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BEFORE THE ARIZONA CORPORATION CO

1
2 DOUG LITTLE
CHAIRMAN
3 BOB STUMP
COMMISSIONER
4 BOB BURNS
COMMISSIONER
5 TOM FORESE
COMMISSIONER
6 ANDY TOBIN
COMMISSIONER

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AZ CORP COMMISSION
DOCKET CONTROL

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7
8 IN THE MATTER OF THE APPLICATION OF
ARIZONA WATER COMPANY, AN ARIZONA
9 CORPORATION, FOR A DETERMINATION
OF THE FAIR VALUE OF ITS UTILITY
10 PLANT AND PROPERTY, AND FOR
ADJUSTMENTS TO ITS RATES AND
11 CHARGES FOR UTILITY SERVICE
FURNISHED BY ITS WESTERN GROUP
12 AND FOR CERTAIN RELATED
APPROVALS.

Docket No. W-01445A-15-0277

Arizona Corporation Commission

DOCKETED

MAR 11 2016

DOCKETED BY	<i>AK</i>
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RUCO'S NOTICE OF FILING

14
15 The RESIDENTIAL UTILITY CONSUMER OFFICE ("RUCO") hereby provides notice of
16 filing the Direct Testimony of John Cassidy in the above referenced matter.

17
18 RESPECTFULLY SUBMITTED this 11th day of March, 2016.

19
20 Daniel W. Pozefsky
21 Chief Counsel

1 AN ORIGINAL AND THIRTEEN COPIES
2 of the foregoing filed this 11th day
3 of March, 2016 with:

3 Docket Control
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6 Phoenix, Arizona 85007

5 COPIES of the foregoing hand delivered/
6 mailed this 11th day of March, 2016 to:

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ARIZONA WATER COMPANY
DOCKET NO. W-01445A-15-0277

DIRECT TESTIMONY
OF
JOHN CASSIDY
ON
COST OF CAPITAL

ON BEHALF OF THE
RESIDENTIAL UTILITY CONSUMER OFFICE

MARCH 11, 2016

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JAC-4	CAPITAL ASSET PRICING MODEL
JAC-5	COMPARABLE EARNINGS
JAC-6	ECONOMIC INDICATORS
EXHIBITS	
JAC-A	AWC DIVIDEND PAYOUT RATIOS -- 10-YEAR ANALYSIS
JAC-B	RUCO SAMPLE AVERAGE WEIGHTED COST OF LONG-TERM DEBT
JAC-C	RUCO RESTATEMENT OF AHERN EXHIBIT PMA-5

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EXECUTIVE SUMMARY

RUCO recommends that the Commission adopt a 7.32 percent overall rate of return for Arizona Water Company's ("AWC," or "Company") Western Group, based upon (i) the Company's proposed capital structure consisting of 46.31 percent long-term debt and 53.69 percent common equity, (ii) RUCO's recommended 5.43 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	46.31 %	5.43 %	2.51 %
Common Equity	53.69 %	8.95 %	<u>4.80 %</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	8.63 %
Capital Asset Pricing Model	7.79 %
Comparable Earnings	<u>10.42 %</u>
Average Cost of Equity	<u>8.95 %</u>

I will also demonstrate that the 10.75 percent cost of equity recommendation of AWC witness, Ms. Pauline M. Ahern 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. In addition to filing cost of capital direct testimony on behalf of RUCO, I will also file
7 direct testimony in this proceeding which will address the rate base and operating income
8 issues associated with 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, Ms. Pauline
21 M. Ahern, also obtains cost of equity estimates from both the DCF and CAPM models, as
22 well as from a Risk Premium Model ("RPM"). My testimony will conclude with a
23 discussion of Ms. Ahern's cost of equity estimation methodologies, and I will demonstrate
24 that her analyses significantly over-states the Company's actual cost of equity.

1 **Q. Please summarize the recommendations and adjustments that you will address in**
2 **your testimony.**

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

4 I recommend that the Commission adopt a 7.32 percent overall rate of return for the
5 Company. The components included in my cost of capital calculation include:¹

	<u>Weight</u>	<u>Cost</u>	<u>Weighted Cost</u>
Long-Term Debt	46.31 %	5.43 %	2.51 %
Common Equity	53.69 %	8.95 %	<u>4.80 %</u>
Overall Rate of Return			<u>7.32 %</u>

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

	<u>Estimated Cost</u>
Discounted Cash Flow	8.63 %
Capital Asset Pricing Model	7.79 %
Comparable Earnings	<u>10.42 %</u>
Average Cost of Equity	<u>8.95 %</u>

15 **III. ECONOMIC PRINCIPLES APPLICABLE TO ARIZONA**

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

18 A. For regulated public utilities in Arizona, rates are established in a manner designed to
19 allow for recovery of the utility's costs, including capital costs. This is traditionally referred
20 to as "cost of service" ratemaking. Rates are established using the "rate base – rate of
21 return" concept, wherein utilities are allowed to recover specific operating expenses, taxes
22 and depreciation, and granted an opportunity to earn a fair value rate of return on the
23

24

¹ See JAC Schedule 1

1 assets utilized (i.e., fair value rate base) in providing service to ratepayers. Rate base is
2 derived from the asset side of the utility's balance sheet, while rate of return is developed
3 from the liability/stockholders' equity side of the balance sheet. The revenue impact of
4 the cost of capital in rates is determined by multiplying rate base by rate of return. In the
5 instant docket RUCO is recommending an overall rate of return for AWC's Western Group
6 of 7.32 percent.

7
8 **Q. Is the Company proposing that its original cost rate base also be used as its fair**
9 **value rate base?**

10 A. Yes.

11
12 **Q. What is the meaning of a "fair rate of return" when analyzing a rate case**
13 **application?**

14 A. From an economic standpoint, a "fair rate of return" is one which allows an efficient and
15 economically well managed utility the ability to maintain its financial integrity, attract
16 capital, and establish comparable returns for similar risk investments. These concepts
17 are derived from economic and financial theory and are generally implemented using
18 financial models and economic concepts. From a technical perspective, a "fair rate of
19 return" is an ex post (after the fact) earned return on an asset base. Conversely, the cost
20 of capital is an ex ante (before the fact) expected, or required, return on a capital base.
21 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 afforded 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. Briefly describe the recent trends in economic conditions and their impact on**
2 **capital costs over the past thirty years?**

3 A. Since the early 1980's through the end of 2007 the United States economy had been
4 relatively stable. This period was characterized by longer economic expansions, small
5 contractions, low and/or declining inflation, and declining interest rates and other capital
6 costs. However, in 2008 and 2009, the economy declined as a result of the mortgage
7 crisis and had a negative effect on the financial markets both in the US and international
8 financial markets. This decline was described as the worst financial crisis since the Great
9 Depression and has been referred to as the "Great Recession." Since 2008, central banks
10 in the U.S. (i.e., the Federal Reserve Board) and other foreign countries have initiated
11 accommodative monetary policies designed to stimulate economic growth and reduce
12 unemployment in an effort to recover from this worldwide recession.

13
14 The recession bottomed out in mid-2009 and since that time the economy has begun to
15 expand again, initially at a slow pace but at a more rapid rate in recent months. This is
16 evidenced by the national unemployment rate falling from 7.4 percent in 2013 to 5.3
17 percent in 2015. At the State level, however, Arizona's unemployment rate continues to
18 lag that of the nation, and as of December 2015 stood at 5.8 percent.² The length of this
19 most recent recession and the slow recovery indicate that the impact may be felt for an
20 extended period of time.

21
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23
24 ² 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 continued at a slower pace than that in
10 prior expansions following an economic downturn.

11
12 Since 2008 inflation, as measured by the CPI, has been 3.0 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 forty-year period, 1975-2015?**

20 A. Schedule JAC-6 (Pages 3 – 5) shows that interest rates rose sharply to record levels in
21 1975-1981, when the inflation rate was high and generally rising. Interest rates declined
22 substantially, as did inflation, during the remainder of the 1980s and throughout the 1990s.
23 Interest rates declined even further from 2000-2005, and after trending slightly upward in
24 years 2006-2008, continued on a downward path reaching levels in years 2009-2015 not

1 previously seen since the early 1960s. In 2008, the Federal Reserve (the "Fed") initiated
2 an accommodative monetary by lowering the federal funds ("Fed Funds") rate (the rate
3 the Fed charges banks for overnight transfers of funds), and in an effort to promote
4 increased lending and liquidity, eventually initiated a policy of quantitative easing, an
5 unconventional monetary policy used when short-term interest rates are at or approaching
6 zero. As a consequence, in years 2012-2015, both U.S. and corporate bond yields
7 declined to their lowest levels in more than 40 years. While interest rates have risen
8 slightly from their lows of 2012, both government and corporate lending rates remain at
9 historically low levels through 2015, again reflective of lower capital costs. On December
10 16, 2015, the Fed raised the Fed Funds rate from a level of 0 to $\frac{1}{4}$ percent to $\frac{1}{4}$ - $\frac{1}{2}$
11 percent. Since doing so, however, yields on medium- and longer-term (i.e., 5-, 7-, 10-,
12 20- and 30-year) U.S. Treasury securities have continued to fall due to heavy demand by
13 fixed income investors; a circumstance suggestive that today's low interest rate
14 environment may continue into the future.³

15
16 **Q. Did the action taken by the Fed to raise the Fed Funds rate in December 2015 signal**
17 **a change in monetary policy by the U.S. central bank?**

18 **A.** No, it did not. While the increase to the Fed Funds rate marked the first time the Fed had
19 increased the rate it charged banks for overnight transfers of funds since mid-2006,⁴ in a
20 press release issued on December 16, 2015, the Fed made the following statement: "The
21

22
23 ³ As of the close of market on Wednesday, December 16, 2015, the day the Federal Reserve hiked the Fed Funds
24 rate, yields on the 5-, 7-, 10-, 20- and 30-year Treasury securities were 1.75%, 2.11%, 2.30%, 2.65%, and 3.02%,
respectively. As of the close of market on Thursday, February 11, 2016, yields on these same 5-, 7-, 10-, 20- and
30-year Treasury securities were 1.11%, 1.39%, 1.63%, 2.06%, and 2.50%, respectively.

⁴ The Fed last raised the Fed Funds rate on June 29, 2006.

<http://www.federalreserve.gov/monetarypolicy/openmarket.htm>

1 stance of monetary policy remains accommodative after this increase, thereby supporting
2 further improvement in labor market conditions and a return to 2 percent inflation.”⁵
3

4 **Q. What trends do the economic indicators suggest for common share prices?**

5 A. As shown in Schedule JAC-6 (Pages 6 and 7), stock prices were stagnant during the high
6 inflation/high interest rate environment of the late 1970s and early 1980s. In 1983,
7 however, equity prices began to rise steadily, particularly as measured by the Dow Jones
8 Industrial Average (“DJIA”), before peaking in 2007. With the onset of the Great
9 Recession in 2008, equity prices declined sharply from their highs of 2007, reaching a low
10 in the first quarter of 2009. Beginning in the third quarter of 2009, equity prices again
11 began to rise, eventually recovering the losses sustained as a consequence of the “crash”
12 in 2008 and, as evidenced by the performance of the DJIA, the S&P 500 Composite Index
13 (“S&P 500”), and the NASDAQ Composite Index (“NASDAQ”), went on to reach new all-
14 time highs in the fourth quarter of 2015. Following the action taken by the Fed to raise
15 the Fed Funds rate, the equity markets have since experienced a sell-off, but all three
16 major stock indices have risen from their lows of February 11, 2016.⁶
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23 ⁵ Federal Reserve Board, Federal Open Market Committee, *Press Release* (December 16, 2015),
<http://www.federalreserve.gov/newsevents/press/monetary/20151216a.htm>

24 ⁶ On February 11, 2016, the DJIA closed at 15,660.18, the S&P 500 closed at 1,829.08, and the NASDAQ closed
at 4,266.84. On February 18, 2016, these three market indices closed at 16,413.43, 1,917.83, and 4,487.54,
respectfully.

1 **Q. We are now in the seventh year of recovery from the Great Recession. Is it possible**
2 **that the U.S. economy could fall into recession in late-2016?**

3 A. Yes. In fact, research analysts at CitiGroup forecast a 65 percent probability of the U.S.
4 economy entering into recession – defined as two consecutive quarters of shrinking
5 economic growth – later this year.⁷ CitiGroup analysts predict (i) a global growth
6 recession in 2016 as a consequence of the continued economic downturn in China, and
7 (ii) recession in the U.S. caused by a rapid flattening of the bond yield curve towards
8 inversion, with “curve inversion coming more quickly than the consensus thinks.”⁸ As
9 another observer has expressed it, “[t]he odds of a recession in 2016 may be less than
10 50%, but not by much. And in 2017, the odds shift.”⁹

11
12 **Q. In setting monetary policy, what is the Fed’s stated long-term objective?**

13 A. Consistent with its statutory mandate, when setting monetary policy the long-term
14 objective of the Fed’s Federal Open Market Committee (“FOMC”) is two-fold: (i) maximum
15 employment, and (ii) price stability (i.e., inflation of 2.0 percent).¹⁰

21
22 ⁷ Sherter, Alain, “Will the U.S. Economy Slip into Recession in 2016?,” *Money Watch* (December 23, 2015).
<http://www.cbsnews.com/news/will-the-u-s-economy-slip-into-recession-in-2016/>

23 ⁸ McGeever, Jamie, “Watch for U.S. Recession, Zero Interest Rates in China next Year, Citi Says,” *Reuters*
(December 2, 2015). <http://www.reuters.com/article/us-global-economy-idUSKBN0TL18F20151202>

24 ⁹ Murray, Alan, “Is 2016 the Year of the Next Recession?,” *Fortune.com* (January 11, 2016).
<http://fortune.com/2016/01/11/stock-market-recession-2016/>

¹⁰ Federal Reserve Board, Federal Open Market Committee, *Press Release* (December 16, 2015).
<http://www.federalreserve.gov/newsevents/press/monetary/20151216a.htm>

1 **Q. So in the event the U.S. economy went into recession in either 2016 or 2017 and**
2 **the unemployment rate were to rise, the Fed might once again have to take steps**
3 **to stimulate economic growth in order to achieve full employment, correct?**

4 A. Yes, in keeping with its statutory mandate to achieve full employment, the Fed might well
5 have to do that.

6
7 **Q. Has Janet Yellen, the Fed Chairperson, made statements to the effect that the Fed**
8 **would again consider lowering the Fed Funds rate in order to stimulate economic**
9 **growth?**

10 A. Yes. When testifying before the Joint Congressional Economic Committee (“Committee”)
11 in early December 2015 (i.e., prior to the hike in the Fed Funds rate), Ms. Yellen
12 downplayed the possibility of a recession in the U.S. economy but specifically
13 acknowledged the risk of a global economic recession, stating that a hike in the Fed Funds
14 rate would give the Fed “the flexibility to lower it if those risks cause the economy to falter
15 in the future.”¹¹ Subsequently, when testifying before the Committee on February 11,
16 2016, Ms. Yellen “conceded that there’s a ‘chance’ of a downturn ahead,” and indicated
17 that the Fed “is studying whether **negative interest rates** would help should conditions
18 worsen (emphasis added).” Ms. Yellen went on to say the following:

19 “In light of the experience of European countries and others that have
20 gone to **negative rates**, we’re taking a look at them again, because **we**
21 **would want to be prepared in the event that we would need (to**
22 **increase) accommodation.**”¹²

23 ¹¹ Puzzanghera, Jim, “Downplaying Risk of Recession, Yellen Indicates an Interest Rate Hike is Coming this Month,”
24 *Los Angeles Times* (December 3, 2015). <http://www.latimes.com/business/la-fi-yellen-congress-20151203-story.html>

¹² Cox, Jeff, “Yellen on Negative Rates: ‘We Wouldn’t Take those off the Table,’” (February 11, 2016).
<http://www.cnbc.com/2016/02/11/fed-chair-yellen-theres-always-some-chance-of-recession.html>

1 In further testimony before the Committee, Ms. Yellen acknowledged that Fed officials
2 had been “caught off guard” by (i) the degree to which “[m]arkets have been tumbling as
3 oil prices plunge, with traders now pricing in the chance that **the Fed’s next move could**
4 **be a rate cut rather than hike;**” and (ii) the persistent strength of the greenback, as the
5 dollar movement is “not something we anticipated.”¹³

6
7 **Q. You indicated that a stated objective of the Fed is to achieve price stability, defined**
8 **as an inflation rate of 2.0 percent. Is the Fed concerned that inflation might become**
9 **a problem for the U.S. economy anytime soon?**

10 A. No, inflation is currently very low, and in keeping with its goal to achieve price stability,
11 the Fed would prefer to see the rate of inflation rise to a level of 2.0 percent.

12
13 **Q. How do American’s feel about the prospects for the U.S. economy in the coming**
14 **year (i.e., 2016)?**

15 A. According to a new survey conducted by the Pew Research Center, Americans are “less
16 optimistic about how well the economy will fare over the next year than they were last
17 January.”¹⁴

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¹³ *Ibid.*

24 ¹⁴ “As election Year Nears, Public Sees Mixed Economic Picture,” Pew Research Center (December 22, 2015).
<http://www.people-press.org/2015/12/22/as-election-year-nears-public-sees-mixed-economic-picture/>

1 **Q. What conclusions can be drawn from the above discussion of economic and**
2 **financial conditions as they relate to the cost of capital?**

3 A. Despite the Federal Reserve having raised the Fed Funds rate in December 2015, I
4 believe the probability of continued rate hikes in 2016 and 2017 to be low. Fed
5 Chairperson Yellen has indicated a willingness to raise short-term interest rates in the
6 event the U.S. economy should go into recession, and should circumstances warrant
7 additional monetary policy accommodation, a willingness to consider use of negative
8 interest rates, as well. Thus, while the U.S. economy is stronger today than it was in
9 2008-2009, expected investment returns have declined since the onset of the Great
10 Recession of 2008, and given the economic uncertainty on the horizon there is good
11 reason to believe that interest rates, and hence the cost of capital, would be expected to
12 remain at or near current levels for the next several years.

13

14 **V. CAPITAL STRUCTURE AND COST OF DEBT**

15 **Q. What is the Company's proposed capital structure in this proceeding?**

16 A. AWC proposes a capital structure consisting of 46.31 percent long-term debt and 53.69
17 percent common equity.

18

19 **Q. What is the Company's proposed cost of debt in this proceeding?**

20 A. In this proceeding, the Company proposes a cost of debt of 6.82 percent. This cost figure
21 represents the weighted average cost of long-term debt as presented in Schedule D-2
22 (Page 2) of the Company's application.

23

24

1 **Q. What test-year was used in the prior Western Group rate proceeding, and what cost**
2 **of debt did the Company propose in that docket?**

3 A. In the prior AWC Western Group rate filing,¹⁵ the Company used a December 31, 2009
4 test-year end, and in that docket AWC similarly proposed a 6.82 percent cost of debt.

5
6 **Q. But interest rates have fallen appreciably since the December 31, 2009 test-year**
7 **end used in the Western Group's last rate case, resulting in commensurate**
8 **reductions to both the cost of long-term debt as well as equity capital, true?**

9 A. Yes. In response to the great recession of 2008, the Federal Reserve Board initiated an
10 accommodative monetary policy designed to stimulate economic growth and reduce
11 unemployment. As a consequence, interest rates have fallen to levels not seen since the
12 early 1960s, and because inflation has been held in check, both the cost of long-term debt
13 and equity capital have experienced historically low levels, as well.

14
15 **Q. Did the Company propose this same 6.82 percent cost of debt in AWC's most recent**
16 **Eastern Group and Northern Group rate filings?**

17 A. Yes, in both the most recent Eastern Group and Northern Group rate filings, the Company
18 proposed a cost of debt of 6.82 percent. In the Eastern Group docket,¹⁶ the Company
19 used a December 31, 2010 test-year end, and in the Northern Group docket,¹⁷ the
20 Company used a December 31, 2011 test-year end.

21

22

23

24 ¹⁵ Docket No. W-01445A-10-0517.

¹⁶ Docket No. W-01445A-11-0310.

¹⁷ Docket No. W-01445A-12-0348.

1 **Q. In the AWC rate dockets noted above, did any reach resolution by means of a**
2 **Settlement Agreement?**

3 A. Yes. In both the Western Group proceeding (Docket No. W-01445A-10-0517) and the
4 Northern Group proceeding (Docket No. W-01445A-12-0348), resolution was achieved
5 by means of a Settlement Agreement.¹⁸ Only the Eastern Group rate proceeding (Docket
6 No. W-01445A-11-0310) was fully litigated at Hearing.

7
8 **Q. What cost of debt was approved by the Commission in the Settlement Agreements**
9 **achieved in the above noted Western Group and Northern Group rate proceedings?**

10 A. In both the Western Group proceeding and the Northern Group proceeding, the
11 Commission approved the 6.82 percent cost of debt agreed to in the Settlement
12 Agreement.

13
14 **Q. When setting rates for AWC's Eastern Group in Docket No. W-01445A-11-0310, did**
15 **the Commission approve the Company's proposed 6.82 percent cost of debt?**

16 A. Yes. However, in doing so the Commission made the following statement:

17 "Although **this [6.82 percent] cost of long-term debt seems**
18 **somewhat high considering the current market**, we agree that it is
19 appropriate to use AWC's actual cost of long-term debt as of the end of
the TY to determine the Eastern Group's cost of capital in this case."

20 To further underscore the point that the Company's 6.82 percent cost of debt appeared
21 high, the Commission then stated:

22 "**Official notice is taken that the prime rate has been at 3.25 percent**
23 **since December 16, 2008.** It may be worthwhile for AWC to explore

24

¹⁸ In the Northern Group settlement agreement, RUCO agreed to the revenue requirement portion, but not the SIB.

1 whether it is possible to refinance any of its long-term debt at a more
2 favorable interest rate (emphasis added)."¹⁹

3 **Q. Please provide a brief discussion of the nature and type of permanent debt capital**
4 **employed by AWC to fund its utility plant investment.**

5 A. On a total company basis, the debt component of AWC's capital structure consists of
6 \$75,000,000 in 30-year term, non-amortizing, General Mortgage Bonds requiring (i) semi-
7 annual interest payments and (ii) a balloon payment of the aggregate principal balance
8 upon maturity. As shown in the Company's Schedule D-2, the Company's permanent
9 debt capital consists of the following three series of General Mortgage Bonds:

	<u>Issue Date</u>	<u>Maturity Date</u>	<u>Amount</u>	<u>Interest Rate</u>
Series K	April 1, 2001	April 1, 2031	\$15,000,000	8.05 %
Series L	August 1, 2006	August 1, 2036	\$25,000,000	6.30 %
Series M	August 1, 2008	August 1, 2038	\$35,000,000	6.67 %

13 **Q. Does RUCO believe it is feasible for AWC to redeem/refinance any portion of its**
14 **long-term debt at the present time?**

15 A. No, it is not feasible, due to highly restrictive loan covenants contained in the Indenture.
16 Specifically, Article 2.04 of the Indenture effectively precludes the Company from
17 redeeming any portion of its Series K or Series L debt prior to 20 years of the 30-year
18 Bond Series term having elapsed. What this means is that at the earliest, the Series K
19 Bonds (\$15M, 8.05%) would not be eligible for redemption until April 1, 2021, while the
20 Series L Bonds (\$25M, 6.30%) would not be eligible for redemption until August 1,
21 2026).²⁰ Although the Company's Series M Bonds (\$35M, 6.67%) are eligible for
22

23
24 ¹⁹ See Decision No. 73736 (dated February 20, 2013), p. 44, lines 20-22, and Footnote 50.

²⁰ Information provided pursuant to RUCO 2.05.

1 redemption at any time prior to maturity, a Make Whole provision would require payment
2 of a discounted (i.e., net present) value of all remaining scheduled interest payments from
3 the date of redemption to maturity. At present, the Company estimates this discounted
4 cost to be approximately \$42M which, when added to the \$35M principal balance
5 outstanding, would result in a total redemption cost of \$77M.²¹

6
7 **Q. For rate-making purposes, does RUCO believe AWC's inability to refinance its long-**
8 **term debt to be grounds for adoption of the Company's 6.82 percent embedded**
9 **cost of debt in this proceeding?**

10 A. No. As will be demonstrated, there are several compelling reasons why adoption of the
11 Company's proposed 6.82 percent cost of debt is **not** warranted in this proceeding.

12
13 **Q. What is the first compelling reason why the Company's 6.82 percent embedded**
14 **cost of debt should not be adopted in this proceeding?**

15 A. Contemporaneous to the prime rate falling (i.e., December 16, 2008) to a level of 3.25
16 percent, the Company, on December 19, 2008, filed a financing application with the
17 Commission seeking authority to issue short-term debt in an amount not to exceed
18 \$30,000,000.²² As stated in the application, the debt proceeds were to be used for
19 construction of improvements and additions to the Company's utility plant, with AWC
20 alleging Commission authorization of its request to be "in the best interests of the
21 Company and its customers." In the docket, Staff recommended Commission approval

22
23

²¹ Information provided in response to RUCO 4.06.

24 ²² See Docket No. W-01445A-08-0607, *Application for Authority to Issue Short-Term Debt*, dated December 19, 2008.

1 of \$14,200,000 of the requested indebtedness, but the Company clearly desired
2 authorization of the entire \$30,000,000 request, as evidenced by AWC filings made to the
3 docket.²³ Nevertheless, frustrated by Staff's unwillingness to recommend approval of the
4 entire \$30,000,000 request, the Company elected to **withdraw** its financing application,²⁴
5 and in so doing (i) eliminated the potential for AWC to reduce its then current 6.82 percent
6 weighted cost of debt through the issuance new lower cost debt, and (ii) effectively
7 ensured that during the 7-plus year period in which the prime rate remained at 3.25
8 percent,²⁵ all plant additions and improvements made by AWC to its Western, Eastern
9 and Northern Groups would, out of necessity, be financed exclusively with higher cost
10 equity. For obvious reasons, withdrawal of the Company's financing application has
11 accrued only to the benefit of AWC shareholders. Therefore, the Commission should feel
12 no obligation to pass on what is admittedly a high cost of debt to AWC ratepayers in this
13 proceeding when, given the opportunity to mitigate this high cost by obtaining authority to
14 issue low cost debt, AWC management elected not to do so.

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22 ²³ See Docket No. W-01445A-08-0607, *Arizona Water Company's Comments to Arizona Corporation Commission*
23 *Staff's Recommendation*, dated August 7, 2009; *Arizona Water Company's Reply to Arizona Corporation*
Commission Staff's Response, dated September 11, 2009; and *Memorandum in Support of Request for Approval*
to Incur Short-Term Debt, dated October 2, 2009.

24 ²⁴ See Docket No. W-01445A-08-0607, *Withdrawal of Application for Authority to Issue Short-Term Debt*, dated
September 17, 2010.

²⁵ On December 17, 2015, the prime rate rose to a level of 3.50%.

1 **Q. Since withdrawing its financing application in Docket No. W-01445A-08-0607, has**
2 **the Company made a subsequent filing with the Commission seeking authority to**
3 **issue debt?**

4 A. No, it has not; this, despite the fact that when withdrawing its application, the Company
5 “respectfully reserve[d] the right to refile its application, in the form in which it was filed or
6 in another form, at some future date.”²⁶

7
8 **Q. Since withdrawing its financing application in the above referenced docket, has the**
9 **equity capital used to fund plant additions and improvements made to AWC’s**
10 **Western, Eastern and Northern Groups been funded exclusively with internally**
11 **generated retained earnings?**

12 A. No, it has not, because shareholders made a cash equity infusion of \$10,222,000 into the
13 Company on October 29, 2010 “for the purpose of improving Arizona Water Company’s
14 equity ratio.” (Information provided in response to RUCO 5.07 see Attachment 4)

15
16 **Q. What is the second compelling reason why the Company’s 6.82 percent embedded**
17 **cost of debt should not be adopted in this proceeding?**

18 A. While AWC is a public service company subject to regulation by the Commission, it is an
19 affiliate of San Gabriel Valley Water Company (“SGVWC”), a public service company
20 subject to regulation by the California Public Utilities Commission (“CPUC”). Annual
21 reports filed by SGVWC are available on the CPUC website, and a review of the 2014
22 annual report revealed that in 2011, SGVWC issued \$30,000,000 of 10-year bonds at an
23

24

²⁶ See Docket No. W-01445A-08-0607, *Withdrawal of Application*, dated September 17, 2010, p. 1.

1 interest rate of 3.75 percent.²⁷ Thus, while AWC has made no effort to mitigate the high
2 cost of its long-term debt in today's low interest rate environment, its California affiliate,
3 SGVWC, has actively taken steps to do so.

4
5 **Q. Since issuing the above referenced 10-year, 3.75 percent bonds in 2011, has**
6 **SGVWC taken further steps to reduce its weighted average cost of debt and overall**
7 **cost of capital?**

8 A. Yes, it has. A further search of the CPUC website revealed that in 2013, SGVWC filed
9 an application requesting CPUC authority to issue an additional \$80,000,000 of low cost
10 debt.²⁸ A review of the filings made to the docket reveal that SGVWC wanted to act
11 quickly before interest rates began to rise, and in the application requested the CPUC to
12 act "as expeditiously as possible," in order to take advantage of "the currently favorable
13 conditions for the issuance of debt securities."²⁹ In a subsequent filing, SGVWC continued
14 to urge the CPUC to act promptly on its requested authorization, as "interest rates on
15 long-term debt ha[d] recently begun to increase after a long period at historically low
16 levels."³⁰

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22 ²⁷ See San Gabriel Valley Water Company, *2014 Annual Report*, Schedule A-24 "Account 210-Bonds," p. 36.

23 ²⁸ See Application 13-05-006, *Application of San Gabriel Valley Water Company (U337W) for Authorization to Issue*
and Sell Bonds, Notes, or Other Evidence of Indebtedness Not to Exceed \$80,000,000, filed with the California
Public Utilities Commission (May 13, 2013).

24 ²⁹ *Ibid*, p. 2.

³⁰ See Application 13-05-006, *Brief of Applicant San Gabriel Valley Water Company (U337W)*, filed with the
California Public Utilities Commission (November 25, 2013), p. 2.

1 **Q. In the above noted financing docket, did SGVWC seek authorization to issue bonds**
2 **with a sinking fund requirement (i.e., amortizing debt)?**

3 A. Yes, in its financing application SGVWC specifically requested authority to issue bonds
4 with a sinking fund requirement, pointing out that **“the interest rate and overall cost of**
5 **the debt securities may be reduced by the use of a sinking fund** (emphasis added).”³¹

6 The lower cost associated with bonds having a sinking fund requirement was affirmed in
7 testimony provided by San Gabriel's Vice-President and Treasurer, Mr. David M. Batt,
8 who stated that **“to get a loan on the best possible terms, a lender might want a**
9 **sinking fund and San Gabriel certainly would want to have the ability to consider**
10 **offering that arrangement** (emphasis added).” Mr. Batt further testified that SGVWC
11 already had one series of bonds outstanding with a sinking fund provision.³²

12
13 **Q. Did the CPUC authorize SGVWC’s requested \$80,000,000 debt issuance?**

14 A. Yes. SGVWC was granted the authority to issue the requested \$80,000,000 in new long-
15 term debt by the CPUC in Decision No. 14-01-014 (dated January 16, 2014).³³

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21 ³¹ In its financing application, SGVWC explained that a sinking fund normally operates in one of two ways: (1) Applicant may set aside a sum of money at specified dates so that, at the maturity date of the bond issue, there is a pool of cash available to redeem the issue, or (2) Applicant may redeem specified portions of the bond issue at agreed upon dates. See Application 13-05-006, *“Application of San Gabriel Valley Water Company (U337W),”* filed with the California Public Utilities Commission (May 13, 2013), p. 6.

22
23 ³² See Application 13-05-006, *Brief of Applicant San Gabriel Valley Water Company (U337W)*, filed with the California Public Utilities Commission (November 25, 2013), p. 4.

24 ³³ See Decision No. 14-01-014, *Decision Authorizing San Gabriel Valley Water Company to Issue up to \$80 Million of New Long-Term Debt*, (January 16, 2014).

1 **Q. What is the third compelling reason why the Company's 6.82 percent embedded**
2 **cost of debt should not be adopted in this proceeding?**

3 A. While AWC's sister California affiliate, SGVWC, specifically requested authority to issue
4 bonds with a sinking fund requirement in order to further reduce its cost of long-term debt,
5 it appears AWC is unwilling to do likewise, as evidenced by the company's response to
6 RUCO 3.03(2), which reads as follows:

7 **"Arizona Water Company does not consider bonds with a sinking**
8 **fund requirement to be a suitable option** given the capital intensity
9 of the water utility industry. **Retiring debt through annual sinking**
10 **fund payments significantly reduces** the amount of **cash flow**
11 available and can impair the utility's ability to make ongoing necessary
system improvements and replacements. It is for this reason that public
utilities have traditionally issued debt without sinking fund requirements
(emphasis added)." (Information provided in response to RUCO 3.03 is
included in Attachment 4)

12 **Q. Did RUCO ask the Company why it has historically relied upon the issuance of 30-**
13 **year, non-amortizing bonds to fund its utility plant?**

14 A. Yes, and the Company's response to RUCO 3.03(1) reads, in part, as follows:

15 "Arizona Water Company has issued traditional public utility-style bonds
16 (i.e., long-term, non-sinking fund) because doing so is consistent with
17 the permanent nature of the capital deployed in financing long-lived
18 assets and **provides cash flow** to fund ongoing necessary system
improvements and replacements, thereby maintaining a balanced
19 capital structure **without unnecessarily increasing customers' rates**
(emphasis added)." (Information provided in response to RUCO 3.03
is included in Attachment 4)

20
21 In light of the above, and given the Company's unwillingness to issue lower-cost, sinking
22 fund bonds, there is every reason to call into question the assertion that AWC's exclusive
23 reliance on non-sinking fund debt has not '*unnecessarily increased customer's rates.*'
24

1 **Q. What is the fourth, and final, compelling reason why the Company's 6.82 percent**
2 **embedded cost of debt should not be adopted in this proceeding?**

3 A. In response to both RUCO 3.03(2) and RUCO 3.03(1), the Company addresses the cash
4 flow implications of sinking fund, and non-sinking fund bonds as they relate to making
5 "ongoing necessary system improvements and replacements," but is conspicuously silent
6 as to the payment of dividends. Because AWC makes exclusive use of 30-year, non-
7 sinking fund bonds requiring only semi-annual interest payments, the enhanced cash
8 flows associated with that debt more easily facilitates the payment of dividends to AWC
9 shareholders. Therefore, in view of the fact that the Company has **done nothing** to
10 reduce the weighted average cost of its long-term debt over the entire 7-plus year period
11 in which the prime rate stood at 3.25 percent, RUCO believes that consideration of AWC's
12 dividend payout ratio is relevant to the issue of what cost of long-term debt should be
13 approved in this rate proceeding.

14
15 **Q. Has RUCO prepared a schedule showing what the Company's dividend payout has**
16 **been over the 10-year period, 2005-2014?**

17 A. Yes. RUCO Exhibit JAC-A presents an analysis of AWC's shareholders' equity over the
18 10-year period, 2005-2014, as well as the Company's dividend payout in each year. For
19 informational purposes, the dividend payout ratios for RUCO's sample companies is also
20 provided.

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1 **Q. As measured over the 10-year period, 2005-2014, what is AWC's 10-year average**
2 **annual dividend payout ratio?**

3 A. As shown in RUCO Exhibit JAC-A, over the 10-year period, 2005-2014, on an average
4 annual basis AWC paid out **93.99 percent** of its earnings in the form of dividends.

5
6 **Q. Within the 10-year period, 2005-2014, were there years in which AWC's dividend**
7 **payout exceeded earnings (i.e. a dividend payout ratio in excess of 100 percent)?**

8 A. Yes. As shown in RUCO Exhibit JAC-A, within this 10-year period, the dividend payout
9 exceeded earnings on five occasions: In years 2007 (**109.60 percent**), 2008 (**145.66**
10 **percent**), 2009 (**147.79 percent**), 2010 (**114.16 percent**), and 2012 (**111.73 percent**). In
11 another year – 2011 (94.99 percent) – the dividend payout was almost 100 percent.

12
13 **Q. Over the 10-year period, 2005-2014, have there been extended periods within which**
14 **AWC's average annual dividend payout exceeded 100 percent?**

15 A. Yes, as shown in RUCO Exhibit JAC-A this happened on two occasions. First, over the
16 **8-year period, 2007-2014**, when the average annual dividend payout was **101.38**
17 **percent**; and second, over the **7-year period, 2008-2014**, when the average annual
18 dividend payout was **100.21 percent**.

19
20 **Q. As measured over the 5-year period, 2010-2014, what is AWC's 5-year average**
21 **annual dividend payout ratio?**

22 A. As shown in RUCO Exhibit JAC-A, over the 5-year period, 2010-2014, on an average
23 annual basis AWC paid out **81.61 percent** of its earnings in the form of dividends.

24

1 **Q. What are RUCO's observations concerning the above noted AWC dividend payout**
2 **ratios?**

3 A. RUCO has only one observation: the ability of AWC to achieve such high dividend payout
4 ratios year-in and year-out over the last ten years is a testament to the fact that the
5 enhanced cash flows made possible by the Company's exclusive use of higher cost, non-
6 sinking fund debt does, indeed, facilitate the payment of dividends. Unfortunately, while
7 AWC shareholders have directly benefitted from this higher cost debt, the Company has
8 made **no effort** to mitigate or otherwise reduce its weighted cost of debt over a 7-year
9 extended period of time in which interest rates have reached historically low levels.

10

11 **Q. You noted earlier that AWC shareholders made a \$10,222,000 equity infusion into**
12 **the Company in 2010 for the stated purpose of increasing the equity component.**
13 **What was the amount of the annual dividend distribution made to AWC**
14 **shareholders in each of the following two years, 2011 and 2012?**

15 A. As shown in RUCO Exhibit JAC-A, AWC paid total annual dividends of \$4,665,600 in
16 2011, and total annual dividends of \$7,079,400 in 2012. Thus, over the two years
17 combined, the total dividend distribution made to AWC shareholders in years 2011 and
18 2012 was **\$11,745,000** ($\$4,665,600 + \$7,079,400 = \$11,745,000$).

19

20 **Q. So after having made an equity infusion of \$10,222,000 in late 2010, within the next**
21 **two years AWC shareholders received total dividend distributions in an amount**
22 **greater (i.e., \$11,745,000) than the equity infusion made in 2010, correct?**

23 A. Yes. In fact, the total 2011 and 2012 dividend distribution exceeded the 2010 equity
24 infusion by \$1,523,000 ($\$11,745,000 - \$10,222,000 = \$1,523,000$). That the Company

1 was able to return the equity infusion made by shareholders in the form of a dividend
2 distribution in such a short period of time underscores the point made earlier concerning
3 the enhanced cash flows resulting from AWC's exclusive use of higher cost, non-sinking
4 fund debt and how it facilitates the payment of dividends to shareholders.

5
6 **Q. In view of the compelling reasons noted above as to why the Company's 6.82**
7 **percent embedded cost of debt should not be adopted, for rate making purposes**
8 **in this proceeding what cost of debt does RUCO recommend?**

9 A. RUCO recommends adoption of a **5.43 percent** cost of debt for AWC's Western Group,
10 a cost rate equal to the December 31, 2014 weighted average cost of long-term debt used
11 to fund the utility plant of RUCO's proxy group of companies.

12
13 **Q. For purposes of its cost of capital recommendations in this docket, why did RUCO**
14 **elect to use the 5.43 percent sample average weighted average cost of long-term**
15 **debt of its proxy group of companies?**

16 A. The reason is two-fold. First, when estimating the cost of equity, a proxy group of sample
17 companies is used to obtain an estimated cost rate. RUCO's adoption of the 5.43 percent
18 weighted average cost of debt for its sample companies is predicated on this same
19 concept. Second, as shown in Schedule JAC-6 (Page 8), the common equity ratios, and
20 thus the capital structures, of RUCO's proxy group of companies closely mirrors that of
21 AWC.

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1 **Q. Has RUCO prepared a schedule presenting the overall (i.e., sample average)**
2 **weighted average cost of long-term debt for its sample companies to support its**
3 **recommended 5.43 percent recommended cost of debt?**

4 A. Yes. As shown in RUCO Exhibit JAC-B, for each of RUCO's sample companies the
5 balance of long-term debt outstanding, as of December 31, 2014, used to fund utility plant
6 is presented in Column [A], the weighted average cost of long-term debt for each company
7 is presented in Column [B], and the annual interest expense associated with each
8 company's long-term debt is presented in Column [C]. For informational purposes, the
9 weighted average years to maturity of long-term debt outstanding for each sample
10 company is presented in Column [D], the percentage of total long-term debt issued by
11 each sample company exceeding AWC's 6.82 weighted cost of debt is presented in
12 Column [E], while a comparison between AWC's lowest cost debt (i.e., Series L Bonds
13 (\$25M @ 6.30%) and the weighted average cost of debt for each sample company is
14 presented in Column [F].³⁴ Information relating to AWC appears at the top of the
15 schedule.

16
17 **Q. Please enumerate the most significant items of information presented in RUCO**
18 **Exhibit JAC-B.**

19 A. First, as shown in Column [B], as of December 31, 2014, the weighted average cost of
20 long term debt for RUCO's sample companies is **5.43 percent**, a figure **140 basis points**
21 **lower** than the Company's 6.82 percent weighted average cost. Second, as shown in
22 Column [D], AWC rate payers will be saddled with this higher cost debt for an extended
23

24 ³⁴ Information obtained from the 2014 Form 10-K filed with the Securities and Exchange Commission by each
sample company was used in the preparation of Exhibit JAC-B.

1 period of time, as the Company's long-term debt has a weighted average years to maturity
2 of **21.43 years**. Third, as shown in Column [E], of the total long-term debt issued and
3 outstanding by RUCO's sample companies, on average only 17.31 percent carries an
4 interest rate higher than AWC's weighted average 6.82 percent cost of debt. Fourth, as
5 shown in Column [F], with the exception of American States Water (6.51 percent), all of
6 RUCO's sample companies have a weighted average cost of debt **lower** than AWC's
7 lowest cost debt (i.e., Series L Bonds, 6.30 percent). Finally, as shown in Column [C],
8 AWC had annual interest expense (\$5,118,614) exceeding that of one publicly-traded
9 sample company (York Water Company, \$4,647,175).

10
11 **Q. In compiling the data used in the preparation of RUCO Exhibit JAC-B, did you find**
12 **that the publicly-traded sample companies utilized amortizing debt (i.e., sinking**
13 **fund debt) in an effort to reduce the weighted average cost of long-term debt?**

14 A. Yes. The 10-K Forms filed by RUCO's nine sample companies indicated that each utilized
15 amortizing debt in order to reduce its overall weighted average cost of long-term debt.

16
17 **VI. SELECTION OF PROXY GROUP**

18 **Q. Was RUCO able to directly estimate AWC's cost of common equity?**

19 A. No. The Company's common stock is not publicly-traded, and for this reason it is not
20 possible to directly estimate AWC's cost of common equity. Therefore, RUCO employed
21 a proxy group of publicly-traded water utility companies to indirectly estimate the
22 Company's cost of equity utilizing financial market data available for each sample
23 company.

24

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

3 A. RUCO's proxy group consists of the following nine publicly-traded water utility companies:
4 American States Water, American Water Works, Aqua America, Artesian Resources,
5 California Water, Connecticut Water, Middlesex Water, SJW Corp., and York Water.
6 These nine water utilities comprise the entire universe of publicly-traded water utility
7 companies followed by both the Standard Large-Cap and Small & Mid-Cap editions of
8 *The Value Line Investment Survey*. Attachment 2 contains the most recent *Value Line*
9 quarterly update for each of RUCO's nine proxy companies.

10

11 **Q. For purposes of her analysis, does the Company's cost of capital witness, Pauline**
12 **M. Ahern, employ the same proxy group used by RUCO?**

13 A. No. Ms. Ahern's proxy group consists of eight of the nine water utility companies in
14 RUCO's sample group; for purposes of her analysis, Ms. Ahern excludes Artesian
15 Resources from her proxy group.

16

17 **VII. DCF ANALYSIS**

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

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

1 The most common variant of the DCF used to estimate the cost of equity is the Constant
2 Growth DCF model, which assumes that dividend growth is expected to continue at a
3 constant rate into perpetuity, is expressed by the following formula:

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

4
5
6 Where: K = cost of equity
7 D₁ = expected annual dividend
8 P₀ = current stock price
9 g = expected constant rate of dividend growth

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

13
14 **Q. For purposes of its DCF analysis, does RUCO employ the Constant Growth DCF
15 model?**

16 A. Yes. In doing so, RUCO combines the current dividend yield (D₀/P₀) for each proxy group
17 sample company with several indicators of expected dividend growth.

18
19 **Q. How did RUCO derive the dividend yield component of the DCF equation?**

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

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

The current stock price (P_0) in my yield calculation represents the average of the high and low stock price for each proxy company over the most recent three month period (November 2015 – January 2016). The current dividend (D_0) is the current annualized dividend rate for each proxy company, computed using the most recent quarterly dividend.

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

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

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

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

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

2 A. RUCO's DCF analysis is presented in Schedule JAC-3, Pages 1 through 4. Page 1
3 presents RUCO's overall DCF cost of equity estimation results for its proxy group of
4 sample companies. As can be seen, "raw" DCF calculations are presented on several
5 bases: mean, median, and high values. Page 2 presents the calculation of the dividend
6 yield for each proxy company prior to adjustment for growth. Pages 3 and 4 present
7 RUCO's historical and projected growth rate calculations for its proxy group of companies.
8

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

10 A. The DCF cost of equity rates obtained for RUCO's proxy group fall into a range between
11 7.58 percent and 8.63 percent. RUCO's highest DCF cost rate is 8.63 percent. RUCO
12 concludes that 8.63 percent represents the current DCF cost of equity for the proxy group.
13 Accordingly, RUCO recommends a DCF cost of equity of 8.63 percent for AWC's Western
14 Group, which is based on the high end of the DCF range.
15

16 **VIII. CAPM ANALYSIS**

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

18 A. Developed in the 1960s and 1970s as an extension of modern portfolio theory, the CAPM
19 describes the relationship between a security's investment risk and its market rate of
20 return.³⁵ This relationship identifies the rate of return which investors expect a security to
21 earn so that its market return is comparable with the market returns earned by other
22

23
24 ³⁵ 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 securities that have similar risk. The relationship is specified by the Security Market Line
2 (SLM) that indicates the relationship between each security or portfolio's "beta" and its
3 resulting return. Beta is a measure of relative risk (i.e., volatility) between a given equity
4 security and the market as a whole.

5
6 **Q. How is the CAPM derived?**

7 A. The general form of the CAPM is expressed by the following formula:

$$8 \quad K = R_f + \beta (R_m - R_f)$$

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

10 $R_f = \text{risk free rate}$

11 $R_m = \text{return on market}$

12 $\beta = \text{beta}$

13 $R_m - R_f = \text{market risk premium}$

14
15 **Q. Can you please identify the strengths of using the CAPM model in your analysis?**

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

23

24

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

2 A. For purposes of its CAPM analysis, RUCO uses a risk-free rate of 2.95 percent. RUCO's
3 risk-free rate represents the 3-month average yield on the 30-year long-term U.S.
4 Treasury Bond, measured over the 3-month period, November 2015 – January 2016. The
5 calculation of RUCO's risk-free rate is presented in Schedule JAC-4, Page 1.

6

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

9 A. Yes, because debt securities issued by the United States Department of the Treasury are
10 considered to be free of default risk. For purposes of its analysis, RUCO elected to use
11 the yield on the 30-year U.S. Treasury Bond as a measure of the risk-free rate because
12 the 30-year maturity of U.S. Treasury Bonds more closely matches the useful life of the
13 Company's utility plant assets.

14

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

17 A. No. The appropriate interest rate to be used in the CAPM is the current rate borne by
18 investors in the market place. Use of a forecasted risk-free rate overstates the estimated
19 cost of equity derived from the CAPM. Use of a current, or recent average, long-term
20 Treasury rate is reflective of investor's current expectations, and as such is the
21 appropriate risk-free rate to be used in the CAPM. This is particularly true given the
22 prospect that the Fed may have to further reduce short-term interest rates and/or initiate
23 an accommodative monetary policy utilizing negative interest rates should the U.S.
24 economy, once again, go into recession.

1 **Q. What beta does RUCO employ in its CAPM analysis?**

2 A. RUCO employs the most recent (i.e., January 16, 2016) *Value Line* beta reported for each
3 company in its proxy group. Once again, beta³⁶ is a measure of the relative riskiness (i.e.
4 as measured by market volatility) of a given company's stock in relation to that of the
5 market as a whole. The market is assumed to have a beta of 1.0; thus, firm's having a
6 beta less than 1.0 are considered to be less risky than the market, whereas firms having
7 a beta coefficient greater than 1.0 are considered to be riskier than the market. As
8 regulated entities insulated from market competition by virtue of having been granted
9 natural monopoly status, the common stocks of utility companies are perceived to be less
10 risky than the overall market and, thus, have traditionally had betas less than 1.0.

11
12 **Q. How does RUCO estimate the market risk premium ($R_m - R_f$) component?**

13 A. The market risk premium component ($R_m - R_f$) represents the investor-expected premium
14 of common stocks over the risk-free rate, or government bonds. For purposes of its
15 analysis, RUCO estimated the market risk premium by comparing annual realized returns
16 on equity for the S&P 500 group with the actual annual yields on 20-year long-term
17 Treasury bonds over the period, 1978-2015. As shown in Schedule JAC-4, Page 2, the
18 market risk premium component used in RUCO's CAPM represents the average of
19 differential returns on equity for the S&P 500 group and the annual yields on 20-year U.S.
20 Treasury bonds over this 1978-2015 period of time. RUCO determined the average ROE
21 on the S&P 500 to be 13.69 percent, and the average 20-year U.S. Treasury bond yield

22
23
24

³⁶ See Attachment 2 – Individual proxy companies beta's identified

1 to be 6.78 percent. Thus, based upon these returns RUCO concluded the market risk
2 premium ($R_m - R_f$) component in its CAPM to be 6.91 percent ($13.69\% - 6.78\% = 6.91\%$).

3
4 **Q. What did RUCO conclude the overall estimated CAPM COE to be?**

5 A. As shown in Schedule JAC-4, Page 1, the CAPM COE estimate for RUCO's proxy group
6 of sample companies is 7.79 percent.

7
8 **IX. CE ANALYSIS**

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

10 A. The CE method is designed to measure returns expected to be earned on the original
11 cost book value of similar risk business enterprises, in this case RUCO's proxy group of
12 companies. Thus, it provides a direct measure of the fair return, since it translates into
13 practice the competitive principle upon which regulation rests. This is true despite AWC
14 not being a public company, as it provides additional support that the company will be
15 earning a fair rate of return.

16
17 **Q. How did RUCO apply the CE methodology?**

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

21
22 **Q. What cost of equity results were obtained from RUCO's CE analysis?**

23 A. As shown in Schedule 5, RUCO calculated historical returns on equity for its sample
24 companies over both a 5- and 10-year period, and projected returns on equity over the 5-

1 year period, 2015-2019. Based upon its analysis, RUCO generated mean and median
2 CE cost of equity estimates ranging from a low of 8.63 percent to a high of 10.42 percent.
3 The results of RUCO's CE cost of equity analysis based on returns on equity for the proxy
4 group can be summarized as follows:

	<u>Historic ROE's</u>	<u>Projected ROE's</u>
5 Mean	8.83 % - 9.18 %	10.42 %
6 Median	8.63 % - 8.74 %	9.92 %

7
8 For purposes of its analysis, RUCO adopts the 10.42 percent cost of equity estimate at
9 the high end of the range as its CE-derived cost of equity estimate for the Company.
10

11 **X. RUCO RESPONSE TO COMPANY'S COST OF CAPITAL WITNESS MS. PAULINE M.**
12 **AHERN**

13 **Q. Please summarize Ms. Ahern's cost of equity estimation methodology and**
14 **recommendations.**

15 **A.** Ms. Ahern recommends a 10.75 percent cost of equity based on estimates derived from
16 the constant growth DCF model, two risk premium models (the Predictive Risk Premium
17 Model™ ("PRPM™") and a Risk Premium Model using an Adjusted Total Market
18 Approach), and the CAPM model (both the Traditional CAPM and the Empirical CAPM)
19 for a proxy group of eight sample companies.
20

21 For purposes of her analysis, Ms. Ahern relies on the average of the mean and median
22 cost rates obtained from each of her cost of equity models. Accordingly, Ms. Ahern
23 derives an estimated 8.64 percent cost of common equity from her DCF model, an
24 estimated 10.76 percent cost of common equity from her two risk premium models, and

1 an estimated 9.58 percent cost of common equity from her CAPM models. She concludes
2 that the indicated cost of common equity to her sample group of companies before
3 adjustments for credit risk and business/ small size risk is 9.60 percent. To this 9.60
4 percent indicated cost of equity figure, Ms. Ahern adds an upward 63 basis point credit
5 risk adjustment and an upward 50 basis point business/small size risk adjustment, thus
6 arriving at an indicated cost of common equity of 10.73 percent. Ms. Ahern's
7 recommended cost of common equity for AWC is 10.75 percent. Her overall
8 recommended rate of return for the Company is 8.93 percent.

9
10 For purposes of her constant growth DCF analysis, Ms. Ahern (i) relies on 5-year analysts'
11 forecasts of EPS growth from Value Line, Reuters, Zack's and Yahoo! Finance to estimate
12 the dividend growth (g) component; (ii) utilizes a 60-day average stock price (P_0) in the
13 computation of the current dividend (D_0/P_0) yield, and (iii) makes a semi-annual
14 compounding adjustment to the expected dividend yield (D_1/P_0) component to reflect the
15 periodic payment of dividends.

16
17 For purposes of her CAPM, ECAPM and PRPM™ analyses, Ms. Ahern employs an
18 inflated risk-free (R_F) rate of 3.69 percent; a figure representing the forecasted average
19 yield on 30-year U.S. Treasury Bonds obtained from *Blue Chip Financial Forecasts*
20 covering (i) the 18-month period, Q2 2015 – Q3 2016, (ii) the 5-year period, 2017-2021,
21 and (iii) the 5-year period, 2022-2026.

1 **Q. Turning first to Ms. Ahern's DCF analysis, as presented in Exhibit PMA-5 (Page 1),**
2 **did RUCO find Ms. Ahern's sample average (8.93 percent), sample median (8.35**
3 **percent) and average mean/median (8.64 percent) DCF cost rates to be overstated?**

4 A. The DCF cost estimates presented in Exhibit PMA-5 (Page 1) are overstated, and this
5 overstatement is largely attributable to recent reductions made to *Value Line's* 5-year EPS
6 growth forecast for six of Ms. Ahern's eight sample companies.³⁷ Additionally, there have
7 been changes to the Yahoo! Finance 5-year EPS growth estimates for three of Ms.
8 Ahern's sample companies (American States Water, American Water Works and Aqua
9 America).³⁸ As a consequence, the average projected 5-year EPS growth estimate
10 presented in column [6] of PMA-5 (Page 1) for six of Ms. Ahern's sample companies is
11 overstated.³⁹

12
13 **Q. Has RUCO determined the extent to which Ms. Ahern's sample average, sample**
14 **median and average mean/median DCF cost rates, as presented in Exhibit PMA-5**
15 **(Page 1), have been overstated?**

16 A. Yes. As shown in RUCO Exhibit JAC-C, after updating the Value Line and Yahoo!
17 Finance 5-year projected EPS growth estimates in column's [2] and [5] of Ahern Exhibit
18 PMA-5, RUCO determined (i) the sample average DCF cost rate to be **8.47 percent**, (ii)
19 the sample median DCF cost rate to be **8.25 percent**, and (iii) the average mean/median
20 DCF cost rate to be **8.36 percent**. For purposes of her analysis, Ms. Ahern relies upon
21

22
23 ³⁷ *Value Line* (January 16, 2016). Only *Value Line's* 5-year EPS growth forecast for Middlesex Water (5.0 percent)
and York Water (6.5 percent) remained unchanged.

³⁸ For purposes of confirmation, see RUCO Schedule JAC-3 (Page 1), column [F].

24 ³⁹ Only the average projected 5-year EPS growth rate for Middlesex Water (3.85 percent) and York Water Company
(5.70 percent) remained unchanged.

1 the average mean/median DCF estimate in her cost of equity analysis; therefore, her DCF
2 cost of equity estimate has been **overstated by 28 basis points** (8.64% - 8.36% =
3 0.28%).
4

5 **Q. What is Ms. Ahern's estimated Predictive Risk Premium Model ("PRPM™") cost of**
6 **equity?**

7 A. As shown in Exhibit PMA-7 (Page 2), Ms. Ahern's sample average PRPM™ COE is 11.94
8 percent, her median PRPM™ COE is 11.24 percent, and her average mean/median
9 PRPM™ COE is 11.59 percent. For purposes of her analysis, Ms. Ahern relies on the
10 average mean/median estimate. Therefore, for purposes of her cost of equity
11 recommendation in this docket, Ms. Ahern's PRPM™ estimated COE is 11.59 percent.
12

13 **Q. Among the cost of equity estimates obtained by Ms. Ahern in this docket, is the**
14 **11.59 percent estimate obtained from the PRPM™ the highest?**

15 A. Yes, it is.
16

17 **Q. In arriving at her 11.59 percent PRPM™ derived cost of equity estimate, what risk-**
18 **free (R_F) rate does Ms. Ahern employ?**

19 A. As shown in Exhibit PMA-7 (Page 2), Column 6, Ms. Ahern uses a forecasted risk-free
20 rate of 3.69 percent. As shown in Exhibit PMA-8, Note 2, this 3.69 percent risk-free rate
21 represents the average of forecasted yields on 30-year U.S. Treasury Bonds, covering
22 the following periods: (i) the 18-month period, Q2 2015 – Q3 2016, (ii) the 5-year period,
23 2017-2021, and (iii) the 5-year period, 2022-2026, as reported by *Blue Chip Financial*
24 *Forecasts*.

1 **Q. Does Ms. Ahern's use of a forecasted 30-year Treasury Bond yield as the risk-free**
2 **rate in her PRPM™ analysis overstate the cost of equity?**

3 A. Yes. As noted earlier, the appropriate risk-free rate to be used is the current rate borne
4 by investors in the market place. Use of a forecasted risk-free rate overstates the
5 estimated cost of equity. Use of a current, or recent average, long-term Treasury rate is
6 reflective of investor's current expectations, and as such is the appropriate risk-free rate
7 to be used when estimating the cost of equity.

8
9 **Q. Does RUCO find it somewhat ironic that Ms. Ahern, on behalf of the Company,**
10 **would advocate for the adoption of cost of equity estimates predicated on the**
11 **assumption that interest rates will rise (i.e., her use of a forecasted risk-free rate)**
12 **when, during an extended period (7-years plus) of historically low interest rates,**
13 **the company has made no effort to reduce its weighted average cost of long-term**
14 **debt?**

15 A. Yes.

16
17 **Q. Have cost of equity estimates derived from the PRPM™ previously been adopted**
18 **by the Commission in a rate proceeding?**

19 A. No, they have not.⁴⁰
20
21
22

23 ⁴⁰ See Decision No. 75268 (dated September 8, 2015), *EPCOR Water Arizona*, Docket No. WS-01303A-14-0010,
24 p.41. In the Decision, the Commission rejected cost of equity estimates obtained from Ms. Ahern's PRPM™, stating:
"We are not persuaded that the Company's PRPM, which was developed and sponsored by its witness, should be
adopted in this case. Despite Ms. Ahern's claims, the record does not support a conclusion that the PRPM has been
peer-reviewed simply because it appeared in a few journals and that it may be included in future publications."

1 **Q. Have cost of equity estimates derived from the PRPM™ previously been adopted in**
2 **a rate proceeding before any regulatory commission?**

3 A. No. To date, cost of equity estimates derived from the PRPM™ have not been adopted
4 in a rate proceeding before any regulatory commission. The following is an excerpt from
5 the Final Order issued by the Maine Public Utilities Commission in which PRPM™ derived
6 cost of equity estimates proposed by Ms. Ahern were rejected:

7 “We are not convinced that we should accept results based on a newly
8 derived analytical model that has not been rigorously vetted. As
9 acknowledged by Ms. Ahern, the PRPM™ model is one that was
10 developed by her consulting firm Associated Utility Services (AUS) and
11 has been used only by AUS cost of equity consultants since 2012.
12 January 14, 2014 Tr. At 37. To the best of Ms. Ahern’s knowledge, no
13 other state commission has adopted it. January 14, 2014 Tr. At 39-40.
14 As stated by Mr. Hill, the model does not easily lend itself to analysis
15 and independent verification of accuracy. At this point, we are not
16 prepared to incorporate the results of the analysis using the PRPM™
17 inputs into our determination of an appropriate ROE in this case. This
18 does not however preclude us from future reliance once the model is
19 fully vetted by academia and other regulatory bodies.”⁴¹

14 **Q. The above cited passage makes reference to a Mr. Hill. Does RUCO have**
15 **knowledge of Mr. Hill, and if so, did RUCO review his cost of capital testimony in**
16 **the above referenced Maine docket as it relates to Ms. Ahern’s PRPM™ model?**

17 A. Yes. Mr. Stephen G. Hill is a Certified Rate of Return Analyst (CRRA) and former Vice-
18 President of the Society of Utility Regulatory Financial Analysts (SURFA), and has
19 previously filed cost of capital testimony on behalf of RUCO before the Commission on
20 many occasions. In reviewing the docket, RUCO found that Mr. Hill addressed Ms.
21 Ahern’s PRPM™ model in oral surrebuttal testimony provided at hearing. A transcript of
22

23
24 ⁴¹ See Maine Water Company-Camden & Rockland Division, Maine Public Utilities Commission (Docket No. 2013-00362), Final Order, pp. 11-12.

1 Mr. Hill's surrebuttal testimony is available on the Maine Public Utilities Commission
2 website,⁴² and it serves as an insightful tutorial as to the reasons why cost of equity
3 estimates obtained from the PRPM™ should **not** be adopted in a regulatory rate
4 proceeding. As contained in the transcript, the following is a brief bullet-point overview of
5 Mr. Hill's substantive criticism of Ms. Ahern's PRPM™ model:

- 6
- 7 1) The threshold question to be asked when a new cost of equity
8 estimation model is introduced is whether it provides a reasonable
9 estimate of the COE, and the PRPM™ model developed by Ms. Ahern
10 and her former AUS colleagues fails to pass this threshold test because
11 it **overstates** the COE;
- 12 2) Unlike the DCF and CAPM models, both of which are based on financial
13 economics, the PRPM™ is based on **behavioral economics**;
- 14 3) Behavioral economics is used to measure a "utility function," **not** a
15 "dollar return function;"
- 16 4) The PRPM™ utilizes a historical data set of monthly returns, and
17 **assumes that investors are buying and selling the market every**
18 **month**;
- 19 5) In using the PRPM™ to estimate the cost of equity for utility companies,
20 Ms. Ahern improperly assumes that utility stocks are **not** defensive
21 stocks;⁴³
- 22 6) The PRPM™ is a consumption-based asset pricing model subject to
23 statistical GARCH analysis, and there are **three general problems**
24 associated with such models:
 - a) Changes in conditional variance are much **more dramatic** when
utilizing daily or **monthly data**, and much weaker at lower
frequencies (i.e., the stock price volatilities obtained by Ms. Ahern
when using monthly data are much more pronounced than had she
utilized yearly data);
 - b) Forecasts of excess stock returns do not move proportionally with
estimates of conditional variance – Ms. Ahern's PRPM™ analysis

21 ⁴² See Transcript of Hearing, Maine Water Company-Camden & Rockland Division, Maine Public Utilities
22 Commission (Docket No. 2013-00362), dated January 14, 2014. Mr. Hill's oral surrebuttal testimony appears on
pp. 57-97.

<https://mpuc-cms.maine.gov/CQM.Public.WebUI/Common/CaseMaster.aspx?CaseNumber=2013-00362>

23 ⁴³ To demonstrate that this is an invalid assumption, Mr. Hill cites to a definition of "defensive stock," obtained from
24 Investopedia, which reads as follows: "The utility industry is an example of defensive stocks because, during all
phases of the business cycle, people need gas and electricity. Many active investors will invest in defensive stocks
if a market downturn is expected."

1 assumes that conditional variance determines stock price
2 movements, but research shows that this is not the case; and
3 c) There is little evidence of cyclical variation and consumption
4 volatility that could explain the variation in stock market volatility.⁴⁴

5 **Q. You indicated that Mr. Hill's surrebuttal testimony was provided orally at hearing.**
6 **Did Ms. Ahern also testify at that hearing, and if so how did she respond to Mr. Hill's**
7 **criticism of the PRPM™?**

8 A. Yes, Ms. Ahern testified at the hearing, and her oral rebuttal testimony is included in the
9 transcript from that Maine docket. A review of that document indicates that at no time did
10 Ms. Ahern take exception to the criticism leveled against the PRPM™ by Mr. Hill.

11 **Q. In accordance with the Efficient Market Hypothesis, investors are assumed to be**
12 **"rational." In your judgement, would a so-called 'rational investor' buy and sell the**
13 **market on a monthly basis (i.e., churn the account) in the fashion the PRPM™ does**
14 **in Ms. Ahern's cost of equity analysis?**

15 A. No, and this is an additional reason why cost of equity estimates obtained from the
16 PRPM™ model should be rejected when setting rates for AWC's Western Group in this
17 proceeding.

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24 ⁴⁴ See Maine Water Company-Camden & Rockland Division, Maine Public Utilities Commission (Docket No. 2013-00362), *Surrebuttal Testimony of Stephen G. Hill*, Transcript of Hearing, dated January 14, 2014, pp. 57-98.

1 **Q. Ms. Ahern presents the results of her PRPM™ cost of equity estimates in Exhibit**
2 **PMA-7 (Page 2). As shown, column [2] presents the PRPM™ derived predicted risk**
3 **premiums for each of her sample companies, and among these risk premium**
4 **values, only two – (Aqua America (10.95 percent) and York Water Company (10.30**
5 **percent) – exceed ten percent.⁴⁵ Does RUCO have reason to believe that the 10.30**
6 **percent predicted risk premium shown for York Water is significantly overstated?**

7 **A. Yes.**

8
9 **Q. Please explain why RUCO believes the 10.30 percent PRPM™ derived predicted risk**
10 **premium for York Water to be significantly overstated.**

11 **A. As mentioned earlier, the PRPM™ model utilized by Ms. Ahern in her analysis was**
12 **developed by Ms. Ahern and several former associates with the firm, AUS Consultants.**
13 **In 2011, in an article co-authored by Ms. Ahern and published in the Journal of Regulatory**
14 **Economics, the authors make the following statement:**

15 **“Another problem is that the model [i.e., PRPM™ model] requires a**
16 **substantial time series history on stock returns data to develop**
17 **stable estimates of risk premia (emphasis added).”⁴⁶**

18
19
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23 ⁴⁵ Although a value not shown in PMA-7 (Page 2), Column [2], the sample average predicted risk premium for Mr. Ahern's sample group of companies is 8.25 percent.

24 ⁴⁶ Ahern, Pauline M., Hanley, Frank J., and Michelfelder, Richard A., “New Approach to Estimating the Cost of Common Equity Capital for Public Utilities,” *Journal of Regulatory Economics* (2011), p.277.

1 **Q. When was York Water Company founded, and how long has it been an investor-**
2 **owned water utility company?**

3 A York Water Company was founded in 1816, and has been an investor-owned water utility
4 since inception. Thus, the common stock of York Water Company has been publicly-
5 traded for a period of 200 years.

6

7 **Q. For purposes of obtaining a 10.30 percent PRPM™ derived predicted risk premium**
8 **for York Water, what time series of monthly stock price data does Ms. Ahern use?**

9 A A review of Ms. Ahern's PRPM™ work papers reveals that the time series of monthly
10 stock prices used to obtain a 10.30 percent predicted risk premium for York Water covered
11 the period, February 2001–May 2015.

12

13 **Q. So for purposes of her analysis, even though the common stock of York Water has**
14 **been publicly-traded for a period of 200 years, Ms. Ahern utilizes a time series of**
15 **stock price data covering a period of less than 15 years, true?**

16 A. Yes; this, despite the fact that in the article cited to above which she co-authored, Ms.
17 Ahern acknowledges that the PRPM™ *“requires a substantial time series history on stock*
18 *returns data to develop stable estimates of risk premia.”*

19

20 **Q. As noted, Ms. Ahern incorporates an 11.59 percent PRPM™ derived Risk Premium**
21 **cost of equity estimate into her analysis. Does Ms. Ahern incorporate PRPM™**
22 **derived metrics into her other models, as well?**

23 A. Yes. Ms. Ahern incorporates PRPM™ derived metrics on two occasions in the
24 development of the 4.87 percent equity risk premium component used in her Risk

1 Premium Using and Adjusted Total Market Approach model.⁴⁷ Additionally, Ms. Ahern
2 incorporates PRPM™ derived metrics on another occasion in the development of the 7.41
3 percent market risk premium component used in her CAPM.⁴⁸

4
5 **Q. Does use of PRPM™ derived metrics in Ms. Ahern's Risk Premium Using and**
6 **Adjusted Total Market Approach and CAPM models overstate the cost of equity**
7 **estimates obtained from those models?**

8 A. Yes.⁴⁹

9
10 **Q. In closing on the issue of Ms. Ahern's PRPM™ cost of equity estimation model, did**
11 **RUCO request Ms. Ahern to provide (i) the actual proprietary program utilized in**
12 **her PRPM™ cost of equity analysis and (ii) all data inputs used to compute the**
13 **PRPM™ derived predicted risk premiums in her cost of equity analysis, and if so,**
14 **did Ms. Ahern provide the information requested?**

15 A. Yes, RUCO requested this information in a data request, RUCO 2.08 (Information
16 provided in response to RUCO 2.08 is included in Attachment 4). However, the
17 information requested of Ms. Ahern was not provided.

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23 ⁴⁷ See Ahern Exhibits: PMA-7 (Page 3), Line 6; PMA-7 (Page 7); PMA-7 (Page 8), Line 2; and PMA-7 (Page 11),
Line 4.

24 ⁴⁸ See Ahern Exhibit PMA-8, Measure 3: Application of the PRPM to Ibbotson historical data.

⁴⁹ See (i) Ahern Exhibit PMA-7 (Page 8), compare the 5.89 percent Ibbotson Equity Risk Premium (Line 1) to the
6.34 percent Ibbotson Equity Risk Premium based on PRPM™ (Line 2); and (ii) Ahern Exhibit PMA-8, compare the
6.84 percent MRP based on Ibbotson historical data (Measure 2) to the 7.15 percent MRP with PRPM application
to that same Ibbotson historical data (Measure 3).

1 **Q. Has the Commission, in a prior rate proceeding, indicated that Ms. Ahern should**
2 **provide other parties access to her proprietary PRPM™ model, as well as the data**
3 **inputs used therein?**

4 A. Yes. In Decision No. 75268, issued in the aforementioned EPCOR docket, the
5 Commission stated as follows:

6 "We are also concerned that the other parties did not have access to
7 the actual program and data used by the Company because of the
8 proprietary nature of the model. Access to the model is critical for
multiple reasons, ranging from the possibility of data input errors, to
formula miscalculations, to manipulation of data."⁵⁰

9

10 **Q. Turning now to Ms. Ahern's CAPM analysis, does RUCO believe Ms. Ahern's CAPM**
11 **cost of equity estimates to be overstated?**

12 A. Yes, and for several reasons. First, as shown in Exhibit PMA-8, rather than relying on
13 beta values reported by *Value Line*, for each of her sample companies Ms. Ahern employs
14 a beta coefficient representing the average of (i) a *Value Line* adjusted beta and (ii) a
15 Bloomberg adjusted beta. Use of Bloomberg betas leads to an overstatement to the beta
16 component of her CAPM analysis.⁵¹ Second, as shown in Exhibit PMA-8, Ms. Ahern
17 employs a 7.41 percent MRP in her CAPM analysis, a figure obtained by taking the
18 average of four different MRP measures:

19 Measure 1: 6.11 percent (based on Value Line information);
20 Measure 2: 6.84 percent (based on Ibbotson historical data);
Measure 3: 7.15 percent (PRPM™ applied to Ibbotson data); and
21 Measure 4: 9.53 percent (based on Bloomberg data).

21

22

23

⁵⁰ Decision No. 75268, p. 41, lines 21-24

24 ⁵¹ Although figures not shown in the schedule, the sample average Bloomberg beta (.79375) exceeds the sample
average Value Line beta (.71875) by 10.43 percent $((.79375/.71875)-1 = .1043)$.

1 As can be seen, among these four MRP measures, that obtained from Bloomberg data
2 (i.e., Measure 4, 9.53 percent) **far exceeds** the others, while the PRPM™ derived MRP
3 based on Ibbotson historical data (i.e., Measure 3, 7.15 percent) **exceeds by 31 basis**
4 **points** the MRP obtained from Ibbotson historical data without PRPM™ application (i.e.,
5 Measure 2, 6.84 percent). RUCO believes the Bloomberg and PRPM™ derived MRP
6 inputs serve to overstate the 7.41 percent MRP used in Ms. Ahern's CAPM analysis, and
7 thus, her CAPM estimated cost of equity, as well.⁵² Third, Ms. Ahern's CAPM cost of
8 equity estimates are further overstated due to the use of a 3.69 percent forecasted risk-
9 free (R_f) rate. Lastly, inclusion of cost of equity estimates obtained from Ms. Ahern's
10 ECAPM model is unnecessary and redundant, and further serves to overstate her CAPM
11 results.

12
13 **Q. Please explain why cost of equity estimates obtained from the ECAPM should not**
14 **be relied upon.**

15 A. The ECAPM modification to the traditional CAPM is predicated on the notion that cost of
16 equity estimates derived from the CAPM are biased downward for companies having a
17 beta coefficient less than 1.0, and biased upward for companies having a beta coefficient
18 greater than 1.0. Use of an adjusted beta increases the beta coefficient for companies
19 with a beta less than 1.0 and decreases beta coefficient for companies with a beta greater
20 than 1.0. As noted, for purposes of her CAPM cost of equity analyses, Ms. Ahern utilizes
21 a beta representing the average of adjusted betas provided by *Value Line* and Bloomberg.

22
23 ⁵² Ms. Ahern's utilization of estimates provided by Bloomberg appears to be a recent development. In response to
24 RUCO 2.10, when asked why she included an equity risk premium based on data obtained from Bloomberg in this
docket but had not done so in the recent EPCOR case (i.e., Docket No. WS-01303A-14-0010), Ms. Ahern indicated
that Bloomberg Professional Services were not available to her at that time.

1 Because both the *Value Line* and Bloomberg betas are “adjusted” betas, the ECAPM beta
2 adjustment is an unnecessary redundancy which only serves to overstate the cost of
3 equity. As shown in Exhibit PMA-8, Ms. Ahern’s average ECAPM cost rate (9.76 percent)
4 exceeds her average traditional CAPM cost rate (9.31 percent) by 45 basis points ($.0976$
5 $- .0931 = .0045$), while her median ECAPM cost rate (9.82 percent) exceeds her median
6 traditional CAPM cost rate (9.40 percent) by 42 basis points ($.0982 - .0940 = .0042$). While
7 it is true that Ms. Ahern relies on the average mean/median 9.58 percent cost rate shown
8 in column [8] of Exhibit PMA-8 as her CAPM estimated cost of equity, the differences in
9 average and median cost rates noted above as obtained from Ms. Ahern’s CAPM and
10 ECAPM models clearly demonstrate that ECAPM estimates overstate the cost of equity.

11
12 **Q. As shown in Exhibit PMA-8, the 6.84 percent MRP (i.e., Measure 2) used by Ms.**
13 **Ahern to obtain the 7.41 percent MRP used in her CAPM analysis was obtained**
14 **through the exclusive use of arithmetic mean returns, with no consideration given**
15 **to the use of geometric mean returns. Has the Commission previously ruled on the**
16 **issue of geometric returns and whether they should be considered in the**
17 **development of an equity risk premium?**

18 **A. Yes, and the ACC has consistently ruled that geometric returns should be considered**
19 **in the development of an equity risk premium.⁵³**

20
21
22

⁵³ See Decision No. 70011 (dated November 27, 2007), in *UNS Gas, Inc.* (Docket No. G-04204A-06-0463); Decision
23 No. 70360 (dated May 27, 2008), in *UNS Electric, Inc.* (Docket No. E-04204A-06-0783);
24 Decision No. 71308 (dated October 21, 2009), in *Chaparral City Water Company* (Docket No. W-02113A-07-0551);
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 **Q. How does RUCO respond to Ms. Ahern's proposed 63 basis point upward credit**
2 **risk adjustment?**

3 A. Ms. Ahern's proposed credit risk adjustment has no merit, as a 1994 study by S. Brooks
4 Marshall which investigated the relationship between equity risk and bond risk concluded
5 that bond ratings fail to explain a large portion of total equity risk (defined as equity risk
6 premiums and beta). Specifically, the author concluded:

7 "These data show that using a bond rating as the sole measure for
8 selecting a set of comparable companies for a cost-of-equity
9 determination will not necessarily produce a group of companies that
have similar equity risk. Most of this risk is explained by characteristics
other than bond ratings."⁵⁴

10 Accordingly, the proposed 63 basis point upward credit risk adjustment should be denied.

11
12 **Q. For purposes of her 10.75 percent recommended cost of equity for AWC, Ms. Ahern**
13 **also makes provision for an upward 50 basis point business risk/small size**
14 **adjustment. How does RUCO respond?**

15 A. Empirical research has demonstrated that a small company risk premium adjustment to
16 the cost of equity is unwarranted for regulated utilities. Annie Wong, of Western
17 Connecticut State University, conducted a study on utility stocks to determine if the so-
18 called size effect exists in the utility industry, and she writes as follows:

19 The fact that the two samples show different, though weak, results
20 indicates that utility and industrial stocks do not share the same
21 characteristics. First, given firm size, utility stocks are consistently less
22 risky than industrial stocks. Second, industrial betas tend to decrease with
23 firm size but utility betas do not. These findings may be attributed to the
fact that all public utilities operate in an environment with regional
monopolistic power and regulated financial structure. As a result, the
business and financial risks are very similar among the utilities regardless

24 ⁵⁴ Marshall, S. Brooks. "Bond Ratings: A Poor Predictor of Equity Risk," *Public Utilities Fortnightly*, Oct. 15, 1994, pp. 27-28.

1 of their size. Therefore, utility betas would not necessarily be expected to
2 be related to firm size.

3 The object of this study is to examine if the size effect exists in the utility
4 industry. After controlling for equity values, there is some weak evidence
5 that firm size is a missing factor from the CAPM for the industrial but not
6 for the utility stocks. This implies that although the size phenomenon has
7 been strongly documented for industrials, the findings suggest that **there
8 is no need to adjust for the firm size in utility regulations.**⁵⁵ (emphasis
9 added)

7 **Q. Has the Commission previously ruled on the issue of firm size and whether it
8 warrants a risk premium adjustment to the cost of equity?**

9 **A.** Yes. In Decision No. 64282,⁵⁶ the Commission ruled in a prior Arizona Water case that
10 firm size does not warrant recognition of a risk premium stating, "We do not agree with
11 the Company's proposal to assign a risk premium to Arizona Water based on its size
12 relative to other publicly traded water utilities...." The Commission confirmed its previous
13 ruling in Decision No. 64727⁵⁷ for Black Mountain Gas agreeing with Staff that "the 'firm
14 size phenomenon' does not exist for regulated utilities, and that therefore there is no need
15 to adjust for risk for small firm size in utility regulation." All companies have firm-specific
16 risks; therefore, the existence of unique risks for a company does not lead to the
17 conclusion that its total risk is greater than other entities. Moreover, as previously
18 discussed, investors cannot expect compensation for firm-specific risk since it can be
19 eliminated through diversification.

20
21
22
23 ⁵⁵ Annie Wong, "Utility Stock and the Size Effect: An Empirical Analysis," *Journal of the Midwest Finance
24 Association*, (1993), p.98.

⁵⁶ Dated December 28, 2001.

⁵⁷ Dated April 17, 2002.

1 **Q. Has the Commission issued a more recent decision which reconfirms its prior**
2 **position regarding firm size?**

3 A. Yes, in a recent EPCOR Water Arizona case in which Ms. Ahern appeared as the cost of
4 capital witness on behalf of the applicant.⁵⁸ Specifically, in Decision No. 75268⁵⁹ the
5 Commission ruled as follows:

6 **Nor are we persuaded by Ms. Ahern's claim that EPCOR's "size"**
7 **should be recognized as a business risk factor.** Although a company's
8 size may sometimes be considered as a business risk factor, **for utilities**
9 **of substantial size (i.e., those that have access to the equity capital**
10 **markets) it is a minimal consideration in determining business risk.**
11 Small utilities, (e.g., non-class A utilities) may have additional risk due to
12 the inability to hire employees or contract for sufficient levels of expertise
13 management, technical & financial) to perform effectively and efficiently.
14 Small utilities also have other risks such as information access, greater
15 annual variability in operating expenses, and greater regulatory risk both
16 due to lack of skilled rate case personnel and the percentage of operating
17 expenses and rate base components reviewed by Staff and intervenors.
18 Due to the latter two reasons, for any adopted return on equity the
19 distribution of actual returns is greater for a small utility than for a large
20 utility, and greater variability means greater risk. However, most of the
21 proxy companies used in the cost of capital analyses, including EPCOR,
22 are a conglomeration of many smaller water systems and have the
23 capacity to attract the appropriate level of talent for proficient operation.
24 Thus, the business risk for any of the EPCOR systems parallels that of the
sample companies, and **we do not believe a cost of equity adjustment**
for size is appropriate. (emphasis added)

18 **Q. To your knowledge, do EPCOR and AWC rank as the two largest water utility**
19 **companies in Arizona subject to rate regulation by the Commission?**

20 A. Yes, they do.

24 ⁵⁸ EPCOR Water Arizona, Inc. (Docket No. WS-01303A-14-0010).

⁵⁹ Dated September 8, 2015.

1 **Q. Does this suggest that pursuant to Decision No. 75268, Ms. Ahern's 50 basis point**
2 **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 capital structure composed of 46.31 percent long-term debt and 53.69
9 percent common equity;

10 2) A cost of debt of 5.43 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.

16

17

18

19

20

21

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23

24

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/W 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:

Liberty Utilities (Black Mountain Sewer)	(Docket No. SW-02361A-15-0206, et al)
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 **40.79** P/E RATIO **24.9** (Trailing: 24.7 Median: 20.0) RELATIVE P/E RATIO **1.44** DIV'D YLD **2.3%** VALUE LINE

TIMELINESS 2 Raised 6/5/15
SAFETY 2 Raised 7/20/12
TECHNICAL 3 Lowered 11/27/15
BETA .70 (1.00 = Market)

High: 13.4 17.3 21.9 23.1 21.0 19.4 19.8 18.2 24.1 33.1 38.7 44.1
 Low: 10.4 12.2 15.1 16.8 13.5 14.9 15.6 15.3 17.0 24.0 27.0 35.8

LEGENDS
 — 1.25 x Dividends p sh divided by Interest Rate
 Relative Price Strength
 2-for-1 split 9/13
 Options: Yes
 Shaded area indicates recession

2018-20 PROJECTIONS

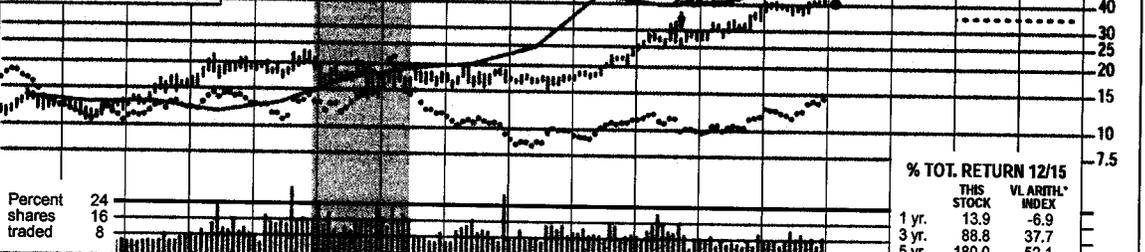
	Price	Gain	Ann'l Total Return
High	50	(+25%)	7%
Low	35	(-15%)	-1%

Insider Decisions

	F	M	A	M	J	J	A	S	O
to Buy	0	0	0	0	0	0	0	0	0
Options	0	1	0	1	0	1	0	2	3
to Sell	0	1	0	0	3	1	1	5	3

Institutional Decisions

	1Q2015	2Q2015	3Q2015
to Buy	86	80	91
to Sell	93	82	89
Hld's(000)	23637	23707	23779



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	12.45	12.35	Revenues per sh	15.00
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	2.90	"Cash Flow" per sh	3.45
.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 A	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 B	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	2.20	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	13.00	13.85	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	36.50	36.50	Common Shs Outst'g C	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	24.7		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	1.25		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%	2.2%		Avg Ann'l Div'd Yield	2.7%

CAPITAL STRUCTURE as of 9/30/15
 Total Debt \$325.9 mill. Due in 5 Yrs \$41.6 mill.
 LT Debt \$325.6 mill. LT Interest \$21.5 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 36,728,248 shs.
 as of 11/2/15

MARKET CAP: \$1.5 billion (Mid Cap)

CURRENT POSITION (\$MILL.)

	2013	2014	9/30/15
Cash Assets	38.2	76.0	27.3
Accts Receivable	23.8	18.8	22.1
Other	129.6	114.7	86.1
Current Assets	191.6	209.5	135.5
Accts Payable	49.8	41.9	46.5
Debt Due	6.3	.3	.3
Other	44.8	57.1	77.2
Current Liab.	100.9	99.3	124.0

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '12-'14 to '18-'20
Revenues	6.0%	5.5%	3.5%
"Cash Flow"	8.5%	9.0%	5.0%
Earnings	11.0%	14.0%	6.0%
Dividends	5.5%	8.5%	7.5%
Book Value	6.0%	6.5%	3.0%

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	133.0	106.5	455
2016	95.0	110	135	110	450

EARNINGS PER SHARE A

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	.56	.31	1.60
2016	.31	.46	.60	.33	1.70

QUARTERLY DIVIDENDS PAID B

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.14	.14	.1775	.1775	.64
2013	.1775	.1775	.2025	.2025	.76
2014	.2025	.2025	.213	.213	.83
2015	.213	.213	.224	.224	.87
2016					

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

Shares of American States Water have not performed well lately. Since our October report, the equity of the company has declined 1.3% compared to an average gain of 4.9% for the typical water utility, and a 1.9% rise in the S&P 500. Indeed, only two out of the nine members in the group posted losses, and each one has significant operations in California.

Despite the ongoing drought, we expect earnings growth to be healthy in 2016. In California, petitions for higher rates are made triennially. So, this year is important as we expect the California Public Utility Commission to be reasonable regarding the Golden State Water subsidiary's request for higher tariffs. Based on this assumption, and a greater contribution from ASUS (see below), we think the company's bottom line should rise a solid 6%, to \$1.70 a share.

Nonregulated businesses may play a more important role in the future. Through its ASUS subsidiary, the company has been operating the water systems at several U.S. Army bases. Responsible for an estimated 15% of income, this percentage could rise as the government pri-

vatizes more of these facilities. We think ASUS should win more contracts, which are for a 50-year period. This could provide a boost to earnings because returns on equity in this sector are not regulated.

All in all, American States is in good shape. Like all water utilities, Golden State has to invest heavily in upgrading its antiquated water infrastructure. With a strong balance sheet, however, we think the financial integrity of the firm will be maintained through the late decade. Another benefit is operating in California, as the regulatory environment has improved significantly in years past.

Shares of American States are ranked to outperform the broader market averages in the year ahead. This equity might only be suitable for momentum accounts, however. That's because many water utility investors traditionally take a long-term view of their holdings. From this perspective, the stock looks more than fully valued. Indeed, even with the recent weakness in the stock price, AWR's total return potential is still substantially lower than the Value Line median.

James A. Flood January 15, 2016

(A) Primary earnings. Excludes nonrecurring gains/(losses): '04, 7¢; '05, 13¢; '06, 3¢; '08, (14¢); '10, (23¢); '11, 10¢. Next earnings report due late February. 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

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	90
Earnings Predictability	70

To subscribe call 1-800-VALUELINE

AMERICAN WATER NYSE-AWK

RECENT PRICE **60.15**

P/E RATIO **22.4** (Trailing: 23.1 Median: NMF)

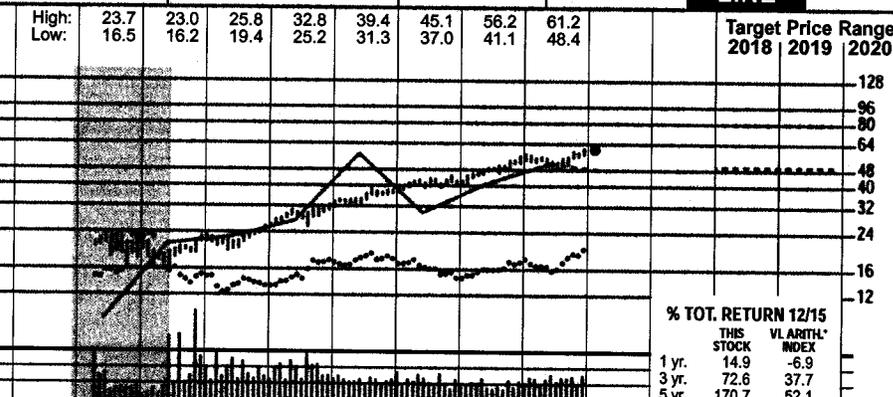
RELATIVE P/E RATIO **1.29**

DIV'D YLD **2.4%**

VALUE LINE

TIMELINESS 2 Lowered 7/10/15
SAFETY 3 New 7/25/08
TECHNICAL 3 Lowered 11/27/15
BETA .70 (1.00 = Market)

LEGENDS
 0.85 x Dividends p sh divided by Interest Rate
 Relative Price Strength
 Options: Yes
 Shaded area indicates recession



2018-20 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	80	(+35%)	10%
Low	50	(-15%)	-1%

Insider Decisions

	F	M	A	M	J	J	A	S	O
to Buy	0	0	0	0	0	0	1	0	0
Options	2	5	0	2	0	1	0	0	0
to Sell	2	5	0	4	0	0	1	0	0

Institutional Decisions

	1Q2015	2Q2015	3Q2015	Percent shares traded
to Buy	213	247	211	21
to Sell	222	206	220	14
Hld's(000)	147193	145636	148013	7

1999	2000	2001	2002	2003	2004	2005	2006	2007 ^E	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	17.55	18.45	Revenues per sh	21.60
--	--	--	--	--	--	--	.65	d.47	2.87	2.89	3.56	3.73	4.27	4.36	4.75	5.05	5.30	"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 ^A	3.25
--	--	--	--	--	--	--	--	--	.40	.82	.86	.90	1.21	.84	1.21	1.33	1.45	Div'd Decl'd per sh ^B	1.75
--	--	--	--	--	--	--	4.31	4.74	6.31	4.50	4.38	5.27	5.25	5.50	5.33	7.20	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	29.05	30.40	Book Value per sh ^D	36.75
--	--	--	--	--	--	--	160.00	160.00	160.00	174.63	175.00	175.66	176.99	178.25	179.46	179.00	179.00	Common Shs Outst'g ^C	185.00
--	--	--	--	--	--	--	--	--	18.9	15.6	14.6	16.8	16.7	19.9	20.0	20.8	--	Avg Ann'l P/E Ratio	20.0
--	--	--	--	--	--	--	--	--	1.14	1.04	.93	1.05	1.06	1.12	1.05	1.06	--	Relative P/E Ratio	1.25
--	--	--	--	--	--	--	--	--	4.2%	4.2%	3.8%	3.1%	3.4%	2.0%	2.5%	2.5%	--	Avg Ann'l Div'd Yield	2.7%
CAPITAL STRUCTURE as of 9/30/15																		4000	
Total Debt \$6342.6 mil. Due in 5 Yrs \$1294.5 mil.																		600	
LT Debt \$5940.6 mil. LT Interest \$295.0 mil. (53% of Cap'l)																		37.5%	
Leases, Uncapitalized: Annual rentals \$14.0 mil.																		53.0%	
Pension Assets 12/14 \$1428.2 mill. Oblig. \$1746.5 mill.																		47.0%	
Pfd Stock \$14.3 mill. Pfd Div'd \$5.5 mill																		14500	
Common Stock 179,469,453 shs. as of 10/30/2015																		16000	
MARKET CAP: \$10.8 billion (Large Cap)																		5.5%	
CURRENT POSITION 2013 2014 9/30/15 (\$MILL.)																		9.0%	
Cash Assets 27.0 23.1 75.2																		9.0%	
Accts Receivable 244.6 267.1 341.7																		4.0%	
Other 278.8 638.3 462.1																		54%	
Current Assets 550.4 661.4 879.0																			
Accts Payable 264.1 285.8 281.3																			
Debt Due 644.5 511.1 402.0																			
Other 326.9 444.1 482.1																			
Current Liab. 1235.5 1241.0 1165.4																			

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.

New Jersey is its largest market accounting for 22.7% of regulated revenues. Has roughly 6,400 employees. BlackRock, Inc., owns 10.0% of outstanding shares; Vanguard, 6.3%; officers & directors, less than 1.0%. (3/15 Proxy). Pres. & CEO: Susan Story. Chairman: George Mackenzie. Addr.: 1025 Laurel Oak Road, Voorhees, NJ 08043. Tel.: 856-346-8200. Internet: www.amwater.com.

ANNUAL RATES

	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%

Shares of American Water Works continue to rise. Once again, the stock had a strong three-month showing. Since our mid-October report, AWK increased 8.1% in value compared to the water utility average of 4.9% and the 1.9% for the S&P 500 Index. Indeed, the equity reached a new all time high before trading lower during a general market sell off.

Earnings prospects for 2016 are bright. We expect the company's share net to rise a healthy 8% over our 2015 estimate. Much of the earnings improvement will continue to be derived from synergies from the acquisitions, as well as successful cost controls on existing operations.

QUARTERLY REVENUES (\$ mill.)

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
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	896.2	763.6	3140
2016	735	830	920	815	3300

Acquisitions are an integral part of management's long-term strategy. In the U.S., there are literally thousands of small municipally-run water districts. (Even after excluding the very minor operations, there are still over 50,000.) As these systems age and large amounts of capital are required to modernize the infrastructure, some of the more financially-pressed districts look to be purchased. This often works out very well for the acquirer because of the large amount of redundancies in the industry that can be eliminated, resulting in higher returns. As the biggest investor-owned water utility in the country, American Water Works has been using its size to benefit from this situation for years, making hundreds of acquisitions.

The balance sheet is just average. The capital expenditure budget has been, and should continue to be burdensome through late decade. Internally generated funds will not be sufficient to finance the investment, so additional debt may be required. The firm has not had a major equity offering in years and the timing might be good considering the lofty stock price.

EARNINGS PER SHARE ^A

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.28	.66	.87	.30	2.11
2013	.32	.57	.84	.33	2.06
2014	.39	.62	.86	.52	2.39
2015	.44	.68	.96	.52	2.60
2016	.48	.72	1.03	.57	2.80

Our Ranking System continues to favor shares of American Water Works. Long-term income-oriented investors, who usually are attracted to water utility stocks for current income and dividend growth prospects, may want to look elsewhere, however. That's because the stock's yield is now just equal to the Value Line median, and its total-return prospects through 2018-2020 are substantially below average.

QUARTERLY DIVIDENDS PAID ^B

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.23	.23	.25	.50	1.21
2013	--	.28	.28	.28	.84
2014	.28	.31	.31	.31	1.21
2015	.31	.34	.34	.34	1.33
2016					

James A. Flood January 15, 2016

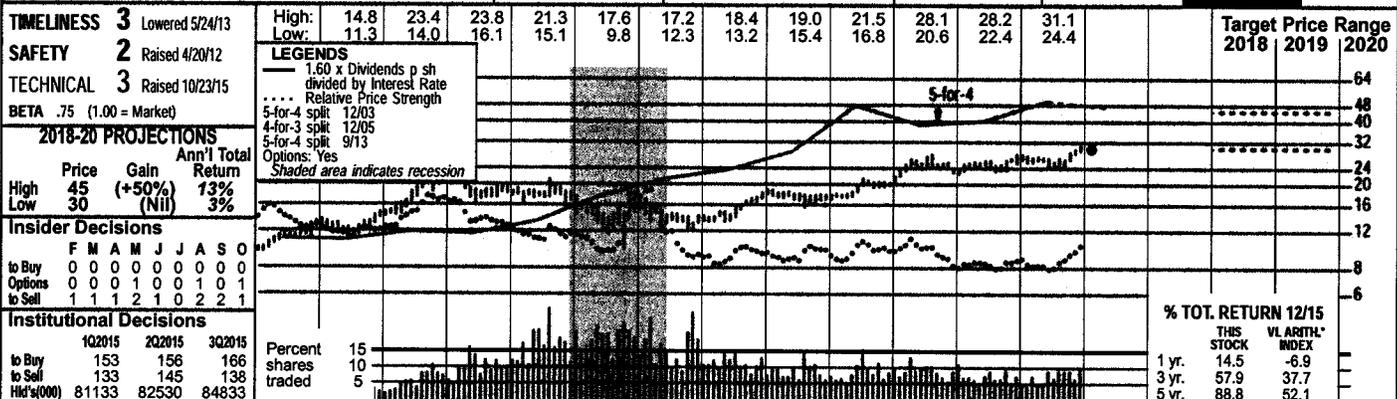
(A) Diluted earnings. Excludes nonrecurring losses: '08, \$4.62; '09, \$2.63; '11, \$0.07. Discontinued operations: '06, (\$0.04); '11, \$0.03; '12, (\$0.10); '13, (\$0.01). GAAP used as of 2014. Next earnings report due late February. Quarterly earnings may not sum due to rounding. (B) Dividends paid in March, June, September, and December. ■ Div. reinvestment available. Two payments made in 4th quarter of 2012. (C) In millions. (D) Includes intangibles. In 2014: \$1.21 billion, \$6.73/share. (E) Pro forma numbers for '06 & '07.

Company's Financial Strength B+
Stock's Price Stability 100
Price Growth Persistence 85
Earnings Predictability 35

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AQUA AMERICA NYSE-WTR

RECENT PRICE **29.65** P/E RATIO **23.2** (Trailing: 23.7) Median: 23.0
 RELATIVE P/E RATIO **1.34** DIV'D YLD **2.5%** 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
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	4.65	4.75	Revenues 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	"Cash Flow" per sh
.33	.37	.41	.43	.46	.51	.57	.56	.57	.58	.62	.72	.83	.87	1.16	1.20	1.25	1.35	Earnings per sh ^
.22	.23	.24	.26	.28	.29	.32	.35	.38	.41	.44	.47	.50	.54	.58	.63	.69	.76	Div'd Decl'd per sh B=
.72	.93	.87	.96	1.06	1.23	1.47	1.84	1.43	1.58	1.66	1.89	1.90	1.98	1.73	1.84	1.95	2.00	Cap'l Spending 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	9.80	10.10	Book Value per sh
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	178.50	174.00	Common Shs Outs'g C
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	21.4	21.4	Avg Ann'l 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	Relative P/E Ratio
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%	2.6%	2.6%	Avg Ann'l Div'd Yield

CAPITAL STRUCTURE as of 9/30/15
 Total Debt \$1756.7 mill. Due in 5 Yrs \$437.0 mill.
 LT Debt \$1681.1 mill. LT Interest \$74.0 mill. (49% of Cap'l)

496.8	533.5	602.5	627.0	670.5	726.1	712.0	757.8	768.6	779.9	815	825	Revenues (\$mill)	1000
91.2	92.0	95.0	97.9	104.4	124.0	144.8	153.1	205.0	213.9	220	235	Net Profit (\$mill)	280
38.4%	39.6%	38.9%	39.7%	39.4%	39.2%	32.9%	39.0%	10.0%	10.5%	10.0%	11.0%	Income Tax Rate	23.0%
--	--	--	--	--	--	--	--	1.1%	2.4%	2.0%	2.5%	AFUDC % to Net Profit	3.0%
52.0%	51.6%	55.4%	54.1%	55.6%	56.6%	52.7%	52.7%	48.9%	48.5%	49.5%	49.5%	Long-Term Debt Ratio	50.0%
48.0%	48.4%	44.6%	45.9%	44.4%	43.4%	47.3%	47.3%	51.1%	51.5%	50.5%	50.5%	Common Equity Ratio	50.0%
1690.4	1904.4	2191.4	2306.6	2495.5	2706.2	2846.8	2929.7	3003.6	3216.0	3425	3550	Total Capital (\$mill)	4000
2280.0	2506.0	2792.8	2997.4	3227.3	3469.3	3612.9	3936.2	4167.3	4402.0	4675	4900	Net Plant (\$mill)	5000
6.9%	6.4%	5.9%	5.7%	5.6%	5.9%	6.9%	6.6%	8.0%	7.8%	7.5%	7.5%	Return on Total Cap'l	8.5%
11.2%	10.0%	9.7%	9.3%	9.4%	10.6%	11.6%	11.0%	13.4%	12.9%	13.0%	13.0%	Return on Shr. Equity	14.0%
11.2%	10.0%	9.7%	9.3%	9.4%	10.6%	11.6%	11.0%	13.4%	12.9%	13.0%	13.5%	Return on Com Equity	14.0%
4.9%	3.7%	3.2%	2.8%	2.7%	3.7%	4.6%	4.3%	6.7%	6.1%	5.5%	6.0%	Retained to Com Eq	5.5%
56%	63%	67%	70%	72%	65%	60%	61%	50%	52%	55%	56%	All Div'ds to Net Prof	61%

Pension Assets-12/14 232.4 mill. **Oblig.** \$281.2 mill.
Pfd Stock None
Common Stock 176,428,025 shares as of 10/23/15
MARKET CAP: \$5.2 billion (Mid Cap)

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; Vanguard 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.

Shares of Aqua America have been on a roll. Like several other water utility stocks, this equity has turned in an excellent performance since our mid-October report, increasing roughly 11% in value. In contrast, the typical stock in the group rose about 5%, while the S&P 500 gained only 2%, over the same period. **Our earnings estimates are unchanged.** Last year's fourth-quarter profits should probably be similar to 2014's. For the full year, we expect Aqua's share net to rise a decent 4%. (Comparisons on a year-over-year basis would look better if not for an unusual gain posted in 2014.) In 2016, results should be more impressive as Aqua should benefit from a combination of factors, including synergies derived from many of its acquisitions, rate relief, and relative constructive regulatory treatment. All told, we think a solid 7% rise in earnings per share is possible. **Aqua is one of the nation's best-run water utilities.** There may be only nine members in this industry, but the company has some compelling attributes. For starters, it is one of only a handful of firms that has a meaningful market capitaliza-

ANNUAL RATES Past 10 Yrs. Past 5 Yrs. Est'd '12-'14 of change (per sh)

Revenues	5.5%	3.0%	5.5%
"Cash Flow"	8.0%	8.0%	7.0%
Earnings	8.5%	13.0%	7.5%
Dividends	7.5%	7.0%	9.5%
Book Value	7.5%	6.5%	5.5%

QUARTERLY REVENUES (\$ mill.)

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
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	221.1	197.8	815
2016	192	208	225	200	825

EARNINGS PER SHARE ^

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.15	.24	.29	.19	.87
2013	.26	.30	.36	.24	1.16
2014	.24	.31	.38	.27	1.20
2015	.27	.32	.38	.28	1.25
2016	.28	.34	.42	.31	1.35

QUARTERLY DIVIDENDS PAID B=

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.132	.132	.132	.14	.54
2013	.14	.14	.152	.152	.58
2014	.152	.152	.165	.165	.63
2015	.165	.165	.178	.178	.69

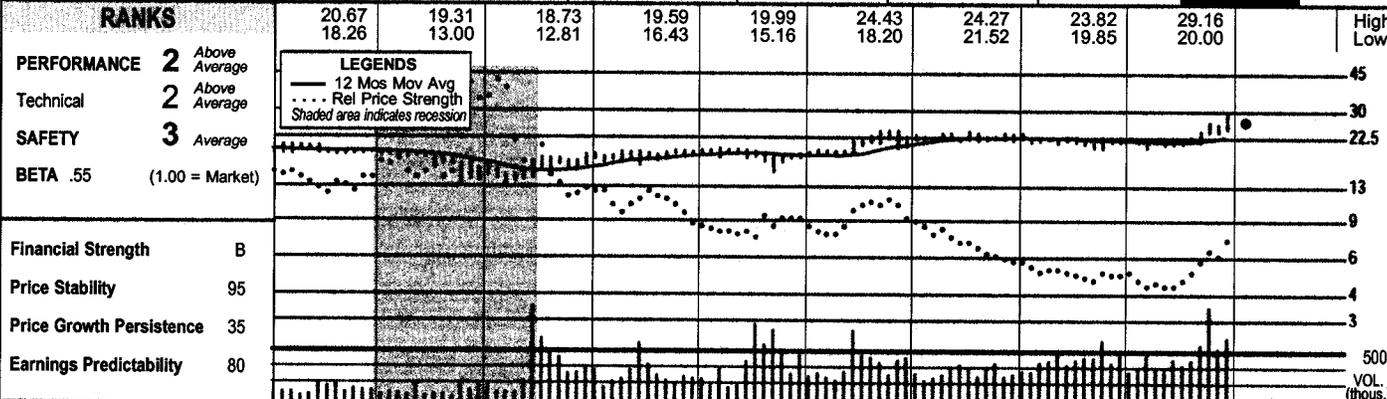
(A) Diluted egs. Excl. nonrec. gains (losses): '99, (9¢); '00, 2¢; '01, 2¢; '02, 4¢; '03, 3¢; '12, 18¢. Excl. gain from disc. operations: '12, 7¢; '13, 9¢; '14, 11¢. May not sum due to rounding.
 (B) Dividends historically paid in early March, June, Sept. & Dec. = Div'd. reinvestment plan available (5% discount).
 (C) In millions, adjusted for stock splits.

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Company's Financial Strength A
Stock's Price Stability 95
Price Growth Persistence 60
Earnings Predictability 100

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tion (\$5.2 billion). Furthermore, despite a large capital budget, the company's finances are solid. In addition, there are thousands of small municipally-owned water districts that can be purchased by larger water companies like Aqua and made more profitable due to the large amount of redundancies prevalent in the industry. Acquisitions are usually small, so the process is ongoing. For example, the company made 16 purchases last year alone. We are not sure how many will eventually be made, but we expect the customer base to be increased by 1.5%-2% annually, via this method. **We think this stock has lost some of its appeal.** A water utility is attractive in part for its yield and dividend growth prospects. Due to the recent run-up in WTR's price, its yield is now only 10 basis points higher than the Value Line median. So, while Aqua remains a very sound company, we think that the market may be placing too high a premium on its shares. Also, with so many positives factored into the current price, we think the equity may be vulnerable to any bad news. *James A. Flood* *January 15, 2016*



© 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	1.28 ^{A,B}	1.29 ^C /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	21.0	20.8/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%	--	

^ANo. of analysts changing earn. est. in last 2 days: 0 up, 0 down, consensus 5-year earnings growth not available. ^BBased upon 2 analysts' estimates. ^CBased upon one analyst's estimate.

ANNUAL RATES					ASSETS (\$mill.)		
of change (per share)	5 Yrs.	1 Yr.			2013	2014	9/30/15
Sales	1.0%	4.0%			4	.2	.5
"Cash Flow"	3.5%	9.0%			8.1	8.4	6.6
Earnings	3.0%	14.0%			1.5	1.9	1.7
Dividends	3.5%	3.0%			3.3	6.1	6.2
Book Value	3.0%	2.0%			13.3	16.6	15.0
Fiscal Year	QUARTERLY SALES (\$mill.)				LIABILITIES (\$mill.)		
	1Q	2Q	3Q	4Q	Full Year		
12/31/13	16.3	17.8	18.1	16.9	69.1	Accts Payable	4.1
12/31/14	16.9	17.9	19.6	18.1	72.5	Debt Due	12.2
12/31/15	18.0	19.5	20.8			Other	9.3
12/31/16						Current Liab	25.6
							3.8
							19.9
							13.7
							9.7
							27.3
Cal-endar	QUARTERLY DIVIDENDS PAID				LONG-TERM DEBT AND EQUITY as of 9/30/15		
	1Q	2Q	3Q	4Q	Full Year		
2013	.203	.206	.206	.209	.82	Total Debt \$117.6 mill.	Due in 5 Yrs. NA
2014	.209	.212	.212	.215	.85	LT Debt \$103.9 mill.	
2015	.215	.218	.218	.222	.87	Including Cap. Leases NA	(45% of Cap'l)
2016						Leases, Uncapitalized Annual rentals NA	
						Pension Liability \$3 mill. in '14 vs. \$3 mill. in '13	
						Pfd Stock None	Pfd Div'd Paid None
						Common Stock 9,003,000 shares	(55% of Cap'l)

INDUSTRY: Water Utility

BUSINESS: Artesian Resources Corp. operates as a holding company of wholly-owned subsidiaries offering water, wastewater services, and related services. Artesian Water Co., the principal subsidiary, is the oldest and largest investor-owned water utility on the Delmarva Peninsula, supplying roughly 7.3 billion gallons of water per year through 1,201 miles of water main to about 300,000 people. Artesian Wastewater Management, Inc. is a regulated entity that owns wastewater collection and treatment infrastructure and provides wastewater services to customers in Delaware as a regulated public wastewater service company. As of September 30, 2015, it owned and operated four wastewater treatment facilities, which are capable of treating approximately 730,000 gallons per day and can be expanded to treat 1.6 million gallons per day. Its Artesian Water Maryland distributes and sells water to residential, commercial, industrial, and municipal customers in Cecil County, MD. Has 237 employees. Chairman, C.E.O. & President: Dian C. Taylor. Address: 664 Churchmans Rd., Newark, DE 1902. Tel.: (302) 453-6900. Internet: <http://www.artesianwater.com>. E.B.

January 15, 2016

TOTAL SHAREHOLDER RETURN
 Dividends plus appreciation as of 12/31/2015

3 Mos.	6 Mos.	1 Yr.	3 Yrs.	5 Yrs.
15.79%	33.86%	27.52%	38.51%	77.44%

CALIFORNIA WATER NYSE-CWT

RECENT PRICE **23.24** P/E RATIO **20.0** (Trailing: 23.2 Median: 20.0) RELATIVE P/E RATIO **1.16** DIV'D YLD **3.0%** VALUE LINE

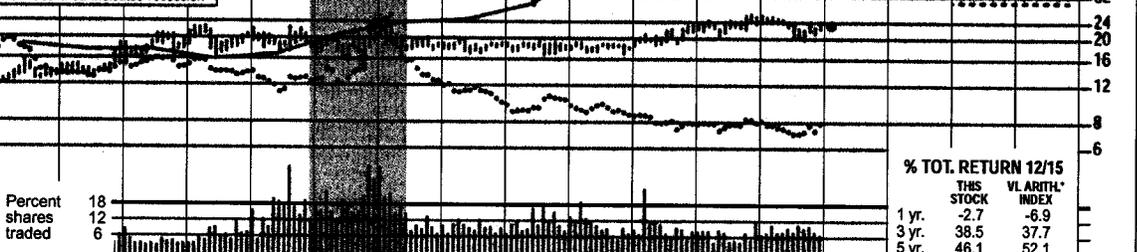
TIMELINESS 3 Raised 1/8/16
SAFETY 3 Lowered 7/27/07
TECHNICAL 5 Lowered 12/18/15
BETA .75 (1.00 = Market)

High: 19.0 21.1 22.9 22.7 23.3 24.1 19.8 19.4 19.3
 Low: 13.0 15.6 16.4 17.1 13.8 16.7 16.9 16.7 16.8
LEGENDS
 1.33 x Dividends p sh divided by Interest Rate
 Relative Price Strength
 2-for-1 split 6/11
 Options: Yes
 Shaded area indicates recession

2018-20 PROJECTIONS
 Price Gain Ann'l Total
 High 45 (+95%) 20%
 Low 30 (+30%) 7%

Insider Decisions
 F M A M J J A S O
 to Buy 0 0 0 0 0 0 0 1 0 0
 Options 0 3 0 0 0 0 0 0 0 0
 to Sell 0 2 0 1 0 0 1 0 0 0

Institutional Decisions
 10/20/15 20/20/15 30/20/15
 to Buy 79 82 69
 to Sell 67 66 74
 Hld's(000) 29379 29659 28655
 Percent shares traded 18 12 6



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Revenues per sh	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
"Cash Flow" per sh	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	2.30	2.60
Earnings per sh A	.77	.66	.47	.63	.61	.73	.74	.67	.75	.95	.98	.91	.86	1.02	1.02	1.19	1.00	1.25
Div'd Decl'd per sh B	.54	.55	.56	.56	.56	.57	.57	.58	.58	.59	.59	.60	.62	.63	.64	.65	.67	.69
Cap'l Spending per sh	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	3.30	3.00
Book Value per sh C	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	13.45	13.90
Common Shs Outst'g D	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
Avg Ann'l P/E Ratio	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	23.3	23.0
Relative P/E Ratio	1.01	1.27	1.39	1.08	1.26	1.06	1.33	1.58	1.39	1.19	1.31	1.29	1.34	1.14	1.13	1.04	1.18	1.45
Avg Ann'l Div'd Yield	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%	2.9%	3.0%

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Revenues (\$mill) E	320.7	334.7	367.1	410.3	449.4	460.4	501.8	560.0	584.1	597.5	585	600	720	77.5	720	77.5	720	77.5
Net Profit (\$mill)	27.2	25.6	31.2	39.8	40.6	37.7	36.1	42.6	47.3	56.7	60.0	60.0	720	77.5	720	77.5	720	77.5
Income Tax Rate	42.4%	37.4%	39.9%	37.7%	40.3%	39.5%	40.5%	37.5%	30.3%	33.0%	28.0%	29.0%	35.5%	5.0%	35.5%	5.0%	35.5%	5.0%
AFUDC % to Net Profit	3.3%	10.6%	8.3%	8.6%	7.6%	4.2%	7.6%	8.0%	4.3%	2.7%	7.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Long-Term Debt Ratio	48.3%	43.5%	42.9%	41.6%	47.1%	52.4%	51.7%	47.8%	41.6%	40.1%	40.0%	41.5%	41.5%	41.5%	41.5%	41.5%	41.5%	41.5%
Common Equity Ratio	51.1%	55.9%	56.6%	58.4%	52.9%	47.6%	48.3%	52.2%	58.4%	59.9%	60.0%	58.5%	58.5%	58.5%	58.5%	58.5%	58.5%	58.5%
Total Capital (\$mill)	568.1	670.1	674.9	690.4	794.9	914.7	931.5	908.2	1024.9	1045.9	1070	1145	1370	1755	1755	1755	1755	1755
Net Plant (\$mill)	862.7	941.5	1010.2	1112.4	1198.1	1294.3	1381.1	1457.1	1515.8	1590.4	1685	1755	1820	1820	1820	1820	1820	1820
Return on Total Cap'l	6.3%	5.2%	5.9%	7.1%	6.5%	5.5%	6.3%	6.0%	6.0%	6.3%	6.5%	6.5%	7.0%	7.5%	7.5%	7.5%	7.5%	7.5%
Return on Shr. Equity	9.3%	6.8%	8.1%	9.9%	9.6%	8.6%	8.0%	9.0%	7.9%	9.1%	9.0%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%
Return on Com Equity	9.3%	6.8%	8.1%	9.9%	9.6%	8.6%	8.0%	9.0%	7.9%	9.1%	9.0%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%
Retained to Com Eq	2.1%	1.0%	1.8%	3.8%	3.8%	3.0%	2.3%	3.4%	3.4%	4.1%	2.5%	4.0%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
All Div'ds to Net Prof	78%	86%	77%	61%	60%	66%	71%	62%	56%	55%	67%	55%	63%	67%	55%	67%	55%	63%

CAPITAL STRUCTURE as of 9/30/15
 Total Debt \$559.6 mill. Due in 5 Yrs \$165.8 mill.
 LT Debt \$416.4 mill. LT Interest \$24.0 mill.
 (39% of Cap'l)

Pension Assets-12/14 \$306.3 mill.
 Oblig. \$390.6 mill.

Pfd Stock None

Common Stock 47,876,087 shs.
 as of 10/27/15

MARKET CAP: \$1.1 billion (Mid Cap)

CURRENT POSITION (\$MILL)	2013	2014	9/30/15
Cash Assets	27.5	19.6	50.8
Other	112.0	134.5	140.3
Current Assets	139.5	154.1	191.1
Accts Payable	55.1	59.4	77.3
Debt Due	54.7	85.7	143.2
Other	56.8	72.6	80.3
Current Liab.	166.6	217.7	300.8

ANNUAL RATES Past	Past 10 Yrs.	Past 5 Yrs.	Est'd '12-'14 to '18-'20
Revenues	4.0%	5.0%	2.0%
"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%

Cal-endar	QUARTERLY REVENUES (\$ mill.) E				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
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	183.5	135.1	585
2016	120	150	190	140	600

Cal-endar	EARNINGS PER SHARE A				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
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	.52	.24	1.00
2016	.05	.35	.60	.25	1.25

Cal-endar	QUARTERLY DIVIDENDS PAID B				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
2012	.1575	.1575	.1575	.1575	.63
2013	.16	.16	.16	.16	.64
2014	.1625	.1625	.1625	.1625	.65
2015	.1675	.1675	.1675	.1675	.67
2016					

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. Ac-

The California Water Service Group posted its second-straight poor quarter. The water utility's share earnings came in at \$0.52, versus the prior year's \$0.70, and our \$0.69 estimate. Even though the same quarter in 2014 had been aided by a tax adjustment and revenue recognition from outlays the company had made earlier in the year, the bottom-line showing was still a disappointment. Increased costs related to the state's ongoing drought, higher maintenance expenses, and meaningful "uninsured loss costs," were also provided by management as reasons for the earnings miss.

The utility's profitability is not supposed to be meaningfully impacted by the drought. In an attempt to preserve water, the California Public Utility Commission (CPUC) has mandated strict restrictions on usage. Previously, the CPUC instituted a change in how water utilities' income is calculated. Based on the new methodology, income and revenues were switched from being a "quantity based" to a "fixed-rate charge" system. The main goal of this maneuver was to incentivize utilities to sway customers to use

quired 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.

less water. Thus, revenues are now more fee-based and don't correlate as much to the volume of water sold.

We are cutting our estimates once again. We now expect the company's share net to reach \$1.00 for 2015, \$0.15 less than our previous forecast. A \$0.10 a-share-reduction has also been made to our 2016 figure. In any case, we think any drought-related costs will eventually be recovered by California Water. Indeed, at the end of the third quarter, the company had a large increase in unbilled revenues, which are incurred expenses that the utility has not been reimbursed for yet.

These shares may appeal to long-term accounts willing to assume slightly more risk than the typical water utility investor. The premium that was usually priced into the value of this equity has dissipated, as some investors appear wary of owning water utilities domiciled in California. Based on our assumption that the CPUC will maintain its current constructive approach, we think CWT could provide better long-term returns through late decade than the average water utility.

James A. Flood
 January 15, 2016

(A) Basic EPS. Excl. nonrecurring gain (loss): '00, (4¢); '01, 2¢; '02, 4¢; '11, 4¢. Next earnings report due late February.

(B) Dividends historically paid in late Feb.,

May, Aug., and Nov. ■ Div'd reinvestment plan available.

(C) Incl. 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

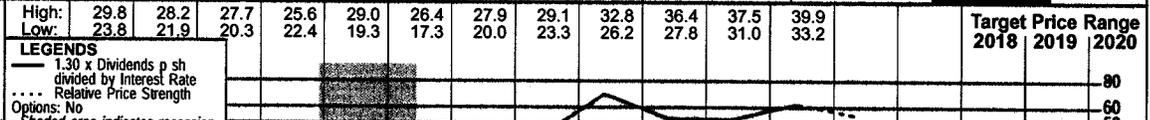
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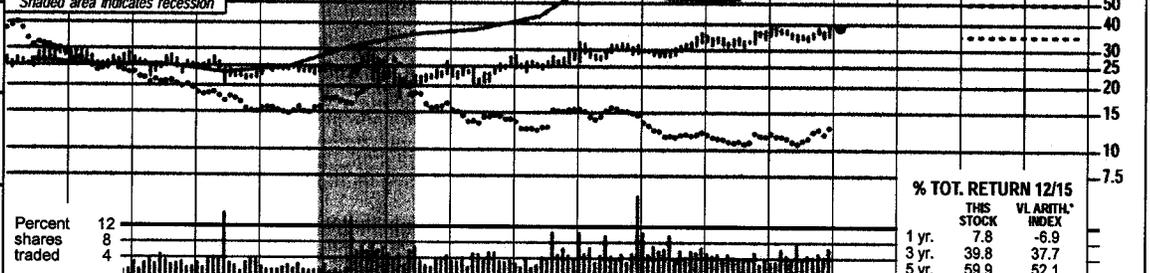
CONNECTICUT WATER NDQ-CTWS

RECENT PRICE **38.47** P/E RATIO **19.2** (Trailing: 18.7) RELATIVE P/E RATIO **1.11** DIVD YLD **2.8%** VALUE LINE

TIMELINESS 3 Lowered 11/21/14
SAFETY 3 New 1/18/13
TECHNICAL 4 Lowered 1/1/16
 BETA .65 (1.00 = Market)



2018-20 PROJECTIONS
 Price High 50 Low 35
 Gain (+30%) Return 10%
Insider Decisions
 to Buy 0 to Sell 0
Institutional Decisions
 to Buy 37 to Sell 40
 Hld's(000) 4289



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	8.60	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	3.25	3.40	"Cash Flow" per sh	3.75
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 A	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 B	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	3.60	5.80	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	19.95	21.15	Book Value per sh D	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 Outs't'g C	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	17.5		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	.89		Relative P/E Ratio	1.20
4.2%	4.0%	3.3%	3.0%	3.0%	3.1%	3.4%	3.6%	3.6%	3.6%	4.1%	3.9%	3.6%	3.2%	3.2%	3.0%	2.9%		Avg Ann'l Div'd Yield	3.1%

CAPITAL STRUCTURE as of 9/30/15
 Total Debt \$190.7 mill. Due in 5 Yrs \$19.3 mill.
 LT Debt \$176.7 mill. LT Interest \$7.0 mill.
 (44% 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 11,181,070 shs.
 as of 10/31/15
MARKET CAP: \$425 million (Small Cap)

47.5	46.9	59.0	61.3	59.4	66.4	69.4	83.8	91.5	102	Revenues (\$mill)	155
7.2	6.7	8.8	9.4	10.2	9.8	9.9	13.6	18.3	23.0	Net Profit (\$mill)	27.0
--	23.5%	32.4%	27.2%	19.5%	35.2%	41.3%	32.0%	28.0%	14.4%	Income Tax Rate	27.0%
--	--	--	1.7%	--	--	--	1.7%	2.0%	2.4%	AFUDC % to Net Profit	2.0%
44.9%	44.4%	47.8%	46.9%	50.6%	49.5%	53.2%	49.0%	46.9%	45.7%	Long-Term Debt Ratio	47.0%
54.6%	55.1%	51.8%	52.7%	49.1%	50.2%	46.5%	50.8%	52.9%	54.1%	Common Equity Ratio	53.0%
172.3	174.1	193.2	196.5	221.3	225.6	254.2	364.6	373.6	386.8	Total Capital (\$mill)	510
247.7	268.1	284.3	302.3	325.2	344.2	362.4	447.9	471.9	506.9	Net Plant (\$mill)	650
5.0%	4.9%	5.5%	5.9%	5.5%	5.4%	4.9%	4.8%	5.9%	6.4%	Return on Total Cap'l	6.5%
7.5%	6.9%	8.7%	9.0%	9.3%	8.6%	8.3%	7.3%	9.2%	10.1%	Return on Shr. Equity	9.5%
7.6%	7.0%	8.7%	9.1%	9.4%	8.7%	8.3%	7.3%	9.2%	10.2%	Return on Com Equity	9.5%
3%	NMF	1.6%	1.9%	2.3%	1.6%	1.4%	2.8%	3.8%	4.8%	Retained to Com Eq	4.0%
95%	105%	82%	79%	76%	81%	83%	62%	59%	53%	All Div'ds to Net Prof	58%

CURRENT POSITION

	2013	2014	9/30/15
Cash Assets	18.4	2.5	2.2
Accounts Receivable	12.3	12.0	13.0
Other	16.2	21.7	24.1
Current Assets	46.9	36.2	39.3
Accts Payable	10.8	10.0	9.7
Debt Due	4.1	4.4	14.0
Other	7.8	9.2	8.5
Current Liab.	22.7	23.6	32.2

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.

The balance sheet is in decent shape. The company carries an average Financial Strength rating of B+, but that would be higher if Connecticut's market capitalization was larger. The current long-term debt-to-total capital ratio is 44%, which is near the lower end of the industry spectrum. What's more, even with the company's higher projected budgets over the next year or two, we think the balance sheet should remain quite sound through the late decade.

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '12-'14 to '18-'20
Revenues	4.0%	4.5%	6.5%
"Cash Flow"	4.0%	7.5%	5.5%
Earnings	4.0%	9.0%	4.5%
Dividends	2.0%	2.0%	5.0%
Book Value	6.5%	9.5%	3.5%

Connecticut Water Service probably turned in another solid earnings performance last year. Even though we are expecting the company to report a negative profit comparison in the fourth quarter, we think the utility still posted a healthy 7% increase in full-year share earnings versus 2014. This would mark the fourth-straight year of healthy gains.

Dividend growth is clearly on the upswing. For years, the company would only raise its annual payout by 2%. Starting in 2014, the rate rose to 3%, and increased 4% in 2015. Over the next 3- to 5-year period, we expect growth to average 5%. These shares are ranked to perform in line with the broader market averages in the year ahead. Moreover, it appears that all of the company's strong points are currently factored into the recent price. Indeed, the stock's capital appreciation potential to 2018-2020 is only 10%, versus the median of 50% for all companies in the Value Line universe.

QUARTERLY REVENUES (\$ mill.)

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
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	28.4	21.5	96.5
2016	22.5	27.5	30.0	22.0	102

We are being more conservative in our expectations for 2016. For now, we are sticking with our \$2.10-a-share forecast, which would be only a 2.5% increase over 2015. Connecticut Water could surprise to the upside, however, due to the continued benefits of an earlier rate increase in Maine.

These shares are ranked to perform in line with the broader market averages in the year ahead. Moreover, it appears that all of the company's strong points are currently factored into the recent price. Indeed, the stock's capital appreciation potential to 2018-2020 is only 10%, versus the median of 50% for all companies in the Value Line universe.

EARNINGS PER SHARE A

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.22	.47	.67	.17	1.53
2013	.24	.39	.86	.17	1.66
2014	.27	.67	.76	.22	1.92
2015	.28	.77	.79	.21	2.05
2016	.32	.68	.85	.25	2.10

A substantial hike in capital expenditures has been approved for this year. In late November, the company announced it will spend \$66 million on major projects during 2016. This represents a hefty 47% rise over what we estimate Connecticut spent in 2015. Roughly one-third of the total will be used to upgrade a wastewater facility, with the rest expected to be spent replacing the company's aging infrastructure.

James A. Flood January 15, 2016

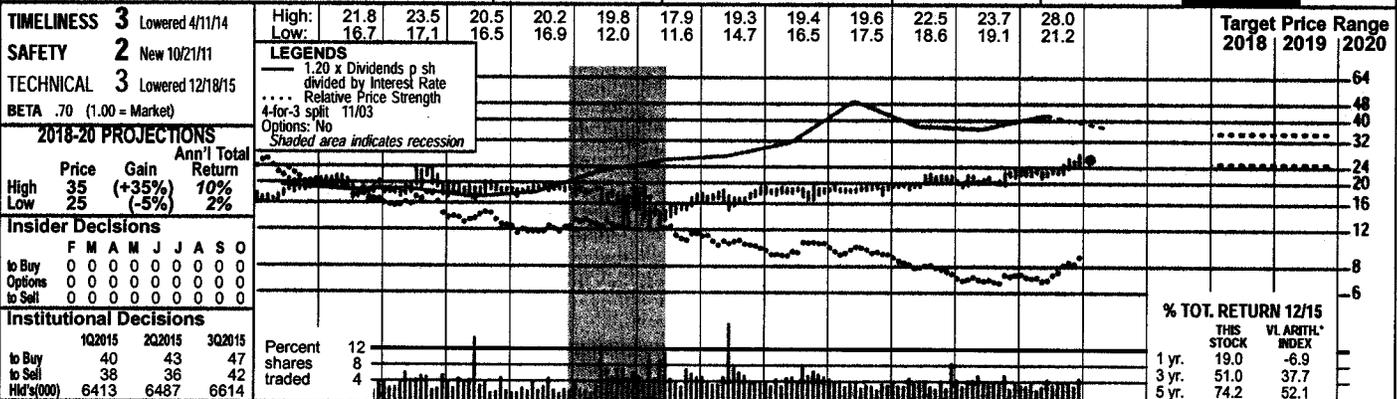
QUARTERLY DIVIDENDS PAID B

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.238	.238	.2425	.2425	.962
2013	.2425	.2425	.2475	.2475	.98
2014	.2475	.2475	.2575	.2575	1.01
2015	.2575	.2575	.2675	.2675	1.05
2016					

(A) Diluted earnings. Next earnings report due late February. Quarterly earnings do not add in 2012 due to rounding. (B) Dividends historically paid in mid-March, June, September, and December. (C) In millions, adjusted for split. (D) Includes intangibles. In 2014: \$31.7 million/\$2.85 a share. Company's Financial Strength B+ Stock's Price Stability 90 Price Growth Persistence 50 Earnings Predictability 85 © 2016 Value Line, Inc. All rights reserved. Factual material is obtained from sources believed to be reliable and is provided without warranties of any kind. THE PUBLISHER IS NOT RESPONSIBLE FOR ANY ERRORS OR OMISSIONS HEREIN. This publication is strictly for subscriber's own, non-commercial, internal use. No part of it may be reproduced, resold, stored or transmitted in any printed, electronic or other form, or used for generating or marketing any printed or electronic publication, service or product. To subscribe call 1-800-VALUELINE

MIDDLESEX WATER NDQ-MSEX

RECENT PRICE **26.23** P/E RATIO **21.3** (Trailing: 22.6 Median: 21.0) RELATIVE P/E RATIO **1.23** DIVD YLD **3.0%** VALUE LINE



Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Value Line Pub. LLC	18-20	
Price	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	7.70	8.00	Revenues per sh	9.10
Gain	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	2.10	2.15	"Cash Flow" per sh	2.25
Loss	.76	.51	.66	.73	.61	.73	.71	.82	.87	.89	.72	.96	.84	.90	1.03	1.13	1.20	1.30	Earnings per sh A	1.35
Div	.60	.61	.62	.63	.65	.66	.67	.68	.69	.70	.71	.72	.73	.74	.75	.76	.78	.81	Div'd Decl'd per sh B	.89
CapEx	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	1.60	1.75	Cap'l Spending per sh	2.00
Book Value	6.95	6.98	7.11	7.39	7.80	8.02	8.26	9.52	10.03	10.33	11.13	11.27	11.48	11.82	12.24	12.45	12.95	12.95	Book Value per sh	14.30
Outstg	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 C	17.00
P/E Ratio	17.6	28.7	24.6	23.5	30.0	26.4	27.4	22.7	21.6	19.8	21.0	17.8	21.7	20.8	19.7	18.5	19.4		Avg Ann'l P/E Ratio	21.0
Relative P/E	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		Relative P/E Ratio	1.30
Div'd Yield	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%	3.3%		Avg Ann'l Div'd Yield	3.1%

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Value Line Pub. LLC	18-20
Total Debt	74.6	81.1	86.1	91.0	91.2	102.7	102.1	110.4	114.8	117.1	125	130	Revenues (\$mill)	155
LT Debt	8.5	10.0	11.8	12.2	10.0	14.3	13.4	14.4	16.6	18.4	20.5	21.0	Net Profit (\$mill)	23.0
Cap'l	27.6%	33.4%	32.6%	33.2%	34.1%	32.1%	32.7%	33.9%	34.1%	35.0%	35.0%	31.0%	Income Tax Rate	34.0%
AFUDC	--	--	--	--	--	6.8%	6.1%	3.4%	1.9%	1.7%	1.0%	1.5%	AFUDC % to Net Profit	2.5%
Debt Ratio	55.3%	49.5%	49.0%	45.6%	46.6%	43.1%	42.3%	41.5%	40.4%	40.5%	40.0%	40.0%	Long-Term Debt Ratio	43.5%
Equity Ratio	41.3%	47.5%	49.6%	51.8%	52.1%	55.8%	56.6%	57.4%	58.7%	58.8%	59.5%	59.5%	Common Equity Ratio	56.5%
Total Capital	231.7	264.0	268.8	259.4	267.9	310.5	312.5	316.5	321.4	335.8	340	355	Total Capital (\$mill)	430
Net Plant	288.0	317.1	333.9	366.3	376.5	405.9	422.2	435.2	446.5	465.4	480	495	Net Plant (\$mill)	555
Return on Total Cap'l	5.0%	5.1%	5.6%	5.8%	5.0%	5.7%	5.2%	5.4%	5.9%	6.3%	6.5%	7.0%	Return on Total Cap'l	6.5%
Return on Shr. Equity	8.2%	7.5%	8.6%	8.6%	7.0%	8.1%	7.5%	7.8%	8.7%	9.2%	10.0%	10.0%	Return on Shr. Equity	9.5%
Return on Com Equity	8.6%	7.8%	8.7%	8.9%	7.0%	8.2%	7.5%	7.8%	8.7%	9.3%	10.0%	10.0%	Return on Com Equity	9.5%
Retained to Com Eq	6%	1.3%	1.8%	2.0%	NMF	2.1%	1.0%	1.4%	2.4%	3.1%	4.0%	4.0%	Retained to Com Eq	3.5%
All Div'ds to Net Prof	94%	84%	79%	78%	98%	75%	87%	83%	73%	67%	62%	62%	All Div'ds to Net Prof	66%

CAPITAL STRUCTURE as of 9/30/15
 Total Debt \$158.9 mill. Due in 5 Yrs \$49.8 mill.
 LT Debt \$135.2 mill. LT Interest \$4.6 mill.
 (39% 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 16,211,304 shs. as of 10/31/15

MARKET CAP: \$425 million (Small Cap)

Item	2013	2014	9/30/15
Cash Assets	4.8	2.7	4.7
Other	21.0	20.2	26.2
Current Assets	25.8	22.9	30.9
Accts Payable	6.3	6.4	8.6
Debt Due	33.8	24.9	23.7
Other	12.6	12.6	14.6
Current Liab.	52.7	43.9	46.9

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)

Item	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%	3.0%
Book Value	4.5%	3.0%	3.0%

Shares of Middlesex continue to perform well. Since our mid-October report, the value of the equity has risen 8.2%, compared to 4.9% for the industry, and 1.9% for the S&P 500 Index.

since 1997 by exactly \$0.01 a share annually (one-quarter of one cent every quarter). In the final period of 2015, however, instead of raising the quarterly payout the usual amount to \$.1925, or +1.3%, management hiked the payout five-eighths of one cent, or 3.2%. To reflect this, we've raised our long-term growth forecast. **Finances are very solid.** Though not a large company, Middlesex has an equity-to-total capital ratio close to 60%, which is extremely high for a water utility. Due to projected greater capital spending commitments to modernize the existing water infrastructure, we expect the financial metrics to slide marginally, but still remain well above industry levels.

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	34.7	29.8	125
2016	29.5	32.5	35.5	32.5	130

We think the utility finished 2015 on a positive note. Third-quarter results were disappointing due to a sharp spike in expenses related to the company's employee benefit plan. With costs at more normal levels in the final quarter, Middlesex probably posted an earnings-per-share gain of over 15%. Rate relief implemented in New Jersey was almost certainly the reason for the expected strong showing.

Most of the bloom is off the rose of these shares. As evidenced by the recent strength in the stock price, investors have become well aware of company's positive attributes. The equity is current ranked to only be a market performer this year. Over the pull to 2018-2020, though, projected capital appreciation is only 15%, substantially below the 50% median of all stocks in the Value Line universe.

EARNINGS PER SHARE A

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	.41	.26	1.20
2016	.23	.33	.45	.29	1.30

Earnings should be even better this year. Even though New Jersey regulators were restrictive in last year's major rate case by allowing only \$5 million of the \$9 million in higher tariffs sought by Middlesex, the rate hike will be in effect for the entire year. Moreover, despite the aforementioned employee compensation charge, the utility has been doing a fairly good job of containing costs.

A major change has been made in Middlesex's dividend policy. The company has increased the annual dividend

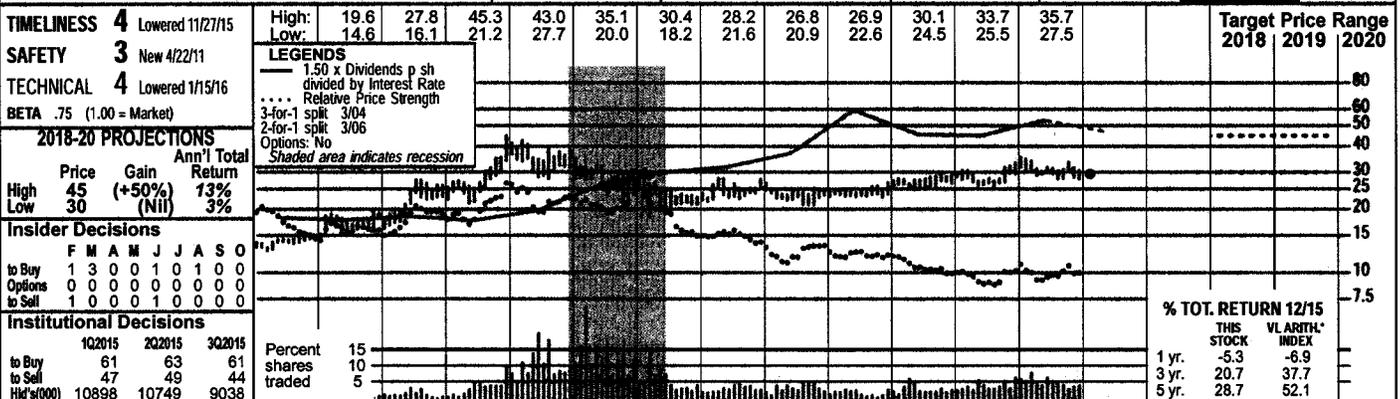
QUARTERLY DIVIDENDS PAID B

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.185	.185	.185	.1875	.74
2013	.1875	.1875	.1875	.19	.75
2014	.19	.19	.19	.1925	.76
2015	.1925	.1925	.1925	.19875	.78
2016					

James A. Flood January 15, 2016

SJW CORP. NYSE-SJW

RECENT PRICE **29.52** P/E RATIO **21.7** (Trailing: 22.2 Median: 24.0) RELATIVE P/E RATIO **1.25** DIVD YLD **2.7%** 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	
6.40	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	14.15	14.30	Revenues per sh	17.60
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	3.40	3.65	"Cash Flow" per sh	3.95
.87	.58	.77	.78	.91	.87	1.12	1.19	1.04	1.08	.81	.84	1.11	1.18	1.12	2.54	1.35	1.55	Earnings per sh ^A	1.75
.40	.41	.43	.46	.49	.51	.53	.57	.61	.65	.66	.68	.69	.71	.73	.75	.78	.81	Div'd Decl'd per sh ^B	1.05
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	4.65	5.20	Cap'l Spending per sh	4.95
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	18.30	19.30	Book Value per sh	22.60
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	Common Shs Outst'g ^C	23.00
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	22.8		Avg Ann'l P/E Ratio	22.0
.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	1.16		Relative P/E Ratio	1.40
3.0%	2.1%	3.0%	3.4%	3.5%	3.0%	2.4%	2.0%	1.7%	2.3%	2.8%	2.8%	2.9%	3.0%	2.7%	2.6%	2.5%		Avg Ann'l Div'd Yield	2.7%

CAPITAL STRUCTURE as of 9/30/15		2013	2014	9/30/15
Total Debt \$405.8 mill. Due in 5 Yrs \$21.2 mill.		180.1	189.2	206.6
LT Debt \$381.0 mill. LT Interest \$21.0 mill. (51% of Cap'l)		20.7	22.2	19.3
Leases, Uncapitalized: Annual rentals \$5.5 mill.		41.6%	40.8%	39.4%
Pension Assets-12/14 \$91.4 mill. Oblig. \$128.7 mill.		1.6%	2.1%	2.7%
Pfd Stock None.		42.6%	41.8%	47.7%
Common Stock 20,381,949 shs. as of 10/21/15		57.4%	58.2%	52.3%
MARKET CAP: \$600 million (Small Cap)		341.2	391.8	453.2
CURRENT POSITION (\$MILL.)		484.8	541.7	645.5
Cash Assets		7.6%	7.0%	5.7%
Accts Receivable		10.6%	9.7%	8.2%
Other		10.6%	9.7%	8.2%
Current Assets		5.6%	5.2%	3.5%
Accts Payable		47%	46%	57%
Debt Due				
Other				
Current Liab.				

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 with a total population of roughly one million people in the San Jose area and 12,000 connections that reaches about 36,000 residents in the region between San Antonio and Austin, Texas. The company also offers nonregulated water-related services and owns and operates commercial real estate investments. Has about 395 employees. Officers and directors (including Nancy O. Moss) own 27.9% of outstanding shares. Chairman: Charles J. Toeniskoetter. Incorporated: California. Address: 110 West Taylor Street, San Jose, CA 95110. Telephone: (408) 279-7800. Internet: www.sjwater.com.

Shares of SJW Corp. have badly underperformed both the company's peer group and the broader market averages since our mid-October report. During this span, the value of SJW has declined 5.0%, versus the 4.9% increase posted by the average water utility, and the gain of about 1.9% recorded by the S&P 500 Index.

We have reduced our full-year 2015 earnings estimate for the company. Share earnings for the third quarter came in at \$0.46, \$0.07 below our forecast. The disappointing results were mainly attributed to higher administrative costs, pension-related expenses, and a spike in the income tax rate. We should note that comparing figures from 2014 and 2015 is difficult, as 2014's income was bolstered by a one-time \$45 million reimbursement for expenses incurred in past years. In any case, we have sliced \$0.10 a share off of our prior estimate and now think SJW's earnings per share will only reach \$1.35.

The profit picture looks much brighter next year. For starters, the utility operates in a thriving service area, which includes Silicon Valley. Moreover, the regulatory climate in California is actually constructive as authorities have been working with utilities to enable them to earn a reasonable rate of return on equity despite spending freely to replace old pipes and modernize other parts of the water distribution system. SJW has been investing heavily (and should continue to do so through late decade) on modernizing its entire water infrastructure. All told, we think share net can rise 15%, to \$1.55. One caveat is that our assumption does not factor in a lengthy delay in recovering costs related to the drought.

Dividend growth prospects are decent. Even though we only project earnings to increase 1%-2% annually through to 2018-2020, we think the current dividend-to-net profit ratio is relatively low, which should enable dividends to increase a healthy 6% a year, over that time. **SJW stock is the lone equity in the water utility group expected to underperform the market averages in the year ahead.** Furthermore, despite the recent price weakness, long-term total return prospects are also not appealing.

James A. Flood
 January 15, 2016

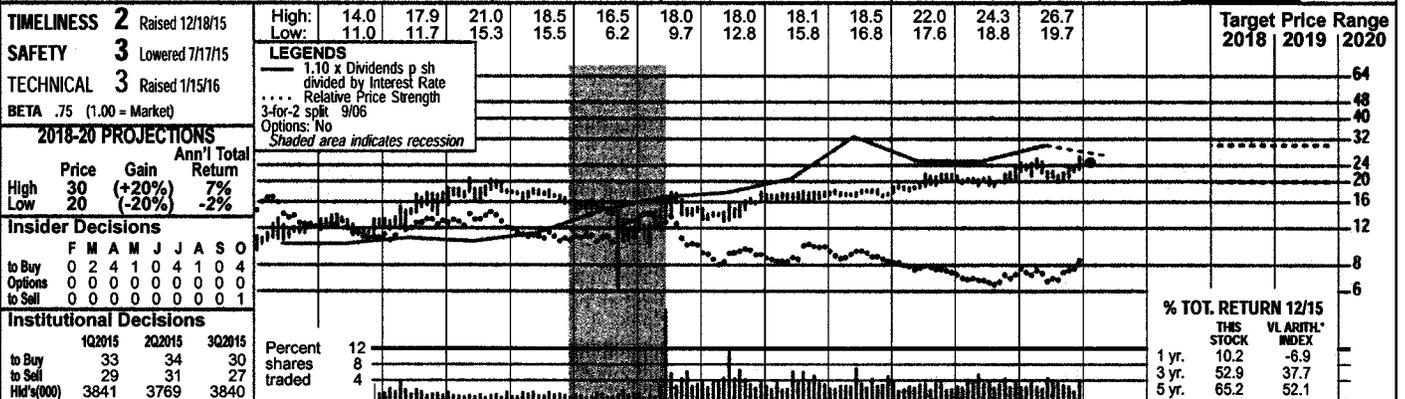
(A) Diluted earnings. Excludes nonrecurring losses: '03, \$1.97; '04, \$3.78; '05, \$1.09; '06, \$16.36; '08, \$1.22; '10, \$0.46. GAAP accounting as of 2013. Next earnings report due late February. Quarterly earnings may not add due to rounding. (B) Dividends historically paid in early March, June, September, and December. ■ Div'd reinvestment plan available. (C) In millions, adjusted for stock splits.

Company's Financial Strength B+
 Stock's Price Stability 85
 Price Growth Persistence 20
 Earnings Predictability 50

To subscribe call 1-800-VALUELINE

YORK WATER NDQ:YORW

RECENT PRICE **24.84** P/E RATIO **25.6** (Trailing: 25.3 Median: 25.0) RELATIVE P/E RATIO **1.48** DIVD YLD **2.5%** 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
--	--	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	5.00
--	--	.59	.57	.65	.65	.79	.77	.86	.88	.95	1.07	1.09	1.12	1.19	1.36	1.45	1.55	"Cash Flow" per sh	1.75
--	--	.43	.40	.47	.49	.56	.58	.57	.57	.64	.71	.71	.72	.75	.89	.93	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	8.40	8.40	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 Outst'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	24.5		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	1.24		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%	2.6%		Avg Ann'l Div'd Yield	3.2%

CAPITAL STRUCTURE as of 9/30/15		2013	2014	9/30/15	© VALUE LINE PUB. LLC													18-20	
Total Debt \$87.3 mill. Due in 5 Yrs \$30.5 mill.		26.8	28.7	31.4	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)	60.0	
LT Debt \$87.3 mill. LT Interest \$5.1 mill.		5.8	6.1	6.4	5.8	6.1	6.4	6.4	7.5	8.9	9.1	9.3	9.7	11.5	12.0	12.5	Net Profit (\$mill)	14.0	
(45% of Cap'l)		36.7%	34.4%	36.5%	36.1%	37.9%	38.5%	35.3%	37.6%	37.6%	29.8%	30.5%	24.5%	Income Tax Rate	32.5%				
Pension Assets 12/14 \$30.6 mill. Oblig. \$40.9 mill.		--	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%				
Pfd Stock None		44.1%	48.3%	46.5%	54.5%	45.7%	48.3%	47.1%	46.0%	45.1%	44.8%	45.0%	49.5%	Long-Term Debt Ratio	48.0%				
Common Stock 12,791,600 shs. as of 11/5/15		55.9%	51.7%	53.5%	45.5%	54.3%	51.7%	52.9%	54.0%	54.9%	55.2%	55.0%	52.5%	Common Equity Ratio	52.0%				
MARKET CAP: \$325 million (Small Cap)		90.3	126.5	125.7	153.4	160.1	176.4	180.2	184.8	188.4	189.4	195	200	Total Capital (\$mill)	220				
CURRENT POSITION (SMILL.)		155.3	174.4	191.6	211.4	222.0	228.4	233.0	240.3	244.2	253.2	263	270	Net Plant (\$mill)	280				
Cash Assets		8.4%	6.2%	6.7%	5.7%	6.2%	6.5%	6.4%	6.4%	6.5%	7.4%	7.5%	8.0%	Return on Total Cap'l	8.0%				
Accounts Receivable		11.6%	9.3%	9.5%	9.2%	8.6%	9.8%	9.5%	9.3%	9.3%	11.0%	11.0%	12.0%	Return on Shr. Equity	12.0%				
Inventory (Avg. Cost)		11.6%	9.3%	9.5%	9.2%	8.6%	9.8%	9.5%	9.3%	9.3%	11.0%	11.0%	12.0%	Return on Com Equity	12.0%				
Other		74%	77%	82%	85%	78%	72%	73%	74%	74%	64%	65%	63%	Retained to Com Eq	3.5%				
Current Assets														All Div'ds to Net Prof	69%				
Accts Payable																			
Debt Due																			
Other																			
Current Liab.																			

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		Past 10 Yrs.	Past 5 Yrs.	Est'd '12-'14 to '18-'20
of change (per sh)		4.5%	3.0%	7.0%
Revenues		7.0%	6.5%	6.0%
"Cash Flow"		5.5%	6.0%	6.5%
Earnings		4.0%	2.5%	6.5%
Dividends		6.5%	4.5%	3.0%
Book Value				

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	.28	.23	.93
2016	.20	.26	.28	.26	1.00

Cal-endar	QUARTERLY DIVIDENDS PAID B				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
2012	.134	.134	.134	.134	.535
2013	.138	.138	.138	.138	.552
2014	.1431	.1431	.1431	.1431	.572
2015	.1495	.1495	.1495	.1555	.604
2016					

(A) Diluted earnings. Next earnings report due late February. (B) Dividends historically paid in mid-January, April, July, and October. (C) In millions, adjusted for splits.

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Company's Financial Strength B+
 Stock's Price Stability 90
 Price Growth Persistence 50
 Earnings Predictability 95

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Thu, Feb 11, 2016, 3:50PM EST - U.S. Markets close in 10 mins [Report an Issue](#)



AWR

AWR 0.12



American States Water Company (AWR) - NYSE Watchlist

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46.20 **0.04(0.10%)** 3:50PM EST - Nasdaq Real Time Price

Analyst Estimates

Get Analyst Estimates for:

Earnings Est	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	0.30	0.33	1.59	1.69
No. of Analysts	4.00	2.00	6.00	6.00
Low Estimate	0.26	0.24	1.52	1.56
High Estimate	0.34	0.42	1.65	1.83
Year Ago EPS	0.35	0.32	1.57	1.59

AWR 0.27% YORW 1.72%

AWR 0.27%
American States Wa...

46.28

+0.12 (0.27%)

Revenue Est	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	107.42M	118.27M	463.93M	482.01M
No. of Analysts	2	1	6	6
Low Estimate	102.40M	118.27M	450.93M	464.00M
High Estimate	112.44M	118.27M	493.00M	516.60M
Year Ago Sales	109.88M	100.93M	465.79M	463.93M
Sales Growth (year/est)	-2.20%	17.20%	-0.40%	3.90%

Earnings History	Dec 14	Mar 15	Jun 15	Sep 15
EPS Est	0.26	0.29	0.41	0.56
EPS Actual	0.35	0.32	0.41	0.56
Difference	0.09	0.03	0.00	0.00
Surprise %	34.60%	10.30%	0.00%	0.00%

EPS Trends	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Current Estimate	0.30	0.33	1.59	1.69
7 Days Ago	0.30	0.33	1.59	1.69
30 Days Ago	0.30	0.33	1.59	1.69
60 Days Ago	0.30	0.33	1.59	1.69
90 Days Ago	0.30	0.33	1.59	1.69

EPS Revisions	Current Qtr. Dec 15	Next Qtr. Mar 16	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	AWR	Industry	Sector	S&P 500
Current Qtr.	-14.30%	50.00%	46.70%	2.70%
Next Qtr.	3.10%	22.40%	49.00%	13.00%
This Year	1.30%	-15.60%	22.90%	2.70%
Next Year	6.30%	-1.50%	7.90%	9.30%
Past 5 Years (per annum)	12.86%	N/A	N/A	N/A
Next 5 Years (per annum)	4.10%	8.09%	6.16%	4.88%

Dow **1.63%** Nasdaq **0.39%**



American Water Works Company, Inc. (AWK) - NYSE [★ Watchlist](#)

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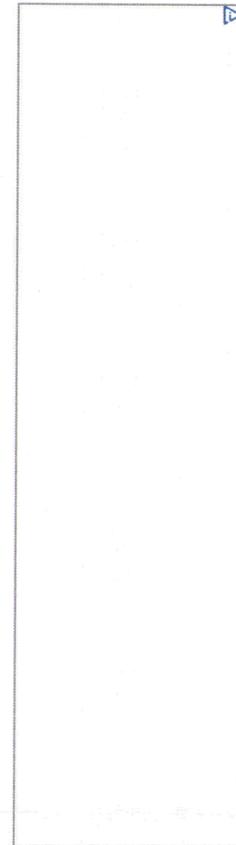
66.08 **0.60(0.90%)** 4:00PM EST

- NYSE Real Time Price

Analyst Estimates

Get Analyst Estimates for:

	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Earnings Est				
Avg. Estimate	0.55	0.46	2.63	2.82
No. of Analysts	13.00	9.00	16.00	17.00
Low Estimate	0.53	0.41	2.60	2.75
High Estimate	0.61	0.50	2.65	2.87
Year Ago EPS	0.52	0.44	2.47	2.63
Revenue Est				
Avg. Estimate	827.48M	742.94M	3.17B	3.34B
No. of Analysts	10	9	14	15
Low Estimate	760.98M	722.00M	3.14B	3.30B
High Estimate	1.24B	802.52M	3.22B	3.42B
Year Ago Sales	731.38M	698.08M	3.01B	3.17B
Sales Growth (year/est)	13.10%	6.40%	5.20%	5.40%
Earnings History				
EPS Est	0.51	0.41	0.67	0.94
EPS Actual	0.52	0.44	0.68	0.96
Difference	0.01	0.03	0.01	0.02
Surprise %	2.00%	7.30%	1.50%	2.10%
EPS Trends				
Current Estimate	0.55	0.46	2.63	2.82
7 Days Ago	0.55	0.46	2.63	2.82
30 Days Ago	0.55	0.47	2.63	2.82
60 Days Ago	0.55	0.46	2.63	2.82
90 Days Ago	0.55	0.46	2.62	2.82
EPS Revisions				
Up Last 7 Days	0	0	0	0
Up Last 30 Days	1	0	2	1
Down Last 30 Days	0	0	0	0
Down Last 90 Days	N/A	N/A	N/A	N/A
Growth Est				
Current Qtr.	AWK 5.80%	Industry 50.00%	Sector 46.70%	S&P 500 2.70%
Next Qtr.	4.50%	22.40%	49.00%	13.00%
This Year	6.50%	-15.60%	22.90%	2.70%
Next Year	7.20%	-1.50%	7.90%	9.30%
Past 5 Years (per annum)	12.25%	N/A	N/A	N/A
Next 5 Years (per annum)	7.72%	8.09%	6.16%	4.88%



Dow **1.60%** NYSE ONLINE U.S. EQUITY TRADES

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WTR **1.56%**

Aqua America Inc. (WTR) - NYSE [★ Watchlist](#)

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31.52 **0.51(1.59%)** 4:02PM EST
 - NYSE Real Time Price

Analyst Estimates

Get Analyst Estimates for:

Earnings Est	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	0.29	0.28	1.27	1.34
No. of Analysts	6.00	3.00	10.00	10.00
Low Estimate	0.29	0.27	1.26	1.31
High Estimate	0.29	0.28	1.28	1.38
Year Ago EPS	0.28	0.27	1.20	1.27

Next Earnings Date: Feb 23, 2016 - [Set a Reminder](#)

Revenue Est	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	199.79M	196.51M	817.73M	855.00M
No. of Analysts	5	3	8	8
Low Estimate	195.60M	194.60M	811.00M	842.00M
High Estimate	206.37M	197.94M	824.20M	874.50M
Year Ago Sales	191.39M	190.33M	779.90M	817.73M
Sales Growth (year/est)	4.40%	3.20%	4.90%	4.60%

Earnings History	Dec 14	Mar 15	Jun 15	Sep 15
EPS Est	0.27	0.26	0.32	0.38
EPS Actual	0.28	0.27	0.32	0.38
Difference	0.01	0.01	0.00	0.00
Surprise %	3.70%	3.80%	0.00%	0.00%

EPS Trends	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Current Estimate	0.29	0.28	1.27	1.34
7 Days Ago	0.29	0.28	1.27	1.34
30 Days Ago	0.29	0.28	1.27	1.36
60 Days Ago	0.29	0.28	1.27	1.36
90 Days Ago	0.29	0.28	1.27	1.36

EPS Revisions	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Up Last 7 Days	0	0	0	0
Up Last 30 Days	1	0	0	1
Down Last 30 Days	0	0	1	0
Down Last 90 Days	N/A	N/A	N/A	N/A

Growth Est	WTR	Industry	Sector	S&P 500
Current Qtr.	3.60%	50.00%	46.70%	2.70%
Next Qtr.	3.70%	22.40%	49.00%	13.00%
This Year	5.80%	-15.60%	22.90%	2.70%
Next Year	5.50%	-1.50%	7.90%	9.30%
Past 5 Years (per annum)	12.43%	N/A	N/A	N/A
Next 5 Years (per annum)	5.85%	8.09%	6.16%	4.88%

Dow **1.60%** Nasdaq **0.39%**
ARTNA 0.45



ARTNA



Artesian Resources Corp. (ARTNA) - NasdaqGS [★ Watchlist](#)

Like 1

29.51 **0.79(2.61%)** 4:00PM EST

- Nasdaq Real Time Price

Analyst Estimates

Get Analyst Estimates for:

	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Earnings Est				
Avg. Estimate	0.24	N/A	1.29	1.29
No. of Analysts	1.00	N/A	2.00	2.00
Low Estimate	0.24	N/A	1.28	1.22
High Estimate	0.24	N/A	1.29	1.35
Year Ago EPS	0.24	0.28	1.07	1.29
Revenue Est				
Avg. Estimate	18.69M	NaN	77.17M	79.44M
No. of Analysts	1		2	2
Low Estimate	18.69M	NaN	76.96M	77.70M
High Estimate	18.69M	NaN	77.38M	81.19M
Year Ago Sales	18.08M	NaN	72.46M	77.17M
Sales Growth (year/est)	3.40%	N/A	6.50%	2.90%
Earnings History	Dec 14	Mar 15	Jun 15	Sep 15
EPS Est	0.21	0.30	0.29	0.35
EPS Actual	0.24	0.28	0.36	0.41
Difference	0.03	-0.02	0.07	0.06
Surprise %	14.30%	-6.70%	24.10%	17.10%
EPS Trends				
Current Estimate	0.24	N/A	1.29	1.29
7 Days Ago	0.24	N/A	1.29	1.29
30 Days Ago	0.24	N/A	1.29	1.29
60 Days Ago	0.24	N/A	1.29	1.29
90 Days Ago	0.24	N/A	1.29	1.29
EPS Revisions				
Up Last 7 Days	0	N/A	0	0
Up Last 30 Days	0	N/A	0	0
Down Last 30 Days	0	N/A	0	0
Down Last 90 Days	N/A	N/A	N/A	N/A
Growth Est	ARTNA	Industry	Sector	S&P 500
Current Qtr.	0.00%	50.00%	46.70%	2.70%
Next Qtr.	N/A	22.40%	49.00%	13.00%
This Year	20.60%	-15.60%	22.90%	2.70%
Next Year	0.00%	-1.50%	7.90%	9.30%
Past 5 Years (per annum)	7.43%	N/A	N/A	N/A
Next 5 Years (per annum)	4.00%	8.09%	6.16%	4.88%

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Dow **1.60%** Nasdaq **0.89%**

California Water Service Group (CWT) - NYSE

24.88 **0.05(0.20%)** 4:02PM EST

Analyst Estimates

Get Analyst Estimates for:

Earnings Est	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	0.21	0.07	1.00	1.23
No. of Analysts	4.00	1.00	5.00	5.00
Low Estimate	0.17	0.07	0.93	1.10
High Estimate	0.24	0.07	1.15	1.30
Year Ago EPS	0.24	0.03	1.19	1.00

Next Earnings Date: Feb 24, 2016 - [Set a Reminder](#)

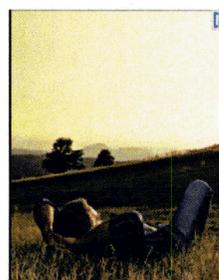
Revenue Est	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	130.96M	126.86M	590.92M	619.90M
No. of Analysts	2	1	3	3
Low Estimate	130.52M	126.86M	580.46M	604.59M
High Estimate	131.40M	126.86M	611.00M	640.00M
Year Ago Sales	137.38M	121.98M	597.50M	590.92M
Sales Growth (year/est)	-4.70%	4.00%	-1.10%	4.90%

Earnings History	Dec 14	Mar 15	Jun 15	Sep 15
EPS Est	0.17	0.01	0.34	0.67
EPS Actual	0.24	0.03	0.21	0.52
Difference	0.07	0.02	-0.13	-0.15
Surprise %	41.20%	200.00%	-38.20%	-22.40%

EPS Trends	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Current Estimate	0.21	0.07	1.00	1.23
7 Days Ago	0.21	0.07	1.00	1.23
30 Days Ago	0.22	0.07	1.01	1.23
60 Days Ago	0.22	0.07	1.01	1.23
90 Days Ago	0.22	0.07	1.01	1.23

EPS Revisions	Current Qtr. Dec 15	Next Qtr. Mar 16	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.	-12.50%	50.00%	46.70%	2.70%
Next Qtr.	133.30%	22.40%	49.00%	13.00%
This Year	-16.00%	-15.60%	22.90%	2.70%
Next Year	23.00%	-1.50%	7.90%	9.30%
Past 5 Years (per annum)	14.03%	N/A	N/A	N/A
Next 5 Years (per annum)	5.00%	8.09%	6.16%	4.88%



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Dow **1.60%** Nasdaq **0.39%**
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CTWS **0.54%**



Connecticut Water Service Inc. (CTWS) - NasdaqGS ★ Watchlist

Like 3

42.07 **0.25(0.59%)** 4:00PM EST

- Nasdaq Real Time Price

Analyst Estimates

Get Analyst Estimates for:

Earnings Est	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	0.22	N/A	2.05	2.08
No. of Analysts	3.00	N/A	3.00	3.00
Low Estimate	0.22	N/A	2.05	2.04
High Estimate	0.22	N/A	2.06	2.15
Year Ago EPS	0.22	0.28	1.92	2.05
Revenue Est	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	22.44M	NaN	97.49M	102.68M
No. of Analysts	2		3	3
Low Estimate	21.47M	NaN	96.57M	100.85M
High Estimate	23.40M	NaN	98.50M	104.10M
Year Ago Sales	20.75M	NaN	94.02M	97.49M
Sales Growth (year/est)	8.20%	N/A	3.70%	5.30%
Earnings History	Dec 14	Mar 15	Jun 15	Sep 15
EPS Est	0.21	0.33	0.69	0.80
EPS Actual	0.22	0.28	0.77	0.79
Difference	0.01	-0.05	0.08	-0.01
Surprise %	4.80%	-15.20%	11.60%	-1.30%
EPS Trends	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Current Estimate	0.22	N/A	2.05	2.08
7 Days Ago	0.22	N/A	2.05	2.08
30 Days Ago	0.22	N/A	2.05	2.08
60 Days Ago	0.22	N/A	2.05	2.08
90 Days Ago	0.23	N/A	2.07	2.05
EPS Revisions	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Up Last 7 Days	0	N/A	0	0
Up Last 30 Days	0	N/A	0	0
Down Last 30 Days	0	N/A	0	0
Down Last 90 Days	N/A	N/A	N/A	N/A
Growth Est	CTWS	Industry	Sector	S&P 500
Current Qtr.	0.00%	50.00%	46.70%	2.70%
Next Qtr.	N/A	22.40%	49.00%	13.00%
This Year	6.80%	-15.60%	22.90%	2.70%
Next Year	1.50%	-1.50%	7.90%	9.30%
Past 5 Years (per annum)	11.73%	N/A	N/A	N/A
Next 5 Years (per annum)	5.00%	8.09%	6.16%	4.88%

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Dow **1.60%** Nasdaq **0.39%**

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Middlesex Water Co. (MSEX) - NasdaqGS [★ Watchlist](#)

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28.42 **0.05(0.18%)** 4:00PM EST

- Nasdaq Real Time Price

Analyst Estimates

Get Analyst Estimates for:

	Current Qtr. Dec 14	Next Qtr. Mar 15	Current Year Dec 14	Next Year Dec 15
Earnings Est				
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				
Avg. Estimate	NaN	NaN	NaN	122.25M
No. of Analysts	1	1	1	1
Low Estimate	29.62M	29.62M	117.87M	122.25M
High Estimate	29.62M	29.62M	117.87M	122.25M
Year Ago Sales	27.42M	27.17M	114.85M	NaN
Sales Growth (year/est)	N/A	N/A	N/A	N/A
Earnings History				
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 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				
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				
Current Qtr.	N/A	50.00%	46.70%	2.70%
Next Qtr.	N/A	22.40%	49.00%	13.00%
This Year	N/A	-15.60%	22.90%	2.70%
Next Year	N/A	-1.50%	7.90%	9.30%
Past 5 Years (per annum)	9.57%	N/A	N/A	N/A
Next 5 Years (per annum)	2.70%	8.09%	6.16%	4.88%

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Thu, Feb 11, 2016, 4:19PM EST - U.S. Markets closed [Report an Issue](#)

Dow **1.60%** Nasdaq **0.39%**
SJW



SJW Corp. (SJW) - NYSE **Watchlist**

Like 3

33.01 **0.03(0.09%)** 4:02PM EST

Analyst Estimates

Get Analyst Estimates for:

Earnings Est	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	0.29	0.16	1.43	1.54
No. of Analysts	1.00	1.00	2.00	2.00
Low Estimate	0.29	0.16	1.35	1.43
High Estimate	0.29	0.16	1.50	1.65
Year Ago EPS	0.28	0.23	2.54	1.43

Next Earnings Date: Feb 18, 2016 - [Set a Reminder](#)

Revenue Est	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	73.70M	64.95M	291.08M	306.13M
No. of Analysts	1	1	2	2
Low Estimate	73.70M	64.95M	291.00M	303.26M
High Estimate	73.70M	64.95M	291.17M	309.00M
Year Ago Sales	69.29M	62.11M	319.67M	291.08M
Sales Growth (year/est)	6.40%	4.60%	-8.90%	5.20%

Earnings History	Dec 14	Mar 15	Jun 15	Sep 15
EPS Est	0.26	0.06	0.42	0.57
EPS Actual	0.28	0.23	0.36	0.46
Difference	0.02	0.17	-0.06	-0.11
Surprise %	7.70%	283.30%	-14.30%	-19.30%

EPS Trends	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Current Estimate	0.29	0.16	1.43	1.54
7 Days Ago	0.29	0.16	1.43	1.54
30 Days Ago	0.29	0.16	1.43	1.54
60 Days Ago	0.29	0.16	1.43	1.54
90 Days Ago	0.29	0.16	1.43	1.54

EPS Revisions	Current Qtr. Dec 15	Next Qtr. Mar 16	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.	3.60%	50.00%	46.70%	2.70%
Next Qtr.	-30.40%	22.40%	49.00%	13.00%
This Year	-43.70%	-15.60%	22.90%	2.70%
Next Year	7.70%	-1.50%	7.90%	9.30%
Past 5 Years (per annum)	9.49%	N/A	N/A	N/A
Next 5 Years (per annum)	14.00%	8.09%	6.16%	4.88%

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The York Water Company (YORW) - NasdaqGS [★ Watchlist](#)

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27.73 0.34(1.24%) 4:00PM EST

- Nasdaq Real Time Price

Analyst Estimates

Get Analyst Estimates for:

Earnings Est	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	0.23	N/A	0.93	0.99
No. of Analysts	2.00	N/A	2.00	2.00
Low Estimate	0.20	N/A	0.90	0.98
High Estimate	0.26	N/A	0.95	1.00
Year Ago EPS	0.28	0.20	0.89	0.93

6 SJW 0.30% MSEX 0.0'

YORW 1.53%
York Water Co

27.81

+0.42 (1.53%)

Revenue Est	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Avg. Estimate	11.71M	NaN	47.19M	48.86M
No. of Analysts	2		2	2
Low Estimate	11.60M	NaN	47.10M	48.80M
High Estimate	11.81M	NaN	47.28M	48.91M
Year Ago Sales	11.50M	NaN	45.90M	47.19M
Sales Growth (year/est)	1.80%	N/A	2.80%	3.50%

Earnings History	Dec 14	Mar 15	Jun 15	Sep 15
EPS Est	0.23	0.23	0.25	0.26
EPS Actual	0.28	0.20	0.22	0.28
Difference	0.05	-0.03	-0.03	0.02
Surprise %	21.70%	-13.00%	-12.00%	7.70%

EPS Trends	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Current Estimate	0.23	N/A	0.93	0.99
7 Days Ago	0.23	N/A	0.93	0.99
30 Days Ago	0.23	N/A	0.93	0.99
60 Days Ago	0.23	N/A	0.93	0.99
90 Days Ago	0.20	N/A	0.93	0.99

EPS Revisions	Current Qtr. Dec 15	Next Qtr. Mar 16	Current Year Dec 15	Next Year Dec 16
Up Last 7 Days	0	N/A	0	0
Up Last 30 Days	0	N/A	0	0
Down Last 30 Days	0	N/A	0	0
Down Last 90 Days	N/A	N/A	N/A	N/A

Growth Est	YORW	Industry	Sector	S&P 500
Current Qtr.	-17.90%	50.00%	46.70%	2.70%
Next Qtr.	N/A	22.40%	49.00%	13.00%
This Year	4.50%	-15.80%	22.90%	2.70%
Next Year	6.50%	-1.50%	7.90%	9.30%
Past 5 Years (per annum)	6.74%	N/A	N/A	N/A
Next 5 Years (per annum)	4.90%	8.09%	6.16%	4.88%

ATTACHMENT 4

**ARIZONA WATER COMPANY'S RESPONSES TO
RESIDENTIAL UTILITY CONSUMER OFFICE'S
FIFTH SET OF DATA REQUESTS
WESTERN GROUP RATE APPLICATION
DOCKET NO. W-01445A-15-0277
February 8, 2016**

Company Response Number: RUCO 5.07

- Q. Equity Infusion – Please provide (a) the date the above \$10,222,000 equity infusion was made, (b) detail as to the capital projects to be funded by the equity proceeds, and (c) an indication as to why AWC elected to fund those capital projects with equity capital as opposed to debt capital.**
- A.**
- a) October 29, 2010.
 - b) Paid-in capital is a component of total capitalization and as such, finances utility plant in service.
 - c) Arizona Water Company's stockholders made a cash equity infusion for the purpose of improving Arizona Water Company's equity ratio.

Response provided by: Joseph D. Harris
Title: Vice President and Treasurer
Address: 3805 N. Black Canyon Highway
Phoenix, AZ 85015

ARIZONA WATER COMPANY'S RESPONSES TO
RESIDENTIAL UTILITY CONSUMER OFFICE'S
THIRD SET OF DATA REQUESTS
WESTERN GROUP RATE APPLICATION
DOCKET NO. W-01445A-15-0277

December 28, 2015

Company Response Number: RUCO 3.03

- 5) In regard to question 4 above, to the extent the Company considered issuing, but elected not to issue, new lower cost debt, provide a detailed explanation as to all reasons why the Company elected not to avail itself of the opportunity to reduce its weighted average cost of debt; and
 - 6) In regard to question 4 above, to the extent the Company did not consider the issuance of new lower cost debt, acknowledge that pursuant to the regulatory compact regulators typically set rates at a level which requires ratepayers to compensate the Company for its embedded cost of debt.
- A.
- 1) Arizona Water Company uses a combination of long-term debt, short-term debt, internally-generated funds (i.e. equity), and outside funds (e.g. grants, hook-up fees, advances and contributions) to fund capital projects. The choice of funds depends on a number of factors including the type of project and its timing, capital requirements, availability, terms, capital structure and financial/economic conditions. Arizona Water Company has issued traditional public utility-style bonds (i.e. long-term, non-sinking fund) because doing so is consistent with the permanent nature of the capital deployed in financing long-lived assets and provides cash flow to fund ongoing necessary system improvements and replacements, thereby maintaining a balanced capital structure without unnecessarily increasing customers' rates.
 - 2) Arizona Water Company does not consider bonds with a sinking fund requirement to be a suitable option given the capital intensity of the water utility industry. Retiring debt through annual sinking fund payments significantly reduces the amount of cash flow available and can impair the utility's ability to make ongoing necessary system improvements and replacements. It is for this reason that public utilities have traditionally issued debt without sinking fund requirements.
 - 3) Shortly after the issuance of the Company's Series M Bonds in August of 2008, the market for corporate bonds collapsed (i.e. bond investors began avoiding risky corporate bonds in favor of U.S. Treasury securities), resulting in dramatically higher borrowing costs for companies. While interest rates subsequently declined, so did Arizona Water Company's financial condition. Consequently, after Arizona Water Company filed an application with the Commission for financing approval on December 19, 2008 (Docket 08-0607), Staff concluded that Arizona Water Company's pro forma equity ratio was so poor that Staff could no longer assume that Arizona Water Company could refinance the debt, and recommended denial of over 50% of Arizona Water Company's financing request.

Response provided by:	Joel M. Reiker
Title:	Vice President – Rates and Revenues
Address:	3805 N. Black Canyon Highway Phoenix, AZ 85015

ARIZONA WATER COMPANY'S RESPONSES TO
RESIDENTIAL UTILITY CONSUMER OFFICE'S
THIRD SET OF DATA REQUESTS
WESTERN GROUP RATE APPLICATION
DOCKET NO. W-01445A-15-0277

December 28, 2015

Company Response Number: RUCO 3.03

Q. Long-Term Debt – Pursuant to the Company's response to RUCO Data Request 2.05, information was provided for Arizona Water Company's long-term debt. A review of the Supplemental Indentures provided for the Company's Series K, Series L and Series M long-term debt indicates the following:

- a) The Series K Bonds (\$15,000,000) were issued April 1, 2001, at an interest rate of 8.04%;
- b) The Series L Bonds (\$25,000,000) were issued August 1, 2006, at an interest rate of 6.30%;
- c) The Series M Bonds (\$35,000,000) were issued August 1, 2008, at an interest rate of 6.67%;
- d) The underlying debt for each Bond Series has a 30-year maturity;
- e) The underlying debt for each Bond Series is non-amortizing, as the aggregate principal balance of the debt in each Bond Series is due and payable upon maturity;
- f) Each Bond Series requires that interest be paid semi-annually; and
- g) Contingent upon Article 2.04 of the Indenture, no portion of the debt in each Bond Series may be redeemed prior to 20 years of the 30-year Bond Series term having elapsed (excepting the sale or transfer of the assets to a municipality pursuant to a condemnation proceeding).

In light of the above, please respond to the following:

- 1) When making capital budgeting decisions as to the nature and type of debt to be used to fund the Company's utility plant, explain why the Company has historically relied upon the issuance of long-term, 30-year maturity non-amortizing debt;
- 2) To what extent, if any, has the Company considered issuing amortizing debt, rather than non-amortizing debt;
- 3) Acknowledge that subsequent to the issuance of the Company's 6.30% Series M Bonds in August of 2008, the market cost of debt fell appreciably, thanks in part to the accommodative monetary policy enacted by the Federal Reserve;
- 4) Subsequent to the issuance of its Series M Bonds, indicate to what extent, if any, the Company considered issuing additional new debt in order to avail itself of the opportunity to reduce its current 6.82% weighted average cost of debt;

Response provided by:	Joel M. Reiker
Title:	Vice President – Rates and Revenues
Address:	3805 N. Black Canyon Highway Phoenix, AZ 85015

ARIZONA WATER COMPANY'S RESPONSES TO
RESIDENTIAL UTILITY CONSUMER OFFICE'S
THIRD SET OF DATA REQUESTS
WESTERN GROUP RATE APPLICATION
DOCKET NO. W-01445A-15-0277

December 28, 2015

Company Response Number: RUCO 3.03

- 4) See response to part 3 above.
- 5) In response to Arizona Water Company's worsening financial condition and economic conditions in the final weeks of 2008, Arizona Water Company's Board of Directors cut the 2009 capital budget from \$19 million to \$5 million, thereby eliminating the need for additional debt financing.
- 6) Arizona Water Company cannot acknowledge that regulators "typically set rates at a level which requires ratepayers to compensate the Company for its embedded cost of debt" because Arizona Water Company has not conducted, nor is it aware of, any such study. However, Arizona Water Company can acknowledge that under the regulatory compact, a regulated public utility is entitled to fair and reasonable compensation equal to the prudently incurred cost of providing service.

Response provided by: Joel M. Reiker
Title: Vice President – Rates and Revenues
Address: 3805 N. Black Canyon Highway
Phoenix, AZ 85015

**ARIZONA WATER COMPANY'S RESPONSES TO
RESIDENTIAL UTILITY CONSUMER OFFICE'S
SECOND SET OF DATA REQUESTS
WESTERN GROUP RATE APPLICATION
DOCKET NO. W-01445A-15-0277**

November 30, 2015

Company Response Number: RUCO 2.08

Q. PRPM™ Program and Data Inputs – Ms. Ahern recently testified as to cost of capital on behalf of EPCOR Water Arizona in a rate proceeding before the Arizona Corporation Commission (Docket No. WS-01303A-14-0010). In Decision No. 75268, dated September 8, 2015 (p. 41, lines 22-24), the Commission expressed concerns regarding the lack of access by other parties to Ms. Ahern's proprietary PRPM™ model and the data used therein, stating “[a]ccess to the model is critical for multiple reasons, ranging from the possibility of data input errors, to formula miscalculations, to manipulation of data.” In light of the above, please provide RUCO with (i) the actual PRPM™ proprietary program utilized by Ms. Ahern in her PRPM™ cost of equity estimation analysis, and (ii) all data inputs employed by Ms. Ahern in the computation of the following PRPM™ derived cost of equity metrics:

- a) The predicted equity risk premiums for each of her eight sample companies, as presented in column [5] of Exhibit PMA-7 (Page 2 of 11),**
- b) The 6.34% Ibbotson equity risk premium based on PRPM™, as presented on line 2 of Exhibit PMA-7 (Page 8 of 11) Exhibit PMA-7 (Page 2 of 11), and**
- c) The 4.47% forecasted equity risk premium based on PRPM™, as presented on line 4 of Exhibit PMA-7 (Page 11 of 11).**

To the extent mathematical operations have been performed on the data to obtain the above referenced PRPM™ derived cost of equity metrics, provide an electronic version of the files showing Ms. Ahern's calculations, in Excel format with formulas intact.

- A. (i)** Due to copyright laws, Ms. Ahern cannot provide RUCO with EViews®, the software used to derive the predicted risk premiums through the GARCH methodology. However, as discussed in response to discovery in Docket No. WS-01303A-14-0010, she can make herself, her staff, and EViews® available to RUCO in person or via webinar to replicate the derivation of the predicted risk premiums referenced in her testimony.
- (ii)** Please refer to Ms. Ahern's response to RUCO 2.01 Cost of Capital Work Papers.

Response provided by: Pauline Ahern
Title: Partner, Sussex Economic Advisors, LLC
Address: 1900 West Park Road, Suite 250
Westborough, MA 01581

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	\$ 75,000,000	\$ -	\$ 75,000,000	46.31%	5.43%	2.51%
2							
3	Common Equity	\$ 86,959,196	\$ -	\$ 86,959,196	53.69%	8.95%	4.80%
4							
5	TOTAL CAPITALIZATION	\$161,959,196	\$ -	\$161,959,196	100.00%		7.32%
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

Cost of Capital -- Common Equity

<u>Line No</u>			
1	Discounted Cash Flow Model ("DCF")	Schedule JAC - 3	8.63%
2			
3	Capital Asset Pricing Model ("CAPM")	Schedule JAC - 4	7.79%
4			
5	Comparable Earnings Model ("CE")	Schedule JAC - 5	<u>10.42%</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	(A) Current Dividend Yield (D_0/P_0)	(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_1/P_0)	(I) DCF Rates
1	American States Water Co.	2.1%	6.0%	5.8%	9.7%	5.5%	4.1%	6.2%	8.4%
2	American Water Works Co., Inc	2.3%	3.8%	4.3%		7.0%	7.72%	5.7%	8.0%
3	Aqua America, Inc.	2.4%	5.1%	5.7%	8.8%	7.5%	5.85%	6.6%	9.1%
4	Artesian Resources Corp.	3.3%	1.5%		3.2%		4.0%	2.9%	6.2%
5	California Water Service Group	2.9%	3.2%	3.3%	3.7%	6.0%	5.0%	4.2%	7.2%
6	Connecticut Water Service, Inc.	2.8%	2.9%	4.7%	6.8%	4.3%	5.0%	4.7%	7.6%
7	Middlesex Water	3.0%	2.0%	3.8%	3.0%	3.7%	2.7%	3.0%	6.1%
8	SJW Corporation	2.6%	4.1%	3.3%	5.7%	4.5%	14.0%	6.3%	9.0%
9	York Water Company	2.5%	2.8%	4.0%	4.3%	5.3%	4.9%	4.3%	6.9%
10									
11									
12	Mean	2.65%	3.49%	4.38%	5.65%	5.48%	5.92%	4.89%	7.61%
13									
14									
15									
16	Median	2.59%	3.24%	4.17%	5.00%	5.42%	5.00%	4.74%	7.58%
17									
18									
19	Composite-Mean		6.21%	7.09%	8.36%	8.19%	8.63%	7.61%	
20									
21									
22	Composite-Median		5.91%	6.84%	7.67%	8.09%	7.67%	7.41%	
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%	3.5%	4.3%
8	Middlesex Water	4.5%	1.5%	3.0%	3.0%	5.0%	3.0%	3.0%	3.7%
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%

Reference:

Value Line Investment Survey - January 15, 2016 - Attachment 1

15
 16
 17

PROXY GROUP -- DIVIDEND YIELD

Line No	Proxy Group Companies	(A)	(B)	(C)	(D)	(E)
		DPS	July - September, 2014			Yield
			High	Low	Average	
1	American States Water Co.	\$0.90	\$45.47	\$39.16	\$42.32	2.1%
2	American Water Works Co., Inc	\$1.36	\$65.04	\$55.13	\$60.09	2.3%
3	Aqua America, Inc.	\$0.71	\$31.53	\$28.05	\$29.79	2.4%
4	Artesian Resources Corp.	\$0.89	\$30.34	\$23.80	\$27.07	3.3%
5	California Water Service Group	\$0.67	\$25.14	\$21.01	\$23.08	2.9%
6	Connecticut Water Service, Inc.	\$1.07	\$43.12	\$34.15	\$38.64	2.8%
7	Middlesex Water	\$0.80	\$29.01	\$24.01	\$26.51	3.0%
8	SJW Corporation	\$0.78	\$32.63	\$27.60	\$30.12	2.6%
9	York Water Company	\$0.62	\$26.67	\$22.18	\$24.43	2.5%
10	<hr/>					
11						
12	Average					2.65%
13						
14						
15						
16						

References:

- 18 Column (A) - Value Line Investment Survey January 15, 2016 - Fourth Quarter Dividends Annualized
- 19 Columns (B), (C), and (D) - Yahoo Finance
- 20

PROXY GROUP -- GROWTH RATES - RETAINED TO COMMON EQUITY

<u>Line No</u>	<u>Proxy Group Companies</u>	<u>(A) 2010</u>	<u>(B) 2011</u>	<u>(C) 2012</u>	<u>(D) 2013</u>	<u>(E) 2014</u>	<u>Average</u>	<u>2015</u>	<u>2016</u>	<u>2018-'20</u>	<u>Average</u>
1	American States Water Co.	5.8%	5.3%	6.6%	6.8%	5.7%	6.0%	5.5%	5.5%	6.5%	5.8%
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%	6.0%	5.5%	5.7%
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%	2.5%	4.0%	3.5%	3.3%
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%	4.0%	4.0%	3.5%	3.8%
8	SJW Corporation	1.2%	3.1%	3.3%	2.8%	10.2%	4.1%	3.0%	4.0%	3.0%	3.3%
9	York Water Company	2.7%	2.5%	2.4%	2.4%	3.9%	2.8%	4.0%	4.5%	3.5%	4.0%
10											
11											
12	Average						3.5%				4.4%
13											
14											

Source: Value Line Investment Survey January 15, 2016

15
 16
 17
 18
 19
 20

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.	2.95%	0.70 X	6.91%	=	4.84%
2	American Water Works Co., Inc	2.95%	0.70 X	6.91%	=	4.84%
3	Aqua America, Inc.	2.95%	0.75 X	6.91%	=	5.18%
4	Artesian Resources Corp.	2.95%	0.55 X	6.91%	=	3.80%
5	California Water Service Group	2.95%	0.75 X	6.91%	=	5.18%
6	Connecticut Water Service, Inc.	2.95%	0.65 X	6.91%	=	4.49%
7	Middlesex Water	2.95%	0.70 X	6.91%	=	4.84%
8	SJW Corporation	2.95%	0.75 X	6.91%	=	5.18%
9	York Water Company	2.95%	0.75 X	6.91%	=	5.18%

10

11 Average

7.79%

12

13

14

15

20 year Treasury Bonds

30 year Treasury Bonds

16

November, 2015 2.69%

3.03%

17

December, 2015 2.61%

2.97%

18

January, 2016 2.49%

2.86%

19

Average 2.59%

2.95%

20

21

RUCO Risk-Free Rate 2.95%

22

23

REFERENCES

24

Column [A]: Federal Reserve Selected Interest Rates H.15 - Attachment 2

25

Column [B]: Value Line Investment Survey - January 15, 2016 - 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	\$134.07	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	\$18.86	\$149.74	12.22%	7.29%	4.93%
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	\$216.51	16.58%	7.60%	8.98%
20	1996	\$38.73	\$237.08	17.08%	6.18%	10.90%
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	\$24.70	\$338.37	7.44%	5.53%	1.91%
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	\$66.18	\$529.59	12.80%	4.86%	7.94%
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	\$86.95	\$613.14	14.59%	3.81%	10.78%
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	\$102.31	\$726.96	14.18%	3.12%	11.06%
39	2015	\$84.79	\$744.68	11.52%	2.55%	8.98%
40	Average			13.69%	6.78%	6.91%

[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 and
https://ycharts.com/indicators/reports/sp_500_earnings

Source for [D]: Morningstar 2015 Classic Yearbook (Table A-7) and
 U.S. Department of the Treasury

<https://www.treasury.gov/Pages/default.aspx>

Note: Data for 2015 reflects EPS and BVPS as of the end of Q3. EPS is annualized over four quarters.

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%	12.5%	14.5%	10.1%	11.6%
American Water Works	11.2%	10.0%	9.7%	9.3%	9.4%	10.6%	11.6%	11.0%	13.4%	8.7%	9.0%	9.0%	9.0%	7.3%	7.7%	9.0%
Aqua America, Inc.			7.4%	7.3%	8.0%	8.0%	6.0%	8.3%	6.8%	12.9%	13.0%	13.5%	14.0%	10.9%	11.9%	13.5%
Artesian Resources	9.3%	6.8%	8.1%	9.9%	9.6%	8.6%	8.0%	9.0%	7.9%	9.1%	7.5%	9.0%	9.5%	7.4%	7.3%	8.7%
California Water Service Group	7.6%	7.0%	8.7%	9.1%	9.4%	8.7%	8.3%	7.3%	9.2%	10.2%	10.5%	10.0%	9.5%	8.6%	8.7%	10.0%
Connecticut Water Service, Inc.	8.6%	7.8%	8.7%	8.9%	7.0%	8.2%	7.5%	7.8%	8.7%	9.3%	10.0%	10.0%	9.5%	8.6%	8.3%	9.8%
Middlesex Water	10.6%	9.7%	8.2%	8.0%	6.0%	6.2%	7.9%	8.1%	7.3%	14.4%	7.0%	8.0%	7.5%	8.6%	8.8%	7.5%
SJW Corporation	11.6%	9.3%	9.5%	9.2%	8.6%	9.8%	9.5%	9.3%	9.3%	11.0%	11.0%	12.0%	12.0%	9.7%	9.8%	11.7%
York Water																
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%	10.42%
Median	9.3%	8.1%	8.7%	9.0%	8.2%	8.6%	8.0%	8.4%	8.7%	10.2%	10.3%	10.0%	9.5%	8.63%	8.74%	9.92%
Average of Mean and Median																10.17%

Source: Value Line Investment Survey (January 15, 2016).

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%	3.2%	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%	5.7%	9.6%	1.5%	4.7%
37	2011	1.6%	3.3%	8.9%	3.0%	4.7%
38	2012	2.3%	3.8%	8.1%	1.7%	1.4%
39	2013	2.2%	2.9%	7.4%	1.5%	0.8%
40	2014	2.4%	4.1%	6.2%	0.8%	-1.2%
41	2015			5.3%		

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%	1.7%	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.	-1.5%	5.4%	9.0%	4.8%	9.6%
43	2nd Qtr.	2.9%	3.6%	9.0%	3.2%	3.6%
44	3rd Qtr.	0.8%	3.3%	9.1%	2.4%	6.4%
45	4th Qtr.	4.6%	4.0%	8.7%	0.4%	-1.2%
46	2012					
47	1st Qtr.	2.3%	4.5%	8.3%	3.2%	2.0%
48	2nd Qtr.	1.6%	4.7%	8.2%	0.0%	-2.8%
49	3rd Qtr.	2.5%	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.	2.7%	2.5%	7.7%	2.0%	1.2%
53	2nd Qtr.	1.8%	2.0%	7.6%	1.2%	2.4%
54	3rd Qtr.	4.5%	2.6%	7.3%	1.6%	0.0%
55	4th Qtr.	3.5%	3.3%	7.0%	1.2%	0.3%
56	2014					
57	1st Qtr.	-2.1%	3.2%	6.6%	1.6%	0.3%
58	2nd Qtr.	4.6%	4.2%	6.2%	3.6%	0.2%
59	3rd Qtr.	5.0%	4.7%	6.1%	0.0%	0.0%
60	4th Qtr.	2.2%	4.5%	5.7%	-2.8%	-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	5.0%	N/A	N/A

*GDP=Gross Domestic Product

Source: Council of Economic Advisors, Economic Indicators, various issues.

INTEREST RATES

Line No	Year	Prime	US Treasury	US Treasury	Utility	Utility	Utility	Utility
		Rate	T Bills 3 Month	T Bonds 10 Year	Bonds Aaa	Bonds Aa	Bonds A	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%	9.43%	9.86%	10.22%	10.49%	10.96%
6	1980	15.27%	11.51%	11.43%	12.30%	13.00%	13.34%	13.95%
7	1981	18.89%	14.03%	13.92%	14.64%	15.30%	15.95%	16.60%
8	1982	14.86%	10.69%	13.01%	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%	12.46%	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%	7.67%	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%		4.19%	4.28%	4.80%
41	2015	3.27%	0.05%	2.14%				

[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	2007						
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	2008						
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	2009						
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	2010						
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	2011						
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	2012						
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	2013						
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%	4.59%	4.81%	5.25%
92	2014						
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%	4.23%	4.29%	4.73%
99	July	3.25%	0.03%	2.54%	4.16%	4.23%	4.66%
100	Aug	3.25%	0.03%	2.42%	4.07%	4.13%	4.65%
101	Sept	3.25%	0.02%	2.53%	4.18%	4.24%	4.79%
102	Oct	3.25%	0.02%	2.30%	3.96%	4.06%	4.67%
103	Nov	3.25%	0.02%	2.33%	4.03%	4.09%	4.75%
104	Dec	3.25%	0.04%	2.21%	3.90%	3.95%	4.70%
105	2015						
106	Jan	3.25%	0.03%	1.88%	3.52%	3.58%	4.39%
107	Feb	3.25%	0.02%	1.98%	3.62%	3.67%	4.44%
108	Mar	3.25%	0.03%	2.04%	3.67%	3.74%	4.51%
109	Apr	3.25%	0.02%	1.94%	3.63%	3.75%	4.51%

INTEREST RATES

<u>Line No</u>		<u>Prime Rate</u>	<u>US Treasury T Bills 3 Month</u>	<u>US Treasury T Bonds 10 Year</u>	<u>Utility Bonds Aa</u>	<u>Utility Bonds A</u>	<u>Utility Bonds Baa</u>
110	May	3.25%	0.02%	2.20%			
111	Jun	3.25%	0.02%	2.36%			
112	Jul	3.25%	0.03%	2.32%			
113	Aug	3.25%	0.07%	2.17%			
114	Sep	3.25%	0.02%	2.17%			
115	Oct	3.25%	0.02%	2.07%			
116	Nov	3.25%	0.13%	2.26%			
117	Dec	3.50%	0.23%	2.24%			
118	2016						
119	Jan	3.50%	0.26%	2.09%			

[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 No	Year	S&P Composite	NASDAQ Composite	DJIA	S&P Dividend/Price Ratio	S&P Earnings/Price Ratio
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%
41	2015	2,061.20	4,940.49	17,590.61	2.10%	N/A

Source: Council of Economic Advisors, Economic Indicators, various issues.

STOCK PRICE INDICATORS

Line No		<u>S&P Composite</u>	<u>NASDAQ Composite</u>	<u>DJIA</u>	<u>S&P Dividends/Price Ratio</u>	<u>S&P Earnings/Price Ratio</u>
1	2004					
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	2005					
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	2006					
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	2007					
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	2008					
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	2009					
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	2010					
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	2011					
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	2012					
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	2013					
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	2014					
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	2015					
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%	4.72%
71	4th Qtr.	2,053.17	5,000.70	17,482.97	2.16%	N/A

Source: Council of Economic Advisors, Economic Indicators, various issues.

PROXY GROUP COMMON EQUITY RATIOS

	Company	2009	2010	2011	2012	2013	2014
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							
11							
12	Average	49.6%	49.0%	49.5%	51.5%	54.0%	54.5%
13							

14

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16 Source: Value Line January 15, 2016

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EXHIBITS

Analysis of Stockholders' Equity on a Total Company Basis, 2005-2014

Dividend Payout Ratios

Activity Year	Shares	Common Stock \$10 par value	Additional Paid in Capital	Retained Earnings	Total Equity	AWC Annual Dividend Payout Ratio	Sample Average Annual Dividend Payout Ratio
2005	270,000	\$ 2,700,000	\$ 9,087,347	\$ 55,127,428	\$ 66,914,775	65.00%	73.52%
				6,102,184			
				(3,966,300)			
2006	270,000	\$ 2,700,000	\$ 9,087,347	\$ 57,263,312	\$ 69,050,659	63.85%	76.04%
				6,465,743			
				(4,128,300)			
2007	270,000	\$ 2,700,000	\$ 9,087,347	\$ 59,600,755	\$ 71,388,102	109.60%	72.70%
				3,880,116			
				(4,252,500)			
2008	270,000	\$ 2,700,000	\$ 9,087,347	\$ 59,228,371	\$ 71,015,718	145.66%	72.94%
				2,943,571			
				(4,287,600)			
2009	270,000	\$ 2,700,000	\$ 9,087,347	\$ 57,884,342	\$ 69,671,689	147.79%	74.37%
				2,901,166			
				(4,287,600)			
2010	270,000	\$ 2,700,000	\$ 9,087,347	\$ 56,497,908	\$ 68,285,255	114.16%	68.88%
				3,755,683			
				(4,287,600)			
			10,222,000				
2011	270,000	\$ 2,700,000	\$ 19,309,347	\$ 55,965,991	\$ 77,975,338	94.99%	70.25%
				4,911,456			
				(4,665,600)			
2012	270,000	\$ 2,700,000	\$ 19,309,347	\$ 56,211,846	\$ 78,221,193	111.73%	64.07%
				6,336,366			
				(7,079,400)			
2013	270,000	\$ 2,700,000	\$ 19,309,347	\$ 55,468,812	\$ 77,478,159	29.53%	62.04%
				8,239,155			
				(2,432,700)			
2014	270,000	\$ 2,700,000	\$ 19,309,347	\$ 61,275,267	\$ 83,284,614	57.62%	55.94%
				8,669,582			
				(4,995,000)			
Balance - December 31, 2014	270,000	\$ 2,700,000	\$ 19,309,347	\$ 64,949,849	\$ 86,959,196		
Dividend Payout Ratios							
10-Year Average (2005-2014)						93.99%	69.08%
8-Year Average (2007-2014)						101.38%	67.65%
7-Year Average (2008-2014)						100.21%	66.93%
5-Year Average (2010-2014)						81.61%	64.23%

Sources: Schedule E-4 filed in this and prior AWC rate filings.
Value Line Investment Survey, January 15, 2016.

RUCO Sample Average Weighted Cost of Long-Term Debt

Line	Company	[A] Long-Term Debt O/S as of 12/31/2014	[B] Weighted Average Cost of Long-Term Debt 12/31/2014	[C] Annual Interest Expense	[D] L-T Debt Weighted Average Years to Maturity	[E] Percent Total L-T Debt Exceeding AWC 6.8248% Weighted Cost of Debt	[F] Weighted Avg. Cost of Debt Lower than AWC Lowest Cost Debt (i.e., 6.30% Series L Bonds)	[G] Employs Lower Cost Amortizing and/ or Sinking Fund Debt
1	Arizona Water Company	\$ 75,000,000	6.82%	\$ 5,118,614	21.43		6.30%	No
2								
3	American States Water	326,090,000	6.51%	21,214,950	15.98	30.08%	Higher	Yes
4	American Water Works	5,456,502,000	5.57%	303,883,125	25.46	12.40%	Lower	Yes
5	Aqua America	1,619,270,000	4.65%	75,296,055	14.36	6.70%	Lower	Yes
6	Artesian Resources	106,199,000	6.23%	6,613,286	12.32	19.06%	Lower	Yes
7	California Water	425,840,000	6.07%	25,863,151	12.40	23.19%	Lower	Yes
8	Connecticut Water	178,201,000	3.96%	7,063,289	13.10	6.31%	Lower	Yes
9	Middlesex Water	140,029,000	3.99%	5,587,157	18.37	3.94%	Lower	Yes
10	SJW Corp.	384,949,000	6.04%	23,254,507	16.95	24.68%	Lower	Yes
11	York Water	84,885,000	5.47%	4,647,175	15.20	29.45%	Lower	Yes
12								
13	Sample Totals	\$ 8,721,965,000		\$ 473,422,695				
14								
15	Sample Averages		5.43%			17.31%		
16								
17	Excess AWC Cost of Debt		1.397%					
18								
19								

Source: Sample company 2014 Form 10-K, U.S. Securities and Exchange Commission

RUCO Restatement of Ahern Exhibit PMA-5

Discounted Cash Flow (DCF) Cost of Equity Estimates
Updated to Reflect Changes in Value Line and Yahoo! Finance
5-Year EPS Growth Projections

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Eight Publicly Traded Water Companies	Average Dividend Yield (1)	Value Line Projected Five Year Growth in EPS (2)	Reuters Mean Consensus Projected Five Year Growth Rate in EPS	Zack's Five Year Projected Growth Rate in EPS	Yahoo! Finance Projected Five Year Growth in EPS	Average Projected Five Year Growth in EPS (3)	Adjusted Dividend Yield (4)	Indicated Common Equity Cost Rate (5)
American States Water Co.	2.16 %	6.00 %	5.00 %	5.00 %	4.10 %	5.03 %	2.21 %	7.24 %
American Water Works Co., Inc.	2.53	7.00	7.50	7.40	7.72	7.41	2.62	10.03
Aqua America, Inc.	2.49	7.50	5.00	5.30	5.85	5.91	2.56	8.47
California Water Service Group	2.74	6.50	5.00	5.00	5.00	5.38	2.81	8.19
Connecticut Water Service, Inc.	2.84	4.50	5.00	5.00	5.00	4.88	2.91	7.79
Middlesex Water Company	3.43	5.00	NA	NA	2.70	3.85	3.50	7.35
SJW Corporation	2.54	1.50	NA	NA	14.00	7.75	2.64	10.39
York Water Company	2.54	6.50	NA	NA	4.90	5.70	2.61	8.31
							Average	<u>8.47 %</u>
							Median	<u>8.25 %</u>
							Average of Mean and Median	<u>8.36 %</u>

Source of RUCO Updates: *Value Line* (January 16, 2016)
<http://finance.yahoo.com>

ARIZONA WATER COMPANY
DOCKET NO. W-01445A-15-0277

DIRECT TESTIMONY
OF
JOHN CASSIDY
ON
REVENUE REQUIREMENT

ON BEHALF OF THE
RESIDENTIAL UTILITY CONSUMER OFFICE

MARCH 11, 2016

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EXECUTIVE SUMMARY

Arizona Water Company (“AWC” or “Company”) is a Class A public service water corporation. At the present time, the total Company serves approximately 84,000 customers. AWC is comprised of ten separate operating systems that are organized into three different geographical groups: the Eastern, Western, and Northern Groups. AWC filed a general rate application with the Arizona Corporation Commission (“ACC” or “Commission”) on August 21, 2015 for its Western Group using a test year ending December 31, 2014. The Commission found the Application sufficient and filed a letter of Sufficiency on September 14, 2015.

The Company’s Western Group is comprised of the Pinal Valley, White Tank and Ajo systems and serves approximately 32,700 customers. AWC is requesting adjustments to its rates and charges for utility service in each of the Western Groups water systems. AWC’s rate application uses a test year ending December 31, 2014, and requests an increase in total revenues for the Western Group of \$6,010,409, or approximately 28.3 percent increase over test year operating revenues. In addition, AWC’s application proposes continuation of an arsenic cost recovery mechanism (“ACRM”) as previously authorized in Decision No. 71845 for the Pinal Valley system; a Nitrate Cost Reduction Mechanism (“NCRM”) which the Company describes as operating the same as the ACRM (if approved by the ACC) also for the Pinal Valley system; authorization to implement Off Site Facilities Fees of \$2,500 for new service connections in the White Tank system; authorization to implement a System Improvement Benefit (“SIB”); continuation of a Monitoring Assistance Program (“MAP”) surcharge previously authorized for the Western Group and finally the Company has requested a purchase power adjustor for each of the systems included in the Western Group.

AWC’s Application requests and RUCO’s proposed gross revenue increases are as follows:

<u>Service Area</u>	<u>AWC Requested</u>		<u>RUCO</u>	
	<u>Increase</u>	<u>Percent</u>	<u>Recommended</u>	<u>Percent</u>
Pinal Valley	\$5,354,172	28.99%	\$2,862,004	15.39%
White Tank	\$ 561,919	24.32%	\$ 298,814	12.74%
Ajo	\$ 94,318	21.54%	\$ 28,608	6.42%

1 AWC is requesting an 8.93 percent rate of return on the fair value rate base (FVRB)
2 on the Western Groups Systems while RUCO is recommending a 7.32 percent rate
3 of return. The FVRB as identified by the Company and RUCO's recommendation is
4 shown as follows:

<u>Service Area</u>	<u>COMPANY PROPOSED FVRB</u>	<u>RUCO's PROPOSED FVRB</u>
5 Pinal Valley	\$61,344,294	\$56,001,472
6 White Tank	\$ 5,107,756	\$ 4,737,182
7 Ajo	\$ 965,735	\$ 954,567

1 **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

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24

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

2 A. The purpose of my testimony is to present RUCO's recommendations regarding AWC's
3 Western Group's Application for a determination of the current fair value of its utility plant
4 and property and for a permanent increase in its rates and charges based thereon for
5 utility service. The test year utilized by the Company in connection with the preparation
6 of this Application is the 12-month period that ended December 31, 2014.

7
8 **Q. How many and which systems are in the Company's Western Group?**

9 A. There are three systems that make up AWC's Western Group. The largest system in
10 the Western Group is the Pinal Valley System that has approximately 28,723
11 customers. The remaining two systems White Tank and Ajo have 2,321 and 647
12 customers respectively.

13
14 **BACKGROUND**

15 **Q. Please describe your work effort on this project.**

16 A. I reviewed financial data provided by the Company and performed analytical procedures
17 necessary to understand the Company's filing as it relates to operating income, rate base,
18 and the overall revenue requirement for each system in the Western Group. Procedures
19 performed include the in-house formulation and analysis of this data, the preparation of
20 discovery requests, the review and analysis of the Company's responses to RUCO and
21 Commission Staff data requests, and a review of prior ACC dockets related to AWC's
22 Western Group. I was responsible for the rate base and operating income and expense
23 adjustments that determine RUCO's revenue requirement recommendations.

1 **Q. Please identify the exhibits you are sponsoring.**

2 A. I am sponsoring schedules for the Western Group systems numbered JAC-1 through
3 JAC-16. Schedules are provided for each of the systems including Pinal Valley, White
4 Tank and the Ajo systems.

5
6 **SUMMARY OF COMPANY'S REVENUE REQUEST**

7 **Q. Please provide a summary of the Company's filing for each of the systems in the**
8 **Western Group.**

9 A. The Company is proposing a fair value rate base ("FVRB") of \$67,417,786 for the Western
10 Group and an 8.93 percent rate of return on the FVRB. For ratemaking purposes the
11 Company has elected not to perform a reconstructive cost new less depreciation study
12 and is using its original cost rate base ("OCRB") as it's FVRB. The Company is also
13 proposing an adjustment in rates that will increase operating revenues for the Western
14 Group by \$6,010,434, or 28.32 percent.

15

<u>Service Area</u>	<u>FVRB</u>	<u>Current Operating Revenue</u>	<u>Inc. From Test Year</u>	<u>Percent Increase</u>
Pinal Valley	\$ 61,344,294	\$ 18,467,889	\$ 5,354,172	28.99%
White Tank	\$ 5,107,756	\$ 2,310,910	\$ 561,919	24.32%
Ajo	\$ 965,735	\$ 437,888	\$ 94,318	21.54%
	<u>\$ 67,417,785</u>	<u>\$ 21,216,687</u>	<u>\$ 6,010,409</u>	<u>28.32%</u>

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1 **RATE BASE ADJUSTMENTS – SUMMARY**

2 **Q. Has RUCO recommended any adjustments to the rate base for any of the three**
3 **systems included in the Western Group?**

4 A. Yes. RUCO is recommending several adjustments to the rate base as filed by AWC. A
5 summary of RUCO's recommendations includes the following:

6 **Rate Base Adjustment No. 1 – Post Test Year Plant**

7 RUCO is recommending reductions in post-test year plant for each of the three systems
8 included in the Western Group. The adjustments decreased the rate base in the Pinal
9 Valley, White Tank and Ajo systems by (\$5,167,279), (\$352,391) and (\$4,326)
10 respectively.

11 **Rate Base Adjustment No. 2 – Accumulated Depreciation**

12 RUCO's proposed adjustments to the accumulated depreciation accounts for each of the
13 three systems results in RUCO's reduction to depreciation expense related to the
14 proposed decrease in post-test year plant. The adjustments decreased accumulated
15 depreciation in the Pinal Valley, White Tank and Ajo systems by (\$117,932), (\$11,568)
16 and (\$201) respectively.

17 **Rate Base Adjustment No. 3 – Change in Cash Working Capital**

18 RUCO is recommending a reduction in the Company's cash working capital primarily as
19 a result of reducing the Company's operating expenses and the Company's failure to
20 include interest expense in its calculations of working capital requirements. The
21 adjustments decreased the working capital requirement in the Pinal Valley, White Tank
22 and Ajo systems by (\$293,475), (\$29,751) and (\$6,641) respectively.

23

24

1 **OPERATING INCOME ADJUSTMENTS – SUMMARY**

2 **Q. Has RUCO recommended adjustments to the operating income as requested by the**
3 **Company for the three systems included in this applications?**

4 A. Yes. RUCO has recommended several adjustments to the operating income as filed
5 by the Company. In summary, the operating income adjustments RUCO is recommending
6 include the following:

7 **RUCO Operating Income Adjustment No. 1 – Depreciation Expense**

8 RUCO has reduced depreciation expense due to the reduction of RUCO's
9 recommendation for post-test year plant.

10 **RUCO Operating Income Adjustment No. 2 – Weather Normalization**

11 RUCO has eliminated the Company's request for declining usage and weather
12 normalization.

13 **RUCO Operating Income Adjustment No. 3 – Tank Maintenance**

14 RUCO's is proposing denial of the Company's pro-forma adjustment for tank maintenance
15 expense. The Company's adjustment is predicated on forecasts made over a 14-year
16 period. In reviewing the Company's support for the adjustments made to tank
17 maintenance there were several years when there were no tank maintenance expenses
18 incurred. Consequently, ratepayers will be paying for expenses that the Company has
19 not incurred and may never incur.

20 **RUCO Operating Income Adjustment No. 4 – Payroll Annualization #1**

21 The Company has made pro-forma payroll annualization adjustments based on expected
22 salary increases for two years (i.e., 2015 and 2016). RUCO's first payroll adjustment
23

1 removes the pro forma 3.0 percent salary increase in year 2016, resulting in a reduction
2 to payroll in the Western Group by \$97,603.

3 **RUCO Operating Income Adjustment No. 5 – Payroll Annualization #2**

4 In its pro forma payroll annualization adjustment, the Company includes two corporate
5 officers shown to be full-time employees of AWC. However, these two executives also
6 work for AWC's California affiliate, San Gabriel Valley Water Company ("SGVWC").
7 RUCO's second payroll annualization adjustment reflects a sharing of payroll costs
8 between AWC and its California affiliate for salaries paid to the (i) Chairman/CEO and (ii)
9 Assistant Secretary, and results in a reduction to payroll expense by the Western Group
10 of \$49,307.

11 **RUCO Operating Income Adjustment No. 6 – Payroll Annualization #3**

12 RUCO's final payroll adjustment gives recognition to the known and measurable change
13 in employment status of one of the witnesses testifying on behalf of the Company in this
14 proceeding. Mr. Joel M. Reiker now lives in California and is employed by SGVWC, and
15 by removing his salary, RUCO's payroll adjustment results in a reduction to payroll
16 expense by the Western Group of \$36,383.

17 **RUCO Operating Income Adjustment No. 7 – Vehicles Service Cost**

18 RUCO has made an adjustment to vehicle service costs based on the substantial
19 decrease in gasoline prices compared to the test year.

20 **RUCO Operating Income Adjustment No. 8 – Rate Case Expense**

21 RUCO has reduced rate case expense based on the Commission's most recent litigated
22 decisions involving the Western Group as well as Commission decisions in other water
23 company filings, as adjusted for inflation.

1 **Q. Can you please identify the post-test year plant and accumulated depreciation**
2 **recorded by the Company for each of the Western Group systems?**

3 A. Yes. The pro-form adjustments made as of the close of the test year by each of the three
4 water systems, exclusive of the Phoenix office and meter shop, are as follows:

<u>System</u>	<u>Plant in Service</u>	<u>Accu. Depreciation</u>	<u>Net Plant</u>
Pinal Valley	\$ 9,122,637	(\$ 164,354)	\$ 8,958,283
White Tank	541,050	(14,004)	527,046
Ajo	11,650	(185)	11,465
<u>TOTALS</u>	<u>\$ 9,675,337</u>	<u>(\$ 178,543)</u>	<u>\$ 9,496,794</u>

8
9 **Q. What has been the ACC Staff's position on post-test year plant additions in recent**
10 **rate case applications?**

11 A. In recent applications the Staff has allowed post-test year additions even in cases when
12 the Staff Engineer did not do a used and useful determination. In the recent EPCOR
13 hearing, Docket No. WS-01303A-14-0010, the Staff Engineer did not perform a used and
14 useful determination prior to the hearing. See Transcript at 821-822.

15
16 **Q. Hasn't the Commission addressed the post-test year plant issue in prior rate cases**
17 **that was contrary to the position that the Staff seems to be taking in recent rate**
18 **case applications requesting post-test year plant?**

19 A. Yes. In decision No. 71410,² the Commission adopted most of Staff's recommendations
20 to remove post-test year plant additions from the rate setting process. In that case, Staff
21 explained that the matching principle is the reason that the Commission has allowed the
22

23 _____
24 ² Arizona-American Water Company; Docket No. W-01303A-08-0227; pages 19 through pages 22

1 inclusion of post-test year plant in rate base only in special and unusual situations that
2 were summarized as follows:

- 3 1) when the magnitude of the investment relative to the utility's total investment is
4 such that not including the post-test year plant in the cost of service would
jeopardize the utility's financial health;
- 5 2) the cost of the post-test year plant is significant and substantial;
- 6 3) the net impact on revenue and expenses for the post-test year plant is known and
7 insignificant (or is revenue-neutral); and
- 8 4) the post-test year plant is prudent and necessary for the provision of services and
reflects appropriate, efficient, effective and timely decision making.

9
10 **Q. Does RUCO believe that the reasoning put forth by Staff in that rate case continues**
11 **to be relevant today?**

12 A. Yes. RUCO believes that Staff's reasoning in that previous case are still sound principles
13 to continue to support. Only by matching costs and revenues will the test period be the
14 proper basis for setting rates that are just and reasonable.

15
16 **Q. Have you researched other regulatory agencies and how they have treated the**
17 **question of post-test year plant?**

18 A. I have reviewed filings from several other states. In a recent case in Maryland the
19 Administrative Law Judge summarized the Maryland Public Service Commission's policy
20 as follows:

21 "Adjustments to historic test year data should reflect the
22 relationship between sales, expenses, and rate base that can
23 reasonably be expected to exist during the rate effective period.
The return that will be earned is a function of this relationship
between these items – it is not dependent upon only one of them.

1 Selective projection of only one element in the equation is not
2 appropriate. Adjustments to the test year relationship must be
3 balanced and should, so far as possible, reflect all predictable
4 changes to the test year relationship. Commission's precedent
5 permits adjustments for known and measurable changes from
6 test year totals because known and measurable changes
7 suggest that the test year relationship between the cost of
8 service items will change."³

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Q. What is RUCO's position on post-test year plant?

A. RUCO will support post-test year plant if the project(s) are completed within six months
of the test year end and for projects considered as "major projects." Major projects would
be considered as transmission and distribution mains, wells and pumping equipment,
services, and projects that typically improve infrastructure. Additionally, major projects
improve water quality, reduce significant repair expenses, and would include projects that
ensure regulatory compliance.

**Q. Are there specific projects that the Company has requested in this case that RUCO
has taken exception too even if completed within the six month time period?**

A. Yes. These would be considered as "small and/or recurring type projects" that are
purchased on an ongoing bases and are not directly improving the quality of service to
ratepayers. The projects that RUCO classifies in this category and that the Company has
requested in their post-test year request include (1) Office Furniture and Equipment, (2)
Tools, Shop and Garage Equipment, and (3) Communication Equipment. The total

³ Case No. 8959 – In the matter of the application of Washington Gas and Light Company for authority to increase existing rates and charges for gas service.

1 project costs that the Company has requested in post-test year plant that RUCO believes
2 qualifies as small and/or recurring projects includes \$47,000 in Pinal Valley, \$329,250 in
3 White Tanks and \$450 in the Ajo system.

4
5 **Q. Can you please summarize the adjustments that RUCO is recommending be**
6 **removed from the Company's post-test year plant adjustment?**

7 **A.** Yes. RUCO is recommending the following adjustments to the Company's request
8 for post-test year plant.

9

System	Company Request Plant in Service	Meter Shop/ Phoenix Off.	RUCO Adj.		RUCO Recommends
			Plant	Shop/Office	
Pinal Valley	\$ 9,122,637	\$ 178,557	(\$ 4,988,722)	(\$ 178,557)	\$ 4,133,915
White Tank	541,050	23,566	(328,824)	(23,566)	212,226
Ajo	11,650	3,877	(450)	(3,877)	11,200
TOTALS	\$ 9,675,337	\$ 203,750	(\$ 5,317,996)	(\$ 203,750)	\$ 4,357,341

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14 **Rate Base Adjustment No. 2 – Accumulated Depreciation / Depreciation Expense**

15 **Q. Has RUCO identified any other adjustments related to the Company's post-test year**
16 **plant adjustment?**

17 **A.** Yes. RUCO is also making adjustments to reduce depreciation expense as well as
18 accumulated depreciation resulting from the reduction to post-test year plant. RUCO
19 is recommending that depreciation expense be reduced by \$117,932, \$11,568, and
20 \$201 for the Pinal Valley, White Tank and Ajo systems respectively. These reductions,
21 as previously stated, are caused by RUCO's recommended reduction in post-test
22 year plant.

1 **Q. Did AWC make a pro-forma adjustment to record deferred income taxes related to**
2 **the post-test year adjustments?**

3 A. No. The Company did not make a pro-forma adjustment to record deferred income taxes
4 related to the inclusion of post-test year plant additions.

5
6 **Q. Does AWC use accelerated depreciation methods in calculating federal and state**
7 **income taxes?**

8 A. Yes. See Reiker Exhibit Schedule E-9, Page 1 of 2. Ln 38 through 40; "Depreciation is
9 computed on a straight-line composite basis on property classifications ranging from
10 1.79% to 6.67%. For federal and state income tax purposes, depreciation is computed
11 using accelerated methods."

12
13 **Q. What are the ramifications to the revenue requirements by not recording deferred**
14 **income taxes?**

15 A. Deferred income taxes calculated as a result of the Company's use of accelerated
16 depreciation methods allowable by the Internal Revenue Service, are a reduction from
17 rate base, therefore, a benefit to ratepayers. If deferred taxes are not recognized for the
18 inclusion of post-test year plant then the ratepayer is, to put it simply, paying more in
19 rates than they should.

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1 **Q. Can RUCO calculate the deferred income tax effect that should have been recorded**
2 **by AWC and deducted from rate base when submitting its rate application?**

3 A. RUCO could make an attempt to calculate the deferred income taxes but too many
4 assumptions would have to be made. RUCO has asked AWC to provide this calculation
5 and will make any further adjustment(s) in surrebuttal testimony if necessary.
6

7 **Rate Base Adjustment No. 3 – Cash Working Capital**

8 **Q. Please explain the concept of Cash Working Capital.**

9 A. Cash Working Capital is often defined as the net cash outlay that a utility must furnish to
10 provide service before payment for that service is received from the customers. A
11 company's Cash Working Capital requirement represents the amount of cash the
12 company must have on hand to cover any differences in the time period between when
13 revenues are received and expenses must be paid. The most accurate way to measure
14 the cash working capital requirement is via a lead/lag study. The lead/lag study measures
15 the actual lead and lag days attributable to the individual revenues and expenses.
16

17 **Q. Is RUCO proposing a Cash Working Capital requirement adjustment in this case?**

18 A. Yes. RUCO proposes a reduction in Cash Working Capital for each system.
19 Adjustments of \$293,475, \$29,751 and \$6,641 were made in the Pinal Valley, White
20 Tank and Ajo water systems respectively.
21
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23

1 **Q Did the Company prepare a lead/lag study and did RUCO prepare its own study**
2 **confirming the lead/lag study as filed by the Company?**

3 A. Yes. The Company prepared a lead/lag study and while RUCO did not prepare a full
4 lead/lag study we did review the Company's and accepted their study as filed.

5
6 **Q. What element of expenses did RUCO adjust in its lead/lag study?**

7 A RUCO made several operating expense adjustments that are reflected in RUCO's
8 recommended lead/lag expense levels reflected on Schedule(s) JAC-5 that are
9 presented for each system.. The lone expense adjustment not reflected in RUCO's
10 lead/lag study is the Rate Case Expense adjustment.

11
12 **Q. Why isn't RUCO's Rate Case Expense adjustments reflected in RUCO's**
13 **operating expenses in its lead/lag study?**

14 A. Rate Case Expense has already been incurred and paid, consequently, it is not an
15 appropriate expense to be included in the calculation of Cash Working Capital.

16
17 **Q. What is RUCO's rationale for including the interest expense in the lead/lag**
18 **study?**

19 A. Interest payments are contractual arrangements associated with AWC's debt issuances
20 that obligate the Company to make fixed interest payments on certain dates. In this
21 respect, debt interest closely resembles AWC's other cash operating expenses. Thus,
22 the payment lead for AWC's interest expense should be separately recognized in the
23

1 lead/lag calculation as the Commission has recognized in numerous cases. Typically,
2 long-term debt interest is paid semi-annually, creating a 91.25-day expense lag.
3

4 **Q. Did the Company include interest expense in their calculation of working**
5 **capital?**

6 A. No. The Company did not include interest expense.
7

8 **OPERATING INCOME ADJUSTMENTS**

9 **RUCO Operating Income Adjustment No. 1 – Depreciation Expense**

10 **Q. Did RUCO adjust the depreciation expense that the Company had requested for**
11 **each system?**

12 A. Yes. RUCO reduced the Company's request for depreciation expense related to the
13 post-test year adjustments. RUCO reduced the depreciation in the Pinal Valley system by
14 \$117,932, in the White Tanks system by \$11,568 and in the Ajo system by \$201. As
15 previously stated the accumulated depreciation accounts for each of the systems were
16 also adjusted in the same amounts.
17

18 **RUCO Operating Income Adjustment No. 2 – Weather Normalization**

19 **Q. Did the Company make a weather normalization adjustment to test-year operating**
20 **revenues and expenses to compensate for declining usage?**

21 A. Yes. The Company's weather normalization adjustment decreases test-year operating
22 revenues by \$165,791 and decreases operating expenses by \$80,566 for the Western
23 Group. Among the individual operating systems, the Company's weather normalization
24

1 adjustment (i) decreases operating revenues in the Pinal Valley, White Tank and Ajo
2 systems by \$123,848, \$34,391, and \$7,552, respectively; and (ii) decreases operating
3 expenses in the Pinal Valley, White Tank and Ajo systems by \$56,308, \$18,002, and
4 \$6,256, respectively.

5
6 **Q. What is the Company's stated justification for its proposed weather normalization**
7 **adjustment?**

8 A. The Company believes such an adjustment is necessary to reflect residential customer
9 sales under "normal weather conditions and usage patterns." In making its adjustment,
10 AWC conducted a multiple regression analysis of monthly residential usage per customer
11 and weather conditions over the 5-year period ending December 2014. Based on its
12 analysis, the Company determined that weather conditions in the Pinal Valley and White
13 Tank service areas were "slightly wetter and cooler than normal," resulting in lower test
14 year residential usage, while weather conditions in the Ajo service area in 2014 were "drier
15 and hotter than normal," leading to residential usage higher than under normal weather
16 conditions. Regardless of the divergence in weather patterns, the Company states that
17 when controlling for weather conditions, its analysis demonstrates a statistically significant
18 annual decline in residential usage for each of its Western group systems.⁴

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⁴ See Direct Testimony of Joel M. Reiker, pp. 24-25.

1 **Q. Does RUCO support the Company's proposed weather normalization adjustment?**

2 A. No. RUCO believes the Company's weather normalization declining usage analysis
3 to be speculative, for as a determinant of customer usage fluctuations in weather
4 patterns are not, '*known and measureable.*' Additionally, for purposes of its
5 regression analysis, the Company relies on historical weather data over only a 5-year
6 period. Weather normalization adjustments made by regulated natural gas and power
7 companies, typically rely on historical data over a minimum 10-year period of time in
8 order to establish a baseline norm. For this reason, RUCO makes a reversing
9 adjustment to the weather normalization adjustment made by the Company, increasing
10 test-year operating revenues by \$165,791 and increasing operating expenses by \$80,566
11 for the Western Group. As shown in schedule JAC-9 filed for each system within the
12 Western Group, RUCO's weather normalization adjustment (i) increases operating
13 revenues in the Pinal Valley, White Tank and Ajo systems by \$123,848, \$34,391, and
14 \$7,552, respectively; and (ii) increases operating expenses in the Pinal Valley, White Tank
15 and Ajo systems by \$56,308, \$18,002, and \$6,256, respectively.

16
17 **RUCO Operating Income Adjustment No. 3 – Tank Maintenance**

18 **Q. Does the Company propose an income statement adjustment to normalize tank**
19 **maintenance expense?**

20 A. Yes. The Company makes a \$174,048 income statement adjustment to normalize tank
21 maintenance expense. The Company's proposed normalized cost of tank maintenance
22 calls for the tank interiors to be recoated every fourteen (14) years and the exteriors
23 painted every seven (7) years. In the test year, the Western Group experienced actual
24

1 tank maintenance expense of \$131,210, all of which cost was incurred by the Pinal Valley
2 system. The Company's proposed \$174,048 tank maintenance normalization adjustment
3 is based on projections of tank maintenance costs to be incurred over the next 14-year
4 period (i.e., 2016-2029) by each of the three Western Group systems, with the normalized
5 storage tank expense for each system representing a 14-year annual average cost figure.⁵
6 The following presents the normalized annual cost figures used to obtain the Company's
7 proposed \$174,048 tank maintenance normalization adjustment:

	<u>Pinal Valley</u>	<u>White Tank</u>	<u>Ajo</u>	<u>Western Group</u>
Storage Tanks - Actual	\$131,210	\$ -	\$ -	\$131,210
Storage Tanks - Normalized	<u>\$231,105</u>	<u>\$55,199</u>	<u>\$18,953</u>	<u>\$305,258</u>
Annual Increase	\$99,896	\$55,199	\$18,953	\$174,048

11
12
13 **Q. Does RUCO support the Company's proposed tank maintenance normalization**
14 **adjustment?**

15 **A.** No, and for three reasons. First, the Company's adjustment is predicated on forecasts
16 made over a 14-year period, a circumstance which is highly problematic given the
17 uncertainty associated with making forecasts over such an extended period of time.
18 Second, the further you move from a historical test year, the greater the imbalances
19 become between rate base, revenues, and expenses. Authorization of the Company's
20 proposed normalization adjustment would allow for recovery of future costs well in
21 advance of the period in which those costs are to be incurred. Third, and to underscore

22
23 ⁵ Over the 14-year period, 2016-2029, AWC projects the following tank maintenance expense to be incurred by its
24 Western Group systems: Pinal Valley (\$3,235,473, or 14-year annual average of \$231,105); White Tank (\$772,790, or
14-year annual average of \$55,199); and Ajo (\$265,346 or 14-year annual average of \$18,953).

1 the above point, a review of the work papers supporting the Company's proposed
2 adjustment reveals the following: (i) **in 10 of the 14 years**, the Ajo system is expected to
3 incur **no tank maintenance costs** (i.e., \$ 0); (ii) **in 9 of the 14 years**, White Tank is
4 expected to experience **average annual tank maintenance costs of only \$9,122**, with
5 **no tank maintenance costs** incurred in **6 of those years**; and (iii) **in 9 of the 14 years**,
6 Pinal Valley is expected to experience tank maintenance costs **less** than the anticipated
7 \$231,105 14-year annual average cost period, 2016-2029. For the above reasons, RUCO
8 recommends denial of the Company's proposed tank maintenance normalization
9 adjustment.

10
11 **Q. Does RUCO's tank maintenance income statement adjustment reverse the**
12 **Company's pro forma tank maintenance adjustment?**

13 **A.** Yes. As shown in Schedule JAC-10 filed for each Western Group system, RUCO's tank
14 maintenance adjustment decreases operating expenses by \$99,896, \$55,199 and
15 \$18,953 for the Pinal Valley, White Tank and Ajo systems, respectively.

16
17 **RUCO Operating Income Adjustment No. 4 – Payroll Annualization Adj. #1**

18 **Q. In reviewing the work papers relating to the Company's proposed payroll**
19 **annualization adjustment, did RUCO find that the Company made provision for two**
20 **post-test year salary increases, (i) a so-called "2015 rate" and (ii) a 3.0 percent**
21 **"2015 increase" in the hourly wage paid to all AWC Western Group employees?**

22 **A.** Yes. For purposes of its analysis, RUCO allowed the '2015 rate,' but made an adjustment
23 to remove the 3.0 percent across the board salary increase proposed for year 2016.

1 **Q. After disallowing the above noted across the board 3 percent 2016 salary increase,**
2 **what was RUCO's adjustment to the Company's proposed payroll annualization**
3 **adjustment?**

4 A. As shown in Schedule JAC-11, Page1 of 3, RUCO's adjustment to remove the 3.0 percent
5 salary increase resulted in a \$97,603 decrease to payroll and related expenses for the
6 Western Group. Individually, RUCO's adjustment resulted in a reduction to payroll
7 expense of \$85,980, \$8,713 and \$2,910 for the Pinal Valley, White Tank and Ajo systems,
8 respectively.

9
10 **RUCO Operating Income Adjustment No. 5 – Payroll Annualization Adj. #2**

11 **Q. Please explain the rationale for RUCO's second payroll annualization adjustment.**

12 A. A review of the work papers accompanying the Company's payroll annualization
13 adjustment revealed that two corporate officers working for both for AWC as well as its
14 California affiliate, San Gabriel Valley Water Company, were shown to be full-time
15 employees of AWC. Accordingly, RUCO made an adjustment to reduce the salaries of (i)
16 the Chairman/CEO and (ii) Assistant Secretary by one half (i.e., 50 percent) to reflects a
17 sharing of payroll costs between AWC and its California affiliate for salaries paid to these
18 corporate officers. RUCO's adjustment resulted in a total reduction to payroll expense for
19 the Western Group of \$49,307. As shown in Schedule JAC-11, Page 2 of 3, RUCO's
20 adjustment reduced payroll expenses by \$ 44,616, \$3,446 and \$1,246 for the Pinal Valley,
21 White Tank and Ajo sytems, respectively.

1 **RUCO Operating Income Adjustment No. 6 – Payroll Annualization Adj. #3**

2 **Q. Please explain the rationale for RUCO’s third payroll annualization adjustment.**

3 A. Mr. Joel Reiker has been a long-time employee of AWC, and is testifying on behalf of the
4 Company in this proceeding. However, Mr. Reiker now lives in California and is employed
5 by AWC’s affiliate, SGVWC. In view of this known and measureable change in Mr.
6 Reiker’s employment status, RUCO’s third payroll annualization adjustment removes Mr.
7 Reiker’s salary from test-year payroll expenses. As shown in Schedule JAC-11, Page 3
8 of 3, RUCO’s adjustment reduces payroll expenses in the Western Group by \$36,383.
9 Individually, RUCO’s adjustment reduces payroll expense by \$32,921, \$2,542 and \$920
10 for the Pinal Valley, White Tank and Ajo systems, respectively.

11
12 **RUCO Operating Income Adjustment No. 7 – Vehicles Service Costs**

13 **Q. Has RUCO made an adjustment to the Company’s pro forma service vehicle cost**
14 **adjustment, and if so why?**

15 A. Yes. In its application, AWC states that this adjustment is “necessary to reflect **current**
16 **costs** related to the Company’s fleet of service vehicles (emphasis added).”⁶ A review of
17 the work papers accompanying the Company’s service vehicle cost adjustment reveals,
18 however, that the Company made no adjustment to reflect the known and measurable
19 change in gasoline prices.

20
21
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23

⁶ See Reiker Direct, p.32, lines 9-10.

1 **Q. What was the average price per gallon paid by the Company for gasoline in the 2014**
2 **test year, and what price per gallon does RUCO propose in making its adjustment**
3 **to AWC's service vehicle cost adjustment?**

4 A. During the test-year the average price per gallon paid by the Company was \$3.174.
5 RUCO's adjusted price per gallon is \$1.8725. RUCO's adjusted closing price is computed
6 as an average annual price per gallon, using the average price (i.e., \$1.789) per gallon in
7 Arizona as of February 4, 2016 and the average price (i.e., \$1.956) per gallon one year
8 earlier ($(\$1.789 + \$1.956) / 2 = \$1.8725$).⁷ Thus, RUCO's adjustment gives recognition to
9 a known and measurable decrease in the current cost of gasoline of \$1.301 ($\$1.174 -$
10 $\$1.8725 = \1.301) over a one year period of time.

11
12 **Q. What impact did RUCO's known and measureable change in fuel prices have upon**
13 **service vehicle costs in the Western Group?**

14 A. As shown in Schedule JAC-12, RUCO's adjustment to reflect the current known and
15 measureable reduction in fuel prices decreases vehicle service costs by \$11,220 for the
16 Western Group.⁸ RUCO's adjustment reduces the fuel component of service vehicle
17 expense by \$9,389 for the Pinal Valley system and \$1,831 for the White Tank system.⁹

18
19
20
21 ⁷ These average Arizona gas prices were obtained from AAA Daily Fuel Gauge Report
<http://fuelgaugereport.aaa.com/states/arizona/>

22 ⁸ In its prior rate filing, the Company made a fleet fuel adjustment increasing operating expenses, in part to reflect an
increase in the price of gasoline. In response to RUCO 7.02, the Company indicated that it does not expect gasoline
prices to remain at current levels.

23 ⁹ Because the fuel component of the Company's vehicle service cost adjustment did not impact the Ajo system, RUCO
similarly made no adjustment to the service vehicle costs for the Ajo system.

1 **RUCO Operating Income Adjustment No. 8 – Rate Case Expense**

2 **Q. What amount of rate case expense has the Company requested be authorized in**
3 **this proceeding?**

4 A. The Company requests recovery of rate case expense estimated to be \$486,274,
5 amortized over three years. To facilitate recovery of this expense, in its application AWC
6 has proposed an income statement adjustment increasing operating expenses by
7 \$40,606 for the Western Group.

8
9 **Q. Has RUCO proposed an adjustment reducing the amount of rate case expense**
10 **requested by the Company?**

11 A. Yes. RUCO proposes recovery of rate case expense of \$319,827 in this docket. In
12 arriving at this dollar figure, RUCO looked to see what the Commission authorized rate
13 case expense had been in the prior AWC Western Group rate filing litigated at Hearing.

14
15 **Q. Was the prior AWC Western Group rate proceeding litigated at Hearing?**

16 A. No. The previous AWC Western Group rate proceeding was resolved by means of a
17 Settlement Agreement in Docket No. W-01445A-10-0517. Prior to that time, the last
18 Western Group rate proceeding to be fully litigated at Hearing was the Company's rate
19 filing in Docket No. W-01445A-04-0650. In that docket, in Decision No. 68302 (dated
20 November 14, 2005), the Commission authorized recovery of rate case expense in an
21 amount of \$250,000.

22

23

24

1 **Q. Did RUCO use the \$250,000 rate case expense figure authorized in Decision No.**
2 **68302 as a basis for its recommendation in the instant docket, and if so, how?**

3 A. Yes. Although resolved by means of a Settlement Agreement, RUCO did file testimony
4 in Docket No. W-01445A-10-0517. In that docket, RUCO witness, Mr. Tim Coley,
5 borrowed upon the \$250,000 authorized rate case expense in the prior Western Group
6 rate proceeding, making an upward adjustment for inflation to obtain his then
7 recommended \$304,975 rate case expense in that proceeding.

8
9 **Q. For purposes of RUCO's recommended rate case expense in this docket, have you**
10 **made an additional upward adjustment to Mr. Coley's recommended rate case**
11 **expense in the prior AWC rate proceeding (i.e., Docket No. 01445A-10-0517)?**

12 A. Yes. As shown in RUCO Direct Schedule JAC-13, in arriving at my \$319,827
13 recommended rate case expense figure, I make an upward 4.87 percent adjustment for
14 inflation to give recognition to the diminished purchasing power of the U.S. dollar over the
15 period, January 1, 2004 through July 1, 2011.¹⁰ RUCO's adjustment reduces rate case
16 expense by to the Company's proposed rate

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23 ¹⁰ The 4.87 percent inflation factor used to compute RUCO's recommended \$319,827 rate case expense figure was
24 obtained from InflationData.com
http://inflationdata.com/Inflation/Inflation_Calculators/Cumulative_Inflation_Calculator.aspx

1 **Q. What is RUCO's recommended rate case expense for each of the three Western**
2 **Group systems?**

3 A. As shown in Schedule JAC-13, individually RUCO's adjustment results in a reduction to
4 rate case expense of \$48,622, \$5,805 and \$1,055 for the Pinal Valley, White Tank and
5 Ajo systems, respectively.

6
7 **Q. Does RUCO believe its \$319,827 recommended rate case expense to be**
8 **reasonable?**

9 A. Yes, as it is based on an amount previously awarded by the Commission in an AWC
10 Western Group rate docket, and has been updated for inflation on two occasions, thereby
11 ensuring that its purchasing power today is equivalent to that of the \$250,000 Commission
12 authorized rate case expense in Decision No. 68302.

13

14 **RUCO Operating Income Adjustment No. 9 – Property Tax Expense**

15 **Q. What amount of property tax expense has the Company requested be authorized in**
16 **this proceeding?**

17 A. RUCO increased property tax expense in Pinal Valley and the White Tank systems in the
18 Western Group. Property taxes in Arizona are calculated on revenues in the water industry
19 and adjustments are being made to each system as a result of RUCO's recommended
20 increase in test year revenue. Property tax adjustments of \$6,629 and \$1,648 were made
21 to the Pinal Valley and White Tank systems accordingly.

22

23

24

RUCO Operating Income Adjustment No. 10 – Income Tax Expense

Q. What amount of income tax expense has the Company requested be authorized in this proceeding?

A. Federal and State income tax expense is directly related to taxable income as reported to the taxing authorities. RUCO made adjustments to each of the Western Groups systems income tax calculations as RUCO is recommending adjustments to both revenue and expense items as proposed by the Company. Schedule JAC-16 is included for Pinal Valley, White Tank and Ajo and provides the details of the Company's tax calculations and RUCO's adjustments

SYSTEM IMPROVEMENT BENEFIT ("SIB")

Q. Has AWC requested that a System Improvement Benefit ("SIB") mechanism be approved by the Commission for the Western group in this filing?

A. Yes. AWC has requested a SIB mechanism be approved for all three of the systems included in the rate case application. The Company's cost estimates included in their request are:

Pinal Valley service area	\$48,110,000
White Tank service areas	7,141,000
Ajo service area	<u>559,000</u>
TOTAL	<u>\$55,810,000</u>

1 **Q. What is a SIB mechanism?**

2 A. Basically, a SIB mechanism, if approved by the Commission, allows a company to
3 increase customer rates during the years between rate case applications, based on the
4 completion of projects included in the SIB mechanism request.

5
6 **Q. Wasn't there a recent opinion issued by the Arizona Court of Appeal's
7 declaring that the SIB mechanism is unconstitutional?**

8 A. Yes. The Arizona Court of Appeals, ruled on August 18, 2015, that the SIB mechanism
9 is unconstitutional as there is no determination of "fair Value" at the time the SIB
10 mechanism rate(s) go into effect.

11
12 **Q. What has transpired since the Court of Appeals ruling?**

13 A. The Arizona Corporation Commission petitioned the Arizona Supreme Court to review the
14 Court of Appeals' opinion in *Residential Util. Consumer Office v. Ariz. Corp. Comm'n*, 1
15 CA-CC 13-0002 and 1 CA-CC 14-0001 (Consolidated), 2015 WL 4911765 (Aug. 18,
16 2015).

17
18 **Q. What was the outcome of the ACC's petition?**

19 A. The Supreme Court of Arizona has agreed to hear the case and it is scheduled for oral
20 arguments on March 22, 2016.

21

22

23

24

1 **Q. In the meantime, what is RUCO's position on AWC's current request for a SIB**
2 **mechanism in this case?**

3 A. RUCO has opposed such a mechanism in all rate case applications where companies
4 have requested a SIB. RUCO continues to oppose a SIB mechanism and as of this filing,
5 the SIB is unconstitutional and should be denied by the Commission.
6

7 **NITRATE COST RECOVERY MECHANISM ("NCRM")**

8 **Q. Can you please explain why AWC believes that a new adjustor mechanism is**
9 **necessary in this rate case filing?**

10 A. Yes. As stated in Mr. Garfield's testimony; "Arizona Water also faces federally mandated
11 costs to build and operate treatment plants to remove high levels of nitrates from
12 groundwater in Arizona Water's Pinal Valley service area. Accordingly, Arizona Water
13 requests Commission authorization of an NCRM, identical in function to the ACRM.
14 Arizona Water must design and construct four nitrate removal facilities in the Pinal Valley
15 service area. The cost to design, construct, operate, and maintain these nitrate removal
16 facilities, as described in Mr. Schneider's pre-filed direct testimony, is even greater than
17 that of similarly-sized arsenic removal facilities."¹¹
18
19
20
21
22

23 ¹¹ Mr. Garfield's Direct Testimony, page 7

1 **Q. Is RUCO recommending that the NCRM be adopted by the Commission for AWC's**
2 **Pinal Valley service area?**

3 A. No. RUCO is not recommending that the Commission adopt a new adjustor mechanism.
4 RUCO takes exception to this mechanism for the same reasons that RUCO
5 opposes a SIB mechanism. Both the SIB and the NCRM, if approved by the Commission,
6 allows the Company to increase ratepayer's rates without the benefit of a fair value
7 determination. RUCO continues to oppose a SIB mechanism as stated above and is now
8 also opposing the NCRM.

9

10 **PURCHASE POWER ADJUSTOR MECHANISM ("PPAM")**

11 **Q. What is RUCO's position and recommendation regarding the Company's requested**
12 **purchased power adjustment mechanism?**

13 A. RUCO's recommends the Commission deny the Company's request for a PPAM. Such
14 an adjustor would allow an increase in rates without the benefit of determining fair value.
15 It's another instance of violating the Arizona constitution the same as the SIB that was
16 found by the Court of Appeal to be unconstitutional.

17

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

20 A. Adjustment mechanisms traditionally have been established to mitigate the regulatory lag
21 for 1) volatile and 2) very large expense items (such as purchased coal, oil, and gas in
22 the case of electric utilities and purchased gas for natural gas distribution companies) that

23

24

1 utilities in both 1984 and 1996, with the 1996 being the most recent updated and published
2 USOA.

3
4 **Q. Are there significant differences noted between the 1976 NARUC account numbers
5 compared to the most recent updates in 1996?**

6 A. Yes. There are significant differences noted. Many on the account numbers used by
7 AWC today have been revised and updated by NARUC and are account numbers that
8 are being used by wastewater utilities today.

9
10 **Q. Has AWC offered an explanation to explain their non-compliance and failure to
11 comply with the existing NARUC guidelines as well as non-compliance with the
12 A.A.C.?**

13 A. Yes. In the Company's response to Staff DR. BAB 1.17, they offer the following
14 explanation; "The ACC has not established any forum to consider the recommended 1984
15 or 1996 NARUC USOA. The ACC has never taken any action, whether by decision or
16 rulemaking, to specifically adopt either the 1984 or 1996 NARUC USOA. Therefore, the
17 Company has continued to use the 1976 NARUC USOA."

18
19 **Q. Does RUCO consider this a valid explanation for non-compliance?**

20 A. No. The use of a proper account numbering system is well defined by the A.A.C. The
21 responsibility for compliance is the responsibility of each Company and the onus should
22 not be put on the ACC to establish a forum just for the purpose of adopting revisions to
23 NARUC guidelines.

1 **Depreciation Reserve Accounts**

2 **Q. Can you please explain the other non-compliance issue being the incorrect**
3 **accounting for depreciation reserves?**

4 A. Yes. See A.A.C. R14-2-102, B.2, "A separate reserve for each account or functional
5 account shall be maintained."

6
7 **Q. Is AWC in compliance with this requirement?**

8 A. No. In the Company's response to RUCO DR. 1.13 (b) the AWC stated; "The Company
9 does not maintain accumulated depreciation balances by plant account. Accumulated
10 depreciation balances by system are provided." In the Company's response to RUCO
11 DR. 3.06, a follow-up to RUCO DR. 1.13 (b), AWC further stated; "The Company does
12 not maintain accumulated depreciation balances by function."

13
14 **Q. So, in summary, the Company does not maintain separate depreciation reserves**
15 **for each account or by functional account as required by the A.A.C., correct?**

16 A. Yes. The Company is clearly in violation of the A.A.C. by not maintaining appropriate
17 depreciations reserve accounts.

18
19 **Q. Is RUCO aware of any other water or wastewater company that fails to comply with**
20 **the requirements of the A.A.C?**

21 A. No. RUCO is aware of no other water or wastewater companies that fail to meet the
22 reporting requirements as outlined in the A.A.C.

23

24

1 **Q. Does RUCO know if AWC's California affiliate, SGVWC, maintains depreciation**
2 **reserves by plant account?**

3 A. Yes, AWC's affiliate does maintain depreciation reserves by plant account.¹²
4

5 **Q. What is RUCO's recommendation to resolve the critical non-compliance issues?**

6 A. RUCO strongly recommends that the Company should be required, prior to their next rate
7 case filing for any of their systems, to comply with the rules and regulations as laid out in
8 A.A.C.
9

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

14 A. No, it does not.
15

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

17 A. Yes. It does
18
19
20
21

22 ¹² As shown in the Annual Reports filed with the California Public Utility Commission, San Gabriel Valley Water
23 Company maintains accumulated depreciation reserves by plant account.
<ftp://ftp.cpuc.ca.gov/waterannualreports/2014/Class%20A/San%20Gabriel%20Valley%20-%202014%20Annual%20Report.pdf>

SCHEDULES
WESTERN GROUP
PINAL VALLEY

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REVENUE REQUIREMENT

LINE NO.	DESCRIPTION	(A) COMPANY OCRB/FVRB COST	(B) RUCO OCRB/FVRB COST
1	Adjusted Original Cost/Fair Value Rate Base	\$ 61,344,294	\$ 56,001,472
2	Adjusted Operating Income (Loss)	\$ 2,215,360	\$ 2,380,502
3	Current Rate of Return (L2 / L1)	3.61%	4.25%
4	Required Operating Income (L5 X L1)	\$ 5,479,474	\$ 4,099,285
5	Required Rate of Return on Fair Value Rate Base	8.93%	7.32%
6	Operating Income Deficiency (L4 - L2)	\$ 3,264,114	\$ 1,718,784
7	Gross Revenue Conversion Factor (JAC-1, Page 2)	1.6403	1.6651
8	Required Increase in Gross Revenue Requirement (L7 X L6)	\$ 5,354,172	\$ 2,862,004
9	Adjusted Test Year Revenue	\$ 18,467,889	\$ 18,591,737
10	Proposed Annual Revenue (L8 + L9)	\$ 23,822,061	\$ 21,453,741
11	Required Percentage Increase in Revenue (L8 / L9)	28.99%	15.39%
12	Rate of Return on Common Equity	10.75%	8.95%

References:

Column (A): Company Schedules A-1 and C-1
Column (B): RUCO Schedule JAC-2, JAC-6, and JAC-14

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	1.20%		
3	Revenues (L1 - L2)	98.8000%		
4	Combined Federal and State Income Tax and Property Tax Rate (Line 23)	38.7447%		
5	Subtotal (L3 - L4)	60.0553%		
6	Revenue Conversion Factor (L1 / L5)	1.6651		
<u>Calculation of Uncollectible Factor:</u>				
7	Unity	100.0000%		
8	Combined Federal and State Tax Rate (Line 17)	38.2900%		
9	One Minus Combined Income Tax Rate (L7 - L8)	61.7100%		
10	Uncollectible Rate	0.01200		
11	Uncollectible Factor (L9 * L10)	0.7405%		
<u>Calculation of Effective Tax Rate:</u>				
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%		
13	Arizona State Income Tax Rate	6.5000%		
14	Federal Taxable Income (L12 - L13)	93.5000%		
15	Applicable Federal Income Tax Rate (Col. [C], L53)	34.0000%		
16	Effective Federal Income Tax Rate (L14 x L15)	31.7900%		
17	Combined Federal and State Income Tax Rate (L13 + L16)		38.2900%	
<u>Calculation of Effective Property Tax Factor</u>				
18	Unity	100.0000%		
19	Combined Federal and State Income Tax Rate (Col. [B], L17)	38.2900%		
20	One Minus Combined Income Tax Rate (L18-L19)	61.7100%		
21	Property Tax Factor	0.7369%		
22	Effective Property Tax Factor (L20 x L21)		0.4547%	
23	Combined Federal and State Income Tax and Property Tax Rate (Col. [B], L17 + L22)			38.7447%
24	Required Operating Income (Sch. JAC-1, Col. [B] Line 4)	\$ 4,099,285		
25	Adjusted Test Year Operating Income (Loss) (Sch. JAC-1, Col. [B], L2)	2,380,502		
26	Required Increase in Operating Income (L24 - L25)		\$ 1,718,784	
27	Income Taxes on Recommended Revenue (Col. [C], L52)	\$ 1,596,459		
28	Income Taxes on Test Year Revenue (Col. [A], L52)	503,337		
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		1,093,122	
30	Recommended Revenue Requirement (Sch. JAC-1, Col. [B], Line 10)	\$ 21,453,741		
31	Uncollectible Rate (L10)	0.2100%		
32	Uncollectible Expense on Recommended Revenue (L30 x L31)	\$ 45,053		
33	Adjusted Test Year Uncollectible Expense	\$ 211,863		
34	Required Increase in Revenue to Provide for Uncollectible Exp. (L32 - L33)		(166,810)	
35	Property Tax with Recommended Revenue	\$ 1,025,917		
36	Property Tax on Test Year Revenue	975,843		
37	Increase in Property Tax Due to Increase in Revenue (L35 - 36)		50,074	
38	Total Required Increase in Revenue (Col. [B], L26 + L29 + L34 + L37)		\$ 2,861,980	
<u>Calculation of Income Tax:</u>				
39	Revenue (Sch. JAC-1, Col. [B], Line 9 & Sch. JAC-1, Col. [B], L10)	\$ 18,467,889		\$ 21,453,741
40	Operating Expenses Excluding Income Taxes	\$ 15,707,898		\$ 15,757,933
41	Synchronized Interest (Col. [C], L57)	\$ 1,408,169		\$ 1,408,169
42	Arizona Taxable Income (L39 - L40 - L41)	\$ 1,351,821		\$ 4,287,638
43	Arizona State Income Tax Rate	4.9000%		4.9000%
44	Arizona Income Tax (L42 x L43)	\$ 66,239		\$ 210,094
45	Federal Taxable Income (L42 - L44)	\$ 1,285,582		\$ 4,077,544
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		\$ 91,650
50	Federal Tax on Fifth Income Bracket (\$335,001 - \$1,000,000) @ 34%	\$ 323,198		\$ 1,272,465
51	Total Federal Income Tax	\$ 437,098		\$ 1,386,365
52	Combined Federal and State Income Tax (L44 + L51)	\$ 503,337		\$ 1,596,459
53	Applicable Federal Income Tax Rate [Col. [C], L46 - Col. [A], L46] / [Col. [C], L40 - Col. [A], L40]			34.0000%
54	<u>Synchronized Interest Calculation:</u>			
55	Rate Base			\$ 56,001,472
56	x Weighted Average Cost of Debt			2.5145%
57	Synchronized Interest			\$ 1,408,169

RATE BASE - ORIGINAL COST

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED OCR/FVRB	(B) RUCO OCR/FVRB ADJUSTMENTS	(C) RUCO ADJ'TED OCR/FVRB
	Plant Classification			
1	Intangible Plant	\$ 1,989,297	\$ -	\$ 1,989,297
2	Source of Supply Plant	7,647,074	-	7,647,074
3	Pumping Plant	16,648,575	(2,254,806)	14,393,769
4	Water Treatment Plant	14,061,976	(2,894,112)	11,167,864
5	Transmission & Distribution Plant	125,319,344	(58,465)	125,260,879
6	General Plant	7,229,460	40,104	7,269,564
7	Total Gross Plant in Service	\$ 172,895,726	\$ (5,167,279)	\$ 167,728,447
	Less:			
8	Accumulated Depreciation	(44,260,678)	117,932	(44,142,746)
9	Net Utility Plant in Service (L7 less L8)	\$ 128,635,048	\$ (5,049,347)	\$ 123,585,701
10	Advances in Aid of Construction	\$ (36,540,428)	\$ -	\$ (36,540,428)
11	Contributions in Aid of Construction (CIAC)	(29,481,326)	-	(29,481,326)
12	Accumulated Amortization of CIAC	5,181,305	-	5,181,305
13	Net CIAC (L11 less L12)	\$ (24,300,021)	\$ -	\$ (24,300,021)
14	Accumulated Deferred Income Taxes (ADIT)	(12,343,427)	-	(12,343,427)
15	Customer Deposits	(422,585)	-	(422,585)
	Add:			
16	Allowance for Working Capital	\$ 1,561,902	\$ (293,475)	\$ 1,268,427
17	Net Regulatory Asset / (Liability)	4,753,804	-	4,753,804
18	Rounding	-	-	-
19	TOTAL RATE BASE (Sum L's 9, 10, 13, & 14 Thru 18)	\$ 61,344,294	\$ (5,342,822)	\$ 56,001,472

References:

Column (A): Company Schedule B-1
Column (B): Schedule JAC-3
Column (C): Column (A) + Column (B)

SUMMARY OF ORIGINAL COST RATE BASE ADJUSTMENTS

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED OCRB/FVRB	(B) ADJMT NO. 1 Post Test Test Plant	(C) ADJMT NO. 2	(D) ADJMT NO. 3	(E) ADJMT NO. 4	(F) ADJMT NO. 5	(G) ADJMT NO. 6 WORKING CAPITAL	(H) RUCO ADJUSTED OCRB/FVRB
Plant Classification									
1	Intangible Plant	\$ 1,989,297	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,989,297
2	Source of Supply Plant	7,647,074	-	-	-	-	-	-	7,647,074
3	Pumping Plant	16,648,575	(2,254,806)	-	-	-	-	-	14,393,769
4	Water Treatment Plant	14,061,976	(2,894,112)	-	-	-	-	-	11,167,864
5	Transmission & Distribution Plant	125,319,344	(58,465)	-	-	-	-	-	125,260,879
6	General Plant	7,229,460	40,104	-	-	-	-	-	7,269,564
7	Total Gross Plant in Service	\$ 172,895,726	\$ (5,167,279)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 167,728,447
Less:									
8	Accumulated Depreciation	(44,260,678)	117,932	-	-	-	-	-	(44,142,746)
9	Net Utility Plant in Service (L7 less L8)	\$ 128,635,048	\$ (5,049,347)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 123,585,701
10	Advances in Aid of Construction	\$ (36,540,428)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (36,540,428)
11	Contributions in Aid of Construction (CIAC)	(29,481,326)	-	-	-	-	-	-	(29,481,326)
12	Accumulated Amortization of CIAC	5,181,305	-	-	-	-	-	-	5,181,305
13	Net CIAC (L11 less L12)	\$ (24,300,021)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (24,300,021)
14	Accumulated Deferred Income Taxes (ADIT)	(12,343,427)	-	-	-	-	-	-	(12,343,427)
15	Customer Deposits	(422,585)	-	-	-	-	-	-	(422,585)
Add:									
16	Allowance for Working Capital	\$ 1,561,902	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (293,475)	\$ 1,268,427
17	Net Regulatory Asset / (Liability)	4,753,804	-	-	-	-	-	-	4,753,804
18	Rounding	-	-	-	-	-	-	-	-
19	TOTAL RATE BASE (Sum L's 9, 10, 13, & 14 Thru 18)	\$ 61,344,294	\$ (5,049,347)	\$ -	\$ -	\$ -	\$ -	\$ (293,475)	\$ 56,001,472

References:
Column (A): Company Schedule B-2
Column (B): Adjustment No. 1 - Adjust Test-Year Plant, PTY Plant & Accumulated Depreciation (See JAC-4.1 Direct, Phx. Off., and MS Schedule and JAC Testimony)
Column (C): Adjustment No. 2 - Intentionally Left Blank
Column (D): Adjustment No. 3 - Intentionally Left Blank
Column (E): Adjustment No. 4 - Intentionally Left Blank
Column (F): Adjustment No. 5 - Intentionally Left Blank
Column (G): Adjustment No. 6 - Working Capital
Column (H): Sum Of Columns (A), (B), (C), (D), (E), (F) & (G)

**RATE BASE ADJUSTMENT NO. 6
ALLOWANCE FOR WORKING CAPITAL**

LINE NO.	DESCRIPTION	(A)	(B)
		AMOUNT	REFERENCE
1	Working Cash Requirement Per Company	\$ 201,938	Company Schedule B-5, PG. 1
2	Working Cash Requirement Per RUCO	(91,537)	RUCO Schedule JAC-6, Page 2
3	Adjustment	<u>\$ (293,475)</u>	Line 2 - Line 1
4	Material and Supplies Inventories Per Company	\$ 119,556	Company Schedule B-5, PG. 1
5	Material and Supplies Inventories Per RUCO	119,556	Company Schedule B-5, PG. 1
6	Adjustment	<u>\$ -</u>	Line 5 - Line 4
7	Required Bank Balances Per Company	\$ 799,112	Company Schedule B-5, PG. 1
8	Required Bank Balances Per RUCO	799,112	Company Schedule B-5, PG. 1
9	Adjustment	<u>\$ -</u>	Line 8 - Line 7
10	Prepayments & Special Deposits Per Company	\$ 441,295	Company Schedule B-5, PG. 1
11	Prepayments & Special Deposits Per RUCO	441,295	Company Schedule B-5, PG. 1
12	Adjustment	<u>\$ -</u>	Line 11 - Line 10
13	TOTAL ADJUSTMENT (See JAC-2, Column (K))	<u><u>\$ (293,475)</u></u>	Sum of Lines 3, 6, 9 & 12

**RATE BASE ADJUSTMENT NO. 6 - CONT'D
LEAD/LAG DAY SUMMARY**

LINE NO.	DESCRIPTION	(A) COMPANY EXPENSES AS FILED	(B) RUCO ADJUSTM'TS	(C) RUCO EXPENSES AS ADJUSTED	(D) (LEAD)/LAG DAYS	(E) DOLLAR DAYS
Operating Expenses						
1	Purchased Power	\$ 2,071,310	\$ -	\$ 2,071,310	30.87	\$ 63,941,344
2	Payroll	3,869,443	-	3,869,443	14.00	54,172,209
3	Purchased Water	715,000	-	715,000	(57.84)	(41,355,600)
4	Chemicals	407,363	-	407,363	(18.11)	(7,377,346)
5	Property & Liability Insurance	215,569	-	215,569	(45.27)	(9,758,802)
6	Workman's Compensation Insurance	56,136	-	56,136	(46.50)	(2,610,325)
7	Health Insurance	868,512	-	868,512	(8.92)	(7,747,127)
8	Other Operating & Maintenance Expenses	1,999,287	(255,791)	1,743,496	(9.27)	(16,162,211)
9	Federal Current Income Taxes	1,839,977	293,352	1,386,365	37.00	51,295,506
10	State Current Income Taxes	313,163	41,774	210,094	37.00	7,773,489
11	FICA Taxes	267,606	-	267,606	14.00	3,746,483
12	FUTA & SUTA Taxes	3,202	-	3,202	83.10	266,068
13	Property Taxes	1,062,879	(36,962)	1,025,917	212.00	217,494,340
14	Registration, Svc. Contracts, & Misc. Fees	86,918	-	86,918	(98.83)	(8,590,057)
15	Retirement Annuities (401k)	296,049	-	296,049	34.72	10,278,820
16	Subtotal	<u>14,072,414</u>	<u>42,374</u>	<u>13,222,980</u>		<u>315,366,791</u>
17	Interest Expense	\$ -	\$ 1,762,861	\$ 1,762,861	90.83	\$ 160,126,499
18						
19	Subtotal	<u>\$ -</u>	<u>\$ 1,762,861</u>	<u>\$ 1,762,861</u>		<u>\$ 160,126,499</u>
20	Total	<u>\$ 14,072,414</u>	<u>\$ 1,805,234</u>	<u>\$ 14,985,841</u>		<u>\$ 475,493,290</u>
21	Expense Lag	Line 20, Col. (E) / (C)	31.73			
22	Revenue Lag	Company B-5 Schedules	<u>29.50</u>			
23	Net Lag	Line 22 - Line 21	(2.23)			
24	RUCO Adjusted Expenses	Col. (C), Line 20	<u>\$ 14,985,841</u>			
25	Cash Working Capital	Line 23 X Line 24 / 365 Days	<u>(91,537)</u>			
26	Company As Filed	Co. Schedule B-5, Page 2	201,938			
27	Difference	Line 25 - Line 26	<u>\$ (293,475)</u>			
28	ADJUSTMENT	Line 27	<u>\$ (293,475)</u>			

NOTE: Dependent on System

References:

- Column (A): - Company Schedule B-5
- Column (B): RUCO Operating Income Adjustments (See Schedule JAC-7)
- Column (C): Column (A) + (B)
- Column (D): - Company Schedule B-5
- Column (E): Column (C) X Column (D)

OPERATING INCOME

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) RUCO TEST YEAR ADJM'TS	(C) RUCO TEST YEAR AS ADJ'TED	(D) RUCO PROP'D CHANGES	(E) RUCO AS RECOMM'D
1	Operating Revenues:					
2	Residential	\$ 11,298,361	\$ 123,848	\$ 11,422,209	\$ 2,862,004	\$ 14,284,213
3	Commercial	5,412,782	-	5,412,782	-	5,412,782
4	Industrial	957,969	-	957,969	-	957,969
5	Private Fire Service	121,650	-	121,650	-	121,650
6	Other Water Revenues	216,003	-	216,003	-	216,003
7	Total Water Revenues	\$ 18,006,765	\$ 123,848	\$ 18,130,613	\$ 2,862,004	\$ 20,992,617
8	Miscellaneous	461,124	-	461,124	-	461,124
9	Total Operating Revenues	\$ 18,467,889	\$ 123,848	\$ 18,591,737	\$ 2,862,004	\$ 21,453,741
10	Operating Expenses:					
11	Source of Supply					
12	Purchased Water	\$ 1,085,544	\$ -	\$ 1,085,544	\$ -	\$ 1,085,544
13	Other	75,424	6,434	81,858	-	81,858
14	Pumping Expenses					
15	Purchased Power	2,071,310	-	2,071,310	-	2,071,271
16	Purchased Gas	878	(2,437)	(1,559)	-	(1,559)
17	Other	892,848	16,549	909,397	-	909,397
18	Water Treatment Expenses	1,404,743	6,203	1,410,946	-	1,410,946
19	Transmission & Distribution Expenses	1,661,471	(128,940)	1,532,531	-	1,532,531
20	Customer Accounting Expenses	1,239,559	(20,132)	1,219,427	-	1,219,427
21	Sales Expense	2,093	-	2,093	-	2,093
22	Administrative & General Expenses	2,543,213	(133,467)	2,409,746	-	2,409,746
23	Total Operations & Maintenance Expense	\$ 10,977,082	\$ (255,791)	\$ 10,721,292	\$ -	\$ 10,721,253
24	Depreciation & Amortization Expense	3,963,576	(117,932)	3,845,644	-	3,845,644
25	Taxes:					
26	Federal Income Taxes	\$ 143,745	\$ 293,352	\$ 437,098	\$ 949,267	\$ 1,386,365
27	State Income Taxes	24,465	41,774	66,239	\$ 143,855	210,094
28	Property Taxes	969,214	6,629	975,843	50,074	1,025,917
29	Other	174,445	(9,326)	165,120	-	165,120
30	Total Taxes	\$ 1,311,870	\$ 332,429	\$ 1,644,300	\$ 1,143,196	\$ 2,787,496
31	Total Operating Expenses	\$ 16,252,529	\$ (41,293)	\$ 16,211,235	\$ 1,143,196	\$ 17,354,392
32	Operating Income	\$ 2,215,360	\$ 165,141	\$ 2,380,502	\$ 1,718,808	\$ 4,099,285

References:

Column (A): Company Schedule C-1
Column (B): JAC-7, Columns (B) Thru (I)
Column (C): Column (A) + Column (B)
Column (D): JAC-7, Columns B Thru K
Column (E): Column (C) + Column (D)

SUMMARY OF OPERATING INCOME ADJUSTMENTS
TEST YEAR AS FILED AND ADJUSTMENTS

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) ADJMT NO. 1 DEPRECIATION EXPENSE	(C) ADJMT NO. 2 WEATHER NORMALIZATION	(D) ADJMT NO. 3 TANK MAINTENANCE EXPENSE	(E) ADJMT NO. 4 PAYROLL ANNUALIZATION #1	(F) ADJMT NO. 5 PAYROLL ANNUALIZATION #2	(G) ADJMT NO. 6 PAYROLL ANNUALIZATION #3	(H) ADJMT NO. 7 SERVICE VEHICLE EXPENSE	(I) ADJMT NO. 8 RATE CASE EXPENSE	(J) ADJMT NO. 9 PROPERTY TAX EXPENSE	(K) ADJMT NO. 10 INCOME TAXES	(L) RUCO AS ADJTD
1	Operating Revenues:												
2	Residential	\$ 11,298,361	\$ -	\$ 123,848	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 11,422,209
3	Commercial	5,412,782	-	-	-	-	-	-	-	-	-	-	5,412,782
4	Industrial	957,969	-	-	-	-	-	-	-	-	-	-	957,969
5	Private Fire Service	121,650	-	-	-	-	-	-	-	-	-	-	121,650
6	Other Water Revenues	216,003	-	-	-	-	-	-	-	-	-	-	216,003
7	Total Water Revenues	\$ 18,006,765	\$ -	\$ 123,848	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,130,613
8	Miscellaneous	461,124	-	-	-	-	-	-	-	-	-	-	461,124
9	Total Operating Revenues	\$ 18,467,889	\$ -	\$ 123,848	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,591,737
10	Operating Expenses:												
11	Source of Supply												
12	Purchased Water	\$ 1,085,544	\$ -	\$ 7,003	\$ -	\$ (523)	\$ -	\$ -	\$ (47)	\$ -	\$ -	\$ -	\$ 1,085,544
13	Other	75,424	-	-	-	-	-	-	-	-	-	-	75,424
14	Pumping Expenses	2,071,310	-	-	-	-	-	-	-	-	-	-	2,071,310
15	Purchased Power	892,848	-	-	-	-	-	-	-	-	-	-	892,848
16	Purchased Gas	878	-	-	-	-	-	-	-	-	-	-	878
17	Other	1,404,743	-	33,349	-	(16,112)	-	-	(2,437)	-	-	-	1,409,543
18	Water Treatment Expenses	1,961,471	-	15,956	-	(5,135)	-	-	(688)	-	-	-	1,971,605
19	Transmission & Distribution Expenses	1,239,559	-	-	(99,896)	(27,608)	17	16	(4,617)	-	-	-	1,239,559
20	Customer Accounting Expenses	2,093	-	-	-	(20,305)	87	85	(1,470)	-	-	-	2,093
21	Sales Expense	2,093	-	-	-	-	-	-	-	-	-	-	2,093
22	Administrative & General Expenses	2,593,213	-	-	-	(16,298)	(39,530)	(28,887)	(130)	(48,622)	-	-	2,409,746
23	Total Operations & Maintenance Expenses	\$ 10,377,062	\$ -	\$ 56,308	\$ (99,896)	\$ (85,980)	\$ (39,426)	\$ (28,785)	\$ (9,389)	\$ (48,622)	\$ -	\$ -	\$ 10,721,292
24	Depreciation & Amortization Expense	3,963,576	(117,932)	-	-	-	-	-	-	-	-	-	3,845,644
25	Taxes:												
26	Federal Income Taxes	\$ 143,745	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 293,352	\$ 437,098
27	State Income Taxes	24,465	-	-	-	-	-	-	-	-	-	41,774	66,239
28	Property Taxes	959,214	-	-	-	-	-	-	6,629	-	-	-	975,843
29	Other	174,445	-	-	-	-	(5,189)	(4,136)	-	-	-	-	165,120
30	Total Taxes	\$ 1,311,870	\$ -	\$ -	\$ -	\$ -	\$ (5,189)	\$ (4,136)	\$ -	\$ -	\$ 6,629	\$ 335,126	\$ 1,644,300
31	Total Operating Expenses	\$ 15,282,529	\$ (117,932)	\$ 56,308	\$ (99,896)	\$ (85,980)	\$ (44,616)	\$ (32,921)	\$ (9,389)	\$ (48,622)	\$ 6,629	\$ 335,126	\$ 16,211,235
32	Operating Income	\$ 2,215,360	\$ 117,932	\$ 67,540	\$ 99,896	\$ 85,980	\$ 44,616	\$ 32,921	\$ 9,389	\$ 48,622	\$ (6,629)	\$ (335,126)	\$ 2,380,502

ADJUSTMENTS:
1 - Depreciation Expense
2 - Weather Normalization
3 - Tank Maintenance Expense
4 - Payroll Annualization
5 - Service Vehicle Costs
6 - Rate Case Expense
7 - Intentionally Left Blank
8 - Intentionally Left Blank
9 - Property Tax Expense
10 - Income Tax Expense

REFERENCE:
JAC Testimony and Schedule JAC-9, Page 1 of 1
JAC Testimony and Schedule JAC-8, Page 1 of 1
JAC Testimony and Schedule JAC-10, Page 1 of 1
N/A
N/A
JAC Testimony and Schedule JAC-11, Page 1 of 1
JAC Testimony and Schedule JAC-13, Page 1 of 1

**OPERATING INCOME ADJUSTMENT NO. 2
WEATHER NORMALIZATION**

<u>Line No.</u>	<u>Description</u>	<u>Company Proposed</u>	<u>RUCO Adjustment</u>	<u>RUCO Recommended</u>
1				
2	Company decrease to residential revenues	\$ (123,848)	\$ 123,848	\$ -
3				
4	Company Proposed Expense Adjustments			
5	Source of Supply	(7,003)	7,003	-
6	Pumping	(33,349)	33,349	-
7	Water Treatment	(15,956)	15,956	-
8				
9	Total Operating Expense Adjustment	<u>(56,308)</u>	<u>56,308</u>	<u>\$ -</u>

10
11
12
13 To reverse the weather normalization declining usage adjustment made by the Company which
14 decreased test-year operating revenues for the Pinal Valley system by \$123,848, and decreased test-year
15 operating expenses for the Pinal Valley system by \$56,308.

16
17 Source:
18 Company Exhibit Schedule C-2 Appendix (Page 9 of 38)

19
20

**OPERATING INCOME ADJUSTMENT NO. 3
NORMALIZE TANK MAINTENANCE**

Line No.	Western Group	Company Proposed	RUCO Adjustment	RUCO Recommended	
1					
2	To reverse Company tank maintenance				
3	normalization adjustment (IS-19)	231,105	(99,896)	131,210	
4					
5					
6					
7					
8		<u>Pinal Valley</u>	<u>White Tank</u>	<u>Ajo</u>	<u>Total</u>
9		041	044	047	
10	Trans. & Dist. - Storage Tanks - Actual	131,210	-		131,210
11	Trans. & Dist. - Storage Tanks - Normalized	231,105	55,199	18,953	305,258
12					
13	Increase / (Decrease)	\$ 99,896	\$ 55,199	\$ 18,953	\$ 174,048
14					
15					
16					
17					
18					
19					
20					

OPERATING INCOME ADJUSTMENT NO. 5
PAYROLL ANNUALIZATION ADJ. #2
ADJUSTMENT TO REFLECT SHARING OF PAYROLL COSTS WITH CALIFORNIA AFFILIATE

Line No.	Western Group	Western Group - Payroll Annualization							Total Increase / (Decrease)
		[A] Source of Supply Increase / (Decrease)	[B] Pumping Increase / (Decrease)	[C] Water Treatment Increase / (Decrease)	[D] Transmission & Distribution Increase / (Decrease)	[E] Customer Accounting Increase / (Decrease)	[F] Administrative & General Increase / (Decrease)	[G] Taxes & 401K Increase / (Decrease)	
4	Pinal Valley per RUCO	\$ 27,635	\$ 646,274	\$ 209,622	\$ 1,014,849	\$ 694,139	\$ 579,366	\$ 53,115	\$ 3,225,000
5	Pinal Valley per Company	27,635	646,274	209,622	1,014,832	694,052	618,896	58,305	3,269,616
7	RUCO Pinal Valley Adjustments	\$ -	\$ -	\$ -	\$ 17	\$ 87	\$ (39,530)	\$ (5,189)	\$ (44,616)
10	White Tank per RUCO	\$ 15,208	\$ 130,094	\$ 44,894	\$ 76,203	\$ 74,897	\$ 39,548	\$ 8,912	\$ 389,757
11	White Tank per Company	15,208	130,094	44,894	76,202	74,890	42,601	9,313	393,203
13	RUCO White Tank Adjustments	\$ -	\$ -	\$ -	\$ 1	\$ 7	\$ (3,053)	\$ (401)	\$ (3,446)
16	Ajo per RUCO	\$ 384	\$ 11,031	\$ 18,808	\$ 31,076	\$ 23,631	\$ 14,216	\$ 2,907	\$ 102,054
17	Ajo per Company	384	11,031	18,808	31,076	23,628	15,320	3,052	103,300
19	RUCO Ajo Adjustments	\$ -	\$ -	\$ -	\$ 0	\$ 2	\$ (1,104)	\$ (145)	\$ (1,246)
22	Subtotal per RUCO	\$ 43,228	\$ 787,399	\$ 273,324	\$ 1,122,129	\$ 792,666	\$ 633,131	\$ 64,934	\$ 3,716,811
23	Subtotal per Company	43,228	787,399	273,324	1,122,110	792,570	676,818	70,669	3,766,119
25	RUCO's Total WG Adjustments	\$ -	\$ -	\$ -	\$ 19	\$ 96	\$ (43,687)	\$ (5,735)	\$ (49,307)
27	Increase/(Decrease) in Payroll Expenses -- Change in Employment Status								\$ (49,307)

Column [A]: Payroll allocations made to Source of Supply function.
Column [B]: Payroll allocations made to Pumping function.
Column [C]: Payroll allocations made to Water Treatment function.
Column [D]: Payroll allocations made to Transmission & Distribution function.
Column [E]: Payroll allocations made to Customer Accounting function.
Column [F]: Payroll allocations made to Administrative & General function.
Column [G]: [A] + [B] + [C] + [D] + [E] + [F]

**OPERATING INCOME ADJUSTMENT NO. 6
PAYROLL ANNUALIZATION ADJ. #3
ADJUSTMENT TO REFLECT KNOWN AND MEASURABLE CHANGE IN EMPLOYMENT STATUS**

		Western Group - Payroll Annualization							
Line No.		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
	Western Group	Source of Supply Increase / (Decrease)	Pumping Increase / (Decrease)	Water Treatment Increase / (Decrease)	Transmission & Distribution Increase / (Decrease)	Customer Accounting Increase / (Decrease)	Administrative & General Increase / (Decrease)	Payroll Taxes & 401K Increase / (Decrease)	Total Increase / (Decrease)
4	Pinal Valley per RUCO	\$ 27,635	\$ 646,274	\$ 209,622	\$ 1,014,849	\$ 694,137	\$ 590,009	\$ 54,169	\$ 3,236,694
5	Pinal Valley per Company	27,635	646,274	209,622	1,014,832	694,052	618,896	58,305	3,269,616
7	RUCO Pinal Valley Adjustments	\$ -	\$ -	\$ -	\$ 16	\$ 85	\$ (28,887)	\$ (4,136)	\$ (32,921)
10	White Tank per RUCO	\$ 15,208	\$ 130,094	\$ 44,894	\$ 76,203	\$ 74,897	\$ 40,370	\$ 8,993	\$ 390,660
11	White Tank per Company	15,208	130,094	44,894	76,202	74,890	42,601	9,313	393,203
13	RUCO White Tank Adjustments	\$ -	\$ -	\$ -	\$ 1	\$ 7	\$ (2,231)	\$ (319)	\$ (2,542)
16	Ajo per RUCO	\$ 384	\$ 11,031	\$ 18,808	\$ 31,076	\$ 23,631	\$ 14,514	\$ 2,936	\$ 102,380
17	Ajo per Company	384	11,031	18,808	31,076	23,628	15,320	3,052	103,300
19	RUCO Ajo Adjustments	\$ -	\$ -	\$ -	\$ 0	\$ 2	\$ (807)	\$ (116)	\$ (920)
22	Subtotal per RUCO	\$ 43,228	\$ 787,399	\$ 273,324	\$ 1,122,129	\$ 792,664	\$ 644,893	\$ 66,098	\$ 3,729,735
23	Subtotal per Company	43,228	787,399	273,324	1,122,110	792,570	676,818	70,669	3,766,119
25	RUCO's Total WG Adjustments	\$ -	\$ -	\$ -	\$ 18	\$ 94	\$ (31,925)	\$ (4,571)	\$ (36,383)
27	Increase/(Decrease) in Payroll Expenses – Change in Employment Status								\$ (36,383)

31 Column [A]: Payroll allocations made to Source of Supply function.
32 Column [B]: Payroll allocations made to Pumping function.
33 Column [C]: Payroll allocations made to Water Treatment function.
34 Column [D]: Payroll allocations made to Transmission & Distribution function.
35 Column [E]: Payroll allocations made to Customer Accounting function.
36 Column [F]: Payroll allocations made to Administrative & General function.
37 Column [G]: [A] + [B] + [C] + [D] + [E] + [F]
38
39

**OPERATING INCOME ADJUSTMENT NO. 7
SERVICE VEHICLE COSTS
ADJUSTMENT TO REFLECT LOWER FUEL COSTS**

		Western Group - Fleet Fuel							
Line No.	Western Group	[A] Capital	[B] Source of Supply Increase / (Decrease)	[C] Pumping Increase / (Decrease)	[D] Water Treatment Increase / (Decrease)	[E] Transmission & Distribution Increase / (Decrease)	[F] Customer Accounting Increase / (Decrease)	[G] Administrative & General Increase / (Decrease)	[H] Total Increase / (Decrease)
3									
4	Pinal Valley per RUCO	\$ 10,037	\$ 369	\$ 19,241	\$ 5,427	\$ 36,449	\$ 11,806	\$ 1,025	\$ 74,117
5	Pinal Valley per Company	11,309	416	21,679	6,115	41,066	13,076	1,155	83,507
6									
7	RUCO Pinal Valley Adjustments		\$ (47)	\$ (2,437)	\$ (688)	\$ (4,617)	\$ (1,470)	\$ (130)	\$ (9,389)
8									
9									
10	White Tank per RUCO	\$ 1,655	\$ 267	\$ 4,161	\$ 512	\$ 3,031	\$ 2,041	\$ 31	\$ 10,043
11	White Tank per Company	1,956	316	4,919	605	3,584	2,413	36	11,874
12									
13	RUCO White Tank Adjustments		\$ (49)	\$ (758)	\$ (93)	\$ (553)	\$ (372)	\$ (6)	\$ (1,831)
14									
15									
16	Ajo per RUCO	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17	Ajo per Company	-	-	-	-	-	-	-	-
18									
19	RUCO Ajo Adjustments		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
20									
21									
22	Subtotal per RUCO	\$ 11,692	\$ 637	\$ 23,402	\$ 5,939	\$ 39,480	\$ 13,647	\$ 1,056	\$ 84,160
23	Subtotal per Company	13,265	732	26,598	6,720	44,650	15,489	1,191	95,380
24									
25	RUCO's Total WG Adjustments		\$ (96)	\$ (3,196)	\$ (781)	\$ (5,170)	\$ (1,842)	\$ (135)	\$ (11,220)
26									
27	Increase/(Decrease) in Service Vehicle Expenses -- Lower Fuel Costs								\$ (11,220)

Column [A]: The cost figures shown in column [A] are presented in the work papers accompanying Income Statement adjustment IS-16 , but are not included as an expense in the Company's IS-16 service vehicle cost adjustments. RUCO presents them for informational purposes only.
Columns [B] - [G]: Fuel cost allocations made
Column [H]: [B] + [C] + [D] + [E] + [F] + [G]

Company average cost per gallon in 2014 test year:	\$ 3.1736
¹ Average Arizona Price as of 2/4/2016	\$ 1.789
¹ Year Ago Average Arizona Price	1.956
Recent 12-Month Average Price	1.8725
RUCO Adjustment to Cost per Gallon	<u>\$ 1.3011</u>

¹ Average Arizona gas price data obtained from AAA Daily Fuel Gauge Report -- Arizona Fuel Prices
<http://fuelgagereport.aaa.com/states/arizona/>
Downloaded February 4, 2016

**OPERATING INCOME ADJUSTMENT NO. 8
RATE CASE EXPENSE**

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) RUCO ADJUSTMENT	(C) RUCO AS ADJUSTED
1	Rate Case Expense Total	\$ 486,274	\$ (166,447)	\$ 319,827
2	Allocation Factor			0.87635
3	Pinal Valley System (Line 1 X Line 2)			\$ 280,282
4	Normalized Over 3 Years			3
5	RUCO Adjusted Rate Case Expense (Line 3 / 3 Years)			\$ 93,427
6	Company Rate Case Expenses As Filed (Company Sch. C-2)			\$ 142,049
7	RUCO Pro Forma Rate Case Expense (Lines 5 - 6)			\$ (48,622)
8	RUCO Adjustment (Line 7) (See JAC-8, Column (E))			\$ (48,622)

RUCO's Rate Case Expense Adjustment Calculation:

Decision No. 68302, dated November 14, 2005, Approved
\$250,000 for Arizona Water Company's Western Grc \$ 250,000

Inflation Factor from January 1, 2004 thru July 1, 2011
per InflationData.com 21.99%

RUCO recommended Rate Case Expense in prior
Western Group rate case (Docket No. W-01445A-10 \$ 304,975

Inflation Factor from July 1, 2011 thru January 31, 2016
per InflationData.com 4.87%

Reasonable rate case expense based on
Commission Decision No. 68302 \$ 319,827

RUCO Rate Case Expense Adjustment \$ (166,447)

3-Factor Allocation Percentages Used by the Company:

Pinal Valley System	0.87635
White Tank System	0.10462
Ajo System	0.01902
Western Group Total	1.00000

**RUCO OPERATING INCOME ADJUSTMENT NO. 4
PROPERTY TAXES**

LINE NO.	Property Tax Calculation	(A)	(B)
		RUCO AS ADJUSTED	RUCO RECOMMENDED
1	RUCO Adjusted Test Year Revenues - 2014	\$ 18,591,737	\$ 18,591,737
2	Multiplied by 2	<u>2</u>	<u>2</u>
3	Subtotal (Line 1 * Line 2)	\$ 37,183,474	\$ 37,183,474
4a	RUCO Adjusted Test Year Revenues - 2014	<u>18,591,737</u>	
4b	RUCO Recommended Revenue, Per Schedule TJC-7		<u>21,453,741</u>
5	Subtotal (Line 4 + Line 5)	\$ 55,775,210	\$ 58,637,214
6	Number of Years	<u>3</u>	<u>3</u>
7	Three Year Average (Line 5 / Line 6)	\$ 18,591,737	\$ 19,545,738
8	Department of Revenue Multiplier	<u>2</u>	<u>2</u>
9	Revenue Base Value (Line 7 * Line 8)	\$ 37,183,474	\$ 39,091,476
10	Plus: 10% of CWIP -	-	-
11	Less: Net Book Value of Licensed Vehicles	-	-
12	Full Cash Value (Line 9 + Line 10 - Line 11)	\$ 37,183,474	\$ 39,091,476
13	Assessment Ratio	<u>18.0%</u>	<u>18.0%</u>
14	Assessment Value (Line 12 * Line 13)	\$ 6,693,025	\$ 7,036,466
15	Composite Property Tax Rate (Per Company Schedule C-2, Page 3, Line 16)	<u>14.5800%</u>	<u>14.5800%</u>
16	RUCO Proposed Property Tax Expense (Line 14 * Line 15)	\$ 975,843	\$ 1,025,917
17	Company Proposed Property Tax	<u>969,214</u>	
18	RUCO Test Year Adjustment (Line 16-Line 17)	<u>\$ 6,629</u>	
19	Property Tax - RUCO Recommended Revenue (Line 14 * Line 15)		\$ 1,025,917
20	RUCO Test Year Adjusted Property Tax Expense (Line 16)		<u>975,843</u>
21	Increase/(Decrease) to Property Tax Expense		<u>1.0513</u>

**OPERATING INCOME ADJUSTMENT NO. 10
INCOME TAX EXPENSE**

LINE NO.	DESCRIPTION	(A) REFERENCE	(B) AMOUNT
FEDERAL INCOME TAXES:			
1	Operating Income Before Taxes	Sch. JAC-7, Column (C), L28 + L22 + L23	\$ 2,883,839
	LESS:		
2	Arizona State Tax	Line 11	102,854
3	Interest Expense	Note (A) Line 21	1,408,169
4	Federal Taxable Income	Line 1 - Line 2 - Line 3	<u>\$ 1,372,815</u>
5	Federal Tax Rate	Sch. JAC-1, Pg 2, Col. (D), L46	34.00%
6	Federal Income Tax Expense	Line 4 X line 5	<u>\$ 466,757</u>
STATE INCOME TAXES:			
7	Operating Income Before Taxes	Line 1	\$ 2,883,839
	LESS:		
8	Interest Expense	Note (A) Line 21	1,408,169
9	State Taxable Income	Line 7 - Line 8	<u>\$ 1,475,669</u>
10	State Tax Rate	Tax Rate	6.97%
11	State Income Tax Expense	Line 9 X Line 10	<u>\$ 102,854</u>
TOTAL INCOME TAX EXPENSE:			
12	Federal Income Tax Expense	Line 6	\$ 466,757
13	State Income Tax Expense	Line 11	102,854
14	Total Income Tax Expense Per RUCO	Line 12 + Line 13	<u>\$ 569,611</u>
15	Total Federal Income Tax Expense Per Company (Per Company Sch. C-1, L30)		143,745
16	Total State Income Tax Expense Per Company (Per Company Sch. C-1, L31)		24,465
17	RUCO Federal Income Tax Adjustment	Line 12 - Line 15	<u>\$ 323,012</u>
18	RUCO State Income Tax Adjustment	Line 13 - Line 16	<u>\$ 78,389</u>

NOTE (A):

Interest Synchronization:			
19	Adjusted Rate Base (Sch. TJC-2, Col. (H), L17)	\$	56,001,472
20	Weighted Cost Of Debt (Sch. TJC-15 Col. (D), L		2.51%
21	Interest Expense (L18 X L19)	<u>\$</u>	<u>1,408,169</u>

COST OF CAPITAL

LINE NO.	DESCRIPTION	(A) DOLLAR AMOUNT	(B) CAPITAL RATIO	(C) COST RATE	(D) WEIGHTED COST RATE
1	Long-Term Debt	\$ 75,000,000	46.31%	5.43%	2.51%
2	Common Equity	86,959,196	53.69%	8.95%	4.81%
3	Total Capitalization	<u>\$ 161,959,196</u>	<u>100.00%</u>		
4	WEIGHTED AVERAGE COST OF CAPITAL				7.32%

References:

Columns (A) Thru (D): JAC Cost of Capital Testimony

SCHEDULES
WESTERN GROUP
WHITE TANK

TABLE OF CONTENTS TO JAC SCHEDULES

SCH. NO.	PAGE NO.	TITLE
JAC-1	1 & 2	REVENUE REQUIREMENT AND GROSS REVENUE CONVERSION FACTOR
JAC-2	1	RATE BASE
JAC-3	1	SUMMARY OF ORIGINAL COST RATE BASE ADJUSTMENTS
JAC-4	1	RATE BASE ADJUSTMENT NO. 1 - POST-TEST YEAR PLANT & ACCUMULATED DEPRECIATION RATE BASE ADJUSTMENT NO. 2 - INTENTIONALLY LEFT BLANK RATE BASE ADJUSTMENT NO. 3 - INTENTIONALLY LEFT BLANK RATE BASE ADJUSTMENT NO. 4 - INTENTIONALLY LEFT BLANK RATE BASE ADJUSTMENT NO. 5 - INTENTIONALLY LEFT BLANK
JAC-5	1 & 2	RATE BASE ADJUSTMENT NO. 6 - WORKING CAPITAL AND LEAD/LAG STUDY
JAC-6	1	OPERATING INCOME
JAC-7	1	SUMMARY OF OPERATING INCOME ADJUSTMENTS
JAC-8	1	OPERATING INCOME ADJUSTMENT NO. 1 - DEPRECIATION EXPENSE
JAC-9	1	OPERATING INCOME ADJUSTMENT NO. 2 - WEATHER NORMALIZATION
JAC-10	1	OPERATING INCOME ADJUSTMENT NO. 3 - TANK MAINTENANCE
JAC-11, Page 1	1	OPERATING INCOME ADJUSTMENT NO. 4 - PAYROLL ANNUALIZATION ADJ. #1
JAC-11, Page 2	1	OPERATING INCOME ADJUSTMENT NO. 5 - PAYROLL ANNUALIZATION ADJ. #2
JAC-11, Page 3	1	OPERATING INCOME ADJUSTMENT NO. 6 - PAYROLL ANNUALIZATION ADJ. #3
JAC-12	1	OPERATING INCOME ADJUSTMENT NO. 7 - SERVICE VEHICLE EXPENSE
JAC-13	1	OPERATING INCOME ADJUSTMENT NO. 8 - RATE CASE EXPENSE
JAC-14	1	OPERATING INCOME ADJUSTMENT NO. 9 - PROPERTY TAX EXPENSE
JAC-15	1	OPERATING INCOME ADJUSTMENT NO. 10 - INCOME TAX EXPENSE
JAC-16	1	COST OF CAPITAL

REVENUE REQUIREMENT

LINE NO.	DESCRIPTION	(A) COMPANY OCRB/FVRB COST	(B) RUCO OCRB/FVRB COST
1	Adjusted Original Cost/Fair Value Rate Base	\$ 5,107,756	\$ 4,737,182
2	Adjusted Operating Income (Loss)	\$ 113,125	\$ 172,921
3	Current Rate of Return (L2 / L1)	2.21%	3.65%
4	Required Operating Income (L5 X L1)	\$ 456,242	\$ 346,646
5	Required Rate of Return on Fair Value Rate Base	8.93%	7.32%
6	Operating Income Deficiency (L4 - L2)	\$ 343,116	\$ 173,725
7	Gross Revenue Conversion Factor (TJC-1, Page 2)	1.6377	1.7200
8	Required Increase in Gross Revenue Requirement (L7 X L6)	\$ 561,919	\$ 298,814
9	Adjusted Test Year Revenue	\$ 2,310,991	\$ 2,345,382
10	Proposed Annual Revenue (L8 + L9)	\$ 2,872,910	\$ 2,644,196
11	Required Percentage Increase in Revenue (L8 / L9)	24.32%	12.74%
12	Rate of Return on Common Equity	10.75%	8.95%

References:

Column (A): Company Schedules A-1 and C-1
Column (B): RUCO Schedule JAC-2, JAC-6, and JAC-14

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)	41.8617%			
5	Subtotal (L3 - L4)	58.1383%			
6	Revenue Conversion Factor (L1 / L5)	1.7200			
<u>Calculation of Uncollectible Factor:</u>					
7	Unity	100.0000%			
8	Combined Federal and State Tax Rate (Line 17)	40.9274%			
9	One Minus Combined Income Tax Rate (L7 - L8)	59.0726%			
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)	37.8837%			
16	Effective Federal Income Tax Rate (L14 x L15)	36.0274%			
17	Combined Federal and State Income Tax Rate (L13 + L16)		40.9274%		
<u>Calculation of Effective Property Tax Factor:</u>					
18	Unity	100.0000%			
19	Combined Federal and State Income Tax Rate (Col. [B], L17)	40.9274%			
20	One Minus Combined Income Tax Rate (L18-L19)	59.0726%			
21	Property Tax Factor (Sch. TJC-9, Col. [B], L24)	1.5816%			
22	Effective Property Tax Factor (L20 x L21)		0.9343%		
23	Combined Federal and State Income Tax and Property Tax Rate (Col. [B], L17 + L22)			41.8617%	
24	Required Operating Income (Sch. TJC-1, Col. [B] Line 4)	\$ 346,646			
25	Adjusted Test Year Operating Income (Loss) (Sch. TJC-1, Col. [B], L2)	172,921			
26	Required Increase in Operating Income (L24 - L25)		\$ 173,725		
27	Income Taxes on Recommended Revenue (Col. [C], L52)	\$ 135,001			
28	Income Taxes on Test Year Revenue (Col. [A], L52)	14,639			
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		120,362		
30	Recommended Revenue Requirement (Sch. TJC-1, Col. [B], Line 10)	\$ 2,644,196			
31	Uncollectible Rate (L10)	0.0000%			
32	Uncollectible Expense on Recommended Revenue (L30 x L31)	\$ 0			
33	Adjusted Test Year Uncollectible Expense (Sch. TJC-6, Col. [C], L32)	4,487			
34	Required Increase in Revenue to Provide for Uncollectible Exp. (L32 - L33)		(4,487)		
35	Property Tax with Recommended Revenue (Sch. TJC-9, Col. [B], L19)	\$ 116,010			
36	Property Tax on Test Year Revenue (Sch. TJC-9, Col. [B], L20)	111,284			
37	Increase in Property Tax Due to Increase in Revenue (L35 - 36)		4,726		
38	Total Required Increase in Revenue (Col. [B], L26 + L29 + L34 + L37)		\$ 298,814		
<u>Calculation of Income Tax:</u>					
39	Revenue (Sch. TJC-1, Col. [B], Line 9 & Sch. TJC-1, Col. [B], L10)	\$ 2,345,382	\$ 298,814	\$ 2,644,196	
40	Operating Expenses Excluding Income Taxes	\$ 2,157,823		\$ 2,162,549	
41	Synchronized Interest (Col. [C], L57)	\$ 119,072		\$ 119,072	
42	Arizona Taxable Income (L39 - L40 - L41)	\$ 68,487		\$ 362,575	
43	Arizona State Income Tax Rate	4.9000%		4.9000%	
44	Arizona Income Tax (L42 x L43)	\$ 3,356		\$ 17,766	
45	Federal Taxable Income (L42 - L44)	\$ 65,131		\$ 344,809	
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%	\$ 3,783		\$ 6,250	
48	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	\$ -		\$ 8,500	
49	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	\$ -		\$ 91,650	
50	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	\$ -		\$ 3,335	
51	Total Federal Income Tax	\$ 11,283		\$ 117,235	
52	Combined Federal and State Income Tax (L44 + L51)	\$ 14,639		\$ 135,001	
53	Applicable Federal Income Tax Rate [Col. [C], L46 - Col. [A], L46] / [Col. [C], L40 - Col. [A], L40]			37.8837%	
54	<u>Synchronized Interest Calculation:</u>				
55	Rate Base		\$ 4,737,182		
56	x Weighted Average Cost of Debt		2.5136%		
57	Synchronized Interest		\$ 119,072		

RATE BASE - ORIGINAL COST

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED OCRB/FVRB	(B) RUCO OCRB/FVRB ADJUSTMENTS	(C) RUCO ADJ'TED OCRB/FVRB
Plant Classification				
1	Intangible Plant	\$ 14,444	\$ -	\$ 14,444
2	Source of Supply Plant	1,932,442	-	1,932,442
3	Pumping Plant	3,284,147	-	3,284,147
4	Water Treatment Plant	8,812,741	(342)	8,812,399
5	Transmission & Distribution Plant	16,707,713	(1,482)	16,706,231
6	General Plant	881,728	(350,567)	531,161
7	Total Gross Plant in Service	\$ 31,633,216	\$ (352,391)	\$ 31,280,825
Less:				
8	Accumulated Depreciation	(5,425,556)	11,568	(5,413,987)
9	Net Utility Plant in Service (L7 less L8)	\$ 26,207,660	\$ (340,823)	\$ 25,866,838
10	Advances in Aid of Construction	\$ (16,185,732)	\$ -	\$ (16,185,732)
11	Contributions in Aid of Construction (CIAC)	(4,006,138)	-	(4,006,138)
12	Accumulated Amortization of CIAC	458,417	-	458,417
13	Net CIAC (L11 less L12)	\$ (3,547,721)	\$ -	\$ (3,547,721)
14	Accumulated Deferred Income Taxes (ADIT)	(1,473,620)	-	(1,473,620)
15	Customer Deposits	(34,152)	-	(34,152)
Add:				
16	Allowance for Working Capital	\$ 141,320	\$ (29,751)	\$ 111,568
17	Net Regulatory Asset / (Liability)	-	-	-
18	Rounding	-	-	-
19	TOTAL RATE BASE (Sum L's 9, 10, 13, & 14 Thru 18)	\$ 5,107,756	\$ (370,574)	\$ 4,737,182

References:

Column (A): Company Schedule B-1
Column (B): Schedule JAC-3
Column (C): Column (A) + Column (B)

SUMMARY OF ORIGINAL COST RATE BASE ADJUSTMENTS

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED OCR/FV/RB	(B) ADJMT NO. 1 PLANT & ACCUM DEP.	(C) ADJMT NO. 2 REMOVE PTY PLANT	(D) ADJMT NO. 3	(E) ADJMT NO. 4	(F) ADJMT NO. 5	(G) ADJMT NO. 6 WORKING CAPITAL	(H) RUCO ADJUSTED OCR/FV/RB
	Plant Classification								
1	Intangible Plant	\$ 14,444	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 14,444
2	Source of Supply Plant	1,932,442	-	-	-	-	-	-	1,932,442
3	Pumping Plant	3,284,147	-	-	-	-	-	-	3,284,147
4	Water Treatment Plant	8,812,741	(342)	-	-	-	-	-	8,812,399
5	Transmission & Distribution Plant	16,707,713	(1,482)	-	-	-	-	-	16,706,231
6	General Plant	881,728	(350,567)	-	-	-	-	-	531,161
7	Total Gross Plant in Service	\$ 31,633,216	\$ (352,391)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 31,280,825
	Less:								
8	Accumulated Depreciation	\$ (5,425,556)	\$ 11,568	-	-	-	-	-	(5,413,987)
9	Net Utility Plant in Service (L7 less L8)	\$ 26,207,660	\$ (340,823)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 25,866,838
10	Advances in Aid of Construction	\$ (16,185,732)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (16,185,732)
11	Contributions in Aid of Construction (CIAC)	(4,006,138)	-	-	-	-	-	-	(4,006,138)
12	Accumulated Amortization of CIAC	458,417	-	-	-	-	-	-	458,417
13	Net CIAC (L11 less L12)	\$ (3,547,721)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (3,547,721)
14	Accumulated Deferred Income Taxes (ADIT)	\$ (1,473,620)	-	-	-	-	-	-	(1,473,620)
15	Customer Deposits	(34,152)	-	-	-	-	-	-	(34,152)
	Add:								
16	Allowance for Working Capital	\$ 141,320	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (29,751)	\$ 111,568
17	Net Regulatory Asset / (Liability)	-	-	-	-	-	-	-	-
18	Rounding	-	-	-	-	-	-	-	-
19	TOTAL RATE BASE (Sum L's 9, 10, 13, & 14 Thru 18)	\$ 5,107,756	\$ (340,823)	\$ -	\$ -	\$ -	\$ -	\$ (29,751)	\$ 4,737,182

References:
Column (A): Company Schedule B-2
Column (B): Adjustment No. 1 - Adjust Test-Year Plant, PTY Plant & Accumulated Depreciation (See JAC-4.1 Direct, Phx. Off., and MS Schedule and JAC Testimony)
Column (C): Adjustment No. 2 - Intentionally Left Blank
Column (D): Adjustment No. 3 - Intentionally Left Blank
Column (E): Adjustment No. 4 - Intentionally Left Blank
Column (F): Adjustment No. 5 - Intentionally Left Blank
Column (G): Adjustment No. 6 - Working Capital
Column (H): Sum Of Columns (A), (B), (C), (D), (E), (F) & (G)

EXPLANATION OF RATE BASE ADJUSTMENT NO. 1
Summary of Post Test Year Plant Additions
Preliminary Costs vs Final Costs

Line	Work Authorization Number	Account Description	Acct No.	Date Const. Began	Date Const. Was/Expected to be Completed	Company Exhibit Sch. B-2 Appendix (Pages 1 thru 4)	As per Response to Staff DR's BAB 4.1 and BAB 5.1	Actual Costs as of 2/9-Nov-15	Budgeted vs. Actual Cost	Post-Test Year Plant Not in Service as of 6/30/2015	RUCO Adjustments				
											Company Proposed Cost as Per	Function	White Tank	Depre Rates	Depre Reduction
1	I-5167	Pinat Valley Valley Farms ARF Well No. 2	332	9/24/2014	7/8/2015	\$ 1,250,000					WT				
2	I-5164	Coolidge 9 & 10 Motors	325	10/3/2014	12/8/2015	175,000					PP				
3	I-5170	Cottonwood Lane Storage Tank	325	11/18/2014	7/23/2015	1,200,000					PP				
4	I-5296	PV Well No. 19 Pump	321	5/7/2015	9/14/2015	175,000					PP				
5	I-5299	Coolidge 9 & 10 Access Road	321	3/2/2015	12/14/2015	100,000					PP				
6	I-4808	Coolidge Well No. 13 ARF	332	3/9/2011	11/30/2016	1,500,000					WT				
7	I-5166	Coolidge Airport POU	332	3/19/2015	2/29/2016	80,000					WT				
8	I-5304	PV Well No. 27 Booster Pump Station	325	2/15/2015	12/31/2015	175,000					PP				
9	I-5307	Coolidge Well Nos. 9 & 10 Strainer	332	6/16/2015	7/1/2015	40,000					WT				
10	I-5168	Hwy. 84 Gate & Butterfly Valves	343	4/30/2015	7/20/2015	110,000					TD				
11	I-5345	1065 North Casa Grande Ave. Replacement	343	5/4/2015	8/4/2015	62,000					TD				
12	I-5280	PV Well No. 29 Sodium Hypochlorite	332	10/30/2014	9/28/2015	25,000					WT				
13	I-5348	Burgess Peak Ratio System	397	6/2/2015	7/23/2015	27,000					GP				
14	I-5358	PV Well No. 26 Pump	325	6/23/2015	8/10/2015	115,000					PP				
15	I-5362	PV Well No. 31 Pump	325	8/26/2015	11/26/2015	117,000					PP				
16	I-5359	PV Well No. 27 Pump	325	7/10/2015	10/16/2015	200,000					PP				
17	I-5361	Elevated Tank in Coolidge Catholic Protection	342	10/9/2014	7/8/2015	70,000	\$ 407,891	\$ 15,891			TD				
18	I-5169	Replace PVC with Iron Pipe on Overfield Road	343	10/22/2014	5/21/2015	392,000	\$ 551,402	\$ 34,402			TD				
19	I-5171	Trans. & Dist. Mains - Cottonwood Rd.	343	10/27/2014	4/15/2015	517,000	194,840	14,840			TD				
20	I-5301	Trans. & Dist. Mains - Hancock Trail	343	2/24/2015	6/6/2015	180,000	173,112	(888)			TD				
21	I-5303	Install Nitrate Analyzers - Well Nos. 32 & 33	332	2/6/2015	6/5/2015	43,000	42,857	(143)			PP				
22	I-5306	Install Booster Pump - Stanfield Station	325	5/11/2014	6/30/2015	43,000	42,857	(143)			PP				
23	I-5329	Construction of Main - 4th Street	343	1/29/2015	2/12/2015	24,000	19,402	(4,598)			TD				
24	I-5332	Replace Main on Casa Grande Mountain	343	2/18/2015	5/5/2015	300,000	191,545	(108,455)			TD				
25	I-5339	Replace Water Service Line - Aizola Blvd.	345	5/4/2015	5/21/2015	62,000	57,535	(4,465)			TD				
26	I-5341	Replace Water Service Line - Pinat Ave.	345	5/11/2015	6/20/2015	43,000	35,165	(7,835)			TD				
27	I-1076	No support Provided	346			120,000	(120,000)				TD				
28	I-5344	Construction of Main - 2nd Street	343	5/7/2015	6/18/2015	27,000	23,685	(3,315)			TD				
29	I-5076	Lower and Replace Main - Az. Grain Depot	343	5/10/2013	12/23/2014	195,574	195,574				TD				
30	I-5173	Install Electrical Panel - 39 sites	325	11/10/2014	12/31/2014	106,065	(2,467)				PP				
31	I-5165	Block Walls - Well Nos. 21, 30 and 31	314	9/22/2014	1/12/2015	417,446	417,446				SS; PP				
32	I-5251	Replace Pump - Well No. 33	325	10/14/2014	1/22/2015	245,552	245,988	416			PP				
33						1,750									
34		White Tank													
35	I-5032	Install SCADA at BAE Tank, Well Nos. 7 & 8	397			327,000					GP	(327,000)	6.67%	(10,905)	
36	I-5309	Replace Pipe at Blue Horizon ARF	332			54,000	(942)				WT	(342)	1.79%	(3)	
37	I-5263	Install 230' of 6" DIP along Citrus Rd.	343			52,000	53,708	1,708			TD	1,708	6.67%	57	
38	I-5360	Replace Ladder, Add Overflow BAE Water Tank	343			20,000	16,810	(3,190)			TD	(3,190)	6.67%	(106)	
39		Phoenix Office													
40															
41	I-5324		397			85,000					GP	(8,863)	6.67%	(297)	
42	I-5325		390.1			31,000					GP	(3,243)	0.00%	-	
43	I-5326		391			14,000					GP	(1,465)	6.67%	(49)	
44	I-5327		398			20,000					GP	(2,062)	3.33%	(95)	
45															
46	Blankets	Pinat Valley	391; 394			855,000				20,000	GP	(2,250)	4.00%	(45)	
47	Blankets	White Tank	391; 394			86,050				2,250	GP	(2,250)	4.00%	(45)	
48	Blankets	Ajo	391; 394			11,650				450	GP	(5,440)	6.67%	(181)	
49	Blankets	Phoenix Office	391			52,000					GP	(183)	4.00%	(4)	
50	Blankets	Meter Shop	391; 394			1,750					GP	(183)	4.00%	(4)	
51															
52															
53															
54															

Post-Test Year Plant Adjustments \$ 9,879,087 \$ 2,784,196 \$ (1,888,441) \$ 22,700 \$ (352,391) \$ (11,568)

**RATE BASE ADJUSTMENT NO. 6
ALLOWANCE FOR WORKING CAPITAL**

LINE NO.	DESCRIPTION	(A)	(B)
		AMOUNT	REFERENCE
1	Working Cash Requirement Per Company	\$ (21,040)	Company Schedule B-5, PG. 1
2	Working Cash Requirement Per RUCO	(50,791)	RUCO Schedule JAC-5, Page 2
3	Adjustment	\$ (29,751)	Line 2 - Line 1
4	Material and Supplies Inventories Per Company	\$ 14,273	Company Schedule B-5, PG. 1
5	Material and Supplies Inventories Per RUCO	14,273	Company Schedule B-5, PG. 1
6	Adjustment	\$ -	Line 5 - Line 4
7	Required Bank Balances Per Company	\$ 95,402	Company Schedule B-5, PG. 1
8	Required Bank Balances Per RUCO	95,402	Company Schedule B-5, PG. 1
9	Adjustment	\$ -	Line 8 - Line 7
10	Prepayments & Special Deposits Per Company	\$ 52,684	Company Schedule B-5, PG. 1
11	Prepayments & Special Deposits Per RUCO	52,684	Company Schedule B-5, PG. 1
12	Adjustment	\$ -	Line 11 - Line 10
13	TOTAL ADJUSTMENT (See JAC-2, Column (K))	\$ (29,751)	Sum of Lines 3, 6, 9 & 12

RATE BASE ADJUSTMENT NO. 6 - CONT'D
LEAD/LAG DAY SUMMARY

LINE NO.	DESCRIPTION	(A) COMPANY EXPENSES AS FILED	(B) RUCO ADJUSTM'TS	(C) RUCO EXPENSES AS ADJUSTED	(D) (LEAD)/LAG DAYS	(E) DOLLAR DAYS
	Operating Expenses					
1	Purchased Power	\$ 286,661	\$ -	\$ 286,661	30.87	\$ 8,849,233
2	Payroll	476,932	-	476,932	14.00	6,677,049
3	Purchased Water	-	-	-	41.88	-
4	Chemicals	47,058	-	47,058	(18.11)	(852,228)
5	Property & Liability Insurance	25,736	-	25,736	(45.27)	(1,165,054)
6	Workman's Compensation Insurance	4,335	-	4,335	(46.50)	(201,586)
7	Health Insurance	67,130	-	67,130	(8.92)	(598,797)
8	Other Operating & Maintenance Expenses	354,699	(59,055)	295,644	(9.27)	(2,740,619)
9	Federal Current Income Taxes	153,203	36,384	117,235	37.00	4,337,693
10	State Current Income Taxes	26,075	7,628	17,766	37.00	657,348
11	FICA Taxes	28,684	-	28,684	14.00	401,581
12	FUTA & SUTA Taxes	319	-	319	83.10	26,514
13	Property Taxes	118,521	1,648	116,010	212.00	24,594,060
14	Registration, Svc. Contracts, & Misc. Fees	10,342	-	10,342	(98.83)	(1,022,120)
15	Retirement Annuities (401k)	22,863	-	22,863	34.72	793,797
16	Subtotal	<u>1,622,559</u>	<u>(13,395)</u>	<u>1,516,715</u>		<u>39,756,870</u>
17	Synchronized Interest		\$ 146,782	\$ 146,782	90.83	\$ 13,332,733
18						
19	Subtotal	<u>\$ -</u>	<u>\$ 146,782</u>	<u>\$ 146,782</u>		<u>\$ 13,332,733</u>
20	Total	<u>\$ 1,622,559</u>	<u>\$ 133,388</u>	<u>\$ 1,663,498</u>		<u>\$ 53,089,603</u>
21	Expense Lag	Line 20, Col. (E) / (C)	31.91			
22	Revenue Lag	Company B-5 Schedules	<u>20.77</u>			
23	Net Lag	Line 22 - Line 21	(11.14)			
24	RUCO Adjusted Expenses	Col. (C), Line 20	\$ <u>1,663,498</u>			
25	Cash Working Capital	Line 23 X Line 24 / 365 Days	<u>(50,791)</u>			
26	Company As Filed	Co. Schedule B-5, Page 2	(21,040)			
27	Difference	Line 25 - Line 26	<u>(29,751)</u>			
28	ADJUSTMENT	Line 27	<u>(29,751)</u>			

NOTE: Dependent on System

References:

- Column (A): - Company Schedule B-5
- Column (B): RUCO Operating Income Adjustments (See Schedule JAC-7)
- Column (C): Column (A) + (B)
- Column (D): - Company Schedule B-5
- Column (E): Column (C) X Column (D)

OPERATING INCOME

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) RUCO TEST YEAR ADJ'MTS	(C) RUCO TEST YEAR AS ADJ'TED	(D) RUCO PROP'D CHANGES	(E) RUCO AS RECOMM'D
1	Operating Revenues:					
2	Residential	\$ 1,791,645	\$ 34,391	\$ 1,826,036	\$ 298,814	\$ 2,124,849
3	Commercial	421,627	-	421,627	-	421,627
4	Industrial	15,992	-	15,992	-	15,992
5	Private Fire Service	1,800	-	1,800	-	1,800
6	Other Water Revenues	35,306	-	35,306	-	35,306
7	Total Water Revenues	\$ 2,266,370	\$ 34,391	\$ 2,300,761	\$ 298,814	\$ 2,599,575
8	Miscellaneous	44,621	-	44,621	-	44,621
9	Total Operating Revenues	\$ 2,310,991	\$ 34,391	\$ 2,345,382	\$ 298,814	\$ 2,644,196
10	Operating Expenses:					
11	Source of Supply					
12	Purchased Water	\$ -	\$ -	\$ -	\$ -	\$ -
13	Other	26,216	241	26,457	-	26,457
14	Pumping Expenses					
15	Purchased Power	286,661	-	286,661	-	286,661
16	Purchased Gas	-	-	-	-	-
17	Other	178,709	8,170	186,878	-	186,878
18	Water Treatment Expenses	231,997	(449)	231,548	-	231,548
19	Transmission & Distribution Expenses	171,716	(51,925)	119,791	-	119,791
20	Customer Accounting Expenses	154,650	(2,171)	152,479	-	152,479
21	Sales Expense	2,636	(372)	2,264	-	2,264
22	Administrative & General Expenses	260,129	(12,307)	247,822	-	247,822
23	Total Operations & Maintenance Expense	\$ 1,312,714	\$ (58,814)	\$ 1,253,901	\$ -	\$ 1,253,901
24	Depreciation & Amortization Expense	788,523	(11,531)	776,992	-	776,992
25	Taxes:					
26	Federal Income Taxes	\$ (25,101)	\$ 36,384	\$ 11,283	\$ 105,952	\$ 117,235
27	State Income Taxes	(4,272)	7,628	3,356	14,410	17,766
28	Property Taxes	109,635	1,648	111,284	4,726	116,010
29	Other	16,366	(720)	15,646	-	15,646
30	Total Taxes	\$ 96,628	\$ 44,940	\$ 141,568	\$ 125,088	\$ 266,656
31	Total Operating Expenses	\$ 2,197,866	\$ (25,405)	\$ 2,172,461	\$ 125,088	\$ 2,297,550
32	Operating Income	\$ 113,125	\$ 59,796	\$ 172,921	\$ 173,725	\$ 346,646

References:

Column [A]: Company Schedule C-1
Column [B]: JAC-7, Columns [B] Thru [I]
Column [C]: Column [A] + Column [B]
Column [D]: JAC-7, Columns [B] Thru [K]
Column [E]: Column [C] + Column [D]

SUMMARY OF OPERATING INCOME ADJUSTMENTS
 TEST YEAR AS FILED AND ADJUSTMENTS

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) ADJMT NO. 1 DEPRECIATION EXPENSE	(C) ADJMT NO. 2 WEATHER NORMALIZATION	(D) ADJMT NO. 3 TANK MAINTENANCE EXPENSE	(E) ADJMT NO. 4 PAYROLL ANNUALIZATION #1	(F) ADJMT NO. 5 PAYROLL ANNUALIZATION #2	(G) ADJMT NO. 6 PAYROLL ANNUALIZATION #3	(H) ADJMT NO. 7 SERVICE VEHICLE COSTS	(I) ADJMT NO. 8 RATE CASE EXPENSE	(J) ADJMT NO. 9 PROPERTY TAX EXPENSE	(K) ADJMT NO. 10 INCOME TAXES	(L) RUO AS ADJTD.
1	Operating Revenues:												
2	Residential	\$ 4,791,645		\$ 34,391									\$ 1,826,036
3	Commercial	421,627											421,627
4	Industrial	15,992											15,992
5	Private Fire Service	1,800											1,800
6	Other Water Revenues	35,306											35,306
7	Total Water Revenues	\$ 2,266,370		\$ 34,391									\$ 2,300,761
8	Miscellaneous	44,621											44,621
9	Total Operating Revenues	\$ 2,310,991		\$ 34,391									\$ 2,345,382
10	Operating Expenses:												
11	Share of Service												
12	Purchased Water												
13	Other	\$ 26,216		\$ 480		(170)							\$ 26,457
14	Pumpkin Expenses	286,661											286,661
15	Purchased Power												
16	Purchased Gas												
17	Other	178,709		11,769		(2,841)							186,878
18	Water Treatment Expenses	231,997				(956)							231,948
19	Transmission & Distribution Expenses	171,716		5,773		(1,949)							174,777
20	Customer Accounting Expenses	154,850				(2,184)							152,477
21	Sales Expense	2,636											2,636
22	Administrative & General Expenses	260,129											260,129
23	Total Operations & Maintenance Expense	\$ 1,312,714		\$ 18,002		(1,214)	(3,053)	(2,223)	(6)	(5,805)			\$ 1,253,801
24	Depreciation & Amortization Expense	788,523	(11,531)										776,992
25	Taxes:												
26	Federal Income Taxes	\$ (25,101)											\$ 36,394
27	State Income Taxes	(4,272)											7,628
28	Property Taxes	109,635											111,284
29	Other	16,365											15,648
30	Total Taxes	\$ 96,628					(401)	(319)					\$ 44,012
31	Total Operating Expenses	\$ 2,197,866	(11,531)	\$ 18,002	(55,199)	(6,713)	(3,446)	(2,542)	(1,831)	(5,805)	1,648		\$ 2,172,461
32	Operating Income	\$ 113,125		\$ 16,389		\$ 8,713		\$ 2,542		\$ 5,805			\$ (44,012)

ADJUSTMENTS:
 1- Depreciation Expense
 2- Weather Normalization
 3- Tank Maintenance Expense
 4- Payroll Annualization #1
 5- Payroll Annualization #2
 6- Payroll Annualization #3
 7- Service Vehicle Costs
 8- Rate Case Expense
 9- Property Tax Expense
 10- Income Tax Expense

REFERENCE:
 JAC Testimony and Schedule JAC-8, Page 1 of 1
 JAC Testimony and Schedule JAC-9, Page 1 of 1
 JAC Testimony and Schedule JAC-10, Page 1 of 1
 JAC Testimony and Schedule JAC-11, Page 2 of 3
 JAC Testimony and Schedule JAC-11, Page 3 of 3
 JAC Testimony and Schedule JAC-12, Page 1 of 1
 JAC Testimony and Schedule JAC-13, Page 1 of 1
 JAC Testimony and Schedule JAC-14, Page 1 of 1
 JAC Testimony and Schedule JAC-15, Page 1 of 1

OPERATING EXPENSE ADJUSTMENT No. 1
 Depreciation Expense

Line	Work Authorization Number	Account Description	Acct No.	Date Const. Began	Date Const. Was/Expected to be Completed	Company Proposed Cost as Per	Company Exhibit Sch. B-2 Appendix (Excess 1 thru 4)	As per Response to Staff DR's BAB 4.1 and BAB 5.1	Actual Costs as of 2/9-Nov-15	[E]	[F]	[G]	[H]	[I]	[J]	RUCO Adjustments	
																Budgeted vs. Actual Cost	Post-Test Year Plant Not in Service as of 6/30/2015
1	I-5167	Pinal Valley Valley Farms ARF Well No. 2	332	9/24/2014	7/8/2015	\$ 1,250,000											
2	I-5164	Coolidge 9 & 10 Motors	325	10/30/2014	12/8/2015	175,000											
3	I-5170	Cottonwood Lane Storage Tank	325	11/18/2014	7/23/2015	1,200,000											
4	I-5296	PV Well No. 19 Pump	325	5/7/2015	9/14/2015	175,000											
5	I-5299	Coolidge 9 & 10 Access Road	321	3/2/2015	12/14/2015	100,000											
6	I-4806	Coolidge Well No. 13 ARF	332	3/9/2011	11/30/2016	1,500,000											
7	I-5166	Coolidge Airport PCU	332	3/19/2015	2/26/2016	80,000											
8	I-5304	PV Well No. 27 Booster Pump Station	325	2/15/2015	12/31/2015	175,000											
9	I-5307	Coolidge Well Nos. 9 & 10 Strainer	332	6/16/2015	7/1/2015	40,000											
10	I-5168	Hwy. 84 Gate & Butterfly Valves	343	4/30/2015	7/20/2015	110,000											
11	I-5345	1955 North Casa Grande Ave. Replacement	343	5/4/2015	8/4/2015	62,000											
12	I-5260	PV Well No. 29 Solum Hypochlorite	332	10/30/2014	9/28/2015	25,000											
13	I-5348	Burgess Peak Radio System	397	6/2/2015	7/23/2015	27,000											
14	I-5358	PV Well No. 26 Pump	325	6/25/2015	8/10/2015	115,000											
15	I-5362	PV Well No. 31 Pump	325	8/26/2015	11/26/2015	110,000											
16	I-5359	PV Well No. 27 Pump	325	7/10/2015	10/16/2015	200,000											
17	I-5361	Elevated Tank in Coolidge Catholic Protection	342	10/31/2014	7/8/2015	70,000											
18	I-5169	Replace PVC with Iron Pipe on Overfield Road	343	10/2/2014	5/21/2015	392,000	\$ 15,891	\$ 407,891	\$ 407,891								
19	I-5171	Trens. & Dist. Mains - Cottonwood Rd.	343	10/27/2014	4/15/2015	517,000	551,402	551,402	34,402								
20	I-5301	Trens. & Dist. Mains - Hancock Trail	343	2/24/2015	6/6/2015	180,000	194,940	194,940	14,840								
21	I-5303	Install Nitrate Analyzers - Well Nos. 32 & 33	332	2/6/2015	6/5/2015	174,000	173,112	173,112	(888)								
22	I-5306	Install Booster Pump - Stanfield Station	325	5/11/2014	6/30/2015	43,000	42,857	42,857	(143)								
23	I-5329	Construction of Main - 4th Street	343	1/29/2015	2/12/2015	24,000	19,402	19,402	(4,598)								
24	I-5332	Replace Main on Casa Grande Mountain	343	2/18/2015	5/5/2015	300,000	191,545	191,545	(108,455)								
25	I-5339	Replace Water Service Line - Anzole Blvd.	345	5/4/2015	5/21/2015	62,000	57,535	57,535	(4,465)								
26	I-5341	Replace Water Service Line - Pinal Ave.	345	5/11/2015	6/20/2015	43,000	35,165	35,165	(7,835)								
27	I-1076	No support Provided	346			120,000			(120,000)								
28	I-5344	Construction of Main - 2nd Street	343	5/7/2015	6/18/2015	27,000	23,685	23,685	(3,315)								
29	I-5076	Lower and Replace Main - Az. Grain Depot	343	5/10/2013	12/23/2014	195,574	195,574										
30	I-5173	Install Electrical Panel - 30 sites	325	11/10/2014	12/31/2014	106,065	103,598	103,598	(2,467)								
31	I-5165	Block Walls - Well Nos. 21, 30 and 31	314	9/22/2014	1/12/2015	417,446	417,446										
32	I-5251	Replace Pump - Well No. 33	325	10/14/2014	1/22/2015	245,552	245,552	416									
33		White Tank															
34		White Tank															
35	I-5032	Install SCADA at BAE Tank, Well Nos. 7 & 8	397			327,000							(327,000)				(10,905)
36	I-5309	Replace Pipe at Blue Horizon ARF	332			54,000	53,668	53,668	(332)				(342)				(5)
37	I-5263	Install 230' of DIP along Circa Rd.	343			52,000	53,708	53,708	1,708				1,708				15
38	I-5360	Replace Ladder, Add Overflow BAE Water Tank	343			20,000	16,810	16,810	(3,190)				(3,190)				(29)
39		Phoenix Office															
40	I-5324	Phoenix Office	397			85,000							(8,803)				(294)
41	I-5325	Phoenix Office	390.1			31,000							(3,243)				-
42	I-5326	Phoenix Office	391			14,000							(1,465)				(49)
43	I-5327	Phoenix Office	398			20,000							(2,063)				(35)
44																	
45																	
46	Blankets	Pinal Valley	391, 394			855,000							(2,250)				(45)
47	Blankets	White Tank	391, 394			86,050											
48	Blankets	Ajo	391, 394			11,650											
49	Blankets	Phoenix Office	391			52,000							(5,440)				(191)
50	Blankets	Meter Shop	391, 394			1,750							(183)				(4)
51																	
52																	
53																	
										9,873,087	\$ 2,784,196	\$ (188,441)	\$ 22,700	\$ (352,301)	\$ (11,531)		

**OPERATING INCOME ADJUSTMENT NO. 2
WEATHER NORMALIZATION**

Line No.	Description	Company Proposed	RUCO Adjustment	RUCO As Adjusted
1				
2	Company decrease to residential revenues	\$ (34,391)	\$ 34,391	\$ -
3				
4	Company Proposed Expense Adjustments			
5	Source of Supply	\$ (460)	\$ 460	\$ -
6	Pumping	(11,769)	11,769	-
7	Water Treatment	(5,773)	5,773	-
8				
9	Total Operating Expense Adjustment	\$ (18,002)	\$ 18,002	\$ -

10
11
12
13 To reverse the weather normalization declining usage adjustment made by the Company which
14 decreased test-year operating revenues for the White Tank system by \$34,391, and decreased test-year
15 operating expenses for the White Tank system by \$18,002.

16
17 Source:
18 Company Exhibit Schedule C-2 Appendix (Page 10 of 38)

19
20

**OPERATING INCOME ADJUSTMENT NO. 3
NORMALIZE TANK MAINTENANCE**

Line No.	<u>Western Group</u>	<u>Company Proposed</u>	<u>RUCO Adjustment</u>	<u>RUCO As Adjusted</u>
1				
2	To reverse Company tank maintenance	\$ 55,199	\$ (55,199)	\$ -
3	normalization adjustment (IS-19)			
4	for the White Tank System			
5				
6				
7				
8		<u>Pinal Valley</u>	<u>White Tank</u>	<u>Ajo</u>
9		041	044	047
10	Trans. & Dist. - Storage Tanks - Actual	131,210	\$ -	131,210
11	Trans. & Dist. - Storage Tanks - Normalized	231,105	55,199	18,953
12				305,258
13	Increase / (Decrease)	99,896	\$ 55,199	18,953
14				174,048
15				
16				
17				
18				
19				
20				

**OPERATING INCOME ADJUSTMENT NO. 4
PAYROLL ANNUALIZATION
REMOVAL OF PRO FORMA 3% SALARY INCREASE IN 2016**

		Western Group - Payroll Annualization						
Line No.	Western Group	[A]	[B]	[C]	[D]	[E]	[F]	[G]
		Source of Supply Increase / (Decrease)	Pumping Increase / (Decrease)	Water Treatment Increase / (Decrease)	Transmission & Distribution Increase / (Decrease)	Customer Accounting Increase / (Decrease)	Administrative & General Increase / (Decrease)	Total Increase / (Decrease)
1								
2								
3								
4	Pinal Valley per RUCO	\$ 9,991	\$ 120,689	\$ 42,605	\$ 75,559	\$ 9,757	\$ 75,325	\$ 333,927
5	Pinal Valley per Company	10,514	136,801	47,740	103,167	30,062	91,623	419,907
6								
7	RUCO Pinal Valley Adjustments	\$ (523)	\$ (16,112)	\$ (5,135)	\$ (27,608)	\$ (20,305)	\$ (16,298)	\$ (85,980)
8								
9								
10	White Tank per RUCO	\$ 9,471	\$ 33,919	\$ 32,906	\$ 10,598	\$ 1,502	\$ 2,072	\$ 90,470
11	White Tank per Company	9,641	36,761	33,262	12,547	3,686	3,286	99,183
12								
13	RUCO White Tank Adjustments	\$ (170)	\$ (2,841)	\$ (356)	\$ (1,949)	\$ (2,184)	\$ (1,214)	\$ (8,713)
14								
15								
16	Ajo per RUCO	\$ 5	\$ 148	\$ 252	\$ 410	\$ 383	\$ 754	\$ 1,953
17	Ajo per Company	16	470	800	1,315	1,072	1,190	4,863
18								
19	RUCO Ajo Adjustments	\$ (11)	\$ (321)	\$ (548)	\$ (905)	\$ (688)	\$ (436)	\$ (2,910)
20								
21								
22	Subtotal per RUCO	\$ 19,468	\$ 154,757	\$ 75,763	\$ 86,568	\$ 11,643	\$ 78,151	\$ 426,350
23	Subtotal per Company	20,171	174,032	81,802	117,029	34,819	96,099	523,953
24								
25	RUCO's Total WG Adjustments	\$ (703)	\$ (19,274)	\$ (6,039)	\$ (30,461)	\$ (23,177)	\$ (17,948)	\$ (97,603)
26								
27	Increase/(Decrease) in Payroll and related Expenses							<u>\$ (97,603)</u>

31 Column [A]: Payroll allocations made to Source of Supply function, utilizing the methodology employed by the Company.
32 Column [B]: Payroll allocations made to Pumping function, utilizing the methodology employed by the Company.
33 Column [C]: Payroll allocations made to Water Treatment function, utilizing the methodology employed by the Company.
34 Column [D]: Payroll allocations made to Transmission & Distribution function, utilizing the methodology employed by the Company.
35 Column [E]: Payroll allocations made to Customer Accounting function, utilizing the methodology employed by the Company.
36 Column [F]: Payroll allocations made to Administrative & General function, utilizing the methodology employed by the Company.
37 Column [G]: ([A] + [B] + [C] + [D] + [E] + [F])
38
39

OPERATING INCOME ADJUSTMENT NO. 5
PAYROLL ANNUALIZATION ADJ. #2
ADJUSTMENT TO REFLECT SHARING OF PAYROLL COSTS WITH CALIFORNIA AFFILIATE

Line No.	Western Group	Western Group - Payroll Annualization							Total Increase / (Decrease)
		[A] Source of Supply Increase / (Decrease)	[B] Pumping Increase / (Decrease)	[C] Water Treatment Increase / (Decrease)	[D] Transmission & Distribution Increase / (Decrease)	[E] Customer Accounting Increase / (Decrease)	[F] Administrative & General Increase / (Decrease)	[G] Taxes & 401K Increase / (Decrease)	
1									
2									
3									
4	Pinal Valley per RUCO	\$ 27,635	\$ 646,274	\$ 209,622	\$ 1,014,849	\$ 694,139	\$ 579,366	\$ 53,115	\$ 3,225,000
5	Pinal Valley per Company	27,635	646,274	209,622	1,014,832	694,052	618,896	58,305	3,269,616
6									
7	RUCO Pinal Valley Adjustments	\$ -	\$ -	\$ -	\$ 17	\$ 87	\$ (39,530)	\$ (5,189)	\$ (44,616)
8									
9									
10	White Tank per RUCO	\$ 15,208	\$ 130,094	\$ 44,894	\$ 76,203	\$ 74,897	\$ 39,548	\$ 8,912	\$ 389,757
11	White Tank per Company	15,208	130,094	44,894	76,202	74,890	42,601	9,313	393,203
12									
13	RUCO White Tank Adjustments	\$ -	\$ -	\$ -	\$ 1	\$ 7	\$ (3,053)	\$ (401)	\$ (3,446)
14									
15									
16	Ajo per RUCO	\$ 384	\$ 11,031	\$ 18,808	\$ 31,076	\$ 23,631	\$ 14,216	\$ 2,907	\$ 102,054
17	Ajo per Company	384	11,031	18,808	31,076	23,628	15,320	3,052	103,300
18									
19	RUCO Ajo Adjustments	\$ -	\$ -	\$ -	\$ 0	\$ 2	\$ (1,104)	\$ (145)	\$ (1,246)
20									
21									
22	Subtotal per RUCO	\$ 43,228	\$ 787,399	\$ 273,324	\$ 1,122,129	\$ 792,666	\$ 633,131	\$ 64,934	\$ 3,716,811
23	Subtotal per Company	43,228	787,399	273,324	1,122,110	792,570	676,818	70,669	3,766,119
24									
25	RUCO's Total WG Adjustments	\$ -	\$ -	\$ -	\$ 19	\$ 96	\$ (43,687)	\$ (5,735)	\$ (49,307)
26									
27	Increase/(Decrease) in Payroll Expenses – Change in Employment Status								\$ (49,307)
28									
29									
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									

Column [A]: Payroll allocations made to Source of Supply function.
Column [B]: Payroll allocations made to Pumping function.
Column [C]: Payroll allocations made to Water Treatment function.
Column [D]: Payroll allocations made to Transmission & Distribution function.
Column [E]: Payroll allocations made to Customer Accounting function.
Column [F]: Payroll allocations made to Administrative & General function.
Column [G]: [A] + [B] + [C] + [D] + [E] + [F]

**OPERATING INCOME ADJUSTMENT NO. 6
PAYROLL ANNUALIZATION ADJ. #3
ADJUSTMENT TO REFLECT KNOWN AND MEASURABLE CHANGE IN EMPLOYMENT STATUS**

		Western Group - Payroll Annualization							
Line No.	Western Group	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
		Source of Increase / (Decrease)	Pumping Increase / (Decrease)	Water Treatment Increase / (Decrease)	Transmission & Distribution Increase / (Decrease)	Customer Accounting Increase / (Decrease)	Administrative & General Increase / (Decrease)	Payroll Taxes & 401K Increase / (Decrease)	Total Increase / (Decrease)
1									
2									
3									
4	Pinal Valley per RUCO	\$ 27,635	\$ 646,274	\$ 209,622	\$ 1,014,849	\$ 694,137	\$ 590,009	\$ 54,169	\$ 3,236,694
5	Pinal Valley per Company	27,635	646,274	209,622	1,014,832	694,052	618,896	58,305	3,269,616
6									
7	RUCO Pinal Valley Adjustments	\$ -	\$ -	\$ -	\$ 16	\$ 85	\$ (28,887)	\$ (4,136)	\$ (32,921)
8									
9									
10	White Tank per RUCO	\$ 15,208	\$ 130,094	\$ 44,894	\$ 76,203	\$ 74,897	\$ 40,370	\$ 8,993	\$ 390,660
11	White Tank per Company	15,208	130,094	44,894	76,202	74,890	42,601	9,313	393,203
12									
13	RUCO White Tank Adjustments	\$ -	\$ -	\$ -	\$ 1	\$ 7	\$ (2,231)	\$ (319)	\$ (2,542)
14									
15									
16	Ajo per RUCO	\$ 384	\$ 11,031	\$ 18,808	\$ 31,076	\$ 23,631	\$ 14,514	\$ 2,936	\$ 102,380
17	Ajo per Company	384	11,031	18,808	31,076	23,628	15,320	3,052	103,300
18									
19	RUCO Ajo Adjustments	\$ -	\$ -	\$ -	\$ 0	\$ 2	\$ (807)	\$ (116)	\$ (920)
20									
21									
22	Subtotal per RUCO	\$ 43,228	\$ 787,399	\$ 273,324	\$ 1,122,129	\$ 792,664	\$ 644,893	\$ 66,098	\$ 3,729,735
23	Subtotal per Company	43,228	787,399	273,324	1,122,110	792,570	676,818	70,669	3,766,119
24									
25	RUCO's Total WG Adjustments	\$ -	\$ -	\$ -	\$ 18	\$ 94	\$ (31,925)	\$ (4,571)	\$ (36,383)
26									
27	Increase/(Decrease) in Payroll Expenses -- Change in Employment Status								\$ (36,383)
28									
29									
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									

Column [A]: Payroll allocations made to Source of Supply function.
Column [B]: Payroll allocations made to Pumping function.
Column [C]: Payroll allocations made to Water Treatment function.
Column [D]: Payroll allocations made to Transmission & Distribution function.
Column [E]: Payroll allocations made to Customer Accounting function.
Column [F]: Payroll allocations made to Administrative & General function.
Column [G]: [A] + [B] + [C] + [D] + [E] + [F]

**OPERATING INCOME ADJUSTMENT NO. 7
SERVICE VEHICLE COSTS
ADJUSTMENT TO REFLECT LOWER FUEL COSTS**

Line No.	System	Western Group - Service Vehicle Costs - Fuel Costs							Total Increase / (Decrease)
		[A] Capital	[B] Source of Supply Increase / (Decrease)	[C] Pumping Increase / (Decrease)	[D] Water Treatment Increase / (Decrease)	[E] Transmission & Distribution Increase / (Decrease)	[F] Customer Accounting Increase / (Decrease)	[G] Administrative & General Increase / (Decrease)	
2	Western Group:								
4	Pinal Valley per RUCO	\$ 10,037	\$ 369	\$ 19,241	\$ 5,427	\$ 36,449	\$ 11,606	\$ 1,025	\$ 74,117
5	Pinal Valley per Company	11,309	416	21,679	6,115	41,066	13,076	1,155	83,507
7	RUCO Pinal Valley Adjustments		\$ (47)	\$ (2,437)	\$ (688)	\$ (4,617)	\$ (1,470)	\$ (130)	\$ (9,389)
10	White Tank per RUCO	\$ 1,655	\$ 267	\$ 4,161	\$ 512	\$ 3,031	\$ 2,041	\$ 31	\$ 10,043
11	White Tank per Company	1,956	316	4,919	605	3,584	2,413	36	11,874
13	RUCO White Tank Adjustments		\$ (49)	\$ (758)	\$ (93)	\$ (553)	\$ (372)	\$ (6)	\$ (1,831)
16	Ajo per RUCO	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17	Ajo per Company	-	-	-	-	-	-	-	-
19	RUCO Ajo Adjustments		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
22	Subtotal per RUCO	\$ 11,692	\$ 637	\$ 23,402	\$ 5,939	\$ 39,480	\$ 13,647	\$ 1,056	\$ 84,160
23	Subtotal per Company	13,265	732	26,598	6,720	44,650	15,489	1,191	95,380
25	RUCO's Total WG Adjustments		\$ (96)	\$ (3,196)	\$ (781)	\$ (5,170)	\$ (1,842)	\$ (135)	\$ (11,220)
27	Increase/(Decrease) in Fuel Expenses								\$ (11,220)

Column [A]: The cost figures shown in column [A] are presented in the work papers accompanying Income Statement adjustment IS-16 , but ate not included as an expense in the Company's IS-16 service vehicle cost adjustments. RUCO presents them for informational purposes only.

Columns [B] - [G]: Fuel cost allocations made

Column [H]: ((B) + [C] + [D] + [E] + [F] + [G])

**OPERATING INCOME ADJUSTMENT NO. 8
RATE CASE EXPENSE**

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) RUCO ADJUSTMENT	(C) RUCO AS ADJUSTED
1	Rate Case Expense Total	\$ 486,274	\$ (166,447)	\$ 319,827
2	Allocation Factor			0.10462
3	White Tank System (Line 1 X Line 2)			\$ 33,461
4	Normalized Over 3 Years			3
5	RUCO Adjusted Rate Case Expense (Line 3 / 3 Years)			\$ 11,154
6	Company Rate Case Expenses As Filed (Company Sch. C-2)			\$ 16,959
7	RUCO Pro Forma Rate Case Expense (Lines 5 - 6)			\$ (5,805)
8	RUCO Adjustment (Line 7) (See JAC-7, Column (I))			\$ (5,805)

RUCO's Rate Case Expense Adjustment Calculation:

Decision No. 68302, dated November 14, 2005, Approved \$250,000 for Arizona Water Company's Western Group.	\$ 250,000
Inflation Factor from January 1, 2004 thru July 1, 2011 per InflationData.com	<u>21.99%</u>
RUCO recommended Rate Case Expense in prior Western Group rate case (Docket No. W-01445A-10-0517)	\$ 304,975
Inflation Factor from July 1, 2011 thru January 31, 2016 per InflationData.com	<u>4.87%</u>
Reasonable rate case expense based on Commission Decision No. 68302	\$ 319,827
RUCO Rate Case Expense Adjustment	\$ (166,447)

3-Factor Allocation Percentages Used by the Company:

Pinal Valley System	0.87635
White Tank System	0.10462
Ajo System	<u>0.01902</u>
Western Group Total	1.00000

**RUCO OPERATING INCOME ADJUSTMENT NO. 9
PROPERTY TAXES**

LINE NO.	Property Tax Calculation	(A)	(B)
		RUCO AS ADJUSTED	RUCO RECOMMENDED
1	RUCO Adjusted Test Year Revenues - 2010	\$ 2,345,382	\$ 2,345,382
2	Multiplied by 2	2	2
3	Subtotal (Line 1 * Line 2)	\$ 4,690,764	\$ 4,690,764
4a	RUCO Adjusted Test Year Revenues - 2010	2,345,382	
4b	RUCO Recommended Revenue, Per Schedule JAC-7		2,644,196
5	Subtotal (Line 4 + Line 5)	\$ 7,036,146	\$ 7,334,959
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	\$ 2,345,382	\$ 2,444,986
8	Department of Revenue Multiplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	\$ 4,690,764	\$ 4,889,973
10	Plus: 10% of CWIP -	-	-
11	Less: Net Book Value of Licensed Vehicles	-	-
12	Full Cash Value (Line 9 + Line 10 - Line 11)	\$ 4,690,764	\$ 4,889,973
13	Assessment Ratio	18.0%	18.0%
14	Assessment Value (Line 12 * Line 13)	\$ 844,337	\$ 880,195
15	Composite Property Tax Rate (Per Company Schedule C-2, Page 3, Line 16)	13.1800%	13.1800%
16	RUCO Proposed Property Tax Expense (Line 14 * Line 15)	\$ 111,284	\$ 116,010
17	Company Proposed Property Tax	109,635	
18	RUCO Test Year Adjustment (Line 16-Line 17)	\$ 1,648	
19	Property Tax - RUCO Recommended Revenue (Line 14 * Line 15)		\$ 116,010
20	RUCO Test Year Adjusted Property Tax Expense (Line 16)		111,284
21	Increase/(Decrease) to Property Tax Expense		\$ 4,726
22	Increase (Decrease) in Property Tax Expense		\$ 4,726
	Increase in Revenue Requirement		\$ 298,814
	Increase/Decrease to Property Tax Per Dollar Increase in Revenue (Line 22 / Line 23)		1.5816%

**OPERATING INCOME ADJUSTMENT NO. 10
INCOME TAX EXPENSE**

LINE NO.	DESCRIPTION	(A) Adjusted Test Year	(B) As Recommended
1	Company Federal Income Tax Proposed	\$ (25,101)	\$ 153,203
2	RUCO Federal Income Tax Recommended	<u>11,283</u>	<u>117,235</u>
3	RUCO Federal Income Tax Adjustment	\$ 36,384	\$ (35,968)
	Company State Income Tax Proposed	(4,272)	26,075
	RUCO State Income Tax Recommended	<u>3,356</u>	<u>17,766</u>
	RUCO State Income Tax Adjustment	<u>\$ 7,628</u>	<u>\$ (8,309)</u>

COST OF CAPITAL

LINE NO.	DESCRIPTION	(A) DOLLAR AMOUNT	(B) CAPITAL RATIO	(C) COST RATE	(D) WEIGHTED COST RATE
1	Long-Term Debt	\$ 75,000,000	46.31%	5.43%	2.51%
2	Common Equity	86,959,196	53.69%	8.95%	4.80%
3	Total Capitalization	<u>\$ 161,959,196</u>	<u>100.00%</u>		
4	WEIGHTED AVERAGE COST OF CAPITAL				7.32%

References:
Columns (A) Thru (D): JAC Cost of Capital Testimony

SCHEDULES
WESTERN GROUP
AJO

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JAC-16	1	COST OF CAPITAL

REVENUE REQUIREMENT

LINE NO.	DESCRIPTION	(A) COMPANY OCRB/FVRB COST	(B) RUCO OCRB/FVRB COST
1	Adjusted Original Cost/Fair Value Rate Base	\$ 965,735	\$ 954,567
2	Adjusted Operating Income (Loss)	\$ 28,644	\$ 47,910
3	Current Rate of Return (L2 / L1)	2.97%	5.02%
4	Required Operating Income (L5 X L1)	\$ 86,263	\$ 69,851
5	Required Rate of Return on Fair Value Rate Base	8.93%	7.32%
6	Operating Income Deficiency (L4 - L2)	\$ 57,618	\$ 21,941
7	Gross Revenue Conversion Factor (TJC-1, Page 2)	1.6369	1.3039
8	Required Increase in Gross Revenue Requirement (L7 X L6)	\$ 94,318	\$ 28,608
9	Adjusted Test Year Revenue	\$ 437,888	\$ 445,441
10	Proposed Annual Revenue (L8 + L9)	\$ 532,206	\$ 474,049
11	Required Percentage Increase in Revenue (L8 / L9)	21.54%	6.42%
12	Consolidated Revenue Adjustment	\$ -	\$ -
13	Required Increase in Gross Revenue Under Company Proposed Consolidation	\$ -	\$ -
14	Required Revenue Under Company Proposed Consolidation	\$ -	\$ -
15	Required Percentage Increase in Revenue Under Company Proposed Consolidation	-	-
16	Rate of Return on Common Equity	10.75%	8.95%

References:

Column (A): Company Schedules A-1 and C-1

Column (B): RUCO Schedule JAC-2, JAC-6, and JAC-14

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 (Company Sch. C-3, Page 2, L13)	0.00%			
3	Revenues (L1 - L2)	100.0000%			
4	Combined Federal and State Income Tax and Property Tax Rate (Line 23)	23.3047%			
5	Subtotal (L3 - L4)	76.6953%			
6	Revenue Conversion Factor (L1 / L5)	1.3039			
<u>Calculation of Uncollectible Factor:</u>					
7	Unity	100.0000%			
8	Combined Federal and State Tax Rate (Line 17)	22.1140%			
9	One Minus Combined Income Tax Rate (L7 - L8)	77.8860%			
10	Uncollectible Rate	0.0000%			
11	Uncollectible Factor (L9 * L10)		0.0000%		
<u>Calculation of Effective Tax Rate:</u>					
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%			
13	Arizona State Income Tax Rate	6.5000%			
14	Federal Taxable Income (L12 - L13)	93.5000%			
15	Applicable Federal Income Tax Rate (Col. [C], L53)	16.6995%			
16	Effective Federal Income Tax Rate (L14 x L15)	15.6140%			
17	Combined Federal and State Income Tax Rate (L13 + L16)		22.1140%		
<u>Calculation of Effective Property Tax Factor</u>					
18	Unity	100.0000%			
19	Combined Federal and State Income Tax Rate (Col. [B], L17)	22.1140%			
20	One Minus Combined Income Tax Rate (L18-L19)	77.8860%			
21	Property Tax Factor (Sch. JAC-9, Col. [B], L24)	1.5288%			
22	Effective Property Tax Factor (L20 x L21)		1.1907%		
23	Combined Federal and State Income Tax and Property Tax Rate (Col. [B], L17 + L22)			23.3047%	
24	Required Operating Income (Sch. JAC-1, Col. [B] Line 4)	\$ 69,851			
25	Adjusted Test Year Operating Income (Loss) (Sch. JAC-1, Col. [B], L2)	47,910			
26	Required Increase in Operating Income (L24 - L25)		\$ 21,941		
27	Income Taxes on Recommended Revenue (Col. [C], L52)	\$ 12,406			
28	Income Taxes on Test Year Revenue (Col. [A], L52)	6,176			
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		6,230		
30	Recommended Revenue Requirement (Sch. JAC-1, Col. [B], Line 10)	\$ 474,049			
31	Uncollectible Rate (L10)	0.0000%			
32	Uncollectible Expense on Recommended Revenue (L30 x L31)	\$ 0			
33	Adjusted Test Year Uncollectible Expense	\$ -			
34	Required Increase in Revenue to Provide for Uncollectible Exp. (L32 - L33)		0		
35	Property Tax with Recommended Revenue (Sch. JAC-9, Col. [B], L19)	\$ 20,867			
36	Property Tax on Test Year Revenue (Sch. JAC-9, Col. [B], L20)	\$ 20,430			
37	Increase in Property Tax Due to Increase in Revenue (L35 - 36)		437		
38	Total Required Increase in Revenue (Col. [B], L26 + L29 + L34 + L37)		\$ 28,675		
<u>Calculation of Income Tax:</u>					
39	Revenue (Sch. JAC-1, Col. [B], Line 9 & Sch. JAC-1, Col. [B], L10)	\$ 445,441		\$ 474,049	
40	Operating Expenses Excluding Income Taxes (Sch. JAC-6, Cols. [C] and [E])	\$ 391,355		\$ 391,792	
41	Synchronized Interest (Col. [C], L57)	\$ 23,994		\$ 23,994	
42	Arizona Taxable Income (L39 - L40 - L41)	\$ 30,093		\$ 58,263	
43	Arizona State Income Tax Rate	6.5000%		6.5000%	
44	Arizona Income Tax (L42 x L43)	\$ 1,956		\$ 3,787	
45	Federal Taxable Income (L42 - L44)	\$ 28,137		\$ 54,476	
46	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$ 4,220		\$ 7,500	
47	Federal Tax on Second Income Bracket (\$51,001 - \$75,000) @ 25%	\$ -		\$ 1,119	
48	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	\$ -		\$ -	
49	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	\$ -		\$ -	
50	Federal Tax on Fifth Income Bracket (\$335,001 - \$1,000,000) @ 34%	\$ -		\$ -	
51	Total Federal Income Tax	\$ 4,220		\$ 8,619	
52	Combined Federal and State Income Tax (L44 + L51)	\$ 6,176		\$ 12,406	
53	Applicable Federal Income Tax Rate [Col. [C], L46 - Col. [A], L46] / [Col. [C], L40 - Col. [A], L40]			16.6995%	
54	<u>Synchronized Interest Calculation:</u>				
55	Rate Base		\$ 954,567		
56	x Weighted Average Cost of Debt		2.5136%		
57	Synchronized Interest		\$ 23,994		

RATE BASE - ORIGINAL COST

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED OCR/FVRB	(B) RUCO OCR/FVRB ADJUSTMENTS	(C) RUCO ADJ'TED OCR/FVRB
Plant Classification				
1	Intangible Plant	\$ 4,578	\$ -	\$ 4,578
2	Source of Supply Plant	11,236	-	11,236
3	Pumping Plant	103,468	-	103,468
4	Water Treatment Plant	4,305	-	4,305
5	Transmission & Distribution Plant	2,057,913	-	2,057,913
6	General Plant	393,164	(4,326)	388,838
7	Total Gross Plant in Service	\$ 2,574,664	\$ (4,326)	\$ 2,570,339
Less:				
8	Accumulated Depreciation	(1,186,265)	(201)	(1,186,467)
9	Net Utility Plant in Service (L7 less L8)	\$ 1,388,399	\$ (4,527)	\$ 1,383,872
10	Advances in Aid of Construction	\$ (35,084)	\$ -	\$ (35,084)
11	Contributions in Aid of Construction (CIAC)	(167,252)	-	(167,252)
12	Accumulated Amortization of CIAC	28,097	-	28,097
13	Net CIAC (L11 less L12)	\$ (139,155)	\$ -	\$ (139,155)
14	Accumulated Deferred Income Taxes (ADIT)	(267,931)	-	(267,931)
15	Customer Deposits	(9,501)	-	(9,501)
Add:				
16	Allowance for Working Capital	\$ 29,007	\$ (6,641)	\$ 22,366
17	Net Regulatory Asset / (Liability)	-	-	-
18	Rounding	-	-	-
19	TOTAL RATE BASE (Sum L's 9, 10, 13, & 14 Thru 18)	\$ 965,735	\$ (11,169)	\$ 954,567

References:

Column (A): Company Schedule B-1
Column (B): Schedule JAC-3
Column (C): Column (A) + Column (B)

SUMMARY OF ORIGINAL COST RATE BASE ADJUSTMENTS

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED OCRB/FVRB	(B) ADJMT NO. 1 Post Test Year Plant	(C) ADJMT NO. 2	(D) ADJMT NO. 3	(E) ADJMT NO. 4	(F) ADJMT NO. 5	(G) ADJMT NO. 6 WORKING CAPITAL	(H) RUCO ADJUSTED OCRB/FVRB
	Plant Classification								
1	Intangible Plant	\$ 4,578	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,578
2	Source of Supply Plant	11,236	-	-	-	-	-	-	11,236
3	Pumping Plant	103,468	-	-	-	-	-	-	103,468
4	Water Treatment Plant	4,305	-	-	-	-	-	-	4,305
5	Transmission & Distribution Plant	2,057,913	-	-	-	-	-	-	2,057,913
6	General Plant	393,164	(4,326)	-	-	-	-	-	388,838
7	Total Gross Plant in Service	\$ 2,574,664	\$ (4,326)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,570,339
	Less:								
8	Accumulated Depreciation	\$ (1,186,265)	(201)	-	-	-	-	-	(1,186,467)
9	Net Utility Plant in Service (L7 less L8)	\$ 1,388,399	\$ (4,527)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,383,872
10	Advances in Aid of Construction	\$ (35,084)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (35,084)
11	Contributions in Aid of Construction (CIAC)	(167,252)	-	-	-	-	-	-	(167,252)
12	Accumulated Amortization of CIAC	28,097	-	-	-	-	-	-	28,097
13	Net CIAC (L11 less L12)	\$ (139,155)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (139,155)
14	Accumulated Deferred Income Taxes (ADIT)	\$ (267,931)	-	-	-	-	-	-	(267,931)
15	Customer Deposits	(9,501)	-	-	-	-	-	-	(9,501)
	Add:								
16	Allowance for Working Capital	\$ 29,007	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (6,641)	\$ 22,366
17	Net Regulatory Asset / (Liability)	-	-	-	-	-	-	-	-
18	Rounding	-	-	-	-	-	-	-	-
19	TOTAL RATE BASE (Sum L's 9, 10, 13, & 14 Thru 18)	\$ 965,735	\$ (4,527)	\$ -	\$ -	\$ -	\$ -	\$ (6,641)	\$ 954,567

References:

- Column (A): Company Schedule B-2
- Column (B): Adjustment No. 1 - Adjust Test-Year Plant, PTY Plant & Accumulated Depreciation (See JAC-4.1 Direct, Phx. Off., and MS Schedule and JAC Testimony)
- Column (C): Adjustment No. 2 - Post-Test Year Plant
- Column (D): Adjustment No. 3 - Intentionally Left Blank
- Column (E): Adjustment No. 4 - Intentionally Left Blank
- Column (F): Adjustment No. 5 - Intentionally Left Blank
- Column (G): Adjustment No. 6 - Working Capital
- Column (H): Sum Of Columns (A), (B), (C), (D), (E), (F) & (G)

EXPLANATION OF RATE BASE ADJUSTMENT NO. 1
Summary of Post-Test Year Plant Additions
Preliminary Costs vs Final Costs

Line	Work Authorization Number	Account Description	Account No.	Date Construction Began	Date Construction Was/Expected to be Completed	Company Proposed Cost as Per Company Exhibit Sch. B-2 Appendix (Pages 1 thru 4)	Actual Costs as of 29-Nov-15 As per Response to Staff DR's BAB 4.1 and BAB 5.1	RUCO Adjusted Budgeted vs. Actual Cost	RUCO Adjusted Post-Test Year Plant Not in Service as of 6/30/2015	Function	RUCO Adjustments		
											Pinal Valley	White Tank	Ajo
1	I-5167	Pinal Valley	332	9/24/2014	7/8/2015	\$ 1,250,000	\$ 407,891	\$ 15,891	-	WT	\$ (1,250,000)		
2	I-5164	Valley Farms ARF Well No. 2	325	10/3/2014	12/8/2015	175,000	551,402	34,402	-	PP	(175,000)		
3	I-5170	Coolidge 9 & 10 Motors	325	11/18/2014	7/23/2015	1,200,000	194,840	14,840	-	PP	(1,200,000)		
4	I-5296	Cottonwood Lane Storage Tank	325	5/7/2015	9/14/2015	175,000	173,112	(888)	-	PP	(175,000)		
5	I-5299	PV Well No. 19 Pump	321	3/2/2015	12/14/2015	100,000	42,857	(143)	-	PP	(100,000)		
6	I-5299	Coolidge 9 & 10 Access Road	332	3/3/2011	11/30/2016	1,500,000	191,402	(4,598)	-	PP	(1,500,000)		
7	I-5166	Coolidge Well No. 13 ARF	332	3/19/2015	2/29/2016	80,000	57,535	(4,465)	-	WT	(80,000)		
8	I-5304	Coolidge Airport POU	332	12/31/2015	7/11/2015	175,000	35,165	(7,835)	-	PP	(175,000)		
9	I-5307	PV Well No. 27 Booster Pump Station	332	3/19/2015	7/20/2015	40,000	23,685	(3,315)	-	PP	(40,000)		
10	I-5168	Coolidge Well Nos. 9 & 10 Strainer	343	6/16/2015	8/4/2015	110,000	195,574	15,891	-	TD	(110,000)		
11	I-5345	Hwy. 84 Gate & Butterfly Valves	343	4/30/2015	9/28/2015	62,000	194,840	14,840	-	TD	(62,000)		
12	I-5260	1955 North Casa Grande Ave. Replacement	332	10/30/2014	7/23/2015	27,000	42,857	(143)	-	TD	(27,000)		
13	I-5348	Burgess Peak Radio System	397	6/2/2015	8/10/2015	115,000	19,402	(4,598)	-	GP	(115,000)		
14	I-5358	PV Well No. 26 Pump	325	6/23/2015	10/16/2015	200,000	191,402	(4,465)	-	PP	(200,000)		
15	I-5362	PV Well No. 31 Pump	325	8/26/2015	11/26/2015	117,000	35,165	(7,835)	-	PP	(117,000)		
16	I-5359	PV Well No. 27 Pump	325	7/10/2015	10/16/2015	200,000	191,402	(4,465)	-	PP	(200,000)		
17	I-5361	Elevated Tank in Coolidge Catholic Protection	342	10/31/2014	7/8/2015	70,000	407,891	15,891	-	TD	(70,000)		
18	I-5169	Replace PVC with Iron Pipe on Overfield Road	343	10/27/2014	5/21/2015	392,000	551,402	34,402	-	TD	(392,000)		
19	I-5171	Trans. & Dist. Mains - Cottonwood Rd.	343	10/27/2014	4/15/2015	517,000	194,840	14,840	-	TD	(517,000)		
20	I-5301	Trans. & Dist. Mains - Hancock Trail	343	2/24/2015	6/6/2015	180,000	173,112	(888)	-	TD	(180,000)		
21	I-5303	Install Nitrate Analyzers - Well Nos. 32 & 33	332	2/6/2015	6/5/2015	174,000	43,000	(888)	-	TD	(174,000)		
22	I-5306	Install Booster Pump - Starfield Station	325	5/11/2014	6/30/2015	43,000	42,857	(143)	-	PP	(43,000)		
23	I-5329	Construction of Main - 4th Street	343	1/23/2015	2/12/2015	24,000	19,402	(4,598)	-	TD	(24,000)		
24	I-5332	Replace Main on Casa Grande Mountain	343	2/18/2015	5/5/2015	300,000	191,402	(4,598)	-	TD	(300,000)		
25	I-5338	Replace Water Service Line - Antzola Blvd.	345	5/4/2015	5/21/2015	62,000	57,535	(4,465)	-	TD	(62,000)		
26	I-5341	Replace Water Service Line - Pinal Ave.	345	5/11/2015	6/20/2015	43,000	35,165	(7,835)	-	TD	(43,000)		
27	I-1076	No support Provided	346	5/11/2015	6/20/2015	120,000	120,000	(3,315)	-	TD	(120,000)		
28	I-5344	Construction of Main - 2nd Street	343	5/7/2015	6/18/2015	27,000	23,685	(3,315)	-	TD	(27,000)		
29	I-5076	Lower and Replace Main - Az. Grain Depot	343	5/10/2013	12/23/2014	195,574	195,574	-	-	TD			
30	I-5173	Install Electrical Panel - 30 sites	325	11/10/2014	12/31/2014	106,065	103,598	(2,467)	-	PP	(106,065)		
31	I-5165	Block Walls - Well Nos. 21, 30 and 31	314	9/22/2014	1/12/2015	417,446	417,446	-	-	SS, PP			
32	I-5251	Replace Pump - Well No. 33	325	10/14/2014	1/22/2015	245,552	245,968	416	-	PP	(245,552)		
34		White Tank											
35	I-5032	Install SCADA at BAE Tank, Well Nos. 7 & 8	397			327,000				GP	(327,000)		
36	I-5309	Replace Pipe at Blue Horizon ARF	332			54,000	53,658	(342)	-	WT	(54,000)		
37	I-5263	Install 230' of 6" DIP along Citrus Rd.	343			52,000	53,708	1,708	-	TD	(52,000)		
38	I-5360	Replace Ladder, Add Overflow BAE Water Tank	343			20,000	16,810	(3,190)	-	TD	(20,000)		
39		Phoenix Office											
40	I-5324		397			85,000				GP	(8,893)		(1,617)
41	I-5325		390,1			31,000				GP	(27,167)		(590)
42	I-5325		391			14,000				GP	(3,243)		(266)
43	I-5327		398			20,000				GP	(12,269)		(266)
44											(17,527)		(380)
45													
46	Blankets	Pinal Valley	391, 394			855,000			20,000	GP	(20,000)		
47	Blankets	White Tank	391, 394			88,050			2,250	GP	(2,250)		
48	Blankets	Ajo	391, 394			11,650			450	GP	(450)		
49	Blankets	Phoenix Office	391			52,000				GP	(45,570)		(640)
50	Blankets	Meter Shop	391, 394			1,750				GP	(1,554)		(183)
51													
52													
53									22,700				
54						9,873,087	2,784,196	(188,441)					
55													

Post-Test Year Plant Adjustments \$ (5,806,174) \$ (352,391) \$ (4,326)

**RATE BASE ADJUSTMENT NO. 6
ALLOWANCE FOR WORKING CAPITAL**

LINE NO.	DESCRIPTION	(A) AMOUNT	(B) REFERENCE
1	Working Cash Requirement Per Company	\$ (513)	Company Schedule B-5, PG. 1
2	Working Cash Requirement Per RUCO	(7,154)	RUCO Schedule JAC-5, Page 2
3	Adjustment	\$ (6,641)	Line 2 - Line 1
4	Material and Supplies Inventories Per Company	\$ 2,595	Company Schedule B-5, PG. 1
5	Material and Supplies Inventories Per RUCO	2,595	Company Schedule B-5, PG. 1
6	Adjustment	\$ -	Line 5 - Line 4
7	Required Bank Balances Per Company	\$ 17,346	Company Schedule B-5, PG. 1
8	Required Bank Balances Per RUCO	17,346	Company Schedule B-5, PG. 1
9	Adjustment	\$ -	Line 8 - Line 7
10	Prepayments & Special Deposits Per Company	\$ 9,579	Company Schedule B-5, PG. 1
11	Prepayments & Special Deposits Per RUCO	9,579	Company Schedule B-5, PG. 1
12	Adjustment	\$ -	Line 11 - Line 10
13	TOTAL ADJUSTMENT (See JAC-2, Column (K))	\$ (6,641)	Sum of Lines 3, 6, 9 & 12

**RATE BASE ADJUSTMENT NO. 6 - CONT'D
LEAD/LAG DAY SUMMARY**

LINE NO.	DESCRIPTION	(A) COMPANY EXPENSES AS FILED	(B) RUCO ADJUSTM'TS	(C) RUCO EXPENSES AS ADJUSTED	(D) (LEAD)/LAG DAYS	(E) DOLLAR DAYS
	Operating Expenses					
1	Purchased Power	\$ 4,903	\$ -	\$ 4,903	30.87	\$ 151,354
2	Payroll	118,010	-	118,010	14.00	1,652,143
3	Purchased Water	117,312	-	117,312	38.97	4,571,748
4	Chemicals	502	-	502	(18.11)	(9,087)
5	Property & Liability Insurance	4,679	-	4,679	(45.27)	(211,828)
6	Workman's Compensation Insurance	1,568	-	1,568	(46.50)	(72,914)
7	Health Insurance	24,173	-	24,173	(8.92)	(215,624)
8	Other Operating & Maintenance Expenses	36,170	(18,569)	17,601	(9.27)	(163,165)
9	Federal Current Income Taxes	28,967	-	8,619	37.00	318,906
10	State Current Income Taxes	4,930	-	3,787	37.00	140,124
11	FICA Taxes	8,841	-	8,841	14.00	123,774
12	FUTA & SUTA Taxes	99	-	99	83.10	8,218
13	Property Taxes	21,529	-	20,524	212.00	4,351,029
14	Registration, Svc. Contracts, & Misc. Fees	1,893	-	1,893	(98.83)	(187,127)
15	Retirement Annuities (401k)	8,270	-	8,270	34.72	287,118
16	Subtotal	<u>381,845</u>	<u>(18,569)</u>	<u>340,781</u>		<u>10,744,668</u>
17	Synchronized Interest		\$ 27,752	\$ 27,752	90.83	\$ 2,520,850
18			-	-	-	-
19	Subtotal	<u>\$ -</u>	<u>\$ 27,752</u>	<u>\$ 27,752</u>		<u>\$ 2,520,850</u>
20	Total	<u>\$ 381,845</u>	<u>\$ 9,184</u>	<u>\$ 368,533</u>		<u>\$ 13,265,518</u>
21	Expense Lag	Line 20, Col. (E) / (C)	36.00			
22	Revenue Lag	Company B-5 Schedules	<u>28.91</u>			
23	Net Lag	Line 22 - Line 21	(7.09)			
24	RUCO Adjusted Expenses	Col. (C), Line 20	<u>\$ 368,533</u>			
25	Cash Working Capital	Line 23 X Line 24 / 365 Days	<u>(7,154)</u>			
26	Company As Filed	Co. Schedule B-5, Page 2	(513)			
27	Difference	Line 25 - Line 26	<u>\$ (6,641)</u>			
28	ADJUSTMENT	Line 27	<u>\$ (6,641)</u>			

NOTE: Dependent on System

References:

- Column (A): - Company Schedule B-5
- Column (B): RUCO Operating Income Adjustments (See Schedule JAC-7)
- Column (C): Column (A) + (B)
- Column (D): - Company Schedule B-5
- Column (E): Column (C) X Column (D)

OPERATING INCOME

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) RUCO TEST YEAR ADJ'MTS	(C) RUCO TEST YEAR AS ADJ'TED	(D) RUCO PROP'D CHANGES	(E) RUCO AS RECOMM'D
1	Operating Revenues:					
2	Residential	\$ 306,895	\$ 7,552	\$ 314,447	\$ 28,608	\$ 343,055
3	Commercial	125,128	-	125,128	-	125,128
4	Industrial	-	-	-	-	-
5	Private Fire Service	1,200	-	1,200	-	1,200
6	Other Water Revenues	564	-	564	-	564
7	Total Water Revenues	\$ 433,787	\$ 7,552	\$ 441,339	\$ 28,608	\$ 469,948
8	Miscellaneous	4,101	-	4,101	-	4,101
9	Total Operating Revenues	\$ 437,888	\$ 7,552	\$ 445,441	\$ 28,608	\$ 474,049
10	Operating Expenses:					
11	Source of Supply					
12	Purchased Water	\$ 117,312	\$ -	\$ 117,312	\$ -	\$ 117,312
13	Other	(3,893)	4,512	618	-	618
14	Pumping Expenses					
15	Purchased Power	4,903	-	4,903	-	4,903
16	Purchased Gas	-	-	-	-	-
17	Other	18,038	493	18,531	-	18,531
18	Water Treatment Expenses	23,870	371	24,241	-	24,241
19	Transmission & Distribution Expenses	58,757	(19,858)	38,899	-	38,899
20	Customer Accounting Expenses	38,982	(683)	38,299	-	38,299
21	Sales Expense	46	-	46	-	46
22	Administrative & General Expenses	59,465	(3,403)	56,062	-	56,062
23	Total Operations & Maintenance Expense	\$ 317,480	\$ (18,569)	\$ 298,911	\$ -	\$ 298,911
24	Depreciation & Amortization Expense	66,337	(201)	66,136	-	66,136
25	Taxes:					
26	Federal Income Taxes	\$ (975)	\$ 5,196	\$ 4,220	\$ 4,399	\$ 8,619
27	State Income Taxes	(166)	2,122	1,956	1,831	3,787
28	Property Taxes	20,086	-	20,086	437	20,524
29	Other	6,482	(260)	6,221	-	6,221
30	Total Taxes	\$ 25,427	\$ 7,057	\$ 32,484	\$ 6,667	\$ 39,151
31	Total Operating Expenses	\$ 409,244	\$ (11,713)	\$ 397,531	\$ 6,667	\$ 404,198
32	Operating Income	\$ 28,644	\$ 19,265	\$ 47,910	\$ 21,941	\$ 69,851

References:

Column (A): Company Schedule C-1
Column (B): JAC-7, Columns (B) Thru (I)
Column (C): Column (A) + Column (B)
Column (D): JAC-7, Columns B Thru K
Column (E): Column (C) + Column (D)

SUMMARY OF OPERATING INCOME ADJUSTMENTS
 TEST YEAR AS FILED AND ADJUSTMENTS

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) ADJMT NO. 1 DEPRECIATION EXPENSE	(C) ADJMT NO. 2 WEATHER NORMALIZATION	(D) ADJMT NO. 3 TANK MAINTENANCE EXPENSE	(E) ADJMT NO. 4 PAYROLL ANNUALIZATION #1	(F) ADJMT NO. 5 PAYROLL ANNUALIZATION #2	(G) ADJMT NO. 6 PAYROLL ANNUALIZATION #3	(H) ADJMT NO. 7 INTENTIONALLY LEFT BLANK	(I) ADJMT NO. 8 RATE CASE EXPENSE	(J) ADJMT NO. 9 PROPERTY TAX EXPENSE	(K) ADJMT NO. 10 INCOME TAXES	(L) RUO AS ADJTD
1	Operating Revenues:												
2	Residential	\$ 306,895											\$ 314,447
3	Commercial	125,128		7,552									125,128
4	Industrial												
5	Private Fire Service	1,200											1,200
6	Other Water Revenues	564											564
7	Total Water Revenues	\$ 433,787		\$ 7,552									\$ 441,339
8	Miscellaneous	4,101											4,101
9	Total Operating Revenues	\$ 437,888		\$ 7,552									\$ 445,441
10	Operating Expenses:												
11	Source of Supply												
12	Purchased Water	\$ 117,312											\$ 117,312
13	Other Expenses	(3,893)		4,523		(11)							618
14	Purchased Power	4,903											4,903
15	Purchased Gas												
16	Other	18,038		814		(221)							18,531
17	Water Treatment Expenses	23,870		919		(549)							24,241
18	Transmission & Distribution Expenses	58,757			(18,953)								38,899
19	Customer Accounting Expenses	38,982				(688)							38,299
20	Sales Expense	46					2						48
21	Administrative & General Expenses	59,455				(498)	(1,104)			(1,055)			56,862
22	Total Operations & Maintenance Expense	\$ 317,480		\$ 6,256		\$ (2,910)	\$ (1,102)			\$ (1,055)			\$ 288,911
23	Depreciation & Amortization Expense	66,337	(201)										66,136
24	Taxes:												
25	Federal Income Taxes	\$ (975)											\$ 4,220
26	State Income Taxes	(168)											1,956
27	Property Taxes	20,096											20,096
28	Other	6,452					(145)	(116)					6,241
29	Total Taxes	\$ 25,427					(145)	(116)					\$ 24,166
30	Total Operating Expenses	\$ 409,244		\$ 6,256		\$ (2,910)	\$ (1,247)			\$ (1,055)			\$ 412,531
31	Operating Income	\$ 28,644		\$ 1,296		\$ 2,910	\$ 1,247			\$ 1,055			\$ 32,784
32													\$ 32,784

ADJUSTMENTS:

- 1- Depreciation Expense
- 2- Weather Normalization
- 3- Tank Maintenance Expense
- 4- Payroll Annualization #1
- 5- Payroll Annualization #2
- 6- Payroll Annualization #3
- 7- Service Vehicle Costs (Intentionally Left Blank)
- 8- Rate Case Expense
- 9- Property Tax Expense
- 10- Income Tax Expense

REFERENCE:

- JAC Testimony and Schedule JAC-8, Page 1 of 1
- JAC Testimony and Schedule JAC-9, Page 1 of 1
- JAC Testimony and Schedule JAC-10, Page 1 of 1
- JAC Testimony and Schedule JAC-11, Page 1 of 3
- JAC Testimony and Schedule JAC-11, Page 2 of 3
- JAC Testimony and Schedule JAC-11, Page 3 of 3
- N/A
- JAC Testimony and Schedule JAC-13, Page 1 of 1
- JAC Testimony and Schedule JAC-14, Page 1 of 1
- JAC Testimony and Schedule JAC-15, Page 1 of 1

**OPERATING INCOME ADJUSTMENT NO. 2
WEATHER NORMALIZATION**

<u>Line No.</u>	<u>Description</u>	<u>(A) Company Proposed</u>	<u>(B) RUCO Adjustment</u>	<u>(C) RUCO As Adjusted</u>
1				
2	Company decrease to residential revenues	\$ (7,552)	\$ 7,552	\$ -
3				
4	Company Proposed Expense Adjustments			
5	Source of Supply	(4,523)	4,523	-
6	Pumping	(814)	814	-
7	Water Treatment	(919)	919	-
8				
9	Total Operating Expense Adjustment	<u>\$ (6,256)</u>	<u>\$ 6,256</u>	<u>\$ -</u>

10
11
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To reverse the weather normalization declining usage adjustment made by the Company which decreased test-year operating revenues for the Ajo system by \$7,552, and decreased test-year operating expenses for the Ajo system by \$6,256.

Column (A): Company Exhibit Schedule C-2 Appendix (Page 11 of 38)

**OPERATING INCOME ADJUSTMENT NO. 3
NORMALIZE TANK MAINTENANCE**

Line No.	Description	(A) Company Proposed	(B) RUCO Adjustment	(C) RUCO As Adjusted
1				
2	To reverse Company tank maintenance	\$ 18,953	\$ (18,953)	\$ -
3	normalization adjustment (IS-19)			
4	for the Ajo system			
5				
6				
7				
8				
9		<u>Pinal Valley</u> 041	<u>White Tank</u> 044	<u>Ajo</u> 047
10	Trans. & Dist. - Storage Tanks - Actual	\$ 131,210	\$ -	\$ 131,210
11	Trans. & Dist. - Storage Tanks - Normalized	231,105	55,199	18,953
12				305,258
13	Increase / (Decrease)	\$ 99,896	\$ 55,199	\$ 18,953
14				\$ 174,048
15				
16				
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**OPERATING INCOME ADJUSTMENT NO. 5
PAYROLL ANNUALIZATION ADJ. #2
ADJUSTMENT TO REFLECT SHARING OF PAYROLL COSTS WITH CALIFORNIA AFFILIATE**

Line No.	Western Group	Western Group - Payroll Annualization							Total Increase / (Decrease)
		[A] Source of Supply Increase / (Decrease)	[B] Pumping Increase / (Decrease)	[C] Water Treatment Increase / (Decrease)	[D] Transmission & Distribution Increase / (Decrease)	[E] Customer Accounting Increase / (Decrease)	[F] Administrative & General Increase / (Decrease)	[G] Taxes & 401K Increase / (Decrease)	
1									
2									
3									
4	Pinal Valley per RUCO	\$ 27,635	\$ 646,274	\$ 209,622	\$ 1,014,849	\$ 694,139	\$ 579,366	\$ 53,115	\$ 3,225,000
5	Pinal Valley per Company	27,635	646,274	209,622	1,014,832	694,052	618,896	58,305	3,269,616
6									
7	RUCO Pinal Valley Adjustments	\$ -	\$ -	\$ -	\$ 17	\$ 87	\$ (39,530)	\$ (5,189)	\$ (44,616)
8									
9									
10	White Tank per RUCO	\$ 15,208	\$ 130,094	\$ 44,894	\$ 76,203	\$ 74,897	\$ 39,548	\$ 8,912	\$ 389,757
11	White Tank per Company	15,208	130,094	44,894	76,202	74,890	42,601	9,313	393,203
12									
13	RUCO White Tank Adjustments	\$ -	\$ -	\$ -	\$ 1	\$ 7	\$ (3,053)	\$ (401)	\$ (3,446)
14									
15									
16	Ajo per RUCO	\$ 384	\$ 11,031	\$ 18,808	\$ 31,076	\$ 23,631	\$ 14,216	\$ 2,907	\$ 102,054
17	Ajo per Company	384	11,031	18,808	31,076	23,628	15,320	3,052	103,300
18									
19	RUCO Ajo Adjustments	\$ -	\$ -	\$ -	\$ 0	\$ 2	\$ (1,104)	\$ (145)	\$ (1,246)
20									
21									
22	Subtotal per RUCO	\$ 43,228	\$ 787,399	\$ 273,324	\$ 1,122,129	\$ 792,666	\$ 633,131	\$ 64,934	\$ 3,716,811
23	Subtotal per Company	43,228	787,399	273,324	1,122,110	792,570	676,818	70,669	3,766,119
24									
25	RUCO's Total WG Adjustments	\$ -	\$ -	\$ -	\$ 19	\$ 96	\$ (43,687)	\$ (5,735)	\$ (49,307)
26									
27	Increase/(Decrease) in Payroll Expenses -- To Reflect Sharing of Costs with California Affiliate								\$ (49,307)

Column [A]: Payroll allocations made to Source of Supply function.
Column [B]: Payroll allocations made to Pumping function.
Column [C]: Payroll allocations made to Water Treatment function.
Column [D]: Payroll allocations made to Transmission & Distribution function.
Column [E]: Payroll allocations made to Customer Accounting function.
Column [F]: Payroll allocations made to Administrative & General function.
Column [G]: [A] + [B] + [C] + [D] + [E] + [F]

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**OPERATING INCOME ADJUSTMENT NO. 6
PAYROLL ANNUALIZATION ADJ. #3
ADJUSTMENT TO REFLECT KNOWN AND MEASURABLE CHANGE IN EMPLOYMENT STATUS**

		Western Group - Payroll Annualization							
Line No.		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
	Western Group	Source of Supply Increase / (Decrease)	Pumping Increase / (Decrease)	Water Treatment Increase / (Decrease)	Transmission & Distribution Increase / (Decrease)	Customer Accounting Increase / (Decrease)	Administrative & General Increase / (Decrease)	Payroll Taxes & 401K Increase / (Decrease)	Total Increase / (Decrease)
1									
2									
3									
4	Pinal Valley per RUCO	\$ 27,635	\$ 646,274	\$ 209,622	\$ 1,014,849	\$ 694,137	\$ 590,009	\$ 54,169	\$ 3,236,694
5	Pinal Valley per Company	27,635	646,274	209,622	1,014,832	694,052	618,896	58,305	3,269,616
6									
7	RUCO Pinal Valley Adjustments	\$ -	\$ -	\$ -	\$ 16	\$ 85	\$ (28,887)	\$ (4,136)	\$ (32,921)
8									
9									
10	White Tank per RUCO	\$ 15,208	\$ 130,094	\$ 44,894	\$ 76,203	\$ 74,897	\$ 40,370	\$ 8,993	\$ 390,660
11	White Tank per Company	15,208	130,094	44,894	76,202	74,890	42,601	9,313	393,203
12									
13	RUCO White Tank Adjustments	\$ -	\$ -	\$ -	\$ 1	\$ 7	\$ (2,231)	\$ (319)	\$ (2,542)
14									
15									
16	Ajo per RUCO	\$ 384	\$ 11,031	\$ 18,808	\$ 31,076	\$ 23,631	\$ 14,514	\$ 2,936	\$ 102,380
17	Ajo per Company	384	11,031	18,808	31,076	23,628	15,320	3,052	103,300
18									
19	RUCO Ajo Adjustments	\$ -	\$ -	\$ -	\$ 0	\$ 2	\$ (807)	\$ (116)	\$ (920)
20									
21									
22	Subtotal per RUCO	\$ 43,228	\$ 787,399	\$ 273,324	\$ 1,122,129	\$ 792,664	\$ 644,893	\$ 66,098	\$ 3,729,735
23	Subtotal per Company	43,228	787,399	273,324	1,122,110	792,570	676,818	70,669	3,766,119
24									
25	RUCO's Total WG Adjustments	\$ -	\$ -	\$ -	\$ 18	\$ 94	\$ (31,925)	\$ (4,571)	\$ (36,383)
26									
27	Increase/(Decrease) in Payroll Expenses -- Change in Employment Status								\$ (36,383)
28									
29									
30									

Column [A]: Payroll allocations made to Source of Supply function.
Column [B]: Payroll allocations made to Pumping function.
Column [C]: Payroll allocations made to Water Treatment function.
Column [D]: Payroll allocations made to Transmission & Distribution function.
Column [E]: Payroll allocations made to Customer Accounting function.
Column [F]: Payroll allocations made to Administrative & General function.
Column [G]: [A] + [B] + [C] + [D] + [E] + [F]

**OPERATING INCOME ADJUSTMENT NO. 7
SERVICE VEHICLE COSTS
ADJUSTMENT TO REFLECT LOWER FUEL COSTS**

		Western Group - Service Vehicle Costs - Fuel Costs							
Line No.		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
	Western Group	Capital	Source of Supply Increase / (Decrease)	Pumping Increase / (Decrease)	Water Treatment Increase / (Decrease)	Transmission & Distribution Increase / (Decrease)	Customer Accounting Increase / (Decrease)	Administrative & General Increase / (Decrease)	Total Increase / (Decrease)
1									
2									
3									
4	Pinal Valley per RUCO	\$ 10,037	\$ 369	\$ 19,241	\$ 5,427	\$ 36,449	\$ 11,606	\$ 1,025	\$ 74,117
5	Pinal Valley per Company	11,309	416	21,679	6,115	41,066	13,076	1,155	83,507
6									
7	RUCO Pinal Valley Adjustments		\$ (47)	\$ (2,437)	\$ (688)	\$ (4,617)	\$ (1,470)	\$ (130)	\$ (9,389)
8									
9									
10	White Tank per RUCO	\$ 1,655	\$ 267	\$ 4,161	\$ 512	\$ 3,031	\$ 2,041	\$ 31	\$ 10,043
11	White Tank per Company	1,956	316	4,919	605	3,584	2,413	36	11,874
12									
13	RUCO White Tank Adjustments		\$ (49)	\$ (758)	\$ (93)	\$ (553)	\$ (372)	\$ (6)	\$ (1,831)
14									
15									
16	Ajo per RUCO	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17	Ajo per Company	-	-	-	-	-	-	-	-
18									
19	RUCO Ajo Adjustments		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
20									
21									
22	Subtotal per RUCO	\$ 11,692	\$ 637	\$ 23,402	\$ 5,939	\$ 39,480	\$ 13,647	\$ 1,056	\$ 84,160
23	Subtotal per Company	13,265	732	26,598	6,720	44,650	15,489	1,191	95,380
24									
25	RUCO's Total WG Adjustments		\$ (96)	\$ (3,196)	\$ (781)	\$ (5,170)	\$ (1,842)	\$ (135)	\$ (11,220)
26									
27	Increase/(Decrease) in Fuel Expenses								\$ (11,220)
28									
29									
30									

31 Column [A]: The cost figures shown in column [A] are presented in the work papers accompanying Income Statement adjustment IS-16 , but are not
32 included as an expense in the Company's IS-16 service vehicle cost adjustments. RUCO presents them for informational purposes only.
33 Columns [B] - [G]: Fuel cost allocations made

34 Column [H]: ((B) + [C] + [D] + [E] + [F] + [G])

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**OPERATING INCOME ADJUSTMENT NO. 8
RATE CASE EXPENSE**

LINE NO.	Western Group	(A) COMPANY AS FILED	(B) RUCO ADJUSTMENT	(C) RUCO AS ADJUSTED
1	Rate Case Expense Total	\$ 486,274	\$ (166,447)	\$ 319,827
2	Allocation Factor			0.01902
3	Ajo System (Line 1 X Line 2)			\$ 6,084
4	Normalized Over 3 Years			3
5	RUCO Adjusted Rate Case Expense (Line 3 / 3 Years)			\$ 2,028
6	Company Rate Case Expenses As Filed (Company Sch. C-2)			\$ 3,083
7	RUCO Pro Forma Rate Case Expense (Lines 5 - 6)			\$ (1,055)
8	RUCO Adjustment (Line 7) (See JAC-8, Column (E))			\$ (1,055)

RUCO's Rate Case Expense Adjustment Calculation:

Decision No. 68302, dated November 14, 2005, Approved
\$250,000 for Arizona Water Company's Western Gro \$ 250,000

Inflation Factor from January 1, 2004 thru July 1, 2011
per InflationData.com 21.99%

RUCO recommended Rate Case Expense in prior
Western Group rate case (Docket No. W-01445A-10- \$ 304,975

Inflation Factor from July 1, 2011 thru January 31, 2016
per InflationData.com 4.87%

Reasonable rate case expense based on
Commission Decision No. 68302 \$ 319,827

RUCO Rate Case Expense Adjustment \$ (166,447)

3-Factor Allocation Percentages Used by the Company:

Pinal Valley System 0.87635
White Tank System 0.10462
Ajo System 0.01902

Western Group Total 1.00000

**RUCO OPERATING INCOME ADJUSTMENT NO. 9
PROPERTY TAXES**

LINE NO.	Property Tax Calculation	(A)	(B)
		RUCO AS ADJUSTED	RUCO RECOMMENDED
1	RUCO Adjusted Test Year Revenues - 2010	\$ 445,441	\$ 445,441
2	Multiplied by 2	2	2
3	Subtotal (Line 1 * Line 2)	\$ 890,882	\$ 890,882
4a	RUCO Adjusted Test Year Revenues - 2010	445,441	
4b	RUCO Recommended Revenue, Per Schedule JAC-7		474,049
5	Subtotal (Line 4 + Line 5)	\$ 1,336,322	\$ 1,364,931
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	\$ 445,441	\$ 454,977
8	Department of Revenue Multiplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	\$ 890,882	\$ 909,954
10	Plus: 10% of CWIP -	-	-
11	Less: Net Book Value of Licensed Vehicles	-	-
12	Full Cash Value (Line 9 + Line 10 - Line 11)	\$ 890,882	\$ 909,954
13	Assessment Ratio	18.0%	18.0%
14	Assessment Value (Line 12 * Line 13)	\$ 160,359	\$ 163,792
15	Composite Property Tax Rate (Per Company Schedule C-2, Page 3, Line 16)	12.7400%	12.7400%
16	RUCO Proposed Property Tax Expense (Line 14 * Line 15)	\$ 20,430	
17	Company Proposed Property Tax	24,146	
18	RUCO Test Year Adjustment (Line 16-Line 17)	\$ (3,716)	
19	Property Tax - RUCO Recommended Revenue (Line 14 * Line 15)		\$ 20,867
20	RUCO Test Year Adjusted Property Tax Expense (Line 16)		20,430
21	Increase/(Decrease) to Property Tax Expense		\$ 437
22	Increase/(Decrease) to Property Tax Expense		\$ 437
23	Increase in Revenue Requirement		28,608
24	Increase /(Decrease) to Property Tax per Dollar Increase in Revenue (Line19/Line 20)		0.015288

COST OF CAPITAL

LINE NO.	DESCRIPTION	(A) DOLLAR AMOUNT	(B) CAPITAL RATIO	(C) COST RATE	(D) WEIGHTED COST RATE
1	Long-Term Debt	\$ 75,000,000	46.31%	5.43%	2.51%
2	Common Equity	86,959,196	53.69%	8.95%	4.80%
3	Total Capitalization	<u>\$ 161,959,196</u>	<u>100.00%</u>		
4	WEIGHTED AVERAGE COST OF CAPITAL				7.32%

References:

Columns (A) Thru (D): JAC Cost of Capital Testimony