another layer of corporate cost allocations excessively above what other  
8 stand-alone utility ratepayers had to bear, when the ALJ stated, "What the utility  
9 would need to pay on a stand alone basis may provide a check on the  
10 reasonableness of the expense."

11  
12 **Q. What adjustment is necessary to pull the costs back in line with other Arizona**  
13 **stand-alone utilities for corporate allocations?**

14 A. It was necessary to reduce the APUC cost allocations by \$27,147 to adhere more  
15 closely Decision Nos. 71865 and 72059. Those decisions also resemble the results  
16 of the wages and salaries study that I presented in the Rio Rico case. This is a fair  
17 and reasonable adjustment considering all the facets mentioned earlier in this  
18 adjustment.

19  
20 Operating Income Adjustment #14 – Intentionally Left Blank

21  
22 Operating Income Adjustment #15 – Intentionally Left Blank

1           Operating Income Adjustment #16 – Rate Case Expense:

2   **Q.    Please discuss the Company’s proposed rate case expense treatment in this**  
3   **case.**

4   A.    The Company proposes yet another surcharge for the rate case expense in this  
5   proceeding. The Company requests a total rate case expense of \$450,000 to be  
6   recovered over an estimated three-year period or \$6.09 per customer a month to  
7   be billed as a separate charge enclosed on the ratepayers bill.

8  
9   **Q.    What does RUCO recommend for rate case expense in this proceeding?**

10   A.    RUCO recommends \$100,000 be allowed for total rate case expense in this  
11   proceeding. The \$100,000 should be normalized over a three-year period or an  
12   annual rate case expense of \$33,333 per year. Taking several past rate cases and  
13   my experience into consideration, this represents a fair and reasonable  
14   recommendation after reviewing the Company’s financials as filed.

15  
16   **Q.    Please expand on RUCO’s statement of “taking several past rate cases and**  
17   **my experience into consideration, this represents a fair and reasonable**  
18   **recommendation after reviewing the Company’s financials as filed.”**

19   A.    RUCO’s cost of capital adjustment recommendation alone caused the Company’s  
20   \$56,929 base rate revenue increase go negative. In addition, the last Liberty Black  
21   Mountain Sewer rate case found \$180,000 to be fair and reasonable with many  
22   more issues required to be solved. Further, the most recent EPCOR rate case in  
23   Decision No. 75268, dated September 8, 2015, authorized \$325,000 for five

1 separate districts that took over a year to complete. The last updated level of actual  
2 rate case expense incurred by the Company was approximately \$80,000 that  
3 RUCO is aware of at this time. RUCO views this case resting on the sole laurels of  
4 a rate design issue for its commercial customers.  
5

6 **Q. Wasn't there a recovery issue related to the recoverable plant closure costs**  
7 **incurred by the Company too?**

8 A. Yes, there was the plant closure cost issue too. However, the plant closure costs  
9 were largely absolved in Phase I and II of Decision No. 73885. From a practical  
10 standpoint, this case revolved around the antiquated Arizona Department of  
11 Environmental Quality ("ADEQ") Bulletin 12 rate design issue for its commercial  
12 customers. RUCO's rate design testimony to be filed on December 16, 2015 will  
13 recommend a more fair<sup>10</sup> set of rates for the commercial customers then.  
14

15 Operating Income Adjustment #17 – Income Tax Expense:

16 **Q. Have you calculated income tax expense based on RUCO's recommended**  
17 **adjusted operating income?**

18 A. Yes. This adjustment is increases the Company's adjusted TY income taxes by  
19 \$92,444.  
20

---

<sup>10</sup> Fair in this context does not imply the Company was charging an unfair rate to commercial customers. It does imply that ADEQ's Bulletin 12 became antiquated with today's technology and rendered Bulletin 12 as an unfair source to set rates for commercial customers.

1 **Q. Have you included an interest synchronization calculation in your**  
2 **computation of income tax expense?**

3 A. Yes. The interest synchronization calculation computes an interest expense  
4 deduction for income taxes. The interest synchronization calculation is RUCO's  
5 adjusted TY rate base multiplied by the weighted cost of the Company's proposed  
6 debt. The income tax gross up revenue conversion factor includes an element for  
7 the increase in property taxes due to RUCO's recommended level of decreased  
8 revenues.

9  
10 **Q. Are there any other expenses that RUCO wants to address here?**

11 A. Yes. Due to RUCO's time constraints in addition to delays in receiving responses  
12 to DR's, RUCO reserves the right to recommend incentive pay adjustments in its  
13 surrebuttal testimony. Those adjustments will be reflected in its surrebuttal.

14  
15 **Q. Please continue to RUCO's positions regarding the other issues and**  
16 **surcharges as requested in the Company's filing.**

17 A. The last section, Section VIII, of this testimony will address RUCO's positions  
18 regarding the Company's other issues and surcharges as requested.

19  
20  
21  
22

1 **VIII. RUCO POSITIONS ON THE OTHER COMPANY ISSUES AS REQUESTED:**

2 Plant Closure Surcharge:

3 **Q. Does RUCO support the overwhelming majority of its constituents,**  
4 **residential ratepayers, and desire to close and pay for the expenditures**  
5 **necessary to decommission and close the wastewater treatment plant in this**  
6 **case?**

7 A. Yes.

8  
9 **Q. Is RUCO recommending the surcharge mechanism as proposed in Phase II**  
10 **of Decision No. 73885 and as requested by the Company in its rate filing?**

11 A. No. As stated in other sections of this testimony, RUCO recommends the plant  
12 closure costs be rate based in two separate plant accounts. The first account  
13 should include all the reasonable and necessary costs that are directly related to  
14 the costs to close, remove, and pipe the wastewater flows from the plant to a  
15 connection point where the City of Scottsdale can receive the wastewater flows into  
16 its system. RUCO recommends that those costs, less the costs filed under a  
17 confidentiality agreement, be included and recorded to an account readily  
18 recognizable as the "Plant Closure" or "Wastewater Treatment Facility ("WTF")  
19 Decommissioning" UPIS account and be depreciated over 25-years or 4 percent  
20 per annum. RUCO has not included the costs related to the plant closure at this  
21 juncture in its testimony. The total costs related to the plant closure as stated above  
22 and reached between the various parties in the instrument termed the

1 Memorandum of Understanding (“MOU”) will be addressed in surrebuttal testimony  
2 after reviewing the Company’s final costs included in its rebuttal filing.  
3

4 **Q. Did the Company’s testimony in this proceeding address the possibility that**  
5 **the said plant closure costs could be directly placed into rate base as RUCO**  
6 **recommends rather than as a surcharge?**

7 A. Yes. In Mr. Bourassa’s direct testimony on page 11 at lines 3-4, Mr. Bourassa  
8 stated, “Of course, if the Commission believes including the plant closure costs  
9 directly in rate base is preferable, it can so direct.”  
10

11 **Q. So, is it RUCO’s position that the fair and reasonable plant closure costs be**  
12 **placed directly in rate base?**

13 A. Yes. RUCO recommends the costs directly related to the plant closure costs be  
14 placed into a separate plant account and depreciated over a 25-year period or at  
15 four percent per annum. The four percent depreciation rate approximates the  
16 composite rate one would derive if calculating the rate for the various components  
17 of plant that are required to be decommissioned.  
18  
19  
20  
21  
22  
23

1           Rate Case Expense Surcharge:

2       **Q.    What is RUCO's recommendation as it pertains to the Company's request that**  
3       **the rate case expense also be placed in a surcharge mechanism and**  
4       **recovered via a surcharge?**

5       A.    RUCO's position on the Company's proposed treatment of placing the rate case  
6       expense in a surcharge was thoroughly vetted in the rate case expense adjustment  
7       section of this testimony. RUCO recommends that the expense be normalized over  
8       a three-year period. The amount of total rate case expense that RUCO  
9       recommended in that section of testimony was \$100,000, which was an estimated  
10      amount incurred to date from DR responses that updated the actual rate case  
11      expense incurred by the Company. RUCO recommends the Commission deny the  
12      Company's rate case expense surcharge mechanism in this case.

13  
14           Purchased Power Adjustment Mechanism ("PPAM"):

15      **Q.    What is RUCO's position and recommendation regarding the Company's**  
16      **requested purchased power adjustment mechanism ("PPAM")?**

17      A.    RUCO's position on the Company's proposed PPAM is it constitutes single issue  
18      ratemaking and recommends the Commission deny the Company's request for a  
19      PPAM.

20  
21      **Q.    Please explain what a PPAM is and how it works.**

22      A.    The adjustment is being requested so the Company can pass the additional or  
23      reduced cost of electric power on to its customers thereby recovering or reducing

1 the expense. Since overall electric and gas utility rates very rarely or generally  
2 never decrease, the Company's request is a one-way proposal that adversely  
3 impacts ratepayers to increase utility rates outside of a full rate case. This  
4 adjustment mechanism is inappropriate considering the fact that the State of  
5 Arizona requires a finding of "Fair Value" in determining fair and reasonable rates.  
6 In the past, the price of purchased power has been somewhat volatile with monthly  
7 fluctuations that would generally increase and that rarely decrease the cost of either  
8 purchased electric or natural gas power. In fact, the Commission eliminated the  
9 use of PPAM's and purchased water adjustment mechanisms in an Arizona Water  
10 Company ("AWC") rate case for its Eastern Group in Decision No. 66849, dated  
11 March 19, 2004. RUCO supports that Commission decision in the Eastern Group  
12 case on this issue.

13  
14 **Q. Would you please explain why the PPAM should be denied by the**  
15 **Commission in this case as it was in the AWC rate case?**

16 A. Adjustment mechanisms traditionally have been established to mitigate the  
17 regulatory lag for 1) volatile and 2) very large expense items (such as purchased  
18 coal, oil, and gas in the case of electric utilities and purchased gas for natural gas  
19 distribution companies) that may have a negative impact on the financial health of  
20 a utility. In the Liberty Black Mountain Sewer case, purchased power does not  
21 qualify as volatile and does not represent an unusually large level of expense to  
22 place the Company in financial jeopardy.

23

1 Liberty Black Mountain Sewer does not have significantly large purchased  
2 power bills and none meet the volatility criteria since increases in purchased  
3 power costs do not occur frequently. The Company's percent of purchased  
4 power expense to its total operating expense represents only an approximate  
5 3 percent for both its adjusted and proposed levels of total expenses. It is easily  
6 seen that the purchased power does not represent a significant component of  
7 the Company's operating expense and does not warrant an adjustment  
8 mechanism. Such an adjustment mechanism is inherently unfair to ratepayers  
9 when other expenses could very well be decreasing with no benefit to the  
10 ratepayer whatsoever. Automatic adjustment mechanisms should not be a  
11 substitute for a formal rate case and should not be used to preserve the  
12 Company's allowed rate of return.

13  
14 Property Tax Adjustment Mechanism ("PTAM"):

15 **Q. What is RUCO's position and recommendation regarding the Company's**  
16 **requested property tax adjustment mechanism ("PTAM")?**

17 A. RUCO's position on the Company's proposed PTAM is it also constitutes single  
18 issue ratemaking and recommends the Commission deny the Company's request  
19 for a PTAM. Please see RUCO's previous PPAM regarding its position and  
20 recommendation as it applies to the Company's requested PTAM here also. The  
21 Company's percent of property tax expense to its total operating expense  
22 represents approximately 2.5 percent, which is less than the previous purchased  
23 power expense of approximately 3 percent, for both its adjusted and proposed

1 levels of total expenses. In fact, RUCO's recommended decrease of \$284,244 in  
2 the Company's revenue in this case resulted in only a \$2,095 decrease in property  
3 taxes, which represents less than one-percent, .74 percent, per one-dollar of  
4 revenue decrease or increase. That is an important fact to consider when  
5 measuring volatility of an expense that the Company may incur since property tax  
6 expense is revenue driven. When measuring the volatility or materiality of an  
7 expense, revenue is often the common denominator used when measuring the  
8 volatility or materiality of an item. It is easily seen too that the property tax expense  
9 does not represent a significant component of the Company's operating expense  
10 and does not warrant an adjustment mechanism for all the previous reasons stated  
11 in the PPAM discussion.

12  
13 **Q. Does your silence on any of the issues, matters, findings, or lack of**  
14 **adjustment to and for other ratemaking components addressed or not in your**  
15 **testimony of any of the witnesses for the Company constitute your**  
16 **acceptance of their positions on such issues, matters or findings?**

17 A. No, it does not.

18  
19 **Q. Does that complete RUCO's recommendations for the other issues in this**  
20 **proceeding?**

21 A. Yes.

22

1 **Q. Does this conclude your direct testimony?**

2 A. Yes, it does.

3

## APPENDIX 1

### Qualifications of Timothy J. Coley

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#### WORK HISTORY

July 2000 – Present: **RESIDENTIAL UTILITY CONSUMER OFFICE**, Phoenix, Arizona  
**Public Utilities Analyst V.** The Residential Utility Consumer Office (RUCO) is a consumer advocate group providing residential consumers a voice in utility regulation and backed by a professional staff with legal and financial expertise. Responsibilities include: audited, reviewed and analyzed public utility companies various filings; prepared written testimony, schedules, financial statements, and spreadsheet models and analyses. Testified and stand cross-examination before the Arizona Corporation Commission.

January 2000 - April 2000: **JACKSON HEWITT TAX SERVICE**, Phoenix, Arizona  
**Tax Preparer.** Interviewed clients, determined tax situation, and explained how the tax laws benefited them in their specific situation. Ensured that each customer received every deduction that they were entitled. Prepared individual and business income tax returns, which best utilized each specific situation that minimized their tax obligations.

May 1998 - November 1999: **BENEFITS CONSULTING**, Cypress, Texas  
**Consultant Assistant.** The consulting firm specialized in alleged medical claim charges brought against the government of Harris County in Houston, Texas. Assisted in the review, examination, and analysis of the attested charges. Determined if the purported medical claim charges were prudent, customary, and reasonable for the alleged sustained injuries. The firm analyzed cases for both the County's Risk Department and Attorneys Office.

January 1992 - April 1998: **PHOENIX SERVICES**, Villa Rica, Georgia  
**Owner.** Provided landscaping services primarily in a high growth gated community where the Property Owners' Association approved mandated ordinances to be strictly adhered and abided by. Coordinated and supervised all aspects of projects from inception to completion, from master planning to site design to installation.

May 1989 - October 1991: **GEORGIA PUBLIC SERVICE COMMISSION**, Atlanta, GA  
**Senior Auditor.** The Public Service Commission (PSC) was responsible for regulating many intrastate telecommunications, electric, and gas utility industries operating in Georgia. It was the PSC's job to ensure that consumers received adequate and reliable service at reasonable rates. It must also assure the utility companies and investors an opportunity to earn a fair rate of return on prudent investments. The Commission participated significantly in Georgia's economic health and growth. I was promoted to the PSC's Electric/Gas Division where I examined, verified, and analyzed various financial documents, accounting records, reports, ledgers, and statements. In addition, I was assigned to automate the PSC's Electric Division where I utilized a computer application process that I had developed earlier while with the (PSC) Telecommunication Division. I was later ascribed to work in conjunction with the Engineering Department and established a procedure to track and compare costs of operation and maintenance (O&M) expenses of nuclear electric generating plants. This effort determined a comparative price per kilowatt-hour produced that influenced the awareness for the company to control the O&M costs, which benefited the consumer through lower prices.

- Developed computer application system that streamlined audit procedures by 30 – 40%.
- Various other schedules were implemented to track, maintain, and control costs.

### **GEORGIA PUBLIC SERVICE COMMISSION (continued)**

November 1986 - April 1989: **Georgia Public Service Commission**, Atlanta, Georgia **Auditor**. Regulated telecommunications and also oversaw the deregulation process that was currently under way in that industry. Examined and analyzed accounting records to determine financial status of companies and prepared financial reports concerning audit findings. Reviewed data including payroll, time sheets, purchase vouchers, cash receipt ledgers, financial reports, and disbursements. Verified statewide telephone company transaction classifications and documentation.

- Developed computer application utilizing Lotus to completely automate and streamline the entire telecommunication audit process. The results saved 25% in field audit time and produced a product of professional appearance.
- Created, coordinated, and implemented "Operational Project Training" automated procedure-training program. Trained and supervised staff of five auditors.
- Computerized "Desk Audit Analysis" program that identified 11 independent telephone companies in the state of over-earning and resulted in \$4.1M annual savings to the Georgia ratepayers affected.

October 1985 - October 1986: **Georgia Public Service Commission**, Atlanta, Georgia **Junior Auditor**. Assisted in planning and performing telecommunication audit engagements. Examined financial records, internal management control, correspondence, bills, and records of services delivered in order to verify or recommend compliance with company specifications contained in contracts, agreements, regulations, and/or laws.

- As a special project, I was assigned to analyze the results of a survey designed to evaluate "Interest in Organizing a Multi-State Nuclear Management Review Group" by the Director of Utilities. Wrote the draft and findings for the speech that was presented to all participatory commissions.

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### **PROFESSIONAL MEMBERSHIPS**

- Elected Member of the National Honor Society for Public Affairs and Administration.
- Active Member of Delta Sigma Pi - Professional Business Fraternity.

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### **SPECIAL TRAINING AND CERTIFICATES**

- The Graduate School of Business Administration - Michigan State University; completed the Annual Regulatory Studies Program of the National Association of Regulatory Utility Commissioners.
- Completed Graduate Exit Paper on "Deregulation of the Electric Industry".
- Attended Eastern Utility Rate School in 2000 and 2005.

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### **EDUCATION**

- Currently enrolled at Arizona State University - West in the Post Baccalaureate Graduate Certificate Program in Accountancy with two courses remaining.
- Master of Public Administration, State University of West Georgia, 1997, GPA 3.5.
- BS Business Management & Administration, Minor in Economics, Sorrel School of Business, Troy State University, 1985.
- AA Business Administration, Miles Community College, 1981.

## RESUME OF PUBLIC UTILITY RATE CASES & AUDITS PARTICIPATION

### Residential Utility Consumer Office For Years 2000 To Present

Arizona-American Water Company – Docket No. WS-01303A-05-0405

Arizona Public Service Co. – Docket No. E-01345A-03-0437

Tucson Electric Power Company – Docket No. E-01933A-04-0408

UniSource Merger – Docket No. E-04230A-03-0933

Arizona-American Water Company – Docket No. WS-01303A-02-0867

Arizona Water Company (Eastern Group) – Docket No. W01445A-02-0619

Litchfield Park Service Company – Docket Nos. W-01427A-01-0487 &  
SW-01428A-01-0487

Arizona Water Company (Northern Group) – Docket No. W-01445A-00-0962

Rio Verde Utilities, Inc. – Docket Nos. W-02156A-00-0321 &  
SW-02156A-00-0323

Arizona-American Water Company (Paradise Valley) –  
Docket Nos. W-01303A-05-0405 &  
W-01303A-05-0910

Arizona-American Water Company (Mohave District) –  
Docket No. WS-01303A-06-0014

Arizona-American Water Company (Sun City & Sun Cit West Wastewater) –  
Docket No. WS-01303A-06-0491

Arizona-American Water Company - Docket No. W-01303A-07-0209

Chaparral City Water Company – Docket No. W-02113A-07-0551

Arizona-American Water Company - Docket No. W-01303A-08-0227

**Residential Utility Consumer Office For Years 2000 To Present (cont'd)**

Arizona Water Company - Docket No. W-01445A-08-0440

Far West Water & Sewer Company – Docket No. WS-03478A-08-0608

Rio Rico Utilities, Inc. – Docket No. WS-02676A-08-09-0257

Bella Vista Water Company – Docket No. W-02465A-09-0411

Goodman Water Company – Docket No. W-02500A-10-0382

Arizona Water Company – Western Group – Docket No. W-01445A-10-0517

Pima Utility Company – Docket No. W-02199A-11-0329 et al.

Arizona Water Company, San Manuel System ACRM – Docket No. W-01445A-11-0310

Rio Rico Utilities, Inc. – Docket No. WS-02676A-12-0196

Tucson Electric Power Company – Docket No. E-01933A-12-0504

Far West Water & Sewer Company – Docket No. WS-03478A-12-0307

Litchfield Park Service Company – Docket No. SW-01428A-13-0042 et al.

Utility Source – Docket No. WS-04235A-13-0331

EPCOR – Docket No. WS-01303A-14-0010

Black Mountain Sewer Company – Docket No. SW-02361A-15-0207 et al.

**Georgia Public Service Commission For Years 1985 – 1991**

Atlanta Gas Light Company

Georgia Power Company

Atlanta Gas Light Company (Management Audit)

Georgia Power Company

Trenton Telephone Company

Fairmount Telephone Company

Ellijay Telephone Company

GTE, Inc.

ALL-TEL Telephone Company

Citizens Utilities Co.

Ball Ground Telephone Company

Lanett Telephone Company

Brantley Telephone Company

Blue Ridge Telephone Company

Waverly Hall Telephone Company

St. Marys Telephone Company

Darien Telephone Company

Statesboro Telephone Company

Statesboro Telephone Co-op

Wilkes Telephone Company

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TJC-19	1	SCOTTSDALE CAPACITY OPERATING LEASE CALCULATION CORRECTION
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TJC-21	1	RECLASSIFY CAPITALIZED EXPENDITURES TO O&M EXPENSES
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TJC-23	1	INTENTIONALLY LEFT BLANK
TJC-24	1	INTENTIONALLY LEFT BLANK
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TJC-30	1	COST OF CAPITAL

**RUCO RECOMMENDED REVENUE REQUIREMENT**

Line No.	Description	[A] Company OCRB/FVRB Cost	[B] RUCO OCRB/FVRB Cost
1	Fair Value Rate Base	\$ 3,412,024	\$ 3,235,735
2	Adjusted Test Year Operating Income (Loss)	\$ 258,613	\$ 412,582
3	Current Rate Of Return (L2 / L1)	7.58%	12.75%
4	Required Operating Income (L5 X L1)	\$ 294,082	\$ 236,994
5	Required Rate Of Return On Fair Value Rate Base	8.62%	7.32%
6	Operating Income Deficiency (L4 - L2)	\$ 35,469	\$ (175,588)
7	Gross Revenue Conversion Factor (TJC-1, Pg 2)	1.6050	1.6188
8	Increase In Gross Revenue Requirement (L7 X L6)	<b>\$ 56,929</b>	<b>\$ (284,244)</b>
9	Adjusted Test Year Revenues	\$ 2,239,848	\$ 2,240,800
10	Proposed Annual Revenue (L8 + L9)	\$ 2,296,777	\$ 1,956,557
11	Required Percentage Increase In Revenue (L8 / L9)	2.54%	-12.68%
12	Rate Of Return On Common Equity	10.80%	8.95%

**References:**

Column [A]: Company Schedules A-1, B-1, C-1, and D-1  
Column [B]: RUCO Schedule TJC-2, TJC-11 and TJC-30

**RUCO GROSS REVENUE CONVERSION FACTOR ("GRCF")**

LINE NO.	DESCRIPTION	[A]	[B]	[C]
<u>Calculation of Gross Revenue Conversion Factor:</u>				
1	Revenue	100.0000%		
2	Uncollectible Factor	0.0000%		
3	Revenues (L1 - L2)	100.0000%		
4	Combined Federal and State Income Tax and Property Tax Rate (Line 23)	38.2263%		
5	Subtotal (L3 - L4)	61.7737%		
6	<b>Revenue Conversion Factor (L1 / L5)</b>	<b>1.6188</b>		
<u>Calculation of Uncollectible Factor:</u>				
7	Unity	100.0000%		
8	Combined Federal and State Tax Rate (Line 17)	37.7677%		
9	One Minus Combined Income Tax Rate (L7 - L8)	62.2323%		
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	4.9000%		
14	Federal Taxable Income (L12 - L13)	95.1000%		
15	Applicable Federal Income Tax Rate (Col. [C], L53)	34.5612%		
16	Effective Federal Income Tax Rate (L14 x L15)	32.8677%		
17	Combined Federal and State Income Tax Rate (L13 + L16)		37.7677%	
<u>Calculation of Effective Property Tax Factor</u>				
18	Unity	100.0000%		
19	Combined Federal and State Income Tax Rate (Col. [B], L17)	37.7677%		
20	One Minus Combined Income Tax Rate (L18-L19)	62.2323%		
21	Property Tax Factor (Sch. TJC-9, Col. [B], L24)	0.7369%		
22	Effective Property Tax Factor (L20 x L21)		0.4586%	
23	Combined Federal and State Income Tax and Property Tax Rate (Col. [B], L17 + L22)			38.2263%
24	Required Operating Income (Sch. TJC-1, Col. [B] Line 4)	\$ 236,994		
25	Adjusted Test Year Operating Income (Loss) (Sch. TJC-1, Col. [B], L2)	412,582		
26	Required Increase in Operating Income (L24 - L25)		\$ (175,588)	
27	Income Taxes on Recommended Revenue (Col. [C], L52)	\$ 117,863		
28	Income Taxes on Test Year Revenue (Col. [A], L52)	224,424		
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		(106,561)	
30	Recommended Revenue Requirement (Sch. TJC-1, Col. [B], Line 10)	\$ 1,956,557		
31	Uncollectible Rate (L10)	0.0000%		
32	Uncollectible Expense on Recommended Revenue (L30 x L31)	\$ -		
33	Adjusted Test Year Uncollectible Expense (Sch. TJC-6, Col. [C], L32)	\$ -		
34	Required Increase in Revenue to Provide for Uncollectible Exp. (L32 - L33)		-	
35	Property Tax with Recommended Revenue (Sch. TJC-9, Col. [B], L19)	\$ 47,072		
36	Property Tax on Test Year Revenue (Sch. TJC-9, Col. [B], L20)	49,167		
37	Increase in Property Tax Due to Increase in Revenue (L35 - 36)		(2,095)	
38	Total Required Increase in Revenue (Col. [B], L26 + L29 + L34 + L37)		\$ (284,244)	
<u>Calculation of Income Tax:</u>				
39	Revenue (Sch. TJC-1, Col. [B], Line 9 & Sch. TJC-1, Col. [B], L10)	\$ 2,240,800	\$ (284,244)	\$ 1,956,557
40	Operating Expenses Excluding Income Taxes	\$ 1,603,795		\$ 1,601,700
41	Synchronized Interest (Col. [C], L57)	\$ 34,266		\$ 34,266
42	Arizona Taxable Income (L39 - L40 - L41)	\$ 602,739		\$ 320,590
43	Arizona State Income Tax Rate	4.9000%		4.9000%
44	Arizona Income Tax (L42 x L43)	\$ 29,534		\$ 15,709
45	Federal Taxable Income (L42 - L44)	\$ 573,205		\$ 304,881
46	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$ 7,500		\$ 7,500
47	Federal Tax on Second Income Bracket (\$51,001 - \$75,000) @ 25%	\$ 6,250		\$ 6,250
48	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	\$ 8,500		\$ 8,500
49	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	\$ 91,650		\$ 79,904
50	Federal Tax on Fifth Income Bracket (\$335,001 - \$1,000,000) @ 34%	\$ 80,990		\$ -
51	Total Federal Income Tax	\$ 194,890		\$ 102,154
52	Combined Federal and State Income Tax (L44 + L51)	\$ 224,424		\$ 117,863
53	Applicable Federal Income Tax Rate [Col. [C], L46 - Col. [A], L46] / [Col. [C], L40 - Col. [A], L40]			34.5612%
<u>Synchronized Interest Calculation:</u>				
55	Rate Base		\$	3,235,735
56	x Weighted Average Cost of Debt			1.0590%
57	Synchronized Interest		\$	34,266

**RUCO RATE BASE SUMMARY**

Line No.	Description	[A] Company As Filed OCRB/FVRB	[B] RUCO Recommended Adjustments	[C] RUCO As Adjusted OCRB/FVRB
1	Gross Utility Plant In Service	\$ 14,166,434	\$ (105,465)	\$ 14,060,969
2	Accumulated Depreciation	(8,654,682)	(102,246)	(8,756,927)
3	Net Utility Plant In Service (L1 + L2)	\$ 5,511,752	\$ (207,710)	\$ 5,304,042
<b>Less:</b>				
4	Advances In Aid Of Construction ("AIAC")	\$ (1,743,922)	\$ 1,129,184	\$ (614,739)
5	Contribution In Aid Of Construction ("CIAC")	(5,461,736)	(983,517)	(6,445,253)
6	Accumulated Amortization of CIAC	5,240,717	375,838	5,616,555
7	Net CIAC (L5 + L6)	\$ (221,019)	\$ (607,679)	\$ (828,698)
8	Customer Meter Deposits	\$ (8,570)	\$ -	\$ (8,570)
9	Customer Security Deposits	-	-	-
10	Gross Regulatory Liability - Scottsdale Capacity	-	(51,451)	(51,451)
11	Accumulated Amortization	-	20,581	20,581
12	Net Regulatory Liability	\$ -	\$ (30,871)	\$ (30,871)
13	Accumulated Deferred Income Taxes ("ADIT")	\$ (75,116)	\$ (377,821)	\$ (452,937)
<b>Plus:</b>				
14	Unamortized Finance Charges	-	-	-
15	Prepayments	9,493	(3,293)	6,200
16	Materials & Supplies	-	-	-
17	Cash Working Capital	(60,594)	(78,098)	(138,692)
18	TOTAL RATE BASE (Sum L's 3, 4, 7, 8, 9, 12 Thru 17)	\$ 3,412,024	\$ (176,288)	\$ 3,235,735

**References:**

Column [A]: Company Schedule B-1  
Column [B]: TJC-3, Columns [B] Thru [K]  
Column [C]: Column [A] + Column [B]

**RATE BASE ADJUSTMENTS**

Line No.	Description	[A] Company As Filed OCRR/EVRB	[B] Adjust No. 1 UPIS & A/D Reconstruct Adjustments	[C] Adjust No. 2 Plant Reallocations Per Staff DR DH-3	[D] Adjust No. 3 Remove Allocated Corp. AFUDC	[E] Adjust No. 4 Correct AFUDC	[F] Adjust No. 5 A/AAC Adjustment	[G] Adjust No. 6 CIAC & Amortization Adjustments	[H] Adjust No. 7 Scottsdale Capacity	[I] Adjust No. 8 Intentionally Left Blank	[J] Adjust No. 9 ADIT Adjustment	[K] Adjust No. 10 Working Capital Adjustments	[L] Total RUCO Adjustments	[M] Recommended RUCO OCRR/EVRB
1	Gross Utility Plant In Service	\$ 14,166,454	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (105,465)	\$ 14,060,989
2	Accumulated Depreciation	(8,654,682)	(58,209)	(7,683)	(97,465)	(317)	-	-	-	-	-	-	(102,246)	(8,756,927)
3	Net Utility Plant In Service (L1 + L2)	\$ 5,511,752	\$ (58,209)	\$ (66,245)	\$ (95,257)	\$ (317)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (207,710)	\$ 5,304,042
4	<b>LESS:</b>													
5	Advances in Aid Of Construction ("AIAC")	\$ (1,743,922)	\$ -	\$ -	\$ -	\$ -	\$ 1,129,184	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,129,184	\$ (614,739)
6	Contribution In Aid Of Construction ("CIAC")	(5,461,736)	-	-	-	-	-	(983,517)	-	-	-	-	(983,517)	(6,445,253)
7	Accumulated Amortization of CIAC	5,240,717	-	-	-	-	-	375,838	-	-	-	-	375,838	5,616,555
8	Net CIAC (L5 + L6)	\$ (221,019)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (607,679)	\$ -	\$ -	\$ -	\$ -	\$ (607,679)	\$ (828,698)
9	Customer Meter Deposits	(8,570)	-	-	-	-	-	-	-	-	-	-	-	(8,570)
10	Customer Security Deposits	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Gross Regulatory Liability - Scottsdale Capacity	-	-	-	-	-	-	-	(51,451)	-	-	-	(51,451)	(51,451)
12	Accumulated Amortization	-	-	-	-	-	-	-	20,581	-	-	-	20,581	20,581
13	Net Regulatory Liability	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (30,871)	\$ -	\$ -	\$ -	\$ (30,871)	\$ (30,871)
14	Accumulated Deferred Income Taxes ("ADIT")	\$ (75,116)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (377,821)	\$ -	\$ (377,821)	\$ (452,937)
15	<b>Plus:</b>													
16	Unamortized Finance Charges	-	-	-	-	-	-	-	-	-	-	-	-	-
17	Prepayments	9,493	-	-	-	-	-	-	-	-	-	-	-	-
18	Materials & Supplies	-	-	-	-	-	-	-	-	-	-	(3,293)	(3,293)	6,200
19	Cash Working Capital	(60,594)	-	-	-	-	-	-	-	-	-	(78,098)	(78,098)	(138,692)
20	<b>TOTAL RATE BASE (Sum L's 3, 4, 7, 8, 9, 12 Thru 17)</b>	\$ 3,412,024	\$ (58,209)	\$ (63,928)	\$ (95,257)	\$ (317)	\$ 1,129,184	\$ (607,679)	\$ (30,871)	\$ -	\$ (377,821)	\$ (81,391)	\$ (176,288)	\$ 3,235,735

**RUCO Adjustments:**  
 Adjustment No. 1: Reconstruct Utility Plant in Service ("UPIS") & Accum. Depr. ("AD") Balances as Filed by Company - See RUCO Rate Base Adjustment No. 1 on Schedule TJC-4(a) 2012 TY Plant Summary Schedule on pages 1 and 2, Column [B] at line 37;  
 Adjustment No. 2: UPIS & AD Reconstruct - See RUCO Adjustment No. 2 on Schedule TJC-4(a) UPIS & AD Summary Schedule on pages 1 and 2, Column [D] at line 37;  
 Adjustment No. 3: Remove Allocated Corporate Plant - See RUCO Adjustment No. 3 on Schedule TJC-4(a) on pages 1 and 2, Column [D] at line 37;  
 Adjustment No. 4: Correct Allowance of Funds Used During Construction (AFUDC) Rate as Filed by Company - See RUCO Schedule TJC-4(g) Adjustment No. 4 on page 1 of 2, Column [F], at line 37;  
 Adjustment No. 5: Correct Contributions in Aid of Construction (AIAC) Balance as Filed by Company - See RUCO Schedule TJC-5 on page 1 of 2 at line 11;  
 Adjustment No. 6: Correct Contributions in Aid of Construction (CIAC) & Accum. Amort. Balances as Filed by Company's Erroneous Calculation for Scottsdale Capacity Loan Terms Agreement - See RUCO Schedule TJC-7 on page 1 of 1 at lines 1 and 2 with Net Regulatory Liability at line 3;  
 Adjustment No. 7: Establish Regulatory Liability to Remove Profit and Credit Ratepayers for Company's Erroneous Calculation for Scottsdale Capacity Loan Terms Agreement - See RUCO Schedule TJC-7 on page 1 of 1 at line 27;  
 Adjustment No. 8: Intentionally Left Blank  
 Adjustment No. 9: RUCO Recommended 2014 TY End Accumulated Deferred Income Tax ("ADIT") Balance After RUCO Recommended Rate Base Adjustments - See RUCO Schedule TJC-9 ADIT on page 1 of 1 at line 27;  
 Adjustment No. 10: RUCO Recommended Allowance for Working Capital - See RUCO Schedule TJC-10 on page 1 of 1 at line 27;

**References:**  
 Column [A]: Company Schedule B-1  
 Column [B] Thru Column [K]: RUCO Recommended Rate Base Adjustments  
 Column [L]: Sum of RUCO Recommended Rate Base Adjustments of Columns [B] through [K]  
 Column [M]: Column [A] + Column [L]

**RATE BASE ADJUSTMENTS NO. 1(a)  
 SUMMARY OF UTILITY PLANT IN SERVICE ("UPIS") ADJUSTMENTS  
 TEST YEAR ENDED DECEMBER 31, 2014**

Line No.	Acct. No.	(A) Company Adjusted Plant in Service As Filed	(B) RUCO Adjustment #1 UPIS & AD Reconstruction	(C) RUCO Adjustment #2 Plant Reclassifications Per SART DR 1,3	(D) RUCO Adjustment #3 Remove Allocated Corp. UPIS	(E) RUCO Adjustment #4 AFUDC Adjustment Per RUCO DR 1,3	(F) RUCO Adjustment #5 Intentionally Left Blank	(G) RUCO Adjustment #6 Intentionally Left Blank	(H) RUCO Adjustment #7 Intentionally Left Blank	(I) RUCO Adjustment #8 Intentionally Left Blank	(J) Total UPIS Adjustments	(K) RUCO Recommended Plant in Service
1	351	Organization										
2	352	Franchise										
3	353	Land & Land Rights	47,1024	1,500							1,500	472,524
4	354	Structures & Improvements	3,001,815	(152,909)		(6)					(152,917)	2,036,899
5	355	Power Generation Equipment		3,839							3,839	3,839
6	360	Collection Sewers - Forced	1,130,000	568		(238)					340	1,130,430
7	361	Collection Sewers - Gravity	4,555,232			(51)					(51)	4,555,182
8	362	Special Collecting Structures										
9	363	Services to Customers	260,442			(7)					(7)	260,435
10	364	Flow Measuring Devices	31,688									31,688
11	365	Flow Measuring Installations	180,051									180,051
12	366	Reuse Services										
13	367	Reuse Meters And Installation										
14	370	Receiving Wells	1,026,182									1,026,182
15	371	Effluent Pumping Equipment	937,492			(3)					85,863	1,023,465
16	374	Reuse Distribution Reservoirs										
17	375	Reuse Distribution Reservoirs and DIS-System										
18	381	Treatment & Disposal Equipment	326,087									326,087
19	382	Outfall Sewer Lines	124,527			(2,211)					(2,211)	124,527
20	389	Other Sewer Plant & Misc. Equipment										
21	389	Other Sewer Plant & Misc. Equipment	993,742									993,742
22	390	Office Furniture & Equipment	286,536			(21)					(3,150)	283,386
23	390.1	Computers and Software									(62,224)	221,162
24	391	Transportation Equipment									62,224	62,224
25	392	Stores Equipment	80,215									80,215
26	393	Tools, Shop And Garage Equipment	28,042									28,042
27	394	Laboratory Equipment	10,683			(0)					(0)	10,683
28	395	Power Operated Equipment										
29	396	Communication Equipment	43,068								58,083	102,851
30	397	Miscellaneous Equip.										
31	398	Other Tangible Plant - Scotsdale Capacity	486,294									486,294
32		<b>Total Direct Plant</b>	<b>\$ 14,095,969</b>	<b>\$ (7,683)</b>	<b>\$ -</b>	<b>\$ (317)</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ (8,000)</b>	<b>\$ 14,089,889</b>
33	903	<b>Allocated Corporate Plant:</b>										
34	904	Land & Land Rights	8,429				(8,429)					
35	940.1	Structures and Improvements Computers and Software	75,829				(75,829)					
			13,207				(13,207)					
36		<b>Total Allocated Corporate Plant</b>	<b>\$ 97,465</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ (97,465)</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ (97,465)</b>	<b>\$ 0</b>
37		<b>Total Utility Plant in Service (UPIS)</b>	<b>\$ 14,193,434</b>	<b>\$ (7,683)</b>	<b>\$ -</b>	<b>\$ (317)</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ (105,465)</b>	<b>\$ 14,088,989</b>

**RUCO Adjustments:**

- Adjustment No. 1: Reconstruct Utility Plant in Service ("UPIS") & Accum. Depr. Balances as Filed by Company - See RUCO Adjustment No. 1 on Schedule T, JC-4(a), 2008 thru 2014 TY Plant Schedules on pages 1-7 at page 7 on line 37 and 39;
- Adjustment No. 2: Plant Reclassifications - See RUCO Schedule T, JC-4(c) on page 1 of 2, Column (B), at line 32;
- Adjustment No. 3: Remove Corporate Allocations for UPIS & AD;
- Adjustment No. 4: Correct AFUDC Rate - See RUCO Schedule T, JC-10 on page 1 of 1 at line 8;
- Adjustment No. 5: Intentionally Left Blank;
- Adjustment No. 6: Intentionally Left Blank;
- Adjustment No. 7: Intentionally Left Blank;
- Adjustment No. 8: Intentionally Left Blank;

**References:**

- Column (A): Company Schedule B-2 on page 3 Adjusted Test Year UPIS Balances as Filed;
- Column (B) thru (J): RUCO Recommended UPIS Adjustments;
- Column (J): Sum of Columns (B) Through (I) - RUCO Sum of Total Recommended UPIS Adjustments;

**RATE BASE ADJUSTMENT NO. 1(b)  
 SUMMARY OF ACCUMULATED DEPRECIATION ADJUSTMENTS  
 TEST YEAR ENDED DECEMBER 31, 2014**

Line No.	Acct No.	(A) Company Adjusted Accum. Depr. As Filed	(B) RUCO Accumulated Depreciation	(C) RUCO Adjustment #2 Plant Reclassifications Per Staff DR DH 3	(D) RUCO Adjustment #3 Remove Allocated Corp A/D	(E) AFUDC Adjustment Per RUCO DR 1.33	(F) RUCO Adjustment #5 Intentionally Left Blank	(G) RUCO Adjustment #6 Intentionally Left Blank	(H) RUCO Adjustment #7 Intentionally Left Blank	(I) RUCO Adjustment #8 Intentionally Left Blank	(J) RUCO Total Accum. Depr. Adjustments	(K) RUCO Total Accum. Depr. Recommended
<b>Direct Plant Accumulated Depreciation:</b>												
1	351	Organization	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2	352	Franchise	-	-	-	-	-	-	-	-	-	-
3	353	Land & Land Rights	-	-	-	-	-	-	-	-	-	-
4	354	Structures & Improvements	1,641,790	14,176	(15,076)	-	-	-	-	-	(900)	1,640,890
5	355	Power Generation Equipment	-	-	480	-	-	-	-	-	480	480
6	360	Collection Sewers - Forced	342,270	2,360	6	-	-	-	-	-	2,365	344,635
7	361	Collection Sewers - Gravity	3,547,500	14,283	-	-	-	-	-	-	14,283	3,561,783
8	362	Special Collecting Structures	-	-	-	-	-	-	-	-	-	-
9	363	Services to Customers	171,989	662	-	-	-	-	-	-	662	172,651
10	364	Flow Measuring Devices	31,668	0	-	-	-	-	-	-	0	31,668
11	365	Flow Measuring Installations	162,645	2,994	-	-	-	-	-	-	2,994	165,639
12	366	Reuse Services	-	-	-	-	-	-	-	-	-	-
13	367	Reuse Meters And Installation	-	-	-	-	-	-	-	-	-	-
14	370	Receiving Wells	499,821	5,178	-	-	-	-	-	-	5,178	505,000
15	371	Effluent Pumping Equipment	690,332	(2,585)	-	-	-	-	-	-	32,032	722,365
16	374	Reuse Distribution Reservoirs	-	-	-	-	-	-	-	-	-	-
17	375	Reuse Trans. and Dist. System	-	-	-	-	-	-	-	-	-	-
18	380	Treatment & Disposal Equipment	109,481	1,376	-	-	-	-	-	-	1,071	110,551
19	381	Plant Sewers	124,527	0	(305)	-	-	-	-	-	0	124,527
20	382	Outfall Sewer Lines	-	-	-	-	-	-	-	-	-	-
21	389	Other Sewer Plant & Misc. Equipment	656,611	10,461	(735)	-	-	-	-	-	9,725	666,336
22	390	Office Furniture & Equipment	173,186	2,497	(6,226)	-	-	-	-	-	(3,729)	169,457
23	390.1	Computers and Software	-	-	18,667	-	-	-	-	-	18,667	18,667
24	391	Transportation Equipment	56,967	(2,181)	-	-	-	-	-	-	(2,181)	54,786
25	392	Stores Equipment	-	-	-	-	-	-	-	-	-	-
26	393	Tools, Shop And Garage Equipment	4,592	62	-	-	-	-	-	-	62	4,654
27	394	Laboratory Equipment	7,152	125	-	-	-	-	-	-	125	7,277
28	395	Power Operated Equipment	-	-	-	-	-	-	-	-	-	-
29	396	Communication Equipment	26,962	676	-	-	-	-	-	-	-	-
30	397	Miscellaneous Equip.	-	-	-	-	-	-	-	-	-	-
31	398	Other Tangible Plant - Scottsdale Capacity	405,245	8,105	-	-	-	-	-	-	15,514	42,476
32		<b>Total Direct Plant</b>	<b>\$ 8,652,737</b>	<b>\$ 58,209</b>	<b>\$ 46,245</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 8,105</b>	<b>\$ 413,350</b>
<b>Allocated Corporate Plant A/D</b>												
33	903	Land & Land Rights	-	-	-	-	-	-	-	-	-	-
34	904	Structures and Improvements	1,944	-	(1,944)	-	-	-	-	-	(1,944)	(0)
35	940.1	Computers and Software	-	-	(264)	-	-	-	-	-	(264)	(264)
36		<b>Total Allocated Plant A/D</b>	<b>\$ 1,944</b>	<b>\$ -</b>	<b>\$ (2,208)</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ (2,208)</b>	<b>\$ (264)</b>
37		<b>Total Accumulated Depreciation (A/D)</b>	<b>\$ 8,654,682</b>	<b>\$ 58,209</b>	<b>\$ 46,245</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 102,246</b>	<b>\$ 8,756,927</b>

**RUCO Adjustments:**

- Adjustment No. 1: Reconstruct Utility Plant In Service (UPIS) & Accum. Depr. Balances as Filed by Company - See RUCO Adjustment No. 1 on Schedule TJC-4(b) 2008 thru 2014 TV Plant Schedules on pages 1-7 at page 7 on line 37 and 39;
- Adjustment No. 2: Plant Reclassifications - See RUCO Schedule TJC-4(c) on page 1 of 2, Column (B), at line 32;
- Adjustment No. 3: Remove Corporate Allocations for UPIS & A/D;
- Adjustment No. 4: Correct AFUDC Rate - See RUCO Schedule TJC-10 on page 1 of 1 at line 8;
- Adjustment No. 5: Intentionally Left Blank;
- Adjustment No. 6: Intentionally Left Blank;
- Adjustment No. 7: Intentionally Left Blank;
- Adjustment No. 8: Intentionally Left Blank;

UTILITY PLANT IN SERVICE ("UPIS") & UPIS ACCUMULATED DEPRECIATION ADJUSTMENT NO. 1  
 DIRECT PLANT RECONSTRUCTION SCHEDULE  
 TEST YEAR ENDED DECEMBER 31, 2014

Line No.	NARUC Account No.	Description	Vintage Year	Previously Allowed Deprec. Rate	Per Decision 7/1985				2008 (6 Months - July 1 through December 31, 2008)				Net Plant				
					Company Plant at 6/30/2008	Accum. Deprec. At 6/30/2008	Company Net Plant at 6/30/2008	Allowed Deprec. Rate	Plant Additions (Per Books)	Plant Adjustments	Adjusted Plant	Plant Retirements		Salvage AD City	Depreciation (Calculated)	Company Vintage Depreciation Formula	Plant Balance
1	351	Organization		0.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
2	352	Franchise		0.00%	-	-	-	-	-	-	-	-	-	-	-	-	
3	353	Land & Land Rights		0.00%	461,300	-	461,300	-	-	-	-	-	-	-	461,300	-	
4	354	Structures & Improvements		3.33%	2,506,220	1,069,268	1,470,950	-	-	(12,085)	-	-	-	-	2,548,135	1,131,797	
5	355	Power Generation Equipment		5.00%	-	237,047	470,845	-	-	(37)	-	-	-	-	707,855	244,126	
6	360	Collection Sewers - Forced		2.00%	707,892	2,896,891	1,298,057	-	-	(49)	-	-	-	-	4,284,899	3,029,740	
7	361	Collection Sewers - Gravity		2.00%	4,284,948	-	-	-	-	-	-	-	-	-	4,284,948	1,255,159	
8	362	Special Collecting Structures		2.00%	-	-	-	-	-	-	-	-	-	-	-	-	
9	363	Services to Customers		2.00%	198,723	151,259	47,464	-	-	-	-	-	-	-	198,723	153,246	
10	364	Flow Measuring Devices		10.00%	31,512	31,230	282	-	156	-	-	-	-	-	31,068	31,516	
11	365	Flow Measuring Installations		10.00%	179,622	48,777	130,845	-	-	-	-	-	-	-	179,622	57,758	
12	366	Reuse Services		2.00%	-	-	-	-	-	-	-	-	-	-	-	-	
13	367	Reuse Meters And Installation		8.33%	-	-	-	-	-	-	-	-	-	-	-	-	
14	370	Receiving Wells		3.33%	-	-	-	-	-	-	-	-	-	-	-	-	
15	371	Effluent Pumping Equipment		12.50%	932,871	285,616	647,255	-	311	-	-	-	-	-	933,162	301,151	
16	374	Reuse Distribution Reservoirs		2.50%	657,647	401,703	255,944	-	1,641	-	(4,461)	-	-	-	654,827	438,257	
17	375	Reuse Trans. and Dist. System		2.50%	-	-	-	-	-	-	-	-	-	-	-	-	
18	380	Treatment & Disposal Equipment		5.00%	181,828	14,930	166,898	-	(33,499)	-	-	-	-	-	148,329	19,057	
19	381	Plant Sewers		5.00%	124,527	105,608	18,919	-	-	-	-	-	-	-	124,527	108,721	
20	382	Outfall Sewer Lines		3.33%	-	-	-	-	-	-	-	-	-	-	-	-	
21	389	Other Sewer Plant & Misc. Equipment		6.67%	839,432	249,600	689,832	-	3,138	-	-	-	-	-	842,570	280,983	
22	390	Office Furniture & Equipment		20.00%	224,587	71,997	152,590	-	-	-	-	-	-	-	224,587	79,487	
23	390.1	Computers and Software		20.00%	-	-	-	-	-	-	-	-	-	-	-	-	
24	391	Transportation Equipment		4.00%	107,367	47,775	59,592	-	203	-	-	-	-	-	107,570	58,522	
25	392	Stores Equipment		5.00%	-	203	5,552	-	-	-	-	-	-	-	9,174	390	
26	393	Tools, Shop And Garage Equipment		10.00%	7,488	2,250	5,238	-	3,420	-	-	-	-	-	7,488	2,824	
27	394	Laboratory Equipment		5.00%	-	-	-	-	-	-	-	-	-	-	-	-	
28	395	Power Operated Equipment		10.00%	-	-	-	-	-	-	-	-	-	-	-	-	
29	396	Communication Equipment		10.00%	40,451	1,011	39,440	-	275	-	-	-	-	-	40,726	3,041	
30	397	Miscellaneous Equip.		10.00%	-	-	-	-	-	-	-	-	-	-	-	-	
31	398	Other Tangible Plant - Scottsdale Capacity		10.00%	486,294	97,259	389,035	-	-	-	-	-	-	-	486,294	121,574	
32		<b>RUCO Total Direct UPIS &amp; Accum. Depr.</b>			\$ 12,132,463	\$ 5,922,426	\$ 6,310,037	\$ -	\$ (36,526)	\$ (4,461)	\$ (36,526)	\$ (4,461)	\$ -	\$ 244,023	\$ 244,175	\$ 12,091,476	\$ 6,061,988



UTILITY PLANT IN SERVICE ("UPIS") & UPIS ACCUMULATED DEPRECIATION ADJUSTMENT NO. 1  
 DIRECT PLANT RECONSTRUCTION SCHEDULE  
 TEST YEAR ENDED DECEMBER 31, 2014

Line No.	NARUC Account No.	Description	Vintage Year	Previously Allowed Deprec. Rate	December 31, 2009			2010			Plant Balance	Accum. Deprec.	Net Plant
					Company Plant at 12/31/2009	Accum. Deprec. At 12/31/2009	Company Net Plant at 12/31/2009	Plant Additions (Per Books)	Plant Adjustments	Adjusted Plant Additions			
1	351	Organization		0.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2	352	Franchise		0.00%	-	-	-	-	-	-	-	-	-
3	353	Land & Land Rights		0.00%	461,300	-	461,300	-	-	-	461,300	-	461,300
4	354	Structures & Improvements		3.33%	2,682,194	1,214,712	1,367,482	(1,282)	104,634	-	2,686,828	1,302,441	1,384,387
5	355	Power Generation Equipment		5.00%	-	-	-	-	-	-	-	-	-
6	360	Collection Sewers - Forced		2.00%	752,358	258,728	493,630	(211)	93,901	-	846,269	274,714	571,545
7	361	Collection Sewers - Gravity		2.00%	4,412,032	3,116,710	1,295,322	(189)	150,571	-	4,562,602	3,206,456	1,356,146
8	362	Special Collecting Structures		2.00%	-	-	-	-	-	-	-	-	-
9	363	Services to Customers		2.00%	202,123	157,255	44,868	-	-	-	202,123	161,297	40,826
10	364	Flow Measuring Devices		10.00%	31,668	31,668	-	-	-	-	31,668	31,668	-
11	365	Flow Measuring Installations		10.00%	179,622	75,720	103,902	-	-	-	179,622	93,682	85,940
12	366	Reuse Services		2.00%	-	-	-	-	-	-	-	-	-
13	367	Reuse Meters And Installation		8.33%	-	-	-	-	-	-	-	-	-
14	370	Receiving Wells		3.33%	1,028,182	333,807	694,374	-	-	-	1,028,182	368,046	660,136
15	371	Effluent Pumping Equipment		12.50%	660,118	515,600	144,519	(189)	107,702	-	767,820	604,846	162,974
16	374	Reuse Distribution Reservoirs		2.50%	-	-	-	-	-	-	-	-	-
17	375	Reuse Trans. and Dist. System		2.50%	-	-	-	-	-	-	-	-	-
18	380	Treatment & Disposal Equipment		5.00%	148,832	26,486	122,346	(24)	186,017	-	334,849	38,578	296,271
19	381	Plant Sewers		5.00%	124,527	114,947	9,580	-	-	-	124,527	121,174	3,353
20	382	Outfall Sewer Lines		3.33%	-	-	-	-	-	-	-	-	-
21	389	Other Sewer Plant & Misc. Equipment		6.67%	943,557	343,885	599,672	-	500	-	944,057	406,837	537,220
22	390	Office Furniture & Equipment		20.00%	224,587	94,467	130,120	-	-	-	224,587	109,447	115,140
23	390.1	Computers and Software		20.00%	-	-	-	-	-	-	-	-	-
24	391	Transportation Equipment		20.00%	-	-	-	-	-	-	-	-	-
25	392	Stores Equipment		4.00%	107,570	80,036	27,534	-	-	-	107,570	101,550	6,020
26	393	Tools, Shop And Garage Equipment		5.00%	9,525	857	8,668	-	-	-	9,525	1,377	8,148
27	394	Laboratory Equipment		10.00%	7,488	3,373	4,115	(6)	1,753	-	11,278	4,122	7,156
28	395	Power Operated Equipment		5.00%	-	-	-	-	-	-	7,488	4,122	3,366
29	396	Communication Equipment		10.00%	40,726	7,113	33,613	-	-	-	40,726	11,186	29,540
30	397	Miscellaneous Equip.		10.00%	-	-	-	-	-	-	-	-	-
31	398	Other Tangible Plant - Scottsdale Capacity		10.00%	486,294	170,203	316,091	-	-	-	486,294	218,833	267,462
32		RUCO Total Direct UPIS & Accum. Depre.			\$ 12,402,703	\$ 6,545,567	\$ 5,857,136	\$ (1,902)	\$ 645,078	\$ -	\$ 13,047,781	\$ 7,056,253	\$ 5,991,527

UTILITY PLANT IN SERVICE ("UPIS") & UPIS ACCUMULATED DEPRECIATION ADJUSTMENT NO. 1  
 DIRECT PLANT RECONSTRUCTION SCHEDULE  
 TEST YEAR ENDED DECEMBER 31, 2014

NARUC Line No.	Description	Vintage Year	Previously Allowed Deprec. Rate	December 31, 2010				2011				Net Plant			
				Company Plant at 12/31/2010	Accum. Deprec. At 12/31/2010	Company Net Plant at 12/31/2010	Plant Additions (Per Books)	Plant Adjustments	Adjusted Plant Additions	Plant Retirements	Salvage A/D Only (Calculated)		Plant Balance	Accum. Deprec.	
1	Direct Plant:			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
2	351 Organization		0.00%												
3	352 Franchise		0.00%	461,300		461,300							461,300		
4	354 Land & Land Rights		0.00%	2,686,828	1,302,441	1,384,387		(1,491)	107,903	(8,614)			1,401,165		
5	355 Structures & Improvements		3.33%										1,384,952		
6	356 Power Generation Equipment		5.00%												
7	360 Collection Sewers - Forced		2.00%	846,259	274,714	571,545	99,047	(612)	98,435	(8,381)			284,159		
8	361 Collection Sewers - Gravity		2.00%	4,562,602	3,206,456	1,356,146	69,030	(699)	68,331	(5,072)			3,293,269		
9	362 Special Collecting Structures		2.00%										1,332,592		
10	363 Services to Customers		2.00%	202,123	161,297	40,826							36,783		
11	364 Flow Measuring Devices		10.00%	31,668	31,668								31,668		
12	365 Flow Measuring Installations		10.00%	179,622	93,682	85,940							179,622		
13	366 Reuse Services		2.00%												
14	367 Reuse Meters And Installation		8.33%												
15	370 Receiving Wells		3.33%	1,028,182	368,046	660,136							660,136		
16	371 Effluent Pumping Equipment		12.50%	767,820	604,846	162,974	76,164	(553)	75,611	(6,482)			165,764		
17	374 Reuse Distribution Reservoirs		2.50%												
18	375 Reuse Trans. and Dist. System		2.50%												
19	380 Treatment & Disposal Equipment		5.00%	334,849	38,578	296,271	33,223	(267)	32,956				31,668		
20	381 Plant Sewers		5.00%	124,527	121,174	3,353							3,353		
21	382 Outfall Sewer Lines		3.33%												
22	389 Other Sewer Plant & Misc. Equipment		6.67%	944,067	406,837	537,220	33,223	(11)	33,212				537,220		
23	390 Office Furniture & Equipment		20.00%	224,587	109,447	115,140							115,140		
24	391 Computers and Software		20.00%												
25	392 Transportation Equipment		4.00%	107,570	101,550	6,020							6,020		
26	393 Stores Equipment		5.00%	11,278	1,377	9,901	3,386	(30)	3,356				9,901		
27	394 Tools, Shop And Garage Equipment		10.00%	7,488	4,122	3,367							3,367		
28	395 Laboratory Equipment		5.00%												
29	396 Power Operated Equipment		10.00%	40,726	11,186	29,540							29,540		
30	397 Communication Equipment		10.00%												
31	398 Other Tangible Plant - Scottsdale Capacity		10.00%	486,294	218,833	267,462							267,462		
				\$ 13,047,781	\$ 7,096,283	\$ 5,991,627	\$ 423,467	\$ (3,664)	\$ 419,803	\$ (28,549)	\$ -	\$ 489,994	\$ 13,439,035	\$ 7,517,698	\$ 5,921,337

UTILITY PLANT IN SERVICE ("UPIS") & UPIS ACCUMULATED DEPRECIATION ADJUSTMENT NO. 1  
DIRECT PLANT RECONSTRUCTION SCHEDULE  
TEST YEAR ENDED DECEMBER 31, 2014

Line No.	NARUC Account No.	Description	Vintage Year	Previously Allowed Deprec. Rate	December 31, 2011			2012					Net Plant		
					Company Plant at 12/31/2011	Accum. Deprec. At 12/31/2011	Company Net Plant at 12/31/2011	Plant Additions (Per Books)	Plant Adjustments	Adjusted Plant Additions	Plant Retirements	Salvage A/D Only		Depreciation (Calculated)	Plant Balance
<b>Direct Plant:</b>															
1	351	Organization		0.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2	352	Franchise		0.00%	461,300	-	461,300	9,740	(16)	9,724	-	-	471,024	-	471,024
3	353	Land & Land Rights		0.00%	2,786,117	1,384,952	1,401,165	237,042	(1,140)	235,903	(11,217)	-	3,070,803	1,470,254	1,540,549
4	354	Structures & Improvements		3.33%	936,313	284,159	652,154	60,446	(407)	60,039	(671)	-	995,682	302,808	692,873
5	355	Power Generation Equipment		5.00%	4,625,861	3,293,269	1,332,592	30,677	(141)	30,536	(842)	-	4,655,556	3,385,241	1,270,314
6	360	Collection Sewers - Forced		2.00%	202,123	165,339	36,783	-	-	-	-	-	202,123	169,382	32,741
7	361	Collection Sewers - Gravity		2.00%	31,668	31,668	-	-	-	-	-	-	31,668	31,668	-
8	362	Special Collecting Structures		10.00%	179,622	111,644	67,977	430	-	430	-	-	180,051	129,628	50,423
9	363	Services to Customers		2.00%	-	-	-	-	-	-	-	-	-	-	-
10	364	Flow Measuring Devices		10.00%	1,028,182	402,284	625,897	59,529	(432)	59,098	(13,118)	-	1,028,182	436,523	591,659
11	365	Flow Measuring Installations		3.33%	836,949	671,185	165,764	-	-	-	-	-	882,929	685,526	197,402
12	366	Reuse Services		2.50%	-	-	-	-	-	-	-	-	-	-	-
13	367	Reuse Meters And Installation		8.33%	-	-	-	-	-	-	-	-	-	-	-
14	370	Receiving Wells		12.50%	-	-	-	-	-	-	-	-	-	-	-
15	371	Effluent Pumping Equipment		2.50%	-	-	-	-	-	-	-	-	-	-	-
16	374	Reuse Distribution Reservoirs		5.00%	-	-	-	-	-	-	-	-	-	-	-
17	375	Reuse Trans. and Dist. System		2.50%	-	-	-	-	-	-	-	-	-	-	-
18	380	Treatment & Disposal Equipment		5.00%	367,805	56,144	311,660	2,231	(19)	2,212	-	-	370,017	74,590	295,427
19	381	Plant Sewers		5.00%	124,527	124,527	-	-	-	-	-	-	124,527	124,527	-
20	382	Outfall Sewer Lines		3.33%	-	-	-	-	-	-	-	-	-	-	-
21	389	Other Sewer Plant. & Misc. Equipment		6.67%	977,269	470,913	506,356	683	-	683	-	-	977,952	536,120	441,832
22	390	Office Furniture & Equipment		6.67%	224,587	124,427	100,160	-	-	-	-	-	224,587	139,407	85,180
23	390.1	Computers and Software		20.00%	-	-	-	-	-	-	-	-	-	-	-
24	391	Transportation Equipment		20.00%	107,570	107,570	-	5,228	(7)	5,221	(33,699)	-	79,092	71,023	8,069
25	392	Stores Equipment		4.00%	-	-	-	-	-	-	-	-	-	-	-
26	393	Tools, Shop And Garage Equipment		5.00%	14,634	2,025	12,609	-	(24)	(24)	-	-	14,610	2,756	11,854
27	394	Laboratory Equipment		10.00%	7,488	4,871	2,618	-	(2)	(2)	-	-	7,486	5,619	1,867
28	395	Power Operated Equipment		5.00%	-	-	-	-	-	-	-	-	-	-	-
29	396	Communication Equipment		10.00%	40,726	15,259	25,467	-	-	-	-	-	40,726	19,331	21,395
30	397	Miscellaneous Equip.		10.00%	-	-	-	-	-	-	-	-	-	-	-
31	398	Other Tangible Plant - Scottsdale Capacity		10.00%	486,294	267,462	218,832	-	-	-	-	-	486,294	316,091	170,203
32						\$ 13,439,035	\$ 7,517,698	\$ 5,921,337	\$ 406,006	\$ (2,187)	\$ 403,819	\$ (59,546)	\$ 13,783,308	\$ 7,900,495	\$ 5,882,813
					RUCO Total Direct UPIS & Accum. Depr.										





**UTILITY PLANT IN SERVICE ("UPIS") ADJUSTMENT NO. 2  
SUMMARY OF RECLASSIFICATIONS OF UTILITY PLANT IN SERVICE ("UPIS")**

Line No.	Acct. No.	Description	[A] RUCO After Reconstruction	[B] RUCO UPIS Reclassification Adjustments	[C] RUCO Recommended UPIS Balances
1	351	Organization	\$ -	\$ -	\$ -
2	352	Franchise	-	-	-
3	353	Land & Land Rights	471,024	1,500	472,524
4	354	Structures & Improvements	3,091,815	(152,909)	2,938,906
5	355	Power Generation Equipment	-	3,839	3,839
6	360	Collection Sewers - Forced	1,130,090	568	1,130,658
7	361	Collection Sewers - Gravity	4,555,232	-	4,555,232
8	362	Special Collecting Structures	-	-	-
9	363	Services to Customers	260,442	-	260,442
10	364	Flow Measuring Devices	31,668	-	31,668
11	365	Flow Measuring Installations	180,051	-	180,051
12	366	Reuse Services	-	-	-
13	367	Reuse Meters And Installation	-	-	-
14	370	Receiving Wells	1,028,182	-	1,028,182
15	371	Effluent Pumping Equipment	937,492	85,996	1,023,488
16	374	Reuse Distribution Reservoirs	-	-	-
17	375	Reuse Trans. and Dist. System	-	-	-
18	380	Treatment & Disposal Equipment	326,067	(2,211)	323,857
19	381	Plant Sewers	124,527	-	124,527
20	382	Outfall Sewer Lines	-	-	-
21	389	Other Sewer Plant & Misc. Equipment	992,742	(3,150)	989,592
22	390	Office Furniture & Equipment	289,536	(62,224)	227,311
23	390.1	Computers and Software	-	62,224	62,224
24	391	Transportation Equipment	80,215	-	80,215
25	392	Stores Equipment	-	-	-
26	393	Tools, Shop And Garage Equipment	28,942	-	28,942
27	394	Laboratory Equipment	10,683	-	10,683
28	395	Power Operated Equipment	-	-	-
29	396	Communication Equipment	43,968	58,683	102,651
30	397	Miscellaneous Equip.	-	-	-
31	398	Other Tangible Plant - Scottsdale Capacity	486,294	-	486,294
32		Totals	\$ 14,068,969	\$ (7,683)	\$ 14,061,286

**References:**

Per Company Responses to Staff DR DH 3

**UPIS ACCUMULATED DEPRECIATION ADJUSTMENT NO. 2  
SUMMARY OF RECLASSIFICATIONS OF ACCUMULATED DEPRECIATION ("A/D")**

Line No.	Acct. No.	Description	[A]	[B]	[C]
			RUCO After Reconstruction	RUCO Accum. Depr. Reclassification Adjustments	RUCO Recommended Accum. Depr. Balances
1	351	Organization	\$ (21,100)	\$ -	\$ (21,100)
2	352	Franchise	-	-	-
3	353	Land & Land Rights	-	-	-
4	354	Structures & Improvements	(3,036,910)	251,726	(2,785,184)
5	355	Power Generation Equipment	-	-	-
6	360	Collection Sewers - Forced	-	-	-
7	361	Collection Sewers - Gravity	(915,114)	(14,624)	(929,738)
8	362	Special Collecting Structures	-	-	-
9	363	Services to Customers	-	-	-
10	364	Flow Measuring Devices	(87,092)	(681)	(87,773)
11	365	Flow Measuring Installations	(759,242)	43	(759,200)
12	366	Reuse Services	(199,379)	-	(199,379)
13	367	Reuse Meters And Installation	-	(145,981)	(145,981)
14	370	Receiving Wells	-	-	-
15	371	Effluent Pumping Equipment	(205,453)	-	(205,453)
16	374	Reuse Distribution Reservoirs	-	(59,973)	(59,973)
17	375	Reuse Trans. and Dist. System	-	-	-
18	380	Treatment & Disposal Equipment	(5,947,658)	-	(5,947,658)
19	381	Plant Sewers	(1,409,855)	-	(1,409,855)
20	382	Outfall Sewer Lines	(2,960,806)	-	(2,960,806)
21	389	Other Sewer Plant & Misc. Equipment	(335,259)	-	(335,259)
22	390	Office Furniture & Equipment	(15,227)	-	(15,227)
23	390.1	Computers and Software	(85,429)	-	(85,429)
24	391	Transportation Equipment	(239,369)	(1,093)	(240,462)
25	392	Stores Equipment	-	(5,910)	(5,910)
26	393	Tools, Shop And Garage Equipment	(200,543)	-	(200,543)
27	394	Laboratory Equipment	(5,839)	-	(5,839)
28	395	Power Operated Equipment	(11,341)	-	(11,341)
29	396	Communication Equipment	(290)	-	(290)
30	397	Miscellaneous Equip.	-	-	-
31	398	Other Tangible Plant - Scottsdale Capacity	(58,472)	-	(58,472)
32		Totals	<u>\$ (16,494,377)</u>	<u>\$ 23,507</u>	<u>\$ (16,470,870)</u>

**References:**

Per Company Responses to Staff DR DH 3

**RATE BASE ADJUSTMENT NO. 4**  
**CORRECT ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION (AFUDC)**

<u>Line No.</u>	<u>Acct. No.</u>	<u>Description</u>	<u>Amount</u>
		<b>AFUDC Adjustments:</b>	
1	354	Structures & Improvements	\$ (8)
2	360	Collection Sewers - Forced	(228)
3	361	Collection Sewers - Gravity	(51)
4	363	Services to Customers	(7)
5	371	Effluent Pumping Equipment	(3)
6	390	Office Furniture & Equipment	(21)
7	393	Tools, Shop, and Garage Equipment	(0)
8		<b>RUCO Total AFUDC Adjustment</b>	<b>\$ (317)</b>
9		<b>Plant Closure AFUDC Adjustment</b>	<b>\$ (736)</b>

**References:**

Company Response to RUCO DR 1.33

**RATE BASE ADJUSTMENT NO. 5  
ADVANCES IN AID OF CONSTRUCTION ("AIAC")**

Line No.	Description	Amount
<b><u>AIAC Adjustment #1:</u></b>		
1	Company AIAC as Filed	\$ 1,743,922
2	RUCO Recommended AIAC per Company Response to RUCO DR 1.27 to Remove LXA Double-Count	<u>1,598,255</u>
3	RUCO Recommended Increase/(Decrease) Adjustment #1	<u>\$ (145,667)</u>
<b><u>AIAC Adjustment #2:</u></b>		
4	Parkview Investors LXA - AIAC Converted to CIAC per Arizona Administrative Code Section R14-2-606	\$ 154,558
5	Pulte LXA - AIAC Converted to CIAC per Arizona Administrative Code Section R14-2-606	504,936
6	Heritage Healthcare - AIAC Converted to CIAC per Arizona Administrative Code Section R14-2-606	101,048
7	Ray & Alma School LLC - AIAC Converted to CIAC per Arizona Administrative Code Section R14-2-606	<u>222,975</u>
8	RUCO Recommended Increase/(Decrease) Adjustment #2	<u>\$ (983,517)</u>
9	Company Total AIAC as Filed	\$ 1,743,922
10	RUCO Total Recommended AIAC Balance	<u>614,739</u>
11	RUCO Total Recommended AIAC Increase /(Decrease) Adjustments #1 & #2 Above	<b><u>\$ (1,129,184)</u></b>

**References:**

AIAC Adjustment #1: Per Company Response to RUCO DR 1.27 and Staff DR 1.15.

AIAC Adjustment #2: Per Company Response to RUCO DR 1.27, Staff DR 1.15, and per Arizona Administrative Code Section R14-2-606 and per MXA Contractual Terms.

RATE BASE ADJUSTMENT NO. 5  
 ADVANCES IN AID OF CONSTRUCTION (AIAC) AND ACCUMULATED AMORTIZATION (AA) RECONSTRUCTION SCHEDULE

Line No.	AIAC Balance Per Decision No. 71865 6/30/2008	July 1 - December 31, 2008		2009		2010		2011		2012		2013		2014	
		Adds / (Refunds) or (Converted) to CIAC Activity	AIC Balance 12/31/2008	Adds / (Refunds) or (Converted) to CIAC Activity	AIC Balance 12/31/2009	Adds / (Refunds) or (Converted) to CIAC Activity	AIC Balance 12/31/2010	Adds / (Refunds) or (Converted) to CIAC Activity	AIC Balance 12/31/2011	Adds / (Refunds) or (Converted) to CIAC Activity	AIC Balance 12/31/2012	Adds / (Refunds) or (Converted) to CIAC Activity	AIC Balance 12/31/2013	Adds / (Refunds) or (Converted) to CIAC Activity	AIC Balance 12/31/2014
1	AIAC in Process	\$ 32,150	\$ -	\$ 18,712	\$ 50,863	\$ 19,706	\$ 70,568	\$ -	\$ 70,568	\$ 2,500	\$ 73,068	\$ 10,100	\$ 83,168	\$ 10,951	\$ 94,119
2	AIAC	1,679,110	(165,953)	-	1,513,157	164,139	1,677,296	-	1,677,296	(504,936)	1,172,360	-	1,172,360	(651,740)	520,620
3	Total	\$ 1,711,260	\$ (165,953)	\$ 18,712	\$ 1,564,020	\$ 183,844	\$ 1,747,864	\$ -	\$ 1,747,864	\$ (502,436)	\$ 1,245,428	\$ 10,100	\$ 1,255,528	\$ (640,790)	\$ 614,739

**RATE BASE ADJUSTMENT NO. 6**  
**CONTRIBUTIONS IN AID OF CONSTRUCTION (CIAC) & AMORTIZATIONS RECONSTRUCTION SCHEDULE**

Line No.	Description	Amount
<b><u>Gross CIAC:</u></b>		
1	Company Gross CIAC as Filed	\$ 5,461,736
2	RUCO Recommended Gross CIAC	6,445,253
3	RUCO Recommended Increase/(Decrease) Adjustment	<u>\$ 983,517</u>
<b><u>Accumulated Amortization of CIAC:</u></b>		
4	Company Accumulated Amortization of CIAC as Filed	\$ (5,240,717)
5	RUCO Recommended Accumulated Amortization of CIAC	(5,616,555)
6	RUCO Recommended Increase/(Decrease) Adjustment	<u>\$ (375,838)</u>
7	Company Net CIAC as Filed	\$ 221,019
8	RUCO Recommended Net CIAC	<u>828,698</u>
9	RUCO Net Increase/Decrease Adjustment	<u>\$ 607,679</u>

**References:**

Per Company Response to RUCO DR 1.27 and Staff DR 1.15.

Per Company Response to RUCO DR 1.27, Staff DR 1.15, and per Arizona Administrative Code Section R14-2-606 and per MXA Contractual Terms.

CONTRIBUTIONS IN AID CONSTRUCTION (CIAC) & CIAC ACCUMULATED AMORTIZATION (A/A) ADJUSTMENTS NO. 6  
 CIAC RECONSTRUCTION SCHEDULES  
 TEST YEAR ENDED DECEMBER 31, 2014

Line No.	NARUC Account No.	Description	Vintage Year	RUCC Amortization Rate Calculated	Per Decision No. 71865			After Decision No. 71865			2008 (6 Months - July 1 through December 31, 2008)				Net CIAC		
					Gross CIAC Balance at 6/30/2008	Accumulated Amortization at 6/30/2008	Net CIAC at 6/30/2008	CIAC Adjustments 7/1/2008	Gross CIAC Balance at 7/1/2008	Net CIAC at 7/1/2008	CIAC Additions (Per Books)	Converted CIAC Adjustments	Adjusted CIAC Additions	Amortization Expense (Calculated)		Gross CIAC Balance	Accumulated Amortization
1		Various Contributions-in-Aid-of-Construction		2.10%	\$ 5,232,139	4,214,384	1,017,755	154,558	5,386,697	1,172,313	-	-	-	113,023	5,386,697	4,327,407	1,059,290
2		<b>RUCC Total Direct UPIS &amp; Accum. Depr.</b>			\$ 5,232,139	4,214,384	1,017,755	154,558	5,386,697	1,172,313	-	-	-	113,023	5,386,697	4,327,407	1,059,290
3		Company As Filed			\$ 5,232,139	4,214,384	1,017,755	-	5,232,139	1,017,755	-	-	-	73,200	5,232,139	4,287,583	944,556
4		RUCC Gross CIAC & Accum. Amort. Adjustments			\$ -	-	0	154,558	154,558	154,558	-	-	-	39,824	154,558	39,824	114,735

CONTRIBUTIONS IN AID CONSTRUCTION (CIAC) & CIAC ACCUMULATED AMORTIZATION (A/A) ADJUSTMENTS NO. 6  
 CIAC RECONSTRUCTION SCHEDULES  
 TEST YEAR ENDED DECEMBER 31, 2014

NARUC Line Account No.	Description	Virilage Year	RUCO Amortization Rate Calculated	CIAC Balances from Previous Period End		Period Ending December 31, 2009							
				Gross CIAC Balance at 12/31/2008	Accumulated Amortization at 12/31/2008	Net CIAC at 12/31/2008	CIAC Additions (Per Books)	Converted AIAC to CIAC Adjustments	Adjusted CIAC Additions	Amortization Expense (Calculated)	Gross CIAC Balance	Accumulated Amortization	Net CIAC
1	Various Contributions-in-Aid-of-Construction		4.11%	5,386,697	4,327,407	1,059,290	-	-	-	221,453	5,386,697	4,548,860	837,837
2	<b>RUCO Total Direct UPIS &amp; Accum. Depre.</b>			<b>\$ 5,386,697</b>	<b>\$ 4,327,407</b>	<b>\$ 1,059,290</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 221,453</b>	<b>\$ 5,386,697</b>	<b>\$ 4,548,860</b>	<b>\$ 837,837</b>
3	Company As Filed			\$ 5,232,139	\$ 4,287,583	\$ 944,556	\$ -	\$ -	\$ -	\$ 215,129	\$ 5,232,139	\$ 4,502,712	\$ 729,427
4	RUCO Gross CIAC & Accum. Amort. Adjustments			\$ 154,558	\$ 39,824	\$ 114,735	\$ -	\$ -	\$ -	\$ 6,323	\$ 154,558	\$ 46,148	\$ 108,410

**CONTRIBUTIONS IN AID CONSTRUCTION (CIAC) & CIAC ACCUMULATED AMORTIZATION (AIA) ADJUSTMENTS NO. 6**  
**CIAC RECONSTRUCTION SCHEDULES**  
**TEST YEAR ENDED DECEMBER 31, 2014**

NARUC Line Account No.	Description	Vintage Year	RUCO Amortization Rate Calculated	CIAC Balances from Previous Period End		Period Ending December 31, 2010						Net CIAC	
				Gross CIAC Balance at 12/31/2009	Accumulated Amortization at 12/31/2009	Net CIAC at 12/31/2009	CIAC Additions (Per Books)	Converted AIAC to CIAC Adjustments	Adjusted CIAC Additions	Amortization Expense (Calculated)	Gross CIAC Balance		Accumulated Amortization
1	Various Contributions-in-Aid-of-Construction		4.07%	5,386,697	4,548,860	837,837	-	-	-	219,121	5,386,697	4,767,981	618,716
2	<b>RUCO Total Direct UPIS &amp; Accum. Depre.</b>			<b>\$ 5,386,697</b>	<b>\$ 4,548,860</b>	<b>\$ 837,837</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 219,121</b>	<b>\$ 5,386,697</b>	<b>\$ 4,767,981</b>	<b>\$ 618,716</b>
3	Company As Filed			\$ 5,232,139	\$ 4,502,712	\$ 729,427	\$ -	\$ -	\$ -	\$ 212,825	\$ 5,232,139	\$ 4,715,537	\$ 516,602
4	RUCO Gross CIAC & Accum. Amort. Adjustments			\$ 154,558	\$ 46,148	\$ 108,410	\$ -	\$ -	\$ -	\$ 6,296	\$ 154,558	\$ 52,444	\$ 102,114

**CONTRIBUTIONS IN AID CONSTRUCTION (CIAC) & CIAC ACCUMULATED AMORTIZATION (A/A) ADJUSTMENTS NO. 6**  
**CIAC RECONSTRUCTION SCHEDULES**  
**TEST YEAR ENDED DECEMBER 31, 2014**

NARUC Line Account No.	Description	Vintage Year	RUCO Amortization Rate Calculated	CIAC Balances from Previous Period End		Period Ending December 31, 2011							
				Gross CIAC Balance at 12/31/2010	Accumulated Amortization at 12/31/2010	Net CIAC at 12/31/2010	CIAC Additions (Per Books)	Converted AIAC to CIAC Adjustments	Adjusted CIAC Additions	Amortization Expense (Calculated)	Gross CIAC Balance	Accumulated Amortization	Net CIAC
1	Various Contributions-in-Aid-of-Construction		3.81%	5,386,697	4,767,981	618,716	-	-	-	205,317	5,386,697	4,973,298	413,399
2	<b>RUCO Total Direct UPIS &amp; Accum. Depre.</b>			<b>\$ 5,386,697</b>	<b>\$ 4,767,981</b>	<b>\$ 618,716</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 205,317</b>	<b>\$ 5,386,697</b>	<b>\$ 4,973,298</b>	<b>\$ 413,399</b>
3	Company As Filled			\$ 5,232,139	\$ 4,715,537	\$ 516,602	\$ -	\$ -	\$ -	\$ 205,587	\$ 5,232,139	\$ 4,921,124	\$ 311,015
4	RUCO Gross CIAC & Accum. Amort. Adjustments			\$ 154,558	\$ 52,444	\$ 102,114	\$ -	\$ -	\$ -	\$ (269)	\$ 154,558	\$ 52,175	\$ 102,383

**CONTRIBUTIONS IN AID CONSTRUCTION (CIAC) & CIAC ACCUMULATED AMORTIZATION (AIA) ADJUSTMENTS NO. 6**  
**CIAC RECONSTRUCTION SCHEDULES**  
**TEST YEAR ENDED DECEMBER 31, 2014**

NARUC Line Account No.	Description	Vintage Year	RUCO Amortization Rate Calculated	CIAC Balances from Previous Period End		Period Ending December 31, 2012						Net CIAC	
				Gross CIAC Balance at 12/31/2011	Accumulated Amortization at 12/31/2011	Net CIAC at 12/31/2011	CIAC Additions (Per Books)	Converted AIA to CIAC Adjustments	Adjusted CIAC Additions	Amortization Expense (Calculated)	Gross CIAC Balance		Accumulated Amortization
1	Various Contributions-in-Aid-of-Construction		3.38%	5,386,697	4,973,298	413,399	-	504,936	504,936	199,244	5,891,633	5,172,542	719,091
2	<b>RUCO Total Direct UPIS &amp; Accum. Depre.</b>			\$ 5,386,697	\$ 4,973,298	\$ 413,399	\$ -	\$ 504,936	\$ 504,936	\$ 199,244	\$ 5,891,633	\$ 5,172,542	\$ 719,091
3	Company As Filed			\$ 5,232,139	\$ 4,921,124	\$ 311,015	\$ -	\$ -	\$ -	\$ 187,459	\$ 5,232,139	\$ 5,108,582	\$ 123,557
4	RUCO Gross CIAC & Accum. Amort. Adjustments			\$ 154,558	\$ 52,175	\$ 102,383	\$ -	\$ 504,936	\$ 504,936	\$ 11,785	\$ 659,494	\$ 63,960	\$ 595,534

CONTRIBUTIONS IN AID CONSTRUCTION (CIAC) & CIAC ACCUMULATED AMORTIZATION (AJA) ADJUSTMENTS NO. 6  
 CIAC RECONSTRUCTION SCHEDULES  
 TEST YEAR ENDED DECEMBER 31, 2014

NARUC Line Account No.	Description	Vintage Year	RUCO Amortization Rate Calculated	CIAC Balances from Previous Period End		Period Ending December 31, 2013						Net CIAC	
				Gross CIAC Balance at 12/31/2012	Accumulated Amortization at 12/31/2012	Net CIAC at 12/31/2012	CIAC Additions (Per Books)	Converted AJAC to CIAC Adjustments	Adjusted CIAC Additions	Amortization Expense (Calculated)	Gross CIAC Balance		Accumulated Amortization
1	Various Contributions-in-Aid-of-Construction		3.54%	5,891,633	5,172,542	719,091	-	-	-	208,530	5,891,633	5,381,072	510,561
2	<b>RUCO Total Direct UPIS &amp; Accum. Depre.</b>			<b>\$ 5,891,633</b>	<b>\$ 5,172,542</b>	<b>\$ 719,091</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 208,530</b>	<b>\$ 5,891,633</b>	<b>\$ 5,381,072</b>	<b>\$ 510,561</b>
3	Company As Filed			\$ 5,232,139	\$ 5,108,582	\$ 123,557	\$ -	\$ -	\$ -	\$ 123,557	\$ 5,232,139	\$ 5,232,139	\$ (0)
4	RUCO Gross CIAC & Accum. Amort. Adjustments			\$ 659,494	\$ 63,960	\$ 595,534	\$ -	\$ -	\$ -	\$ 84,973	\$ 659,494	\$ 148,333	\$ 510,561

CONTRIBUTIONS IN AID CONSTRUCTION (CIAC) & CIAC ACCUMULATED AMORTIZATION (AJA) ADJUSTMENTS NO. 6  
 CIAC RECONSTRUCTION SCHEDULES  
 TEST YEAR ENDED DECEMBER 31, 2014

NARUC Line Account No.	Description	Vintage Year	RUCO Amortization Rate Calculated	CIAC Balances from Previous Period End		Period Ending December 31, 2014						Net CIAC	
				Gross CIAC Balance at 12/31/2013	Accumulated Amortization at 12/31/2013	Net CIAC at 12/31/2013	CIAC Additions (Per Books)	Converted AIAC to CIAC Adjustments	Adjusted CIAC Additions	Amortization Expense (Calculated)	Gross CIAC Balance		Accumulated Amortization
1	Various Contributions-in-Aid-of-Construction		3.65%	5,891,633	5,381,072	510,561	-	553,620	553,620	235,483	6,445,253	5,616,555	828,698
2	<b>RUCO Total Direct UPIS &amp; Accum. Depre.</b>			\$ 5,891,633	\$ 5,381,072	\$ 510,561	\$ -	\$ 553,620	\$ 553,620	\$ 235,483	\$ 6,445,253	\$ 5,616,555	\$ 828,698
3	Company As Filed			\$ 5,232,139	\$ 5,232,139	\$ (0)	\$ -	\$ 229,597	\$ 229,597	\$ 8,578	\$ 5,461,736	\$ 5,240,717	\$ 221,019
4	RUCO Gross CIAC & Accum. Amort. Adjustments			\$ 659,494	\$ 148,933	\$ 510,561	\$ -	\$ 324,023	\$ 324,023	\$ 226,905	\$ 983,517	\$ 375,838	\$ 607,679

**RATE BASE ADJUSTMENT NO. 7  
SCOTTSDALE CAPACITY REGULATORY LIABILITY**

<u>Line No.</u>	<u>Description</u>	<u>Amount</u>
1	RUCO Scottsdale Capacity Over-Collection January 1, 1997 thru June 30, 2016 (See Work Paper for Calculation)	<u>\$ 51,451</u>
2	Amortization Period - 2 1/2 Years or 40% per Annum	<u>\$ 20,581</u>
3	RUCO Net Regulatory Liability	<b>\$ 30,871</b>

**References:**

Company Response to RUCO DR 3.08 and 6.05

**RATE BASE ADJUSTMENT NO. 8  
INTENTIONALLY LEFT BLANK**

<u>Line</u> <u>No.</u>	<u>Description</u>	<u>Amount</u>
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References:

**RATE BASE ADJUSTMENT NO. 9  
ACCUMULATED DEFERRED INCOME TAXES (ADIT)**

Line No.	Deferred Income Tax as of December 31, 2014	Water & Sewer Adjusted Book Value	Water & Sewer Tax Value	Probability of Realization of Future Tax Benefit	Deductible TD (Taxable TD) Expected to be Realized	Effective Tax Rate	Future Tax Asset Current	Future Tax Asset Non Current	Future Tax Liability Current	Future Tax Liability Non Current
1										
2										
3										
4										
5										
6	Plant-in-Service	\$ 13,588,445 <sup>1</sup>								
7	Accum. Deprec.	(8,756,927) <sup>1</sup>								
8	CIAC	(651,336) <sup>3</sup>								
9	Fed. Fixed Assets	\$ 4,180,182	\$ 2,548,005 <sup>2</sup>	100.0%	\$ (1,632,177)	32.33%				(527,748)
10										
11	State Fixed Assets	\$ 4,180,182	\$ 4,240,435 <sup>2</sup>	100.0%	\$ 60,253	4.900%		2,952		
12										
13	Fed & State AIAC		192,992 <sup>4</sup>	100.0%	\$ 192,992 <sup>4</sup>	37.23%	\$	\$ 71,858		
14										
15										
16										
17	Net Asset (Liability)						\$	\$ (452,937)	\$	\$ (527,748)
18										
19	Allocated Corporate ADIT <sup>5</sup>									
20										
21	Net Asset (Liability)						\$	\$ (452,937)	\$	\$ (527,748)
22										
23	Allocation Factor							1.0000		
24										
25	Net Asset (Liability)						\$	\$ (452,937)	\$	\$ (527,748)
26										
27	Per Company Filing						\$	\$ (75,116)	\$	\$ (527,748)
28										
29	Adjustment to DIT						\$	\$ (377,821)	\$	\$ (527,748)
30										
31										
32										
33										
34										
35										
36										
37										
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43										
44										

Footnotes - See page 7.1

**RATE BASE ADJUSTMENT NO. 10  
CASH WORKING CAPITAL**

Line No.	Description	[A] Company Adjusted Test Year As Filed	[B] RUCO Expense Adjustments	[C] RUCO Recommended Expense	[D] Revenue Lag Days	[E] Expense (Lead)/Lag Days	[F] Net (Lead)/Lag Days Col. [D] - Col. [E]	[G] (Lead)/Lag Factor Col. [F] / 365	[H] Cash Working Capital Requirement Col. [C] x Col. [G]
1	Salaries and Wages	\$ 242,213	\$ -	\$ 242,213	0.56	20.00	(19.44)	\$ (12,901)	
2	Purchased WasteWater Treatment	5,647	-	5,647	0.56	28.22	(27.66)	(428)	
3	Sludge Removal	-	-	-	0.56	-	0.56	-	
4	Purchased Power	65,112	-	65,112	0.56	34.37	(33.81)	(6,032)	
5	Fuel for Power Production	-	-	-	0.56	-	0.56	-	
6	Chemicals	19,215	4,773	23,988	0.56	4.94	(4.38)	(288)	
7	Materials and Supplies	23,875	-	23,875	0.56	(20.42)	20.98	1,372	
8	Contractual Services - Professional	313,511	-	313,511	0.56	20.05	(19.49)	(16,742)	
9	Contractual Services - Testing	8,117	-	8,117	0.56	27.61	(27.05)	(602)	
10	Contractual Services - Other	361,855	(27,147)	334,708	0.56	46.68	(46.12)	(42,294)	
11	Rents	23,807	-	23,807	0.56	27.28	(26.72)	(1,743)	
12	Transportation	15,371	-	15,371	0.56	24.75	(24.19)	(1,019)	
13	Insurance	11,720	-	11,720	0.56	(182.50)	183.06	5,878	
14	Scottsdale Capacity (Operating Lease)	164,522	(2,702)	161,820	0.56	15.00	(14.44)	(6,403)	
15	Miscellaneous	60,542	(268)	60,274	0.56	8.56	(8.00)	(1,321)	
16	Depreciation and Amortization	-	(253,139)	(253,139)	0.56	-	-	-	
17	Taxes Other Than Income	-	-	-	0.56	-	0.56	-	
18	Property Taxes <sup>1</sup>	49,897	(311)	49,586	0.56	213.96	(213.40)	(28,991)	
19	Income Taxes <sup>1</sup>	153,021	92,444	245,465	0.56	37.00	(36.44)	(24,507)	
20	<b>Total Operating Expenses</b>	<b>\$ 1,518,424</b>	<b>\$ (186,349)</b>	<b>\$ 1,332,075</b>					
21	Interest on Proposed Long-Term Debt	-	68,915	68,915	0.56	14.71	(14.15)	(2,672)	
22	Revenue Taxes and Assessments	-	-	-	0.56	-	0.56	-	
23	Regulatory Commission Expense	150,000	(150,000)	-	0.56	(136.54)	137.10	-	
24	<b>Total Cash Working Capital Expenses</b>	<b>\$ 1,668,424</b>	<b>\$ (267,435)</b>	<b>\$ 1,400,990</b>					
25	Total RUCO Recommended Cash Working Capital							\$ (138,692)	
26	Total Company Proposed Cash Working Capital							(60,594)	
27	RUCO Cash Working Capital Adjustment							<b>\$ (78,098)</b>	

<sup>1</sup> At Proposed Rates

**OPERATING INCOME SUMMARY**

Line No.	Description	[A] Company Adjusted Test Year As Filed	[B] RUCO Recommended Adjustments	[C] RUCO Recommended Adjusted Test Year Amounts	[D] RUCO Recommended Changes	[E] RUCO Recommended Amounts
<b>Revenues:</b>						
1	Metered Water Revenues	\$ 2,212,684	\$ 952	\$ 2,213,636	\$ (284,244)	\$ 1,929,392
2	Unmetered Water Revenues	16,067	-	16,067	-	16,067
3	Other Water Revenues	11,098	-	11,098	-	11,098
4	<b>Total Revenues</b>	<u>\$ 2,239,848</u>	<u>\$ 952</u>	<u>\$ 2,240,800</u>	<u>\$ (284,244)</u>	<u>\$ 1,956,557</u>
<b>Operating Expenses:</b>						
5	Salaries and Wages	\$ 242,213	\$ -	\$ 242,213	\$ -	\$ 242,213
6	Purchased WasteWater Treatment	5,647	-	5,647	-	5,647
7	Sludge Removal	-	-	-	-	-
8	Purchased Power	65,112	-	65,112	-	65,112
9	Fuel for Power Production	-	-	-	-	-
10	Chemicals	19,215	4,773	23,988	-	23,988
11	Materials and Supplies	23,875	-	23,875	-	23,875
12	Contractual Services - Professional	313,511	-	313,511	-	313,511
13	Contractual Services - Testing	8,117	-	8,117	-	8,117
14	Contractual Services - Other	361,855	(27,147)	334,708	-	334,708
15	Rents	23,807	-	23,807	-	23,807
16	Transportation	15,371	-	15,371	-	15,371
17	Insurance	11,720	-	11,720	-	11,720
18	Regulatory Commission - Rate Case Expense	-	33,333	33,333	-	33,333
19	Scottsdale Capacity (Operating Lease)	164,522	(2,702)	161,820	-	161,820
20	Miscellaneous	60,542	(268)	60,274	-	60,274
21	Depreciation and Amortization	484,271	(253,139)	231,132	-	231,132
22	Taxes Other Than Income	-	-	-	-	-
23	Property Taxes	49,478	(311)	49,167	(2,095)	47,072
24	Income Taxes	131,980	92,444	224,424	(106,561)	117,863
25	<b>Total Operating Expenses</b>	<u>\$ 1,981,235</u>	<u>\$ (153,016)</u>	<u>\$ 1,828,219</u>	<u>\$ (108,656)</u>	<u>\$ 1,719,563</u>
26	<b>Operating Income</b>	<u>\$ 258,613</u>	<u>\$ 153,968</u>	<u>\$ 412,582</u>	<u>\$ (175,588)</u>	<u>\$ 236,994</u>

**References:**

- Column [A]: Company Schedule C-1;
- Column [B]: RUCO Recommended Total Adjustments Per Schedule TJC-12 on pages 1-2 at page 2 in Column [S] at line 26;
- Column [C]: Column [A] + [B] - RUCO Recommended Adjusted Test Year Amounts Per Schedule TJC-12 on page 2 of 2 in Column [T];
- Column [D]: RUCO Recommended Increase/(Decrease) to Revenue Requirement;
- Column [E]: Column [C] + [D] - RUCO Recommended Increase/(Decrease) Amounts for Revenue Requirement.

RUCO OPERATING INCOME ADJUSTMENTS

Line No.	Description	[A] Company Adjusted Test Year As Filed	[B] Adj. No. 1 Depreciation Expense	[C] Adj. No. 2 Property Taxes	[D] Adj. No. 3 Intentionally Left Blank	[E] Adj. No. 4 Revenue Accrual Fix	[F] Adj. No. 5 Miscellaneous Expense	[G] Adj. No. 6 Intentionally Left Blank	[H] Adj. No. 7 Scottsdale Capacity Exp.	[I] Adj. No. 8 Intentionally Left Blank	[J] Adj. No. 9 Media Reclass From Capital to Expense
<b>Revenues:</b>											
1	Metered Water Revenues	\$ 2,212,684	-	\$ -	-	\$ 952	-	-	\$ -	-	-
2	Unmetered Water Revenues	16,067	-	-	-	-	-	-	-	-	-
3	Other Water Revenues	11,098	-	-	-	-	-	-	-	-	-
4	<b>Total Revenues</b>	<b>\$ 2,239,848</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 952</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Operating Expenses:</b>											
5	Salaries and Wages	\$ 242,213	-	\$ -	-	\$ -	-	-	\$ -	-	-
6	Purchased Waste Water Treatment	5,647	-	-	-	-	-	-	-	-	-
7	Sludge Removal	-	-	-	-	-	-	-	-	-	-
8	Purchased Power	65,112	-	-	-	-	-	-	-	-	-
9	Fuel for Power Production	-	-	-	-	-	-	-	-	-	-
10	Chemicals	19,215	-	-	-	-	-	-	-	-	-
11	Materials and Supplies	23,875	-	-	-	-	-	-	-	-	4,773
12	Contractual Services - Professional	313,511	-	-	-	-	-	-	-	-	-
13	Contractual Services - Testing	8,117	-	-	-	-	-	-	-	-	-
14	Contractual Services - Other	361,855	-	-	-	-	-	-	-	-	-
15	Rents	23,807	-	-	-	-	-	-	-	-	-
16	Transportation	15,371	-	-	-	-	-	-	-	-	-
17	Insurance	11,720	-	-	-	-	-	-	-	-	-
18	Regulatory Commission - Rate Case Expense	-	-	-	-	-	-	-	-	-	-
19	Scottsdale Capacity (Operating Lease)	164,522	-	-	-	-	-	-	(2,702)	-	-
20	Miscellaneous	60,542	-	-	-	-	(268)	-	-	-	-
21	Depreciation and Amortization	484,271	(253,139)	-	-	-	-	-	-	-	-
22	Taxes Other Than Income	-	-	-	-	-	-	-	-	-	-
23	Property Taxes	49,478	-	(311)	-	-	-	-	-	-	-
24	Income Taxes	131,980	-	-	-	-	-	-	-	-	-
25	<b>Total Operating Expenses</b>	<b>\$ 1,981,235</b>	<b>\$ (253,139)</b>	<b>\$ (311)</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ (268)</b>	<b>\$ -</b>	<b>\$ (2,702)</b>	<b>\$ -</b>	<b>\$ 4,773</b>
26	<b>Operating Income</b>	<b>\$ 258,613</b>	<b>\$ 253,139</b>	<b>\$ 311</b>	<b>\$ -</b>	<b>\$ 952</b>	<b>\$ 268</b>	<b>\$ -</b>	<b>\$ 2,702</b>	<b>\$ -</b>	<b>\$ (4,773)</b>

**Adjustments:**

- Adjustment No. 1: Depreciation Expense - See RUCO Schedule TJC-13 in Column [E] at line 39;
- Adjustment No. 2: Property Taxes - See RUCO Schedule TJC-14 in Column [A] at line 18;
- Adjustment No. 3: Intentionally Left Blank;
- Adjustment No. 4: Revenue Accrual Fix - See RUCO Schedule TJC-16 on page 1 of 1 at line 1;
- Adjustment No. 5: Miscellaneous Expense - See RUCO Schedule TJC-17 on page 1 of 1 at line 1;
- Adjustment No. 6: Intentionally Left Blank;
- Adjustment No. 7: Remove Profit Calculated from Erroneous Scottsdale Capacity Loan Terms;
- Adjustment No. 8: Intentionally Left Blank;
- Adjustment No. 9: Active Carbon Media Reclassification - See RUCO Schedule TJC-21 at line 4;

**References:**

- Column [A]: Company Schedule C-1 Adjusted Test Year as Filed;
- Column [B] through [J]: RUCO Recommended Adjusted Test Year Adjustments;

RUCO OPERATING INCOME ADJUSTMENTS

Line No.	Description	[K] Adj. No. 10 Intentionally Left Blank	[L] Adj. No. 11 Intentionally Left Blank	[M] Adj. No. 12 Intentionally Left Blank	[N] Adj. No. 13 APUC Cost Allocations	[O] Adj. No. 14 Intentionally Left Blank	[P] Adj. No. 15 Intentionally Left Blank	[Q] Adj. No. 16 Rate Case Expense	[R] Adj. No. 17 Income Taxes	[S] Total RUCO Adjustments Recommended	[T] RUCO Adjusted Test Year Recommended
<b>Revenues:</b>											
1	Metered Water Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 952	\$ 2,213,636
2	Unmetered Water Revenues	-	-	-	-	-	-	-	-	-	16,067
3	Other Water Revenues	-	-	-	-	-	-	-	-	-	11,098
4	<b>Total Revenues</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 952	\$ 2,240,801
<b>Operating Expenses:</b>											
5	Salaries and Wages	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 242,213
6	Purchased Waste Water Treatment	-	-	-	-	-	-	-	-	-	5,647
7	Sludge Removal	-	-	-	-	-	-	-	-	-	-
8	Purchased Power	-	-	-	-	-	-	-	-	-	65,112
9	Fuel for Power Production	-	-	-	-	-	-	-	-	-	-
10	Chemicals	-	-	-	-	-	-	-	-	-	-
11	Materials and Supplies	-	-	-	-	-	-	-	-	4,773	23,988
12	Contractual Services - Professional	-	-	-	-	-	-	-	-	-	23,875
13	Contractual Services - Testing	-	-	-	-	-	-	-	-	-	313,511
14	Contractual Services - Other	-	-	-	(27,147)	-	-	-	-	(27,147)	8,117
15	Rents	-	-	-	-	-	-	-	-	-	334,708
16	Transportation	-	-	-	-	-	-	-	-	-	23,807
17	Insurance	-	-	-	-	-	-	-	-	-	15,371
18	Regulatory Commission - Rate Case Expense	-	-	-	-	-	-	-	-	-	11,720
19	Scottsdale Capacity (Operating Lease)	-	-	-	-	-	-	33,333	-	33,333	33,333
20	Miscellaneous	-	-	-	-	-	-	(2,702)	-	(2,702)	161,820
21	Depreciation and Amortization	-	-	-	-	-	-	-	-	(268)	60,274
22	Taxes Other Than Income	-	-	-	-	-	-	-	-	(253,139)	231,132
23	Property Taxes	-	-	-	-	-	-	-	-	-	-
24	Income Taxes	-	-	-	-	-	-	-	92,444	(311)	49,167
25	<b>Total Operating Expenses</b>	\$ -	\$ -	\$ -	\$ (27,147)	\$ -	\$ -	\$ 33,333	\$ 92,444	\$ (153,016)	\$ 1,828,219
26	<b>Operating Income</b>	\$ -	\$ -	\$ -	\$ 27,147	\$ -	\$ -	\$ (33,333)	\$ (92,444)	\$ 153,968	\$ 412,582

**Adjustments:**

- Adjustment No. 10: Intentionally Left Blank;
- Adjustment No. 11: Intentionally Left Blank;
- Adjustment No. 12: Intentionally Left Blank;
- Adjustment No. 13: APUC Corporate Cost Allocations - See RUCO Schedule TJC-25 at line 6;
- Adjustment No. 14: Achievement/Incentive/Bonus Pay Adjustments - Left Blank;
- Adjustment No. 15: Intentionally Left Blank;
- Adjustment No. 16: Rate Case Expense - See RUCO Schedule TJC-28 at line 4;
- Adjustment No. 17: Income Taxes - See RUCO Schedule TJC-29 in Column [A] at line 3.

**References:**

- Column [K] thru [R]: RUCO Recommended Adjusted Test Year Adjustments;
- Column [S]: RUCO Total Adjusted Test Year Adjustments on Schedule TJC-12 page 1 of 2 in Columns [B] thru Schedule TJC-12 page 2 of 2 in Columns [K] thru [R];
- Column [T]: Column [A] on Schedule TJC-12 at page 1 of 2 + Column [S] on Schedule TJC-12 page 2 of 2 - RUCO Recommended Adjusted Test Year Balances.

**OPERATING INCOME ADJUSTMENT NO. 1  
DEPRECIATION EXPENSE**

Line No.	NARUC Account	Description	[A] Company As Filed	[B] RUCO Non-Depre. Fully Depre.	[C] RUCO Depreciable UPIS Recommended	[D] Authorized Depreciation Rate	[E] RUCO Depreciation Expense Recommended
<b>Direct Plant:</b>							
1	351	Organization	\$ -	\$ -	\$ -	0.00%	\$ -
2	352	Franchise	-	-	-	0.00%	-
3	353	Land & Land Rights	-	471,024	-	0.00%	-
4	354	Structures & Improvements	3,091,815	(152,917)	2,938,899	3.33%	97,865
5	355	Power Generation Equipment	-	3,839	3,839	5.00%	192
6	360	Collection Sewers - Forced	1,130,090	340	1,130,430	2.00%	22,609
7	361	Collection Sewers - Gravity	4,555,232	(51)	4,555,182	2.00%	91,104
8	362	Special Collecting Structures	-	-	-	2.00%	-
9	363	Services to Customers	260,442	(7)	260,435	2.00%	5,209
10	364	Flow Measuring Devices	31,668	(31,668)	-	10.00%	-
11	365	Flow Measuring Installations	180,051	-	180,051	10.00%	18,005
12	366	Reuse Services	-	-	-	2.00%	-
13	367	Reuse Meters And Installation	-	-	-	8.33%	-
14	370	Receiving Wells	1,028,182	-	1,028,182	3.33%	34,238
15	371	Effluent Pumping Equipment	385,099	88,557	473,657	12.50%	59,207
16	374	Reuse Distribution Reservoirs	-	-	-	2.50%	-
17	375	Reuse Trans. and Dist. System	-	-	-	2.50%	-
18	380	Treatment & Disposal Equipment	326,067	(2,211)	323,857	5.00%	16,193
19	381	Plant Sewers	-	-	-	5.00%	-
20	382	Outfall Sewer Lines	-	-	-	3.33%	-
21	389	Other Sewer Plant & Misc. Equipment	992,742	(3,150)	989,592	6.67%	66,006
22	390	Office Furniture & Equipment	289,536	(62,246)	227,290	6.67%	15,160
23	390.1	Computers and Software	-	62,224	62,224	20.00%	12,445
24	391	Transportation Equipment	28,151	2,181	30,332	20.00%	6,066
25	392	Stores Equipment	-	-	-	4.00%	-
26	393	Tools, Shop And Garage Equipment	28,942	(0)	28,942	5.00%	1,447
27	394	Laboratory Equipment	10,683	-	10,683	10.00%	1,068
28	395	Power Operated Equipment	-	-	-	5.00%	-
29	396	Communication Equipment	43,968	58,683	102,651	10.00%	10,265
30	397	Miscellaneous Equip.	-	-	-	10.00%	-
31	398	Other Tangible Plant - Scottsdale Capacity	486,294	-	486,294	10.00%	48,629
<b>Allocated Corporate Plant:</b>							
32	903	Land & Land Rights	-	-	-	0.00%	-
33	904	Structures and Improvements	75,829	(75,829)	-	2.56%	-
34	940.1	Computers and Software	13,207	(13,207)	-	20.00%	-
					<u>\$ 12,832,539</u>		<u>\$ 505,709</u>
			<u>Gross CIAC</u>	<u>Fully Amortized CIAC</u>	<u>Gross CIAC Depre. Deduction</u>		
35		Less: Contributions-in-Aid-of-Construction (CIAC) Amortizations	\$ 6,445,253	-	\$ 6,445,253	3.94%	\$ (253,997)
36		Regulatory Liability - Scottsdale Capacity Erroneous Calculation			51,451	40.00%	(20,581)
37		RUCO Total Depreciation Expense					231,132
38		Company Adjusted Depreciation Expense As Filed					484,271
39		RUCO Increase/(Decrease) Expense Adjustment					<u>\$ (253,139)</u>

\* Fully Depreciated Per Company Schedule C-2, page 2

**References:**

Company B-2 and C-1 Schedules, and RUCO Schedule TJC-4(a), pages 1 & 2

**OPERATING INCOME ADJUSTMENT NO. 2  
PROPERTY TAXES**

Line No.	Property Tax Calculation	[A]	[B]
		RUCO AS ADJUSTED	RUCO RECOMMENDED
1	RUCO Adjusted Test Year Gross Revenues	\$ 2,240,800	\$ 2,240,800
2	Multiplied by 2	<u>2</u>	<u>2</u>
3	Subtotal (Line 1 * Line 2)	\$ 4,481,600	\$ 4,481,600
4a	RUCO Adjusted Test Year Gross Revenues	<u>2,240,800</u>	
4b	RUCO Recommended Revenue		<u>1,956,557</u>
5	Subtotal (Line 3 + Line 4a)	\$ 6,722,400	\$ 6,438,157
6	Number of Years	<u>3</u>	<u>3</u>
7	Three Year Average (Line 5 / Line 6)	\$ 2,240,800	\$ 2,146,052
8	Department of Revenue Multiplier	<u>2</u>	<u>2</u>
9	Revenue Base Value (Line 7 * Line 8)	\$ 4,481,600	\$ 4,292,105
10	Plus: 10% of CWIP Per Company Schedule E-1 As Filed	-	-
11	Less: Net Book Value of Licensed Vehicles	<u>33,596</u>	<u>33,596</u>
12	Full Cash Value (Line 9 + Line 10 - Line 11)	\$ 4,448,004	\$ 4,258,509
13	Assessment Ratio	<u>18.0%</u>	<u>18.0%</u>
14	Assessed Value (Line 12 * Line 13)	\$ 800,641	\$ 766,532
15	Composite Property Tax Rate (Per RUCO Effective Property Tax Calculation)	<u>6.1409%</u>	<u>6.1409%</u>
16	RUCO Adjusted Test Year Property Tax Expense (Line 14 * Line 15)	\$ 49,167	
17	Company Adjusted Test Year Property Tax Expense (Per Company Schedule C-1)	<u>49,478</u>	
18	RUCO Test Year Adjustment (Line 16-Line 17)	<u>\$ (311)</u>	
19	Property Tax - RUCO Recommended Revenue (Line 14 * Line 15)		\$ 47,072
20	RUCO Test Year Adjusted Property Tax Expense (Line 16)		<u>49,167</u>
21	Increase/(Decrease) to Property Tax Expense		<u>\$ (2,095)</u>
22	Increase/(Decrease) to Property Tax Expense		\$ (2,095)
23	Increase in Revenue Requirement		(284,244)
24	Increase /(Decrease) to Property Tax per Dollar Increase in Revenue (Line 22 / Line 23)		0.7369%

**References:**

- RUCO Schedule TJC-11
- RUCO Schedule TJC-4(a) page 1 of 2

**OPERATING INCOME ADJUSTMENT NO. 3  
INTENTIONALLY LEFT BLANK**

Line No.	Description	Amount
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**References:**

**OPERATING INCOME ADJUSTMENT NO. 4  
REVENUE ACCRUAL FIX**

<u>Line</u> <u>No.</u>	<u>Description</u>	<u>Amount</u>
1	Revenue Accrual Fix per Company Schedule H-1 as Filed	\$ 952

**References:**  
Per Company Schedule H-1

**OPERATING INCOME ADJUSTMENT NO. 5  
MISCELLANEOUS EXPENSE**

<u>Line</u> <u>No.</u>	<u>Description</u>	<u>Amount</u>
1	Unreconciliable Difference Between Booked and Bill Count Revenues Per Company Schedule H-1	\$ (268)

**References:**

Per Company Response to RUCO DR 1.46

**OPERATING INCOME ADJUSTMENT NO. 6  
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Line No.	Description	Amount
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References:

**OPERATING INCOME ADJUSTMENT NO. 7  
SCOTTSDALE CAPACITY OPERATING LEASE CALCULATION CORRECTION**

<u>Line No.</u>	<u>Description</u>	<u>Amount</u>
1	Per Company Capitalized Lease Methodology Calculation	\$ 164,522
2	Per RUCO Operating Lease Methodology Calculation	161,820
3	RUCO Adjustment	<b>\$ (2,702)</b>

**References:**

Per Company Response to RUCO DR 3.08  
Per Company Response to RUCO DR 6.05

**OPERATING INCOME ADJUSTMENT NO. 8  
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Line		
<u>No.</u>	<u>Description</u>	<u>Amount</u>

**References:**

**OPERATING INCOME ADJUSTMENT NO. 9**  
**RECLASSIFY CAPITALIZED EXPENDITURES TO O&M EXPENSES**

Line No.	Description	Amount
	<b><u>Removed from UPIS:</u></b>	
1	UPIS Account 354	\$ (1,202)
2	UPIS Account 380	(3,571)
3	<b>Total Removed from UPIS</b>	<b>\$ (4,773)</b>
	<b><u>Reclassified to O&amp;M Expense:</u></b>	
4	Total Reclassified to O&M Expense Account - Chemicals	\$ 4,773

**References:**

Per Company Response to Staff DR DH 3  
Per RUCO Field Inspection with Company Representatives

**OPERATING INCOME ADJUSTMENT NO. 10  
INTENTIONALLY LEFT BLANK**

Line		
<u>No.</u>	<u>Description</u>	<u>Amount</u>

References:

**OPERATING INCOME ADJUSTMENT NO. 11  
INTENTIONALLY LEFT BLANK**

Line		Amount
No.	Description	

**References:**

**OPERATING INCOME ADJUSTMENT NO. 12  
INTENTIONALLY LEFT BLANK**

<u>Line</u> <u>No.</u>	<u>Description</u>	<u>Amount</u>
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**References:**

**OPERATING INCOME ADJUSTMENT NO. 13  
ALGONQUIN POWER UTILITIES CORPORATION ("APUC") COST ALLOCATIONS**

<u>Line No.</u>	<u>Description</u>	<u>Amount</u>
1	Legal Costs	\$ 2,432
2	Tax Services	3,976
3	Audit	<u>4,289</u>
4	RUCO Recommended APUC Cost Allocations	\$ 10,698
5	Company Requested	<u>37,845</u>
6	RUCO Recommended Adjustment	<u>\$ (27,147)</u>

**References:**

Per Company Response to Staff 6.1  
Prior Commission Decision No. 71865 at page 25

**OPERATING INCOME ADJUSTMENT NO. 14  
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<u>Line</u> <u>No.</u>	<u>Description</u>	<u>Amount</u>
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**References:**

**OPERATING INCOME ADJUSTMENT NO. 15  
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<u>Line No.</u>	<u>Description</u>	<u>Amount</u>
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**References:**

**RATE BASE ADJUSTMENT NO. 16**  
**RATE CASE EXPENSE**

<u>Line No.</u>	<u>Description</u>	<u>Amount</u>
1	Company Rate Case Expense Requested	\$ 450,000
2	RUCO Rate Case Expense Recommended	<u>100,000</u>
3	RUCO Adjustment	<u>\$ (350,000)</u>
4	Annual Rate Case Expense Normalized Over 3-Years (Line 2 / 3-Years)	<b>\$ 33,333</b>

**References:**

Per Company Response to RUCO DR 1.63

**OPERATING INCOME ADJUSTMENT NO. 17  
INCOME TAXES**

Line No.	Description	[A] Adjusted Test Year Amount	[B] Test Year Recommended Amount
1	RUCO Computed Adjusted Test Year Income Tax	\$ 224,424	\$ 117,863
2	Company Income Tax As Filed	131,980	153,021
3	RUCO Adjustment to Income Tax Expense	\$ 92,444	\$ (35,158)

**References:**

See RUCO Schedule TJC-1 at page 2 of 2;  
Company Schedule C-1 Adjusted Test Year as Filed

**COST OF CAPITAL**

Line No.	Description	[A] DOLLAR AMOUNT	[B] CAPITAL RATIO	[C] COST RATE	[D] WEIGHTED COST RATE
1	Long-Term Debt	\$ 1,952,259	30.00%	3.53%	1.06%
2	Common Equity	4,555,272	70.00%	8.95%	6.27%
3	Total Capitalization	<u>\$ 6,507,531</u>	<u>100.00%</u>		
4	WEIGHTED AVERAGE COST OF CAPITAL ("WACC")				<b>7.32%</b>

**References:**

Columns [A] Thru [D]: JAC & JAC Testimony

# **EXHIBIT 1**

Line No.	NARIUC No.	Description	Vintage Year	Previous Allowed Deprec. Rate	Allowed Deprec. Rate	July-December 2008				Accum. Deprec.	
						Plant Additions	Plant Adjustments <sup>1</sup>	Adjusted Plant Additions	Adjusted Plant Retirements		
1	351	Organization		0.00%	0.00%	-	-	-	-	-	
2	352	Franchises		0.00%	0.00%	-	-	-	-	-	
3	353	Land and Land Rights		0.00%	0.00%	-	-	-	-	-	
4	354	Structures and Improvements		3.33%	3.33%	(12,085)	(12,085)	-	-	461,300	
5	355	Power Generation Equipment		5.00%	5.00%	-	-	-	-	2,548,135	
6	360	Collection Sewers - Force		2.00%	2.00%	(37)	(37)	-	-	707,855	
7	361	Collection Sewers - Gravity		2.00%	2.00%	(49)	(49)	-	-	4,284,899	
8	362	Special Collecting Structures		2.00%	2.00%	-	-	-	-	198,723	
9	363	Services to Customers		2.00%	2.00%	-	-	-	-	31,668	
10	364	Flow Measuring Devices		10.00%	10.00%	156	156	-	-	179,622	
11	365	Flow Measuring Installations		10.00%	10.00%	-	-	-	-	-	
12	366	Reuse Services		2.00%	2.00%	-	-	-	-	-	
13	367	Reuse Meters And Installation		8.33%	8.33%	-	-	-	-	-	
14	370	Receiving Wells		3.33%	3.33%	311	311	-	-	-	
15	371	Effluent Pumping Equipment		12.50%	12.50%	-	-	-	-	933,182	
16	374	Reuse Distribution Reservoirs		2.50%	2.50%	1,641	1,641	-	-	654,827	
17	375	Reuse Trans. and Dist. System		2.50%	2.50%	-	-	-	-	-	
18	380	Treatment and Disposal Equipment		5.00%	5.00%	(33,499)	(33,499)	-	-	148,329	
19	381	Plant Sewers		3.33%	3.33%	-	-	-	-	124,527	
20	382	Outfall Sewer Lines		5.00%	5.00%	-	-	-	-	-	
21	389	Other Plant and Misc. Equipment		6.67%	6.67%	-	-	-	-	2,075	
22	390	Office Furniture and Equipment		6.67%	6.67%	3,138	3,138	-	-	20,922	
23	390.1	Computers and Software		20.00%	20.00%	-	-	-	-	4,993	
24	391	Transportation Equipment		20.00%	20.00%	-	-	-	-	224,587	
25	392	Stores Equipment		4.00%	4.00%	203	203	-	-	7,165	
26	393	Tools, Shop and Garage Equipment		5.00%	5.00%	-	-	-	-	107,570	
27	394	Laboratory Equipment		10.00%	10.00%	3,420	3,420	-	-	9,174	
28	395	Power Operated Equipment		5.00%	5.00%	-	-	-	-	250	
29	396	Communication Equipment		10.00%	10.00%	-	-	-	-	7,488	
30	397	Miscellaneous Equip.		10.00%	10.00%	275	275	-	-	1,353	
31	398	Other Tangible Plant - Scottsdale Capacity		10.00%	10.00%	-	-	-	-	40,726	
TOTAL						(36,526)	4,461	(36,526)	4,461	162,710	12,091,476

<sup>1</sup> True-up  
<sup>2</sup> Retirements Not Recorded

Line No.	NARUC Account No.	Description	Vintage Year	Previous Allowed Deprec. Rate	Allowed Deprec. Rate	July-December 2008					Accum. Deprec.	
						Plant Additions	Plant Adjustments <sup>1</sup>	Adjusted Plant Additions	Plant Retirements	Adjusted Plant Retirements		Salvage A/D Only
1	351	Organization		0.00%	0.00%	-	-	-	-	-	-	-
2	352	Franchises		0.00%	0.00%	-	-	-	-	-	-	-
3	353	Land and Land Rights		0.00%	0.00%	-	-	-	-	-	-	-
4	354	Structures and Improvements		3.33%	3.33%	-	-	(12,085)	-	-	461,300	2,548,135
5	355	Power Generation Equipment		5.00%	5.00%	-	-	-	-	-	-	-
6	360	Collection Sewers - Force		2.00%	2.00%	(37)	(37)	-	-	-	707,855	244,126
7	361	Collection Sewers - Gravity		2.00%	2.00%	(49)	(49)	-	-	-	4,284,889	3,029,740
8	362	Special Collecting Structures		2.00%	2.00%	-	-	-	-	-	-	-
9	363	Services to Customers		2.00%	2.00%	-	-	-	-	-	1,987	198,723
10	364	Flow Measuring Devices		10.00%	10.00%	156	156	-	-	-	31,668	153,246
11	365	Flow Measuring Installations		10.00%	10.00%	-	-	-	-	-	179,622	57,758
12	366	Reuse Services		2.00%	2.00%	-	-	-	-	-	-	-
13	367	Reuse Meters And Installation		8.33%	8.33%	-	-	-	-	-	-	-
14	370	Receiving Wells		3.33%	3.33%	311	311	-	-	-	933,182	301,151
15	371	Effluent Pumping Equipment		12.50%	12.50%	1,641	1,641	4,461	-	-	654,827	438,257
16	374	Reuse Distribution Reservoirs		2.50%	2.50%	-	-	-	-	-	-	-
17	375	Reuse Trans. and Dist. System		2.50%	2.50%	-	-	-	-	-	-	-
18	380	Treatment and Disposal Equipment		5.00%	5.00%	(33,499)	(33,499)	-	-	-	148,329	19,057
19	381	Plant Sewers		5.00%	5.00%	-	-	-	-	-	124,527	108,721
20	382	Outfall Sewer Lines		3.33%	3.33%	-	-	-	-	-	-	-
21	389	Other Plant and Misc. Equipment		6.67%	6.67%	3,138	3,138	-	-	-	942,570	280,983
22	390	Office Furniture and Equipment		6.67%	6.67%	-	-	-	-	-	224,587	79,487
23	390.1	Computers and Software		20.00%	20.00%	-	-	-	-	-	-	-
24	391	Transportation Equipment		20.00%	20.00%	203	203	-	-	-	107,570	58,522
25	392	Stores Equipment		4.00%	4.00%	-	-	-	-	-	-	-
26	393	Tools, Shop and Garage Equipment.		5.00%	5.00%	3,420	3,420	-	-	-	9,174	390
27	394	Laboratory Equipment		10.00%	10.00%	-	-	-	-	-	374	2,624
28	395	Power Operated Equipment		5.00%	5.00%	-	-	-	-	-	-	-
29	396	Communication Equipment		10.00%	10.00%	275	275	-	-	-	40,726	3,041
30	397	Miscellaneous Equip.		10.00%	10.00%	-	-	-	-	-	-	-
31	398	Other Tangible Plant - Scottsdale Capacity		10.00%	10.00%	-	-	-	-	-	486,294	121,574
<b>TOTAL</b>						<b>(36,526)</b>	<b>4,461</b>	<b>(36,526)</b>	<b>4,461</b>	<b>244,175</b>	<b>12,091,476</b>	<b>6,062,140</b>

<sup>1</sup> True-up

<sup>2</sup> Retirements Not Recorded

# **EXHIBIT 2**

**Black Mountain Sewer Company 2000 Note 2**  
**As Restated March 16, 2001**

**Principal Balance: \$886,650.33**

**FOR VALUE RECEIVED**, the undersigned, **Black Mountain Sewer Company** hereby acknowledges itself indebted to **ALGONQUIN WATER RESOURCES OF AMERICA INC.** (the "Lender") and unconditionally promises to pay to or to the order of at 2845 Bristol Circle, Oakville, Ontario, L6H 7H7, or such other place and/or person as the Lender may by notice in writing to the Debtor direct, the aggregate unpaid principal balance of all advances made to the undersigned (the "Principal Balance") as recorded by the Lender on the Schedule attached hereto on and subject to the terms and conditions of this Note.

The Principal Balance due hereunder may be reduced to zero from time to time without affecting the validity of this note. The Lender may, and is hereby unconditionally and absolutely authorized and directed by the undersigned to, enter on the attached schedule and any addition thereto all advances, all payments made on account of the amounts remaining unpaid and the dates thereof. The aggregate Principal Balance of the advances shown on the attached schedule and any addition thereto shall be rebuttable presumptive evidence of the principal amount owing and unpaid on this Note. The failure to record the date and amount of any advance on the attached schedule shall not limit or otherwise affect the obligation of the undersigned to repay the Principal Balance of the advances actually made by the Lender together with all interest accruing on such Principal Balance.

1. **Definitions.** As used herein, the following terms shall have the following meanings:

"affiliate" has the meaning ascribed to it in the *Securities Act* (Ontario).

"Business Day" means any day except Saturday, Sunday or any day on which Canadian chartered banks are generally not open for business in the City of Toronto.

"Debtor" means Black Mountain Sewer Company and its successors and assigns.

"Encumbrances" means liens, claims, charges, demands, adverse claims, title retention agreements, security interests, pledges, hypothecs, mortgages and encumbrances of every nature and kind whatsoever and also includes any rights or privileges capable of becoming liens, claims, charges, demands, adverse claims, title retention agreements, security interests, pledges, hypothecs, mortgages and encumbrances of any nature and kind whatsoever.

"Event of Default" means any one or more of the events described in Section 6 hereof.

"General Security Agreement" means the agreement between the Debtor and the Lender entered into as security with respect to all future indebtedness.

**“Indebtedness”** means, at any time, all of the Principal Balance, any interest owing or accrued thereon and all other amounts owing to the Lender pursuant to the terms hereof which have not been paid to the Lender by the Debtor.

**“Interest Payment Date”** means the last day of each calendar month in each year.

**“Lender”** means Algonquin Water Resources of (America) Inc. and its successors and assigns.

**“Permitted Encumbrances”** means:

- (a) encumbrances incurred or pledges and deposits made in connection with workers' compensation, unemployment insurance, old age pensions and similar legislation;
- (b) rights and remedies of lessors under any realty leases (including distress rights) or under leases of personal property, and rights and remedies of licensors under licences of property;
- (c) reversionary rights or other rights of lessors relating to leasehold improvements under any realty leases;
- (d) liens securing payment of Taxes, assessments and governmental charges or levies, either (i) not delinquent or (ii) being contested in good faith by appropriate proceedings;
- (e) liens of mechanics, materialmen, warehousemen, carriers or other similar liens arising by operation of law or statute securing obligations incurred in the ordinary course of business that are not yet due and payable;
- (f) encumbrances on the lessors' or licensors' interest relating to real or personal property leased or licensed to the Debtor;
- (g) the exceptions contained in any applicable land titles registration statutes in any jurisdiction where premises owned by the Debtor are located;
- (h) permits, rights of way, zoning restrictions, easements, licences, reservations, restrictions on the use of real property or minor irregularities or minor title defects incidental thereto which do not in the aggregate materially detract from the value of the property or assets of the Debtor or materially impair the operation of the business of the Debtor;
- (i) capital or operating leases and any Encumbrances created for the purpose of financing the purchase or leasing of equipment and fixtures;
- (j) security given in the ordinary course of business securing the performance of bids, tenders or equipment leases;

**Black Mountain Sewer Company 2000 Note 3  
As Restated March 16, 2001**

**Principal Balance: \$465,761.81**

**FOR VALUE RECEIVED**, the undersigned, **Black Mountain Sewer Company** hereby acknowledges itself indebted to **ALGONQUIN WATER RESOURCES OF AMERICA INC.** (the "Lender") and unconditionally promises to pay to or to the order of at 2845 Bristol Circle, Oakville, Ontario, L6H 7H7, or such other place and/or person as the Lender may by notice in writing to the Debtor direct, the aggregate unpaid principal balance of all advances made to the undersigned (the "Principal Balance") as recorded by the Lender on the Schedule attached hereto on and subject to the terms and conditions of this Note.

The Principal Balance due hereunder may be reduced to zero from time to time without affecting the validity of this note. The Lender may, and is hereby unconditionally and absolutely authorized and directed by the undersigned to, enter on the attached schedule and any addition thereto all advances, all payments made on account of the amounts remaining unpaid and the dates thereof. The aggregate Principal Balance of the advances shown on the attached schedule and any addition thereto shall be rebuttable presumptive evidence of the principal amount owing and unpaid on this Note. The failure to record the date and amount of any advance on the attached schedule shall not limit or otherwise affect the obligation of the undersigned to repay the Principal Balance of the advances actually made by the Lender together with all interest accruing on such Principal Balance.

1. **Definitions.** As used herein, the following terms shall have the following meanings:

"**affiliate**" has the meaning ascribed to it in the *Securities Act* (Ontario).

"**Business Day**" means any day except Saturday, Sunday or any day on which Canadian chartered banks are generally not open for business in the City of Toronto.

"**Debtor**" means Black Mountain Sewer Company and its successors and assigns.

"**Encumbrances**" means liens, claims, charges, demands, adverse claims, title retention agreements, security interests, pledges, hypothecs, mortgages and encumbrances of every nature and kind whatsoever and also includes any rights or privileges capable of becoming liens, claims, charges, demands, adverse claims, title retention agreements, security interests, pledges, hypothecs, mortgages and encumbrances of any nature and kind whatsoever.

"**Event of Default**" means any one or more of the events described in Section 6 hereof.

"**General Security Agreement**" means the agreement between the Debtor and the Lender entered into as security with respect to all future indebtedness.

**“Indebtedness”** means, at any time, all of the Principal Balance, any interest owing or accrued thereon and all other amounts owing to the Lender pursuant to the terms hereof which have not been paid to the Lender by the Debtor.

**“Interest Payment Date”** means the last day of each calendar month in each year.

**“Lender”** means Algonquin Water Resources of (America) Inc. and its successors and assigns.

**“Permitted Encumbrances”** means:

- (a) encumbrances incurred or pledges and deposits made in connection with workers' compensation, unemployment insurance, old age pensions and similar legislation;
- (b) rights and remedies of lessors under any realty leases (including distress rights) or under leases of personal property, and rights and remedies of licensors under licences of property;
- (c) reversionary rights or other rights of lessors relating to leasehold improvements under any realty leases;
- (d) liens securing payment of Taxes, assessments and governmental charges or levies, either (i) not delinquent or (ii) being contested in good faith by appropriate proceedings;
- (e) liens of mechanics, materialmen, warehousemen, carriers or other similar liens arising by operation of law or statute securing obligations incurred in the ordinary course of business that are not yet due and payable;
- (f) encumbrances on the lessors' or licensors' interest relating to real or personal property leased or licensed to the Debtor;
- (g) the exceptions contained in any applicable land titles registration statutes in any jurisdiction where premises owned by the Debtor are located;
- (h) permits, rights of way, zoning restrictions, easements, licences, reservations, restrictions on the use of real property or minor irregularities or minor title defects incidental thereto which do not in the aggregate materially detract from the value of the property or assets of the Debtor or materially impair the operation of the business of the Debtor;
- (i) capital or operating leases and any Encumbrances created for the purpose of financing the purchase or leasing of equipment and fixtures;
- (j) security given in the ordinary course of business securing the performance of bids, tenders or equipment leases;

# **EXHIBIT 3**

## Corporation Commission – Fixed Utilities

- D. Service establishments, re-establishments or reconnect charge
1. A utility may make a charge as approved by the Commission for the establishment, reestablishment, or reconnection of utility service.
  2. For the purpose of this rule, service establishments are where the customer's facilities are ready and acceptable to the utility and do not require construction on the part of the utility.
- E. Temporary service
1. Applicants for temporary service may be required to pay the utility, in advance of service establishment, the estimated cost of installing and removing the facilities necessary for furnishing sewer service.
  2. Where the duration of service is to be less than one month, the applicant may also be required to advance a sum of money equal to the estimated bill for service.
  3. Where the duration of service is to exceed one month, the applicant may also be required to meet the deposit requirements of the utility.
  4. If at any time during the term of the agreement for service the character of a temporary customer's operations changes so that in the opinion of the utility the customer is classified as permanent, the terms of the utility's main extension rules shall apply.

**Historical Note**

Adopted effective March 2, 1982 (Supp. 82-2). Amended to correct subsection numbering (Supp. 99-4).

**R14-2-604. Minimum customer information requirements**

- A. Information for residential customers
1. Each utility shall make available upon customer request not later than 60 days from the date of request a concise summary of the rate schedule applied for by such customer. The summary shall include the following:
    - a. Monthly minimum or customer charge, identifying the amount of the charge and the specific amount of minimum discharge included in the minimum charge, where applicable.
    - b. Rate calculation, including where applicable, computations based upon seasonal or annual water usages.
  2. The utility shall to the extent practical identify the tariff most advantageous to the customer and notify the customer of such prior to service commencement.
  3. In addition, a utility shall make available upon customer request not later than 60 days from the date of request a copy of the Commission's rules and regulations governing:
    - a. Deposits
    - b. Terminations of service
    - c. Billing and collection
    - d. Complaint handling.
  4. Each utility shall inform all new customers of their rights to obtain the information specified above.
- B. Information required due to changes in tariffs
1. Each utility shall transmit to affected customers by the most economic means available a concise summary of any change in the utility's tariffs affecting those customers.
  2. This information shall be transmitted to the affected customer within 60 days of the effective date of the change.

**Historical Note**

Adopted effective March 2, 1982 (Supp. 82-2).

**R14-2-605. Service connections**

- A. Priority and timing

1. After an applicant has complied with the utility's application and deposit requirements and has been accepted for service by the utility, the utility shall schedule that customer for service connection.
  2. Service connections shall be scheduled for completion within five working days of the date the customer has been accepted for service, except in those instances when the customer requests service connection beyond the five working day limitation.
  3. When the utility has made arrangements to meet with a customer for service establishment purposes and the utility or the customer cannot make the appointment during the prearranged time, the utility shall reschedule the connection to the satisfaction of both parties.
  4. For the purposes of this rule, establishment of service takes place only when the customer's facilities are ready and acceptable to the utility.
- B. Customer provided facilities
1. An applicant for service shall be responsible for the installation of all plumbing up to the applicant's property line. In addition, the applicant is responsible for the proper grade or leveling of the sewer connection so that it conforms with the collection system of the utility.
  2. Funds collected for service connections may be nonrefundable contributions to the utility.
- C. Customer provided equipment safety and operation. Each customer shall be responsible for maintaining all equipment and facilities using or used for utility services located on his side of the point of collection in safe operating condition.
- D. Easements and rights-of-way
1. Each customer shall grant adequate easement and right-of-way satisfactory to the utility to ensure that customer's proper service connection. Failure on the part of the customer to grant adequate easement and right-of-way shall be grounds for the utility to refuse service.
  2. When a utility discovers that a customer or his agent is performing work or has constructed facilities adjacent to or within an easement or right-of-way and such work, construction or facility poses a hazard or is in violation of federal, state or local laws, ordinances, statutes, rules or regulations, or significantly interferes with the utility's access to equipment, the utility shall notify the customer or his agent and shall take whatever actions are necessary to eliminate the hazard, obstruction or violation at the customer's expense.

**Historical Note**

Adopted effective March 2, 1982 (Supp. 82-2). Amended to correct subsection numbering (Supp. 99-4).

**R14-2-606. Collection main extension agreements**

- A. General requirements
1. Each utility entering into a main extension agreement shall comply with the provisions of this rule, which specifically defines the conditions governing collection main extensions.
  2. Upon request by a potential applicant for a collection main extension, the utility shall prepare, without charge, a preliminary sketch and rough estimate of the cost of installation to be paid by said applicant.
  3. Any applicant for a collection main extension requesting the utility to prepare detailed plans, specifications, or cost estimates may be required to deposit with the utility an amount equal to the estimated cost of preparation. The utility shall, upon request, make available within 90 days after receipt of the deposit referred to above, such plans, specifications, or cost estimates of the proposed collec-

## Corporation Commission – Fixed Utilities

- tion main extension. Where the applicant accepts the plans and the utility proceeds with construction of the extension, the deposit shall be credited to the cost of construction; otherwise the deposit shall be nonrefundable. If the extension is to include oversizing of facilities to be done at the utility's expense, appropriate details shall be set forth in the plans, specifications and cost estimates.
4. Where the utility requires an applicant to advance funds for a collection main extension, the utility shall furnish the applicant with a copy of the extension tariff of the appropriate utility prior to the applicant's acceptance of the utility's extension agreement.
  5. All collection main extension agreements requiring payment by the applicant shall be in writing and signed by each party before the utility commences construction.
  6. In the event the utility's actual cost of construction is different from the amount advanced by the customer, the utility shall make a refund to or collect additional funds from, the applicant within 120 days after the completion of the construction.
  7. The provisions of this rule apply only to those applicants who in the utility's judgment will be permanent customers of the utility. Applications for temporary service shall be governed by the Commission's rules concerning temporary service applications.
- B. Minimum written agreement requirements**
1. Each collection main extension agreement shall, at a minimum, include the following information:
    - a. Name and address of applicant(s)
    - b. Proposed service address or location
    - c. Description of requested service
    - d. Description and sketch of the requested main extension
    - e. A cost estimate to include materials, labor, and other costs as necessary
    - f. Payment terms
    - g. A clear and concise explanation of any refunding provisions, if appropriate
    - h. The utility's estimated start date and completion date for construction of the collection main extension
  2. Each applicant shall be provided with a copy of the written collection main extension agreement.
- C. Main extension requirements. Each main extension tariff shall include the following provisions:**
1. A maximum footage and/or equipment allowance to be provided by the utility at no charge. The maximum footage and/or equipment allowance may be differentiated by customer class.
  2. An economic feasibility analysis for those main extensions which exceed the maximum footage and/or equipment allowance. Such economic feasibility analysis shall consider the incremental revenues and cost associated with the main extension. In those instances where the requested main extension does not meet the economic feasibility criteria established by the utility, the utility may require the customer to provide funds to the utility, which will make the main extension economically feasible. The methodology employed by the utility in determining economic feasibility shall be applied uniformly and consistently to each applicant requiring a main extension.
  3. The timing and methodology by which the utility will refund any advances in aid of construction as additional customers are served off the main extension. The customer may request an annual survey to determine if additional customers have been connected to and are using service from the main extension. In no case shall the amount of the refund exceed the amount originally advanced.
  4. All advances in aid of construction shall be noninterest bearing.
  5. If after five years from the utility's receipt of the advance, the advance has not been totally refunded, the advance shall be considered a contribution in aid of construction and shall no longer be refundable.
- D. Residential subdivision development and permanent mobile home parks. Each utility shall submit as a part of its main extension tariff separate provisions for residential subdivision developments and permanent mobile home parks.**
- E. Ownership of facilities. Any facilities installed hereunder shall be the sole property of the utility.**

**Historical Note**

Adopted effective March 2, 1982 (Supp. 82-2). Amended to correct subsection numbering (Supp. 99-4).

**R14-2-607. Provision of service**

- A. Utility responsibility**
1. Each utility shall be responsible for the safe conduct and handling of the sewage from the customer's point of collection.
  2. The utility may, at its option, refuse service until the customer has obtained all required permits and/or inspections indicating that the customer's facilities comply with local construction and safety standards.
- B. Customer responsibility**
1. Each customer shall be responsible for maintaining all facilities on the customer's premises in safe operating condition and in accordance with the rules of the state Department of Health.
  2. Each customer shall be responsible for safeguarding all utility property installed in or on the customer's premises for the purpose of supplying utility service to that customer.
- C. Continuity of service. Each utility shall make reasonable efforts to supply a satisfactory and continuous level of service. However, no utility shall be responsible for any damage or claim of damage attributable to any interruption or discontinuation of service resulting from:**
1. Any cause against which the utility could not have reasonably foreseen or made provision for, i.e., force majeure
  2. Intentional service interruptions to make repairs or perform routine maintenance
  3. Any temporary overloading of the utility's collection or treatment facilities.
- D. Service interruption**
1. Each utility shall make reasonable efforts to reestablish service within the shortest possible time when service interruptions occur.
  2. Each utility shall make reasonable provisions to meet emergencies resulting from failure of service, and each utility shall issue instructions to its employees covering procedures to be followed in the event of emergency in order to prevent or mitigate interruption or impairment of service.
  3. In the event of a national emergency or local disaster resulting in disruption of normal service, the utility may, in the public interest, interrupt service to other customers to provide necessary service to civil defense or other emergency service agencies on a temporary basis until normal service to these agencies can be restored.

# **EXHIBIT 4**

**LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.  
DOCKET NOS. SW-02361A-15-0206 & SW-02361A-15-0207 (CONSOLIDATED)  
RESPONSES TO RUCO'S THIRD SET OF DATA REQUESTS**

September 10, 2015

Respondent: Liberty Utilities (Black Mountain Sewer) Corp.

Address: 12725 W. Indian School Rd., Suite D-101  
Avondale, AZ 85392

Company Response Number: 3.01

---

- Q. Main Extension Agreement(s) ("MXA") – For clarity and understanding purposes, when the Company signs a MXA with any party (i.e., Applicant, Developer, or Builder), please provide descriptive responses beyond a simple yes or no when possible to the following requests:
- a. Can the MXA be classified as either an Advance-in-Aid-of-Construction ("AIAC") or a Contribution-in-Aid-of-Construction ("CIAC")?
  - b. Does the Company or Developer determine whether it is classified as AIAC or CIAC?
  - c. When is the decision made during the MXA process for determining the proper classification as either AIAC or CIAC?
  - d. If it is classified as AIAC, who determines the percentage (i.e., 10% or 20%) of total gross revenues to be refunded annually?
  - e. Is the percentage of refundable revenues the same for water and sewer or different? If different percentages apply to water and sewer, please explain the reasons why the refund percentages are different.
  - f. Which party to the MXA determines the contractual period (i.e., number of years) if it is classified as AIAC?
  - g. What is generally the contractual period (i.e., years) for a MXA classified as AIAC? If the MXA contractual period exceeds 10-years, which party determines to extend the contractual period beyond the original expiration date?
  - h. At the expiration of a MXA contractual period that has been classified as AIAC, does the Company convert the non-refunded AIAC amount to CIAC?
  - i. Under what circumstances would the Company extend the MXA contractual period that was originally classified as AIAC?
  - j. When are annual refunds of AIAC made (i.e., month) by the Company to the Developer?

**LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.  
DOCKET NOS. SW-02361A-15-0206 & SW-02361A-15-0207 (CONSOLIDATED)  
RESPONSES TO RUCO'S THIRD SET OF DATA REQUESTS**

September 10, 2015

Respondent: Liberty Utilities (Black Mountain Sewer) Corp.

Address: 12725 W. Indian School Rd., Suite D-101  
Avondale, AZ 85392

- k. At what time of the year (Jan. – Dec.) does the Company convert an expired MXA from AIAC to CIAC?

**RESPONSE:**

- a. Main extension agreements are not classified as AIAC or CIAC. Whether a developer contribution or advance is classified as AIAC or CIAC depends on classification of the facilities under the Company's tariffs, NARUC, and/or Commission rules. With this in mind, developer advances or contributions can be classified as AIAC or CIAC, or a combination of each.
- b. See the Company's response to Data Request 3.01(a). Generally, the Company makes that determination based on Commission rules and the Company's tariffs.
- c. See the Company's response to Data Request 3.01(a). That decision is usually made during drafting and negotiation of the main extension agreement.
- d. Currently, the Company refunds developer advances in aid of construction at 20 percent for 5 years. Under prior tariffs, the Company generally refunded developer advances at 10 percent for 10 years.
- e. Liberty Black Mountain doesn't provide water utility services.
- f. Currently, the Company refunds developer advances in aid of construction at 20 percent for 5 years. Under prior tariffs, the Company generally refunded developer advances at 10 percent for 10 years.
- g. See the Company's response to Data Request 3.01(d).
- h. Generally, yes.
- i. See the Company's response to Data Request 3.01(d). The Company can't speculate on what circumstances it may extend the refund period without further detail.
- j. Annual refunds are issued in August.
- k. The refunding period will depend upon the terms, conditions and schedule set forth in the main extension agreement. The Company has refund periods from January-December and July-June.

# **EXHIBIT 5**

Black Mountain Sewer Company										Ok to Refund Agreement		
Customer Advances for Aid in Construction										Expired Agreements		
LXA Date	LXA #	Yr Expire	FWO#	Vendor	Developer	Development	Deposit	Orig Contract Amt	Contract Refund %	2013 Balance	2014 Refund	Balance
10/29/04	3000				Cachet-Boulders, LLC	Boulders Casitas	7,500.00		10/10/Aug	-		-
01/21/05	3001	2015	8100.200004.0006	Montana Vista Capital, I	Studios at Carefree	Pima Norte	7,500.00	254,251.00	10/10/Aug	254,251.00	9,612.36	244,638.64
06/23/05	3002			Carefree Ventures		Lowe's	7,500.00	164,138.75	10/10/Aug	-		-
06/19/07	3009	2017			8100MONHOM	Montalbano Homes	5,000.00	73,577.90	10/10/Mar	164,138.75	3,696.95	160,441.80
01/08/99	BM01	2012			8100HERCAR	Heritage Healthcare	5,000.00	111,961.26	10/10/Mar	67,039.80	4,374.39	(0.00)
11/10/04	BM02	2015			8100MONTER	Monterey Homes	19,997.00	129,933.54	10/10/Aug	108,950.48	7,902.28	101,048.20
06/23/05	BM03	2015			8100PARDEV	Parkview Investors	10,000.00	158,058.00	10/10/Mar	125,796.67	10,128.19	115,668.48
09/01/97	BM04	2009			8100PULTE	Pulte	10,000.00	583,187.78	10/15/Mar	154,558.20		154,558.20
11/17/97	BM05	2014			8100TCCCAR	TCC Carefree LP		235,836.00	10/15/Mar	504,935.82		504,935.82
10/16/97	BM06	2012			Ray & Alma School LLC	Eckerd Drug Store		222,974.56	10/10/Aug	222,974.56	62,406.33	222,974.56
02/12/01	BM07	2014			Canyon Crossings Hold	Canyon Creek Rd & New I	7,500.00		10/10/Mar	(129.20)		(129.20)
						Annette's entry (booked backward)		(3,002.77)				
					Montana Vista Capital, I	Studios at Carefree				254,250.97		254,250.97
						Accrue Refunds						
						Total		1,930,916.02		2,086,105.05	(229,597.08)	1,756,387.47
											98,120.50	1,504,136.50

LIBERTY UTILITIES CORP.  
(BLACK MOUNTAIN SEWER)  
DOCKET NOS. SW-02361A-15-0206 and SW-02361A-15-0207

DIRECT TESTIMONY  
OF  
JOHN A. CASSIDY  
ON  
COST OF CAPITAL

ON BEHALF OF THE  
RESIDENTIAL UTILITY CONSUMER OFFICE

DECEMBER 2, 2015

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### EXECUTIVE SUMMARY

RUCO recommends that the Commission adopt a 7.32 percent overall rate of return for Liberty Utilities (Black Mountain Sewer) Corp. ("Company"), based upon (i) the Company's proposed pro forma capital structure consisting of 30.00 percent long-term debt and 70.00 percent common equity, (ii) the Company's proposed 3.53 percent cost of long-term debt, and (iii) RUCO's recommended 8.95 percent cost of equity, as shown below:

	<u>Weight</u>	<u>Cost</u>	<u>Weighted Cost</u>
Long-Term Debt	30.00 %	3.53 %	1.06 %
Common Equity	70.00 %	8.95 %	<u>6.27 %</u>
Overall Rate of Return			<u>7.32 %</u>

RUCO's 8.95 percent cost of equity is derived from estimates obtained from three cost of equity estimation models, the results of which are as follows:

	<u>Estimated Cost</u>
Discounted Cash Flow	8.85 %
Capital Asset Pricing Model	7.56 %
Comparable Earnings	<u>10.44 %</u>
Average Cost of Equity	<u>8.95 %</u>

I will also demonstrate that the 10.8 percent cost of equity recommendation of Black Mountain witness, Thomas J. Bourassa significantly over-states the Company's actual cost of equity.

1 **I. INTRODUCTION**

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

3 **A.** My name is John A. Cassidy. I am a Public Utilities Analyst V with the Residential Utility  
4 Consumers Office ("RUCO"). My business address is 1110 W. Washington Street, Suite  
5 220, Phoenix, AZ.

6  
7 **Q. Please describe your educational background and professional experience.**

8 **A.** I hold a Bachelor of Arts degree in History from Arizona State University, a Master of  
9 Library Science degree from the University of Arizona, and a Master of Business  
10 Administration degree with an emphasis in Finance from Arizona State University. I am  
11 a member of Beta Gamma Sigma, the National Business Honor Society, and have passed  
12 the CPA exam, though I opted not to pursue certification. I have worked professionally  
13 as a librarian, financial consultant and tax auditor, and have over seven years of regulatory  
14 work experience as a Public Utilities Analyst with the Arizona Corporation Commission,  
15 where I served as a cost of capital witness on behalf of Staff testifying in numerous rate  
16 case proceedings. I have attended utility related seminars sponsored by both the National  
17 Association of Regulatory Utility Commissioners (NARUC), and the Society of Utility  
18 Regulatory Financial Analysts (SURFA). At present, I am preparing to sit for the Certified  
19 Rate of Return Analyst (CRRRA) exam. Attachment 1 contains a summary of my prior  
20 regulatory work experience.

21  
22 **Q. Please state the purpose of your testimony.**

23 **A.** The purpose of my testimony is to present RUCO's recommendations for the  
24 establishment of a fair value rate of return. For purposes of establishing a fair value rate

1 of return on its invested capital in this proceeding, the Company has elected to use its  
2 original cost rate base (OCRB) as its fair value rate base (FVRB).

3  
4 **Q. Will RUCO provide direct testimony on the rate base, operating income and rate  
5 design issues in this proceeding?**

6 A. Yes. RUCO witness, Mr. Tim Coley, will also file direct testimony in this proceeding. Mr.  
7 Coley's testimony will address the rate base and operating income issues associated with  
8 the case, as well as RUCO's proposed rate design.

9  
10 **II. SUMMARY OF TESTIMONY AND RECOMMENDATIONS**

11 **Q. Briefly summarize how your cost of capital testimony is organized.**

12 A. My cost of capital testimony is organized into eleven (11) different sections as identified  
13 in my "Table of Contents." In summary I have derived cost of equity estimates obtained  
14 from both the Discounted Cash Flow ("DCF") model and the Capital Asset Pricing Model  
15 ("CAPM"). The DCF and CAPM are market-based cost of equity estimation models, and  
16 both have consistently been employed by RUCO and ACC Staff in prior rate proceedings.  
17 Additionally, both the DCF and CAPM are methodologies which the ACC has traditionally  
18 given the most weight when establishing authorized rates of return for utilities operating  
19 within its Arizona jurisdiction. In addition to the DCF and CAPM models, I have also  
20 prepared a Comparable Earnings ("CE") analysis. The Company's witness, Mr. Thomas  
21 J. Bourassa, also obtains cost of equity estimates from both the DCF and CAPM models,  
22 as well as from a Risk Premium Model ("RPM"). My testimony will conclude with a  
23 discussion of Mr. Bourassa's cost of equity estimation methodologies, and I will  
24

1 demonstrate that his analyses significantly over-states the Company's actual cost of  
2 equity.

3  
4 **Q. Please summarize the recommendations and adjustments that you will address in**  
5 **your testimony.**

6 A. Based on the results of my analysis, I am making the following recommendations:

7 I recommend that the Commission adopt a 7.32 percent overall rate of return for the  
8 Company. The components included in my cost of capital calculation include:<sup>1</sup>

	<u>Weight</u>	<u>Cost</u>	<u>Weighted Cost</u>
Long-Term Debt	30.00 %	3.53 %	1.06 %
Common Equity	70.00 %	8.95 %	<u>6.27 %</u>
Overall Rate of Return			<u>7.32 %</u>

9  
10  
11  
12 The cost of equity estimates included in my calculations are derived from the following  
13 three cost of equity models:

	<u>Estimated Cost</u>
Discounted Cash Flow	8.85 %
Capital Asset Pricing Model	7.56 %
Comparable Earnings	<u>10.44 %</u>
Average Cost of Equity	<u>8.95 %</u>

14  
15  
16  
17  
18 **III. ECONOMIC PRINCIPLES APPLICABLE TO ARIZONA**

19 **Q. What are the basic economic principles which apply in the determination of a fair**  
20 **rate of return for regulated public utilities in Arizona?**

21 A. For regulated public utilities in Arizona, rates are established in a manner designed to  
22 allow for recovery of the utility's costs, including capital costs. This is traditionally referred  
23

24  

---

<sup>1</sup> See JAC Schedule 1

1 to as “cost of service” ratemaking. Rates are established using the “rate base – rate of  
2 return” concept, wherein utilities are allowed to recover specific operating expenses, taxes  
3 and depreciation, and granted an opportunity to earn a fair value rate of return on the  
4 assets utilized (i.e., fair value rate base) in providing service to ratepayers. Rate base is  
5 derived from the asset side of the utility’s balance sheet, while rate of return is developed  
6 from the liability/stockholders’ equity side of the balance sheet. The revenue impact of  
7 the cost of capital in rates is determined by multiplying rate base by rate of return. In the  
8 instant docket RUCO is recommending an overall rate of return for Black Mountain of 7.32  
9 percent.

10  
11 **Q. Is the Company proposing that its original cost rate base also be used as its fair  
12 value rate base?**

13 A. Yes.

14  
15 **Q. What is the meaning of a “fair rate of return” when analyzing a rate case  
16 application?**

17 A. From an economic standpoint, a “fair rate of return” is one which allows an efficient and  
18 economically well managed utility the ability to maintain its financial integrity, attract  
19 capital, and establish comparable returns for similar risk investments. These concepts  
20 are derived from economic and financial theory and are generally implemented using  
21 financial models and economic concepts. From a technical perspective, a “fair rate of  
22 return” is an ex post (after the fact) earned return on an asset base. Conversely, the cost  
23 of capital is an ex ante (before the fact) expected, or required, return on a capital base.  
24 In regulatory proceedings, the two terms are often used interchangeably.

1 **Q. As regulated entities granted natural monopoly status, are public utilities**  
2 **guaranteed to earn their authorized rate of return?**

3 A. No. Public utilities are granted an opportunity to earn their authorized rate of return, they  
4 are not guaranteed to earn the rate of return authorized in a rate case. Many factors are  
5 involved in determining a rate of return. However, investments in new plant assets made  
6 subsequent to a rate case and/or increases to operating expenses between rate cases  
7 can have a negative impact on a utility's realized rate of return. Conversely, an increase  
8 in revenues and/or a decrease in operating expenses can have a positive impact on the  
9 earned rate of return. In the former scenario, a public utility will generally file for a rate  
10 increase. In the latter scenario, should a public utility earn a rate of return in excess of  
11 that approved by a utility commission, then the commission may instruct the utility to file  
12 a rate application in order that new rates be established to provide rate relief to ratepayers.

13  
14 **IV. GENERAL ECONOMIC CONDITIONS**

15 **Q. Can you please explain how general economic and financial conditions are**  
16 **considered in the determination of the cost of capital for a public utility?**

17 A. Yes. The cost of capital is determined in part by the current and future economic and  
18 financial conditions. The level of economic activity; the stage of the business cycle; the  
19 trend in interest rates, and the level of inflation or expansion all play an important factor  
20 in determining the cost of capital. While there are other factors involved these are the  
21 most important and at any point in time each can have an influence on the cost of capital.  
22 The general economic indicators which influence the cost of capital are presented in  
23 Schedule JAC-6 (Pages 1-8).

24

1 **Q. Can you describe the recent trends in economic conditions and their impact on**  
2 **capital costs over the past thirty years?**

3 A. Yes. Since the early 1980's through the end of 2007 the United States economy had  
4 been relatively stable. This period had been characterized by longer economic  
5 expansions, small contractions, low and/or declining inflation, and declining interest rates  
6 and other capital costs. However, in 2008 and 2009, the economy declined as a result of  
7 the mortgage crisis and had a negative effect on the financial markets both in the US and  
8 international financial markets. This decline was described as the worst financial crisis  
9 since the Great Depression and has been referred to as the "Great Recession." Since  
10 2008, the U.S. and other governments implemented unprecedented actions to attempt to  
11 correct or minimize the scope and effects of this worldwide recession.

12  
13 The recession bottomed out in mid-2009 and since that time the economy has begun to  
14 expand again, initially at a slow pace but at a more rapid rate in recent months. This is  
15 evidenced by the national unemployment rate falling from 7.4 percent in 2013 to 5.6  
16 percent at the end of September, 2015. At the State level, however, Arizona's  
17 unemployment rate continues to lag that of the nation, and as of October 2015 stood at  
18 6.1 percent.<sup>2</sup> The length of this most recent recession and the slow recovery indicate that  
19 the impact may be felt for an extended period of time.

20  
21  
22  
23  
24 <sup>2</sup> United States Department of Labor, Bureau of Labor Statistics, Arizona Unemployment Rate  
<http://www.bls.gov/eag/eag.az.htm>

1 **Q. Please describe how the economic and financial indicators were examined and how**  
2 **they relate generally to the cost of capital.**

3 A. Schedule JAC-6 (Pages 1 and 2) identifies relevant economic data such a Real Gross  
4 Domestic Product ("GDP") Growth, Industrial Production Growth, Unemployment,  
5 Consumer Price Index ("CPI") and Producer Price Index. As can be seen, 2007 marked  
6 the sixth year of economic expansion, but beginning in 2008 the economy entered into a  
7 significant decline, as indicated by negative real GDP and industrial production growth as  
8 well as an increase in the unemployment rate. Since 2010 the economy has begun to  
9 rebound, however, overall economic growth has been slower than that of prior expansions  
10 following an economic downturn.

11  
12 Since 2008 inflation, as measured by the CPI, has been 3 percent or lower. The annual  
13 rate of inflation in 2014 was 0.8 percent, and as of the end of the third quarter in 2015,  
14 inflation stood at -0.1 percent. The annual rate of inflation has generally been declining  
15 over the past several business cycles and continues to do so as evidenced by the low  
16 annual inflation rates of the last three years, 2012-2014. At present, inflation is at the  
17 lowest level experienced in the past 40 years, and is indicative of lower capital costs.

18  
19 **Q. What have been the trends in interest rates over the four prior business cycles and**  
20 **at the current time?**

21 A. Schedule JAC-6 (Pages 3 – 5) shows that interest rates rose sharply to record levels in  
22 1975-1981, when the inflation rate was high and generally rising. Interest rates declined  
23 substantially as did inflation rates during the remainder of the 1980s and throughout the  
24 1990s. Interest rates declined even further from 2000-2005 and for the years 2009

1 through 2014, interest rates have been the lowest since prior to 1975. Since 2008, the  
2 Federal Reserve has lowered the Federal Funds rate, and in 2012, 2013 and 2014, both  
3 U.S. and corporate bond yields declined to their lowest levels in more than 40 years.  
4 While interest rates have risen slightly from their lows of 2012, both government and  
5 corporate lending rates remain at historically low levels through 2014, again reflective of  
6 lower capital costs.

7  
8 **Q. What do the economic indicators show for trends of common share prices?**

9 A. As shown in Schedule JAC-6 (Pages 6 and 7), stock prices were essentially stagnant  
10 during the high inflation/high interest rate environment of the late 1970s and early 1980s.  
11 Beginning in 1983 a significant upward trend in stock prices began. However, the  
12 beginning of the recent financial crisis saw stock prices decline significantly and stock  
13 prices in 2008 and early 2009 were down significantly from peak 2007 levels, reflecting  
14 the financial/economic crisis. Beginning in the third quarter of 2009, prices have  
15 recovered substantially and have ultimately reached and exceeded the levels achieved  
16 prior to the beginning of the "crash," with the S&P 500 Composite Index, the NASDAQ  
17 Composite Index and the DOW Jones Industrial Average reaching all-time highs in the  
18 second quarter of 2015.

19  
20 **Q. What conclusions can be reached from your discussion of economic and financial**  
21 **conditions?**

22 A. I believe that the most recent downturn in the economy has resulted in a decline in the  
23 investor expectation of returns. This is evident in several ways: 1) lower interest rates  
24 on bank deposits; 2) lower interest rates on U.S. Treasury and corporate bonds; and, 3)

1 lower increases in Social Security cost of living benefits. While unemployment has  
2 reduced substantially, the average median income of families has reduced as well.  
3 Finally, as noted above, utility bond yields are currently at levels below those prevailing  
4 prior to the financial crisis of late 2008 to early 2009 and are at the lowest levels of the  
5 past 40 years. While the economy is recovering from this latest recession, it is recovering  
6 slower than expected. Slower recovery means that the results of the traditional cost of  
7 equity models are lower than prior to the recession.

8  
9 **V. CAPITAL STRUCTURE AND COST OF DEBT**

10 **Q. What is the Company's proposed capital structure?**

11 A. Black Mountain proposes a pro forma capital structure of 30 percent long-term debt and  
12 70 percent common equity.

13  
14 **Q. Concurrent to the filing of its rate application, the Company also filed a financing  
15 application requesting authority to issue evidence of indebtedness in an amount  
16 not to exceed \$3.4 million. What is the stated purpose of the Company's request  
17 to issue long-term debt?**

18 A. The stated purpose of the proposed financing is to effectuate a rebalancing of the  
19 Company's capital structure from its present 100 percent equity structure to one  
20 consisting of 30 percent debt and 70 percent equity.

21  
22 **Q. Has the Company's financing docket been consolidated with the rate docket?**

23 A. Yes. Pursuant to a Procedural Order issued on July 6, 2015, the two dockets have been  
24 consolidated.

1 **Q. Please describe the Company's proposed long-term debt.**

2 A. The proposed \$3.4 million debt will be 10-year term, non-amortizing debt, with interest to  
3 be paid monthly,<sup>3</sup> and the principal balance on the Note due and payable ten years from  
4 the date of closing. The interest rate on the debt is anticipated to be 3.53 percent per  
5 annum, computed as the yield on the 10-year U.S. Treasury debt security plus a 130 basis  
6 point credit spread. The actual interest rate on the debt, however, will not be determined  
7 until 15 business days before the closing date. The term sheet associated with the  
8 proposed financing is attached as Exhibit 3 of the Company's financing application.

9  
10 **Q. What is Black Mountain's proposed cost of debt?**

11 A. As shown in Schedules D-1 and D-2, the Company proposes a cost of debt of 3.53  
12 percent.

13  
14 **Q. Is RUCO supportive of the Company's desire to rebalance its capital structure?**

15 A. Yes, because debt capital is less costly than equity capital, and residential ratepayers will  
16 benefit from a lower revenue requirement for Black Mountain. However, RUCO did have  
17 several concerns relating to the loan terms, as proposed by the Company, and issued  
18 four data requests to the Company relating to those concerns. The data requests issued  
19 by RUCO relating to the proposed financing were RUCO 2.01 – 2.04.

20

21

22

23

24

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<sup>3</sup> Pursuant to the Company's response to RUCO data request 2.01, the Company indicated that it has the option of making interest payments on a semi-annual basis, rather than on a monthly basis as specified in the Term Sheet.

1 **Q. Following receipt of the Company's responses to RUCO's data requests, does**  
2 **RUCO continue to have concerns regarding the Company's financing, as**  
3 **proposed?**

4 A. Yes, but only as it relates to the issue discussed in RUCO data request 2.02. In RUCO  
5 2.02, the Company was asked to explain what factors had been taken into consideration  
6 in the determination of the 130 basis point estimated credit spread. In response (See  
7 attached Company response to RUCO 2.02), the Company stated that the 130 basis point  
8 credit spread was an "estimate" of the credit risk spread related to Liberty Utilities Co.  
9 However, within the body of its response to RUCO 2.02, the Company went on to say that  
10 it "seeks approval" of a change to the interest terms in the Term Sheet, with the credit  
11 spread now contemplated to be "equal to the spread on Liberty Utilities Co.'s most recent  
12 private placement financing."

13  
14 **Q. Has the Company amended its financing application to reflect the above noted**  
15 **changes to the interest terms in the Term Sheet?**

16 A. The Company does not appear to have done so, as a check of the ACC E-Docket web  
17 site shows no amended filing relating to a change in the interest terms.

18  
19 **Q. Has RUCO issued a follow-up data request to the Company regarding its concerns**  
20 **relating to changes in the interest terms contemplated by the Company?**

21 A. Yes. However, RUCO's latest data request (RUCO 13-01) has just been issued, and the  
22 Company has not yet had time to respond. For this reason, RUCO will defer further  
23 comment on the matter in direct testimony, but plans to revisit the issue when filing  
24 surrebuttal testimony once it has reviewed the Company's response.

1 **Q. In view of the above, for purposes of its direct testimony what is RUCO's**  
2 **recommended cost of debt in this proceeding?**

3 A. RUCO recommends a cost of debt not to exceed 3.53 percent, which is the cost rate  
4 proposed by the Company.  
5

6 **VI. SELECTION OF PROXY GROUP**

7 **Q. Was RUCO able to directly estimate Black Mountain's cost of common equity?**

8 A. No. Black Mountain's common stock is not publicly-traded, and for this reason it is not  
9 possible to directly estimate the cost of the Company's common equity. Thus, RUCO  
10 employed a proxy group of publicly-traded water utility companies to indirectly estimate  
11 the Company's cost of equity utilizing financial market data available for each sample  
12 company.  
13

14 **Q. What publicly-traded water utility companies has RUCO selected for inclusion in its**  
15 **proxy group?**

16 A. RUCO's proxy group consists of the following nine publicly-traded water utility companies:  
17 American States Water, American Water Works, Aqua America, Artesian Resources,  
18 California Water, Connecticut Water, Middlesex Water, SJW Corp., and York Water.  
19 These nine water utilities comprise the entire universe of publicly-traded water utility  
20 companies followed by both the Standard Large-Cap and Mid-Cap editions of *The Value*  
21 *Line Investment Survey*. Attachment 2 contains the most recent *Value Line* quarterly  
22 update for each of RUCO's nine proxy companies.  
23  
24

1 **Q. For purposes of his analysis, does the Company's cost of capital witness employ**  
2 **the same proxy group as that of RUCO?**

3 A. No. The company's witness, Mr. Bourassa, employs a proxy group of only seven  
4 companies. For purposes of his analysis, Mr. Bourassa excludes both American Water  
5 Works and Artesian Resources from his proxy group of sample companies.

6  
7 **VII. DCF ANALYSIS**

8 **Q. What is the theory and methodological basis of the DCF model?**

9 A. The DCF model is one of the oldest and most commonly used models for estimating the  
10 COE for public utilities, and the only one which intrinsically takes into consideration the  
11 price investors are willing to pay for a given unit of return. The DCF is based on the  
12 "dividend discount model" of financial theory, which maintains that the value (price) of any  
13 security or commodity is the discounted present value of all future cash flows.

14  
15 The most common variant of the DCF model assumes that dividends are expected to  
16 grow at a constant rate and the following formula will generate the cost of capital.

17 
$$K = \frac{D}{P} + g$$

18  
19 Where: K = cost of equity  
20 P = current price  
21 D = current dividend rate  
22 K = discount rate (cost of capital)  
23 g = constant rate of expected growth  
24

1 This formula essentially recognizes that the return expected, or required, by investors is  
2 comprised of two factors: the dividend yield (current income) and expected growth in  
3 dividends (future income).

4  
5 **Q. Please explain how RUCO employed the DCF model.**

6 A. For purposes of its analysis, RUCO employed the constant growth DCF model. In doing  
7 so, RUCO combined the current dividend yield for each proxy group utility stock with  
8 several indicators of expected dividend growth.

9  
10 **Q. How did RUCO derive the dividend yield component of the DCF equation?**

11 A. Several different methods can be used to compute the dividend yield component in the  
12 constant growth DCF model. However, for purposes of its analysis RUCO utilized the  
13 Gordon quarterly compounding method to compute the dividend yield component, as it  
14 gives recognition to the timing of dividend payments and dividend increases. The Gordon  
15 quarterly compounding method is expressed as follows:

$$Yield = \frac{D_0(1 + 0.5g)}{P_0}$$

16  
17  
18 The current ( $P_0$ ) stock price in my yield calculation represents the average of the high and  
19 low stock price for each proxy company for the most recent three month period (August –  
20 October, 2015). The current ( $D_0$ ) dividend is the current annualized dividend rate for each  
21 proxy company.

1 **Q. How does RUCO estimate the dividend growth (g) component of the DCF equation?**

2 A. In estimating the dividend growth rate in its DCF analysis, RUCO gives consideration to  
3 the following five indicators of growth:

- 4 1. Five-year average (2010-2014) earnings retention (i.e., fundamental)  
5 growth, as reported by *Value Line*;
- 6 2. Five-year average of historic growth in earnings per share (EPS),  
7 dividends per share (DPS), and book value per share (BVPS), as  
8 reported by *Value Line*;
- 9 3. Years 2015, 2016 and 2018-2020 projections of earnings retention  
10 growth, as reported by *Value Line*;
- 11 4. Years 2012-2014 to 2018-2020 projections of EPS, DPS, and BVPS,  
12 as reported by *Value Line*; and,
- 13 5. Five - year projections of EPS growth, as reported by Yahoo Finance.

14 RUCO believes this combination of growth indicators to be a representative and  
15 appropriate set with which to estimate investor expectations of dividend growth for its  
16 proxy group of sample companies, as each is a determinant of dividend growth.  
17 Additionally, these growth indicators are reflective of the types of information that  
18 investors normally take into consideration when making an investment decision.

19 **Q. Please describe RUCO's DCF calculations.**

20 A. RUCO's DCF analysis is presented in Schedule JAC-3, Pages 1 through 4. Page 1  
21 presents RUCO's overall DCF cost of equity estimation results for its proxy group of  
22 sample companies. As can be seen, "raw" DCF calculations are presented on several  
23 bases: mean, median, and high values. Page 2 presents the calculation of the dividend  
24

1 yield for each proxy company prior to adjustment for growth. Pages 3 and 4 present  
2 RUCO's historical and projected growth rate calculations for its proxy group of companies.

3  
4 **Q. What does RUCO conclude from its DCF cost of equity estimation analyses?**

5 A. The DCF cost of equity rates obtained for RUCO's proxy group fall into a range between  
6 7.80 percent and 8.85 percent. The highest DCF rates are 8.85 percent. RUCO  
7 concludes that 8.85 percent represents the current DCF-derived cost of equity for the  
8 proxy group. Accordingly, RUCO recommends a DCF-derived cost of equity of 8.85  
9 percent for Black Mountain, which is based on the high end of the DCF range.

10  
11 **VIII. CAPM ANALYSIS**

12 **Q. Please describe the theory and methodological basis of the CAPM.**

13 A. Developed in the 1960s and 1970s as an extension of modern portfolio theory, the CAPM  
14 describes the relationship between a security's investment risk and its market rate of  
15 return.<sup>4</sup> This relationship identifies the rate of return which investors expect a security to  
16 earn so that its market return is comparable with the market returns earned by other  
17 securities that have similar risk. The relationship is specified by the Security Market Line  
18 (SLM) that indicates the relationship between each security or portfolio's "beta" and its  
19 resulting return. Beta is a measure of relative risk (i.e., volatility) between a given equity  
20 security and the market as a whole.

21  
22  
23  
24 

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<sup>4</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; and 6) homogeneous expectations.

1 **Q. How is the CAPM derived?**

2 A. The general form of the CAPM is:

$$3 \quad K = R_f + \beta (R_m - R_f)$$

4 Where:  $K = \text{cost of equity}$

5  $R_f = \text{risk free rate}$

6  $R_m = \text{return on market}$

7  $\beta = \text{beta}$

8  $R_m - R_f = \text{market risk premium}$

9

10 **Q. Can you please identify the strengths of using the CAPM model in your analysis?**

11 A. The CAPM is cited as having the following strengths (1) it is based on the concept of risk  
12 and return; (2) it is company specific as it relates to the specific beta's within the industry;  
13 (3) it has widespread use as it recognizes that investors can and do diversify; (4) it's highly  
14 structured and easy to apply when using the assumptions of the model; (5) the model is  
15 formulistic and the data used in the computations is readily available; (6) it is a forward  
16 looking concept; and (7) it is a method for converting changes in interest rates to the cost  
17 of equity.

18

19 **Q. What risk-free ( $R_f$ ) rate does RUCO use in its CAPM analysis?**

20 A. For purposes of its CAPM analysis, RUCO uses a risk-free rate of 2.73 percent. RUCO's  
21 risk-free rate represents a composite 3-month average yield on the 20- and 30-year long-  
22 term U.S. Treasury Bond, measured over the 3-month period, August - October 2015.  
23 The calculation of RUCO's risk-free rate is presented in Schedule JAC-4, Page 1.

24

1 **Q. Is it customary to use the yield on U.S. Treasury securities as the risk-free ( $R_f$ )**  
2 **rate in the CAPM?**

3 A. Yes, because debt securities issued by the United States Department of the Treasury are  
4 considered to be free of default risk. Two general types of U.S. Treasury securities are  
5 most often used as the risk free ( $R_f$ ) component, short-term U.S. Treasury bills and long-  
6 term U.S. Treasury bonds. RUCO elected to use the yields on 20- and 30-year U.S.  
7 Treasury bonds because yields on long-term Treasury bonds more closely match the  
8 long-term investment perspective of a cost of equity analyses.

9  
10 **Q. Did RUCO consider use of a forecasted long-term Treasury bond rate as the risk-**  
11 **free rate to be used in its CAPM analysis?**

12 A. No. The appropriate interest rate to be used in the CAPM is the current rate borne by  
13 investors in the market place. Use of a forecasted risk-free rate overstates cost of equity  
14 estimates derived from the CAPM. Use of a current long-term Treasury rate is reflective  
15 of investor's current expectations, and as such is the appropriate risk-free rate to be used  
16 in the CAPM.

17  
18 **Q. What beta coefficients does RUCO employ in its CAPM analysis?**

19 A. RUCO employs the most recent *Value Line* beta reported for each company in its proxy  
20 group. Once again, beta<sup>5</sup> is a measure of the relative volatility, or risk, of a particular stock  
21 in relation to the overall market. Betas less than 1.0 are considered less risky than the  
22

23

24

---

<sup>5</sup> See Attachment 2 – Individual proxy companies beta's identified

1 market, whereas betas greater than 1.0 are more risky. Utility stocks traditionally have  
2 had betas below 1.0.

3  
4 **Q. How does RUCO estimate the market risk premium ( $R_m - R_f$ ) component?**

5 A. The market risk premium component ( $R_m - R_f$ ) represents the investor-expected premium  
6 of common stocks over the risk-free rate, or government bonds. For purposes of its  
7 analysis, RUCO estimated the market risk premium by comparing annual realized returns  
8 on equity for the S&P 500 group with the actual annual yields on 20-year long-term  
9 Treasury bonds over the period, 1978-2014. As shown in Schedule JAC-4, Page 2, the  
10 market risk premium component used in RUCO's CAPM represents the average of  
11 differential returns on equity for the S&P 500 group and the annual yields on 20-year U.S.  
12 Treasury bonds over this 1978-2014 period of time. RUCO determined the average ROE  
13 on the S&P 500 to be 13.75 percent, and the average 20-year U.S. Treasury bond yield  
14 to be 6.89 percent. Thus, based upon these returns RUCO concluded the market risk  
15 premium ( $R_m - R_f$ ) component in its CAPM to be 6.85 percent.

16  
17 **Q. What did RUCO conclude the overall CAPM COE to be?**

18 A. As shown in Schedule JAC-4, Page 1, RUCO determined the CAPM derived cost of equity  
19 to be 7.56 percent for its proxy group of sample companies.

20 **IX. CE ANALYSIS**

21 **Q. Please describe the basis of the Comparable Earnings (CE) methodology.**

22 A. The CE method is designed to measure returns expected to be earned on the original  
23 cost book value of similar risk business enterprises, in this case RUCO's proxy group of  
24

1 companies. Thus, it provides a direct measure of the fair return, since it translates into  
2 practice the competitive principle upon which regulation rests. This is true despite Black  
3 Mountain not being a public company, as it provides additional support that the company  
4 will be earning a fair rate of return.

5  
6 **Q. How did RUCO apply the CE methodology?**

7 A. RUCO applied the CE methodology by examining realized returns on equity for its proxy  
8 group of sample companies over the 10-year period, 2005-2014, as well as projected  
9 returns on equity for 2015 and 2016, and 2018-2020.

10  
11 **Q. What cost of equity results were obtained from RUCO's CE analysis?**

12 A. As shown in Schedule 5, RUCO calculated historical returns on equity for its sample  
13 companies over both a 5- and 10-year period, and projected returns on equity over the 5-  
14 year period, 2015-2019. Based upon its analysis, RUCO generated mean and median  
15 CE cost of equity estimates ranging from a low of 8.63 percent to a high of 10.44 percent.  
16 The results of RUCO's CE cost of equity analysis based on returns on equity for the proxy  
17 group can be summarized as follows:

	<u>Historic ROE's</u>	<u>Projected ROE's</u>
18 Mean	8.83 % - 9.18 %	10.44 %
19 Median	8.63 % - 8.74 %	9.83 %

20  
21 For purposes of its analysis, RUCO adopts the 10.44 percent cost of equity estimate at  
22 the high end of the range as its CE-derived cost of equity estimate for the Company.

1 **X. RUCO RESPONSE TO COMPANY'S COST OF CAPITAL WITNESS MR. THOMAS J.**  
2 **BOURASSA**

3 **Q. Please summarize Mr. Bourassa's cost of capital analyses and recommendations.**

4 A. Mr. Bourassa recommends a return on equity for the Company of no less than 10.8  
5 percent based on estimates derived from two constant growth DCF models, two CAPM  
6 models, and one risk premium model, using a sample group of seven publicly-traded  
7 water companies. Based upon his analyses, Mr. Bourassa determined the cost of equity  
8 for his sample group fell in the range of 9.8 percent to 10.4 percent, with the mid-point  
9 indicated cost of equity being 10.1 percent. However, for purposes of his cost of equity  
10 recommendation for Liberty Black Mountain, Mr. Bourassa makes an upward 100 basis  
11 point adjustment for small size and business risk, resulting in a range of estimates of 10.8  
12 percent to 11.4 percent and a mid-point indicated cost of equity of 11.1 percent. Mr.  
13 Bourassa's recommended 10.8 percent cost of equity reflects a downward 30 basis point  
14 adjustment for financial risk ( $11.1\% - 0.3\% = 10.8\%$ ). Mr. Bourassa recommends an 8.62  
15 percent overall rate of return for the Company, based upon a pro forma capital structure  
16 consisting of 30.0 percent debt and 70.0 percent equity, and a cost of debt of 3.53 percent.

17  
18 In his constant growth DCF analyses, Mr. Bourassa estimates the dividend growth (g)  
19 component based upon (i) an average of both historical and forecasted growth and (ii)  
20 forecasted growth. The 5- and 10-year historical growth metrics employed by Mr.  
21 Bourassa include stock price growth, book value per share (BVPS), earnings per share  
22 (EPS), and dividends per share (DPS). Mr. Bourassa justifies use of stock price as a  
23 growth metric on grounds that in equilibrium, stock prices should grow at the same rate  
24 as BVPS, EPS and DPS (Bourassa Direct, p. 31, lines 12-14). The historical stock price

1 growth rates in Mr. Bourassa's DCF analysis are obtained from Yahoo Finance adjusted  
2 closing prices, while the BVPS, EPS and DPS historical growth rates are obtained from  
3 *Value Line*. Mr. Bourassa makes exclusive use of 5-year EPS forecasts from *Value Line*  
4 for his forecasted dividend growth estimates. In each of his two constant growth DCF  
5 analyses, the current dividend yield ( $D_0/P_0$ ) component is based upon a May 22, 2015  
6 spot market ( $P_0$ ) price. For purposes of the 9.41 percent and 9.71 percent constant growth  
7 DCF cost of equity estimates he relies upon, Mr. Bourassa adopts historical growth  
8 measures obtained over a 5-year period (See Bourassa Schedules D-4.4 and D-4.7  
9 (pages 1 and 2)).

10  
11 In his Risk Premium Analysis Based on Total Returns (RPM), Mr. Bourassa utilizes a 16-  
12 year historical period, 1999-2014, over which to estimate the equity risk premium to be  
13 used in his RPM. In each year, he obtains a composite average annual total return for  
14 his sample companies, subtracts from this value the average annual yield on long-term  
15 Treasury Bonds for that year, with the resulting quantity being the annual risk premium  
16 for his sample companies in that year. The 6.4 percent risk premium value used by Mr.  
17 Bourassa in his RPM analysis represents a 16-year average annual total return. In direct  
18 testimony, Mr. Bourassa describes the RPM as a 'bond yield plus risk premium method;'  
19 thus, to this 6.4 percent risk premium he adds a 4.2 percent expected long-term Treasury  
20 Bond rate. The resulting 10.6 percent projected return on equity is Mr. Bourassa's RPM  
21 derived cost of equity. Mr. Bourassa's RPM analysis is presented in Schedule D-4.9.

22  
23 For purposes of his CAPM analyses, Mr. Bourassa presents estimates based upon both  
24 historical and current market risk premia. In both, he employs a 4.2 percent forecasted

1 risk-free ( $R_f$ ) rate based, in part, upon estimates from Value Line and Blue Chip  
2 Consensus Forecasts for the 30-year long-term Treasury yield covering the period, 2016-  
3 2018. Mr. Bourassa's CAPM analysis is presented in Schedule D-4.11.

4  
5 **Q. Turning first to Mr. Bourassa's DCF analysis, column [1] of Bourassa Schedules D-**  
6 **4.4 and D-4.5 present 5- and 10-year historical average annual changes in stock**  
7 **price. Pursuant to information provided in Footnote 1 of those schedules, Mr.**  
8 **Bourassa states that these historical stock price growth rates have been calculated**  
9 **through December 31, 2014. Was RUCO able to confirm if this was true?**

10 A. A review of Mr. Bourassa's work papers revealed that, contrary to the information provided  
11 in Footnote 1, the 5- and 10-year historical average stock price growth rates presented in  
12 column [1] of Schedules D-4.4 and D-4.5 were calculated through December 31, 2013,  
13 and not December 31, 2014, as indicated.

14  
15 **Q. Does RUCO believe historical stock price growth to be an appropriate metric with**  
16 **which to estimate the dividend growth ( $g$ ) component in the constant growth DCF**  
17 **model?**

18 A. No, because stock price growth is **not** a determinant of dividend growth. In fact, the  
19 reverse is true, for without the ability to demonstrate growth in such metrics as earnings  
20 per share (EPS), dividends per share (DPS), earnings retention and book value per share  
21 (BVPS), investors would be unwilling to bid up the share price of a company's common  
22 equity in the market. In this regard, dividend growth is a determinant of stock price growth,  
23 not *vice versa*. That Mr. Bourassa purports to use stock price growth as a metric to  
24 estimate dividend growth places, figuratively speaking, the cart before the horse.

1 **Q. You state above that Mr. Bourassa “purports” to use stock price growth as a metric**  
2 **to estimate dividend growth. Does RUCO have reason to believe that the 5- and 10-**  
3 **year historical stock price growth rates presented in Bourassa schedules D-4.4 and**  
4 **D-4.5 are something other than 5- and 10-year measures of capital stock price**  
5 **appreciation?**

6 A. Yes. As further indicated in Footnote 1 of Schedules D-4.4 and D-4.5, the data used by  
7 Mr. Bourassa to compute his 5- and 10-year stock price growth rates was obtained from  
8 the Yahoo Finance website. A review of Mr. Bourassa’s work papers, however, indicates  
9 that rather than using actual December 31 year-end closing stock prices reported by  
10 Yahoo Finance, Mr. Bourassa used December 31 year-end **adjusted closing prices**  
11 reported by Yahoo Finance in his calculations. A review of the Yahoo Finance website  
12 clearly indicates that the adjusted closing prices reported have been adjusted for both  
13 dividend distributions and stock splits.<sup>6</sup> Thus, rather than being a measure of capital stock  
14 price appreciation as Mr. Bourassa claims, the stock price growth rates reported in  
15 Bourassa schedules D-4.4 and D-4.5 are 5- and 10-year measures of total return.

16  
17 **Q. Please define the term, “total return.”**

18 A. As defined by Investopedia, ‘total return’ accounts for two categories of investment return:  
19 income and capital appreciation. Income includes interest paid by fixed-income  
20 investments, distributions or dividends. Capital appreciation represents the change in the

21  
22  
23 <sup>6</sup> When searching for historical stock prices on the Yahoo Finance website, the heading of the column  
24 containing Yahoo Finance’s adjusted closing prices reads, “Adj Close\*.” Beneath the historical prices  
displayed, an asterisk appears with language clarifying what is meant by Adj Close, and reads as follows:  
”\*Close price adjusted for dividends and splits.”

1 market price of an asset.<sup>7</sup> Although measures of total return often assume dividend  
2 reinvestment, the above Investopedia definition was silent as to this point.

3  
4 **Q. As per the above definition, is it RUCO's position that the 5- and 10-year stock price**  
5 **growth rates presented in Schedules D-4.4 and D-4.5 contain both (i) an income**  
6 **component and (ii) a capital appreciation component?**

7 A. Yes.

8  
9 **Q. Did RUCO issue a data request to Mr. Bourassa concerning this issue, and if so**  
10 **how did he respond?**

11 A. Yes, two data requests were issued, RUCO Data Requests 4.4 and 5.5. In RUCO 4.4,  
12 Mr. Bourassa was asked (i) to acknowledge that Yahoo Finance adjusted closing prices  
13 are adjusted for both dividends and stock splits, and as a consequence, (ii) to admit that  
14 his computations of 5- and 10-year stock price growth were, instead, measures of total  
15 return. In response (See attached Bourassa Response to RUCO 4.4), Mr. Bourassa  
16 acknowledged the former, but steadfastly denied the latter. For purposes of its second  
17 data request (i.e., RUCO 5.5), RUCO prepared a schedule comparing the sample average  
18 annual total return figures used in Mr. Bourassa's Risk Premium analysis for the period  
19 2004-2014, as presented in Bourassa Schedule D-4.9,<sup>8</sup> to sample average annual returns  
20 computed using Yahoo Finance adjusted closing prices over this same 2004-2014 period.  
21 The annual return figures obtained from Yahoo Finance adjusted closing prices were

22  
23 

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<sup>7</sup> <http://www.investopedia.com/terms/t/totalreturn.asp#ixzz3qSI2j7nj>

24 <sup>8</sup> Footnote 1 of Bourassa Schedule D-4.9 indicates that the annual total return figures presented in Mr. Bourassa's Risk Premium model were obtained using data from *Value Line Analyzer*.

1           **essentially identical** to the annual total return figures from Mr. Bourassa's Risk Premium  
2           model, and in RUCO 5.5 Mr. Bourassa was asked to (i) provide a plausible explanation  
3           as to how this could be, and (ii) once again acknowledge that the stock price growth rates  
4           presented in Bourassa Schedules D-4.4 and D-4.5 had been overstated. In response  
5           (See attached Response to RUCO 5.5), Mr. Bourassa failed to provide a plausible  
6           explanation to the former, and regarding the latter once again steadfastly denied that his  
7           stock price growth rates had been overstated.

8  
9   **Q.    Since issuing RUCO Data Requests 4.4 and 5.5, has RUCO obtained irrefutable**  
10   **evidence demonstrating that annual returns computed using Yahoo Finance**  
11   **adjusted closing prices contain both an income component as well as a capital**  
12   **appreciation component?**

13   **A.**    Yes. On the internet, RUCO accessed the 2014 Annual Report to Shareholders issued  
14           by each of Mr. Bourassa's seven publicly-traded sample companies. RUCO reviewed  
15           that document for each sample company, and in the Annual Report for six of the seven  
16           companies (i.e., American States Water, Aqua America, Connecticut Water, Middlesex  
17           Water, SJW Corporation and York Water) located a presentation showing the 5-year  
18           cumulative total return value, as of December 31, 2014, of an assumed \$100 investment  
19           in the utility company's common equity made as of December 31, 2009, assuming  
20           reinvestment of dividends.<sup>9</sup>

21  
22  
23  
24   <sup>9</sup> The 2014 Annual Report issued by the California Water Service Group included a presentation showing  
cumulative total returns over a 20-year period, not a 5-year period.

1 **Q. Has RUCO prepared an Exhibit comparing the 5-year cumulative total return figures**  
2 **obtained from the Annual Reports with 5-year investment returns based on Yahoo**  
3 **Finance adjusted closing prices over that same 5-year period of time?**

4 A. Yes. As shown in RUCO Exhibit JAC-A, the 5-year compound average cumulative total  
5 returns obtained for each of the six sample companies from the Annual Reports are  
6 **identical** to the 5-year compound average returns obtained for these same six sample  
7 companies using Yahoo Finance adjusted closing prices. That these investment returns  
8 are identical clearly demonstrates that growth rates derived from Yahoo Finance adjusted  
9 closing prices contain both an income component and a capital appreciation component,  
10 and that the "dividend adjustment" made by Yahoo Finance to a stock's actual closing  
11 price is intended to allow for the calculation of a cumulative total return value assuming  
12 full reinvestment of dividends. Thus, contrary to Mr. Bourassa's assertions otherwise, the  
13 5- and 10-year historical stock price growth rates presented in Schedules D-4.4 and D-  
14 4.5 have been **overstated**, as they are measures of cumulative total return and not  
15 measures of stock price growth (i.e., capital appreciation) as he maintains.

16  
17 **Q. Pursuant to a review of his work papers, did RUCO find that Mr. Bourassa had done**  
18 **anything else which further served to overstate the historical 5- and 10-year stock**  
19 **price growth rates shown in column [1] of Schedules D-4.4 and D-4.5 for his sample**  
20 **companies?**

21 A. Yes. A review of Mr. Bourassa's work papers revealed that his historical stock price  
22 growth rates were computed as the arithmetic mean of changes in annual stock prices  
23 over both a 5- and 10-year period for each of his sample companies. By employing an  
24 arithmetic mean Mr. Bourassa gives tacit consideration to stock price volatility, and in so

1 doing needlessly inflates the computation of actual historical growth over a 5- and 10-year  
2 period. To obtain an accurate measure of historical stock price growth, Mr. Bourassa  
3 should have employed a geometric mean to allow for the computation of a compound  
4 average annual 5- and 10-year growth rate.  
5

6 **Q. Earlier you pointed out that the 5- and 10-year stock price growth rates appearing**  
7 **in Bourassa Schedules D-4.4 and D-4.5 were not computed through December 31,**  
8 **2014, as indicated. Did RUCO bring this fact to Mr. Bourassa's attention?**

9 A. Yes, RUCO did so when issuing RUCO Data Request 5.1, wherein Mr. Bourassa was  
10 asked to (i) prepare amended restatements of Schedules D-4.4 and D-4.5 in order to  
11 reflect 5- and 10-year stock price growth rates through December 31, 2014, as indicated,  
12 and (ii) to provide RUCO with a copy of Mr. Bourassa's work papers supporting his  
13 amended restatements.  
14

15 **Q. In responding to RUCO 5.1, did Mr. Bourassa provide RUCO with the requested**  
16 **restatements of Schedules D-4.4 and D-4.5?**

17 A. No, he did not. Instead, Mr. Bourassa indicated that he would "correct the footnote  
18 contained in the original filing."<sup>10</sup> However, in his response (See attached Bourassa  
19 Response to RUCO 5.1), Mr. Bourassa did "update" his 5- and 10-year average annual  
20 change in stock price calculations, pointing out that were he to update his analysis to  
21 reflect stock price growth through December 31, 2014, the 9.43 percent sample average  
22

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23  
24 <sup>10</sup> RUCO infers from this that rather than formally updating his analysis to reflect 5- and 10-year stock price  
growth rates through December 31, 2014, Mr. Bourassa will continue to rely on stock price growth rates  
computed through December 31, 2013, as filed.

1 5-year stock price growth rate reported in column [1] of Schedule D-4.4 would increase  
2 404 basis points to a level of 13.47 percent (.1347 - .0943 = .0404), while the 9.35 percent  
3 sample average 10-year stock price growth rate reported in column [1] of Schedule D-4.5  
4 would increase 40 basis points to a level of 9.75 percent (.0975 - .0935 = .0040). Mr.  
5 Bourassa concluded his response with the following observation:

6 Had Mr. Bourassa used the updated annual averages, the indicated  
7 cost of capital based on the DCF would have been higher. Accordingly,  
8 the indicated cost of capital for the proxy group would have been higher  
9 and Mr. Bourassa's recommendation for the Company would also have  
10 been higher."

11 **Q. In view of Mr. Bourassa's stock price growth rates having been overstated by (i)**  
12 **measures of cumulative total return obtained from Yahoo Finance adjusted closing**  
13 **prices and (ii) use of an arithmetic mean growth calculation, how does RUCO**  
14 **respond to the above comments?**

15 **A.** Mr. Bourassa's use of stock price growth as a metric to estimate the dividend growth (g)  
16 rate in his constant growth DCF models should be viewed for what it is: a results oriented  
17 means of obtaining an inflated DCF derived estimated cost of equity.

18 **Q. For purposes of estimating the dividend grow (g) rate to be used in his constant**  
19 **growth DCF models, does Mr. Bourassa independently estimate the other growth**  
20 **metrics he incorporates into his DCF methodology?**

21 **A.** No. The only growth metric incorporated into Mr. Bourassa's DCF cost of equity  
22 estimation methodology for which he is personally responsible is the previously discussed  
23 stock price growth metric. As noted in Footnote 2 of Bourassa Schedules D-4.4 and D-

1 4.5, all other growth metrics incorporated into his DCF analysis are inputs obtained from  
2 *Value Line*.<sup>11</sup>

3  
4 **Q. In light of the above, has RUCO prepared a restatement of Bourassa Schedules D-**  
5 **4.4 and D-4.5 to show what his 5- and 10-year historical and projected dividend**  
6 **growth (g) rates would be exclusive of stock price as a growth metric and updated**  
7 **with the most recent *Value Line* data?**

8 A. Yes. RUCO Exhibit JAC-B is a restatement of Bourassa Schedule D-4.4 presenting Mr.  
9 Bourassa's 5-year historical and projected growth rates, exclusive of stock price growth,  
10 with all other growth metrics updated as per the most recent *Value Line* data. As shown,  
11 RUCO's restatement indicates that Mr. Bourassa's 5-year sample average historical  
12 dividend growth (g) estimate is overstated by 14 basis points, his sample average 5-year  
13 *Value Line* projected EPS growth estimate is overstated by 135 basis points, resulting in  
14 a 75 basis point overstatement to his average of historical and projected dividend growth  
15 estimate. The detail provided in RUCO Exhibit JAC-B is presented in abbreviated fashion  
16 in the chart below.

Bourassa Schedule D-4.4	5-Year Average Historical Growth	5-Year Value Line Projected EPS Growth	Average Historical & Projected Growth
Bourassa as Filed	6.14%	6.71%	6.43%
RUCO Adjusted	6.00%	5.36%	5.68%
Bourassa Overstatement	0.14%	1.35%	0.75%

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18  
19  
20  
21  
22  
23  
24  
<sup>11</sup> Specifically, *Value Line Analyzer*, weekly as of May 14, 2015.

1  
2 RUCO Exhibit JAC-C presents a similar restatement of Bourassa Schedule D-4.5, with  
3 Mr. Bourassa's 10-year historical and projected growth rates shown exclusive of a stock  
4 price growth metric, with all other growth metrics updated with the most recent *Value Line*  
5 data. As shown, RUCO's restatement indicates that Mr. Bourassa's 10-year sample  
6 average historical dividend growth (g) estimate is overstated by 69 basis points, his  
7 sample average 5-year *Value Line* projected EPS growth estimate is overstated by 135  
8 basis points, resulting in a 102 basis point overstatement to his average of historical and  
9 projected dividend growth estimate. The detail provided in RUCO Exhibit JAC-C is  
10 presented in abbreviated fashion in the chart below.

Bourassa Schedule D-4.5	10-Year Average Historical Growth	5-Year Value Line Projected EPS Growth	Average Historical & Projected Growth
Bourassa As Filed	6.07%	6.71%	6.39%
RUCO Adjusted	5.38%	5.36%	5.37%
Bourassa Overstatement	0.69%	1.35%	1.02%

11  
12  
13  
14  
15  
16  
17 **Q. In making the above restatements to Bourassa Schedules D-4.4 and D-4.5, other**  
18 **than the exclusion of historical stock price growth as a metric to estimate dividend**  
19 **(g) growth, did RUCO alter or change in any way Mr. Bourassa's constant growth**  
20 **DCF methodology?**

21 **A.** No. Aside from excluding stock price as a growth metric, RUCO's restatements were  
22 confined merely to an update of Mr. Bourassa's Schedules D-4.4 and D-4.5, as filed, using  
23 the most recent updated *Value Line* data available.  
24

1 **Q. Has RUCO prepared similar restatements of Bourassa Schedules D-4.7 (Page 1)**  
2 **and D-4.7 (Page 2) to reflect how the above noted overstatements to Mr. Bourassa's**  
3 **dividend growth estimates serve to overstate his overall constant growth DCF cost**  
4 **of equity estimates?**

5 A. Yes. As shown in Exhibit JAC-D, RUCO's restatement of Bourassa Schedule D-4.7  
6 (Page 1) indicates that Mr. Bourassa's 9.71 percent indicated cost of equity obtained from  
7 use of a Value Line projected EPS growth estimate has been overstated by 139 basis  
8 points (9.71% - 8.31% = 1.39%). Similarly, as shown in Exhibit JAC-E, RUCO's  
9 restatement of Bourassa Schedule D-4.7 (Page 2) indicates that Mr. Bourassa's 9.41  
10 percent indicated cost of equity obtained from use of average of historical and projected  
11 growth estimates has been overstated by 77 basis points (9.41% - 8.64% = 0.77%).  
12

13 **Q. Based upon the above RUCO restatements to Bourassa Schedules D-4.7 (Page 1)**  
14 **and D-4.7 (Page 2), what did RUCO determine Mr. Bourassa's average constant**  
15 **growth DCF indicated cost of equity to be?**

16 A. As shown in the restatements of Bourassa Schedules D-4.7 (Pages 1 and 2), RUCO  
17 determined Mr. Bourassa's average constant growth DCF indicated cost of equity to be  
18 **8.48 percent**, a figure which represents the average of the 8.31 percent indicated cost of  
19 equity shown in Exhibit JAC-D and the 8.64 percent indicated cost of equity shown in  
20 Exhibit JAC-E ((8.31% + 8.64%) / 2 = 8.48%).  
21  
22  
23  
24

1 **Q. How does the above 8.48 percent RUCO restatement to Mr. Bourassa's constant**  
2 **growth DCF indicated cost of equity compare to RUCO's DCF derived indicated**  
3 **cost of equity in this proceeding?**

4 A. RUCO's DCF derived indicated cost of equity is 8.85 percent. Thus, RUCO's constant  
5 growth DCF cost of equity estimate exceeds by 37 basis points the average indicated cost  
6 of equity obtained from RUCO's restatement of Mr. Bourassa's two constant growth DCF  
7 models (8.85% - 8.48% = 0.37%).

8  
9 **Q. In closing on a discussion of the DCF, in direct testimony (p. 30, lines 8-12) Mr.**  
10 **Bourassa is critical of the DCF model, stating it will "understate the cost of equity**  
11 **when the market-to-book ratio exceeds 1.0," because "the market-derived return**  
12 **produced by the DCF is often applied to book value rate base by regulators." How**  
13 **does RUCO respond?**

14 A. RUCO would simply point out that pursuant to information provided in the November 2015  
15 issue of *AUS Monthly Utility Reports*, the average authorized ROE for RUCO's proxy  
16 group of companies was reported to be **9.65 percent**, while the percentage return on book  
17 value common equity for these same nine water utilities was **11.4 percent**; this, despite  
18 the fact that the market-to-book ratio for these nine publicly-traded water utilities stood at  
19 **2.28**. Thus, assuming regulators relied upon cost of equity estimates obtained from the  
20 DCF when setting rates for these nine publicly-traded water utilities, doing so doesn't  
21 appear to have hampered their ability to achieve returns on book value common equity  
22 **175 basis points** higher than their authorized ROE at a time when their market-to-book  
23 ratios exceeded book value by 228%.

1 **Q. Moving on to a discussion of Mr. Bourassa's Risk Premium Analysis Based on Total**  
2 **Returns (RPM), as presented in Schedule D-4.9, what is the source of the data used**  
3 **by Mr. Bourassa in the computation of the annual total returns for his sample**  
4 **companies over the 16-year period, 1999-2014?**

5 A. As noted in Footnote 1 of Schedule D-4.9, the source of the total return data used by Mr.  
6 Bourassa in his RPM analysis is *Value Line Analyzer*.

7  
8 **Q. Does RUCO subscribe or otherwise have access to *Value Line Analyzer* as an**  
9 **informational resource?**

10 A. No, it does not.

11  
12 **Q. Does RUCO subscribe to *The Value Line Investment Survey*?**

13 A. Yes, RUCO subscribes to both the Standard Large-Cap edition of *The Value Line*  
14 *Investment Survey* as well as the Mid-Cap edition of *The Value Line Investment Survey*.  
15 RUCO maintains subscriptions to both editions in order to have access to the quarterly  
16 updates for each of the publicly-traded utility companies included in its water, gas, and  
17 electric utility proxy groups.

18  
19 **Q. Mr. Bourassa's proxy group consists of seven publicly-traded water utility**  
20 **companies, all of which are followed by the Standard edition of *The Value Line***  
21 ***Investment Survey*. Do the quarterly updates issued by *Value Line* for companies**  
22 **in the Standard edition present historical total return data?**

23 A. Yes, but *Value Line* presents this historical total return data only for periods of 1-, 3- and  
24 5-years, updated as of the most recent quarter.

1 **Q. In light of the above, would it therefore be fair to say that, to date, RUCO has yet to**  
2 **obtain independent confirmation of the annual total return values reported by Mr.**  
3 **Bourassa in Schedule D-4.9 through a *Value Line* informational resource?**

4 A. Yes, that would be a fair statement.

5  
6 **Q. In reviewing Mr. Bourassa's work papers was RUCO able to independently confirm**  
7 **as to accuracy the computation of the annual total returns reported in Schedule D-**  
8 **4.9?**

9 A. No, because the work papers contained **no support** for the total returns reported for the  
10 6-year period, 1999-2004, and the only support found in the work papers for the total  
11 returns reported for the 10-year period, 2005-2014, was hard coded into the work papers.

12  
13 **Q. Did RUCO issue a Data Request to Mr. Bourassa concerning this issue?**

14 A. Yes. RUCO issued Data Request 4.6 requesting Mr. Bourassa to provide (a) an  
15 explanation why the work papers contained no support for the total returns in years 1999-  
16 2004, (b) all data inputs necessary to compute annual total returns for his sample  
17 companies over the 16-year period, 1999-2004, and (c) a schedule in Excel format  
18 showing the computational methodology employed by Mr. Bourassa to compute the  
19 annual total returns for the period, 1999-2014.

20  
21 **Q. How did Mr. Bourassa respond to RUCO 4.6?**

22 A. In response (See Bourassa Response to RUCO Data Request 4.6) to part (a) Mr.  
23 Bourassa merely confirmed that *Value Line* was the source of the data used to obtain the  
24 total returns reported in Schedule D-4.9, and characterized that information to be,

1           **“publicly available.”** To part (b) Mr. Bourassa provided an additional Excel workbook  
2 containing what he referred to as, “*Value Line* data for to the years 1999-2005,” all of  
3 which, once again, had been **hard coded** into the spreadsheet. Mr. Bourassa’s response  
4 to part (c) reads as follows:

5           **“Mr. Bourassa does not compute total returns** for each utility.  
6 **He uses the total returns as reported by *Value Line*** for each  
7 ***Value Line* defines “Total Return” (a stock’s total return) as the**  
8 **percentage increase in the value of a shareholder’s**  
9 **investment, assuming reinvestment of all dividends and**  
10 **adjusted for any stock splits.** Total returns are shown for a range  
11 of time periods in the *Value Line* Investment Analyzer. Returns for  
periods longer than a year are annualized. An annualized return  
shows the yearly gain required to achieve a cumulative return. See  
also the Company’s responses to (a) and (b) above.” (emphasis  
added).

12 **Q. Earlier you discussed at length Mr. Bourassa’s use of Yahoo Finance adjusted**  
13 **closing prices to compute the stock price growth rates in his constant growth DCF**  
14 **analyses, and demonstrated that rather than simply providing a measure of capital**  
15 **appreciation, Yahoo Finance adjusted closing prices allowed for the computation**  
16 **of cumulative total returns, assuming reinvestment of dividends, correct?**

17 **A. Yes, that is true.**

18  
19 **Q. Did RUCO endeavor to independently confirm the accuracy of the annual total**  
20 **returns reported in Bourassa Schedule D-4.9 using Yahoo Finance adjusted closing**  
21 **prices?**

22 **A. Yes. Utilizing December 31 year-end Yahoo Finance adjusted closing prices obtained**  
23 **from the Yahoo Finance website for each of Mr. Bourassa’s sample companies, RUCO**  
24

1 made an independent calculation of total return values over the same 16-year period (i.e.,  
2 1999-2014) as that shown in Schedule D-4.9. In doing so, RUCO found that annual total  
3 returns obtained from Yahoo Finance adjusted closing prices were **essentially identical**  
4 to those presented in Bourassa Schedule D-4.9 over the 14-year period, 2001-2014.  
5 However, annual total returns obtained from Yahoo Finance adjusted closing prices for  
6 1999 and 2000 were noticeably different from those presented in Schedule D-4.9.  
7 Specifically, as shown in Schedule D-4.9, the annual total returns reported by Mr.  
8 Bourassa in years 1999 and 2000 are **26.28 percent** and **2.70 percent**, respectively. In  
9 contrast, the total returns obtained by RUCO using Yahoo Finance adjusted closing prices  
10 in these same two years are **30.69 percent** and **9.02 percent**, respectively. Thus, based  
11 upon RUCO's analysis the total return values reported in Bourassa Schedule D-4.9 in  
12 both 1999 and 2000 appear to be **understated**.

13  
14 **Q. Did RUCO determine the magnitude of the understatement to Mr. Bourassa's**  
15 **reported total returns in 1999 and 2000?**

16 **A.** Yes. Based upon RUCO's calculations, the 1999 annual total return reported in Bourassa  
17 Schedule D-4.9 is **understated by 441 basis points** ( $30.69\% - 26.28\% = 4.41\%$ ), while  
18 the annual total return in 2000 is understated by 632 basis points ( $9.02\% - 2.7\% = 6.32\%$ ).

1 **Q. Does RUCO have reason to believe that total returns reported by *Value Line* for Mr.**  
2 **Bourassa’s sample companies over the 16-year period, 1999-2014, should be**  
3 **materially different from those obtained using Yahoo Finance adjusted closing**  
4 **prices?**

5 A. No. In view of the *Value Line* definition of “total return” provided by Mr. Bourassa, annual  
6 measures of total return obtained from Yahoo Finance adjusted closing prices should be  
7 essentially identical to those reported by *Value Line*, as both are measures of a stock’s  
8 total return (i.e., they contain both (i) an income component and (ii) a capital appreciation  
9 component), assuming reinvestment of all dividends.

10

11 **Q. Do Mr. Bourassa’s work papers contain the December 31 year–end Yahoo Finance**  
12 **adjusted closing prices used to compute the historical 5- and 10-year stock price**  
13 **growth rates in his constant growth DCF analysis?**

14 A. Yes, they are located in the “Price Growth” tab of Mr. Bourassa’s work papers.

15

16 **Q. Do the year-end Yahoo Finance adjusted closing prices located in the ‘Price**  
17 **Growth’ tab of Mr. Bourassa’s work papers go back far enough in time to allow for**  
18 **the computation of both 1999 and 2000 annual total returns for his sample**  
19 **companies?**

20 A. Yes.<sup>12</sup>

21

22

23

24 <sup>12</sup> For five of Mr. Bourassa’s sample companies, the work papers present December 31 year-end Yahoo Finance adjusted closing prices going back to the year 1990.

1 Q. So had he elected to do so, Mr. Bourassa could have computed 1999 and 2000  
2 annual total returns for each of his sample companies utilizing the Yahoo  
3 Finance adjusted closing prices available to him in the work papers, true?

4 A. Yes, that is correct.

5  
6 Q. But as evidenced by his response to RUCO 4.6, rather than computing total  
7 returns for his sample companies Mr. Bourassa instead relies on total returns  
8 reported by *Value Line*, correct?

9 A. Yes.

10  
11 Q. Does RUCO have reason to believe that *Value Line* would incorrectly report (i.e.,  
12 understate) total returns for Mr. Bourassa's sample companies for the years 1999  
13 and 2000?

14 A. No.

15  
16 Q. Based on the Yahoo Finance adjusted closing prices in Mr. Bourassa's work  
17 papers, did RUCO compute sample average annual total returns for the years 1999  
18 and 2000, and if so, what were they?

19 A. Yes. Based upon the Yahoo Finance adjusted closing prices found in the work papers,  
20 Mr. Bourassa's sample companies experienced annual total returns of **30.74 percent** in  
21 1999, and **8.99 percent** in 2000. RUCO considers these annual total returns to be  
22 identical to those independently obtained by RUCO from Yahoo Finance adjusted closing  
23

24

1 prices, discussed earlier, in these same two years (i.e., 30.69 percent in 1999 and 9.02  
2 percent in 2000).

3  
4 **Q. Does RUCO have reason to believe that the total return values obtained from use  
5 of Yahoo Finance adjusted closing prices for the years 1999 and 2000 are incorrect?**

6 A. No, because the annual total returns obtained from Yahoo Finance adjusted closing prices  
7 for the period, 2001-2014, are essentially identical to those reported by Mr. Bourassa in  
8 Schedule D-4.9.

9  
10 **Q. Has RUCO prepared a schedule to demonstrate this?**

11 A. Yes. As presented in RUCO Exhibit JAC-F, the annual total returns reported for the 16-  
12 year period, 1999-2014, in Bourassa Schedule D-4.9 are shown in Column [A], with  
13 Columns [B] and [C] presenting annual total returns obtained from Yahoo Finance  
14 adjusted closing prices; those in Column [B] are independently obtained by RUCO, while  
15 those in Column [C] are based on adjusted closing prices from Mr. Bourassa's work  
16 papers. As can be seen, the annual total returns in Columns [B] and [C] are **identical**,  
17 with the 16-year average for both being **11.72 percent**. Likewise, over the 14-year period,  
18 2001-2014, annual total returns shown in Column [A] are essentially identical to those  
19 shown in Columns [B] and [C]. Only the annual total returns in Column [A] reported in  
20 years 1999 and 2000 are materially different from those in Columns [B] and [C], and result  
21 in an **understated** 16-year average annual return of **10.97 percent**.

1 **Q. RUCO has a mandate to advocate on behalf of the residential utility consumer in**  
2 **evidentiary rate proceedings before the ACC. In view of this fact, why has RUCO**  
3 **gone to such great lengths to point out that Mr. Bourassa appears to have**  
4 **understated the 1999 and 2000 annual total returns in his RPM analysis?**

5 A. Because it appears that Mr. Bourassa may have understated the sample average 1999  
6 annual total return value in his RPM analysis in order to derive a **higher** estimated cost  
7 of equity.<sup>13</sup> Specifically, RUCO's concerns relate to the 16-year period, 1999-2014,  
8 employed by Mr. Bourassa to obtain the equity risk premium component (i.e., 6.4 percent)  
9 in his RPM analysis. As will be demonstrated, the market performance of Mr. Bourassa's  
10 sample companies in 1999 is clearly **not** representative of that over the subsequent 15-  
11 year period, 2000-2014. For this reason RUCO believes use of annual total returns from  
12 1999 in Mr. Bourassa's RPM analysis to be improper, as it overstates both the equity risk  
13 premium component as well as the RPM derived cost of equity. The following discussion  
14 will shed further light on RUCO's concerns in this regard.

15  
16 **Q. How does Mr. Bourassa describe the risk premium model (RPM) in direct**  
17 **testimony?**

18 A. In his explanatory discussion of the RPM (See Bourassa Direct, pp. 32-33, 20:5), Mr.  
19 Bourassa describes the RPM as a 'bond yield plus risk premium' cost of equity estimation  
20 methodology, whose "**general approach**" involves determining the spread between the  
21 return on debt and the return on equity, and then adding this spread to "**the current debt**  
22 **yield**" to derive an estimated cost of equity. Mr. Bourassa goes on to say that in

23  
24 <sup>13</sup> RUCO has no explanation as to why Mr. Bourassa may have elected to understate the sample average  
annual total return for the year 2000 in his RPM analysis.

1 implementing the RPM, **“it is assumed that the past relationship will continue into the**  
2 **future.”** Mr. Bourassa concludes by stating that the RPM is widely used by both **“analysts**  
3 **and investors”** (emphasis added).

4  
5 **Q. Pursuant to the above description provided by Mr. Bourassa, is it important that**  
6 **the historical period used to obtain the equity risk premium component in the RPM**  
7 **be one which is representative of expected future performance?**

8 **A.** Yes, and Mr. Bourassa, himself, appears to acknowledge this fact when he states that in  
9 implementing the RPM, past relationships are assumed to continue into the future.

10  
11 **Q. Does a cursory review of Schedule D-4.9 provide evidence that, as filed, Mr.**  
12 **Bourassa’s RPM analysis serves to violate the assumption that past relationships**  
13 **continue into the future?**

14 **A.** Yes. A cursory review of Schedule D-4.9 reveals that, as filed, Mr. Bourassa obtained  
15 both the **highest** annual total return (26.28%) and **highest** annual risk premium (20.41%)  
16 results in 1999, the **first** year of the 16-year period used to obtain the equity risk premium  
17 component in his RPM analysis.

1 **Q. Earlier you indicated that the 26.28 percent annual total return reported in Schedule**  
2 **D-4.9 for 1999 was understated by 441 basis points. Would it be fair to say that had**  
3 **Mr. Bourassa not understated this value in his RPM analysis, the 1999 performance**  
4 **of his sample companies would have been far less representative of the**  
5 **subsequent 15-year period, 2000-2014?**

6 **A. Yes, as both the 1999 annual total return and 1999 annual risk premium values would**  
7 **have been 441 basis points higher.**

8  
9 **Q. In reviewing Mr. Bourassa's work papers, was RUCO able to determine why the**  
10 **annual total return and annual risk premiums were unusually high for Mr.**  
11 **Bourassa's sample companies in 1999?**

12 **A. Yes. A review of Mr. Bourassa's work papers indicated that in 1999, common stock**  
13 **investors in one sample company – SJW Corp. – experienced a total return of 111.35**  
14 **percent.<sup>14</sup> On average, the other water utilities in Mr. Bourassa's sample experienced**  
15 **total returns of only 14.62 percent in 1999.<sup>15</sup> Thus, Mr. Bourassa's high total return and**  
16 **risk premium results in 1999 were largely attributable to the market performance of SJW**  
17 **common stock.**

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23 <sup>14</sup> This information appears in the "Price Growth" tab of Mr. Bourassa's work papers.

24 <sup>15</sup> In 1999, no market data was available for York Water Company. Thus, the RPM results obtained by Mr. Bourassa in that year reflect the market performance of only six of his seven sample companies. Beginning in year 2000, market data became available for all seven sample companies.

1 **Q. Was RUCO able to determine if any of Mr. Bourassa's other sample companies**  
2 **experienced total returns equivalent to that of SJW's in 1999?**

3 A. In reviewing Mr. Bourassa's work papers, RUCO found no instance of any sample  
4 company experiencing a gain of that magnitude. In fact, over the 16-year period, 1999-  
5 2014, the highest annual total return achieved by another sample company was 60.58  
6 percent, by York Water in 2001.<sup>16</sup> Thus, the stellar market performance achieved by SJW  
7 in 1999 appears to be a statistical aberration.

8  
9 **Q. For the reasons noted above, is it RUCO's position that the equity risk premium**  
10 **component of Mr. Bourassa's RPM analysis should have been obtained utilizing**  
11 **annual total return data for his sample companies over the 15-year period, 2000-**  
12 **2014?**

13 A. Yes.

14  
15 **Q. Has RUCO prepared an Exhibit which may help to explain why Mr. Bourassa elected**  
16 **to understate the 1999 annual total return for his sample companies in his RPM**  
17 **analysis?**

18 A. Yes. RUCO Exhibit JAC-G presents the annual total returns reported in Schedule D-4.9  
19 over both a 16-year period (i.e., 1999-2014) and a 15-year period (i.e., 2000-2014), and  
20 compares them to annual total returns obtained from Yahoo Finance adjusted closing  
21 prices over this same 16-year and 15-year period of time. As shown in Column [A], Mr.  
22 Bourassa's 16-year average annual total return is 10.97 percent,<sup>17</sup> while the 15-year  
23

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24 <sup>16</sup> This information was obtained in the "Price Growth" tab of Mr. Bourassa's Excel work papers.

<sup>17</sup> This 10.97 percent 16-year average annual total return is a value not presented in Schedule D-4.9.

1 average (i.e., exclusive of 1999) annual total return is 9.95 percent. As shown in Column  
2 [B], the comparable 16-year average annual total return based upon Yahoo Finance  
3 adjusted closing prices is 11.72 percent, while the 15-year average (i.e., exclusive of  
4 1999) annual total return is 10.45 percent. Clearly, average annual total returns in Column  
5 [B] are higher than those in Column [A]. However, had Mr. Bourassa elected to use the  
6 annual total returns in Column [B] in his RPM analysis, the 1999 annual total return  
7 (30.69%) would have exceeded by a factor of 1.94x the 15-year average (10.45%) annual  
8 total return  $((30.69\% / 10.45\%) - 1 = 1.94x)$ . Clearly, a disparity of that magnitude  
9 between performance in the first year and that over the next 15-year period would **not** be  
10 representative of performance which continued into the future.

11  
12 **Q. Does it appear that Mr. Bourassa may have understated the 1999 annual total return**  
13 **so as not to call attention to the disparity in the performance of his sample**  
14 **companies in 1999 relative to that of the subsequent 15-year 2000-2014 period?**

15 A. Yes, for as shown in Column [A], the 1999 annual total return (26.28%) exceeds by a  
16 factor of only 1.64x the 15-year average (9.95%) annual total return  $((26.28\% / 9.95\%) -$   
17  $1 = 1.64x)$ . Perhaps more significantly, however, the 10.97 percent 16-year average  
18 annual total return obtained in Column [A] **exceeds by 52 basis points** the 10.45 percent  
19 15-year average annual return in Column [B]. Thus, by understating the annual total  
20 return for 1999, Mr. Bourassa's methodology allows him to benefit from (i.e., piggy back  
21 on) the stellar annual total return performance of his sample companies in that year  
22 without calling undue attention to his having done so.

1 **Q. Does RUCO acknowledge that there is a certain degree of supposition contained in**  
2 **the above discussion?**

3 A. Yes, but until such time that Mr. Bourassa provides evidence demonstrating that annual  
4 total returns for his sample companies in 1999 were 26.28 percent, as he reports them to  
5 be in Schedule D-4.9, RUCO continues to believe that this scenario largely explains his  
6 RPM methodology.

7  
8 **Q. Thank you. In describing the RPM, you also point out that Mr. Bourassa states the**  
9 **RPM is “widely used by both analysts and investors.” In your judgment, would an**  
10 **investor be inclined to view the 1999 annual total return and equity risk premium**  
11 **levels achieved by Mr. Bourassa's sample group of companies as representative of**  
12 **what to expect in the future?**

13 A. No. Investors are assumed to be rational, and in my judgment a rational investor would  
14 view the total return and risk premium levels achieved in 1999 as a statistical aberration  
15 and, therefore, not representative of investment returns to be expected in the future.  
16 Investors would be much more inclined to view performance measured over the 15-year  
17 period, 2000-2014, as representative of expected future returns.

18  
19 **Q. For purposes of his RPM analysis, did Mr. Bourassa employ a compound geometric**  
20 **mean in the computation of the annual total returns presented in Schedule D-4.9?**  
21

22 A. No, he did not. Mr. Bourassa employed exclusive use of an arithmetic mean when  
23 computing the annual total returns presented in Schedule D-4.9.  
24

1 **Q. Why is exclusive use of arithmetic returns in the development of Mr. Bourassa's**  
2 **RPM equity risk premium inappropriate?**

3 A. It is inappropriate for two reasons. First, exclusive use of arithmetic returns leads to the  
4 development of higher, and potentially excessive, risk premiums. Second, investors have  
5 access to both arithmetic and geometric returns, and utilize both when making investment  
6 decisions. For example, mutual fund investors rely on geometric returns when evaluating  
7 a fund's historic and prospective returns, and *Value Line* reports historic investment  
8 returns on a geometric or compound annual growth rate basis. Thus, to exclude  
9 geometric returns in the development of an equity risk premium fails to give recognition  
10 to their importance in the investment decision-making process.

11  
12 **Q. Are the 5-year cumulative total returns presented in the 2014 Annual Report to**  
13 **Shareholders discussed earlier computed as a geometric mean?**

14 A. Yes, as they are reflective of compound average annual growth over a 5-year period.  
15 Perhaps more significantly, however, inclusion of these geometric return investment  
16 performance metrics in a publication issued by management and intended for  
17 consideration by shareholders is further evidence of their perceived importance to  
18 investors.

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1 **Q. Has the Arizona Corporation Commission (ACC) previously ruled on the issue of**  
2 **geometric returns and whether they should be considered in the development of**  
3 **an equity risk premium?**

4 A. Yes, and the ACC has consistently ruled that geometric returns **should be considered**  
5 in the development of an equity risk premium.<sup>18</sup>

6  
7 **Q. Did RUCO issue a data request asking Mr. Bourassa if he considered use of**  
8 **geometric returns in the development of an equity risk premium to be appropriate,**  
9 **and if so, how did he respond?**

10 A. Yes, this question was asked of Mr. Bourassa in RUCO Data Request 7.02. In response  
11 (See Bourassa Response to RUCO 7.02), Mr. Bourassa stated that geometric returns  
12 should **not** be considered in the development of an equity risk premium, as they are “ex-  
13 post” measures of performance and, as such, “provide no insight into the potential  
14 variance of future returns.”

15  
16 **Q. Has RUCO prepared a restatement of Bourassa Schedule D-4.9 giving**  
17 **consideration to geometric returns in the development of an equity risk premium**  
18 **in Mr. Bourassa’s RPM analysis?**

19 A. Yes. As shown in Exhibit JAC-H, RUCO has prepared a restatement of Schedule D-4.9  
20 incorporating geometric returns into his RPM analysis to obtain an average annual  
21

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22 <sup>18</sup> See Decision No. 70011 (dated November 27, 2007), in *UNS Gas, Inc.* (Docket No. G-04204A-06-0463);  
23 Decision No. 70360 (dated May 27, 2008), in *UNS Electric, Inc.* (Docket No. E-04204A-06-0783);  
Decision No. 71308 (dated October 21, 2009), in *Chaparral City Water Company* (Docket No. W-02113A-07-  
24 0551); Decision No. 71623 (dated April 14, 2010), in *UNS Gas, Inc.* (Docket No. G-04204A-08-0571);  
Decision No. 71845 (dated August 25, 2010), in *Arizona Water Company* (Docket No. W-01445A-08-0440);  
Decision No. 71914 (dated September 30, 2010), in *UNS Electric, Inc.* (Docket No. E-04204A-09-0206);

1 compound total return growth rate over both a 16-year period (i.e., 1999-2014) and a 15-  
2 year period (i.e., 2000-2014). Column [A] presents Mr. Bourassa's arithmetic mean  
3 returns, as filed, while Column [B] presents RUCO's compound geometric returns. As  
4 shown, RUCO determined that Mr. Bourassa's sample companies experienced  
5 compound average growth in total return of **9.94 percent** over a 16-year period, and  
6 compound average growth of **9.17 percent** when measured over a 15-year period.

7  
8 **Q. How did RUCO compute its 16-year and 15-year compound geometric returns?**

9 A. RUCO computed these 16- and 15-year compound geometric returns utilizing Yahoo  
10 Finance adjusted closing prices for Mr. Bourassa's sample companies.

11  
12 **Q. What impact did consideration of the above compound geometric returns have**  
13 **upon Mr. Bourassa's RPM analysis?**

14 A. As shown in Column [C] of RUCO Exhibit JAC-H, when averaging (i.e., simple average)  
15 the arithmetic returns in Column [A] with RUCO's geometric returns in Column [B],  
16 consideration of compound growth metrics in Mr. Bourassa's RPM analysis results in a  
17 16-year average annual total return of **10.46 percent**, and a 15-year average annual total  
18 return of **9.56 percent**. In absolute terms, when measured over the 16-year period, 1999-  
19 2014, consideration of geometric returns in Mr. Bourassa's RPM analysis results in a **51**  
20 **basis points reduction** to the 16-year average annual total return ( $10.97\% - 10.46\% =$   
21  $0.51\%$ ). Similarly, when measured over the 15-year period, 2000-2014, consideration of  
22 geometric returns results in a **39 basis points reduction** to the 15-year average annual  
23 total return ( $9.95\% - 9.56\% = 0.39\%$ ).  
24

1 **Q. In its restatement of Bourassa Schedule D-4.9, did RUCO make other adjustments**  
2 **to Mr. Bourassa's RPM analysis, as filed?**

3 A. Yes, RUCO made adjustments to the long-term Treasury bond yields employed by Mr.  
4 Bourassa in the computation of his annual risk premiums. As shown in Column [D] of  
5 Exhibit JAC-H, RUCO determined the 16-year average long-term Treasury bond yield to  
6 be **4.65 percent**, a figure 11 basis points higher than the **4.54 percent** 16-year average  
7 employed by Mr. Bourassa in his RPM analysis ( $4.65\% - 4.54\% = 0.11\%$ ). When  
8 measured over the 15-year period, 2000-2014, RUCO determined the 15-year average  
9 long-term Treasury bond yield to be **4.55 percent**.

10

11 **Q. Why did RUCO make adjustments to the Treasury bond yields in Mr. Bourassa's**  
12 **RPM?**

13 A. RUCO conducted an independent review of annual average U.S. Treasury rates over the  
14 16-year period, 1999-2014, and found that for the most part the annual Treasury yields  
15 reported by Mr. Bourassa in Schedule D-4.9 were those of the 30-year long-term Treasury  
16 bond. However, in the 4-year period, 1999-2002, and again during the 4-year period,  
17 2006-2009, RUCO found that annual average yields on the 20-year Treasury bond  
18 exceeded those of the 30-year Treasury bond due to an **inverted yield curve**.  
19 Accordingly, RUCO made adjustments to reflect the higher 20-year U.S. Treasury bond  
20 yield in these years. Additionally, during the 3-year period, 2003-2005, the U.S. Treasury  
21 discontinued the 30-year long-term bond, and RUCO made adjustments which reflect use  
22 of the 20-year long-term Treasury bond yield in these years. Finally, RUCO made an  
23 adjustment to the annual average 30-year Treasury bond yield reported by Mr. Bourassa  
24 in 2014, as this value had been understated in his analysis.

1 **Q. After giving consideration to geometric returns and making the above adjustments**  
2 **to Mr. Bourassa's Treasury bond yields, what did RUCO determine the 16-year and**  
3 **15-year average risk premiums to be?**

4 A. As shown in Column [E] of RUCO Exhibit JAC-H, the RUCO adjusted 16-year (i.e., 1999-  
5 2014) average risk premium was determined to be **5.81 percent**, while the RUCO  
6 adjusted 15-year (i.e., 2000-2014) average risk premium was determined to be **5.02**  
7 **percent**. As can be seen, each of these adjusted average risk premiums are **lower** than  
8 the 6.4 percent 16-year average annual risk premium employed by Mr. Bourassa in his  
9 RPM analysis; the RUCO adjusted 16-year average risk premium is **59 basis points**  
10 **lower** ( $6.4\% - 5.81\% = 0.59\%$ ), while the RUCO adjusted 15-year average risk premium  
11 is **138 basis points lower** ( $6.4\% - 5.02\% = 1.38\%$ ).

12  
13  
14 **Q. Earlier you pointed out that when describing the RPM, Mr. Bourassa stated that the**  
15 **"general approach" involves adding the "current debt yield" to the equity risk**  
16 **premium component to derive an RPM derived estimated cost of equity. Does**  
17 **RUCO believe the 'general approach' to the RPM as described by Mr. Bourassa to**  
18 **be the appropriate RPM methodology to use for purposes of setting the rates a**  
19 **regulated public utility may charge its customers?**

20 A. Yes, and for two reasons. First, the current debt yield is reflective of the rate borne by  
21 investors in the marketplace. To set rates based upon projected measures of long-term  
22 U.S. Treasury debt instruments ignores the fact that ratepayers don't have the luxury of  
23 obtaining comparable "projected" returns on investments today, here and now. This is  
24 particularly true when considering the present low rates paid by banks on passbook

1 savings accounts. Second, regulated public utilities are granted natural monopoly status  
2 to serve customers in their certificated service territory, and as a consequence the  
3 ratepayers they serve are held captive to the tariffed rates authorized to be charged.  
4 Thus, to set rates based on cost of equity estimates obtained through the use of projected  
5 measures of long-term Treasury debt yields is inequitable/unfair to ratepayers.

6  
7 **Q. For purposes of arriving at his overall 10.6 percent RPM derived cost of equity,**  
8 **does Mr. Bourassa employ a current measure of the long-term Treasury bond rate?**

9 A. No, he does not. As shown in Schedule D-4.9, Mr. Bourassa employs a 4.20 percent  
10 projected 30-year U.S. Treasury Bond rate, from forecasts obtained from *Value Line* and  
11 *Blue Chip Financial Forecasts* covering the period, 2016-2018 (See Bourassa Direct, pp.  
12 33-34, and Schedule D-4.8). In this respect, Mr. Bourassa's RPM methodology  
13 represents a significant departure from the 'general approach' he describes in direct  
14 testimony.

15  
16 **Q. In direct testimony, Mr. Bourassa frequently cites to a book authored by Dr. Roger**  
17 **A. Morin.<sup>19</sup> In reviewing the Morin book, did RUCO find support for use of a current**  
18 **measure of the long-term Treasury bond rate in the RPM?**

19 A. Yes. When discussing the choice of the debt security to be used in the RPM, Dr. Morin  
20 states that "the yield [i.e., current yield] on very long-term government bonds is the **best**  
21 **measure** of the risk-free rate for use in the risk premium model (emphasis added)."<sup>20</sup>  
22

23  
24 <sup>19</sup> Morin, Roger A., *New Regulatory Finance*, Public Utilities Reports: Vienna, Virginia (2006).

<sup>20</sup> See Morin, p. 112.

1 **Q. Does Mr. Bourassa's use of a 4.2 percent projected 30-year long-term Treasury**  
2 **Bond rate in his RPM analysis serve to overstate his 10.6 percent RPM derived cost**  
3 **of equity?**

4 A. Yes, it significantly overstates the cost of equity in his RPM analysis because the current  
5 yield on the 30-year U.S. Treasury Bond is **2.93 percent**,<sup>21</sup> a figure **127 basis points**  
6 **lower** than the projected 4.2 percent rate employed by Mr. Bourassa in his analysis  
7 (4.20% - 2.93% = 1.27%).

8  
9 **Q. Does RUCO's restatement of Bourassa Schedule D-4.9 present cost of equity**  
10 **estimates obtained using the current 2.93 percent 30-year Treasury Bond rate?**

11 A. Yes. As shown in Column [E] of RUCO Exhibit JAC-H, when incorporating the current  
12 2.93 percent 30-year Treasury Bond rate into Mr. Bourassa's RPM analysis, over a 16-  
13 year (i.e., 1999-2014) period the RUCO adjusted RPM cost of equity estimate falls to **8.74**  
14 **percent**, a figure **186 basis points lower** than Mr. Bourassa's 10.6 percent RPM  
15 estimated cost of equity (10.60% - 8.74% = 1.86%). When measured over a 15-year (i.e.,  
16 2000-2014) period, the RUCO adjusted RPM cost of equity estimate falls to **7.95 percent**,  
17 a figure **265 basis points lower** than Mr. Bourassa's 10.6 percent RPM estimated cost  
18 of equity (10.60% - 7.95% = 2.65%).

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<sup>21</sup> This was the closing spot-rate on the 30-year U.S. Treasury Bond on Friday, October 30, 2015.

1 **Q. For the reasons discussed earlier, does RUCO believe the above 7.95 percent figure**  
2 **to be the appropriate RPM derived cost of equity to be obtained from Mr.**  
3 **Bourassa's RPM analysis for his sample companies?**

4 A. Yes, as it (i) reflects the measurement of average annual total returns over the 15-year  
5 year period, 2000-2014, exclusive of those from 1999, (ii) gives consideration to geometric  
6 returns in the development of the equity risk premium component, (iii) makes appropriate  
7 adjustments to long-term Treasury Bond yields used in the computation of the annual risk  
8 premiums, and (iv) incorporates a current measure of the 30-year long-term Treasury  
9 yield.

10  
11 **Q. Turning now to Mr. Bourassa's CAPM cost of equity analysis, as shown in Schedule**  
12 **D-4.11 he obtains estimates from both a Historical Market Risk Premium (MRP)**  
13 **CAPM as well as a Current MRP CAPM. In both, however, the risk-free ( $R_f$ ) rate**  
14 **component is the same 4.2 percent forecasted long-term Treasury rate as that used**  
15 **by Mr. Bourassa in his RPM analysis. How does RUCO respond?**

16 A. For the reasons noted earlier in my discussion of Mr. Bourassa's RPM analysis, use of  
17 forecasted Treasury yields in the CAPM is inappropriate, and serves to **overstate** cost of  
18 equity estimates derived therefrom. The appropriate risk-free ( $R_f$ ) rate to be used in the  
19 CAPM is the current long-term Treasury Bond rate. The current spot-yield on the 30-year  
20 U.S. Treasury Bond is **2.93 percent**. Thus, Mr. Bourassa's use of a forecasted 4.2  
21 percent risk-free rate overstates the cost of equity estimates derived from both his  
22 Historical MRP and Current MRP CAPM models by **127 basis points** ( $4.20\% - 2.93\% =$   
23  $1.27\%$ ).

1 **Q. What is the sample average beta coefficient used by Mr. Bourassa in his CAPM**  
2 **analysis?**

3 A. As shown in Schedule D-4.11, Mr. Bourassa's sample average beta coefficient is 0.74.  
4

5 **Q. Since the filing of Mr. Bourassa's direct testimony, has there been a change to Mr.**  
6 **Bourassa's sample average beta?**

7 A. Yes, based on information obtained from the most recent *Value Line* quarterly update for  
8 the water utility industry (dated October 16, 2015), RUCO determined that the beta  
9 coefficient for Mr. Bourassa's sample companies has fallen to **0.73**. Thus, relative to other  
10 publicly-traded companies, the level of systematic (i.e., market) risk exposure to investors  
11 holding common shares in the stock of Mr. Bourassa's sample companies is fractionally  
12 lower than it was at the time Mr. Bourassa filed direct testimony.  
13

14 **Q. Does RUCO have concerns regarding the 7.00 percent market risk premium (RP<sub>m</sub>)**  
15 **component of Mr. Bourassa's Historical MRP CAPM?**

16 A. No.  
17

18 **Q. Does RUCO have concerns regarding the 9.25 percent market risk premium (MRP)**  
19 **component employed by Mr. Bourassa in his Current MRP CAPM?**

20 A. Yes, as his 9.25 percent MRP is clearly **not** reflective of **current** market conditions and  
21 has been significantly overstated.  
22  
23  
24

1 **Q. What evidence does RUCO have to demonstrate that the 9.25 percent market risk**  
2 **(RP<sub>m</sub>) premium in Mr. Bourassa's Current MRP CAPM is overstated?**

3 A. Evidence of its overstatement can be found in rebuttal testimony filed by Mr. Bourassa in  
4 the recent Quail Creek Water Company rate case.<sup>22</sup> Specifically, in Rebuttal (Page 10,  
5 lines 20-22), Mr. Bourassa alludes to a recent *Wall Street Journal* article which reported,  
6 as he states, that "estimates of the equity risk premium for the S&P 500 as of the end of  
7 April 2015 was one of the highest estimates going back to 1960." A review of the article  
8 to which Mr. Bourassa cites<sup>23</sup> reveals that as of the end of April 2015, the equity risk  
9 premium on the S&P 500 was 5.8 percent, and was based upon the research findings of  
10 Dr. Aswath Damodaran, Professor of Finance at the Stern School of Business at New  
11 York University.

12  
13 **Q. Does Dr. Damodaran regularly update his research findings as to the current equity**  
14 **risk premium for the S&P 500?**

15 A. Yes, Dr. Damodaran maintains a website dedicated to that purpose.<sup>24</sup> In visiting the  
16 website, RUCO found that he had updated his analysis to November 1, 2015, and as of  
17 that date the current equity risk premium on the S&P 500 was estimated to be **6.12**  
18 **percent.**

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23 <sup>22</sup> *Quail Creek Water Company* (Docket No. W-02514A-14-0343), Rebuttal Testimony (Cost of Capital) filed  
by Thomas J. Bourassa, dated June 3, 2015.

24 <sup>23</sup> Lahart, Justin, "Lower Yields May be Stocks' Real Threat," *The Wall Street Journal*, Heard on the Street  
Column, May 17, 2015. (<http://www.wsj.com/articles/lower-yields-may-be-stocks-real-threat-1431885420>)

<sup>24</sup> <http://pages.stern.nyu.edu/~adamodar/>

1 **Q. Would an equity risk premium on the S&P 500 of 6.12 percent, measured as of**  
2 **November 1, 2015, be considered an indication of the “current” MRP?**

3 A. Yes, because the S&P 500 is a broad based market index of 500 publicly-traded  
4 companies, and the performance of the S&P 500 is often used as a proxy for that of the  
5 market as a whole.

6  
7 **Q. In light of the above, please quantify the degree to which Mr. Bourassa’s 9.25**  
8 **percent current market risk premium is overstated.**

9 A. Mr. Bourassa has overstated the current MRP component in his Current MRP CAPM  
10 analysis by 313 basis points ( $9.25\% - 6.12\% = 3.13\%$ ).

11  
12 **Q. Has RUCO prepared a restatement to Bourassa Schedule D-4.11 reflecting**  
13 **corrections to the above noted problems associated with Mr. Bourassa’s CAPM**  
14 **analysis?**

15 A. Yes. As shown in Exhibit JAC-I, RUCO has prepared a restatement of Schedule D-4.11  
16 to reflect use of (i) the current 2.93 percent 30-year Treasury Bond yield as the risk-free  
17 ( $R_f$ ) rate, (ii) a reduced 0.73 sample average beta coefficient, and (iii) a reduction to the  
18 MRP component in Mr. Bourassa’s Current MRP CAPM. As can be seen, as adjusted by  
19 RUCO Mr. Bourassa’s Historical MRP CAPM estimated cost of equity falls from 9.4  
20 percent to 8.03 percent, a reduction of **137 basis points** ( $9.4\% - 8.03\% = 1.37\%$ ), while  
21 Mr. Bourassa’s Current MRP CAPM estimated cost of equity falls from 11.0 percent to  
22 7.39 percent, a reduction of **361 basis points** ( $11.0\% - 7.39\% = 3.61\%$ ). Overall, Mr.  
23  
24

1 Bourassa's average CAPM estimate falls from 10.2 percent to 7.71 percent, a reduction  
2 of **249 basis points** ( $10.2\% - 7.71\% = 2.49\%$ ).

3  
4 **Q. For purposes of his 10.8 percent recommended cost of equity for Liberty Black**  
5 **Mountain, Mr. Bourassa makes provision for an upward 100 basis point company-**  
6 **specific risk premium which, as noted in his direct testimony (p. 42, line 12) relates**  
7 **to "small size." How does RUCO respond?**

8 **A.** Empirical research has demonstrated that a small company risk premium adjustment to  
9 the cost of equity is unwarranted for regulated utilities. Annie Wong, of Western  
10 Connecticut State University, conducted a study on utility stocks to determine if the so-  
11 called size effect exists in the utility industry, and she writes as follows:

12 The fact that the two samples show different, though weak, results  
13 indicates that utility and industrial stocks do not share the same  
14 characteristics. First, given firm size, utility stocks are consistently less  
15 risky than industrial stocks. Second, industrial betas tend to decrease with  
16 firm size but utility betas do not. These findings may be attributed to the  
17 fact that all public utilities operate in an environment with regional  
18 monopolistic power and regulated financial structure. As a result, the  
19 business and financial risks are very similar among the utilities regardless  
20 of their size. Therefore, utility betas would not necessarily be expected to  
21 be related to firm size.

22 The object of this study is to examine if the size effect exists in the utility industry. After  
23 controlling for equity values, there is some weak evidence that firm size is a missing factor  
24 from the CAPM for the industrial but not for the utility stocks. This implies that although  
the size phenomenon has been strongly documented for industrials, the findings suggest

1           that **there is no need to adjust for the firm size in utility regulations.**<sup>25</sup> (emphasis  
2           added)

3  
4           **Q. Has the Commission previously ruled on the issue of firm size and whether it**  
5           **warrants a risk premium adjustment to the cost of equity?**

6           A. Yes. In Decision No. 64282,<sup>26</sup> the ACC ruled for Arizona Water that firm size does not  
7           warrant recognition of a risk premium stating, "We do not agree with the Company's  
8           proposal to assign a risk premium to Arizona Water based on its size relative to other  
9           publicly traded water utilities...." The Commission confirmed its previous ruling in  
10          Decision No. 64727<sup>27</sup> for Black Mountain Gas agreeing with Staff that "the 'firm size  
11          phenomenon' does not exist for regulated utilities, and that therefore there is no need to  
12          adjust for risk for small firm size in utility regulation." All companies have firm-specific  
13          risks; therefore, the existence of unique risks for a company does not lead to the  
14          conclusion that its total risk is greater than other entities. Moreover, as previously  
15          discussed, investors cannot expect compensation for firm-specific risk since it can be  
16          eliminated through diversification.

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23           <sup>25</sup> Annie Wong, "Utility Stock and the Size Effect: An Empirical Analysis," *Journal of the Midwest Finance*  
24           *Association*, (1993), p.98.

<sup>26</sup> Dated December 28, 2001.

<sup>27</sup> Dated April 17, 2002.

1 **Q. Has the ACC issued a more recent decision which reconfirms its prior position**  
2 **regarding firm size?**

3 A. Yes, in the recent EPCOR Water Arizona case.<sup>28</sup> In Decision No. 75268<sup>29</sup>, the ACC ruled  
4 as follows:

5 **Nor are we persuaded by Ms. Ahern's claim that EPCOR's "size"**  
6 **should be recognized as a business risk factor.** Although a company's  
7 **size may sometimes be considered as a business risk factor, for utilities**  
8 **of substantial size (i.e., those that have access to the equity capital**  
9 **markets) it is a minimal consideration in determining business risk.**  
10 Small utilities, (e.g., non-class A utilities) may have additional risk due to  
11 the inability to hire employees or contract for sufficient levels of expertise  
12 management, technical & financial) to perform effectively and efficiently.  
13 Small utilities also have other risks such as information access, greater  
14 annual variability in operating expenses, and greater regulatory risk both  
15 due to lack of skilled rate case personnel and the percentage of operating  
16 expenses and rate base components reviewed by Staff and intervenors.  
17 Due to the latter two reasons, for any adopted return on equity the  
18 distribution of actual returns is greater for a small utility than for a large  
19 utility, and greater variability means greater risk. However, most of the  
20 proxy companies used in the cost of capital analyses, including EPCOR,  
21 are a conglomeration of many smaller water systems and have the  
22 capacity to attract the appropriate level of talent for proficient operation.  
23 Thus, the business risk for any of the EPCOR systems parallels that of the  
24 sample companies, and **we do not believe a cost of equity adjustment**  
**for size is appropriate.** (emphasis added)

16 **Q. Does Liberty Black Mountain have access to the equity capital markets?**

17 A. Yes, through its ultimate parent, Algonquin Power & Utilities Corp., whose common stock  
18 is publicly traded on the Toronto Stock Exchange (Ticker: AQN).  
19  
20  
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22

23  
24 <sup>28</sup> EPCOR Water Arizona, Inc. (Docket No. WS-01303A-14-0010).

<sup>29</sup> Dated September 8, 2015.

1 **Q. Does this suggest that pursuant to Decision No. 75268, Mr. Bourassa's 100 basis**  
2 **point upward adjustment for small size is unwarranted?**

3 A. Yes.

4  
5 **XI. CONCLUSION AND RECOMMENDATIONS**

6 **Q. Please summarize RUCO's cost of capital recommendations in this proceeding.**

7 A. RUCO recommends that the Commission adopt the following:

- 8 1) A pro forma capital structure composed of 30.0 percent long-term debt and  
9 70.0 percent common equity;
- 10 2) A cost of debt not to exceed 3.53 percent;
- 11 3) A cost of common equity of 8.95 percent; and
- 12 4) An overall rate of return of 7.32 percent.

13  
14 **Q. Does this conclude your direct testimony?**

15 A. Yes, it does.

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WEIGHTED AVERAGE COST OF CAPITAL

<u>Line No</u>	<u>Description</u>	<u>Capitalization Per Company</u>	<u>RUCO Adjustments</u>	<u>RUCO Adjusted Capitalization</u>	<u>Capital Ratio</u>	<u>Cost</u>	<u>Weighed Cost</u>
1	Long Term Debt	\$ 1,952,259	\$ -	\$ 1,952,259	30.00%	3.53%	1.06%
2							
3	Common Equity	\$ 4,555,272	\$ -	\$ 4,555,272	70.00%	8.95%	6.27%
4							
5	<u>TOTAL CAPITALIZATION</u>	<u>\$6,507,531</u>	<u>\$ -</u>	<u>\$6,507,531</u>	<u>100.00%</u>		<u>7.32%</u>

6  
7  
8 In its financing application, the Company seeks authorization to issue long-term (i.e., 10-year maturity) non-amortizing debt  
9 in an amount not to exceed US\$3.4 million. For purposes of its rate filing, the Company's proposed long-term debt consists  
10 of \$1,952,259 of 10-year non-amortizing debt at an interest rate of 3.53 percent per annum.  
11  
12  
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Cost of Capital -- Common Equity

Line  
No

1	Discounted Cash Flow Model ("DCF")	Schedule JAC - 3	8.85%
2			
3	Capital Asset Pricing Model ("CAPM")	Schedule JAC - 4	7.56%
4			
5	Comparable Earning Model ("CE")	Schedule JAC - 5	<u>10.44%</u>
6			
7	Cost of Common Equity		<u><u>8.95%</u></u>
8			
9			
10			
11			
12			
13			
14			
15			
16			

**PROXY GROUP – DCF ANALYSIS**

Line No	Proxy Group Companies	(A) Current Dividend Yield (D <sub>t</sub> /P <sub>t</sub> )	(B) Historic Retention Growth	(C) Projected Retention Growth	(D) Five Year Historic Growth Rate	(E) Projected Per Share Growth Rates	(F) Projected EPS Growth	(G) Average Growth	(H) Expected Dividend Yield (D <sub>t</sub> /P <sub>t</sub> )	(I) DCF Rates
1	American States Water Co.	2.3%	6.0%	6.0%	9.7%	5.5%	5.0%	6.4%	2.4%	8.8%
2	American Water Works Co., Inc	2.5%	3.8%	4.3%		7.0%	7.34%	5.6%	2.6%	8.2%
3	Aqua America, Inc.	2.7%	5.1%	5.5%	8.8%	7.5%	5.55%	6.5%	2.8%	9.3%
4	Artesian Resources Corp.	3.6%	1.5%		3.2%		4.0%	2.9%	3.7%	6.6%
5	California Water Service Group	3.1%	3.2%	3.8%	3.7%	6.0%	5.0%	4.3%	3.1%	7.5%
6	Connecticut Water Service, Inc.	3.0%	2.9%	4.7%	6.8%	4.5%	5.0%	4.8%	3.1%	7.8%
7	Middlesex Water	3.2%	2.0%	3.5%	3.0%	3.3%	2.7%	2.9%	3.2%	6.1%
8	SJW Corporation	2.5%	4.1%	3.5%	5.7%	4.5%	14.0%	6.4%	2.6%	9.0%
9	York Water Company	2.7%	2.8%	3.8%	4.3%	5.3%	4.9%	4.2%	2.8%	7.0%
10										
11										
12										
13	Mean	2.84%	3.49%	4.40%	5.65%	5.46%	5.94%	4.90%	2.91%	7.80%
14										
15										
16	Median	2.75%	3.24%	4.08%	5.00%	5.42%	5.00%	4.78%	2.80%	7.83%
17										
18										
19	Composite-Mean		6.40%	7.30%	8.55%	8.36%	8.85%	7.80%		
20										
21										
22	Composite-Median		6.04%	6.89%	7.80%	8.22%	7.80%	7.58%		
23										
24										
25										

**References:**

- 27 Column (A) - Schedule JAC - 3, page 3 of 4
- 28 Column (B) - Schedule JAC - 3, page 4 of 4
- 29 Column (C) - Schedule JAC - 3, page 4 of 4
- 30 Column (D) and Column (E) - Schedule JAC - 3, page 2 of 4
- 31 Column (F) See Yahoo Finance, Growth Estimates - Next 5 Years - Attachment 7
- 32 Column (G) - Average Columns (B) through (F)
- 33 Column (H) - Column (A) \* [1 + Column (G)]
- 34 Column (I) - Column (G) + Column (H)
- 35

PROXY GROUP -- PER SHARE GROWTH RATES

Line No	Proxy Group Companies	5-Year Historic Growth Rates				Est'd '12-'14 to '18-'20 Growth Rates			
		EPS	DPS	BVPS	Average	EPS	DPS	BVPS	Average
1									
2	American States Water Co.	14.0%	8.5%	6.5%	9.7%	6.0%	7.5%	3.0%	5.5%
3	American Water Works Co., Inc					7.0%	8.5%	5.5%	7.0%
4	Aqua America, Inc.	13.0%	7.0%	6.5%	8.8%	7.5%	9.5%	5.5%	7.5%
5	Artesian Resources Corp.	3.0%	3.5%	3.0%	3.2%				
6	California Water Service Group	4.0%	2.0%	5.0%	3.7%	6.5%	7.0%	4.5%	6.0%
7	Connecticut Water Service, Inc.	9.0%	2.0%	9.5%	6.8%	4.5%	5.0%	4.0%	4.5%
8	Middlesex Water	4.5%	1.5%	3.0%	3.0%	5.0%	2.0%	3.0%	3.3%
9	SJW Corporation	10.5%	3.0%	3.5%	5.7%	1.5%	6.0%	6.0%	4.5%
10	York Water Company	6.0%	2.5%	4.5%	4.3%	6.5%	6.5%	3.0%	5.3%
9									
10									
11					5.6%				5.5%
12									

**Reference:**

Value Line Investment Survey - October 16, 2015 - Attachment 1

15  
16  
17

**PROXY GROUP -- DIVIDEND YIELD**

Line No	Proxy Group Companies	(A)	July - September, 2014			(E)
		DPS	High	Low	Average	Yield
1	American States Water Co.	\$0.90	\$42.40	\$35.80	\$39.10	2.3%
2	American Water Works Co., Inc	\$1.36	\$59.20	\$50.16	\$54.68	2.5%
3	Aqua America, Inc.	\$0.71	\$28.79	\$24.45	\$26.62	2.7%
4	Artesian Resources Corp.	\$0.87	\$26.85	\$21.32	\$24.09	3.6%
5	California Water Service Group	\$0.67	\$24.35	\$19.55	\$21.95	3.1%
6	Connecticut Water Service, Inc.	\$1.07	\$38.49	\$33.15	\$35.82	3.0%
7	Middlesex Water	\$0.77	\$26.65	\$22.12	\$24.39	3.2%
8	SJW Corporation	\$0.78	\$33.84	\$27.66	\$30.75	2.5%
9	York Water Company	\$0.60	\$23.86	\$19.69	\$21.78	2.7%
10	<hr/>					
11						
12	Average					2.84%
13						
14						
15						
16						

**References:**

18 Column (A) - Value Line Investment Survey October 16, 2015 - Third Quarter Dividends Annualized

19 Columns (B), (C), and (D) - Yahoo Finance

20

**PROXY GROUP -- GROWTH RATES - RETAINED TO COMMON EQUITY**

Line No	Proxy Group Companies	(A) 2010	(B) 2011	(C) 2012	(D) 2013	(E) 2014	Average	2015	2016	2018-'20	Average
1	American States Water Co.	5.8%	5.3%	6.6%	6.8%	5.7%	6.0%	6.0%	5.5%	6.5%	6.0%
2	American Water Works Co., Inc	2.8%	3.5%	3.6%	4.7%	4.3%	3.8%	4.5%	4.5%	4.0%	4.3%
3	Aqua America, Inc.	3.7%	4.6%	4.3%	6.7%	6.1%	5.1%	5.5%	5.5%	5.5%	5.5%
4	Artesian Resources Corp.	2.0%	0.5%	2.5%	0.9%	1.6%	1.5%				
5	California Water Service Group	3.0%	2.3%	3.4%	3.4%	4.1%	3.2%	3.5%	4.5%	3.5%	3.8%
6	Connecticut Water Service, Inc.	1.6%	1.4%	2.8%	3.8%	4.8%	2.9%	5.0%	5.0%	4.0%	4.7%
7	Middlesex Water	2.1%	1.0%	1.4%	2.4%	3.1%	2.0%	3.5%	3.5%	3.5%	3.5%
8	SJW Corporation	1.2%	3.1%	3.3%	2.8%	10.2%	4.1%	4.0%	3.5%	3.0%	3.5%
9	York Water Company	2.7%	2.5%	2.4%	2.4%	3.9%	2.8%	3.5%	4.5%	3.5%	3.8%
10											
11											
12	Average						3.5%				4.4%
13											
14											

15 Source: Value Line Investment Survey October 16, 2015

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**CAPITAL ASSET PRICING MODEL -- HISTORICAL MARKET RISK PREMIUM**

Line No	Proxy Group Companies	[A] Risk Free Rate	[B] BETA	[C] Risk Premium	[D] CAPM Rates	[E] CAPM Cost of Equity Capital	
1	American States Water Co.	2.73%	0.70 X	6.85%	=	4.80%	7.52%
2	American Water Works Co., Inc	2.73%	0.70 X	6.85%	=	4.80%	7.52%
3	Aqua America, Inc.	2.73%	0.75 X	6.85%	=	5.14%	7.87%
4	Artesian Resources Corp.	2.73%	0.55 X	6.85%	=	3.77%	6.50%
5	California Water Service Group	2.73%	0.75 X	6.85%	=	5.14%	7.87%
6	Connecticut Water Service, Inc.	2.73%	0.65 X	6.85%	=	4.45%	7.18%
7	Middlesex Water	2.73%	0.75 X	6.85%	=	5.14%	7.87%
8	SJW Corporation	2.73%	0.75 X	6.85%	=	5.14%	7.87%
9	York Water Company	2.73%	0.75 X	6.85%	=	5.14%	7.87%

10  
 11 Average 7.56%

	<u>20 year Treasury Bonds</u>	<u>30 year Treasury Bonds</u>
16	August, 2015 2.55%	2.86%
17	September, 2015 2.62%	2.95%
18	October, 2015 <u>2.50%</u>	<u>2.89%</u>
19	Average <u>2.56%</u>	<u>2.90%</u>

20  
 21 3-Month Composite Average 2.73%

- 22
- 23 **REFERENCES**
- 24 Column [A]: Federal Reserve Selected Interest Rates H.15 - Attachment 2
- 25 Column [B]: Value Line Investment Survey - October 16, 2015 - Attachment 1
- 26 Column [C]: JAC - 4, Page 2 of 2
- 27 Column [D]: [B] \* [C]
- Column [E]: [A] + [D]

STANDARD & POOR'S 500 COMPOSITE  
 20-YEAR U.S. TREASURY BOND YIELDS  
 RISK PREMIUMS

Line No.	Year	[A] EPS	[B] BVPS	[C] ROE	[D] 20-YEAR T-BOND	[E] RISK PREMIUM
1	1977		\$79.07			
2	1978	\$12.33	\$85.35	15.00%	7.90%	7.10%
3	1979	\$14.86	\$94.27	16.55%	8.86%	7.69%
4	1980	\$14.82	\$102.48	15.06%	9.97%	5.09%
5	1981	\$15.36	\$109.43	14.50%	11.55%	2.95%
6	1982	\$12.64	\$112.46	11.39%	13.50%	-2.11%
7	1983	\$14.03	\$116.93	12.23%	10.38%	1.85%
8	1984	\$16.64	\$122.47	13.90%	11.74%	2.16%
9	1985	\$14.61	\$125.20	11.80%	11.25%	0.55%
10	1986	\$14.48	\$126.82	11.49%	8.98%	2.51%
11	1987	\$17.50	\$134.04	13.42%	7.92%	5.50%
12	1988	\$23.75	\$141.32	17.25%	8.97%	8.28%
13	1989	\$22.87	\$147.26	15.85%	8.81%	7.04%
14	1990	\$21.73	\$153.01	14.47%	8.19%	6.28%
15	1991	\$16.29	\$158.85	10.45%	8.22%	2.23%
16	1992	\$19.09	\$149.74	12.37%	7.26%	5.11%
17	1993	\$21.89	\$180.88	13.24%	7.17%	6.07%
18	1994	\$30.60	\$193.06	16.37%	6.59%	9.78%
19	1995	\$33.96	\$215.51	16.62%	7.60%	9.02%
20	1996	\$38.73	\$237.08	17.11%	6.18%	10.93%
21	1997	\$39.72	\$249.52	16.33%	6.64%	9.69%
22	1998	\$37.71	\$266.40	14.62%	5.83%	8.79%
23	1999	\$48.17	\$290.68	17.29%	5.57%	11.72%
24	2000	\$50.00	\$325.80	16.22%	6.50%	9.72%
25	2001	\$24.69	\$338.37	7.43%	5.53%	1.90%
26	2002	\$27.59	\$321.72	8.36%	5.59%	2.77%
27	2003	\$48.73	\$367.17	14.15%	4.80%	9.35%
28	2004	\$58.55	\$414.75	14.98%	5.02%	9.96%
29	2005	\$69.93	\$453.06	16.12%	4.69%	11.43%
30	2006	\$81.51	\$504.39	17.03%	4.68%	12.35%
31	2007	\$66.17	\$529.59	12.49%	4.86%	7.63%
32	2008	\$14.88	\$451.37	3.03%	4.45%	-1.42%
33	2009	\$50.97	\$513.58	10.56%	3.47%	7.09%
34	2010	\$77.35	\$579.14	14.16%	4.25%	9.91%
35	2011	\$86.58	\$613.14	14.52%	3.81%	10.71%
36	2012	\$86.51	\$666.97	13.52%	2.40%	11.12%
37	2013	\$100.20	\$715.84	14.49%	2.86%	11.63%
38	2014	\$103.12	\$733.84	14.23%	3.12%	11.11%
39	Average			<b>13.75%</b>	<b>6.89%</b>	<b>6.85%</b>

[A]: Diluted earnings per share on the S&P 500 Composite Index.

[B]: Book value per share on the S&P 500 Composite Index.

[C]: Average of current- and prior year [B] / current year [A].

[D]: Annual income returns on 20-year U.S. Treasury bonds.

[E]: [C] - [D]

Sources for [A] and [B]: Standard & Poor's 2015 Analysts' Handbook.

Source for [D]: Morningstar 2015 Classic Yearbook (Table A-7).

**COMPARABLE EARNINGS ANALYSIS**  
**RETURN ON COMMON EQUITY FOR RUCO'S PROXY GROUP OF COMPANIES**

Company	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2018 - 2020	10-Year Historical Average 2005-2014	5-Year Historical Average 2010-2014	5-Year Projected Average 2015-2019
	American States Water Co.	8.5%	8.1%	9.3%	8.6%	8.2%	11.0%	10.3%	11.9%	12.7%	12.0%	12.5%	13.0%	14.5%	10.1%	11.6%
American Water Works					5.2%	6.5%	7.2%	8.4%	7.8%	8.7%	9.0%	9.0%	9.0%	7.3%	7.7%	9.0%
Aqua America, Inc.	11.2%	10.0%	9.7%	9.3%	9.4%	10.6%	11.6%	11.0%	13.4%	12.9%	12.5%	13.0%	14.0%	10.9%	11.9%	13.2%
Artesian Resources			7.4%	7.3%	8.0%	8.0%	6.0%	8.3%	6.8%	7.6%				7.4%	7.3%	
California Water Service Group	9.3%	6.8%	8.1%	9.9%	9.6%	8.6%	8.0%	9.0%	7.9%	9.1%	8.5%	9.5%	9.5%	8.6%	8.5%	9.2%
Connecticut Water Service, Inc.	7.6%	7.0%	8.7%	9.1%	9.4%	8.7%	8.3%	7.3%	9.2%	10.2%	10.5%	10.5%	9.5%	8.6%	8.7%	10.2%
Middlesex Water	8.6%	7.8%	8.7%	8.9%	7.0%	8.2%	7.5%	7.8%	8.7%	9.3%	9.5%	9.5%	9.5%	8.3%	8.3%	9.5%
SJW Corporation	10.6%	9.7%	8.2%	8.0%	6.0%	6.2%	7.9%	8.1%	7.3%	14.4%	8.0%	8.0%	7.5%	8.6%	8.8%	7.8%
York Water	11.6%	9.3%	9.5%	9.2%	8.6%	9.8%	9.5%	9.3%	9.3%	11.0%	10.5%	11.5%	12.0%	9.7%	9.8%	11.3%
Mean	9.6%	8.4%	8.7%	8.8%	7.9%	8.6%	8.5%	9.0%	9.2%	10.6%	10.1%	10.5%	10.7%	8.83%	9.18%	10.44%
Median	9.3%	8.1%	8.7%	9.0%	8.2%	8.6%	8.0%	8.4%	8.7%	10.2%	10.0%	10.0%	9.5%	8.63%	8.74%	9.83%
Average of Mean and Median	<b>10.14%</b>															

Source: Value Line Investment Survey (October 16, 2015).

## ECONOMIC INDICATORS

Line No	Year	Real GDP Growth	Industrial Production Growth	Unemployment Rate	Consumer Price Index	Producer Price Index
1	1975	-1.1%	-8.9%	8.5%	7.0%	6.6%
2	1976	5.4%	10.8%	7.7%	4.8%	3.7%
3	1977	5.5%	5.9%	7.0%	6.8%	6.9%
4	1978	5.0%	5.7%	6.0%	9.0%	9.2%
5	1979	2.8%	4.4%	5.8%	13.3%	12.8%
6	1980	-0.2%	-1.9%	7.0%	12.4%	11.8%
7	1981	1.8%	1.9%	7.5%	8.9%	7.1%
8	1982	-2.1%	-4.4%	9.5%	3.8%	3.6%
9	1983	4.0%	3.7%	9.5%	3.8%	0.6%
10	1984	6.8%	9.3%	7.5%	3.9%	1.7%
11	1985	3.7%	1.7%	7.2%	3.8%	1.8%
12	1986	3.1%	0.9%	7.0%	1.1%	-2.3%
13	1987	2.9%	4.9%	6.2%	4.4%	2.2%
14	1988	3.8%	4.5%	5.5%	4.4%	4.0%
15	1989	3.5%	1.8%	5.3%	4.6%	4.9%
16	1990	1.8%	-0.2%	5.6%	6.1%	5.7%
17	1991	-0.5%	-2.0%	6.8%	3.1%	-0.1%
18	1992	3.0%	3.1%	7.5%	2.9%	1.6%
19	1993	2.7%	3.4%	6.9%	2.7%	0.2%
20	1994	4.0%	5.5%	6.1%	2.7%	1.7%
21	1995	3.7%	4.8%	5.6%	2.5%	2.3%
22	1996	4.5%	4.3%	5.4%	3.3%	2.8%
23	1997	4.5%	7.3%	4.9%	1.7%	-1.2%
24	1998	4.2%	5.8%	4.5%	1.6%	0.0%
25	1999	3.7%	4.5%	4.2%	2.7%	2.9%
26	2000	4.1%	4.0%	4.0%	3.4%	3.6%
27	2001	1.1%	-3.4%	4.7%	1.6%	-1.6%
28	2002	1.8%	0.2%	5.8%	2.4%	1.2%
29	2003	2.8%	1.2%	6.0%	1.9%	4.0%
30	2004	3.8%	2.3%	5.5%	3.3%	4.2%
31	2005	3.3%	3.3%	5.1%	3.4%	5.4%
32	2006	2.7%	2.2%	4.6%	2.5%	1.1%
33	2007	1.8%	2.5%	4.6%	4.1%	6.2%
34	2008	-0.3%	-3.4%	5.8%	0.1%	-0.9%
35	2009	-2.8%	-11.3%	9.3%	2.7%	4.3%
36	2010	2.5%	5.6%	9.6%	1.5%	4.7%
37	2011	1.6%	3.0%	8.9%	3.0%	4.7%
38	2012	2.2%	2.8%	8.1%	1.7%	1.4%
39	2013	1.5%	1.9%	7.4%	1.5%	0.8%
40	2014	2.4%	3.7%	6.2%	0.8%	-1.2%

Source: Council of Economic Advisors, Economic Indicators, various issues.

**ECONOMIC INDICATORS**

Line No	Year	Real GDP* Growth	Industrial Production Growth	Unemployment Rate	Consumer Price Index	Producer Price Index
1	2003					
2	1st Qtr.	1.2%	1.1%	5.8%	4.8%	5.6%
3	2nd Qtr.	3.5%	-0.9%	6.2%	0.0%	-0.5%
4	3rd Qtr.	7.5%	-0.9%	6.1%	3.2%	3.2%
5	4th Qtr.	2.7%	1.5%	5.9%	-0.3%	2.8%
6	2004					
7	1st Qtr.	3.0%	2.8%	5.6%	5.2%	5.2%
8	2nd Qtr.	3.5%	4.9%	5.6%	4.4%	4.4%
9	3rd Qtr.	3.6%	4.6%	5.4%	0.8%	0.8%
10	4th Qtr.	2.5%	4.3%	5.4%	3.6%	7.2%
11	2005					
12	1st Qtr.	4.1%	3.8%	5.3%	4.4%	5.6%
13	2nd Qtr.	1.7%	3.0%	5.1%	1.6%	-0.4%
14	3rd Qtr.	3.1%	2.7%	5.0%	8.8%	14.0%
15	4th Qtr.	2.1%	2.9%	4.9%	-2.0%	4.0%
16	2006					
17	1st Qtr.	5.4%	3.4%	4.7%	4.8%	-0.2%
18	2nd Qtr.	1.4%	4.5%	4.6%	4.8%	5.6%
19	3rd Qtr.	0.1%	5.2%	4.7%	0.4%	-4.4%
20	4th Qtr.	3.0%	3.5%	4.5%	0.0%	3.6%
21	2007					
22	1st Qtr.	0.9%	2.5%	4.5%	4.8%	6.4%
23	2nd Qtr.	3.2%	1.6%	4.5%	5.2%	6.8%
24	3rd Qtr.	2.3%	1.8%	4.6%	1.2%	1.2%
25	4th Qtr.	2.9%	2.1%	4.8%	0.6%	6.5%
26	2008					
27	1st Qtr.	-1.8%	1.9%	4.9%	2.8%	9.6%
28	2nd Qtr.	1.3%	0.2%	5.3%	7.6%	14.0%
29	3rd Qtr.	-3.7%	-3.0%	6.0%	2.8%	-0.4%
30	4th Qtr.	-8.9%	6.0%	6.9%	-13.2%	-28.4%
31	2009					
32	1st Qtr.	-5.3%	-11.6%	8.1%	2.4%	-0.4%
33	2nd Qtr.	-0.3%	-12.9%	9.3%	3.2%	9.2%
34	3rd Qtr.	1.4%	-9.3%	9.6%	2.0%	-0.8%
35	4th Qtr.	4.0%	-4.5%	10.0%	2.5%	8.8%
36	2010					
37	1st Qtr.	1.6%	2.7%	9.7%	0.9%	6.5%
38	2nd Qtr.	3.9%	6.5%	9.7%	-1.2%	-2.4%
39	3rd Qtr.	2.8%	6.9%	9.6%	2.8%	4.0%
40	4th Qtr.	2.8%	6.2%	9.6%	2.8%	9.2%
41	2011					
42	1st Qtr.	-1.3%	5.4%	9.0%	4.8%	9.6%
43	2nd Qtr.	3.2%	3.6%	9.0%	3.2%	3.6%
44	3rd Qtr.	1.4%	3.3%	9.1%	2.4%	6.4%
45	4th Qtr.	4.9%	4.0%	8.7%	0.4%	-1.2%
46	2012					
47	1st Qtr.	3.7%	4.5%	8.3%	3.2%	2.0%
48	2nd Qtr.	1.2%	4.7%	8.2%	0.0%	-2.8%
49	3rd Qtr.	2.8%	3.4%	8.1%	4.0%	9.6%
50	4th Qtr.	0.1%	2.8%	7.8%	0.0%	-3.6%
51	2013					
52	1st Qtr.	1.9%	2.5%	7.7%	2.0%	1.2%
53	2nd Qtr.	1.1%	2.0%	7.6%	0.8%	2.4%
54	3rd Qtr.	3.0%	2.5%	7.3%	2.0%	0.0%
55	4th Qtr.	3.8%	2.6%	7.0%	0.3%	0.3%
56	2014					
57	1st Qtr.	-0.9%	3.9%	6.7%	1.6%	0.3%
58	2nd Qtr.	4.6%	4.1%	6.2%	4.0%	0.2%
59	3rd Qtr.	4.3%	4.7%	6.0%	3.9%	0.0%
60	4th Qtr.	2.1%	4.6%	5.7%	-0.2%	-0.8%
61	2015					
62	1st Qtr.	0.6%	3.5%	5.6%	-0.1%	-0.7%
63	2nd Qtr.	3.9%	1.4%	5.4%	0.3%	0.5%
64	3rd Qtr.	1.5%	N/A	5.2%	-0.1%	-0.6%
65	4th Qtr.	N/A	N/A	N/A	N/A	N/A

\*GDP=Gross Domestic Product

Source: Council of Economic Advisors, Economic Indicators, various issues.

### INTEREST RATES

Line No	Year	Prime Rate	US Treasury T Bills 3 Month	US Treasury T Bonds 10 Year	Utility Bonds Aaa	Utility Bonds Aa	Utility Bonds A	Utility Bonds Baa
1	1975	7.86%	5.84%	7.99%	9.03%	9.44%	10.09%	10.96%
2	1976	6.84%	4.99%	7.61%	8.63%	8.92%	9.29%	9.82%
3	1977	6.83%	5.27%	7.42%	8.19%	8.43%	8.61%	9.06%
4	1978	9.06%	7.22%	8.41%	8.87%	9.10%	9.29%	9.62%
5	1979	12.67%	10.04%	9.44%	9.86%	10.22%	10.49%	10.96%
6	1980	15.27%	11.51%	11.46%	12.30%	13.00%	13.34%	13.95%
7	1981	18.89%	14.03%	13.93%	14.64%	15.30%	15.95%	16.60%
8	1982	14.86%	10.69%	13.00%	14.22%	14.79%	15.86%	16.45%
9	1983	10.79%	8.63%	11.10%	12.52%	12.83%	13.66%	14.20%
10	1984	12.04%	9.58%	12.44%	12.72%	13.66%	14.03%	14.53%
11	1985	9.93%	7.48%	10.62%	11.68%	12.06%	12.47%	12.96%
12	1986	8.33%	5.98%	7.68%	8.92%	9.30%	9.58%	10.00%
13	1987	8.21%	5.82%	8.39%	9.52%	9.77%	10.10%	10.53%
14	1988	9.32%	6.69%	8.85%	10.05%	10.26%	10.49%	11.00%
15	1989	10.87%	8.12%	8.49%	9.32%	9.56%	9.77%	9.97%
16	1990	10.01%	7.51%	8.55%	9.45%	9.65%	9.86%	10.06%
17	1991	8.46%	5.42%	7.86%	8.85%	9.09%	9.36%	9.55%
18	1992	6.25%	3.45%	7.01%	8.19%	8.55%	8.69%	8.86%
19	1993	6.00%	3.02%	5.87%	7.29%	7.44%	7.59%	7.91%
20	1994	7.15%	4.29%	7.09%	8.07%	8.21%	8.31%	8.63%
21	1995	8.83%	5.51%	6.57%	7.68%	7.77%	7.89%	8.29%
22	1996	8.27%	5.02%	6.44%	7.48%	7.57%	7.75%	8.16%
23	1997	8.44%	5.07%	6.35%	7.43%	7.54%	7.60%	7.95%
24	1998	8.35%	4.81%	5.26%	6.77%	6.91%	7.04%	7.26%
25	1999	8.00%	4.66%	5.65%	7.21%	7.51%	7.62%	7.88%
26	2000	9.23%	5.85%	6.03%	7.88%	8.06%	8.24%	8.36%
27	2001	6.91%	3.44%	5.02%	7.47%	7.59%	7.78%	8.02%
28	2002	4.67%	1.62%	4.61%		[1] 7.19%	7.37%	8.02%
29	2003	4.12%	1.01%	4.01%		6.40%	6.58%	6.84%
30	2004	4.34%	1.38%	4.27%		6.04%	6.16%	6.40%
31	2005	6.19%	3.16%	4.29%		5.44%	5.65%	5.93%
32	2006	7.96%	4.73%	4.80%		5.84%	6.07%	6.32%
33	2007	8.05%	4.41%	4.63%		5.94%	6.07%	6.33%
34	2008	5.09%	1.48%	3.66%		6.18%	6.53%	7.25%
35	2009	3.25%	0.16%	3.26%		5.75%	6.04%	7.06%
36	2010	3.25%	0.14%	3.22%		5.24%	5.46%	5.96%
37	2011	3.25%	0.06%	2.78%		4.78%	5.04%	5.57%
38	2012	3.25%	0.09%	1.80%		3.83%	4.13%	4.86%
39	2013	3.25%	0.06%	2.35%		4.24%	4.47%	4.98%
40	2014	3.25%	0.03%	2.54%		NA	NA	4.77%

[1] Note: Moody's has not published Aaa utility bond yields since 2001.

Sources: Council of Economic Advisors, Economic Indicators; Moody's Bond Record; Federal Reserve Bulletin; various issues.

**INTEREST RATES**

Line No		Prime Rate	US Treasury T Bills 3 Month	US Treasury T Bonds 10 Year	Utility Bonds Aa	Utility Bonds A	Utility Bonds Baa
1	<b>2007</b>						
2	Jan	8.25%	4.96%	4.76%	5.78%	5.96%	6.16%
3	Feb	8.25%	5.02%	4.72%	5.73%	5.90%	6.10%
4	Mar	8.25%	4.97%	4.56%	5.66%	5.85%	6.10%
5	Apr	8.25%	4.88%	4.69%	5.83%	5.97%	6.24%
6	May	8.25%	4.77%	4.75%	5.86%	5.99%	6.23%
7	June	8.25%	4.63%	5.10%	6.18%	6.30%	6.54%
8	July	8.25%	4.84%	5.00%	6.11%	6.25%	6.49%
9	Aug	8.25%	4.34%	4.67%	6.11%	6.24%	6.51%
10	Sept	7.75%	4.01%	4.52%	6.10%	6.18%	6.45%
11	Oct	7.50%	3.97%	4.53%	6.04%	6.11%	6.36%
12	Nov	7.50%	3.49%	4.15%	5.87%	5.97%	6.27%
13	Dec	7.25%	3.08%	4.10%	6.03%	6.16%	6.51%
14	<b>2008</b>						
15	Jan	6.00%	2.86%	3.74%	5.87%	6.02%	6.35%
16	Feb	6.00%	2.21%	3.74%	6.04%	6.21%	6.60%
17	Mar	5.25%	1.38%	3.51%	5.99%	6.21%	6.68%
18	Apr	5.00%	1.32%	3.68%	5.99%	6.29%	6.82%
19	May	5.00%	1.71%	3.88%	6.07%	6.27%	6.79%
20	June	5.00%	1.90%	4.10%	6.19%	6.38%	6.93%
21	July	5.00%	1.72%	4.01%	6.13%	6.40%	6.97%
22	Aug	5.00%	1.79%	3.89%	6.09%	6.37%	6.98%
23	Sept	5.00%	1.46%	3.69%	6.13%	6.49%	7.15%
24	Oct	4.00%	0.84%	3.81%	6.95%	7.56%	8.58%
25	Nov	4.00%	0.30%	3.53%	6.83%	7.60%	8.98%
26	Dec	3.25%	0.04%	2.42%	5.93%	6.54%	8.13%
27	<b>2009</b>						
28	Jan	3.25%	0.12%	2.52%	6.01%	6.39%	7.90%
29	Feb	3.25%	0.31%	2.87%	6.11%	6.30%	7.74%
30	Mar	3.25%	0.25%	2.82%	6.14%	6.42%	8.00%
31	Apr	3.25%	0.17%	2.93%	6.20%	6.48%	8.03%
32	May	3.25%	0.15%	3.29%	6.23%	6.49%	7.76%
33	June	3.25%	0.17%	3.72%	6.13%	6.20%	7.30%
34	July	3.25%	0.19%	3.56%	5.63%	5.97%	6.87%
35	Aug	3.25%	0.18%	3.59%	5.33%	5.71%	6.36%
36	Sept	3.25%	0.13%	3.40%	5.15%	5.53%	6.12%
37	Oct	3.25%	0.08%	3.39%	5.23%	5.55%	6.14%
38	Nov	3.25%	0.05%	3.40%	5.33%	5.64%	6.18%
39	Dec	3.25%	0.07%	3.59%	5.52%	5.79%	6.26%
40	<b>2010</b>						
41	Jan	3.25%	0.06%	3.73%	5.55%	5.77%	6.16%
42	Feb	3.25%	0.10%	3.69%	5.69%	5.87%	6.25%
43	Mar	3.25%	0.15%	3.73%	5.64%	5.84%	6.22%
44	Apr	3.25%	0.15%	3.85%	5.62%	5.81%	6.19%
45	May	3.25%	0.16%	3.42%	5.29%	5.50%	5.97%
46	June	3.25%	0.12%	3.20%	5.22%	5.46%	6.18%
47	July	3.25%	0.16%	3.01%	4.99%	5.26%	5.98%
48	Aug	3.25%	0.15%	2.70%	4.75%	5.01%	5.55%
49	Sept	3.25%	0.15%	2.65%	4.74%	5.01%	5.53%
50	Oct	3.25%	0.13%	2.54%	4.89%	5.10%	5.62%
51	Nov	3.25%	0.13%	2.76%	5.12%	5.37%	5.85%
52	Dec	3.25%	0.15%	3.29%	5.32%	5.56%	6.04%

### INTEREST RATES

Line No	Prime Rate	US Treasury T Bills 3 Month	US Treasury T Bonds 10 Year	Utility Bonds Aa	Utility Bonds A	Utility Bonds Baa	
53	<b>2011</b>						
54	Jan	3.25%	0.15%	3.39%	5.29%	5.57%	6.06%
55	Feb	3.25%	0.14%	3.58%	5.42%	5.68%	6.10%
56	Mar	3.25%	0.11%	3.41%	5.33%	5.56%	5.97%
57	Apr	3.25%	0.06%	3.46%	5.32%	5.55%	5.98%
58	May	3.25%	0.04%	3.17%	5.08%	5.32%	5.74%
59	June	3.25%	0.04%	3.00%	5.04%	5.26%	5.67%
60	July	3.25%	0.03%	3.00%	5.05%	5.27%	5.70%
61	Aug	3.25%	0.05%	2.30%	4.44%	4.69%	5.22%
62	Sept	3.25%	0.02%	1.98%	4.24%	4.48%	5.11%
63	Oct	3.25%	0.02%	2.15%	4.21%	4.52%	5.24%
64	Nov	3.25%	0.01%	2.01%	3.92%	4.25%	4.93%
65	Dec	3.25%	0.02%	1.98%	4.00%	4.33%	5.07%
66	<b>2012</b>						
67	Jan	3.25%	0.02%	1.97%	4.03%	4.34%	5.06%
68	Feb	3.25%	0.08%	1.97%	4.02%	4.36%	5.02%
69	Mar	3.25%	0.09%	2.17%	4.16%	4.48%	5.13%
70	Apr	3.25%	0.08%	2.05%	4.10%	4.40%	5.11%
71	May	3.25%	0.09%	1.80%	3.92%	4.20%	4.97%
72	June	3.25%	0.09%	1.62%	3.79%	4.08%	4.91%
73	July	3.25%	0.10%	1.53%	3.58%	3.93%	4.85%
74	Aug	3.25%	0.11%	1.68%	3.65%	4.00%	4.88%
75	Sept	3.25%	0.10%	1.72%	3.69%	4.02%	4.81%
76	Oct	3.25%	0.10%	1.75%	3.68%	3.91%	4.54%
77	Nov	3.25%	0.11%	1.65%	3.60%	3.84%	4.42%
78	Dec	3.25%	0.08%	1.72%	3.75%	4.00%	4.56%
79	<b>2013</b>						
80	Jan	3.25%	0.07%	1.91%	3.90%	4.15%	4.66%
81	Feb	3.25%	0.10%	1.98%	3.95%	4.18%	4.74%
82	Mar	3.25%	0.09%	1.96%	3.90%	4.15%	4.66%
83	Apr	3.25%	0.06%	1.76%	3.74%	4.00%	4.49%
84	May	3.25%	0.05%	1.93%	3.91%	4.17%	4.65%
85	June	3.25%	0.05%	2.30%	4.27%	4.53%	5.08%
86	July	3.25%	0.04%	2.58%	4.44%	4.68%	5.21%
87	Aug	3.25%	0.04%	2.74%	4.53%	4.73%	5.28%
88	Sept	3.25%	0.02%	2.81%	4.58%	4.80%	5.31%
89	Oct	3.25%	0.06%	2.62%	4.48%	4.70%	5.17%
90	Nov	3.25%	0.07%	2.72%	4.56%	4.77%	5.24%
91	Dec	3.25%	0.07%	2.90%	4.90%	4.81%	5.25%
92	<b>2014</b>						
93	Jan	3.25%	0.05%	2.86%	4.44%	4.63%	5.09%
94	Feb	3.25%	0.06%	2.71%	4.38%	4.53%	5.01%
95	Mar	3.25%	0.05%	2.72%	4.40%	4.51%	5.00%
96	Apr	3.25%	0.04%	2.71%	4.30%	4.41%	4.85%
97	May	3.25%	0.03%	2.56%	4.16%	4.26%	4.69%
98	June	3.25%	0.03%	2.60%	4.26%	4.29%	4.73%
99	July	3.25%	0.03%	2.54%	4.16%	4.23%	4.66%
100	Aug	3.25%	0.03%	2.50%	4.07%	4.13%	4.65%
101	Sept	3.25%	0.03%	2.50%	4.06%	4.23%	4.55%
102	Oct	3.25%	0.02%	2.49%	4.10%	4.13%	4.55%
103	Nov	3.25%	0.02%	2.33%	NA	NA	4.69%
104	Dec	3.25%	0.03%	2.21%	NA	NA	4.74%

[1] Note: Moody's has not published Aaa utility bond yields since 2001.

Sources: Council of Economic Advisors, Economic Indicators; Moody's Bond Record; Federal Reserve Bulletin; various issues.

### STOCK PRICE INDICATORS

Line		S&P	NASDAQ		S&P	S&P
<u>No</u>	<u>Year</u>	<u>Composite</u>	<u>Composite</u>	<u>DJIA</u>	<u>Dividend/Price</u>	<u>Earnings/Price</u>
					<u>Ratio</u>	<u>Ratio</u>
1	1975			802.49	4.31%	9.15%
2	1976			974.92	3.77%	8.90%
3	1977			894.63	4.62%	10.79%
4	1978			820.23	5.28%	12.03%
5	1979			844.40	5.47%	13.46%
6	1980			891.41	5.26%	12.66%
7	1981			932.92	5.20%	11.96%
8	1982			884.36	5.81%	11.60%
9	1983			1,190.34	4.40%	8.03%
10	1984			1,178.48	4.64%	10.02%
11	1985			1,328.23	4.25%	8.12%
12	1986			1,792.76	3.49%	6.09%
13	1987			2,275.99	3.08%	5.48%
14	1988			2,060.82	3.64%	8.01%
15	1989	322.84		2,508.91	3.45%	7.41%
16	1990	334.59		2,678.94	3.61%	6.47%
17	1991	376.18	491.69	2,929.33	3.24%	4.79%
18	1992	415.74	\$599.26	3,284.29	2.99%	4.22%
19	1993	451.21	715.16	3,522.06	2.78%	4.46%
20	1994	460.42	751.65	3,793.77	2.82%	5.83%
21	1995	541.72	925.19	4,493.76	2.56%	6.09%
22	1996	670.50	1,164.96	5,742.89	2.19%	5.24%
23	1997	873.43	1,469.49	7,441.15	1.77%	4.57%
24	1998	1,085.50	1,794.91	8,625.52	1.49%	3.46%
25	1999	1,327.33	2,728.15	10,464.88	1.25%	3.17%
26	2000	1,427.22	2,783.67	10,734.90	1.15%	3.63%
27	2001	1,194.18	2,035.00	10,189.13	1.32%	2.95%
28	2002	993.94	1,539.73	9,226.43	1.61%	2.92%
29	2003	965.23	1,647.17	8,993.59	1.77%	3.84%
30	2004	1,130.65	1,986.53	10,317.39	1.72%	4.89%
31	2005	1,207.06	2,099.03	10,547.67	1.83%	5.36%
32	2006	1,310.67	2,265.17	11,408.67	1.87%	5.78%
33	2007	1,476.66	2,577.12	13,169.98	1.86%	5.29%
34	2008	1,220.89	2,162.46	11,252.61	2.37%	3.54%
35	2009	946.73	1,841.03	8,876.15	2.40%	1.86%
36	2010	1,139.31	2,347.70	10,662.80	1.98%	6.04%
37	2011	1,268.89	2,680.42	11,966.36	2.05%	6.77%
38	2012	1,379.56	2,965.77	12,967.08	2.24%	6.20%
39	2013	1,462.51	3,537.69	14,999.67	2.14%	5.57%
40	2014	1,930.67	4,374.31	16,773.99	2.04%	5.25%

Source: Council of Economic Advisors, Economic Indicators, various issues.

**STOCK PRICE INDICATORS**

Line No		<u>S&amp;P Composite</u>	<u>NASDAQ Composite</u>	<u>DJIA</u>	<u>S&amp;P Dividends/Price Ratio</u>	<u>S&amp;P Earnings/Price Ratio</u>
1	<b>2004</b>					
2	1st Qtr.	1,133.29	2,041.95	10,488.43	1.64%	4.62%
3	2nd Qtr.	1,122.87	1,984.13	10,289.04	1.71%	4.92%
4	3rd Qtr.	1,104.15	1,872.90	10,129.85	1.79%	5.18%
5	4th Qtr.	1,162.07	2,050.22	10,362.25	1.75%	4.83%
6						
7	<b>2005</b>					
8	1st Qtr.	1,191.98	2,056.01	10,648.48	1.77%	5.11%
9	2nd Qtr.	1,181.65	2,012.24	10,382.35	1.85%	5.32%
10	3rd Qtr.	1,225.91	2,144.61	10,532.24	1.83%	5.42%
11	4th Qtr.	1,262.07	2,246.09	10,827.79	1.86%	5.60%
12						
13	<b>2006</b>					
14	1st Qtr.	1,283.04	2,287.97	10,996.04	1.85%	5.61%
15	2nd Qtr.	1,281.77	2,240.46	11,188.84	1.90%	5.86%
16	3rd Qtr.	1,288.40	2,141.97	11,274.49	1.91%	5.88%
17	4th Qtr.	1,389.48	2,390.26	12,175.30	1.81%	5.75%
18						
19	<b>2007</b>					
20	1st Qtr.	1,425.30	2,444.85	12,470.97	1.84%	5.85%
21	2nd Qtr.	1,496.43	2,552.37	13,214.26	1.82%	5.65%
22	3rd Qtr.	1,490.81	2,609.68	13,488.43	1.86%	5.15%
23	4th Qtr.	1,494.09	2,701.59	13,502.95	1.91%	4.51%
24						
25	<b>2008</b>					
26	1st Qtr.	1,350.19	2,332.91	12,383.86	2.11%	4.55%
27	2nd Qtr.	1,371.65	2,426.26	12,508.59	2.10%	4.05%
28	3rd Qtr.	1,251.94	2,290.87	11,322.40	2.29%	3.94%
29	4th Qtr.	909.80	1,599.64	8,795.61	2.98%	1.65%
30						
31	<b>2009</b>					
32	1st Qtr.	809.31	1,485.14	7,774.06	3.00%	0.86%
33	2nd Qtr.	892.23	1,731.41	8,327.83	2.45%	0.82%
34	3rd Qtr.	996.68	1,985.25	9,229.93	2.16%	1.19%
35	4th Qtr.	1,088.70	2,162.33	10,172.78	1.99%	4.57%
36						
37	<b>2010</b>					
38	1st Qtr.	1,121.60	2,274.88	10,454.42	1.94%	5.21%
39	2nd Qtr.	1,135.25	2,343.40	10,570.54	1.97%	6.51%
40	3rd Qtr.	1,096.39	2,237.97	10,390.24	2.09%	6.30%
41	4th Qtr.	1,204.00	2,534.62	11,236.02	1.95%	6.15%
42						
43	<b>2011</b>					
44	1st Qtr.	1,302.74	2,741.01	12,024.62	1.85%	6.13%
45	2nd Qtr.	1,319.04	2,766.64	12,370.73	1.97%	6.35%
46	3rd Qtr.	1,237.12	2,613.11	11,671.47	2.15%	7.69%
47	4th Qtr.	1,225.65	2,600.91	11,798.65	2.25%	6.91%
48						
49	<b>2012</b>					
50	1st Qtr.	1,347.44	2,902.90	12,839.80	2.12%	6.29%
51	2nd Qtr.	1,350.39	2,928.62	12,765.58	2.30%	6.45%
52	3rd Qtr.	1,402.21	3,029.86	13,118.72	2.27%	6.00%
53	4th Qtr.	1,418.21	3,001.69	13,142.91	2.28%	6.07%
54						
55	<b>2013</b>					
56	1st Qtr.	1,514.41	3,177.10	14,000.30	2.21%	5.59%
57	2nd Qtr.	1,609.77	3,369.49	14,961.28	2.15%	5.66%
58	3rd Qtr.	1,675.31	3,643.63	15,255.25	2.14%	5.65%
59	4th Qtr.	1,770.45	3,960.54	15,751.96	2.06%	5.42%
60						
61	<b>2014</b>					
62	1st Qtr.	1,834.30	4,210.05	16,170.26	2.04%	5.39%
63	2nd Qtr.	1,900.37	4,195.81	16,603.50	2.06%	5.26%
64	3rd Qtr.	1,975.95	4,483.51	16,953.85	2.02%	5.38%
65	4th Qtr.	2012.04	4607.88	17368.36	2.03%	4.97%
66						
67	<b>2015</b>					
68	1st Qtr.	2063.46	4821.99	17806.47	2.02%	4.80%
69	2nd Qtr.	2102.03	5017.47	18007.48	2.05%	4.60%
70	3rd Qtr.	2,026.14	4,921.81	17,065.52	2.16%	N/A
71	4th Qtr.	N/A	N/A	N/A	N/A	N/A

Source: Council of Economic Advisors, Economic Indicators, various issues.

**PROXY GROUP EQUITY RATIOS**

	<b>Company</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
1	American States Water Co.	54.1%	55.7%	54.6%	57.8%	60.2%	60.9%
2	American Water Works Co., Inc	43.1%	43.2%	44.2%	46.1%	47.6%	47.4%
3	Aqua America, Inc.	44.4%	43.4%	47.3%	47.3%	51.1%	51.5%
4	Artesian Resources Corp.	46.2%	47.5%	51.5%	52.7%	53.6%	54.5%
5	California Water Service Group	52.9%	47.6%	48.3%	52.2%	58.4%	59.9%
6	Connecticut Water Service, Inc.	49.1%	50.2%	46.5%	50.8%	52.9%	54.1%
7	Middlesex Water	52.1%	55.8%	56.6%	57.4%	58.7%	58.8%
8	SJW Corporation	50.6%	46.3%	43.4%	45.0%	48.9%	48.4%
9	York Water Company	54.3%	51.7%	52.9%	54.0%	54.9%	55.2%
10	<hr/>						
11							
12	Average	49.6%	49.0%	49.5%	51.5%	54.0%	54.5%
13	<hr/>						

14  
15  
16  
17  
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Source: Value Line October 16, 2015

# **ATTACHMENT 1**

## John A. Cassidy

### EDUCATION

Arizona State University -- Master of Business Administration-Finance (May 1987)  
University of Arizona -- Master of Library Science (August 1980)  
Arizona State University -- B.A. History, Latin American Studies (May 1976)

### REGULATORY EXPERIENCE

Public Utilities Analyst V – Residential Utility Consumer Office (RUCO), Phoenix, AZ (July 2015-Present)  
Public Utilities Analyst III -- Arizona Corporation Commission, Phoenix, AZ (March 2013-July 2015)  
Public Utilities Analyst II -- Arizona Corporation Commission, Phoenix, AZ (May 2012-March 2013)  
Public Utility Consultant -- Arizona Corporation Commission, Phoenix, AZ (Jan. 2012-May 2012)  
Regulatory Utility Consultant – Self-Employed, Tempe, AZ (2009-2010)

- Assisted in the preparation of testimony filed by the Residential Utility Consumer Office (RUCO) in the Litchfield Park W/WW rate case (Docket No. SW-01428A-09-0103, et al)

Regulatory Utility Consultant – Self-Employed, Tempe, AZ (2007-2008)

- Filed formal cost of capital testimony/schedules on behalf of intervener, Anthem Town Council, and testified at evidentiary hearing in the Arizona-American Water Co., Anthem Water and Anthem/Agua Fria WW rate case (Docket No. WS-01303A-06-0403)

Utilities Auditor II -- Arizona Corporation Commission, Phoenix, AZ (Aug. 1993-Nov. 1997)

### PROFESSIONAL DEVELOPMENT

Annual Regulatory Studies Program (“Camp NARUC”), Institute of Public Utilities, Michigan State University, East Lansing, MI (August 4-15, 2014)  
Society of Utility and Regulatory Financial Analysts (SURFA), Indianapolis, IN (April 17-19, 2013)  
NARUC Utility Rate School, San Diego, CA (May 13-17, 2013)  
CRRA Certification – Preparing to sit for the Certified Rate of Return Analyst (CRRA) exam.

### HONORS

CPA Candidate - Passed the CPA exam (1997), but opted not to pursue certification  
Beta Gamma Sigma - National Honor Society in Business Administration

Rate Dockets Testified - Cost of Capital:

Quail Creek Water Company	(Docket No. W-02514A-14-0343)
EPCOR Water Arizona	(Docket No. WS-01303A-14-0010)
Utility Source, L.L.C.	(Docket No. WS-04235A-13-0331)
Verde Santa Fe Wastewater Company	(Docket No. SW-03437A-13-0292)
Chaparral City Water Company	(Docket No. W-02113A-13-0118)
Payson Water Company	(Docket No. W-03514A-13-0111)
Lago Del Oro Water Company	(Docket No. W-01944A-13-0215)
Las Quintas Serenas Water Company	(Docket No. W-01583A-13-0117)
Litchfield Park Service Company	(Docket No. SW-01428A-13-0042, et al.)
Adaman Mutual Water Company	(Docket No. W-01997A-12-0501)
Global Water Utilities	(Docket No. W-01212A-12-0309, et al.)
New River Utility Company	(Docket No. W-01737A-12-0478)
Arizona Water Company	(Docket No. W-01445A-12-0348)
Far West Water & Sewer, Inc.	(Docket No. WS-03478A-12-0307)
Cordes Lakes Water Company	(Docket No. W-02060A-12-0356)
Rio Rico Utilities, Inc.	(Docket No. WS-02676A-12-0196)
Ray Water Company	(Docket No. W-01380A-12-0254)
Vail Water Company	(Docket No. W-01651B-12-0339)
Valley Water Company	(Docket No. W-01412A-12-0195)
Arizona Water Company	(Docket No. W-01445A-11-0310)
Pima Utility Company	(Docket No. W-02199A-11-0329, et al.)

Rate Dockets Testified - Revenue Requirement/Rate Design:

Quail Creek Water Company	(Docket No. W-02514A-14-0343)
Beaver Dam Water Company	(Docket No. W-03067A-12-0232)
Eden Water Company	(Docket No. W-02068A-11-0471)
Great Prairie Oasis, dba Sunland Water Co.	(Docket No. W-04015A-12-0051)

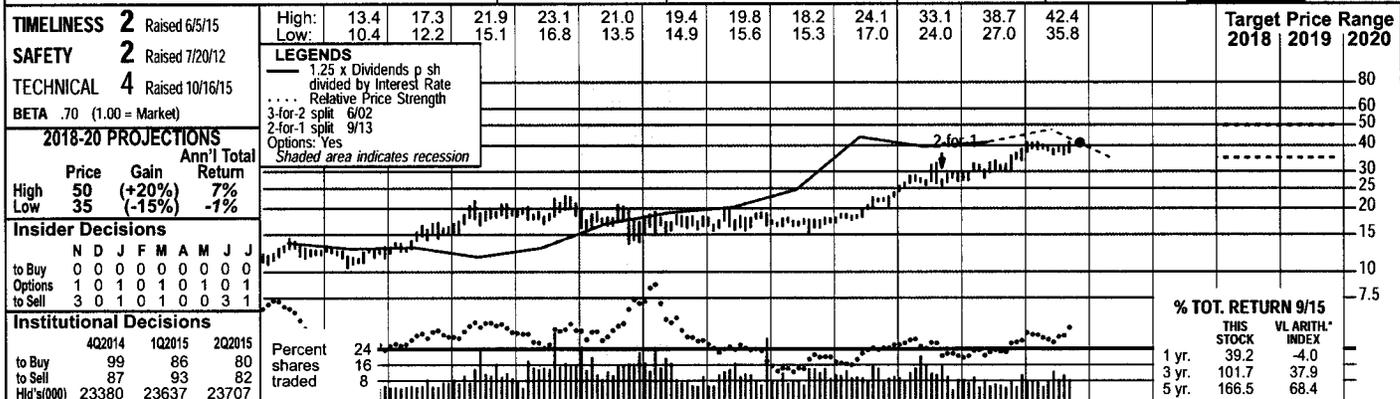
Financing Dockets - Responsible for ACC Staff Report:

Arizona Public Service Company	(Docket No. E-01345A-11-0423)
Tucson Electric Power Company	(Docket No. E-01933A-12-0176)
Chaparral City Water Company	(Docket No. W-02113A-13-0047)
Payson Water Company	(Docket No. W-03514A-13-0142)
Lago Del Oro Water Company	(Docket No. W-01944A-13-0242)
Duncan Valley Electric Cooperative, Inc.	(Docket No. E-01703A-13-0272)
Sulphur Springs Valley Electric Cooperative, Inc.	(Docket No. E-01575A-12-0457)
Trico Electric Cooperative, Inc.	(Docket No. E-01461A-12-0056)
Great Prairie Oasis, dba Sunland Water Co.	(Docket No. W-04015A-12-0050)
Columbus Electric Cooperative, Inc.	(Docket No. E-01851A-11-0415)
Pima Utility Company	(Docket No. W-02199A-11-0403, et al.)

## **ATTACHMENT 2**

# AMER. STATES WATER NYSE-AWR

RECENT PRICE **41.33** P/E RATIO **26.0** (Trailing: 25.4 Median: 20.0) RELATIVE P/E RATIO **1.49** DIV'D YLD **2.2%** VALUE LINE



1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	© VALUE LINE PUB. LLC	18-20
6.45	6.08	6.53	6.89	6.99	6.81	7.03	7.88	8.75	9.21	9.74	10.71	11.12	12.12	12.19	12.17	12.20	12.35	Revenues per sh	14.85
1.13	1.10	1.26	1.27	1.04	1.11	1.32	1.45	1.65	1.69	1.70	2.11	2.13	2.48	2.65	2.67	2.75	2.95	"Cash Flow" per sh	3.50
.60	.64	.67	.67	.39	.53	.66	.67	.81	.78	.81	1.11	1.12	1.41	1.61	1.57	1.60	1.70	Earnings per sh <sup>A</sup>	2.15
.43	.43	.43	.44	.44	.44	.45	.46	.48	.50	.51	.52	.55	.64	.76	.83	.87	.92	Div'd Decl'd per sh <sup>B</sup>	1.15
2.15	1.51	1.59	1.34	1.88	2.51	2.12	1.95	1.45	2.23	2.09	2.12	2.13	1.77	2.52	1.89	2.10	2.15	Cap'l Spending per sh	2.20
5.91	6.37	6.61	7.02	6.98	7.51	7.86	8.32	8.77	8.97	9.70	10.13	10.84	11.80	12.72	13.24	12.70	13.20	Book Value per sh	14.85
26.87	30.24	30.24	30.36	30.42	33.50	33.60	34.10	34.46	34.60	37.06	37.26	37.70	38.53	38.72	38.29	36.90	36.50	Common Shs Outs'tg <sup>C</sup>	37.00
17.1	15.9	16.7	18.3	31.9	23.2	21.9	27.7	24.0	22.6	21.2	15.7	15.4	14.3	17.2	20.1	20.1	20.1	Avg Ann'l P/E Ratio	20.5
.97	1.03	.86	1.00	1.82	1.23	1.17	1.50	1.27	1.36	1.41	1.00	.97	.91	.97	1.06	1.06	1.06	Relative P/E Ratio	1.30
4.2%	4.2%	3.9%	3.6%	3.5%	3.6%	3.1%	2.5%	2.5%	2.9%	2.9%	3.0%	3.2%	3.1%	2.7%	2.6%	2.6%	2.6%	Avg Ann'l Div'd Yield	2.7%

**CAPITAL STRUCTURE as of 6/30/15**

Total Debt \$325.9 mill. Due in 5 Yrs \$41.6 mill.  
 LT Debt \$325.6 mill. LT Interest \$22.0 mill. (41% of Cap'l)

**Leases, Uncapitalized:** Annual rentals \$0.4 mill.  
**Pension Assets-12/14** \$140.6 mill. Oblig. \$185.2 mill.

**Pfd Stock** None.

**Common Stock** 37,240,678 shs. as of 8/3/15

**MARKET CAP:** \$1.5 billion (Mid Cap)

**CURRENT POSITION**

	2013	2014	6/30/15
Cash Assets	38.2	76.0	43.9
Accts Receivable	23.8	18.8	19.2
Other	129.6	114.7	87.1
Current Assets	191.6	209.5	150.2
Accts Payable	49.8	41.9	42.3
Debt Due	6.3	.3	.3
Other	44.8	57.1	52.6
Current Liab.	100.9	99.3	95.2

**ANNUAL RATES**

	Past 10 Yrs.	Past 5 Yrs.	Est'd '12-'14	'12-'14 of change (per sh)
Revenues	6.0%	5.5%	3.5%	6.0%
"Cash Flow"	8.5%	9.0%	5.0%	8.5%
Earnings	11.0%	14.0%	6.0%	11.0%
Dividends	5.5%	8.5%	7.5%	5.5%
Book Value	6.0%	6.5%	3.0%	6.0%

**QUARTERLY REVENUES (\$ mill.)**

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	107.6	114.3	133.5	111.5	466.9
2013	110.6	120.7	130.9	109.9	472.1
2014	102.0	115.6	138.3	109.9	465.8
2015	100.9	114.6	129.5	105	450
2016	95.0	110	135	110	450

**EARNINGS PER SHARE <sup>A</sup>**

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.27	.40	.49	.26	1.41
2013	.35	.43	.53	.30	1.61
2014	.28	.39	.54	.36	1.57
2015	.32	.41	.55	.32	1.60
2016	.31	.46	.60	.33	1.70

**QUARTERLY DIVIDENDS PAID <sup>B</sup>**

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2011	.13	.14	.14	.14	.55
2012	.14	.14	.1775	.1775	.64
2013	.1775	.1775	.2025	.2025	.76
2014	.2025	.2025	.213	.213	.83
2015	.213	.213	.224		

**BUSINESS:** American States Water Co. operates as a holding company. Through its principal subsidiary, Golden States Water Company, it supplies water to 258,191 customers in 75 communities and 10 counties. Service areas include the greater metropolitan areas of Los Angeles and Orange Counties. The company also provides electric utility services to 23,716 customers in the city of Big Bear Lake and in areas of San Bernardino County. Sold Chaparral City Water of Arizona (6/11). Has 707 employees. Blackrock, Inc., owns 9.8% of out. shares; Vanguard, 8.5%; off. & dir. 1.5%. (4/15 Proxy). Chairman: Lloyd Ross. President & CEO: Robert J. Spowls. Inc. CA. Addr: 630 East Foothill Boulevard, San Dimas, CA 91773. Tel: 909-394-3600. Internet: www.aswater.com.

**American States Water's main subsidiary operates in drought-stricken California.** Golden State Water is responsible for almost 85% of the company's total business activity. Due to the lack of potable water, state regulators implemented measures in June aimed at reducing water consumption by 25%.

**The sharp drop in the demand for water should not have a material impact on the company.** In a prescient move, the California Public Utility Commission (CPUC) got out in front of a potential problem by changing the methodology water utilities use to calculate income. In the past, profits were mostly determined by the amount of water sold. In the recent past, utilities' compensation was changed to be more like a service fee. As a result, water companies are joining with the CPUC to aggressively pursue conservation. If the old system had remained in place, Golden State would probably be financially strapped and unable to both provide adequate service to its customers while replacing an aging infrastructure.

**The near-term profit outlook is mixed.** We only expect American States to earn \$1.60 a share in 2015, the second-straight year of flattish bottom-line growth. Income gains are being restrained because the utility is already earning close to the rate established by the CPUC. Next year, earnings should improve due to rate relief and help from nonregulated activities (see below). In sum, we expect share net to increase \$0.10, to \$1.70, a solid 6% gain.

**Nonregulated activities are doing well.** The company's ASUS segment provides water services to military installations. For the first half of the year, ASUS was responsible for 15% of the company's net income. With more privatization expected in the future, increased contributions from this sector are likely.

**Short-term investors may like these shares.** The stock has turned in an excellent performance since our July report, as its value rose 6.5%, compared to the S&P 500's 4.9% decline. Our ranking system believes this good run will continue as it has pegged the stock to outperform the market averages in the year ahead. The equity's recent rally has left AWR with subpar long-term prospects, however.

*James A. Flood*  
*October 16, 2015*

(A) Primary earnings. Excludes nonrecurring gains/(losses): '04, 7¢; '05, 13¢; '06, 3¢; '08, (14¢); '10, (23¢); '11, 10¢. Next earnings report due mid-November. Quarterly earnings may not add due to rounding.  
 (B) Dividends historically paid in early March, June, September, and December. ■ Div'd reinvestment plan available.  
 (C) In millions, adjusted for splits.

**Company's Financial Strength** A  
**Stock's Price Stability** 85  
**Price Growth Persistence** 70  
**Earnings Predictability** 85

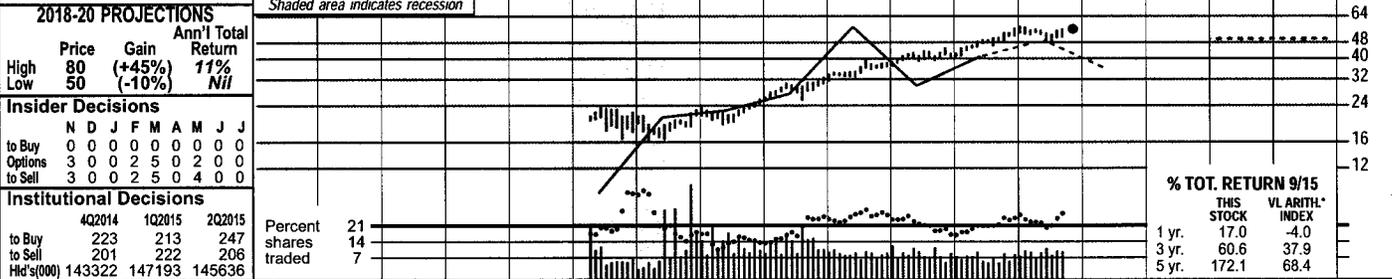
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# AMERICAN WATER NYSE-AWK

RECENT PRICE **55.62** P/E RATIO **21.1** (Trailing: 22.2 Median: NMF) RELATIVE P/E RATIO **1.21** DIV'D YLD **2.6%** VALUE LINE

TIMELINESS <b>2</b> Lowered 7/10/15	High: 23.7	23.0	25.8	32.8	39.4	45.1	56.2	57.5	Target Price Range											
SAFETY <b>3</b> New 7/25/08	Low: 16.5	16.2	19.4	25.2	31.3	37.0	41.1	48.4	2018	2019	2020									
TECHNICAL <b>4</b> Lowered 10/9/15	<p>LEGENDS</p> <p>— 0.85 x Dividends p sh divided by Interest Rate</p> <p>..... Relative Price Strength</p> <p>Options: Yes</p> <p>Shaded area indicates recession</p>																			
BETA .70 (1.00 = Market)	<p>2018-20 PROJECTIONS</p> <table border="1"> <tr> <th>Price</th> <th>Gain</th> <th>Ann'l Total Return</th> </tr> <tr> <td>High 80</td> <td>(+45%)</td> <td>11%</td> </tr> <tr> <td>Low 50</td> <td>(-10%)</td> <td>Nil</td> </tr> </table>											Price	Gain	Ann'l Total Return	High 80	(+45%)	11%	Low 50	(-10%)	Nil
Price	Gain	Ann'l Total Return																		
High 80	(+45%)	11%																		
Low 50	(-10%)	Nil																		



1999	2000	2001	2002	2003	2004	2005	2006	2007 <sup>E</sup>	2008	2009	2010	2011	2012	2013	2014	2015	2016	© VALUE LINE PUB. LLC	18-20
--	--	--	--	--	--	--	13.08	13.84	14.61	13.98	15.49	15.18	16.25	16.28	16.78	17.20	18.00	Revenues per sh	21.60
--	--	--	--	--	--	--	.65	d.47	2.87	2.89	3.56	3.73	4.27	4.36	4.75	5.00	5.25	"Cash Flow" per sh	6.50
--	--	--	--	--	--	--	d.97	d2.14	1.10	1.25	1.53	1.72	2.11	2.06	2.39	2.60	2.80	Earnings per sh <sup>A</sup>	3.25
--	--	--	--	--	--	--	--	--	.40	.82	.86	.90	1.21	.84	1.21	1.33	1.45	Div'd Decl'd per sh <sup>B</sup>	1.75
--	--	--	--	--	--	--	4.31	4.74	6.31	4.50	4.38	5.27	5.25	5.50	5.33	5.50	6.50	Cap'l Spending per sh	6.50
--	--	--	--	--	--	--	23.86	28.39	25.64	22.91	23.59	24.11	25.11	26.52	27.39	28.95	30.65	Book Value per sh <sup>D</sup>	36.75
--	--	--	--	--	--	--	160.00	160.00	160.00	174.63	175.00	175.66	176.99	178.25	179.46	181.50	183.50	Common Shs Outs't'g <sup>C</sup>	185.00
--	--	--	--	--	--	--	--	--	18.9	15.6	14.6	16.8	16.7	19.9	20.0	20.0	20.0	Avg Ann'l P/E Ratio	20.0
--	--	--	--	--	--	--	--	--	1.14	1.04	.93	1.05	1.06	1.12	1.05	1.05	1.05	Relative P/E Ratio	1.25
--	--	--	--	--	--	--	--	--	4.2%	3.8%	3.1%	3.4%	3.4%	2.0%	2.5%	2.5%	2.5%	Avg Ann'l Div'd Yield	2.7%

**CAPITAL STRUCTURE as of 6/30/15**  
 Total Debt \$6316.1 mil. Due in 5 Yrs \$1294.5 mil.  
 LT Debt \$5433.2 mil. LT Interest \$298.0 mil.  
 (52% of Cap'l)

**Leases, Uncapitalized:** Annual rentals \$14.0 mill.  
**Pension Assets 12/14** \$1428.2 mill.  
 Oblig. \$1746.5 mill.  
**Pfd Stock** \$14.3 mill. Pfd Div'd \$5.5 mill

**Common Stock** 180,256,635 shs.  
 as of 7/30/2015

**MARKET CAP: \$10.0 billion (Large Cap)**

CURRENT POSITION (\$MILL.)	2013	2014	6/30/15
Cash Assets	27.0	23.1	144.8
Accts Receivable		267.1	281.2
Other	523.3	638.3	464.1
Current Assets	550.3	661.4	890.1
Accts Payable	264.1	285.8	283.6
Debt Due	644.5	511.1	882.9
Other	326.9	444.1	345.7
Current Liab.	1235.5	1241.0	1512.2

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '12-'14 to '18-'20
Revenues	--	3.0%	4.5%
"Cash Flow"	--	20.5%	6.5%
Earnings	--	NMF	7.0%
Dividends	--	21.5%	8.5%
Book Value	--	5%	5.5%

Cal-endar	QUARTERLY REVENUES (\$ mill.)				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
2012	618.5	745.6	831.8	681.0	2876.9
2013	636.1	724.3	829.2	712.3	2901.9
2014	679.0	754.8	846.1	731.4	3011.3
2015	698.1	782.1	884.8	755	3120
2016	735	830	920	815	3300

Cal-endar	EARNINGS PER SHARE <sup>A</sup>				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
2012	.28	.66	.87	.30	2.11
2013	.32	.57	.84	.33	2.06
2014	.39	.62	.86	.52	2.39
2015	.44	.68	.95	.53	2.60
2016	.48	.72	1.03	.57	2.80

Cal-endar	QUARTERLY DIVIDENDS PAID <sup>B</sup>				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
2011	.22	.23	.23	.23	.91
2012	.23	.23	.25	.50	1.21
2013	--	.28	.28	.28	.84
2014	.28	.31	.31	.31	1.21
2015	.31	.34	.34		

**BUSINESS:** American Water Works Company, Inc. is the largest investor-owned water and wastewater utility in the U.S., providing services to over 15 million people in over 47 states and Canada. (Regulated presence in 16 states.) Nonregulated business assists municipalities and military bases with the maintenance and upkeep as well. Regulated operations made up 88.8% of 2014 revenues.

**The stock of American Water Works Company has been on a roll.** Since our last report three months ago, shares of AWK have increased 8.9% in value. That the S&P 500 declined 4.9% during the same period makes the equity's showing all the more impressive.

**The utility should continue to benefit from its size.** America's water industry is incredibly fragmented. Exclude the small districts and there are still more than 50,000 operating authorities in existence. Because large sums are needed to modernize the long-neglected water infrastructure, small entities are selling themselves to concerns that have the financial wherewithal to make the necessary repairs. Since there are many redundancies in this business, the company is able to modernize the assets of its acquisitions while also cutting costs.

**Earning prospects remain bright.** We expect the company's share net to increase a healthy 9% this year, to \$2.60. The good news should continue into 2016, as an 8% rise in per-share earnings is likely. American Water is atypical in that it has been able to sustain a strong income growth

rate even though it is a regulated entity. The top line is aided by purchasing other water districts, while the bottom line benefits from managements focus on cost controls. Indeed, operating expenses as a percentage of revenues have been declining for some time. For the 12-month period ending June 30th, the ratio was 35.9%, compared to 37.7% over the similar time from one year ago.

**Construction expenditures are set to increase.** Over the past five years, American Water has spent almost \$1 billion annually to modernize its water systems. Management expects this amount to jump 20% and average \$1.2 billion per annum through late decade. Internally generated funds should finance most of the capital outlays, but a fair amount of additional long-term debt will also be required. Still, the company's balance should remain relatively average for the foreseeable future.

**These shares are timely.** So, momentum investors seeking a low-volatility stock with a decent yield may find AWK of interest. Longer-term accounts should probably look elsewhere.

James A. Flood  
 October 16, 2015

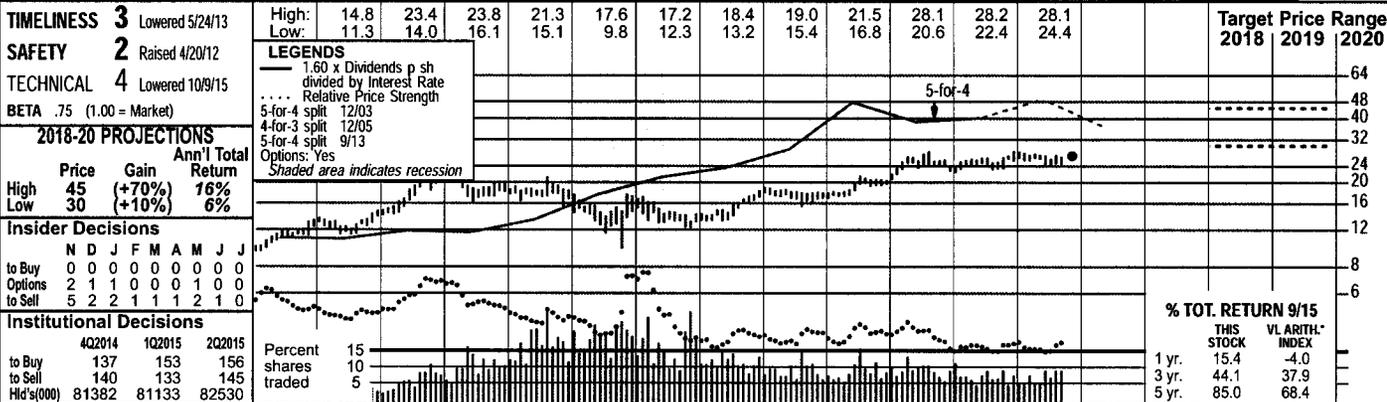
(A) Diluted earnings. Excludes nonrecurring losses: '08, \$4.62; '09, \$2.63; '11, \$0.07. Discontinued operations: '06, (\$0.04); '11, \$0.03; '12, (\$0.10); '13, (\$0.01). GAAP used as of 2014. Next earnings report due early Nov. Quarterly earnings may not sum due to rounding. (B) Dividends paid in March, June, September, and December. (C) Div. reinvestment available. Two payments made in 4th quarter of 2012. (D) in millions. (E) includes intangibles. In 2014: \$1.21 billion, \$6.73/share. (F) Pro forma numbers for '06 & '07.

Company's Financial Strength B+  
 Stock's Price Stability 100  
 Price Growth Persistence 85  
 Earnings Predictability 30

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# AQUA AMERICA NYSE-WTR

RECENT PRICE **26.83** P/E RATIO **21.3** (Trailing: 21.5 Median: 23.0) RELATIVE P/E RATIO **1.22** DIVD YLD **2.7%** VALUE LINE



Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	18-20
Revenues per sh	1.93	1.97	2.16	2.28	2.38	2.78	3.08	3.23	3.61	3.71	3.93	4.21	4.10	4.32	4.32	4.37	4.60	4.70	5.70
"Cash Flow" per sh	.58	.61	.69	.76	.77	.87	.97	1.01	1.10	1.14	1.29	1.42	1.45	1.51	1.82	1.89	2.00	2.10	2.55
Earnings per sh <sup>A</sup>	.33	.37	.41	.43	.46	.51	.57	.56	.57	.58	.62	.72	.83	.87	1.16	1.20	1.25	1.35	1.65
Div'd Decl'd per sh <sup>B</sup>	.22	.23	.24	.26	.28	.29	.32	.35	.38	.41	.44	.47	.50	.54	.58	.63	.69	.76	1.00
Cap'l Spending per sh	.72	.93	.87	.96	1.06	1.23	1.47	1.64	1.43	1.58	1.66	1.89	1.90	1.98	1.73	1.84	1.90	1.95	2.00
Book Value per sh	2.74	3.08	3.32	3.49	4.27	4.71	5.04	5.57	5.85	6.26	6.50	6.81	7.21	7.90	8.63	9.27	9.90	10.45	11.75
Common Shs Outst'g <sup>C</sup>	133.50	139.78	142.47	141.49	154.31	158.97	161.21	165.41	166.75	169.21	170.61	172.46	173.60	175.43	177.93	178.59	176.50	175.00	170.00
Avg Ann'l P/E Ratio	21.2	18.2	23.6	23.6	24.5	25.1	31.8	34.7	32.0	24.9	23.1	21.1	21.3	21.9	21.2	20.8	20.5	20.5	22.5
Relative P/E Ratio	1.21	1.18	1.21	1.29	1.40	1.33	1.69	1.87	1.70	1.50	1.54	1.34	1.34	1.39	1.19	1.10	1.10	1.10	1.40
Avg Ann'l Div'd Yield	3.0%	3.3%	2.5%	2.5%	2.5%	2.3%	1.8%	1.8%	2.1%	2.8%	3.1%	3.1%	2.8%	2.8%	2.4%	2.5%	2.5%	2.5%	2.7%

**CAPITAL STRUCTURE as of 6/30/15**  
 Total Debt \$1735.3 mill. Due in 5 Yrs \$437.0 mill.  
 LT Debt \$1660.5 mill. LT Interest \$70.0 mill. (49% of Cap'l)

Year	2013	2014	6/30/15
Cash Assets	5.1	4.1	4.6
Receivables	95.4	97.0	109.5
Inventory (AvgCst)	11.4	12.8	13.6
Other	59.8	38.6	47.7
Current Assets	171.7	152.5	175.4
Accts Payable	65.8	60.0	47.5
Debt Due	123.0	70.0	74.8
Other	78.1	95.3	81.1
Current Liab.	266.9	225.3	203.4

**ANNUAL RATES**

Rate	Past 10 Yrs	Past 5 Yrs	Est'd '12-'14 to '18-'20
Revenues	5.5%	3.0%	4.5%
"Cash Flow"	8.0%	8.0%	6.5%
Earnings	8.5%	13.0%	7.5%
Dividends	7.5%	7.0%	9.5%
Book Value	7.5%	6.5%	5.5%

Cal-endar	QUARTERLY REVENUES (\$ mill.)				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
2012	164.0	191.7	214.6	187.5	757.8
2013	180.0	195.7	204.3	188.6	768.6
2014	182.7	195.3	210.5	191.4	779.9
2015	190.3	205.8	220	193.9	810
2016	192	208	225	200	825

Cal-endar	EARNINGS PER SHARE <sup>A</sup>				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
2012	.15	.24	.29	.19	.87
2013	.26	.30	.36	.24	1.16
2014	.24	.31	.38	.27	1.20
2015	.27	.32	.39	.27	1.25
2016	.28	.34	.42	.31	1.35

Cal-endar	QUARTERLY DIVIDENDS PAID <sup>B</sup>				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
2011	.124	.124	.124	.132	.50
2012	.132	.132	.132	.14	.54
2013	.14	.14	.152	.152	.58
2014	.152	.152	.165	.165	.63
2015	.165	.165	.178		

**Business:** Aqua America, Inc. is the holding company for water and wastewater utilities that serve approximately three million residents in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Florida, Indiana, and five other states. Has 1,617 employees. Acquired AquaSource, 7/03; Consumers Water, 4/99; and others. Water supply revenues '14: residential, 68%; commercial, 17%; industrial & other, 15%. Officers and directors own .8% of the common stock; Vangurad Group, 7.1%; Blackrock, Inc, 6.7%; State Street Capital Corp., 5.7% (3/15 Proxy). Chairman: Nicholas DeBenedictis. CEO: Christopher Franklin. Incorporated: Pennsylvania. Address: 762 West Lancaster Avenue, Bryn Mawr, Pennsylvania 19010. Tel.: 610-525-1400. Internet: www.aquaamerica.com.

**Aqua America raised its dividend a hefty 8% in the last quarter.** We had anticipated a 7% increase, but the latest hike further enhances the stock's reputation for having much better-than-average dividend growth prospects. Over the next three- to five-year period, we expect the rate to average a generous 9.0%.

**Earnings will probably be flat for the remainder of this year, than pick up in 2016.** Aqua's bottom line benefited from a one-time \$0.11 a-share-gain in 2014, making the 2015 profit figure seem less favorable by comparison. Still, we think the company's share net will rise a decent 4%, to \$1.25. Next year, due to a combination of rate relief, cost saving from acquisitions (see below), and the ability to earn returns on capital expenditures without much regulatory lag, earnings per share may well climb a healthy 8%, to \$1.35.

**Aqua should continue to be very active in the M&A markets.** As we have pointed out before, the domestic water market is fragmented among over 50,000 major-to-mid-sized water districts. With the nation's long-neglected water infrastructure in desperate need of moderniza-

tion, large amounts of capital will be required to pay for the repairs. Since many small municipally run water authorities are in a financial bind, it makes sense for them to be purchased by a larger water company. Because there is a tremendous amount of redundancies in the water industry, companies such as Aqua are able to absorb smaller concerns and substantially reduce overhead. This strategy should help fuel profit growth for the foreseeable future.

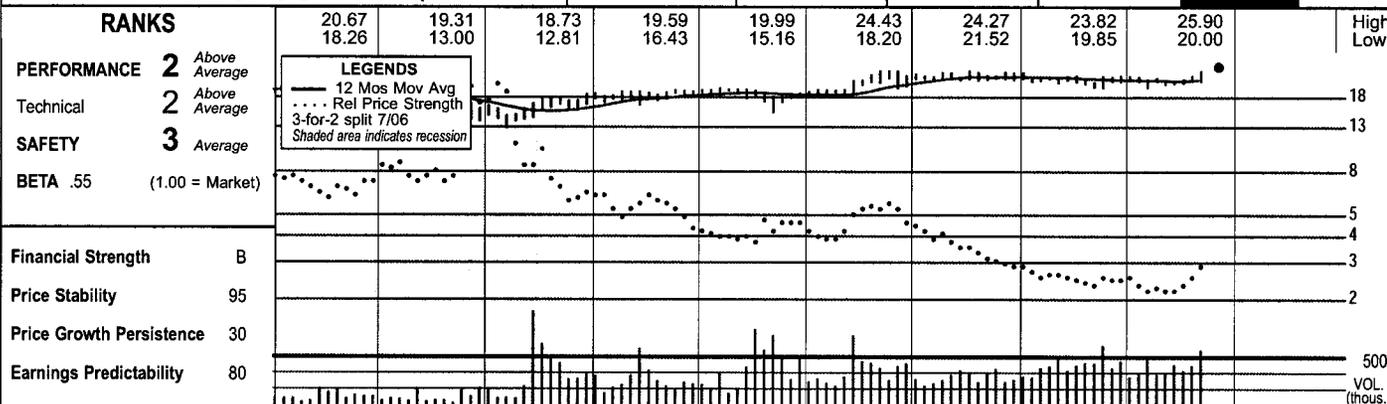
**Long-term, conservative, income-oriented investors should take note of this stock.** Though only ranked to perform in-line with the broader market averages in the coming year, WTR has many attractive attributes. For starters, the stock's yield is 2.7%, which is close to the industry average. This is unusual, as utilities with good dividend growth prospects often carry a much lower yield than a typical member of the group. Moreover, the stock has an A Financial Strength rating, and scores extremely high for both Earnings Predictability (100), and Stock Price Stability (95).

*James A. Flood* *October 16, 2015*

(A) Diluted egs. Excl. nonrec. gains (losses): '99, (9¢); '00, 2¢; '01, 2¢; '02, 4¢; '03, 3¢; '12, 18¢. Excl. gain from disc. operations: '12, 7¢; '13, 9¢; '14, 11¢. May not sum due to rounding.	Next earnings report due mid-November.	(C) In millions, adjusted for stock splits.	Company's Financial Strength	A
	(B) Dividends historically paid in early March, June, Sept. & Dec. ■ Div'd. reinvestment plan available (5% discount).		Stock's Price Stability	95
			Price Growth Persistence	60
			Earnings Predictability	100

# ARTESIAN RES. CORP. NDQ-ARTNA

RECENT PRICE **25.17** TRAILING P/E RATIO **20.1** RELATIVE P/E RATIO **1.10** DIV'D YLD **3.5%** VALUE LINE



© VALUE LINE PUBLISHING LLC	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016/2017
SALES PER SH	7.20	7.59	8.11	8.48	7.56	8.10	7.82	8.13	--	
"CASH FLOW" PER SH	1.57	1.65	1.84	1.92	1.64	2.04	1.87	2.04	--	
EARNINGS PER SH	.90	.86	.97	1.00	.83	1.13	.94	1.07	1.19 <sup>A,B</sup>	1.30 <sup>C</sup> /NA
DIV'DS DECL'D PER SH	.66	.71	.72	.75	.76	.79	.82	.85	--	
CAP'L SPENDING PER SH	3.66	6.09	2.32	2.57	1.83	2.36	2.40	2.66	--	
BOOK VALUE PER SH	11.66	11.86	12.15	12.44	13.12	13.57	13.80	14.09	--	
COMMON SHS OUTST'G (MILL)	7.30	7.40	7.51	7.65	8.61	8.71	8.83	8.91	--	
AVG ANN'L P/E RATIO	21.5	20.1	16.4	18.2	22.5	18.3	23.9	20.5	21.2	19.4/NA
RELATIVE P/E RATIO	1.14	1.21	1.09	1.16	1.41	1.17	1.34	1.08	--	
AVG ANN'L DIV'D YIELD	3.4%	4.1%	4.5%	4.1%	4.1%	3.8%	3.7%	3.9%	--	
SALES (\$MILL)	52.5	56.2	60.9	64.9	65.1	70.6	69.1	72.5	--	Bold figures are consensus earnings estimates and, using the recent prices, P/E ratios.
OPERATING MARGIN	45.6%	45.1%	46.9%	46.5%	45.5%	48.7%	47.0%	48.8%	--	
DEPRECIATION (\$MILL)	5.2	5.8	6.6	7.0	7.4	7.9	8.3	8.7	--	
NET PROFIT (\$MILL)	6.3	6.4	7.3	7.6	6.7	9.8	8.3	9.5	--	
INCOME TAX RATE	39.8%	40.8%	40.1%	40.0%	40.8%	40.2%	40.2%	40.1%	--	
NET PROFIT MARGIN	11.9%	11.4%	11.9%	11.7%	10.4%	14.0%	12.0%	13.1%	--	
WORKING CAP'L (\$MILL)	2.5	d20.9	d23.3	d27.9	d11.4	d11.4	d12.3	d13.5	--	
LONG-TERM DEBT (\$MILL)	91.8	107.6	106.0	105.1	106.5	106.3	105.5	105.0	--	
SHR. EQUITY (\$MILL)	85.1	87.8	91.2	95.1	113.0	118.2	121.8	125.6	--	
RETURN ON TOTAL CAP'L	5.3%	4.7%	5.2%	5.6%	4.6%	5.9%	5.1%	5.5%	--	
RETURN ON SHR. EQUITY	7.4%	7.3%	8.0%	8.0%	6.0%	8.3%	6.8%	7.6%	--	
RETAINED TO COM EQ	2.1%	1.4%	2.1%	2.0%	.5%	2.5%	.9%	1.6%	--	
ALL DIV'DS TO NET PROF	71%	81%	74%	75%	92%	70%	87%	79%	--	

<sup>A</sup>No. of analysts changing earn. est. in last 24 days: 0 up, 0 down, consensus 5-year earnings growth not available. <sup>B</sup>Based upon 2 analysts' estimates. <sup>C</sup>Based upon one analyst's estimate.

ANNUAL RATES						ASSETS (\$mill.)				
of change (per share)	5 Yrs.	1 Yr.				2013	2014	6/30/15		
Sales	1.0%	4.0%				.4	.2	.4		
"Cash Flow"	3.5%	9.0%				8.1	8.4	7.9		
Earnings	3.0%	14.0%				1.5	1.9	1.8		
Dividends	3.5%	3.0%				3.3	6.1	3.7		
Book Value	3.0%	2.0%				13.3	16.6	13.8		
Fiscal Year	QUARTERLY SALES (\$mill.)				Full Year	LIABILITIES (\$mill.)				
	1Q	2Q	3Q	4Q						
12/31/13	16.3	17.8	18.1	16.9	69.1	Accs Payable	4.1	3.8	2.6	
12/31/14	16.9	17.9	19.6	18.1	72.5	Debt Due	12.2	19.9	15.6	
12/31/15	18.0	19.5				Other	9.3	6.5	7.5	
12/31/16						Current Liab	25.6	30.2	25.7	
Fiscal Year	EARNINGS PER SHARE				Full Year	LONG-TERM DEBT AND EQUITY as of 6/30/15				
	1Q	2Q	3Q	4Q						
12/31/12	.28	.32	.33	.20	1.13	Total Debt \$119.9 mill.	Due in 5 Yrs. NA			
12/31/13	.20	.28	.29	.17	.94	LT Debt \$104.3 mill.				
12/31/14	.24	.22	.37	.24	1.07	Including Cap. Leases NA				
12/31/15	.28	.36					(45% of Cap'l)			
12/31/16						Leases, Uncapitalized Annual rentals NA				
Cal-endar	QUARTERLY DIVIDENDS PAID				Full Year	Pension Liability \$3 mill. in '14 vs. \$3 mill. in '13				
	1Q	2Q	3Q	4Q						
2012	.193	.198	.198	.203	.79	Pfd Stock None	Pfd Div'd Paid None			
2013	.203	.206	.206	.209	.82	Common Stock 8,929,033 shares				
2014	.209	.212	.212	.215	.85		(55% of Cap'l)			
2015	.215	.218	.218							
INSTITUTIONAL DECISIONS						TOTAL SHAREHOLDER RETURN				
	4Q'14	1Q'15	2Q'15			Dividends plus appreciation as of 9/30/2015				
to Buy	30	38	33			3 Mos.	6 Mos.	1 Yr.	3 Yrs.	5 Yrs.
to Sell	28	21	27			15.60%	15.16%	24.74%	16.54%	53.78%
Hld's(000)	3004	3046	2853							

**INDUSTRY: Water Utility**

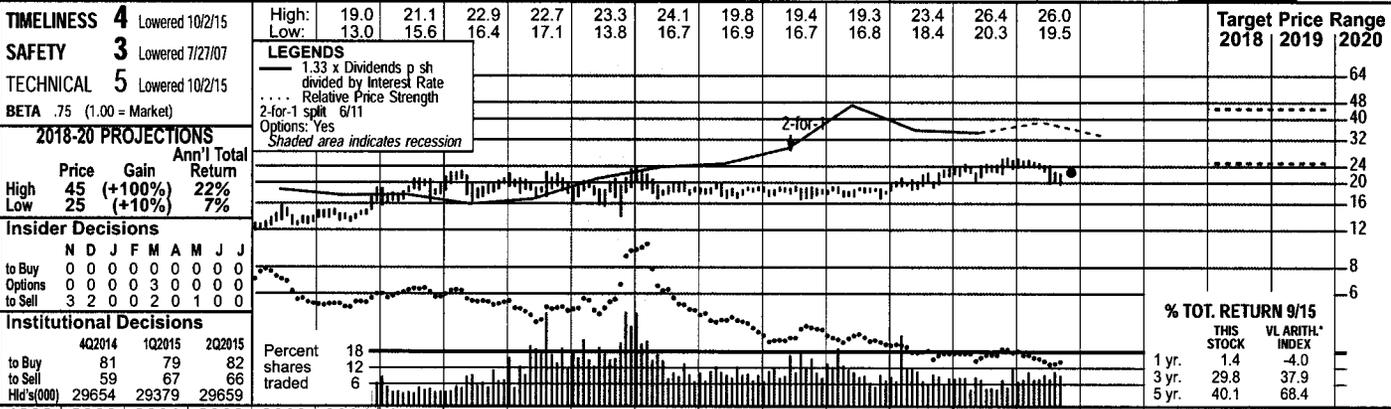
**BUSINESS:** Artesian Resources Corporation, through its subsidiaries, provides water, wastewater, and other services on the Delmarva Peninsula. It distributes and sells water to residential, commercial, industrial, municipal, and utility customers in the states of Delaware, Maryland, and Pennsylvania. The company also offers water for public and private fire protection to customers in its service territories. In addition, it provides contract water and wastewater services, water and sewer service line protection plans, and wastewater management services, as well as design, construction, and engineering services. Artesian supplies over 7.3 billion gallons of water per year through 1,201 miles of water main to approximately 300,000 people. Artesian Water Company, the company's principal subsidiary, is the oldest and largest investor owned public water utility on the Delmarva Peninsula, and has been providing water service since 1905. Has 237 employees. Chairman, C.E.O. & President: Dian C. Taylor. Address: 664 Churchmans Rd., Newark, DE 19702. Tel.: (302) 453-6900. Internet: <http://www.artesianwater.com>.

J.V.

October 16, 2015

# CALIFORNIA WATER NYSE-CWT

RECENT PRICE **22.48** P/E RATIO **19.2** (Trailing: 19.1, Median: 20.0) RELATIVE P/E RATIO **1.10** DIV'D YLD **3.1%** VALUE LINE



**TIMELINESS** 4 Lowered 10/2/15  
**SAFETY** 3 Lowered 7/27/07  
**TECHNICAL** 5 Lowered 10/2/15  
**BETA** .75 (1.00 = Market)

**2018-20 PROJECTIONS**

Ann'l Total		
Price	Gain	Return
High 45	(+100%)	22%
Low 25	(+10%)	7%

**Insider Decisions**

N D J F M A M J J											
to Buy	0	0	0	0	0	0	0	0	0	0	0
Options	0	0	0	0	0	0	0	0	0	0	0
to Sell	3	2	0	2	0	1	0	0	0	0	0

**Institutional Decisions**

4Q2014			1Q2015			2Q2015		
to Buy	81	79	82	81	82	81	82	81
to Sell	59	67	66	67	66	67	66	66
Hld's(000)	29654	29379	29659	29659	29659	29659	29659	29659

1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	© VALUE LINE PUB. LLC 18-20	
7.98	8.08	8.13	8.67	8.18	8.59	8.72	8.10	8.88	9.90	10.82	11.05	12.00	13.34	12.23	12.50	12.20	12.50	Revenues per sh	14.50
1.37	1.26	1.10	1.32	1.26	1.42	1.52	1.36	1.56	1.86	1.93	1.93	2.07	2.32	2.21	2.47	2.50	2.80	"Cash Flow" per sh	3.25
.77	.66	.47	.63	.61	.73	.74	.67	.75	.95	.98	.91	.86	1.02	1.02	1.19	1.15	1.35	Earnings per sh <sup>A</sup>	1.55
.54	.55	.56	.56	.56	.57	.57	.58	.58	.59	.59	.60	.62	.63	.64	.65	.67	.70	Div'd Decl'd per sh <sup>B</sup>	.97
1.72	1.23	2.04	2.91	2.19	1.87	2.01	2.14	1.84	2.41	2.66	2.97	2.83	3.04	2.58	2.76	3.00	2.75	Cap'l Spending per sh	3.15
6.71	6.45	6.48	6.56	7.22	7.83	7.90	9.07	9.25	9.72	10.13	10.45	10.76	11.28	12.54	13.11	13.55	14.15	Book Value per sh <sup>C</sup>	16.00
25.87	30.29	30.36	30.36	33.86	36.73	36.78	41.31	41.33	41.45	41.53	41.67	41.82	41.98	47.74	47.81	48.00	48.00	Common Shs Outst'g <sup>D</sup>	50.00
17.8	19.6	27.1	19.8	22.1	20.1	24.9	29.2	26.1	19.8	19.7	20.3	21.3	17.9	20.1	19.7	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	23.0
1.01	1.27	1.39	1.08	1.26	1.06	1.33	1.58	1.39	1.19	1.11	1.29	1.34	1.14	1.13	1.04			Relative P/E Ratio	1.45
4.0%	4.3%	4.4%	4.5%	4.2%	3.9%	3.1%	2.9%	3.0%	3.1%	3.1%	3.2%	3.4%	3.5%	3.1%	2.8%			Avg Ann'l Div'd Yield	3.0%

**CAPITAL STRUCTURE as of 6/30/15**  
 Total Debt \$550.0 mill. Due in 5 Yrs \$165.8 mill.  
 LT Debt \$416.8 mill. LT Interest \$23.0 mill.  
 (40% of Cap'l)

**Pension Assets-12/14** \$306.3 mill.  
 Oblig. \$390.6 mill.

**Pfd Stock** None

**Common Stock** 47,878,659 shs.  
 as of 7/22/15

**MARKET CAP: \$1.1 billion (Mid Cap)**

320.7	334.7	367.1	410.3	449.4	460.4	501.8	560.0	584.1	597.5	600	600	600	600	600	600	600	600	Revenues (\$mill) <sup>E</sup>	725
27.2	25.6	31.2	39.8	40.6	37.7	36.1	42.6	47.3	56.7	55.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	Net Profit (\$mill)	77.5
42.4%	37.4%	39.9%	37.7%	40.3%	39.5%	40.5%	37.5%	30.3%	33.0%	28.0%	29.5%	29.5%	29.5%	29.5%	29.5%	29.5%	29.5%	Income Tax Rate	36.0%
3.3%	10.6%	8.3%	8.6%	7.6%	4.2%	7.6%	8.0%	4.3%	2.7%	7.0%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	AFUDC % to Net Profit	5.0%
48.3%	43.5%	42.9%	41.6%	47.1%	52.4%	51.7%	47.8%	41.6%	40.1%	42.5%	43.5%	43.5%	43.5%	43.5%	43.5%	43.5%	43.5%	Long-Term Debt Ratio	41.5%
51.1%	55.9%	56.6%	58.4%	52.9%	47.6%	48.3%	52.2%	58.4%	59.9%	57.5%	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%	Common Equity Ratio	58.5%
568.1	670.1	674.9	690.4	794.9	914.7	931.5	908.2	1024.9	1045.9	1135	1205	1205	1205	1205	1205	1205	1205	Total Capital (\$mill)	1370
862.7	941.5	1010.2	1112.4	1198.1	1294.3	1381.1	1457.1	1515.8	1590.4	1680	1760	1760	1760	1760	1760	1760	1760	Net Plant (\$mill)	1820
6.3%	5.2%	5.9%	7.1%	6.5%	5.5%	5.5%	6.3%	6.0%	6.3%	6.0%	6.0%	6.3%	6.0%	6.3%	6.0%	6.0%	6.0%	Return on Total Cap'l	7.0%
9.3%	6.8%	8.1%	9.9%	9.6%	8.6%	8.0%	9.0%	7.9%	9.1%	8.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	Return on Shr. Equity	9.5%
9.3%	6.8%	8.1%	9.9%	9.6%	8.6%	8.0%	9.0%	7.9%	9.1%	8.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	Return on Com Equity	9.5%
2.1%	1.0%	1.8%	3.8%	3.8%	3.0%	2.3%	3.4%	3.4%	4.1%	3.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	Retained to Com Eq	3.5%
78%	86%	77%	61%	60%	66%	71%	62%	56%	55%	58%	51%	51%	51%	51%	51%	51%	51%	All Div'ds to Net Prof	63%

**CURRENT POSITION** 2013 2014 6/30/15 (\$MILL)

Cash Assets	27.5	19.6	24.5
Other	112.0	134.5	125.7
Current Assets	139.5	154.1	150.2
Accts Payable	55.1	59.4	68.7
Debt Due	54.7	85.7	133.2
Other	56.8	72.6	68.5
Current Liab.	166.6	217.7	270.4

**BUSINESS:** California Water Service Group provides regulated and nonregulated water service to 477,900 customers in 85 communities in the state of California. Accounts for over 94% of total customers. Also operates in Washington, New Mexico, and Hawaii. Main service areas: San Francisco Bay area, Sacramento Valley, Salinas Valley, San Joaquin Valley & parts of Los Angeles. Acquired Rio Grande Corp; West Hawaii Utilities (9/08). Revenue breakdown, '14: residential, 68%; business, 19%; industrial, 5%; public authorities, 3%; other 5%. '14 reported depreciation rate: 4.0%. Has 1,105 employees. President, Chairman, and CEO: Peter C. Nelson. Inc.: DE. Address: 1720 North First St., San Jose, CA 95112-4598. Tel.: 408-367-8200. Internet: www.calwatergroup.com.

**ANNUAL RATES** Past 10 Yrs. Past 5 Yrs. Est'd '12-'14 of change (per sh) to '18-'20

Revenues	4.0%	5.0%	4.0%
"Cash Flow"	6.0%	5.5%	5.5%
Earnings	5.0%	4.0%	6.5%
Dividends	1.5%	2.0%	7.0%
Book Value	5.5%	5.0%	4.5%

**Shares of California Water have done poorly for a water company.** The equity of every other regulated water utility we follow recorded positive returns that averaged 5.1% since our July report. This is in sharp contrast to CWT, which has declined 5.1%, basically mirroring the performance of the broader market averages.

**QUARTERLY REVENUES (\$ mill.)<sup>E</sup>**

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	116.8	143.6	178.1	121.5	560.0
2013	111.4	154.6	184.4	133.7	584.1
2014	110.5	158.4	191.2	137.4	597.5
2015	122.0	144.4	183.6	135	585
2016	120	150	190	140	600

**Poor second-quarter earnings obviously put downward pressure on the stock.** Share net came in at \$0.21, versus our \$0.35 estimate and last year's \$0.36 figure. Due to water restrictions implemented by the California Public Utility Commission (CPUC), demand for water was expected to decrease. However, because the CPUC altered the methodology utilities use to calculate earnings, the large drop in income took the market by surprise. Mechanisms were implemented, so water companies' profits would be derived more from fees and "decoupled" from the amount of water sold.

**EARNINGS PER SHARE <sup>A</sup>**

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.03	.31	.56	.12	1.02
2013	.01	.28	.61	.12	1.02
2014	d.11	.36	.70	.24	1.19
2015	.03	.21	.69	.22	1.15
2016	.05	.35	.70	.25	1.35

**QUARTERLY DIVIDENDS PAID <sup>B</sup>**

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2011	.154	.154	.154	.154	.62
2012	.1575	.1575	.1575	.1575	.63
2013	.16	.16	.16	.16	.64
2014	.1625	.1625	.1625	.1625	.65
2015	.1675	.1675	.1675	.1675	.65

**Despite some confusion among investors, we believe most of the lost profits will eventually be recovered.** When water sales drop, the company's accrued unbilled revenue increases. Thus, the timing of California Water's share net is changed. To reflect this, we have lowered 2015's share-net estimate \$0.10, to \$1.15, while raising 2016's by \$0.10, to \$1.35.

(A) Basic EPS. Excl. nonrecurring gain (loss): '00, (4¢); '01, 2¢; '02, 4¢; '11, 4¢. Next earnings report due mid-Nov. (B) Dividends historically paid in late Feb., May, Aug., and Nov. (C) Intangible assets. In '14: \$7.3 mill., \$0.15/sh. (D) In millions, adjusted for splits. (E) Excludes non-reg. rev.

Company's Financial Strength	B++
Stock's Price Stability	95
Price Growth Persistence	35
Earnings Predictability	85

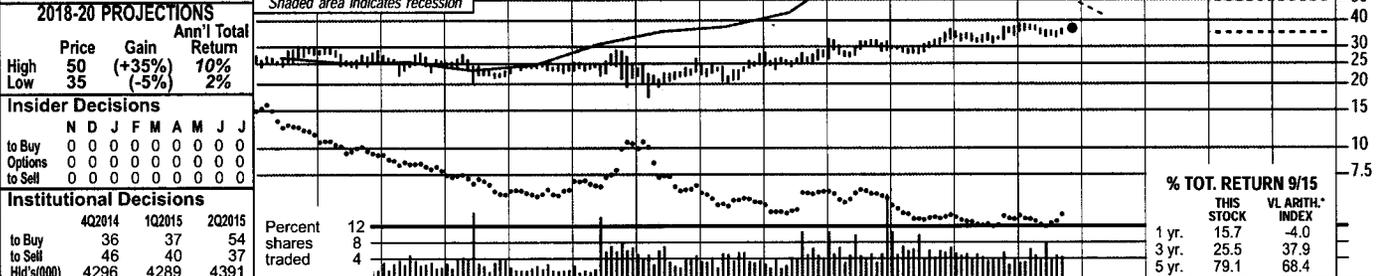
**To subscribe call 1-800-VALUELINE**

# CONNECTICUT WATER NDQ-CTWS

RECENT PRICE **36.64** P/E RATIO **17.5** (Trailing: 18.0 Median: 21.0) RELATIVE P/E RATIO **1.00** DIV'D YLD **2.9%** VALUE LINE

TIMELINESS <b>3</b> Lowered 11/21/14	High: 29.8 28.2 27.7 25.6 29.0 26.4 27.9 29.1 32.8 36.4 37.5 38.6	Target Price Range 2018 2019 2020
SAFETY <b>3</b> New 1/18/13	Low: 23.8 21.9 20.3 22.4 19.3 17.3 20.0 23.3 26.2 27.8 31.0 33.2	
TECHNICAL <b>4</b> Lowered 10/9/15		
BETA <b>65</b> (1.00 = Market)		

LEGENDS  
 1.30 x Dividends p sh divided by Interest Rate  
 Relative Price Strength  
 Options: No  
 Shaded area indicates recession



1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	© VALUE LINE PUB. LLC	18-20
5.87	5.70	5.93	5.77	5.91	6.04	5.81	5.68	7.05	7.24	6.93	7.65	7.93	9.47	8.29	8.45	8.65	9.00	Revenues per sh	12.90
1.65	1.73	1.78	1.78	1.89	1.91	1.62	1.52	1.90	1.95	1.93	2.04	2.11	2.64	2.63	2.97	3.20	3.40	"Cash Flow" per sh	3.65
1.03	1.09	1.13	1.12	1.15	1.16	.88	.81	1.05	1.11	1.19	1.13	1.13	1.53	1.66	1.92	2.05	2.10	Earnings per sh <sup>A</sup>	2.25
.79	.79	.80	.81	.83	.84	.85	.86	.87	.88	.90	.92	.94	.96	.98	1.01	1.05	1.09	Div'd Decl'd per sh <sup>B</sup>	1.30
1.42	1.43	1.86	1.98	1.49	1.58	1.96	1.96	2.24	2.44	3.28	3.06	2.61	2.79	3.02	4.11	4.60	4.15	Cap'l Spending per sh	3.00
8.61	8.92	9.25	10.06	10.46	10.94	11.52	11.60	11.95	12.23	12.67	13.05	13.50	20.95	17.92	18.83	20.10	21.15	Book Value per sh <sup>D</sup>	23.35
7.26	7.28	7.65	7.94	7.97	8.04	8.17	8.27	8.38	8.46	8.57	8.68	8.76	8.85	11.04	11.12	11.20	11.35	Common Shs Outst'g <sup>C</sup>	12.00
18.2	18.2	21.5	24.3	23.5	22.9	28.6	29.0	23.0	22.2	18.4	20.7	23.0	19.4	18.4	17.5	<b>Bold figures are Value Line estimates</b>		Avg Ann'l P/E Ratio	19.0
1.04	1.18	1.10	1.33	1.34	1.21	1.52	1.57	1.22	1.34	1.23	1.32	1.44	1.23	1.03	.92			Relative P/E Ratio	1.20
4.2%	4.0%	3.3%	3.0%	3.1%	3.4%	3.4%	3.6%	3.6%	3.6%	4.1%	3.9%	3.6%	3.2%	3.2%	3.0%			Avg Ann'l Div'd Yield	3.1%

**CAPITAL STRUCTURE as of 6/30/15**  
 Total Debt \$183.5 mill. Due in 5 Yrs \$19.3 mill.  
 LT Debt \$177.3 mill. LT Interest \$7.0 mill. (45% of Cap'l)

**Leases, Uncapitalized:** Annual rentals \$ .1 mill.  
 Pension Assets-12/14 \$61.6 mill.  
 Oblig. \$79.8 mill.

**Pfd Stock \$0.8 mill. Pfd Divd NMF**

**Common Stock 11,168,731 shs. as of 7/31/15**

**MARKET CAP: \$400 million (Small Cap)**

CURRENT POSITION (\$MILL.)	2013	2014	6/30/15
Cash Assets	18.4	2.5	3.1
Accounts Receivable	12.3	12.0	11.5
Other	16.2	21.7	21.1
Current Assets	46.9	36.2	35.7
Accts Payable	10.8	10.0	9.2
Debt Due	4.1	4.4	6.2
Other	7.8	9.2	9.5
Current Liab.	22.7	23.6	24.9

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '12-'14 to '18-'20
Revenues	4.0%	4.5%	6.0%
"Cash Flow"	4.0%	7.5%	4.5%
Earnings	4.0%	9.0%	4.5%
Dividends	2.0%	2.0%	5.0%
Book Value	6.5%	9.5%	4.0%

Cal-endar	QUARTERLY REVENUES (\$ mill.)				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
2012	18.5	21.3	24.5	19.5	83.8
2013	19.7	22.6	27.6	21.6	91.5
2014	20.3	25.4	27.6	20.7	94.0
2015	20.0	26.6	28.9	21.5	97.0
2016	22.5	27.5	30.0	22.0	102

Cal-endar	EARNINGS PER SHARE <sup>A</sup>				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
2012	.22	.47	.67	.17	1.53
2013	.24	.39	.86	.17	1.66
2014	.27	.67	.76	.22	1.92
2015	.28	.77	.77	.23	2.05
2016	.32	.68	.85	.25	2.10

Cal-endar	QUARTERLY DIVIDENDS PAID <sup>B</sup>				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
2011	.233	.233	.238	.238	.942
2012	.238	.238	.2425	.2425	.962
2013	.2425	.2425	.2475	.2475	.98
2014	.2475	.2475	.2575	.2575	1.01
2015	.2575	.2575	.2675		

**BUSINESS:** Connecticut Water Service, Inc. is a non-operating holding company, whose income is derived from earnings of its wholly-owned subsidiary companies (regulated water utilities). In 2014, 93% of net income was derived from these activities. Provides water services to 400,000 people in 77 municipalities throughout Connecticut and Maine. Acquired The Maine Water Company, January, 2012; Biddeford and Saco Water, December, 2012. Incorporated: Connecticut. Has 265 employees. Chairman/President/Chief Executive Officer: Eric W. Thornburg. Officers and directors own 2.3% of the common stock; BlackRock, Inc. 7.0%; (4/15 proxy). Address: 93 West Main Street, Clinton, CT 06413. Telephone: (860) 669-8636. Internet: www.ctwater.com.

**Shares of Connecticut Water Service have been strong performers of late.** Since our last report in July, the price of the equity has increased 5.0%, compared to the 4.9% decline posted by the S&P 500. Much of the gain is probably due to investors fleeing riskier sectors of the market for stocks, such as Connecticut Water, that carry low Betas, well-defined earnings streams, and higher yields. Also, **The last dividend hike was a start of a new trend, in our opinion.** The utility's annual payout growth has been 2% over the past five- and 10-year periods, several hundred basis points lower than that of the typical water utility. Through 2018-2020, we expect the rate to be 5%. **There's a downside to the good news.** For starters, most of the company's positive attributes now appear to be factored into the stock price. In the near term, CTWS is pegged to mirror the market averages. Too, the equity's total return potential to late decade is now subpar. **Meanwhile, Connecticut Water's bottom line is poised for a solid showing this year.** Second-quarter share net came in at \$0.77, versus 2014's \$0.67, and the

Wall Street consensus of \$0.66. A lower-than-expected tax rate and a strong showing by the Maine subsidiary were the primary reasons for the excellent results. In addition, the large gain came despite what we believe was a one-time spike in expenses. All told, earnings per share should rise 4%, despite last year's difficult comparison. We are sticking with our \$2.10-a-share estimate in 2016, even though it could prove conservative. **Connecticut Water is expanding its customer base.** The company purchased two decent-sized water utilities in the recent past and may add smaller districts in the future. Since there are many redundant expenses in this industry, expenses can be trimmed. Connecticut Water is also building out its existing pipelines infrastructure to serve the University of Connecticut's Storrs campus, as well as the greater Manfield area. This will result in higher capital outlays through 2016. The company currently has the financial wherewithal to handle the construction program, so there shouldn't be an appreciable decline in its financial metrics. *James A. Flood* *October 16, 2015*

(A) Diluted earnings. Next earnings report due mid-November. Quarterly earnings do not add in 2012 due to rounding.  
 (B) Dividends historically paid in mid-March.  
 (C) In millions, adjusted for split.  
 (D) Includes intangibles. In 2014: \$31.7 mil-

lion/\$2.85 a share.  
 investment plan available.  
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Company's Financial Strength	B+
Stock's Price Stability	85
Price Growth Persistence	50
Earnings Predictability	85

# MIDDLESEX WATER NDQ-MSEX

RECENT PRICE **24.24** P/E RATIO **20.0** (Trailing: 20.7 Median: 21.0) RELATIVE P/E RATIO **1.14** DIV'D YLD **3.2%** VALUE LINE

TIMELINESS <b>3</b> Lowered 4/11/14	High: 21.8	23.5	20.5	20.2	19.8	17.9	19.3	19.4	19.6	22.5	23.7	25.0	Target Price Range		
SAFETY <b>2</b> New 10/21/11	Low: 16.7	17.1	16.5	16.9	12.0	11.6	14.7	16.5	17.5	18.6	19.1	21.2	2018	2019	2020
TECHNICAL <b>4</b> Lowered 10/9/15	<p>LEGENDS</p> <p>1.20 x Dividends p sh divided by Interest Rate</p> <p>Relative Price Strength</p> <p>3-for-2 split 1/02</p> <p>4-for-3 split 11/03</p> <p>Options: No</p> <p>Shaded area indicates recession</p>														
BETA .75 (1.00 = Market)															

**2018-20 PROJECTIONS**

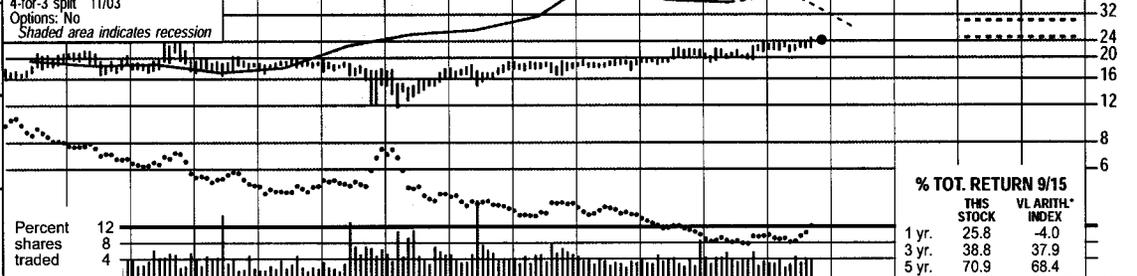
Price	Gain	Ann'l Total Return
High 30	(+25%)	9%
Low 25	(+5%)	4%

**Insider Decisions**

	N	D	J	F	M	A	M	J	J
to Buy	1	0	0	0	0	0	0	0	0
Options	0	0	0	0	0	0	0	0	0
to Sell	0	0	1	0	0	0	0	0	0

**Institutional Decisions**

	4Q2014	1Q2015	2Q2015
to Buy	39	40	43
to Sell	37	38	36
Hld's(000)	6372	6413	6487



1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	© VALUE LINE PUB. LLC	18-20
5.35	5.39	5.87	5.98	6.12	6.25	6.44	6.16	6.50	6.79	6.75	6.60	6.50	6.98	7.19	7.26	7.65	7.80	Revenues per sh	9.10
1.19	.99	1.18	1.20	1.15	1.28	1.33	1.33	1.49	1.53	1.40	1.55	1.46	1.56	1.72	1.84	1.95	2.05	"Cash Flow" per sh	2.25
.76	.51	.66	.73	.61	.73	.71	.82	.87	.89	.72	.96	.84	.90	1.03	1.13	1.20	1.25	Earnings per sh <sup>A</sup>	1.35
.60	.61	.62	.63	.65	.66	.67	.68	.69	.70	.71	.72	.73	.74	.75	.76	.77	.78	Div'd Decl'd per sh <sup>B</sup>	.85
2.33	1.32	1.25	1.59	1.87	2.54	2.18	2.31	1.66	2.12	1.49	1.90	1.50	1.36	1.26	1.40	1.50	2.00	Cap'l Spending per sh	2.00
6.95	6.98	7.11	7.39	7.60	8.02	8.26	9.52	10.05	10.03	10.33	11.13	11.27	11.48	11.82	12.24	12.75	13.25	Book Value per sh	14.30
10.00	10.11	10.17	10.36	10.48	11.36	11.58	13.17	13.25	13.40	13.52	15.57	15.70	15.82	15.96	16.12	16.25	16.25	Common Shs Outst'g <sup>C</sup>	17.00
17.6	28.7	24.6	23.5	30.0	28.4	27.4	22.7	21.6	19.8	21.0	17.8	21.7	20.8	19.7	18.5	18.5	18.5	Avg Ann'l P/E Ratio	20.5
1.00	1.87	1.26	1.28	1.71	1.39	1.46	1.23	1.15	1.19	1.40	1.13	1.36	1.32	1.11	.98	.98	.98	Relative P/E Ratio	1.30
4.4%	4.2%	3.8%	3.7%	3.5%	3.4%	3.5%	3.7%	3.7%	4.0%	4.7%	4.2%	4.0%	4.0%	3.7%	3.7%	3.7%	3.7%	Avg Ann'l Div'd Yield	3.1%

**CAPITAL STRUCTURE as of 6/30/15**  
 Total Debt \$159.8 mill. Due in 5 Yrs \$49.8 mill.  
 LT Debt \$136.1 mill. LT Interest \$4.6 mill.

(40% of Cap'l)

**Pension Assets-12/14** \$51.6 mill.  
 Oblig. \$75.0 mill.  
 Pfd Stock \$2.4 mill. Pfd Div'd: \$.1 mill.

**Common Stock** 16,164,099 shs.  
 as of 7/31/15

**MARKET CAP: \$400 million (Small Cap)**

74.6	81.1	86.1	91.0	91.2	102.7	102.1	110.4	114.8	117.1	124	127	Revenues (\$mill)	155
8.5	10.0	11.8	12.2	10.0	14.3	13.4	14.4	16.6	18.4	19.5	20.5	Net Profit (\$mill)	23.0
27.6%	33.4%	32.6%	33.2%	34.1%	32.1%	32.7%	33.9%	34.1%	35.0%	35.0%	34.0%	Income Tax Rate	34.0%
--	--	--	--	--	6.8%	6.1%	3.4%	1.9%	1.7%	1.0%	1.5%	AFUDC % to Net Profit	2.5%
55.3%	49.5%	49.0%	45.6%	46.6%	43.1%	42.3%	41.5%	40.4%	40.5%	41.0%	41.0%	Long-Term Debt Ratio	43.5%
41.3%	47.5%	49.6%	51.8%	52.1%	55.8%	56.6%	57.4%	58.7%	58.8%	58.5%	58.5%	Common Equity Ratio	56.5%
231.7	264.0	268.8	259.4	267.9	310.5	312.5	316.5	321.4	335.8	345	360	Total Capital (\$mill)	430
288.0	317.1	333.9	366.3	376.5	405.9	422.2	435.2	446.5	465.4	480	500	Net Plant (\$mill)	555
5.0%	5.1%	5.6%	5.8%	5.0%	5.7%	5.2%	5.4%	5.9%	6.3%	6.5%	6.5%	Return on Total Cap'l	6.5%
8.2%	7.5%	8.6%	8.6%	7.0%	8.1%	7.5%	7.8%	8.7%	9.2%	9.5%	9.5%	Return on Shr. Equity	9.5%
8.6%	7.8%	8.7%	8.9%	7.0%	8.2%	7.5%	7.8%	8.7%	9.3%	9.5%	9.5%	Return on Com Equity	9.5%
.6%	1.3%	1.8%	2.0%	NMF	2.1%	1.0%	1.4%	2.4%	3.1%	3.5%	3.5%	Retained to Com Eq	3.5%
94%	84%	79%	78%	98%	75%	87%	83%	73%	67%	64%	63%	All Div'ds to Net Prof	63%

**CURRENT POSITION (\$MILL.)**

	2013	2014	6/30/15
Cash Assets	4.8	2.7	5.8
Other	21.0	20.2	17.1
Current Assets	25.8	22.9	22.9
Accts Payable	6.3	6.4	8.9
Debt Due	33.8	24.9	23.7
Other	12.6	12.6	16.8
Current Liab.	52.7	43.9	49.4

**BUSINESS:** Middlesex Water Company engages in the ownership and operation of regulated water utility systems in New Jersey, Delaware, and Pennsylvania. It also operates water and wastewater systems under contract on behalf of municipal and private clients in NJ and DE. Its Middlesex System provides water services to 60,000 retail customers, primarily in Middlesex County, New Jersey. In 2014, the Middlesex System accounted for 60% of operating revenues. At 12/31/14, the company had 282 employees. Incorporated: NJ. President, CEO, and Chairman: Dennis W. Doll. Officers & directors own 3.5% of the common stock; BlackRock Institutional Trust Co., 6.6% (4/15 proxy). Add.: 1500 Ronson Road, Iselin, NJ 08830. Tel.: 732-634-1500. Internet: www.middlesexwater.com.

**ANNUAL RATES of change (per sh)**

	Past 10 Yrs.	Past 5 Yrs.	Est'd '12-'14 to '18-'20
Revenues	1.5%	1.5%	4.0%
"Cash Flow"	3.5%	3.0%	4.5%
Earnings	4.0%	4.5%	5.0%
Dividends	1.5%	1.5%	2.0%
Book Value	4.5%	3.0%	3.0%

**Shares of Middlesex Water have turned in an excellent performance over the past quarter.** Since our mid-July report, the stock price increased 7.9%, compared to the average return of 5.1% posted by the typical regulated water utility (minus California Water), and the 4.9% loss recorded by the S&P 500.

**QUARTERLY REVENUES (\$ mill.)**

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	23.5	27.4	32.4	27.1	110.4
2013	27.0	29.1	31.3	27.4	114.8
2014	27.1	29.2	32.7	28.1	117.1
2015	28.8	31.7	34.0	29.5	124
2016	29.5	32.0	35.0	30.5	127

**We are modestly raising our earnings estimates.** Mostly due to carryover rate relief, Middlesex's second-quarter share earnings came in at a healthy \$0.31, versus 2014's \$0.29. As a result, we are bumping our full-year forecast \$0.05, to \$1.20. In 2016, we are also adding another \$0.05 a share to our estimate, raising it to \$1.25 a share.

**EARNINGS PER SHARE <sup>A</sup>**

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.11	.24	.38	.17	.90
2013	.20	.28	.36	.19	1.03
2014	.20	.29	.42	.22	1.13
2015	.22	.31	.44	.23	1.20
2016	.23	.33	.46	.23	1.25

**A major rate case is pending.** In March, Middlesex filed a petition in New Jersey seeking to hike rates by \$9.5 million, or 13.5%. As is the case with the entire industry, Middlesex will have to invest heavily to upgrade an aging pipeline system. Because the repairs are needed, we expect the state regulator's final ruling to be reasonable. Also, the percentage increase isn't as onerous as it may sound. Should the full amount sought be granted and implemented, the average residential bill would only go up by about \$25 each quarter. A final ruling on the case could take more than a year.

**The company may not be big, but it has a strong balance sheet.** As of June 30th, the debt-to-total-capital ratio was only 40%, the lowest in the industry. Beginning in 2016 and continuing through the decade, the capital budget will increase by a substantial figure as the water infrastructure is upgraded. Middlesex will not be able to cover all of the outlays with internally generated funds, so external financing will be required. This should result in the company's financial ratios sliding moderately. Nevertheless, finances will remain in good shape.

**Middlesex carries the highest yield in the water industry.** Investors should not be impressed by this, however. That's because the stock's projected annual dividend growth rate through 2018-2020 is only expected to average a paltry 2%. Indeed, we don't think the current yield is sufficient to compensate shareholders for the below-average future cash flows.

**QUARTERLY DIVIDENDS PAID <sup>B</sup>**

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2011	.183	.183	.183	.185	.73
2012	.185	.185	.185	.1875	.74
2013	.1875	.1875	.1875	.19	.75
2014	.19	.19	.19	.1925	.76
2015	.1925	.1925	.1925		

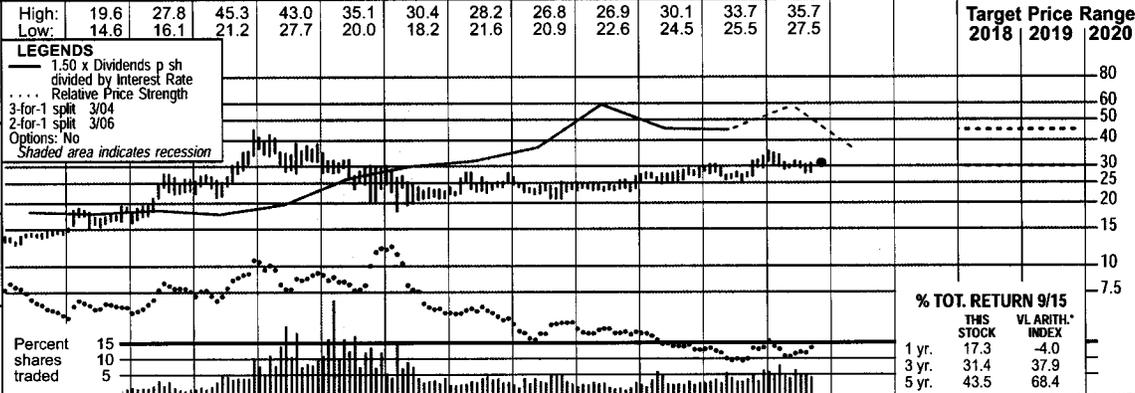
(A) Diluted earnings. May not sum due to rounding. Next earnings report due mid-November.  
 (B) Dividends historically paid in mid-Feb., May, Aug., and November. Div'd reinvestment plan available.  
 (C) In millions, adjusted for splits.

Company's Financial Strength	B++
Stock's Price Stability	95
Price Growth Persistence	35
Earnings Predictability	80

# SJW CORP. NYSE-SJW

RECENT PRICE **31.07** P/E RATIO **21.6** (Trailing: 11.3 Median: 24.0) RELATIVE P/E RATIO **1.23** DIV'D YLD **2.6%** VALUE LINE

**TIMELINESS** 4 Lowered 8/7/15  
**SAFETY** 3 New 4/22/11  
**TECHNICAL** 5 Lowered 10/2/15  
**BETA** .75 (1.00 = Market)



**2018-20 PROJECTIONS**

Price	Gain	Ann'l Total Return
High 45	(+45%)	12%
Low 30	(-5%)	2%

**Insider Decisions**

	N	D	J	F	M	A	M	J	J
to Buy	0	2	0	1	3	0	0	1	0
Options	1	0	0	0	0	0	0	0	0
to Sell	1	0	0	1	0	0	0	1	0

**Institutional Decisions**

	4Q2014	1Q2015	2Q2015
to Buy	49	61	63
to Sell	47	47	49
Hld's(000)	10867	10898	10749

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Value Line Pub. LLC	18-20
Revenues per sh	6.40	6.74	7.45	7.97	8.20	9.14	9.86	10.35	11.25	12.12	11.68	11.62	12.85	14.01	13.73	15.76	14.40	14.30	17.40
"Cash Flow" per sh	1.43	1.23	1.49	1.55	1.75	1.89	2.21	2.38	2.30	2.44	2.21	2.38	2.80	2.97	2.90	4.42	3.60	3.70	4.00
Earnings per sh <sup>A</sup>	.87	.58	.77	.78	.91	.87	1.12	1.19	1.04	1.08	.81	.84	1.11	1.18	1.12	2.54	1.50	1.60	1.75
Div'd Decl'd per sh <sup>B</sup>	.40	.41	.43	.46	.49	.51	.53	.57	.61	.65	.66	.68	.69	.71	.73	.75	.78	.81	1.05
Cap'l Spending per sh	1.77	1.89	2.63	2.06	3.41	2.31	2.83	3.87	6.62	3.79	3.17	5.65	3.75	5.67	4.68	5.02	5.35	5.25	4.95
Book Value per sh	7.88	7.90	8.17	8.40	9.11	10.11	10.72	12.48	12.90	13.99	13.66	13.75	14.20	14.71	15.92	17.75	18.75	19.75	22.60
Common Shs Outs'tg <sup>C</sup>	18.27	18.27	18.27	18.27	18.27	18.27	18.27	18.28	18.36	18.18	18.50	18.55	18.59	18.67	20.17	20.29	20.50	21.00	23.00
Avg Ann'l P/E Ratio	15.5	33.1	18.5	17.3	15.4	19.6	19.7	23.5	33.4	26.2	28.7	29.1	21.2	20.4	24.3	11.2	11.2	11.2	22.0
Relative P/E Ratio	.88	2.15	.95	.94	.88	1.04	1.05	1.27	1.77	1.58	1.91	1.85	1.33	1.30	1.37	.59	.59	.59	1.40
Avg Ann'l Div'd Yield	3.0%	2.1%	3.0%	3.4%	3.0%	3.0%	2.4%	2.0%	1.7%	2.3%	2.8%	2.8%	2.9%	3.0%	2.7%	2.6%	2.6%	2.6%	2.8%

**CAPITAL STRUCTURE as of 6/30/15**  
 Total Debt \$404.8 mill. Due in 5 Yrs \$21.2 mill.  
 LT Debt \$384.0 mill. LT Interest \$21.0 mill.  
 (51% of Cap'l)

**Leases, Uncapitalized:** Annual rentals \$5.5 mill.

**Pension Assets-12/14** \$91.4 mill. Oblig. \$128.7 mill.

**Pfd Stock None.**

**Common Stock** 20,363,574 shs. as of 7/22/15

**MARKET CAP: \$625 million (Small Cap)**

**CURRENT POSITION**

	2013	2014	6/30/15
Cash Assets	2.3	2.4	5.2
Accts Receivable	14.5	15.0	17.6
Other	22.9	50.7	47.2
Current Assets	39.7	68.1	70.0
Accts Payable	12.6	7.0	13.0
Debt Due	23.0	13.8	20.8
Other	23.6	23.9	25.2
Current Liab.	59.2	44.7	59.0

**ANNUAL RATES of change (per sh)**

	Past 10 Yrs.	Past 5 Yrs.	Est'd '12-'14 to '18-'20
Revenues	5.5%	4.5%	3.0%
"Cash Flow"	7.0%	8.0%	2.5%
Earnings	6.5%	10.5%	1.5%
Dividends	4.0%	3.0%	6.0%
Book Value	6.0%	3.5%	6.0%

**QUARTERLY REVENUES (\$ mill.)**

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	51.1	65.6	82.4	62.4	261.5
2013	50.1	74.2	85.2	67.4	276.9
2014	54.6	70.4	125.4	69.3	319.7
2015	62.1	72.4	89.0	71.5	295
2016	60.0	75.0	90.0	75.0	300

**EARNINGS PER SHARE <sup>A</sup>**

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.06	.28	.53	.31	1.18
2013	.07	.37	.44	.24	1.12
2014	.04	.34	1.88	.28	2.54
2015	.23	.36	.59	.32	1.50
2016	.17	.42	.67	.34	1.60

**QUARTERLY DIVIDENDS PAID <sup>B</sup>**

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2011	.173	.173	.173	.173	.69
2012	.1775	.1775	.1775	.1775	.71
2013	.1825	.1825	.1825	.1825	.73
2014	.1875	.1875	.1875	.1875	.75
2015	.1950	.1950	.1950	.1950	.77

180.1	189.2	206.6	220.3	216.1	215.6	239.0	261.5	276.9	319.7	295	300	Revenues (\$mill)	400
20.7	22.2	19.3	20.2	15.2	15.8	20.9	22.3	23.5	51.8	30.5	33.5	Net Profit (\$mill)	40.0
41.6%	40.8%	39.4%	39.5%	40.4%	38.8%	41.1%	41.1%	38.7%	32.5%	36.5%	36.5%	Income Tax Rate	38.0%
1.6%	2.1%	2.7%	2.3%	2.0%	--	--	--	2.0%	1.0%	1.0%	1.0%	AFUDC % to Net Profit	1.5%
42.6%	41.8%	47.7%	46.0%	49.4%	53.7%	56.6%	55.0%	51.1%	51.6%	52.0%	51.5%	Long-Term Debt Ratio	52.5%
57.4%	58.2%	52.3%	54.0%	50.6%	46.3%	43.4%	45.0%	48.9%	48.4%	48.0%	48.5%	Common Equity Ratio	47.5%
341.2	391.8	453.2	470.9	499.6	550.7	607.9	610.2	656.2	744.5	800	855	Total Capital (\$mill)	1100
484.8	541.7	645.5	684.2	718.5	785.5	756.2	831.6	898.7	963.0	1030	1105	Net Plant (\$mill)	1300
7.6%	7.0%	5.7%	5.8%	4.4%	4.3%	4.9%	5.0%	5.0%	8.3%	5.0%	5.0%	Return on Total Cap'l	5.5%
10.6%	9.7%	8.2%	8.0%	6.0%	6.2%	7.9%	8.1%	7.3%	14.4%	8.0%	8.0%	Return on Shr. Equity	7.5%
10.6%	9.7%	8.2%	8.0%	6.0%	6.2%	7.9%	8.1%	7.3%	14.4%	8.0%	8.0%	Return on Com Equity	7.5%
5.6%	5.2%	3.5%	3.3%	1.2%	1.2%	3.1%	3.3%	2.8%	10.2%	4.0%	3.5%	Retained to Com Eq	3.0%
47%	46%	57%	59%	80%	80%	61%	59%	62%	29%	52%	51%	All Div'ds to Net Prof	60%

**BUSINESS:** SJW Corporation engages in the production, purchase, storage, purification, distribution, and retail sale of water. It provides water service to approximately 229,000 connections that serve a population of roughly one million people in the San Jose area and 12,000 connections that serve about 36,000 residents in a service area in the region between San Antonio and Austin, Texas.

The company offers nonregulated water-related services. Also owns and operates commercial real estate investments. Has about 395 employees. Officers & directors (including Nancy O. Moss) own 27.9% of outstanding shares. Chairman: Charles J. Toeniskoetter. Incorporated: CA. Address: 110 West Taylor Street, San Jose, CA 95110. Telephone: (408) 279-7800. Int: www.sjwater.com.

**The historic drought in California has not had an impact on SJW's main subsidiary.** Thanks to a previous change in the methodology used to determine how water utilities' income is calculated, San Jose Water should be able to do well despite the severe water restrictions instituted by the California State Public Utility Commission. In the past, utilities profitability depended on the amount of water that was sold. Based on the new arrangement, utilities receive a fixed charge for their services.

**The company's earnings are much better than they appear.** Last year's tally was inflated by a one-time gain as several years of accrued expenses were reimbursed in the third period. In the first half of 2015, SJW's share net was running well ahead of 2014's levels. While comparisons will be negative for the remainder of the year, we think that share net will come in at a healthy \$1.50. In 2016, we estimate that the bottom line will increase \$0.10 a share, to \$1.60. This solid increase will be due in part to a thriving service area, which includes Silicon Valley.

**The construction program will remain**

**large, but manageable.** San Jose Water has been spending heavily on replacing old pipes and modernizing other facilities. Internally generated funds will not be sufficient to cover all of the capital outlays, so the company will have to depend to some extent on new debt and equity offerings. As a result, some of SJW's financial metrics may deteriorate to some degree, but should remain in an acceptable range.

**Shares of SJW have not done as well as other regulated water utilities.** Since our July report, volatility in the markets increased and the S&P 500 declined 4.9%. Seeking a safe haven, funds poured into this sector as investors placed a premium on low-Beta equities, with good yields, that had well-defined sources of earnings. Thus, this group (excluding California Water) averaged a positive return of 5.1%, compared to the gain of only 81 basis points, recorded by SJW.

**These shares are untimely.** But due to the recent poor showing relative to its peers, SJW's long-term appreciation potential is better than that of most other water utilities.

*James A. Flood*  
*October 16, 2015*

(A) Diluted earnings. Excludes nonrecurring losses: '03, \$1.97; '04, \$3.78; '05, \$1.09; '06, \$16.36; '08, \$1.22; '10, \$0.46. GAAP accounting as of 2013. Next earnings report due mid-

November. Quarterly earnings may not add due to rounding.  
 (B) Dividends historically paid in early March, June, September, and December. ■ Div'd rein-

vestment plan available.  
 (C) In millions, adjusted for stock splits.

Company's Financial Strength	B+
Stock's Price Stability	85
Price Growth Persistence	20
Earnings Predictability	55

# YORK WATER NDQ-YORW

RECENT PRICE **21.91** P/E RATIO **24.3** (Trailing: 23.6 Median: 25.0) RELATIVE P/E RATIO **1.39** DIV'D YLD **2.9%** VALUE LINE

<b>TIMELINESS</b> 3 Raised 3/27/15	High: 14.0	17.9	21.0	18.5	16.5	18.0	18.0	18.1	18.5	22.0	24.3	26.0	Target Price Range		
<b>SAFETY</b> 3 Lowered 7/17/15	Low: 11.0	11.7	15.3	15.5	6.2	9.7	12.8	15.8	16.8	17.6	18.8	19.7	2018	2019	2020
<b>TECHNICAL</b> 4 Raised 10/16/15	<b>LEGENDS</b> 1.10 x Dividends p sh divided by Interest Rate 2-for-1 split 5/02 3-for-2 split 9/06 Options: No Shaded area indicates recession														
<b>BETA</b> .75 (1.00 = Market)	2018-20 PROJECTIONS Price Gain Ann'l Total High 30 (+35%) 11% Low 20 (-10%) 1%														
<b>Insider Decisions</b> N D J F M A M J J to Buy 0 0 4 0 2 4 1 0 4 Options 0 0 0 0 0 0 0 0 0 to Sell 0 0 0 0 0 0 0 0 0															
<b>Institutional Decisions</b> 4Q2014 1Q2015 2Q2015 to Buy 32 33 34 to Sell 24 29 31 Hld's(000) 3767 3841 3769															

1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	© VALUE LINE PUB. LLC 18-20	
--	--	2.05	2.05	2.17	2.18	2.58	2.56	2.79	2.89	2.95	3.07	3.18	3.21	3.27	3.58	3.75	4.00	Revenues per sh	4.85
--	--	.59	.57	.65	.65	.79	.77	.86	.88	.95	1.07	1.09	1.12	1.19	1.36	1.45	1.50	"Cash Flow" per sh	1.75
--	--	.43	.40	.47	.49	.56	.58	.57	.57	.64	.71	.71	.72	.75	.89	.90	1.00	Earnings per sh A	1.15
--	--	.34	.35	.37	.39	.42	.45	.48	.49	.51	.52	.53	.54	.55	.57	.60	.63	Div'd Decl'd per sh B	.80
--	--	.75	.66	1.07	2.50	1.69	1.85	1.69	2.17	1.18	.83	.74	.94	.76	1.10	.95	1.25	Cap'l Spending per sh	1.10
--	--	3.79	3.90	4.06	4.65	4.85	5.84	5.97	6.14	6.92	7.19	7.45	7.73	7.98	8.15	8.65	8.80	Book Value per sh	9.50
--	--	9.46	9.55	9.63	10.33	10.40	11.20	11.27	11.37	12.56	12.69	12.79	12.92	12.98	12.83	12.75	12.50	Common Shs Outs't'g C	12.00
--	--	17.8	26.9	24.5	25.7	26.3	31.2	30.3	24.6	21.9	20.7	23.9	24.4	26.3	23.1	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	22.5
--	--	.91	1.47	1.40	1.36	1.40	1.68	1.61	1.48	1.46	1.32	1.50	1.55	1.48	1.22			Relative P/E Ratio	1.40
--	--	4.4%	3.3%	3.2%	3.1%	2.9%	2.5%	2.8%	3.5%	3.6%	3.5%	3.1%	3.1%	2.8%	2.8%			Avg Ann'l Div'd Yield	3.2%

CAPITAL STRUCTURE as of 6/30/15																		
Total Debt \$84.8 mill.	Due in 5 Yrs \$30.5 mill.	26.8	28.7	31.4	32.8	37.0	39.0	40.6	41.4	42.4	45.9	48.0	50.0	Revenues (\$mill)	58.0			
LT Debt \$84.8 mill.	LT Interest \$5.1 mill.	5.8	6.1	6.4	6.4	7.5	8.9	9.1	9.3	9.7	11.5	11.5	12.5	Net Profit (\$mill)	14.0			
		36.7%	34.4%	36.5%	36.1%	37.9%	38.5%	35.3%	37.6%	37.6%	29.8%	27.5%	24.5%	Income Tax rate	32.5%			
		--	7.2%	3.6%	10.1%	--	1.2%	1.1%	1.1%	.8%	1.8%	1.0%	1.0%	AFUDC % to Net Profit	1.0%			
Pension Assets 12/14 \$30.6 mill.		44.1%	48.3%	46.5%	54.5%	45.7%	48.3%	47.1%	46.0%	45.1%	44.8%	44.0%	46.0%	Long-Term Debt Ratio	48.0%			
Oblig. \$40.9 mill.		55.9%	51.7%	53.5%	45.5%	54.3%	51.7%	52.9%	54.0%	54.9%	55.2%	56.0%	54.0%	Common Equity Ratio	52.0%			
Pfd Stock None		90.3	126.5	125.7	153.4	160.1	176.4	180.2	184.8	188.4	189.4	200	205	Total Capital (\$mill)	220			
Common Stock 12,866,946 shs.		155.3	174.4	191.6	211.4	222.0	228.4	233.0	240.3	244.2	253.2	260	265	Net Plant (\$mill)	280			
as of 8/4/15		8.4%	6.2%	6.7%	5.7%	6.2%	6.5%	6.4%	6.4%	6.5%	7.4%	7.0%	7.5%	Return on Total Cap'l	8.0%			
MARKET CAP: \$275 million (Small Cap)		11.6%	9.3%	9.5%	9.2%	8.6%	9.8%	9.5%	9.3%	9.3%	11.0%	10.5%	11.5%	Return on Shr. Equity	12.0%			
CURRENT POSITION (\$MILL.)		11.6%	9.3%	9.5%	9.2%	8.6%	9.8%	9.5%	9.3%	9.3%	11.0%	10.5%	11.5%	Return on Com Equity	12.0%			
2013	2014	6/30/15	3.0%	2.2%	1.7%	1.4%	1.9%	2.7%	2.5%	2.4%	2.4%	3.9%	3.5%	4.5%	Retained to Com Eq	3.5%		
2015	2016	74%	77%	82%	85%	78%	72%	73%	74%	74%	64%	67%	63%	All Div'ds to Net Prof	69%			

**BUSINESS:** The York Water Company is the oldest investor-owned regulated water utility in the United States. It has operated continuously since 1816. As of December 31, 2014, the company's average daily availability was 35.2 million gallons and its service territory had an estimated population of 190,000. Has more than 65,100 customers. Residential customers accounted for 63% of 2014 revenues; commercial and industrial (29%); other (8%). It also provides sewer billing services. Incorporated: PA. York had 106 full-time employees at 12/31/14. President/CEO: Jeffrey R. Hines. Officers/directors own 1.1% of the common stock (4/15 proxy). Address: 130 East Market Street York, Pennsylvania 17401. Telephone: (717) 845-3601. Internet: www.yorkwater.com.

ANNUAL RATES of change (per sh)		Past 10 Yrs	Past 5 Yrs	Est'd '12-'14 to '18-'20
Revenues	4.5%	3.0%	6.5%	6.5%
"Cash Flow"	7.0%	6.5%	6.0%	6.5%
Earnings	5.5%	6.0%	6.5%	6.5%
Dividends	4.0%	2.5%	6.5%	6.5%
Book Value	6.5%	4.5%	3.0%	3.0%

Cal-endar	QUARTERLY REVENUES (\$ mill.)				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
2012	9.6	10.4	11.0	10.4	41.4
2013	10.1	10.7	10.9	10.7	42.4
2014	10.6	11.8	12.0	11.5	45.9
2015	11.2	11.9	12.4	12.5	48.0
2016	11.5	12.5	13.0	13.0	50.0

Cal-endar	EARNINGS PER SHARE A				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
2012	.15	.17	.22	.18	.72
2013	.17	.18	.19	.21	.75
2014	.16	.22	.23	.28	.89
2015	.20	.22	.25	.23	.90
2016	.20	.26	.28	.26	1.00

Cal-endar	QUARTERLY DIVIDENDS PAID B				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
2011	.131	.131	.131	.131	.524
2012	.134	.134	.134	.134	.535
2013	.138	.138	.138	.138	.552
2014	.1431	.1431	.1431	.1431	.572
2015	.1495	.1495	.1495		

**York Water's earnings were flat in the second quarter.** This broke a string of four-straight solid earnings comparisons on a year-over-year basis. The positives were higher rates being in effect from last year and a smaller tax bill. These were offset, however, by an increase in costs. For the full year, we reduced our earnings-per-share estimate by \$0.05, to \$0.90, roughly on par with 2014's strong number. **Earnings should pick up in 2016.** York ought to benefit from last year's rate hike and a lower tax bill. Also, we don't think last quarter's spike in expenses was the start of a trend. Actually, the company had been successfully reining in costs, and we think this should continue. All told, the company's share net may jump 11%, or \$0.10, to \$1.00. **The company has a solid balance sheet.** To a certain degree, other water entities would probably like to have York's financial problem. Pennsylvania regulators seem to prefer that water utilities maintain a long-term debt-to-total capitalization percentage between 46% and 50%. Because the company has solid cash generation, this figure was 44% at the end of the second quarter. We think York may buy back 4% of its outstanding shares to raise its the debt ratio. **York is the smallest regulated utility in the water industry.** Most institution accounts don't like owning more than 3% to 5% of any one company's stock for diversification reasons. A market cap of around \$275 million just isn't large enough to take a position. A drawback of this could be a lack of liquidity. Conversely, when the stock is priced attractively, retail investors won't have to worry about the smart money getting involved before them. **Dividend growth prospects have improved.** Over the past five years, the payout has increased 2.5% per annum, subpar for a utility. Earlier this year, the dividend was hiked 4.5%, however. We think this level is sustainable through 2018-2020. **These shares are ranked to perform in line with the broader market averages over the next six- to 12-month period.** Due to the equity outperforming the S&P 500 by almost 700 basis points since mid-July, it has below-average long-term total return potential.

James A. Flood October 16, 2015

Company's Financial Strength	B+
Stock's Price Stability	85
Price Growth Persistence	50
Earnings Predictability	95

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(A) Diluted earnings. Next earnings report due mid-November. (B) Dividends historically paid in mid-January, April, July, and October. (C) In millions, adjusted for splits.

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Wed, Oct 28, 2015, 5:38PM EDT - U.S. Markets closed Report an Issue

Dow 1.13%



AWR



**American States Water Company (AWR)** - NYSE

**41.03** 0.03(0.07%) 4:02PM EDT

**Analyst Estimates**

Get Analyst Estimates for:  GC

<b>Earnings Est</b>	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	0.56	0.31	1.61	1.67
No. of Analysts	3.00	3.00	5.00	5.00
Low Estimate	0.49	0.28	1.47	1.53
High Estimate	0.60	0.32	1.66	1.72
Year Ago EPS	0.54	0.35	1.57	1.61

Next Earnings Date: Nov 3, 2015 - [Set a Reminder](#)

<b>Revenue Est</b>	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	143.65M	113.56M	474.79M	492.85M
No. of Analysts	2	2	5	5
Low Estimate	141.64M	112.44M	457.00M	468.00M
High Estimate	145.66M	114.69M	493.00M	516.60M
Year Ago Sales	138.33M	109.88M	465.79M	474.79M
Sales Growth (year/est)	3.80%	3.40%	1.90%	3.80%

<b>Earnings History</b>	Sep 14	Dec 14	Mar 15	Jun 15
EPS Est	0.49	0.26	0.29	0.41
EPS Actual	0.54	0.35	0.32	0.41
Difference	0.05	0.09	0.03	0.00
Surprise %	10.20%	34.60%	10.30%	0.00%

<b>EPS Trends</b>	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Current Estimate	0.56	0.31	1.61	1.67
7 Days Ago	0.56	0.31	1.61	1.67
30 Days Ago	0.56	0.31	1.61	1.67
60 Days Ago	0.56	0.31	1.61	1.67
90 Days Ago	0.56	0.30	1.60	1.68

<b>EPS Revisions</b>	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Down Last 30 Days	0	0	0	0
Down Last 90 Days	N/A	N/A	N/A	N/A

<b>Growth Est</b>	AWR	Industry	Sector	S&P 500
Current Qtr.	3.70%	-16.00%	-27.10%	3.30%
Next Qtr.	-11.40%	14.40%	90.40%	7.40%
This Year	2.50%	-16.30%	32.60%	-1.40%
Next Year	3.70%	1.20%	22.20%	9.50%
Past 5 Years (per annum)	11.61%	N/A	N/A	N/A
Next 5 Years (per annum)	5.00%	8.27%	6.64%	6.00%
Price/Earnings (avg. for comparison categories)	25.67	20.29	21.35	16.30
PEG Ratio (avg. for comparison categories)	5.13	4.30	6.88	2.94

Currency in USD.



AWK

EXTRADE  
OPEN AN ACCOUNT

American Water Works Company, Inc. (AWK) - NYSE

**57.73** 0.20(0.35%) 4:01PM EDT

After Hours : 57.73 0.00 (0.00%) 4:01PM EDT - Nasdaq Real Time Price

Analyst Estimates

Get Analyst Estimates for:  GC

Earnings Est	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	0.94	0.56	2.61	2.81
No. of Analysts	13.00	12.00	17.00	17.00
Low Estimate	0.91	0.51	2.55	2.70
High Estimate	0.96	0.61	2.65	2.88
Year Ago EPS	0.92	0.52	2.47	2.81

Next Earnings Date: Nov 4, 2015 - Set a Reminder

Revenue Est	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	908.82M	809.37M	3.16B	3.32B
No. of Analysts	11	11	15	15
Low Estimate	883.60M	752.62M	3.12B	3.23B
High Estimate	1.03B	1.07B	3.22B	3.40B
Year Ago Sales	846.17M	731.38M	3.01B	3.16B
Sales Growth (year/est)	7.40%	10.50%	5.10%	5.00%

Earnings History	Sep 14	Dec 14	Mar 15	Jun 15
EPS Est	0.91	0.51	0.41	0.67
EPS Actual	0.92	0.52	0.44	0.68
Difference	0.01	0.01	0.03	0.01
Surprise %	1.10%	2.00%	7.30%	1.50%

EPS Trends	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Current Estimate	0.94	0.56	2.61	2.81
7 Days Ago	0.94	0.56	2.61	2.81
30 Days Ago	0.94	0.56	2.61	2.81
60 Days Ago	0.94	0.56	2.61	2.81
90 Days Ago	0.96	0.55	2.61	2.82

EPS Revisions	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Up Last 7 Days	0	0	0	0
Up Last 30 Days	1	0	1	1
Down Last 30 Days	0	1	0	1
Down Last 90 Days	N/A	N/A	N/A	N/A

Growth Est	AWK	Industry	Sector	S&P 500
Current Qtr.	2.20%	-16.00%	-27.10%	3.30%
Next Qtr.	7.70%	14.40%	90.40%	7.40%
This Year	5.70%	-16.30%	32.60%	-1.40%
Next Year	7.70%	1.20%	22.20%	9.50%
Past 5 Years (per annum)	9.40%	N/A	N/A	N/A
Next 5 Years (per annum)	7.34%	8.27%	6.64%	6.00%
Price/Earnings (avg. for comparison categories)	22.20	20.29	21.35	16.30
PEG Ratio (avg. for comparison categories)	3.02	4.30	6.88	2.94

Currency in USD.



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WTR

Wed, Oct 28 2015, 5:43PM EDT - U.S. Markets closed Report an Issue

Aqua America Inc. (WTR) - NYSE

**28.59** 0.03(0.11%) 4:03PM EDT

After Hours : 28.59 0.00 (0.00%) 4:03PM EDT - Nasdaq Real Time Price

Analyst Estimates

Get Analyst Estimates for:  GC

Earnings Est	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	0.38	0.28	1.27	1.36
No. of Analysts	6.00	6.00	10.00	10.00
Low Estimate	0.37	0.27	1.25	1.33
High Estimate	0.40	0.29	1.30	1.40
Year Ago EPS	0.38	0.28	1.20	1.27

Next Earnings Date: Nov 3, 2015 - Set a Reminder

Revenue Est	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	219.28M	198.29M	811.70M	853.96M
No. of Analysts	5	5	9	9
Low Estimate	214.30M	195.10M	779.90M	834.90M
High Estimate	226.33M	201.10M	824.20M	867.19M
Year Ago Sales	210.54M	191.39M	779.90M	811.70M
Sales Growth (year/est)	4.20%	3.60%	4.10%	5.20%

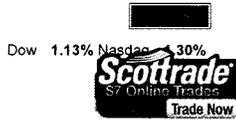
Earnings History	Sep 14	Dec 14	Mar 15	Jun 15
EPS Est	0.37	0.27	0.26	0.32
EPS Actual	0.38	0.28	0.27	0.32
Difference	0.01	0.01	0.01	0.00
Surprise %	2.70%	3.70%	3.80%	0.00%

EPS Trends	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Current Estimate	0.38	0.28	1.27	1.36
7 Days Ago	0.39	0.28	1.27	1.36
30 Days Ago	0.39	0.28	1.27	1.36
60 Days Ago	0.38	0.28	1.27	1.35
90 Days Ago	0.39	0.28	1.27	1.34

EPS Revisions	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Down Last 30 Days	1	0	0	0
Down Last 90 Days	N/A	N/A	N/A	N/A

Growth Est	WTR	Industry	Sector	S&P 500
Current Qtr.	0.00%	-16.00%	-27.10%	3.30%
Next Qtr.	0.00%	14.40%	90.40%	7.40%
This Year	5.80%	-16.30%	32.60%	-1.40%
Next Year	7.10%	1.20%	22.20%	9.50%
Past 5 Years (per annum)	11.93%	N/A	N/A	N/A
Next 5 Years (per annum)	5.55%	8.27%	6.64%	6.00%
Price/Earnings (avg. for comparison categories)	22.46	20.29	21.35	16.30
PEG Ratio (avg. for comparison categories)	4.05	4.30	6.88	2.94

Currency in USD.



Artesian Resources Corp. (ARTNA) - NasdaqGS

**24.58** 0.44(1.82%) 4:00PM EDT

Analyst Estimates

Get Analyst Estimates for:  GC

Earnings Est	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	0.35	0.22	1.25	1.23
No. of Analysts	1.00	1.00	2.00	2.00
Low Estimate	0.35	0.22	1.22	1.11
High Estimate	0.35	0.22	1.28	1.35
Year Ago EPS	0.37	0.24	1.07	1.25

Revenue Est	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	20.90M	18.70M	77.09M	79.19M
No. of Analysts	1	1	2	2
Low Estimate	20.90M	18.70M	77.07M	77.60M
High Estimate	20.90M	18.70M	77.10M	80.77M
Year Ago Sales	19.60M	18.08M	72.46M	77.09M
Sales Growth (year/est)	6.70%	3.40%	6.40%	2.70%

Earnings History	Sep 14	Dec 14	Mar 15	Jun 15
EPS Est	0.33	0.21	0.30	0.29
EPS Actual	0.37	0.24	0.28	0.36
Difference	0.04	0.03	-0.02	0.07
Surprise %	12.10%	14.30%	-6.70%	24.10%

EPS Trends	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Current Estimate	0.35	0.22	1.25	1.23
7 Days Ago	0.34	0.23	1.25	1.23
30 Days Ago	0.34	0.23	1.25	1.27
60 Days Ago	0.34	0.23	1.25	1.27
90 Days Ago	0.34	0.23	1.17	1.23

EPS Revisions	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Up Last 7 Days	1	0	1	0
Up Last 30 Days	1	0	1	0
Down Last 30 Days	0	1	0	1
Down Last 90 Days	N/A	N/A	N/A	N/A

Growth Est	ARTNA	Industry	Sector	S&P 500
Current Qtr.	-5.40%	-16.00%	-27.10%	3.30%
Next Qtr.	-8.30%	14.40%	90.40%	7.40%
This Year	16.80%	-16.30%	32.60%	-1.40%
Next Year	-1.60%	1.20%	22.20%	9.50%
Past 5 Years (per annum)	4.81%	N/A	N/A	N/A
Next 5 Years (per annum)	4.00%	8.27%	6.64%	6.00%
Price/Earnings (avg. for comparison categories)	19.39	20.29	21.35	16.30
PEG Ratio (avg. for comparison categories)	4.85	4.30	6.88	2.94

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Wed, Oct 28, 2015, 5:44PM EDT - U.S. Markets closed Report an Issue

Dow 1.13%



California Water Service Group (CWT) - NYSE

**24.35** 0.41(1.71%) 4:02PM EDT

After Hours : 24.35 0.00 (0.00%) 4:43PM EDT

Analyst Estimates

Get Analyst Estimates for:  GC

Earnings Est	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	0.67	0.24	1.17	1.33
No. of Analysts	4.00	4.00	5.00	5.00
Low Estimate	0.64	0.16	1.05	1.18
High Estimate	0.70	0.36	1.30	1.55
Year Ago EPS	0.70	0.24	1.19	1.17

Next Earnings Date: Oct 28, 2015 - Set a Reminder

Revenue Est	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	183.36M	139.41M	598.15M	627.97M
No. of Analysts	2	2	3	3
Low Estimate	181.63M	130.52M	578.54M	602.61M
High Estimate	185.10M	148.30M	616.00M	641.30M
Year Ago Sales	191.18M	137.38M	597.50M	598.15M
Sales Growth (year/est)	-4.10%	1.50%	0.10%	5.00%

Earnings History	Sep 14	Dec 14	Mar 15	Jun 15
EPS Est	0.68	0.17	0.01	0.34
EPS Actual	0.70	0.24	0.03	0.21
Difference	0.02	0.07	0.02	-0.13
Surprise %	2.90%	41.20%	200.00%	-38.20%

EPS Trends	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Current Estimate	0.67	0.24	1.17	1.33
7 Days Ago	0.67	0.24	1.17	1.33
30 Days Ago	0.67	0.24	1.17	1.33
60 Days Ago	0.67	0.24	1.17	1.34
90 Days Ago	0.66	0.23	1.20	1.33

EPS Revisions	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Down Last 30 Days	0	0	0	0
Down Last 90 Days	N/A	N/A	N/A	N/A

Growth Est	CWT	Industry	Sector	S&P 500
Current Qtr.	-4.30%	-16.00%	-27.10%	3.30%
Next Qtr.	0.00%	14.40%	90.40%	7.40%
This Year	-1.70%	-16.30%	32.60%	-1.40%
Next Year	13.70%	1.20%	22.20%	9.50%
Past 5 Years (per annum)	5.95%	N/A	N/A	N/A
Next 5 Years (per annum)	5.00%	8.27%	6.64%	6.00%
Price/Earnings (avg. for comparison categories)	20.32	20.29	21.35	16.30
PEG Ratio (avg. for comparison categories)	4.06	4.30	6.88	2.94

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Dow 1.13% **5-DAY TREND**  
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Connecticut Water Service Inc. (CTWS) - NasdaqGS

**37.67** 1.04(2.84%) 4:00PM EDT

Analyst Estimates

Get Analyst Estimates for:  GC

	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
<b>Earnings Est</b>				
Avg. Estimate	0.80	0.25	2.09	2.05
No. of Analysts	2.00	2.00	3.00	3.00
Low Estimate	0.74	0.23	2.02	1.97
High Estimate	0.85	0.27	2.20	2.15
Year Ago EPS	0.76	0.22	1.92	2.09
<b>Revenue Est</b>				
Avg. Estimate	28.70M	21.44M	97.77M	103.04M
No. of Analysts	1	1	3	3
Low Estimate	28.70M	21.44M	96.78M	100.99M
High Estimate	28.70M	21.44M	99.13M	105.32M
Year Ago Sales	27.55M	20.75M	94.02M	97.77M
Sales Growth (year/est)	4.20%	3.30%	4.00%	5.40%
<b>Earnings History</b>				
	Sep 14	Dec 14	Mar 15	Jun 15
EPS Est	0.77	0.21	0.33	0.69
EPS Actual	0.76	0.22	0.28	0.77
Difference	-0.01	0.01	-0.05	0.08
Surprise %	-1.30%	4.80%	-15.20%	11.60%
<b>EPS Trends</b>				
	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Current Estimate	0.80	0.25	2.09	2.05
7 Days Ago	0.80	0.25	2.09	2.05
30 Days Ago	0.80	0.25	2.09	2.05
60 Days Ago	0.80	0.25	2.09	2.05
90 Days Ago	0.78	0.25	2.01	2.05
<b>EPS Revisions</b>				
	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Down Last 30 Days	0	0	0	0
Down Last 90 Days	N/A	N/A	N/A	N/A
<b>Growth Est</b>				
	CTWS	Industry	Sector	S&P 500
Current Qtr.	5.30%	-16.00%	-27.10%	3.30%
Next Qtr.	13.60%	14.40%	90.40%	7.40%
This Year	8.90%	-16.30%	32.60%	-1.40%
Next Year	-1.90%	1.20%	22.20%	9.50%
Past 5 Years (per annum)	8.61%	N/A	N/A	N/A
Next 5 Years (per annum)	5.00%	8.27%	6.64%	6.00%
Price/Earnings (avg. for comparison categories)	17.98	20.29	21.35	16.30
PEG Ratio (avg. for comparison categories)	3.60	4.30	6.88	2.94

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Wed, Oct 28, 2015, 5:46PM EDT - U.S. Markets closed Report an Issue

Dow 1.13%



Middlesex Water Co. (MSEX) - NasdaqGS

**26.02** 0.97 (3.87%) 4:00PM EDT

Analyst Estimates

Get Analyst Estimates for:  GC

Earnings Est	Current Qtr. Dec 14	Next Qtr. Mar 15	Current Year Dec 14	Next Year Dec 15
Avg. Estimate	N/A	N/A	N/A	1.20
No. of Analysts	N/A	N/A	N/A	1.00
Low Estimate	N/A	N/A	N/A	1.20
High Estimate	N/A	N/A	N/A	1.20
Year Ago EPS	0.19	0.20	N/A	N/A
Revenue Est	Current Qtr. Dec 14	Next Qtr. Mar 15	Current Year Dec 14	Next Year Dec 15
Avg. Estimate	NaN	NaN	NaN	122.20M
No. of Analysts	1	1	1	1
Low Estimate	29.62M	29.62M	117.87M	122.20M
High Estimate	29.62M	29.62M	117.87M	122.20M
Year Ago Sales	27.42M	27.17M	114.85M	NaN
Sales Growth (year/est)	N/A	N/A	N/A	N/A
Earnings History	Dec 13	Mar 14	Jun 14	Sep 14
EPS Est	0.15	0.16	0.29	0.39
EPS Actual	0.19	0.20	0.29	0.42
Difference	0.04	0.04	0.00	0.03
Surprise %	26.70%	25.00%	0.00%	7.70%
EPS Trends	Current Qtr. Dec 14	Next Qtr. Mar 15	Current Year Dec 14	Next Year Dec 15
Current Estimate	N/A	N/A	N/A	1.20
7 Days Ago	0.28	0.26	1.09	1.20
30 Days Ago	0.28	0.26	1.09	1.20
60 Days Ago	0.28	0.26	1.09	1.20
90 Days Ago	0.28	0.26	1.09	1.20
EPS Revisions	Current Qtr. Dec 14	Next Qtr. Mar 15	Current Year Dec 14	Next Year Dec 15
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Down Last 30 Days	0	0	0	0
Down Last 90 Days	N/A	N/A	N/A	N/A
Growth Est	MSEX	Industry	Sector	S&P 500
Current Qtr.	N/A	-16.00%	-27.10%	3.30%
Next Qtr.	N/A	14.40%	90.40%	7.40%
This Year	N/A	-16.30%	32.60%	-1.40%
Next Year	N/A	1.20%	22.20%	9.50%
Past 5 Years (per annum)	5.73%	N/A	N/A	N/A
Next 5 Years (per annum)	2.70%	8.27%	6.64%	6.00%
Price/Earnings (avg. for comparison categories)	N/A	20.29	21.35	16.30
PEG Ratio (avg. for comparison categories)	N/A	4.30	6.88	2.94

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**SJW Corp. (SJW)** - NYSE  
**33.68** 0.69(2.09%) 4:02PM EDT

**Analyst Estimates**

Get Analyst Estimates for:  GC

Earnings Est	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	0.57	0.29	1.58	1.64
No. of Analysts	1.00	1.00	2.00	2.00
Low Estimate	0.57	0.29	1.45	1.48
High Estimate	0.57	0.29	1.70	1.80
Year Ago EPS	1.88	0.28	2.54	1.58

Next Earnings Date: Oct 28, 2015 - Set a Reminder

Revenue Est	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	92.37M	73.70M	308.29M	324.90M
No. of Analysts	1	1	2	2
Low Estimate	92.37M	73.70M	300.58M	313.00M
High Estimate	92.37M	73.70M	316.00M	336.80M
Year Ago Sales	125.43M	69.29M	319.67M	308.29M
Sales Growth (year/est)	-26.40%	6.40%	-3.60%	5.40%

Earnings History	Sep 14	Dec 14	Mar 15	Jun 15
EPS Est	0.52	0.26	0.06	0.42
EPS Actual	1.88	0.28	0.23	0.36
Difference	1.36	0.02	0.17	-0.06
Surprise %	261.50%	7.70%	283.30%	-14.30%

EPS Trends	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Current Estimate	0.57	0.29	1.58	1.64
7 Days Ago	0.57	0.29	1.58	1.64
30 Days Ago	0.57	0.29	1.58	1.64
60 Days Ago	0.57	0.29	1.58	1.64
90 Days Ago	0.57	0.29	1.61	1.64

EPS Revisions	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Down Last 30 Days	0	0	0	0
Down Last 90 Days	N/A	N/A	N/A	N/A

Growth Est	SJW	Industry	Sector	S&P 500
Current Qtr.	-69.70%	-16.00%	-27.10%	3.30%
Next Qtr.	3.60%	14.40%	90.40%	7.40%
This Year	-37.80%	-16.30%	32.60%	-1.40%
Next Year	3.80%	1.20%	22.20%	9.50%
Past 5 Years (per annum)	5.92%	N/A	N/A	N/A
Next 5 Years (per annum)	14.00%	8.27%	6.64%	6.00%
Price/Earnings (avg. for comparison categories)	21.06	20.29	21.35	16.30
PEG Ratio (avg. for comparison categories)	1.50	4.30	6.88	2.94

Currency in USD.

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Wed Oct 28, 2015, 5:48PM EDT - U.S. Markets closed Report an Issue



The York Water Company (YORW) - NasdaqGS

**23.73** 1.01(4.45%) 4:00PM EDT

Analyst Estimates

Get Analyst Estimates for:  GC

	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
<b>Earnings Est</b>				
Avg. Estimate	0.26	0.20	0.92	0.99
No. of Analysts	1.00	1.00	2.00	2.00
Low Estimate	0.26	0.20	0.88	0.97
High Estimate	0.26	0.20	0.95	1.00
Year Ago EPS	0.23	0.28	0.89	0.92
<b>Revenue Est</b>				
Avg. Estimate	12.50M	11.60M	47.24M	48.96M
No. of Analysts	1	1	2	2
Low Estimate	12.50M	11.60M	47.20M	48.80M
High Estimate	12.50M	11.60M	47.29M	49.12M
Year Ago Sales	12.06M	11.50M	45.90M	47.24M
Sales Growth (year/est)	3.60%	0.90%	2.90%	3.60%
<b>Earnings History</b>				
	Sep 14	Dec 14	Mar 15	Jun 15
EPS Est	0.25	0.23	0.23	0.25
EPS Actual	0.23	0.28	0.20	0.22
Difference	-0.02	0.05	-0.03	-0.03
Surprise %	-8.00%	21.70%	-13.00%	-12.00%
<b>EPS Trends</b>				
	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Current Estimate	0.26	0.20	0.92	0.99
7 Days Ago	0.26	0.20	0.92	0.99
30 Days Ago	0.26	0.20	0.92	0.99
60 Days Ago	0.26	0.20	0.92	0.99
90 Days Ago	0.26	0.20	0.93	1.00
<b>EPS Revisions</b>				
	Current Qtr. Sep 15	Next Qtr. Dec 15	Current Year Dec 15	Next Year Dec 16
Up Last 7 Days	0	0	0	0
Up Last 30 Days	0	0	0	0
Down Last 30 Days	0	0	0	0
Down Last 90 Days	N/A	N/A	N/A	N/A
<b>Growth Est</b>				
	YORW	Industry	Sector	S&P 500
Current Qtr.	13.00%	-16.00%	-27.10%	3.30%
Next Qtr.	-28.60%	14.40%	90.40%	7.40%
This Year	3.40%	-16.30%	32.60%	-1.40%
Next Year	7.60%	1.20%	22.20%	9.50%
Past 5 Years (per annum)	4.98%	N/A	N/A	N/A
Next 5 Years (per annum)	4.90%	8.27%	6.64%	6.00%
Price/Earnings (avg. for comparison categories)	25.49	20.29	21.35	16.30
PEG Ratio (avg. for comparison categories)	5.20	4.30	6.88	2.94

**Temptations**

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## **ATTACHMENT 4**

**LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.  
DOCKET NOS. SW-02361A-15-0206 & SW-02361A-15-0207 (CONSOLIDATED)  
RESPONSES TO RUCO'S FOURTH SET OF DATA REQUESTS**

September 11, 2015

Respondent: Thomas J. Bourassa, CPA

Title: Rate Consultant

Address: 139 W. Wood Drive  
Phoenix, AZ 85029

Company Response Number: 4.4

---

Q. As noted in footnote 1 of Schedules D-4.4 and D-4.5, Mr. Bourassa states that for each of his sample companies the 5- and 10-year historical stock price growth rates shown in column [1] represent the average of “**changes in annual stock prices**” measured as of December 31 for each 5- and 10-year period through 2014. Mr. Bourassa further notes that the data used in his stock price growth calculations was obtained from the Yahoo Finance website. In reviewing the work papers supporting Schedules D-4.4 and D-4.5, RUCO determined that for each of his sample companies Mr. Bourassa’s 5- and 10-year stock price growth rates were computed based on **adjusted closing price** as reported by Yahoo Finance, and not **actual closing price**. Please acknowledge that adjusted closing prices provided by Yahoo Finance represent a stock’s closing price adjusted for both “**dividends and splits,**” thus rendering Mr. Bourassa’s computations to be measures of 5- and 10-year total return, not 5- and 10-year measures of stock price growth.

RESPONSE: Mr. Bourassa acknowledges that the adjusted stock prices reported by Yahoo Finance are adjusted for dividends and splits, but he denies his computations are measures of total return. The adjusted closing price is a way to compare the price of a stock before and after a stock split and/or dividend payment. In other words, it is a useful measure of the “real” closing price without being influenced by dividends or splits. As a result, Mr. Bourassa’s use of adjusted closing prices and comparing them are not measures of total return, rather they are measures of the real increases in the stock price. Mr. Bourassa suggests that RUCO visit the Yahoo Finance website and review the Help topic “About Historical Prices.”

**LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.  
DOCKET NOS. SW-02361A-15-0206 & SW-02361A-15-0207 (CONSOLIDATED)  
RESPONSES TO RUCO'S THIRD SET OF DATA REQUESTS**

September 11, 2015

Respondent: Thomas J. Bourassa, CPA

Title: Rate Consultant

Address: 139 W. Wood Drive  
Phoenix, AZ 85029

Company Response Number: 4.6

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Q. As noted in Direct (p. 33, lines 12-14), the equity risk premium employed by Mr. Bourassa in his Risk Premium Model (RPM) represents the bond-equity spread difference between the average total realized market return of his proxy group of water companies and the average annual long-term treasury yields over the 16-year historical period, 1999-2014. Mr. Bourassa presents his RPM findings in Schedule D-4.9, and as shown in footnote 1 of that schedule, states that the annual total return figures for his sample companies were computed using data from Value Line Analyzer software. RUCO has reviewed Mr. Bourassa's cost of capital work papers relating to Schedule D-4.9, but is unable to reconcile his total return figure calculations for the following reasons:

(i) With the exception of the total return figure reported for 2014 (i.e., 14.98%), all other total return figures presented in Schedule D-4.9 (i.e., for the 15-year period, 1999-2013) have been hardcoded into the spreadsheet;

(ii) The total return figure presented in Schedule D-4.9 for the year 2014 is linked to a separate tab in the work papers (tab: VL\_water; cell FH27); however, a review of the total return values shown in cell range FH5:FQ27 of the "VL\_water" tab indicate that total return values are provided only for the 10-year period, 2005-2014, and that these values, likewise, have been hardcoded into the spreadsheet;

(iii) The "VL\_water" tab contains no support for Mr. Bourassa's annual total return figures reported for the 6-year period, 1999-2004 (not even hardcoded total return values are provided).

In light of the above, please provide the following:

**LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.  
DOCKET NOS. SW-02361A-15-0206 & SW-02361A-15-0207 (CONSOLIDATED)  
RESPONSES TO RUCO'S THIRD SET OF DATA REQUESTS**

September 11, 2015

Respondent: Thomas J. Bourassa, CPA

Title: Rate Consultant

Address: 139 W. Wood Drive  
Phoenix, AZ 85029

- (a) An explanation why Mr. Bourassa's work papers supporting Schedule D-4.9 contain no support for the annual total return figures for his proxy group for the 6-year period, 1999-2004,
- (b) A spreadsheet containing all data inputs necessary to compute annual total return values for each of his seven sample companies over the 16-year period, 1999-2014, and
- (c) A schedule, in Excel format with formulas intact, showing the computational methodology (i.e., arithmetic mean or geometric mean) employed by Mr. Bourassa when arriving at the annual total return values reported in Schedule D-4.9 for the period, 1999-2014.

RESPONSE:

- (a) Mr. Bourassa notes on Schedule D-4.9 that the source for the data he used was from *Value Line*, which is publicly available information.
- (b) The *Value Line* data for the years 2005-2014 is contained in the Tab "VL Water" in the Excel work book "Cost of Capital BMSC.xls" which was previously provided as part of Mr. Bourassa's work papers in response to RUCO Data Request 1.03. An additional Excel workbook containing the *Value Line* data for the years 1999-2005 is attached. See file "VL Water 12-2008.xls."
- (c) Mr. Bourassa does not compute total returns for each utility. He uses the total returns as reported by *Value Line* for each utility and then computes a composite average for the proxy group. *Value Line* defines "Total

**LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.  
DOCKET NOS. SW-02361A-15-0206 & SW-02361A-15-0207 (CONSOLIDATED)  
RESPONSES TO RUCO'S THIRD SET OF DATA REQUESTS**

September 11, 2015

Respondent: Thomas J. Bourassa, CPA

Title: Rate Consultant

Address: 139 W. Wood Drive  
Phoenix, AZ 85029

Return" (a stock's total return) as the percentage increase in the value of a shareholder's investment, assuming reinvestment of all dividends and adjusted for any stock splits. Total returns are shown for a range of time periods in the *Value Line* Investment Analyzer. Returns for periods longer than a year are annualized. An annualized return shows the yearly gain required to achieve a cumulative return. See also the Company's responses to (a) and (b) above.

**LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.  
DOCKET NOS. SW-02361A-15-0206 & SW-02361A-15-0207 (CONSOLIDATED)  
RESPONSES TO RUCO'S FIFTH SET OF DATA REQUESTS**

October 16, 2015

Respondent: Thomas J. Bourassa, CPA

Title: Rate Consultant

Address: 139 W. Wood Drive  
Phoenix, AZ 85029

Company Response Number: 5.1

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Q. Note 1 of Bourassa Schedules D-4.4 and D-4.5 states that the figures appearing in column [1] of those schedules represent “[a]verage of changes in annual stock prices ending on December 31, 2014. Data from Yahoo Finance website.” However, a review of the work papers (See “Price Growth” tab) supporting the figures shown in column [1] reveal that both the 5- and 10-year average annual changes in stock price for each of Mr. Bourassa’s sample companies are computed based on data ending December 31, 2013, and not through December 31, 2014, as indicated. In light of this fact, please (i) prepare amended restatements of Bourassa Schedules D-4.4 and D-4.5 to reflect 5- and 10-year average changes in stock price through December 31, 2014, in conformity with the information provided in Note 1, and (ii) provide RUCO with a copy of Mr. Bourassa’s work papers supporting these amended average changes in annual stock price ending December 31, 2014, in Excel format with formulas intact.

RESPONSE: Mr. Bourassa will correct the footnote contained in the original filing. With respect to both the 5 and 10-year average annual changes in stock prices, below are the 5 and 10-year average annual changes in stock prices ending on December 31, through 2014 with a comparison to the data set-forth on Schedule D-4.4 and D-4.5:

	5-year Annual Change in Stock Price <u>As Originally Filed</u>	5-year Annual Change in Stock Price <u>through 2014</u>	10-year Annual Change in Stock Price <u>As Originally Filed</u>	10-year Annual Change in Stock Price <u>through 2014</u>
American States Water	16.07%	20.90%	12.91%	15.60%
Aqua America	11.70%	17.36%	10.31%	10.53%
California Water	4.27%	9.86%	10.19%	6.87%
Connecticut Water	12.77%	11.97%	6.58%	7.23%

**LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.  
DOCKET NOS. SW-02361A-15-0206 & SW-02361A-15-0207 (CONSOLIDATED)  
RESPONSES TO RUCO'S FIFTH SET OF DATA REQUESTS**

October 16, 2015

Respondent: Thomas J. Bourassa, CPA

Title: Rate Consultant

Address: 139 W. Wood Drive  
Phoenix, AZ 85029

Middlesex	8.36%	9.78%	4.38%	6.14%
SJW Corp.	4.38%	10.88%	12.91%	11.36%
York Water Company	8.44%	13.52%	8.21%	10.55%
Average	9.43%	13.47%	9.35%	9.75%

Note that the updated annual averages through the end of 2014 are higher. Had Mr. Bourassa used the updated annual averages, the indicated cost of cost of capital based on the DCF would have been higher. Accordingly, the indicated cost of capital for the proxy group would have been higher and Mr. Bourassa's recommendation for the Company would also have been higher. Attached is an Excel worksheet used to compute the updated annual averages.

**LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.  
DOCKET NOS. SW-02361A-15-0206 & SW-02361A-15-0207 (CONSOLIDATED)  
RESPONSES TO RUCO'S FIFTH SET OF DATA REQUESTS**

October 16, 2015

Respondent: Thomas J. Bourassa, CPA

Title: Rate Consultant

Address: 139 W. Wood Drive  
Phoenix, AZ 85029

Company Response Number: 5.5

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Q. In response to RUCO Data Request 4.4, Mr. Bourassa acknowledges that adjusted closing prices reported by Yahoo Finance are adjusted for both dividends and splits, but **denies** that his computations of 5- and 10-year "changes in annual stock prices" as presented in column [1] of Schedules D-4.4 and D-4.5 represent measures of total return.

Schedule D-4.9 presents the cost of equity estimates obtained from Mr. Bourassa's Risk Premium Analysis based on Total Returns. In Note 1 of that schedule, Mr. Bourassa indicates that the Annual Total Return figures for his sample companies covering the period, 1999-2014, represent the "[c]omposite of average total returns for water utilities," and that the source of this data was Value Line Analyzer software.

To determine whether computations of share price growth obtained from Yahoo Finance adjusted closing prices represent measures of total return, RUCO has prepared a schedule (see attached) which compares the Annual Total Return figures presented by Mr. Bourassa in Schedule D-4.9 for the period, 2004-2014, to computations of annual returns obtained using adjusted closing prices as of the calendar year end (December 31, or last trading day) reported on the Yahoo Finance website for his sample companies over this same 2004-2014 period. As can be seen, for each year the annual return figures obtained utilizing Yahoo Finance adjusted closing prices are essentially identical to the annual total return figures obtained from Value Line Analyzer software, with the average annual difference between the two being .02% (i.e., two one-hundredths of one percent) over the 2004-2014 period.

**LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.  
DOCKET NOS. SW-02361A-15-0206 & SW-02361A-15-0207 (CONSOLIDATED)  
RESPONSES TO RUCO'S FIFTH SET OF DATA REQUESTS**

October 16, 2015

Respondent: Thomas J. Bourassa, CPA

Title: Rate Consultant

Address: 139 W. Wood Drive  
Phoenix, AZ 85029

In view of Mr. Bourassa's denial that his computations of 5- and 10-year "changes in annual stock prices" as presented in column [1] of Schedules D-4.4 and D-4.5 are measures of total return, please respond to the following:

- a. Provide a plausible explanation as to how the total return figures presented by Mr. Bourassa in Schedule D-4.9 for the years 2004-2014 based upon data obtained from Value Line Analyzer software are essentially identical to annual returns computed using Yahoo Finance adjusted closing prices, and
- b. To the extent Mr. Bourassa now has reason to believe that annual returns computed from Yahoo Finance adjusted closing prices represent measures of total return, acknowledge that the stock price growth rates reported in column [1] of Schedules D-4.4 and D-4.5 have been overstated.

RESPONSE:

- a. Value Line measure of total return is the capital gain or loss for the stock price *plus* the dividends reinvested at month end for the past 12 months, expressed as a percentage whereas the adjusted closing prices of stocks provided by Yahoo remove the impact of dividends from the stock price. In other words, the impact of dividends on the closing price of the stock is removed so as to provide a useful measure of the "real" closing price without being influenced by dividends or splits. In this way stock price growth and total returns are dissimilar. That said, Mr. Bourassa would expect the growth in the stock price and the total returns to be similar in magnitude because the two measures

**LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.  
DOCKET NOS. SW-02361A-15-0206 & SW-02361A-15-0207 (CONSOLIDATED)  
RESPONSES TO RUCO'S FIFTH SET OF DATA REQUESTS**

October 16, 2015

Respondent: Thomas J. Bourassa, CPA

Title: Rate Consultant

Address: 139 W. Wood Drive  
Phoenix, AZ 85029

share the dominant factor, the increase in the share price (capital appreciation). Mr. Bourassa suggests that RUCO visit the web page <https://help.yahoo.com/kb/finance/historical-prices-sln2311.html> for an explanation of adjusted closing price.

- b. Deny. The average stock price growth rates are not overstated. See the response to part a, above.

# EXHIBITS

**5-Year Comparison  
 Cumulative Total Returns on Investment  
 December 31, 2009 -- December 31, 2014**

Company	As per 2014 Annual Report to Shareholders			As per Yahoo Finance Adjusted Closing Price		
	Value of Investment as of 12/31/2009	Value of Investment as of 12/31/2014	5-Year Cumulative Total Return With Dividend Reinvestment	5-Year Compound Average Total Return	Adjusted Closing Price as of 12/31/2014	Adjusted Closing Price as of 12/31/2009
1 American States Water	\$ 100.00	\$ 246.40	19.76%	19.79%	\$ 37.03	\$ 15.01
2 Aqua America	100.00	218.50	16.92%	16.93%	26.19	11.98
3 California Water		N/A	N/A	9.41%	24.08	15.36
4 Connecticut Water	100.00	173.70	11.68%	11.68%	35.50	20.43
5 Middlesex Water	100.00	158.90	9.70%	9.74%	22.47	14.12
6 SJW Corporation	100.00	164.00	10.40%	10.40%	31.51	19.22
7 York Water	100.00	186.00	13.21%	13.20%	22.75	12.24

N/A: 5-Year information not available in Annual Report

Sources for 2014 Annual Reports:

AWR	American States Water , 2014 Annual Report, p. 19.	<a href="http://www.aswater.com/">http://www.aswater.com/</a>
WTR	Aqua America , 2014 Annual Report, p. 70.	<a href="https://www.aquaamerica.com/">https://www.aquaamerica.com/</a>
CWT		<a href="https://www.calwater.com/">https://www.calwater.com/</a>
CTWS	Connecticut Water , 2014 Annual Report, p. 13.	<a href="https://www.ctwater.com/">https://www.ctwater.com/</a>
MSEX	Middlesex Water Company, 2014 Annual Report, p.19.	<a href="http://www.middlesexwater.com/">http://www.middlesexwater.com/</a>
SJW	SJW Corp. , 2014 Annual Report, p. 17.	<a href="https://www.sjwcorp.com/">https://www.sjwcorp.com/</a>
YORW	York Water Company , 2014 Annual Report, p. 6.	<a href="https://www.yorkwater.com/index.asp">https://www.yorkwater.com/index.asp</a>

**Bourassa Schedule D-4.4 – As Filed**

		[1]	[2]	[3]	[4]	[5]	[6]	[7]
		<u>Five-year historical average annual changes</u>					Value Line	Average of
		<u>Price<sup>1</sup></u>	<u>Book Value<sup>2</sup></u>	<u>EPS<sup>2</sup></u>	<u>DPS<sup>2</sup></u>	Average Col 1-4	Projected EPS Growth	Historical & Projected Growth
American States Water	AWR	16.07%	6.50%	13.00%	6.50%	10.52%	6.50%	8.51%
Aqua America	WTR	11.70%	6.00%	11.00%	7.00%	8.92%	8.00%	8.46%
California Water	CWT	4.27%	4.50%	4.00%	1.50%	3.57%	7.00%	5.28%
Conn. Water Services	CTWS	12.77%	8.00%	8.00%	2.00%	7.69%	6.50%	7.10%
Middlesex Water	MSEX	8.36%	3.00%	1.50%	1.50%	3.59%	5.50%	4.55%
SJW Corp.	SJW	4.38%	2.50%	NMF	3.50%	3.46%	6.50%	4.98%
York Water Co.	YORW	8.44%	5.00%	5.00%	2.50%	5.23%	7.00%	6.11%
Group Average		9.43%	5.07%	7.08%	3.50%	6.14%	6.71%	6.43%

**RUCO Restatement of Bourassa Schedule D-4.4**  
 Exclusive of Change in Stock Price as a Proxy for Dividend Growth, and with  
 All other Growth Metrics Updated as per Value Line

		[1]	[2]	[3]	[4]	[5]	[6]	[7]
		<u>Five-year historical average annual changes</u>					Value Line	Average of
		<u>Price<sup>1</sup></u>	<u>Book Value<sup>2</sup></u>	<u>EPS<sup>2</sup></u>	<u>DPS<sup>2</sup></u>	Average Col 2-4	Projected EPS Growth	Historical & Projected Growth
American States Water	AWR		6.50%	14.00%	8.50%	9.67%	6.00%	7.83%
Aqua America	WTR		6.50%	13.00%	7.00%	8.83%	7.50%	8.17%
California Water	CWT		5.00%	4.00%	2.00%	3.67%	6.50%	5.08%
Conn. Water Services	CTWS		9.50%	9.00%	2.00%	6.83%	4.50%	5.67%
Middlesex Water	MSEX		3.00%	4.50%	1.50%	3.00%	5.00%	4.00%
SJW Corp.	SJW		3.50%	10.50%	3.00%	5.67%	1.50%	3.58%
York Water Co.	YORW		4.50%	6.00%	2.50%	4.33%	6.50%	5.42%
Group Average			5.50%	8.71%	3.79%	6.00%	5.36%	5.68%
Overstatement to Estimated Growth Rates from Bourassa Schedule 4-4, as filed:						0.14%	1.36%	0.75%

Source: Value Line Investment Survey (October 16, 2015)

**Bourassa Schedule D-4.5 -- As Filed**

		[1]	[2]	[3]	[4]	[5]	[6]	[7]
		<u>Ten-year historical average annual changes</u>					Value Line	Average of
		<u>Price</u> <sup>1</sup>	<u>Book Value</u> <sup>2</sup>	<u>EPS</u> <sup>2</sup>	<u>DPS</u> <sup>2</sup>	<u>Average Col 1-4</u>	<u>Projected EPS Growth</u>	<u>Historical &amp; Projected Growth</u>
American States Water	AWR	12.91%	5.50%	9.00%	4.00%	7.85%	6.50%	7.18%
Aqua America	WTR	10.31%	8.00%	8.50%	7.50%	8.58%	8.00%	8.29%
California Water	CWT	10.19%	5.50%	5.50%	1.00%	5.55%	7.00%	6.27%
Conn. Water Services	CTWS	6.58%	6.00%	2.50%	1.50%	4.14%	6.50%	5.32%
Middlesex Water	MSEX	4.38%	4.50%	3.50%	1.50%	3.47%	5.50%	4.48%
SJW Corp.	SJW	12.91%	5.50%	3.50%	4.50%	6.60%	6.50%	6.55%
York Water Co.	YORW	<u>8.21%</u>	<u>7.00%</u>	<u>5.50%</u>	<u>4.50%</u>	<u>6.30%</u>	<u>7.00%</u>	<u>6.65%</u>
Group Average		9.35%	6.00%	5.43%	3.50%	6.07%	6.71%	6.39%

**RUCO Restatement of Bourassa Schedule D-4.5  
 Exclusive of Change in Stock Price as a Proxy for Dividend Growth, and with  
 All other Growth Metrics Updated as per Value Line**

		[1]	[2]	[3]	[4]	[5]	[6]	[7]
		<u>Ten-year historical average annual changes</u>					Value Line	Average of
		<u>Price</u> <sup>1</sup>	<u>Book Value</u> <sup>2</sup>	<u>EPS</u> <sup>2</sup>	<u>DPS</u> <sup>2</sup>	<u>Average Col 2-4</u>	<u>Projected EPS Growth</u>	<u>Historical &amp; Projected Growth</u>
American States Water	AWR		6.00%	11.00%	5.50%	7.50%	6.00%	6.75%
Aqua America	WTR		7.50%	8.50%	7.50%	7.83%	7.50%	7.67%
California Water	CWT		5.50%	5.00%	1.50%	4.00%	6.50%	5.25%
Conn. Water Services	CTWS		6.50%	4.00%	2.00%	4.17%	4.50%	4.33%
Middlesex Water	MSEX		4.50%	4.00%	1.50%	3.33%	5.00%	4.17%
SJW Corp.	SJW		6.00%	6.50%	4.00%	5.50%	1.50%	3.50%
York Water Co.	YORW		<u>6.50%</u>	<u>5.50%</u>	<u>4.00%</u>	<u>5.33%</u>	<u>6.50%</u>	<u>5.92%</u>
Group Average			6.07%	6.36%	3.71%	5.38%	5.36%	5.37%
Overstatement to Estimated Growth Rates from Bourassa Schedule 4-5, as filed:						0.69%	1.36%	1.02%

Source: Value Line Investment Survey (October 16, 2015)

**Bourassa Schedule D-4.7 (Page 1) -- As Filed**  
**Discounted Cash Flow Analysis**  
**DCF Constant Growth**

Line	Company	Current Dividend Yield ( $P_0 / D_0$ )	Expected Dividend Yield ( $P_1 / D_0$ )		Value Line Projected EPS Growth (g)	=	Indicated Cost of Equity (K)
1	American States Water	2.28%	2.42%	+	6.50%	=	8.92%
2	Aqua America	2.64%	2.85%	+	8.00%	=	10.85%
3	California Water	2.79%	2.99%	+	7.00%	=	9.99%
4	Connecticut Water	3.04%	3.24%	+	6.50%	=	9.74%
5	Middlesex Water	3.58%	3.78%	+	5.50%	=	9.28%
6	SJW Corp.	2.62%	2.79%	+	6.50%	=	9.29%
7	York Water	2.68%	2.87%	+	7.00%	=	9.87%
8							
9	GROUP AVERAGE	2.80%	2.99%		6.71%		9.71%

**RUCO Restatement of Bourassa Schedule D-4.7 (Page 1)**  
**Discounted Cash Flow Analysis**  
**DCF Constant Growth**  
**With Updated EPS Growth Metrics from Value Line**

Line	Company	Current Dividend Yield ( $P_0 / D_0$ )	Expected Dividend Yield ( $P_1 / D_0$ )		Value Line Projected EPS Growth (g)	=	Indicated Cost of Equity (K)
1	American States Water	2.28%	2.41%	+	6.00%	=	8.41%
2	Aqua America	2.64%	2.83%	+	7.50%	=	10.33%
3	California Water	2.79%	2.97%	+	6.50%	=	9.47%
4	Connecticut Water	3.04%	3.18%	+	4.50%	=	7.68%
5	Middlesex Water	3.58%	3.76%	+	5.00%	=	8.76%
6	SJW Corp.	2.62%	2.66%	+	1.50%	=	4.16%
7	York Water	2.68%	2.85%	+	6.50%	=	9.35%
8							
9	GROUP AVERAGE	2.80%	2.95%		5.36%		8.31%
9							
9					<b>Reduction to DCF Indicated Cost of Equity</b>		<b>1.39%</b>

Source: Value Line Investment Survey (October 16, 2015)

**Bourassa Schedule D-4.7 (Page 2) -- As Filed**  
**Discounted Cash Flow Analysis**  
**DCF Constant Growth**

Line	Company	Current Dividend Yield (P <sub>0</sub> / D <sub>0</sub> )	Expected Dividend Yield (P <sub>1</sub> / D <sub>0</sub> )		Average of Historical & Projected Growth (g)		Indicated Cost of Equity (K)
1	American States Water	2.28%	2.47%	+	8.51%	=	10.98%
2	Aqua America	2.64%	2.86%	+	8.46%	=	11.32%
3	California Water	2.79%	2.94%	+	5.28%	=	8.22%
4	Connecticut Water	3.04%	3.26%	+	7.10%	=	10.36%
5	Middlesex Water	3.58%	3.74%	+	4.55%	=	8.29%
6	SJW Corp.	2.62%	2.75%	+	4.98%	=	7.73%
7	York Water	2.68%	2.84%	+	6.12%	=	8.96%
8							
9	GROUP AVERAGE	2.80%	2.98%		6.43%		9.41%

**RUCO Restatement of Bourassa Schedule D-4.7 (Page 2)**  
**Discounted Cash Flow Analysis**  
**DCF Constant Growth**  
**With Updated EPS Growth Metrics from Value Line**

Line	Company	Current Dividend Yield (P <sub>0</sub> / D <sub>0</sub> )	Expected Dividend Yield (P <sub>1</sub> / D <sub>0</sub> )		Average of Historical & Projected Growth (g)		Indicated Cost of Equity (K)
1	American States Water	2.28%	2.45%	+	7.83%	=	10.29%
2	Aqua America	2.64%	2.85%	+	8.17%	=	11.02%
3	California Water	2.79%	2.93%	+	5.08%	=	8.02%
4	Connecticut Water	3.04%	3.22%	+	5.67%	=	8.88%
5	Middlesex Water	3.58%	3.72%	+	4.00%	=	7.72%
6	SJW Corp.	2.62%	2.72%	+	3.58%	=	6.30%
7	York Water	2.68%	2.83%	+	5.42%	=	8.24%
8							
9	GROUP AVERAGE	2.80%	2.96%		5.68%		8.64%
9							
9							<b>Reduction to DCF Indicated Cost of Equity</b>
							<b>0.77%</b>

Source: Value Line Investment Survey (October 16, 2015)

**Annual Total Returns**  
**Bourassa as Filed vs. Yahoo Finance Adjusted Closing Price**

Year	As Per Yahoo Finance Adjusted Closing Price		
	Bourassa As Filed	RUCO Independently Obtained	From Bourassa Work Papers
	Annual Total Return	Annual Total Return	Annual Total Return
1999	26.28%	30.69%	30.74%
2000	2.70%	9.02%	8.99%
2001	16.00%	16.56%	16.59%
2002	-4.16%	-4.05%	-4.05%
2003	23.72%	23.94%	23.96%
2004	13.78%	13.76%	13.76%
2005	19.02%	19.09%	19.06%
2006	15.86%	15.86%	15.87%
2007	-2.71%	-2.73%	-2.72%
2008	-1.87%	-1.81%	-1.82%
2009	-0.20%	-0.20%	-0.19%
2010	15.26%	15.27%	15.27%
2011	1.52%	1.55%	1.55%
2012	15.08%	15.08%	15.08%
2013	20.34%	20.46%	20.44%
2014	14.98%	14.98%	14.98%
<b>16-Year Average</b>	10.97%	11.72%	11.72%

Comparison of Annual Total Returns, 1999-2014  
 Bourassa as Filed vs. Yahoo Finance Adjusted Closing Price

Line	Year	[A]	[B]	[C]
		Bourassa As Filed	Yahoo Finance Adjusted Closing Price	Difference
		Annual Total Return	Annual Total Return	
1	1999	26.28%	30.69%	-4.41%
2	2000	2.70%	9.02%	-6.32%
3	2001	16.00%	16.56%	-0.56%
4	2002	-4.16%	-4.05%	-0.11%
5	2003	23.72%	23.94%	-0.22%
6	2004	13.78%	13.76%	0.01%
7	2005	19.02%	19.09%	-0.06%
8	2006	15.86%	15.86%	0.00%
9	2007	-2.71%	-2.73%	0.02%
10	2008	-1.87%	-1.81%	-0.05%
11	2009	-0.20%	-0.20%	0.00%
12	2010	15.26%	15.27%	-0.01%
13	2011	1.52%	1.55%	-0.03%
14	2012	15.08%	15.08%	0.00%
15	2013	20.34%	20.46%	-0.12%
16	2014	14.98%	14.98%	0.00%
17	16-Year Average	10.97%	11.72%	-0.74%
18	15-Year Average	9.95%	10.45%	-0.50%
19	Difference: 16-Year vs. 15-Year	1.02%	1.27%	
20	Excess of Bourassa 16-Year average (Column [A], Line 17) over Yahoo Finance Adjusted Closing Price 15-Year average (Column [B], Line 18)			0.52%
21	1999 Total Return Exceeds 15-Year Average by Factor of:	1.64		
22	Factor of:		1.94	

Notes:

- Line 20: (Column [A], Line 17) - (Column [B], Line 18)
- Line 21: (Column [A], Line 1) / (Column [A], Line 18)
- Line 21: (Column [B], Line 1) / (Column [B], Line 18)

**RUCO Restatement of Bourassa Schedule D-4.9  
 Risk Premium Analysis Based on Total Returns  
 With Risk Premium Developed using Arithmetic and Geometric Means**

**Bourassa Schedule D-4.9 – As Filed  
 Risk Premium Analysis Based on Total Returns**

				Analysis of 16-Year Period 1999 - 2014					Analysis of 15-Year Period 2000 - 2014							
				[A]	[B]	[C]	[D]	[E]	[A]	[B]	[C]	[D]	[E]			
Year	Annual Total Return	Treasury Bond Yields	Annual Risk Premiums	Sample Average Total Returns			Long-Term Treasury Bond Yields	Adjusted Risk Premiums	Sample Average Total Returns			Long-Term Treasury Bond Yields	Adjusted Risk Premiums			
				Bourassa Arithmetic Mean	Compound Geometric Mean	Combined Average Mean	Bourassa Arithmetic Mean		Compound Geometric Mean	Combined Average Mean						
1	1999	26.28%	5.87%	20.41%	26.28%	9.94%	18.11%	6.20%	11.91%							
2	2000	2.70%	5.94%	-3.24%	2.70%	9.94%	6.32%	6.23%	0.09%	2.70%	9.17%	5.94%	6.23%	-0.30%		
3	2001	16.00%	5.49%	10.51%	16.00%	9.94%	12.97%	5.63%	7.34%	16.00%	9.17%	12.58%	5.63%	6.95%		
4	2002	-4.16%	5.42%	-9.58%	-4.16%	9.94%	2.89%	5.43%	-2.54%	-4.16%	9.17%	2.51%	5.43%	-2.93%		
5	2003	23.72%	5.05%	18.67%	23.72%	9.94%	16.83%	4.96%	11.87%	23.72%	9.17%	16.45%	4.96%	11.49%		
6	2004	13.78%	5.12%	8.66%	13.78%	9.94%	11.86%	5.04%	6.81%	13.78%	9.17%	11.47%	5.04%	6.43%		
7	2005	19.02%	4.56%	14.46%	19.02%	9.94%	14.48%	4.64%	9.84%	19.02%	9.17%	14.10%	4.64%	9.45%		
8	2006	15.86%	4.91%	10.95%	15.86%	9.94%	12.90%	5.00%	7.90%	15.86%	9.17%	12.51%	5.00%	7.52%		
9	2007	-2.71%	4.84%	-7.55%	-2.71%	9.94%	3.62%	4.91%	-1.29%	-2.71%	9.17%	3.23%	4.91%	-1.68%		
10	2008	-1.87%	4.28%	-6.15%	-1.87%	9.94%	4.04%	4.36%	-0.32%	-1.87%	9.17%	3.65%	4.36%	-0.71%		
11	2009	-0.20%	4.08%	-4.28%	-0.20%	9.94%	4.87%	4.11%	0.75%	-0.20%	9.17%	4.48%	4.11%	0.37%		
12	2010	15.26%	4.25%	11.01%	15.26%	9.94%	12.60%	4.25%	8.35%	15.26%	9.17%	12.22%	4.25%	7.96%		
13	2011	1.52%	3.91%	-2.39%	1.52%	9.94%	5.73%	3.91%	1.82%	1.52%	9.17%	5.34%	3.91%	1.43%		
14	2012	15.08%	2.92%	12.16%	15.08%	9.94%	12.51%	2.92%	9.59%	15.08%	9.17%	12.12%	2.92%	9.20%		
15	2013	20.34%	3.45%	16.89%	20.34%	9.94%	15.14%	3.45%	11.69%	20.34%	9.17%	14.75%	3.45%	11.31%		
16	2014	14.98%	2.59%	12.39%	14.98%	9.94%	12.46%	3.34%	9.12%	14.98%	9.17%	12.07%	3.34%	8.74%		
17	16-Year Average	10.97%	4.54%	6.43%	16-Year Average	10.97%	9.94%	10.46%	4.65%	5.81%	15-Year Average	9.95%	9.17%	9.56%	4.55%	5.02%
18	Expected Long-term Treasury Bond Rate			4.20%	Current Yield on 30-Year U.S. Treasury Bond				2.93%	Current Yield on 30-Year U.S. Treasury Bond				2.93%		
19	Projected Returns on Equity for Sample			10.63%	RPM Cost of Equity – RUCO Adjusted				8.74%	RPM Cost of Equity – RUCO Adjusted				7.95%		

Notes:

- [A]: Annual Total Returns, as presented in Bourassa Schedule D-4.9, as filed.
- [B]: Computed using Yahoo Finance adjusted closing prices.
- [C]:  $([A] + [B]) / 2$
- [D]: Annual average long-term yield on U.S. Treasury Bonds.  
 1999-2002: Due to an inverted yield curve, the yield on the 30-year Bond was lower than the 20-year Bond. RUCO restatement reflects the higher 20-year yield.  
 2003-2005: 30-Year long-term Treasury Bond discontinued. RUCO restatement reflects the 20-year Treasury Bond yield.  
 2006-2009: Due to an inverted yield curve, the yield on the 30-year Bond was lower than the 20-year Bond. RUCO restatement reflects the higher 20-year yield.  
 2014: The Treasury Bond yield reported by Mr. Bourassa was understated. RUCO restatement reflects the actual 30-year annual average yield in 2014.
- [E]:  $[C] - [D]$

Note: The 2.93 percent current yield on the 30-year U.S. Treasury Bond is the spot rate as of the close of market trading on Friday, October 30, 2015.

**Bourassa Schedule D-4.11**  
 -- As Filed --

**Traditional Capital Asset Pricing Model**  
**Historical and Current Market Risk Premia**

	<u>R<sub>f</sub></u>	+	<u>Beta</u>	x	<u>RP<sub>m</sub></u>	=	<u>K</u>
1 Historical Market Risk Premium CAPM	4.2%		0.74		7.00%		9.4%
2 Current Market Risk Premium CAPM	4.2%		0.74		9.25%		<u>11.0%</u>
3 Average CAPM Estimate							10.2%

**Bourassa Schedule D-4.11**  
 -- As Adjusted by RUCO --

**Traditional Capital Asset Pricing Model**  
**Historical and Current Market Risk Premia**

	<u>R<sub>f</sub></u> <sup>1</sup>	+	<u>Beta</u> <sup>2</sup>	x	<u>RP<sub>m</sub></u>	=	<u>K</u>
1 Historical Market Risk Premium CAPM	2.93%		0.73		7.00%		8.03%
2 Current Market Risk Premium CAPM	2.93%		0.73		6.12%		<u>7.39%</u>
3 Average CAPM Estimate							7.71%

<sup>1</sup> Adjustment to reflect the current spot yield on the 30-year long-term U.S. Treasury bond as of Friday, October 30, 2015.  
 (Source: U.S. Department of the Treasury)

<sup>2</sup> Adjustment to reflect the updated sample average Beta for Mr. Bourassa's sample group of companies.  
 (Source: Value Line Investment Survey, October 16, 2015).