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BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION)
OF ARIZONA WATER COMPANY, AN)
ARIZONA CORPORATION, FOR)
ADJUSTMENTS TO ITS RATES AND)
CHARGES FOR UTILITY SERVICE)
FURNISHED BY ITS WESTERN GROUP)
AND FOR CERTAIN RELATED)
APPROVALS)

DOCKET NO. W-01445A-04-0650

**NOTICE OF FILING
REJOINDER TESTIMONY**

Applicant, Arizona Water Company, hereby files the Rejoinder Testimony of William M. Garfield, Sheryl L. Hubbard, Ralph J. Kennedy, and Thomas M. Zepp in the above-captioned docket.

DATED this 10th day of June, 2005.

ARIZONA WATER COMPANY

By: Robert W. Geake

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1 An original and 13 copies of the foregoing, and attached documents were delivered this
2 10th day of June, 2005, to:

3 Docketing Supervisor
4 Docket Control
5 Arizona Corporation Commission
6 1200 West Washington
7 Phoenix, AZ 85007

8 A copy of the foregoing was delivered/mailed this 10th day of June, 2005, to:

9 Teena Wolfe, Administrative Law Judge
10 Hearing Division
11 Arizona Corporation Commission
12 1200 West Washington
13 Phoenix, AZ 85007

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ARIZONA WATER COMPANY



Docket No. W-01445A-04-0650

2004 RATE HEARING EXHIBIT NO. _____

For Test Year Ending 12/31/03

**PREPARED
REJOINDER TESTIMONY & EXHIBITS**

William M. Garfield

ARIZONA WATER COMPANY



Docket No. W-01445A-04-0650

2004 RATE HEARING EXHIBIT NO. _____

For Test Year Ending 12/31/03

**PREPARED
REJOINDER TESTIMONY
OF
William M. Garfield**

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20 **REJOINDER TESTIMONY OF**

21 **William M. Garfield**
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1 **ARIZONA WATER COMPANY**

2
3 **Rejoinder Testimony of**

4 **William M. Garfield**

5
6 **I. INTRODUCTION AND PURPOSE OF TESTIMONY**

7 **Q. WHAT ARE YOUR NAME, EMPLOYER AND OCCUPATION?**

8 A. My name is William M. Garfield. I am employed by Arizona Water Company (the
9 "Company") as President.

10 **Q. ARE YOU THE SAME WILLIAM M. GARFIELD THAT PREVIOUSLY**
11 **SUBMITTED DIRECT TESTIMONY AND REBUTTAL TESTIMONY IN THIS**
12 **MATTER?**

13 A. Yes, I am.

14 **Q. WHAT IS THE PURPOSE OF YOUR REJOINDER TESTIMONY IN THIS**
15 **PROCEEDING?**

16 A. The purpose of my rejoinder testimony is to respond to certain surrebuttal
17 testimony submitted by the Arizona Corporation Commission's Utilities Division
18 Staff ("Staff"), the Residential Utility Consumer Office ("RUCO"), and the City of
19 Casa Grande ("City") in this rate proceeding. Specifically, I will present the
20 Company's rejoinder position with respect to cost recovery of Central Arizona
21 Project ("CAP") M&I capital charges and ratemaking treatment of legal costs
22 related to the Company's defense of the City's unsuccessful attempt to condemn
23 a portion of the Company's Casa Grande system, and the Company's attempt to
24 protect its exclusive water service rights under its Casa Grande Certificate of
25 Convenience and Necessity ("CC&N").

26 **II. RESPONSE TO STAFF'S SURREBUTTAL TESTIMONY**

27 **A. Recovery of Legal Expenses**

28

1 Q. DO YOU AGREE WITH MR. LUDDERS' SURREBUTTAL TESTIMONY
2 CONCERNING THE LACK OF BENEFITS TO THE COMPANY'S CASA
3 GRANDE RATEPAYERS RESULTING FROM THE COMPANY'S LEGAL
4 ACTIONS CONCERNING THE CITY?

5 A. No, I do not. First, no party to this proceeding has questioned the Company's
6 actions in either the defense of the City's unlawful condemnation attempt or in
7 challenging what the Company believed was an unlawful invasion of the
8 Company's CC&N by the City in providing water service to certain of the
9 Company's non-potable water customers. In both cases, the fees and expenses
10 incurred by the Company were legitimate business expenses, and were
11 necessary to protect the Company's rights under its CC&N. Frankly, I find the
12 notion that a utility's costs to defend itself in a lawsuit are not an appropriate
13 expense to be incredible. I also disagree with the argument that to be recovered
14 in rates, an expense must "benefit" ratepayers. A number of expenses do not
15 benefit ratepayers, such as depreciation and various taxes utilities are required
16 by law to pay. Nevertheless, these expenses are regarded as an appropriate
17 cost of service and are recovered in rates because they are reasonably related to
18 the operation of the business. In this case, there is no dispute about the amount
19 or the reasonableness of the Company's expenditures, and they should be
20 treated as a cost of doing business.

21 Q. ASSUMING FOR THE SAKE OF ARGUMENT THAT IT IS NECESSARY TO
22 SHOW THAT RATEPAYERS RECEIVED A "BENEFIT," DO YOU BELIEVE
23 THAT CASA GRANDE RATEPAYERS BENEFITED FROM THE COMPANY'S
24 DEFENSE OF THE CONDEMNATION ACTION?

25 A. Yes. There are six major points of focus on this issue: First, the City was
26 attempting to condemn and take over a portion, but not all, of the Company's
27 Casa Grande CC&N and water system. Second, the condemnation, if
28 successful, would have created several severed areas of the Company's water

1 system, resulting in diminished sources of supply, water storage, pressures and
2 pumping capacities, decreases in overall operating efficiencies, and increases in
3 operating costs and water rates. Third, the City was attempting to condemn all
4 8,884 acre feet of the Company's Casa Grande CAP Colorado River Water
5 allocation, under the Company's long-term allocation and supply contracts
6 approved by the Arizona Department of Water Resources and the Bureau of
7 Reclamation for the Company's existing and future Casa Grande customers.

8 Fourth, the Company's Casa Grande customers would have been forced
9 to become involuntary water customers of the City's start-up water system, and
10 would have faced substantial increases in water rates as a result of the City
11 having to pay the full fair market value of the Company's condemned facilities
12 and CAP water supplies. At the same time, their customers would likely have
13 experienced a reduction in the level of water service that they had come to
14 expect from the Company, such as less reliable sources of supply, diminished
15 water storage, distribution system capacity, water pressure, and potential
16 impacts on water quality. Fifth, the City's voters (the Company's customers) had
17 already rejected the City's previous attempt to enter the water utility business and
18 to fund such a takeover of the Company's water system and the acquisition of
19 the Company's public utility plant and CC&N rights. The City's condemnation
20 action was contrary to its voters' wishes. Finally, the customers within the area
21 the City sought to take over would lose the regulatory protection of the
22 Commission.

23 **Q. CAN YOU PROVIDE AN EXAMPLE OF THE KIND OF THE ADVERSE**
24 **IMPACT THAT YOU DESCRIBE FOR THOSE CUSTOMERS WHO RECEIVE**
25 **WATER SERVICE FROM A CONDEMNING ENTITY?**

26 **A.** Yes, although condemnations of water utilities by cities entering the water utility
27 business for the first time are rare. An example of a recent condemnation
28 attempt is playing out now concerning Cave Creek Water Company. Global

1 Water Resources ("Global") recently purchased Cave Creek Water Company
2 through a stock purchase for approximately \$6 million, well above book value.
3 The stock purchase followed an attempt by the Town of Cave Creek to negotiate
4 a purchase of the water company. Negotiations broke off, however, and Global
5 stepped in to purchase the water company.

6 The Town of Cave Creek recently held an election to decide if voters
7 would approve the purchase of Cave Creek Water Company. With a minimum
8 purchase price now set above \$6 million, it is clear that the purchase price
9 through condemnation by the Town of Cave Creek will significantly exceed the
10 historical cost rate base set by the Commission for Cave Creek Water Company.
11 The result will be increased water rates and/or increased property taxes to pay
12 for general obligation bonds issued to fund the acquisition. If the Town of Cave
13 Creek goes ahead with the condemnation, Cave Creek residents will see
14 increased water utility costs. In addition, if the courts approve the Town of Cave
15 Creek's request to take immediate possession, the previous customers of Cave
16 Creek Water Company will receive service from an inexperienced water provider,
17 as the new water provider tries to learn how to operate a water system.

18 The Cave Creek Water Company case is much less complicated than the
19 City's attempt to condemn part of the Casa Grande water system. The Town of
20 Cave Creek seeks a full condemnation of the water company's water system and
21 CC&N without the significant severance damage that would have occurred with
22 the City's failed unlawful attempt to condemn only a portion of the Company's
23 Casa Grande system.

24 **Q. ARE THERE OTHER EXAMPLES OF WATER UTILITY CONDEMNATIONS BY**
25 **MUNICIPALITIES THAT ILLUSTRATE THE POTENTIAL IMPACTS TO**
26 **RATEPAYERS?**

27 **A.** Yes. The City of Surprise attempted to condemn a water system in the mid-
28 1980's that followed precisely the path I just described. In that case, the jury set

1 the fair market value far above what the City of Surprise expected to pay when it
2 took immediate possession of the water system. As a result the City of Surprise
3 returned the water system to the water utility, and had to bear all of the water
4 utility's litigation expenses.

5 **Q. IS STAFF'S POSITION WITH RESPECT TO RECOVERY OF THE**
6 **COMPANY'S LEGAL EXPENSES ASSOCIATED WITH THE CITY'S**
7 **PROVISION OF RECLAIMED WATER SERVICE TO SOME OF THE**
8 **COMPANY'S CUSTOMERS SIMILAR TO ITS POSITION ON THE**
9 **CONDEMNATION MATTER?**

10 **A.** Yes. Staff fails to see the compelling necessity for the Company's defense of its
11 exclusive right to provide water service within its CC&N. That compelling
12 necessity arises because if another entity takes over water service to some
13 customers within the Company's CC&N, it will ultimately cause rates to increase
14 to the remaining ratepayers. This is especially true in this case because the City

15 required one of the Company's major customers, the Reliant Energy Desert
16 Basin power plant (now owned by Salt River Project), to purchase effluent from
17 the City instead of non-potable CAP water purchased from the Company. The
18 City's provision of water service to Reliant Energy and similar customers
19 receiving non-potable CAP from the Company, shifts recovery of CAP M&I
20 capital charges to the Company's other ratepayers. When non-potable CAP
21 users receive water service from the Company, CAP M&I capital charges, and
22 potential deferrals of such charges, are reduced, providing cost savings to the
23 Company's existing and future ratepayers.

24 **B. Recovery of CAP M&I Capital Charges**

25 **Q. DO YOU AGREE WITH STAFF'S SURREBUTTAL POSITION ON THE**
26 **RECOVERY OF CAP M&I CAPITAL CHARGES?**

27 **A.** No. Staff argues that the Company's Casa Grande, Coolidge and White Tank
28 CAP allocations have not been beneficial to the Company's ratepayers, and

1 therefore, those costs should not be included in rates. Staff's conclusions are
2 wrong about the usefulness and benefits of the Company's CAP allocations to
3 the existing ratepayers. Of course, the Commission could authorize the
4 Company to recover CAP costs through a combination of hook-up fees and/or
5 recovery through water rates. While the Company believes that recovery of the
6 majority of CAP capital charges from current customers is warranted, it
7 recognizes that hook-up fees, if set at proper levels, could generate sufficient
8 revenues to amortize the payment of deferred CAP M&I capital charges over a
9 reasonable period of time. However, hook-up fees are based on forecasted
10 customer growth, and slower customer growth will mean longer recovery periods
11 and further accumulation of deferred CAP M&I capital charges. For additional
12 testimony on this issue, please refer to the rejoinder testimony of Sheryl Hubbard
13 and Ralph J. Kennedy.

14 **Q. IS THE COMPANY WILLING TO PROVIDE THE STAFF AND THE**
15 **COMMISSION WITH A CONCEPTUAL CAP WATER USE PLAN?**

16 **A.** Yes. The Company is willing to provide Staff and the Commission with such a
17 conceptual plan. The Company will file a company-wide rate application in 2007
18 using calendar year 2006 as a test year. It is appropriate to begin collecting
19 revenues now, in order to begin reducing the existing CAP M&I capital charge
20 deferral, with a conceptual plan submitted by the Company to Staff prior to filing
21 the Company's next rate case in 2007. The Staff can build in certain
22 benchmarks and points of compliance into this next rate proceeding to assure
23 that CAP water will be put to beneficial use within a reasonable period of time
24 and with fuller knowledge of the costs of purchasing and treating CAP water.

25 **III. RESPONSE TO RUCO'S SURREBUTTAL TESTIMONY**

26 **A. Recovery of Legal Expenses**

27 **Q. DO YOU AGREE WITH RUCO'S RECOMMENDATIONS CONCERNING THE**
28 **RECOVERY OF LEGAL EXPENSES ASSOCIATED WITH THE CITY'S**

1 **UNSUCCESSFUL AND UNLAWFUL CONDEMNATION AND THE CITY'S**
2 **PROVISION OF WATER SERVICE WITHIN THE COMPANY'S CASA**
3 **GRANDE CC&N?**

4 A. No, I do not agree with RUCO's recommendation for the same reasons that I
5 have provided in response to Mr. Ludders' surrebuttal testimony on this issue.
6 These legal costs were legitimate costs of doing business prudently incurred by
7 the Company in defending its rights. Irrespective of the Company's success,
8 these necessary legal defenses were diligently pursued by the Company for the
9 benefit of the Company's ratepayers for the reasons stated above. Having been
10 legitimately and prudently incurred, those costs must not be disregarded for
11 ratemaking purposes. Sheryl Hubbard and Ralph J. Kennedy will provide
12 additional testimony on the issue of the appropriate accounting treatment of the
13 Company's expenditures.

14 **B. Recovery of CAP M&I Capital Charges**

15 Q. **DO YOU AGREE WITH RUCO'S CONTENTION THAT THE COMPANY**
16 **MISPRESERVED COMMISSION DECISION NO. 62993 CONCERNING COST**
17 **RECOVERY OF CAP M&I CAPITAL CHARGES?**

18 A. No, I do not. I have reviewed this Commission Decision many times and in great
19 detail, and it is clear that the Commission approved all of Staff's
20 recommendations in the Decision as listed under the findings of facts. While the
21 recommendations on the recovery of CAP costs contained within this Decision
22 discussed the need to review on a case by case basis the appropriate method of
23 recovering the cost of CAP water, whether through water rates for existing
24 customers or through hook-up fees from new customers, cost recovery was to
25 commence even if CAP water was not yet fully being used. The Company did
26 not misstate or misrepresent the Commission approved recommendations
27 contained in this Decision or in Staff's Policy.

1 Q. IS RUCO'S POSITION THAT CAP WATER BE USED AND USEFUL PRIOR
2 TO RECOVERING CAP M&I CAPITAL CHARGES APPROPRIATE?

3 A. No. CAP water is part of the Company's long-term water supply needed to serve
4 the Casa Grande, Coolidge and White Tank customers. By definition, long-term
5 water supplies are not meant to be fully used all at once. Their purpose is to help
6 meet water supply needs currently and for the long term. Prudent and
7 responsible water suppliers like the Company, such as the City of Mesa and the
8 City of Phoenix, have entered into long-term CAP water allocation contracts, are
9 well positioned to meet long-term water supply needs and they routinely recover
10 CAP costs through water rates. Commission-regulated water utilities should not
11 be penalized for acting to similarly secure, and fund, such long-term water
12 supplies, and must be allowed to recover the costs associated with doing so.

13 Q. IS RUCO CORRECT THAT THE COMPANY HAS RECOVERED ALL
14 DEFERRED CAP M&I CAPITAL CHARGES FROM ITS NON-POTABLE CAP
15 CUSTOMERS THROUGH WATER SERVICE UNDER NON-POTABLE CAP
16 TARIFF NO. NP-260?

17 No, RUCO is incorrect. The Company recovered a portion of the deferred CAP
18 M&I capital charges from one of its Casa Grande non-potable water CAP
19 customers that has reserved a specific level of CAP supplies, but Tariff No. NP-
20 260 is not retroactive in recovering deferred CAP M&I capital charges from non-
21 potable CAP water customers that have not reserved a level of CAP supplies
22 equal to their current use. Two of the Company's non-potable CAP water
23 customers have reserved only one acre-foot of CAP supplies. These customers
24 have paid ongoing CAP M&I capital charges, but have not repaid any significant
25 amount of deferred CAP M&I capital charges. In addition, to the extent that
26 Reliant Energy uses less non-potable CAP water due to its forced purchase of
27 effluent from the City, the Company will recover less ongoing CAP M&I capital
28 charges as a result, as I have previously explained.

1 In short, RUCO's statement is incorrect concerning the status of the
2 Company's recovery of deferred CAP M&I capital charges. In addition, to the
3 extent that non-potable water customers have purchased CAP water, they have
4 reduced the deferred CAP M&I capital charges from levels that would have been
5 much higher. The Company only seeks the balance of deferred CAP M&I capital
6 charges that it has not already recovered. The Company is not asking for the
7 same deferred charges twice as RUCO wrongly states.

8 **IV. RESPONSE TO THE CITY'S SURREBUTTAL TESTIMONY.**

9 **A. Recovery of CAP M&I Capital Charges**

10 **Q. DO YOU AGREE WITH THE CITY'S WITNESS, MR. HARVEY, THAT CAP**
11 **WATER HAS NOT BEEN USED BY THE COMPANY'S CURRENT**
12 **CUSTOMERS AND, THEREFORE, THAT CURRENT CUSTOMERS SHOULD**
13 **NOT HAVE TO PAY FOR CAP WATER?**

14 **A.** No, I disagree with Mr. Harvey. Current customers have benefited from the
15 Company's CAP allocations for Casa Grande, as I previously testified.
16 Therefore, customers should pay some part of the deferred and ongoing CAP
17 M&I capital charges. If there is another cost recovery method selected that will
18 collect sufficient revenues to pay the deferred balance of the CAP M&I capital
19 charges in a reasonable period of time, such as hook-up fees from new
20 customers, the Company would support such an approach.

21 **Q. DO YOU AGREE WITH MR. HARVEY THAT A WATER RESOURCE PLAN**
22 **MUST BE SUBMITTED BEFORE THE COMMISSION SHOULD AUTHORIZE**
23 **COST RECOVERY AND THAT SUCH WATER RESOURCE PLAN SHOULD**
24 **BE COORDINATED THROUGH THE CITY?**

25 **A.** No, I do not agree. While the Company believes that a conceptual CAP water
26 use plan could be submitted to Staff prior to the Company filing its company-wide
27 rate case in 2007, requiring the filing of a water resource plan in this proceeding
28 is not warranted. Also, while the Company intends to discuss its CAP water use

1 plan with the City, it will be a regional plan and it is the Commission, not the City,
2 that has the authority to address the accounting and ratemaking effects of the
3 Company's use of CAP water. The Company's water utility operations are
4 already regulated by a number of different agencies, including the Commission,
5 the Arizona Department of Environmental Quality and the Arizona Department of
6 Water Resources. There are various laws and regulations that are administered
7 by those agencies, establishing standards and approval processes to which the
8 Company must comply. The City, in contrast, has no authority to impose
9 standards or requirements on water utilities, and has no particular experience or
10 particular expertise in dealing with engineering and operational issues faced by
11 the Company. Allowing the City to regulate the Company's operations would
12 create serious jurisdictional issues and may well lead to arbitrary decisions, given
13 the City's lack of any clear standards or legal authority.

14 In addition to Mr. Harvey's comments on CAP, I also disagree with his
15 statements about the cost of arsenic treatment and the necessity to link arsenic
16 treatment to the use of CAP water through the construction of a CAP water
17 treatment plant. Mr. Harvey fails to recognize that even if sufficient time
18 remained to design and construct a CAP water treatment plant prior to the date
19 that the new arsenic drinking water standard becomes effective in January 2006,
20 the same conclusion would be reached – a CAP water treatment plant cannot
21 offset the current need for arsenic treatment.

22 **Q. DO YOU AGREE WITH MR. HARVEY THAT THE COMPANY WAS ONLY**
23 **PROTECTING ITS BUSINESS INTERESTS IN THE CONDEMNATION AND**
24 **RECLAIMED WATER SERVICE MATTERS AND THAT SUCH LEGAL**
25 **DEFENSES ONLY BENEFITED SHAREHOLDERS?**

26 **A.** No, for the same reasons I stated in response to Staff and RUCO. Also, this is
27 the proper forum for addressing the rate implications of such legitimate business
28 costs, contrary to Mr. Harvey's statements. The Company took the steps

1 necessary for its defense of its proper rights from the City's unlawful actions, and
2 the costs of that defense are reasonable, prudent, and were legitimate costs of
3 doing business. Recovery of these costs should be allowed.

4 **Q. DO YOU AGREE WITH MR. HARVEY THAT THE COMPANY'S WATER**
5 **RESOURCE PLAN MUST BE PRESENTED IN AN OPEN FORUM FOR**
6 **OTHERS TO SCRUTINIZE AND APPROVE?**

7 A. The Company is willing to have open discussions with the City concerning the
8 use of CAP water and the development of its regional plan. However, approvals
9 must be limited to those governmental entities having specific and lawful
10 jurisdiction, as I previously explained.

11 **Q. DO YOU AGREE WITH MR. HARVEY THAT THERE IS NO PROOF THAT CAP**
12 **WATER IS ACTUALLY NEEDED IN CASA GRANDE?**

13 A. No. Mr. Harvey's statement is disingenuous at best, as the City clearly saw the
14 need for the Company's CAP water allocation when it attempted to condemn all
15 of this water supply in 1999 and use it as its own. If CAP water were
16 unnecessary to ensure a reliable long-term supply, then the City would not have
17 attempted to condemn the Company's allocation.

18 **Q. DO YOU AGREE WITH MR. HARVEY THAT THE COMPANY HAS DONE**
19 **NOTHING TO HELP REDUCE ARSENIC TREATMENT COSTS AND THAT IT**
20 **HAS NO INCENTIVE TO PURSUE SUCH COST REDUCTION?**

21 A. No. I disagree with Mr. Harvey. The Company has an interest and an incentive
22 to reduce the costs of arsenic treatment. First, the Company has many projects
23 that it must fund to maintain and improve service to its customers. The Company
24 is conscious of the impacts of its investments in utility plant on its rate base and
25 on its customers. All arsenic treatment costs will be reviewed for reasonableness
26 by the Commission. The Company operates its water systems in a prudent,
27 frugal, and cost-conscious manner. Contrary to Mr. Harvey's unfounded
28 portrayal, the Company seeks out the best deals and its customers will all benefit

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from such efforts. The City is certainly aware of the Company's efforts to secure funding and reduce costs, even if Mr. Harvey is not. The City intervened in the Company's two previous rate cases for the express purpose of investigating the Company's arsenic treatment program.

Q. DOES THIS CONCLUDE YOUR REJOINDER TESTIMONY?

A. Yes, it does. My silence on any issued raised or recommendation made by Staff, RUCO or the City in the surrebuttal testimony should not be taken as the Company's acceptance of such issue or recommendation.

Sheryl L. Hubbard

ARIZONA WATER COMPANY



Docket No. W-01445A-04-0650

2004 RATE HEARING EXHIBIT NO. _____

For Test Year Ending 12/31/03

**PREPARED
REJOINDER TESTIMONY & EXHIBITS
OF
Sheryl L. Hubbard**

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21 **SHERYL L. HUBBARD**
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1 **ARIZONA WATER COMPANY**

2
3 **Rejoinder Testimony of**
4 **Sheryl L. Hubbard**

5
6 **I. INTRODUCTION AND PURPOSE OF TESTIMONY**

7 **Q. PLEASE STATE YOUR NAME, EMPLOYER AND OCCUPATION.**

8 **A.** My name is Sheryl L. Hubbard. I am employed by Arizona Water Company (the
9 "Company") as Manager of Rates and Regulatory Accounting.

10 **Q. ARE YOU THE SAME SHERYL L. HUBBARD THAT PREVIOUSLY**
11 **SUBMITTED DIRECT TESTIMONY AND REBUTTAL TESTIMONY IN THIS**
12 **MATTER?**

13 **A.** Yes, I am.

14 **Q. HAVE YOU REVIEWED THE SURREBUTTAL FILINGS OF WITNESSES FOR**
15 **STAFF AND RUCO IN THIS PROCEEDING?**

16 **A.** Yes, I have reviewed the surrebuttal testimonies of Ronald E. Ludders on behalf
17 of Arizona Corporation Commission's ("Commission") Utilities Division Staff
18 ("Staff") and, William A. Rigsby, and Timothy J. Coley for the Residential Utility
19 Consumer Office ("RUCO").

20 **Q. WHAT IS THE PURPOSE OF YOUR REJOINDER TESTIMONY IN THIS**
21 **PROCEEDING?**

22 **A.** The purpose of my rejoinder testimony is to respond to certain surrebuttal
23 testimony submitted by the Staff and RUCO in this rate proceeding. Specifically,
24 I will present the Company's rejoinder position with respect to the respective
25 parties' responses in their surrebuttal to the Company's rebuttal testimony
26 pertaining to accumulated depreciation, lead/lag factor for federal and state
27 income taxes, deferred Central Arizona Project ("CAP") charges and the
28

1 associated amortization, RUCO's revenue annualization adjustment, property
2 taxes, and purchased power expenses.

3 **Q. HAVE YOU PREVIOUSLY PROVIDED REBUTTAL TESTIMONY**
4 **ADDRESSING THE STAFF'S AND RUCO'S POSITIONS ON THESE**
5 **SUBJECT MATTERS?**

6 A. Yes, and my rejoinder testimony in this proceeding will only address the
7 surrebuttal arguments offered by the Staff and RUCO in response to my rebuttal
8 testimony. I stand by my testimony in the direct and rebuttal phases of this
9 proceeding on any matter not specifically addressed in this rejoinder testimony.

10 **Q. ARE YOU SPONSORING ANY OF THE COMPANY'S REJOINDER EXHIBITS**
11 **AND SCHEDULES?**

12 A. Yes, I am sponsoring the following exhibits, all of which are attached to this
13 testimony:

14 Exhibit SLH-RJ1 Summary of Parties' Schedule A-1

15 Exhibit SLH-RJ2 Summary of Parties' Schedule B-2

16 Exhibit SLH-RJ3 Summary of Parties' Schedule C-1

17 Exhibit SLH-RJ4 Revisions to Rebuttal Exhibits

18 Exhibit SLH-RJ5 Proposed CAP Cost Recovery

19 **Q. PLEASE DESCRIBE EXHIBIT SLH-RJ1.**

20 A. Exhibit SLH-RJ1 is a six-page exhibit titled "Computation of Increase in Gross
21 Revenue Requirements." The exhibit provides a comparison of the proposed
22 increase in gross revenue recommended by the Company, Staff and RUCO in
23 this proceeding. A separate schedule is provided for each system in the Western
24 Group. The exhibit is composed in the same manner as the Company's
25 Schedule A-1 in its direct case filing.

26 **Q. PLEASE DESCRIBE EXHIBIT SLH-RJ2.**

27 A. Exhibit SLH-RJ2 is a six-page exhibit titled "Pro Forma Adjustments to Rate
28 Base." Schedules are presented for each of the five Western Group systems

1 and a total Western Group summary. The final rate base positions of the
2 Company, Staff and RUCO are presented in these schedules. The format of the
3 information summarized on Exhibit SLH-RJ2 is comparable to the Company's
4 rebuttal Exhibit SLH-R2.

5 **Q. PLEASE DESCRIBE EXHIBIT SLH-RJ3.**

6 A. Exhibit SLH-RJ3 is a six-page exhibit titled "Pro Forma Operating Income
7 Statements". This exhibit consists of individual system schedules and a total
8 Western Group summary of the adjusted operating income recommendations of
9 the Company, Staff and RUCO. The format of this exhibit is comparable to the
10 Company's rebuttal Exhibit SLH-R3 in the Company's rebuttal case presentation.

11 **Q. PLEASE DESCRIBE EXHIBIT SLH-RJ4.**

12 A. Exhibit SLH-RJ4 is an 18-page exhibit consisting of a computation of the
13 increase in gross revenue requirements (pages 1 through 6), pro forma
14 adjustments to rate base (pages 7-12), and pro forma adjusted net operating
15 income (pages 13-18) for each of the five Western Group systems. These
16 schedules modify the comparable schedules filed during the rebuttal phase of
17 this proceeding to isolate the pro forma CAP-related investments and expenses
18 from the Company's test year operations that included some CAP usage. This
19 breakdown provides the basis of the Company's CAP cost recovery
20 recommendation in this phase of the proceeding, assuming that the Company's
21 proposed hook-up fee proposal is not accepted.

22 **Q. PLEASE DESCRIBE EXHIBIT SLH-RJ5.**

23 A. Exhibit SLH-RJ5 is a two-page exhibit that summarizes the Company's proposed
24 hook-up fee to recover the deferred CAP M&I charges. The company is
25 proposing a recovery of the deferred charges over a 10-year period by charging
26 a hook-up fee that would be collected from new customers. A single hook-up fee
27 of \$289 is proposed for Casa Grande and Coolidge since these systems will be
28

1 interconnected and consolidated in the 2006 test year rate filing. A \$674 hook-up
2 fee is proposed for White Tank.

3 **II. DEFERRED CAP M&I CHARGES**

4 **Q. HAS RUCO PROVIDED SURREBUTTAL TESTIMONY REGARDING CAP
5 COST RECOVERY TO WHICH THE COMPANY WOULD LIKE TO RESPOND?**

6 A. Yes. RUCO, through its witness, William A. Rigsby, testifies that the Company's
7 NP-260 tariff "allows Arizona Water to recover the deferred CAWCD M&I charges
8 that are attributable to non-potable customers in Casa Grande". (Rigsby Sb. at
9 10). However, non-potable customers are liable for the deferred CAP M&I
10 charges only to the extent that they have a contractual commitment to a portion
11 of the Company's CAP allocation. These obligations have already been reflected
12 in the deferred CAP M&I balance. In the case of the golf course customers,
13 there is no contractual commitment to the Company's CAP allocation and the
14 allocation remains available to the Company's remaining customers.

15 **Q. ARE THERE OTHER CONCERNS THE COMPANY HAS WITH RUCO'S
16 POSITION REGARDING CAP COST RECOVERY?**

17 A. Yes. Mr. Rigsby devotes significant surrebuttal testimony to what he deems to
18 be the Company's misrepresentation of the intent of ACC Decision No. 62993.
19 (Rigsby Sb. at 3) The Company strongly disagrees with Mr. Rigsby.

20 The CAP Cost Recovery Policy makes a clear distinction between
21 recovery: (1) when CAP water is used; (2) when it is partially used; and/or (3)
22 when it is not currently in use. Throughout our rebuttal and rejoinder, the
23 Company's testimony has demonstrated how its proposal is consistent with the
24 guidance of the Commission's CAP Cost Recovery of CAP M&I costs Policy.
25 The Company's goal is to propose a means of recovery of CAP M&I costs that
26 are fair to the ratepayers who benefit from the CAP allocations. RUCO simply
27 wants to deny the Company recovery of these prudently incurred costs.
28

1 Q. IN ITS SURREBUTTAL, STAFF MENTIONS MEETING TO DISCUSS
2 SETTLEMENT ON THE CAP COST RECOVERY. DOES THE COMPANY
3 HAVE A REVISED CAP COST RECOVERY PROPOSAL TO SUBMIT AT THIS
4 TIME?

5 A. Yes. The Company's proposed cost recovery mechanism provides for collection
6 of a hook up fee for ten years. The hook up fee would be paid on new lots and
7 treated as revenue with a corresponding offset of the ongoing M&I charges and
8 the remainder would reduce the balance of deferred CAP M&I charges. The
9 proposed hook-up fee and resulting cost recovery by system is attached as
10 Exhibit SLH-RJ5.

11 III. ACCUMULATED DEPRECIATION

12 Q. HAS RUCO PROPERLY CHARACTERIZED THE COMPANY'S REBUTTAL
13 TESTIMONY AS IT RELATES TO RUCO'S ADJUSTMENT TO
14 ACCUMULATED DEPRECIATION?

15 A. No. The Company explained that RUCO failed to take the removal and salvage
16 costs of plant assets into consideration. The Company was not implying that the
17 depreciation rates required any kind of adjustment to reflect removal and salvage
18 costs. (Rigsby Sb. at 19). Still, the Company's accumulated depreciation
19 balance is affected by more than just depreciation expense based upon the
20 Commission-approved depreciation rates. For instance, removal costs and
21 salvage are charged to the accumulated depreciation account when plant is
22 retired. RUCO has failed to reflect the removal costs and salvage for the thirteen
23 years covered by RUCO's calculation of the appropriate balance of the
24 accumulated depreciation account.

25 This fact, in addition to RUCO's failure to adjust the accumulated
26 depreciation expense for the Commission-authorized reserve deficiency
27 adjustments and amortization of leasehold improvements proves that RUCO's
28 proposed adjustment is incorrect. Merely claiming that an error or part of an

1 error is in the Company's favor does not justify an improper proposed
2 adjustment. In this particular case, all of the Company's Western Group systems
3 do not have leasehold improvements and accordingly would not have benefited
4 from "an error in the Company's favor" as implied by Mr. Rigsby's surrebuttal
5 testimony. (Rigsby Sb.at 20).

6 **IV. LEAD/LAG FACTOR FOR FEDERAL AND STATE INCOME TAXES**

7 **Q. MR. LUDDERS TESTIFIES THAT THE 37 DAY LAG FOR FEDERAL AND**
8 **STATE INCOME TAXES STAFF USED IS THE CORRECT TREATMENT.**
9 **DOES THE COMPANY AGREE WITH THE RESULTS OF STAFF'S**
10 **RESEARCH?**

11 **A.** No, Mr. Ludders' "research" on the matter does not support Staff's position.
12 (Ludders Sb at 4). Authorities on working capital for public utilities for ratemaking
13 purposes are extremely rare. But, those authorities that do exist acknowledge
14 the appropriateness of recognizing actual payment patterns including any
15 associated payment or refund occurring subsequent to the tax year. In the
16 Company's case, a refund is historically received in April of the year following the
17 tax year. Staff failed to recognize this overpayment of the federal and state tax
18 liabilities in its calculation of the lag days. The "source" relied on by Mr. Ludders
19 acknowledges that if a Company "pays sooner than required, due to specific
20 facts and circumstances, such factors may be considered in the calculations"¹.
21 Nevertheless, Staff ignores the payment/refund obligation associated with federal
22 and state income taxes that occurs in April of the year following the tax year in its
23 calculation of the federal and state lead days.

24 **Q. RUCO'S WITNESS COLEY PROVIDES FEDERAL AND STATE LAG DAYS**
25 **OF FOUR OF THE LARGEST UTILITIES IN ARIZONA AS A COMPARISON**
26

27
28 ¹ Dabelstein, C.W. Public Utility Working Capital, p.70.

1 TO THE COMPANY'S FEDERAL AND STATE LAG DAYS. HOW DOES THE
2 COMPANY RESPOND?

3 A. It is extremely difficult to make an informed response to Mr. Coley's calculations
4 because he failed to provide any supporting documentation of the basis of the
5 numbers provided. (COLEY Sb. at 4) This is especially true when the four
6 utilities' federal lag factors range from 80 lag days to 37 lag days and does not
7 include any water utilities. It is strictly based on electric, gas, and telephone
8 utilities. It is unclear whether these supposed sample companies overpay or
9 underpay their liabilities or whether payments are made on statutory payment
10 dates. The data provided in Mr. Coley's table (Coley Sb. at 4) suggests that the
11 lag factors for all utilities are not the same. These same arguments are true for
12 the state lag day calculations, which range from 62 lag days to 18 lag days for
13 the utilities in Mr. Coley's table (Coley Sb. at 4). The Company provided work
14 papers that support the calculation of its federal and state lag days for cash
15 working capital purposes and stands behind its calculations of 2.52 lag days for
16 federal tax purposes and 27.05 lag days for state tax purposes.

17 V. PURCHASED POWER EXPENSES

18 Q. IN THE COMPANY'S REBUTTAL TESTIMONY, THE COMPANY DID NOT
19 INCLUDE THE EFFECTS OF ARIZONA PUBLIC SERVICE COMPANY'S
20 ("APS") RECENT RATE INCREASE. HAS THE COMPANY PERFORMED
21 THAT CALCULATION?

22 A. Yes. The Company has performed a comparison of the test year level of
23 expense for power purchased from APS with the expense it will incur under APS'
24 new rate structure based on the power usage patterns of the test year.

25 Q. WHAT IS THE RESULT OF THAT CALCULATION?

26 A. The calculations support a pro forma adjustment to the Company's adjusted test
27 year purchased power expense of \$22,779 for the Western Group. The effect on
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1 each system's adjusted test year purchased power expense is shown in the table
2 below.

3 System	4 Pro Forma Adj. Direct Testimony	5 Revised Pro Forma Adj	6 Net Change Increase (Decrease)
7 Casa Grande	8 (\$1,467)	9 \$ 23,073	10 \$ 24,540
11 Stanfield	12 (137)	13 510	14 647
15 White Tank	16 (456)	17 (4,783)	18 (4,327)
19 Ajo	20 6	21 64	22 58
23 Coolidge	24 (283)	25 1,578	26 1,861
27 Western Group	28 (\$2,337)	\$ 20,442	\$ 22,779

11
12 **Q. IS THE COMPANY PROPOSING AN ADJUSTMENT TO ITS PURCHASED**
13 **POWER EXPENSES REFLECTED IN ITS ORIGINAL FILING BASED UPON**
14 **THE CALCULATIONS ABOVE?**

15 **A.** Yes. It is necessary to make the adjustments reflected in the Net Change
16 column to properly and accurately reflect the Company's adjusted test year
17 purchased power expenses.

18 **Q. HOW DOES THIS ADJUSTMENT COMPARE TO RUCO'S PRO FORMA**
19 **ADJUSTMENT TO PURCHASED POWER EXPENSE?**

20 **A.** RUCO's pro forma adjustments did not incorporate the Rate 221 rate change, but
21 instead applied the 3.5% rate change to APS' Rate 32 to all of the Company's
22 test year purchased power expense. The Company's adjustments incorporate
23 the effects of the rate increases granted to APS for both of its tariffs (Rate 221
24 and Rate 32) and are based on the Company's test year power usage patterns
25 under each applicable APS tariff and accordingly are more accurate than
26 RUCO's adjustments.

27 **VI. PROPERTY TAXES**

1 Q. RUCO ASSERTS THAT THE COMPANY MODIFIED THE ARIZONA
2 DEPARTMENT OF REVENUE ("ADOR") PROPERTY TAX VALUATION
3 METHOD. IS THIS TRUE?

4 A. No. The Company and Staff used the ADOR formula but with different inputs
5 than RUCO. RUCO fails to account for any change in revenue resulting from this
6 proceeding. The Commission has repeatedly rejected this RUCO position, as
7 shown in the cases I cited in my rebuttal testimony on page 24-25.

8 Q. WHAT ABOUT RECENT LEGISLATION IMPACTING ASSESSMENT RATES
9 FOR UTILITIES?

10 A. Adjustments to reflect changes in property tax rates are more appropriate when
11 revised tax rates become known and measurable. Changes that may occur in
12 the method of computing the assessed property valuations will not necessarily
13 translate into reduced taxes when the taxing districts establish their tax rates.
14 Since the Company is required to file a rate case based on a 2006 test year, the
15 Commission will have an opportunity at that time to make an adjustment, if the
16 circumstances warrant.

17 Q. DID THE STAFF MODIFY ITS PROPERTY TAX CALCULATIONS FOR
18 EFFECTS OTHER THAN JUST THE CHANGE IN REVENUE PROPOSED IN
19 THE SURREBUTTAL PHASE OF THIS PROCEEDING?

20 A. From a comparison of the individual system property tax calculations, it appears
21 that Staff has revised the base year revenues used in the property tax
22 calculations.

23 Q. DOES THE COMPANY AGREE WITH THE BASE REVENUE USED BY STAFF
24 IN ITS SURREBUTAL PROPERTY TAX CALCULATION?

25 A. Yes.

26 VII. REVENUE AND EXPENSE ANNUALIZATION

27 Q. RUCO ASSERTS THAT THE COMPANY'S LEAD/LAG STUDY IS OUTDATED.
28 HOW DOES THE COMPANY RESPOND?

1 A. RUCO's assertion is an attempt to hide a serious flaw in RUCO's regression
2 analysis in this proceeding. Clearly, RUCO's regression analysis is based on
3 outdated data. The financial data that forms the basis of RUCO's study relates to
4 the period 1992 through 1999. Most of the financial information used by RUCO
5 (1992-1998) is more than five years old, unlike the Company's lead/lag study that
6 was based on year 2003 expenses.

7 The Company was even more concerned about the erroneous data that
8 RUCO used in arriving at its conclusion that only pumping expenses, customer
9 accounts expenses and water treatment expenses are directly impacted by a
10 change in customer levels (Coley Dt. at 18). The results of RUCO's analysis are
11 flawed because that analysis excluded transmission and distribution expenses
12 and water treatment maintenance expenses. The Company stands by its
13 rebuttal testimony that any correlation or lack thereof derived from the results of
14 RUCO's regression analysis could not possibly be accurately established from
15 the information provided in response to the Company's data request about
16 RUCO's regression analysis.

17 **Q. DOES THAT COMPLETE YOUR REJOINDER TESTIMONY IN THIS**
18 **PROCEEDING?**

19 A. Yes, it does. I do wish to note, however, that my silence on any issue raised or
20 recommended by any party to this proceeding should not be construed as the
21 Company's acceptance of that issue or recommendation.

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EXHIBITS

ARIZONA WATER COMPANY
SUMMARY OF PARTIES' SCHEDULE A-1
COMPUTATION OF INCREASE IN
GROSS REVENUE REQUIREMENTS
TEST YEAR 2003 WESTERN GROUP

Line No.	Description	Company		Rejoinder Exh SLH-RJ4 (p. 1) Column (5)	Staff		RUCO	
		Direct Testimony	Rebuttal Exh SLH-R1 (p. 1) Column (5)		Direct Testimony	Surrebuttal Testimony	Direct Testimony	Surrebuttal Testimony
1.	Adjusted Rate Base	29,416,615	25,243,002	24,481,429	23,111,191	23,111,191	23,342,003	23,342,003
2.	Adjusted Operating Income	1,462,933	1,462,933	1,674,449	1,640,062	2,011,473	2,065,077	2,065,077
3.	Current Rate of Return	4.97%	5.80%	N.M.	7.10%	8.70%	8.85%	8.85%
4.	Required Operating Income	3,088,745	2,650,515	2,570,550	2,056,896	2,056,896	2,140,462	2,140,462
5.	Required Rate of Return	11.00%	10.90%	10.90%	8.566%	8.566%	8.66%	8.66%
6.	Operating Income Deficiency	1,625,812	1,187,582	896,101	416,834	45,423	75,385	75,385
7.	Gross Revenue Conversion Factor	1.63245	1.63245	1.63245	1.63195	1.63195	Various	Various
8.	Increase in Gross Revenue	2,654,056	1,938,668	1,462,840	680,466	74,151	110,269	110,269

ARIZONA WATER COMPANY
SUMMARY OF PARTIES' SCHEDULE A-1
COMPUTATION OF INCREASE IN
GROSS REVENUE REQUIREMENTS
TEST YEAR 2003 CASA GRANDE

Line No.	Description	Company		Rejoinder Exh SLH-RJ4 (p. 2) Column (5)	Staff		RUCO	
		Direct Testimony	Rebuttal Exh SLH-R1 (p. 2) Column (5)		Direct Testimony	Surrebuttal Testimony	Direct Testimony	Surrebuttal Testimony
1.	Adjusted Rate Base	21,996,652	19,375,318	18,613,745	17,352,671	17,352,671	17,380,813	17,380,813
2.	Adjusted Operating Income	1,180,182	1,180,182	1,331,922	1,279,159	1,541,860	1,584,336	1,584,336
3.	Current Rate of Return	5.37%	6.09%	N.M.	7.37%	8.89%	9.12%	9.12%
4.	Required Operating Income	2,309,648	2,034,408	1,954,443	1,544,388	1,544,388	1,593,821	1,593,821
5.	Required Rate of Return	10.50%	10.50%	10.50%	8.90%	8.90%	9.17%	9.17%
6.	Operating Income Deficiency	1,129,466	854,226	622,521	265,229	2,528	9,485	9,485
7.	Gross Revenue Conversion Factor	1.63245	1.63245	1.63245	1.63246	1.63246	1.63249	1.63249
8.	Increase in Gross Revenue	1,843,798	1,394,482	1,018,235	432,975	4,126	15,483	15,483

ARIZONA WATER COMPANY
SUMMARY OF PARTIES' SCHEDULE A-1
COMPUTATION OF INCREASE IN
GROSS REVENUE REQUIREMENTS
TEST YEAR 2003 STANFIELD

Line No.	Description	Company		Rejoinder Exh SLH-RJ4 (p.3) Column (5)	Staff		RUCO	
		Direct Testimony	Rebuttal Exh SLH-R1 (p.3) Column (5)		Direct Testimony	Surrebuttal Testimony	Direct Testimony	Surrebuttal Testimony
1.	Adjusted Rate Base	314,131	314,131	314,131	310,269	310,269	328,427	328,427
2.	Adjusted Operating Income	25,877	25,877	25,877	23,872	24,124	29,511	29,511
3.	Current Rate of Return	8.24%	8.24%	N.M.	7.69%	7.78%	9.04%	9.04%
4.	Required Operating Income	32,984	32,984	32,984	27,614	27,614	29,933	29,933
5.	Required Rate of Return	10.50%	10.50%	10.50%	8.90%	8.90%	9.17%	9.17%
6.	Operating Income Deficiency	7,107	7,107	7,107	3,742	3,490	422	422
7.	Gross Revenue Conversion Factor	1.63245	1.63245	1.63245	1.63246	1.63246	1.26758	1.26758
8.	Increase in Gross Revenue	11,601	11,601	11,601	6,109	5,697	535	535

ARIZONA WATER COMPANY
SUMMARY OF PARTIES' SCHEDULE A-1
COMPUTATION OF INCREASE IN
GROSS REVENUE REQUIREMENTS
TEST YEAR 2003 WHITE TANK

Line No.	Description	Company		Rejoinder Exh SLH-R1/4 (p. 4) Column (5)	Staff		RUCO	
		Direct Testimony	Rebuttal Exh SLH-R1 (p. 4) Column (5)		Direct Testimony	Surrebuttal Testimony	Direct Testimony	Surrebuttal Testimony
1.	Adjusted Rate Base	2,441,155	1,934,887	1,934,887	1,898,133	1,898,133	1,919,400	1,919,400
2.	Adjusted Operating Income	121,440	121,440	140,935	135,789	171,198	181,559	181,559
3.	Current Rate of Return	4.97%	6.28%	N.M.	7.15%	9.02%	9.46%	9.46%
4.	Required Operating Income	256,321	203,163	203,163	168,934	168,934	176,009	176,009
5.	Required Rate of Return	10.50%	10.50%	10.50%	8.90%	8.90%	9.17%	9.17%
6.	Operating Income Deficiency	134,881	81,723	62,228	33,145	(2,264)	(5,550)	(5,550)
7.	Gross Revenue Conversion Factor	1.63245	1.63245	1.63245	1.63246	1.63246	1.54386	1.54386
8.	Increase in Gross Revenue	220,187	133,409	101,584	54,108	(3,696)	(8,568)	(8,568)

ARIZONA WATER COMPANY
SUMMARY OF PARTIES' SCHEDULE A-1
COMPUTATION OF INCREASE IN
GROSS REVENUE REQUIREMENTS
TEST YEAR 2003 AJO

Line No.	Description	Company		Rejoinder Exh SLH-RJ4 (p. 5) Column (5)	Staff		RUCO	
		Direct Testimony	Rebuttal Exh SLH-R1 (p. 5) Column (6)		Direct Testimony	Surrebuttal Testimony	Direct Testimony	Surrebuttal Testimony
1.	Adjusted Rate Base	847,167	847,167	847,167	837,088	846,711	837,088	846,711
2.	Adjusted Operating Income	34,697	34,697	34,697	35,675	37,858	36,503	37,858
3.	Current Rate of Return	4.10%	4.10%	N.M.	4.26%	4.47%	4.38%	4.47%
4.	Required Operating Income	88,953	88,953	88,953	74,501	77,643	74,501	77,643
5.	Required Rate of Return	10.50%	10.50%	10.50%	8.90%	9.17%	8.90%	9.17%
6.	Operating Income Deficiency	54,256	54,256	54,256	38,826	39,785	37,998	39,785
7.	Gross Revenue Conversion Factor	1.63245	1.63245	1.63245	1.63246	1.31426	1.63246	1.31426
8.	Increase in Gross Revenue	88,569	88,569	88,569	63,382	62,288	62,030	52,288

ARIZONA WATER COMPANY
SUMMARY OF PARTIES' SCHEDULE A-1
COMPUTATION OF INCREASE IN
GROSS REVENUE REQUIREMENTS
TEST YEAR 2003 COOLIDGE

Line No.	Description	Company		Rejoinder Exh SLH-RJ4 (p. 6) Column (5)	Staff		RUCCO	
		Direct Testimony	Rebuttal Exh SLH-R1 (p. 6) Column (5)		Direct Testimony	Surrebuttal Testimony	Direct Testimony	Surrebuttal Testimony
1.	Adjusted Rate Base	3,817,510	2,771,499	2,771,499	2,713,030	2,713,030	2,868,652	2,868,652
2.	Adjusted Operating Income	100,737	100,737	141,018	165,567	237,788	231,813	231,813
3.	Current Rate of Return	2.64%	3.63%	N.M.	6.10%	8.76%	8.08%	8.08%
4.	Required Operating Income	400,839	291,007	291,007	241,460	241,460	263,055	263,055
5.	Required Rate of Return	10.50%	10.50%	10.50%	8.90%	8.90%	9.17%	9.17%
6.	Operating Income Deficiency	300,102	190,270	149,989	75,893	3,672	31,242	31,242
7.	Gross Revenue Conversion Factor	1.63245	1.63245	1.63245	1.63246	1.63246	1.61740	1.61740
8.	Increase in Gross Revenue	489,901	310,607	244,850	123,892	5,984	50,531	50,531

ARIZONA WATER COMPANY
SUMMARY OF PARTIES SCHEDULE B-2
PRO FORMA ADJUSTMENTS TO RATE BASE
TEST YEAR 2003 WESTERN GROUP

Line No.	Description	Company		Rejoinder Exh SLH-RJ4 (p. 7) Column (7)	Staff		RUCO		
		Actual	Pro Forma Direct Adjustments As Adjusted		Rebutral Exh SLH-R2 (p. 1) Column (8)	Exh SLH-R1A (p. 7) Column (7)	Pro Forma Direct Adjustments As Adjusted	Surrebutral Adjustments As Adjusted	
1.	Gross Plant in Service	61,953,083	0	61,953,083	61,953,083	0	61,128,709	0	61,128,709
2.	Phoenix Office Allocation	1,273,531	0	1,273,531	1,273,531	0	1,273,531	0	1,416,252
3.	Meter Shop Allocation	23,651	0	23,651	23,651	0	23,651	0	32,183
4.	Total Gross Plant in Service	63,250,265	0	63,250,265	63,250,265	0	62,425,891	0	62,577,144
5.	Less: Accumulated Depreciation	(19,230,231)	(22,549)	(19,252,780)	(19,252,780)	0	(19,252,780)	0	(19,307,423)
6.	Net Plant in Service	47,020,034	(22,549)	46,997,485	46,997,485	0	46,173,111	0	46,269,721
7.	Construction Work in Progress	284,117	(284,117)	0	0	0	0	0	0
8.	Total Net Plant	47,304,151	(306,666)	46,997,485	46,997,485	0	46,173,111	0	46,269,721
9.	Less: Customers' Advances for Construction Contributions in Aid of Construction	(11,338,790)	117,427	(11,222,363)	(11,222,363)	0	(11,222,363)	0	(11,222,363)
10.	Gross	(8,837,180)	0	(8,837,180)	(8,837,180)	0	(8,837,180)	0	(8,837,180)
11.	Accumulated Amortization	1,591,717	(37,421)	1,554,296	1,554,296	0	1,554,296	0	1,554,296
12.	Net Contributions in Aid of Construction	(7,245,463)	(37,421)	(7,282,884)	(7,282,884)	0	(7,282,884)	0	(7,282,884)
13.	Deferred Income Tax	(4,465,028)	0	(4,465,028)	(4,465,028)	0	(4,465,028)	0	(4,465,028)
14.	Deferred CAP (Net)	0	5,078,082	5,078,082	5,078,082	0	5,078,082	0	5,078,082
15.	Add: Total Working Capital Allowance	311,323	0	311,323	311,323	0	(91,645)	0	42,556
16.	Total Rate Base Components & Adjustments	24,565,193	4,851,422	29,416,615	29,416,615	0	23,111,191	0	23,342,002
17.									

(a) - Represents RUCO's proposed adjustment for Phoenix Office and Meter Shop.
(b) - Includes (\$110,516) of PHX/MS Accum Depr
(c) - Reclassified from Gross Plant in Service for comparative purposes.

ARIZONA WATER COMPANY
SUMMARY OF PARTIES SCHEDULE B-2
PRO FORMA ADJUSTMENTS TO RATE BASE
TEST YEAR 2003 CASA GRANDE

Line No.	Description	Company		Rebinder Exh SLH-R2 (p. 2) Column (8)	Rebinder Exh SLH-R4 (p. 6) Column (7)	Staff		RUCO					
		Actual	Pro Forma Direct Adjustments			As Adjusted	As Adjusted	Pro Forma Direct Adjustments	As Adjusted	Pro Forma Direct Adjustments	As Adjusted		
1.	Gross Plant in Service	48,030,386		48,030,386	48,030,386	47,206,022	0	47,206,022	0	47,206,022	0	47,206,022	0
2.	Phoenix Office Allocation	930,536		930,536	930,536	930,536	0	930,536	0	1,034,817	0	1,034,817	0
3.	Meter Shop Allocation	17,282		17,282	17,282	17,282	0	17,282	0	23,516	0	23,516	0
4.	Total Gross Plant In Service	48,978,214	0	48,978,214	48,978,214	48,153,840	0	48,153,840	0	48,264,356	0	48,264,356	0
5.	Less: Accumulated Depreciation	(12,087,978)	15,761	(12,072,217)	(12,072,217)	(12,072,217)	0	(12,072,217)	0	(12,241,403)	0	(12,241,403)	0
6.	Net Plant in Service	36,890,236	15,761	36,905,997	36,905,997	36,081,623	0	36,081,623	0	36,022,953	0	36,022,953	0
7.	Construction Work in Progress	146,293	(146,293)	0	0	0	0	0	0	0	0	0	0
8.	Total Net Plant	37,036,529	(130,532)	36,905,997	36,905,997	36,081,623	0	36,081,623	0	36,022,953	0	36,022,953	0
9.	Less: Customers' Advances for Construction	(8,892,375)	831	(8,891,444)	(8,891,444)	0	0	0	0	(8,891,444)	0	(8,891,444)	0
10.	Contributions in Aid of Construction												
11.	Gross	(7,754,812)		(7,754,812)	(7,754,812)	(7,754,812)	0	(7,754,812)	0	(7,754,812)	0	(7,754,812)	0
12.	Accumulated Amortization	1,381,441		1,348,820	1,348,820	1,348,820	0	1,348,820	0	1,348,820	0	1,348,820	0
13.	Net Contributions in Aid of Construction	(6,373,371)	(32,621)	(6,405,992)	(6,405,992)	0	0	0	0	(6,405,992)	0	(6,405,992)	0
14.	Deferred Income Tax	(3,387,966)		(3,387,966)	(3,387,966)	0	0	0	0	(3,387,966)	0	(3,387,966)	0
15.	Deferred CAP (Net)	0	3,525,803 (c)	3,525,803	3,525,803	0	0	0	0	(3,525,803)	0	(3,525,803)	0
16.	Add: Total Working Capital Allowance	250,254		250,254	250,254	250,254	0	250,254	0	250,254	0	250,254	0
17.	Total Rate Base Components & Adjustments	18,633,071	3,363,581	21,996,652	21,996,652	18,613,745	0	17,352,671	0	17,380,613	0	17,380,613	0

(a) - Represents RUCO's proposed adjustment for Phoenix Office and Meter Shop.
 (b) - Includes (\$110,516) of PHXMS Accum Depr
 (c) - Reclassified from Gross Plant in Service for comparative purposes.

ARIZONA WATER COMPANY
SUMMARY OF PARTIES SCHEDULE B-2
PRO FORMA ADJUSTMENTS TO RATE BASE
TEST YEAR 2003 AJO

Line No.	Description	Company		Rebinder Exn SLH-R4 (p. 11) Column (7)	Sharf		RUCCO		
		Pro Forma Direct	Rebated Exn SLH-R2 (p. 5) Column (8)		Pro Forma Direct	As Adjusted	Pro Forma Direct	As Adjusted	As Adjusted
1.	Gross Plant in Service	1,656,478	1,656,478	1,656,478	1,656,478	0	1,656,478	0	1,656,478
2.	Phoenix Office Allocation	42,706	42,706	42,706	42,706	0	42,706	0	47,483
3.	Meter Shop Allocation	792	792	792	792	0	792	0	1,078
4.	Total Gross Plant in Service	1,699,976	1,699,976	1,699,976	1,699,976	0	1,699,976	0	1,705,049
5.	Less: Accumulated Depreciation	(627,369)	(624,244)	(624,244)	(624,244)	0	(624,244)	0	(630,349)
6.	Net Plant in Service	1,072,607	1,075,732	1,075,732	1,075,732	0	1,075,732	0	1,074,700
7.	Construction Work in Progress	0	0	0	0	0	0	0	0
8.	Total Net Plant	1,072,607	1,075,732	1,075,732	1,075,732	0	1,075,732	0	1,074,700
9.	Less: Customers' Advances for Construction	(36,395)	(36,395)	(36,395)	(36,395)	0	(36,395)	0	(36,395)
10.	Contributions in Aid of Construction	(41,283)	(41,283)	(41,283)	(41,283)	0	(41,283)	0	(41,283)
11.	Gross	11,040	10,797	10,797	10,797	0	10,797	0	10,797
12.	Accumulated Amortization	(30,225)	(30,466)	(30,466)	(30,466)	0	(30,466)	0	(30,466)
13.	Net Contributions in Aid of Construction	(19,185)	(19,669)	(19,669)	(19,669)	0	(19,669)	0	(19,669)
14.	Deferred Income Tax	0	0	0	0	0	0	0	0
15.	Deferred CAP (Net)	(4,209)	(4,209)	(4,209)	(4,209)	0	(4,209)	0	(4,209)
16.	Add: Total Working Capital Allowance	844,285	847,167	847,167	847,167	(10,079)	837,088	576	846,711
17.	Total Rate Base Components & Adjustments	844,285	847,167	847,167	847,167	(10,079)	837,088	(459)	846,711

(a) - Represents RUCCO's proposed adjustment for Phoenix Office and Meter Shop.
(b) - Includes (\$5,073) of PHYM/MS Accum Depr

ARIZONA WATER COMPANY
SUMMARY OF PARTIES' SCHEDULE C-1
PRO FORMA OPERATING INCOME STATEMENTS
TEST YEAR 2003
WESTERN GROUP - SUMMARY

Line No.	Description	Company		Rejoinder		Staff		RUCO		
		Actual	Pro Forma Direct	Rebuttal	Exh SLH-RJ4 (p. 13)	Pro Forma Direct	Adjustments	Pro Forma Direct	Adjustments	
			Adjustments	Column (9)	Column (9)	As Adjusted	To AWC Direct	As Adjusted	As Adjusted	
Operating Revenues:										
1.	Residential	7,400,612	(330,759)	7,069,853	7,069,853	0	7,069,853	7,069,853	0	
2.	Commercial	2,306,368	(175,727)	2,130,641	2,130,641	0	2,130,641	2,130,641	0	
3.	Industrial	860,781	(61,580)	799,201	799,201	0	799,201	799,201	0	
4.	Private Fire Service	10,535	0	10,535	10,535	0	10,535	10,535	0	
5.	Other	717,317	(52,192)	665,125	665,125	0	665,125	665,125	0	
6.	Total Operating Revenues	11,295,613	(620,256)	10,675,355	10,675,355	0	10,675,355	10,675,355	0	
Operating Expenses:										
Source of Supply Expenses:										
7.	Purchased Water	505,724	247,786	753,510	753,510	(242,553)	510,957	510,957	0	
8.	Other	48,495	8,946	57,441	57,441	0	57,441	57,441	0	
Pumping Expenses:										
9.	Purchased Power	990,617	15,923	1,006,540	1,006,540	2,206	1,008,746	1,022,901	0	
10.	Purchased Gas	603	0	603	603	0	603	603	0	
11.	Other	370,305	0	370,305	370,305	0	370,305	359,351	0	
12.	Water Treatment Expenses	237,237	(22,447)	214,790	214,790	0	214,790	218,866	0	
13.	Transmission and Distribution Expenses	1,047,235	66,250	1,113,485	1,113,485	0	1,113,485	1,078,532	0	
14.	Customer Account Expenses	859,667	27,429	887,096	887,096	0	887,096	883,109	0	
15.	Sales Expenses & Payroll	3,670	0	3,670	3,670	0	3,670	3,670	0	
16.	Administrative and General Expenses	1,154,680	181,063	1,335,743	1,335,743	(24,037)	1,311,706	1,335,743	0	
17.	Total Operation and Maintenance	5,216,233	524,950	5,743,183	5,743,183	(264,384)	5,478,799	5,480,599	0	
18.	Depreciation and Amortization Expenses	1,322,673	567,776	1,890,449	1,890,449	0	1,890,449	1,382,641	0	
19.	Taxes: Federal Income	735,611	(177,456)	558,155	558,155	24,798	582,953	208,740	0	
20.	State Income	124,748	(39,093)	85,655	85,655	42,766	128,421	76,895	0	
21.	Ad Valorem (Property)	689,647	132,464	822,131	822,131	19,691	841,822	172,841	0	
22.	Other	985,127	(872,278)	112,849	112,849	0	112,849	750,203	0	
23.	Total Operating Expenses	9,078,039	136,393	9,214,422	9,214,422	(177,129)	9,035,293	8,666,028	0	
24.	Operating Income	2,219,574	(756,641)	1,462,933	1,462,933	177,129	1,640,062	2,095,077	0	

ARIZONA WATER COMPANY
SUMMARY OF PARTIES' SCHEDULE C-1
PRO FORMA OPERATING INCOME STATEMENTS
TEST YEAR 2003
CASA GRANDE - SUMMARY

Line No.	Description	2003		Company		Rejoinder		Staff		RUOCO			
		As Filed	Adjustments	Pro Forma Direct	Rebuttal	Exn SLH-R3 (p. 2) Column (9)	Exn SLH-R3 (p. 14) Column (9)	As Adjusted	As Adjusted	Adjustments	As Adjusted	Adjustments	As Adjusted
Operating Revenues:													
1.	Residential	5,097,054	(192,304)	4,904,750	4,904,750	4,904,750	4,904,750	4,904,750	4,904,750	67,740	4,972,490	0	4,972,490
2.	Commercial	1,784,978	(130,772)	1,654,206	1,654,206	1,654,206	1,654,206	1,654,206	1,654,206	0	1,654,206	0	1,654,206
3.	Industrial	843,705	(60,327)	783,378	783,378	783,378	783,378	783,378	783,378	0	783,378	0	783,378
4.	Private Fire Service	9,098	0	9,098	9,098	9,098	9,098	9,098	9,098	0	9,098	0	9,098
5.	Other	613,819	(43,869)	569,950	569,950	569,950	569,950	569,950	569,950	0	569,950	0	569,950
6.	Total Operating Revenues	8,348,654	(427,272)	7,921,382	7,921,382	7,921,382	7,921,382	7,921,382	7,921,382	67,740	7,989,122	0	7,989,122
Operating Expenses:													
Source of Supply Expenses:													
7.	Purchased Water	338,564	159,449	498,013	498,013	498,013	498,013	498,013	498,013	(159,449)	338,564	0	338,564
8.	Other	37,593	8,342	45,935	45,935	45,935	45,935	45,935	45,935	12,349	58,284	0	58,284
Pumping Expenses:													
9.	Purchased Power	793,096	17,247	810,343	810,343	810,343	810,343	810,343	810,343	1,467	822,257	0	822,257
10.	Other	286,696	0	286,696	286,696	286,696	286,696	286,696	286,696	0	286,696	0	286,696
11.	Water Treatment Expenses	196,192	(6,197)	187,995	187,995	187,995	187,995	187,995	187,995	(8,342)	180,237	0	180,237
12.	Transmission and Distribution Expenses	745,493	41,123	786,616	786,616	786,616	786,616	786,616	786,616	2,242	788,858	0	788,858
13.	Customer Account Expenses	580,891	24,068	604,959	604,959	604,959	604,959	604,959	604,959	(30,887)	755,729	0	755,729
14.	Sales Expenses & Payroll	2,962	0	2,962	2,962	2,962	2,962	2,962	2,962	(2,837)	602,122	0	602,122
15.	Administrative and General Expenses	820,902	131,816	952,718	952,718	952,718	952,718	952,718	952,718	0	952,718	0	952,718
16.	Total Operation and Maintenance	3,802,369	373,848	4,176,237	4,176,237	4,176,237	4,176,237	4,176,237	4,176,237	(20,495)	4,001,227	0	4,001,227
17.	Depreciation and Amortization Expenses	998,587	389,440	1,388,027	1,388,027	1,388,027	1,388,027	1,388,027	1,388,027	(176,477)	1,211,550	0	1,211,550
18.	Taxes: Federal Income	555,241	(116,221)	439,020	439,020	439,020	439,020	439,020	439,020	(352,580)	86,440	0	86,440
19.	State Income	94,148	(25,602)	68,546	68,546	68,546	68,546	68,546	68,546	158,607	615,054	0	615,054
20.	Ad Valorem (Property)	503,642	108,987	612,639	612,639	612,639	612,639	612,639	612,639	63,106	675,745	0	675,745
21.	Other	717,590	(640,839)	76,751	76,751	76,751	76,751	76,751	76,751	(82,394)	6,353	0	6,353
22.	Total Operating Expenses	6,671,577	69,623	6,741,200	6,741,200	6,741,200	6,741,200	6,741,200	6,741,200	(381,678)	6,404,786	0	6,404,786
23.	Operating Income	1,677,077	(486,895)	1,180,182	1,180,182	1,180,182	1,180,182	1,180,182	1,180,182	404,154	1,584,336	0	1,584,336

ARIZONA WATER COMPANY
SUMMARY OF PARTIES' SCHEDULE C-1
PRO FORMA OPERATING INCOME STATEMENTS
TEST YEAR 2003
WHITE TANK - SUMMARY

Line No.	Description	2003			Company			Staff			RUCO			
		As Filed	Pro Forma Direct		Rebubital Exh SLH-R3 (p. 4) Column (9)	Rejoinder Exh SLH-R4 (p. 16) Column (9)	Pro Forma Direct		Surbeubital		Pro Forma Direct		Surbeubital	
			Adjustments	As Adjusted			Adjustments	As Adjusted	Adjustments	As Adjusted	Adjustments	As Adjusted	Adjustments	As Adjusted
Operating Revenues:														
1.	Residential	710,792	(3,159)	707,633	707,633	707,633	707,633	707,633	704,485	0	704,485	0	704,485	
2.	Commercial	48,881	(2,728)	46,153	46,153	46,153	46,153	46,153	46,153	0	46,153	0	46,153	
3.	Industrial	9,557	(884)	8,673	8,673	8,673	8,673	8,673	8,673	0	8,673	0	8,673	
4.	Private Fire Service	132	0	132	132	132	132	132	132	0	132	0	132	
5.	Other	21,821	(1,108)	20,713	20,713	20,713	20,713	20,713	20,713	0	20,713	0	20,713	
6.	Total Operating Revenues	791,163	(7,880)	783,283	783,283	783,283	783,283	783,283	780,335	0	780,335	0	780,335	
Operating Expenses:														
Source of Supply Expenses:														
7.	Purchased Water	10,279	27,104	37,383	37,383	37,383	37,383	10,279	10,279	(27,104)	10,279	0	10,279	
8.	Other	2,309	571	2,880	2,880	2,880	2,880	2,880	2,880	(410)	2,470	0	2,470	
9.	Pumping Expenses:													
10.	Purchased Power	74,297	4,107	78,404	78,404	78,404	78,404	78,860	78,860	2,744	81,148	0	81,148	
11.	Other	0	0	0	0	0	0	0	0	0	0	0	0	
12.	Water Treatment Expenses	27,057	(1,771)	25,286	25,286	25,286	25,286	27,057	27,057	(571)	26,486	0	26,486	
13.	Transmission and Distribution Expenses	67,739	11,522	79,261	79,261	79,261	79,261	9,655	9,655	(46)	9,609	0	9,609	
14.	Customer Account Expenses	52,306	2,544	54,850	54,850	54,850	54,850	79,261	79,261	(3,294)	75,967	0	75,967	
15.	Sales Expenses & Payroll	263	0	263	263	263	263	54,850	54,850	(182)	54,668	0	54,668	
16.	Administrative and General Expenses	75,031	12,340	87,371	87,371	87,371	87,371	263	263	0	263	0	263	
17.	Total Operation and Maintenance	320,707	58,417	379,124	379,124	379,124	379,124	349,516	349,516	(28,608)	348,261	0	348,261	
18.	Depreciation and Amortization Expenses	119,035	63,991	183,026	183,026	183,026	183,026	131,999	131,999	(50,827)	131,999	0	131,999	
19.	Taxes: Federal Income	61,957	(15,380)	46,577	46,577	46,577	46,577	48,440	48,440	13,337	59,906	0	59,906	
20.	State Income	10,513	(3,390)	7,123	7,123	7,123	7,123	10,671	10,671	7,733	14,856	0	14,856	
21.	Ad Valorem (Property)	35,347	6,646	41,993	41,993	41,993	41,993	48,833	48,833	(4,847)	37,146	0	37,146	
22.	Other	56,996	(50,388)	6,608	6,608	6,608	6,608	6,608	6,608	0	6,608	0	6,608	
23.	Total Operating Expenses	604,555	57,488	662,043	662,043	662,043	662,043	647,694	647,694	(63,267)	584,427	0	584,427	
24.	Operating Income	186,608	(65,168)	121,440	121,440	121,440	121,440	135,789	135,789	60,119	181,559	0	181,559	

ARIZONA WATER COMPANY
SUMMARY OF PARTIES' SCHEDULE C-1
PRO FORMA OPERATING INCOME STATEMENTS
TEST YEAR 2003
COOLIDGE - SUMMARY

Line No.	Description	2003		Company		Rebuttal		Remainder		Staff		RUOCO		Surrebuttal	
		As Filed	As Adjusted	Pro Forma Direct	As Adjusted	Exh SLH-R3 (p. 6) Column (9)	Exh SLH-R3 (p. 18) Column (9)	Pro Forma Direct	As Adjusted						
Operating Revenues:															
1.	Residential	1,163,780	(108,382)	1,055,418	1,055,418	1,055,418	1,055,418	0	1,055,418	1,055,418	0	(4,928)	1,050,490	0	1,050,490
2.	Commercial	341,177	(34,500)	306,677	306,677	306,677	306,677	0	306,677	306,677	0	0	306,677	0	306,677
3.	Industrial	7,919	(569)	6,950	6,950	6,950	6,950	0	6,950	6,950	0	0	6,950	0	6,950
4.	Private Fire Service	1,305	0	1,305	1,305	1,305	1,305	0	1,305	1,305	0	0	1,305	0	1,305
5.	Other	62,931	(5,986)	56,935	56,935	56,935	56,935	0	56,935	56,935	0	0	56,935	0	56,935
6.	Total Operating Revenues	1,576,712	(149,427)	1,427,285	1,427,285	1,427,285	1,427,285	0	1,427,285	1,427,285	0	(4,928)	1,422,357	0	1,422,357
Operating Expenses:															
Source of Supply Expenses:															
7.	Purchased Water	0	56,000	56,000	56,000	56,000	56,000	0	56,000	56,000	0	(56,000)	0	0	0
8.	Other	7,883	31	7,914	7,914	7,914	7,914	0	7,914	7,914	0	(543)	7,371	0	7,371
Pumping Expenses:															
9.	Purchased Power	102,891	(5,483)	97,408	97,408	97,408	97,408	283	97,691	97,691	283	1,088	98,496	0	98,496
10.	Purchased Gas	603	0	603	603	603	603	0	603	603	0	0	603	0	603
11.	Other	37,838	0	37,838	37,838	37,838	37,838	0	37,838	37,838	0	(31)	37,807	0	37,807
12.	Water Treatment Expenses	23,654	(10,387)	13,267	13,267	13,267	13,267	0	13,267	13,267	0	(91)	13,176	0	13,176
13.	Transmission and Distribution Expenses	186,376	10,305	196,681	196,681	196,681	196,681	0	196,681	196,681	0	(921)	195,760	0	195,760
14.	Customer Account Expenses	190,130	940	191,070	191,070	191,070	191,070	0	191,070	191,070	0	(726)	190,344	0	190,344
15.	Sales Expenses & Payroll	259	0	259	259	259	259	0	259	259	0	0	259	0	259
16.	Administrative and General Expenses	208,771	28,815	235,586	235,586	235,586	235,586	0	235,586	235,586	0	0	235,586	0	235,586
17.	Total Operation and Maintenance	755,405	60,221	836,626	836,626	836,626	836,626	(1,967)	834,659	834,659	(1,967)	(57,224)	779,402	0	779,402
18.	Depreciation and Amortization Expenses	147,125	127,997	275,122	275,122	275,122	275,122	0	275,122	275,122	0	(104,601)	170,521	0	170,521
19.	Taxes: Federal Income	93,227	(37,638)	55,589	55,589	55,589	55,589	0	55,589	55,589	0	28,291	83,880	0	83,880
20.	State Income	15,816	(6,292)	7,524	7,524	7,524	7,524	0	7,524	7,524	0	11,285	18,819	0	18,819
21.	Ad Valorem (Property)	111,397	15,713	127,110	127,110	127,110	127,110	0	127,110	127,110	0	(13,766)	113,345	0	113,345
22.	Other	172,419	(147,842)	24,577	24,577	24,577	24,577	0	24,577	24,577	0	0	24,577	0	24,577
23.	Total Operating Expenses	1,293,389	30,159	1,326,546	1,326,546	1,326,546	1,326,546	(64,830)	1,261,718	1,261,718	(64,830)	(136,004)	1,190,544	0	1,190,544
24.	Operating Income	280,323	(179,586)	100,737	100,737	100,737	100,737	64,830	165,567	165,567	64,830	131,076	231,813	0	231,813

**SCHEDULE A-1 Revised
COMPUTATION OF INCREASE IN
GROSS REVENUE REQUIREMENTS
TEST YEAR 2003 WESTERN GROUP**

Exhibit SLH-R1 (Revised)

Line No.	Description	Source	Direct Case		Revenue Requirement of Used Portion of CAP (3)	Rejoinder Revenue Requirement of Unused Portion of CAP (4)	Total Revenue Requirement (5) (2)+(3)+(4)=(5)
			Arizona Water's Direct Case Presentation (1)	Arizona Water's Direct Case Excluding CAP (2)			
1.	Adjusted Rate Base	Sch B-2 Revised	29,416,615	24,338,533	142,896	0	24,481,429
2.	Adjusted Operating Income	Sch C-1 Revised	1,462,933	2,119,891	(8,787)	(436,655)	1,674,449
3.	Current Rate of Return		4.97%	6.71%	-6.15%	0.00%	6.84%
4.	Required Operating Income		3,088,745	2,555,546	15,004	0	2,570,550
5.	Required Rate of Return		10.50%	10.50%	10.50%	10.50%	10.50%
6.	Operating Income Deficiency		1,625,812	435,655	23,791	436,655	896,101
7.	Gross Revenue Conversion Factor		1.63245	1.63245	1.63245	1.63245	1.63245
8.	Increase in Gross Revenue		2,654,056	711,185	38,838	712,817	1,462,840

Exhibit SLH-R1 (Revised)

**SCHEDULE A-1 Revised
COMPUTATION OF INCREASE IN
GROSS REVENUE REQUIREMENTS
TEST YEAR 2003 CASA GRANDE**

Line No.	Description	Source	Direct Case		Rejoinder	Total Revenue Requirement (5)
			Arizona Water's Direct Case Presentation (1)	Arizona Water's Direct Case Excluding CAP (2)		
1.	Adjusted Rate Base	Sch B-2 Revised	21,996,652	18,470,849	142,896	18,613,745
2.	Adjusted Operating Income	Sch C-1 Revised	1,180,182	1,630,810	(8,787)	1,331,922
3.	Current Rate of Return		5.37%	8.83%	-6.15%	7.16%
4.	Required Operating Income		2,309,648	1,939,439	15,004	1,954,443
5.	Required Rate of Return		10.50%	10.50%	10.50%	10.50%
6.	Operating Income Deficiency		1,129,466	308,629	23,791	622,521
7.	Gross Revenue Conversion Factor		1.63245	1.63245	1.63245	1.63245
8.	Increase in Gross Revenue		1,843,798	503,822	38,838	1,016,234

**SCHEDULE A-1 Revised
COMPUTATION OF INCREASE IN
GROSS REVENUE REQUIREMENTS
TEST YEAR 2003 STANFIELD**

Line No.	Description	Source	Direct Case		Rejoinder	Total Revenue Requirement (5)
			Arizona Water's Direct Case Presentation (1)	Arizona Water's Direct Case Excluding CAP (2)		
1.	Adjusted Rate Base	Sch B-2 Revised	314,131	314,131	0	314,131
2.	Adjusted Operating Income	Sch C-1 Revised	25,877	25,877	0	25,877
3.	Current Rate of Return		8.24%	8.24%	N.M.	8.24%
4.	Required Operating Income		32,984	32,984	0	32,984
5.	Required Rate of Return		10.50%	10.50%	10.50%	10.50%
6.	Operating Income Deficiency		7,107	7,107	0	7,107
7.	Gross Revenue Conversion Factor		1,63245	1,63245	1,63245	1,63245
8.	Increase in Gross Revenue		11,601	11,601	0	11,601

Revenue Requirement of Used Portion of CAP (3)

Revenue Requirement of Unused Portion of CAP (4)

Total Revenue Requirement (5)

(2)+(3)+(4)=(5)

Exhibit SLH-R1 (Revised)

**SCHEDULE A-1 Revised
COMPUTATION OF INCREASE IN
GROSS REVENUE REQUIREMENTS
TEST YEAR 2003 WHITE TANK**

Line No.	Description	Source	Direct Case		Revenue Requirement of Used Portion of CAP (3)	Rejoinder Revenue Requirement of Unused Portion of CAP (4)	Total Revenue Requirement (2)+(3)+(4)=(5)
			Arizona Water's Direct Case Presentation (1)	Arizona Water's Direct Case Excluding CAP (2)			
1.	Adjusted Rate Base	Sch B-2 Revised	2,441,155	1,934,887	0	0	1,934,887
2.	Adjusted Operating Income	Sch C-1 Revised	121,440	188,734	0	(47,798)	140,936
3.	Current Rate of Return		4.97%	9.75%			
4.	Required Operating Income		256,321	203,163			7.28%
5.	Required Rate of Return		10.50%	10.50%			
6.	Operating Income Deficiency		134,881	14,429		10.50%	10.50%
7.	Gross Revenue Conversion Factor		1,63245	1,63245		47,798	62,227
8.	Increase in Gross Revenue		220,187	23,555		1,63245	1,63245
						78,028	101,583

Exhibit SLH-R1 (Revised)

**SCHEDULE A-1 Revised
COMPUTATION OF INCREASE IN
GROSS REVENUE REQUIREMENTS
TEST YEAR 2003 AJO**

Line No.	Description	Source	Direct Case		Revenue Requirement of Used Portion of CAP (3)	Rejoinder Revenue Requirement of Unused Portion of CAP (4)	Total Revenue Requirement (5) (2)+(3)+(4)=(5)
			Arizona Water's Direct Case Presentation (1)	Arizona Water's Direct Case Excluding CAP (2)			
1.	Adjusted Rate Base	Sch B-2 Revised	847,167	847,167	0	0	847,167
2.	Adjusted Operating Income	Sch C-1 Revised	34,697	34,697	0	0	34,697
3.	Current Rate of Return		4.10%	4.10%	N.M.	N.M.	4.10%
4.	Required Operating Income		88,953	88,953	0	0	88,953
5.	Required Rate of Return		10.50%	10.50%	10.50%	10.50%	10.50%
6.	Operating Income Deficiency		54,256	54,256	0	0	54,256
7.	Gross Revenue Conversion Factor		1.63245	1.63245	1.63245	1.63245	1.63245
8.	Increase in Gross Revenue		88,569	88,569	0	0	88,569

**SCHEDULE A-1 Revised
COMPUTATION OF INCREASE IN
GROSS REVENUE REQUIREMENTS
TEST YEAR 2003 COOLIDGE**

Line No.	Description	Source	Direct Case		Revenue Requirement of Used Portion of CAP (3)	Rejoinder Revenue Requirement of Unused Portion of CAP (4)	Total Revenue Requirement (2)+(3)+(4)=(5)
			Arizona Water's Direct Case Presentation (1)	Arizona Water's Direct Case Excluding CAP (2)			
1.	Adjusted Rate Base	Sch B-2 Revised	3,817,510	2,771,499	0	0	2,771,499
2.	Adjusted Operating Income	Sch C-1 Revised	100,737	239,773	0	(98,756)	141,017
3.	Current Rate of Return		2.64%	8.65%			5.05%
4.	Required Operating Income		400,839	291,007	0	0	291,007
5.	Required Rate of Return		10.50%	10.50%	10.50%	10.50%	10.50%
6.	Operating Income Deficiency		300,101	51,234	0	98,756	149,990
7.	Gross Revenue Conversion Factor		1.63245	1.63245	1.63245	1.63245	1.63245
8.	Increase in Gross Revenue		489,901	83,637	0	161,214	244,851

ARIZONA WATER COMPANY

SCHEDULE B-2 Revised
PRO FORMA ADJUSTMENTS RATE BASE
TEST YEAR 2003 WESTERN GROUP

Line No.	Description	Direct Case - As Filed		Remove All Pro Forma CAP Charges (4)	2003 TY Excluding Pro Forma CAP (5)	Rejoinder		Adjusted TY 2003 Revised-Base (7)	Unused Portion Of CAP (8)	Adjusted TY 2003 Revised-Total (9)
		TY 2003 Actual (1)	Pro Forma Adjustments (2)			Adjusted TY 2003 (3)	Used Portion Of CAP (6)			
1.	Gross Plant in Service	61,953,083	0	0	61,953,083	0	0	61,953,083	0	61,953,083
2.	Phoenix Office Allocation	1,273,531	0	0	1,273,531	0	0	1,273,531	0	1,273,531
3.	Meter Shop Allocation	23,651	0	0	23,651	0	0	23,651	0	23,651
4.	Total Gross Plant in Service	63,250,265	0	0	63,250,265	0	0	63,250,265	0	63,250,265
5.	Less: Accumulated Depreciation	(16,230,231)	(22,549)	0	(16,252,780)	0	0	(16,252,780)	0	(16,252,780)
6.	Net Plant in Service	47,020,034	(22,549)	0	46,997,485	0	0	46,997,485	0	46,997,485
7.	Construction Work in Progress	284,117	(284,117)	0	0	0	0	0	0	0
8.	Total Net Plant	47,304,151	(306,666)	0	46,997,485	0	0	46,997,485	0	46,997,485
9.	Less: Customers' Advances for Construction	(11,339,790)	117,427	0	(11,222,363)	0	0	(11,222,363)	0	(11,222,363)
10.	Contributions in Aid of Construction	(8,837,180)	0	0	(8,837,180)	0	0	(8,837,180)	0	(8,837,180)
11.	Gross	1,591,717	(37,421)	0	1,554,296	0	0	1,554,296	0	1,554,296
12.	Accumulated Amortization	(7,245,463)	80,006	0	(7,165,457)	0	0	(7,165,457)	0	(7,165,457)
13.	Net Contributions in Aid of Construction	(4,465,028)	0	0	(4,465,028)	0	0	(4,465,028)	0	(4,465,028)
14.	Deferred Income Tax	0	5,078,082	5,078,082	0	0	0	5,078,082	4,935,186	5,078,082
15.	Deferred CAP (Net)	311,323	0	0	311,323	0	0	311,323	0	311,323
16.	Add: Total Working Capital Allowance	24,585,193	4,851,422	5,078,082	29,416,615	24,336,533	142,896	24,481,429	4,935,186	29,416,615
17.	Total Rate Base Components & Adjustments									

(a) - Reclassified for Ease in Presentation

SCHEDULE B-2 Revised
PRO FORMA ADJUSTMENTS RATE BASE
TEST YEAR 2003 CASA GRANDE

Exhibit SLH-R2 (Revised)

Line No.	Description	Direct Case - As Filed		Remove All Pro Forma CAP Charges (4)	2003 TY Excluding Pro Forma CAP (5)	Rejoinder		Adjusted TY 2003 Revised-Base (7)	Unused Portion Of CAP (74.35%) (8)	Adjusted TY 2003 Revised-Total (9)
		TY 2003 Actual (1)	Pro Forma Adjustments (2)			Adjusted TY 2003 (3)	Used Portion Of CAP (25.65%) (6)			
1.	Gross Plant in Service	48,030,396			48,030,396	48,030,396		48,030,396		48,030,396
2.	Phoenix Office Allocation	930,536			930,536	930,536		930,536		930,536
3.	Meter Shop Allocation	17,282			17,282	17,282		17,282		17,282
4.	Total Gross Plant in Service	48,978,214	0	0	48,978,214	48,978,214	0	48,978,214	0	48,978,214
5.	Less: Accumulated Depreciation	(12,087,978)	15,761		(12,072,217)	(12,072,217)		(12,072,217)		(12,072,217)
6.	Net Plant in Service	36,890,236	15,761	0	36,905,997	36,905,997	0	36,905,997	0	36,905,997
7.	Construction Work in Progress	146,293	(146,293)	0	0	0	0	0	0	0
8.	Total Net Plant	37,036,529	(130,532)	0	36,905,997	36,905,997	0	36,905,997	0	36,905,997
9.	Less: Customers' Advances for Construction Contributions in Aid of Construction	(6,892,375)	931	0	(6,891,444)	(6,891,444)	0	(6,891,444)	0	(6,891,444)
10.	Gross Accumulated Amortization	(7,754,812)	(32,621)	0	(7,787,433)	(7,787,433)	0	(7,787,433)	0	(7,787,433)
11.	Net Contributions in Aid of Construction	1,381,441	(32,621)	0	1,348,820	1,348,820	0	1,348,820	0	1,348,820
12.	Deferred Income Tax	(3,387,966)			(3,387,966)	(3,387,966)		(3,387,966)		(3,387,966)
13.	Deferred CAP (Net)	0	3,525,803	3,525,803	0	0	142,896	142,896	3,382,907	3,525,803
14.	Add: Total Working Capital Allowance	250,254			250,254	250,254		250,254		250,254
15.	Total Rate Base Components & Adjustments	18,633,071	3,363,581	3,525,803	18,470,849	18,470,849	142,896	18,613,745	3,382,907	21,996,652

(a) - Reclassified for Ease in Presentation
(b) - \$3,525,803 X (279 AF/(8,884-2000) AF)
(c) - \$3,525,803 X (6,805 AF/(8,884-2000) AF)

SCHEDULE B-2 Revised
PRO FORMA ADJUSTMENTS RATE BASE
TEST YEAR 2003 STANFIELD

Exhibit SLH-R2 (Revised)

Line No.	Description	Direct Case - As Filed			Rejoinder			Adjusted TY 2003 Revised-Total (9)	
		TY 2003 Actual (1)	Pro Forma Adjustments (2)	Adjusted TY 2003 (3) (1)+(2)=(3)	Remove All Pro Forma CAP Changes (4)	2003 TY Excluding Pro Forma CAP (5) (3)-(4)=(5)	Used Portion Of CAP (6)		Adjusted TY 2003 Revised-Base (7) (5)+(6)=(7)
1.	Gross Plant in Service	602,560	0	602,560	0	602,560	602,560	0	602,560
2.	Phoenix Office Allocation	13,936	0	13,936	0	13,936	13,936	0	13,936
3.	Meter Shop Allocation	259	0	259	0	259	259	0	259
4.	Total Gross Plant In Service	616,755	0	616,755	0	616,755	616,755	0	616,755
5.	Less: Accumulated Depreciation	(186,029)	(9,687)	(195,716)	0	(195,716)	(195,716)	0	(195,716)
6.	Net Plant in Service	430,726	(9,687)	421,039	0	421,039	421,039	0	421,039
7.	Construction Work in Progress	9,993	(9,993)	0	0	0	0	0	0
8.	Total Net Plant	440,719	(19,680)	421,039	0	421,039	421,039	0	421,039
9.	Less: Customers' Advances for Construction	0	0	0	0	0	0	0	0
10.	Contributions in Aid of Construction	0	0	0	0	0	0	0	0
11.	Gross	(49,164)	55	(49,164)	0	(49,164)	(49,164)	0	(49,164)
12.	Accumulated Amortization	7,758	55	7,813	0	7,813	7,813	0	7,813
13.	Net Contributions in Aid of Construction	(41,406)	55	(41,351)	0	(41,351)	(41,351)	0	(41,351)
14.	Deferred Income Tax	(62,528)	0	(62,528)	0	(62,528)	(62,528)	0	(62,528)
15.	Deferred CAP (Net)	0	0	0	0	0	0	0	0
16.	Add: Total Working Capital Allowance	(3,029)	(3,029)	(3,029)	0	(3,029)	(3,029)	0	(3,029)
17.	Total Rate Base Components & Adjustments	333,756	(19,625)	314,131	0	314,131	314,131	0	314,131

SCHEDULE B-2 Revised
PRO FORMA ADJUSTMENTS RATE BASE
TEST YEAR 2003 COOLIDGE

Exhibit SLH-R2 (Revised)

Line No.	Description	Direct Case - As Filed			Remove All Pro Forma CAP Charges			Rejoinder			Adjusted TY 2003 Revised-Total (9)
		TY 2003 Actual (1)	Pro Forma Adjustments (2)	Adjusted TY 2003 (1)+(2)=(3)	Remove All Pro Forma CAP Charges (4)	2003 TY Excluding Pro Forma CAP (5)	Used Portion Of CAP (6)	Adjusted TY 2003 Revised-Base (7)	Unused Portion Of CAP (8)		
1.	Gross Plant in Service	6,083,129		6,083,129		6,083,129		6,083,129		6,083,129	
2.	Phoenix Office Allocation	197,345		197,345		197,345		197,345		197,345	
3.	Meter Shop Allocation	3,665		3,665		3,665		3,665		3,665	
4.	Total Gross Plant In Service	6,284,139	0	6,284,139	0	6,284,139	0	6,284,139	0	6,284,139	
5.	Less: Accumulated Depreciation	(2,249,826)	(21,871)	(2,271,697)	0	(2,271,697)	0	(2,271,697)	0	(2,271,697)	
6.	Net Plant in Service	4,034,313	(21,871)	4,012,442	0	4,012,442	0	4,012,442	0	4,012,442	
7.	Construction Work in Progress	127,831	(127,831)	0	0	0	0	0	0	0	
8.	Total Net Plant	4,162,144	(149,702)	4,012,442	0	4,012,442	0	4,012,442	0	4,012,442	
9.	Less: Customers' Advances for Construction Contributions in Aid of Construction	(523,140)	116,496	(406,644)	0	(406,644)	0	(406,644)	0	(406,644)	
11.	Gross	(437,102)		(437,102)	0	(437,102)	0	(437,102)	0	(437,102)	
12.	Accumulated Amortization	76,495	(1,525)	74,970	0	74,970	0	74,970	0	74,970	
13.	Net Contributions in Aid of Construction	(360,607)	(1,525)	(362,132)	0	(362,132)	0	(362,132)	0	(362,132)	
14.	Deferred Income Tax	(504,369)		(504,369)	0	(504,369)	0	(504,369)	0	(504,369)	
15.	Deferred CAP (Net)	0	1,046,011 (e)	1,046,011	1,046,011	0	0	1,046,011	0	1,046,011	
16.	Add: Total Working Capital Allowance	32,202		32,202	0	32,202	0	32,202	0	32,202	
17.	Total Rate Base Components & Adjustments	2,808,230	1,011,280	3,819,510	1,046,011	2,771,499	0	2,771,499	1,046,011	3,817,510	

(e) - Reclassified for Ease in Presentation

Schedule C-1 Revised
Pro Forma Operating Income Statements
Test year 2003
Western Group - Summary

Exhibit SLH-R3 (Revised)

Line No.	Description	Direct Case - As Filed			Rejoinder			Adjusted TY 2003 Revised-Total (9)	
		TY 2003 Actual (1)	Pro Forma Adjustments (2)	Adjusted TY 2003 (1)+(2)=(3)	Remove All Pro Forma CAP Charges (4)	2003 TY Excluding Pro Forma CAP (3)-(4)=(5)	Used Portion Of CAP (6)		Adjusted TY 2003 Revised-Base (5)+(6)=(7)
Operational Revenues:									
1.	Residential	7,400,612	(330,759)	7,069,853	0	7,069,853	0	7,069,853	0
2.	Commercial	2,306,368	(175,727)	2,130,641	0	2,130,641	0	2,130,641	0
3.	Industrial	860,781	(61,590)	799,201	0	799,201	0	799,201	0
4.	Private Fire Service	10,535	0	10,535	0	10,535	0	10,535	0
5.	Other	717,317	(52,192)	665,125	0	665,125	0	665,125	0
6.	Total Operating Revenues	11,295,613	(620,258)	10,675,355	0	10,675,355	0	10,675,355	0
Operational Expenses:									
Source of Supply Expenses:									
7.	Purchased Water	505,724	247,786	753,510	242,553	510,957	0	510,957	216,587
8.	Other	48,485	6,946	57,441	0	57,441	0	57,441	0
9.	Pumping Expenses:								
10.	Purchased Power	990,617	15,923	1,006,540	0	1,006,540	0	1,006,540	0
11.	Purchased Gas	603	0	603	0	603	0	603	0
12.	Water Treatment Expenses	370,305	0	370,305	0	370,305	0	370,305	0
13.	Transmission and Distribution Expenses	237,237	(22,447)	214,790	0	214,790	0	214,790	0
14.	Customer Account Expenses	1,047,235	66,250	1,113,485	0	1,113,485	0	1,113,485	0
15.	Sales Expenses & Payroll	899,967	27,429	927,396	0	927,396	0	927,396	0
16.	Administrative and General Expenses	3,670	0	3,670	0	3,670	0	3,670	0
17.	Total Operation and Maintenance	1,154,680	181,053	1,335,733	0	1,335,733	0	1,335,733	0
18.	Depreciation and Amortization Expenses	5,218,233	524,950	5,743,183	242,553	5,500,630	0	5,500,630	216,587
19.	Taxes: Federal Income	1,322,673	567,776	1,890,449	507,808	1,382,641	14,290	1,396,931	483,518
20.	State Income	735,611	(177,456)	558,155	(76,542)	634,697	(4,509)	630,188	(224,086)
21.	Ad Valorem (Property)	124,748	(39,093)	85,655	(16,962)	102,517	(953)	101,523	(49,364)
22.	Other	689,647	132,484	822,131	0	822,131	0	822,131	0
23.	Total Operating Expenses	9,076,039	136,383	9,212,422	656,958	8,555,464	8,787	8,564,251	436,655
24.	Operating Income	2,219,574	(756,641)	1,462,933	(656,958)	2,119,891	(8,787)	2,111,104	(436,655)

Schedule C-1 Revised
Pro Forma Operating Income Statements
Test year 2003
Casa Grande - Summary

Exhibit SLH-R3 (Revised)

Line No.	Description	Direct Case - As Filed		Rejoinder		2003 TY Excluding Pro Forma CAP (5)	Remove All Pro Forma CAP Changes (4)	2003 TY (3)-(4)=(5)	Used Portion Of CAP (25.65%) (6)	Adjusted TY 2003 Revised-Base (5)+(6)=(7)	Unused Portion Of CAP (74.35%) (8)	Adjusted TY 2003 Revised-Total (9)
		TY 2003 As Filed (1)	Pro Forma Adjustments (2)	Adjusted TY 2003 (3)	Adjusted TY 2003 Revised-Base (5)+(6)=(7)							
Operating Revenues:												
1.	Residential	5,097,054	(192,304)	4,904,750	4,904,750	4,904,750		4,904,750		4,904,750		4,904,750
2.	Commercial	1,784,978	(130,772)	1,654,206	1,654,206	1,654,206		1,654,206		1,654,206		1,654,206
3.	Industrial	843,705	(60,327)	783,378	783,378	783,378		783,378		783,378		783,378
4.	Private Fire Service	9,098	0	9,098	9,098	9,098		9,098		9,098		9,098
5.	Other	613,819	(43,869)	569,950	569,950	569,950		569,950		569,950		569,950
6.	Total Operating Revenues	8,348,554	(427,272)	7,921,282	7,921,282	7,921,282	0	7,921,282	0	7,921,282	0	7,921,282
Operating Expenses:												
Source of Supply Expenses:												
7.	Purchased Water	338,564	159,449	498,013	159,449 (a)	338,564		338,564		338,564	133,483 (a)	472,047
8.	Other	37,593	8,342	45,935	8,342	45,935		45,935		45,935		45,935
Pumping Expenses:												
9.	Purchased Power	793,096	17,247	810,343	17,247	810,343		810,343		810,343		810,343
10.	Purchased Gas	0	0	0	0	0		0		0		0
11.	Other	286,696	0	286,696	0	286,696		286,696		286,696		286,696
12.	Water Treatment Expenses	196,192	(6,197)	189,995	(6,197)	187,995		187,995		187,995		187,995
13.	Transmission and Distribution Expenses	745,493	41,123	786,616	41,123	786,616		786,616		786,616		786,616
14.	Customer Account Expenses	580,891	24,068	604,959	24,068	604,959		604,959		604,959		604,959
15.	Sales Expenses & Payroll	2,962	0	2,962	0	2,962		2,962		2,962		2,962
16.	Administrative and General Expenses	820,902	131,816	952,718	131,816	952,718		952,718		952,718		952,718
17.	Total Operation and Maintenance	3,602,389	373,848	4,176,237	373,848	4,016,788		4,016,788		4,016,788	133,483	4,150,271
18.	Depreciation and Amortization Expenses	998,567	369,440	1,368,007	369,440	1,015,427		1,015,427	14,290 (c)	1,029,717	338,290 (d)	1,368,007
19.	Taxes: Federal Income	555,241	(116,221)	439,020	(116,221)	499,337		499,337	(4,509)	484,828	(148,876)	335,951
20.	State Income	94,148	(25,602)	68,546	(25,602)	79,630		79,630	(963)	78,667	(32,796)	45,871
21.	Ad Valorem (Property)	503,642	(640,839)	612,639	(640,839)	612,639		612,639		612,639		612,639
22.	Other	717,590	0	717,590	0	717,590		717,590		717,590		717,590
23.	Total Operating Expenses	6,671,577	69,623	6,741,200	69,623	6,299,572	450,628	6,299,572	8,787	6,299,572	290,101	6,589,460
24.	Operating Income	1,677,077	(486,895)	1,180,182	(486,895)	1,630,810	(450,628)	1,630,810	(8,787)	1,622,023	(290,101)	1,331,922

(a) - WIP C2-9b Page 1 of 4

(b) - WIP C2-9c

(c) - \$352,580 X (279 AF/(8,884-2,000) AF)

(d) - \$352,580 X (6,805 AF/(8,884 - 2,000) AF) if proposed hook-up fee is not approved

Schedule C-1 Revised
Pro Forma Operating Income Statements
Test year 2003
Stanfield - Summary

Exhibit SLH-R3 (Revised)

Line No.	Description	Direct Case - As Filed		Rejoinder						
		TY 2003 As Filed (1)	Pro Forma Adjustments (2)	Adjusted TY 2003 (3)	Remove All Pro Forma CAP Charges (4)	2003 TY Excluding Pro Forma CAP (5)	Used Portion Of CAP (6)	Adjusted TY 2003 Revised-Base (7)	Unused Portion Of CAP (8)	Adjusted TY 2003 Revised-Total (9)
	Operating Revenues:									
1.	Residential	93,725	(5,150)	88,575		88,575		88,575		88,575
2.	Commercial	29,378	(1,674)	27,704		27,704		27,704		27,704
3.	Industrial	0	0	0		0		0		0
4.	Private Fire Service	0	0	0		0		0		0
5.	Other	15,802	(1,079)	14,723		14,723		14,723		14,723
6.	Total Operating Revenues	138,905	(7,903)	131,002	0	131,002	0	131,002	0	131,002
	Operating Expenses:									
	Source of Supply Expenses:									
7.	Purchased Water	0	0	0		0		0		0
8.	Other	394	2	396		396		396		396
	Pumping Expenses:									
9.	Purchased Power	17,274	135	17,409		17,409		17,409		17,409
10.	Purchased Gas	0	0	0		0		0		0
11.	Other	4,120	0	4,120		4,120		4,120		4,120
12.	Water Treatment Expenses	1,899	(1,469)	430		430		430		430
13.	Transmission and Distribution Expenses	12,400	(160)	12,240		12,240		12,240		12,240
14.	Customer Account Expenses	8,565	39	8,604		8,604		8,604		8,604
15.	Sales Expenses & Payroll	44	0	44		44		44		44
16.	Administrative and General Expenses	12,479	1,972	14,451		14,451		14,451		14,451
17.	Total Operation and Maintenance	57,175	519	57,694	0	57,694	0	57,694	0	57,694
18.	Depreciation and Amortization Expenses	15,082	9,631	24,713		24,713		24,713		24,713
19.	Taxes: Federal Income	10,582	(3,361)	7,221		7,221		7,221		7,221
20.	State Income	1,794	(741)	1,053		1,053		1,053		1,053
21.	Ad Valorem (Property)	12,554	736	13,290		13,290		13,290		13,290
22.	Other	10,179	(9,025)	1,154		1,154		1,154		1,154
23.	Total Operating Expenses	107,366	(2,241)	105,125	0	105,125	0	105,125	0	105,125
24.	Operating Income	31,539	(5,662)	25,877	0	25,877	0	25,877	0	25,877

Schedule C-1 Revised
Pro Forma Operating Income Statements
Test year 2003
White Tank - Summary

Exhibit SLH-R3 (Revised)

Line No.	Description	Direct Case - As Filed			Rejoinder			Adjusted TY 2003 Revised-Total (9)
		TY 2003 As Filed (1)	Pro Forma Adjustments (2)	Adjusted TY 2003 (1)+(2)=(3)	Remove All Pro Forma CAP Charges (4)	2003 TY Excluding All CAP (3)-(4)=(5)	Used Portion Of CAP (6)	
Operating Revenues:								
1.	Residential	710,792	(3,159)	707,633		707,633		
2.	Commercial	46,861	(2,729)	44,132		44,132		
3.	Industrial	9,557	(694)	8,863		8,863		
4.	Private Fire Service	132	0	132		132		
5.	Other	21,821	(1,108)	20,713		20,713		
6.	Total Operating Revenues	791,163	(7,680)	783,483	0	783,483	0	0
Operating Expenses:								
Source of Supply Expenses:								
7.	Purchased Water	10,279	27,104	37,383	27,104 (a)	10,279	27,104 (a)	37,383
8.	Other	2,309	571	2,880		2,880		2,880
9.	Pumping Expenses:							
10.	Purchased Power	74,297	4,107	78,404		78,404		78,404
11.	Purchased Gas	0	0	0		0		0
12.	Other	27,057	0	27,057		27,057		27,057
13.	Water Treatment Expenses	11,426	(1,771)	9,655		9,655		9,655
14.	Transmission and Distribution Expenses	67,739	11,522	79,261		79,261		79,261
15.	Customer Account Expenses	52,308	2,544	54,850		54,850		54,850
16.	Sales Expenses & Payroll	263	0	263		263		263
17.	Administrative and General Expenses	75,031	12,340	87,371		87,371		87,371
18.	Total Operation and Maintenance	320,707	96,417	417,124		417,124		417,124
19.	Depreciation and Amortization Expenses	119,095	63,591	182,626		182,626		182,626
20.	Taxes: Federal Income	61,957	(15,388)	46,569	50,627 (b)	131,999	0 (c)	131,999
21.	State Income	10,513	(3,390)	7,123	(8,553)	55,122	0	55,122
22.	Ad Valorem (Property)	35,347	6,646	41,993	(1,864)	9,007	0	9,007
23.	Other	56,996	(50,388)	6,608		6,608		6,608
24.	Total Operating Expenses	604,555	57,488	662,043	67,294	594,749	0	594,749
		186,608	(65,168)	121,440	(67,294)	188,734	0	188,734

(a) - WWP C2-9b Page 2 of 4
 (b) - WWP C2-9d
 (c) - \$50,627 X (0 AF/968 AF)
 (d) - \$50,627 X (2,000 AF/2,000 AF) if proposed hook-up fee is not approved

Schedule C-1 Revised
Pro Forma Operating Income Statements
Test year 2003
Ajo - Summary

Exhibit SLH-R3 (Revised)

Line No.	Description	Direct Case - As Filed		Remove All Pro Forma CAP Changes		Rejoinder		Adjusted TY 2003 Revised-Total (9)
		TY 2003 As Filed (1)	Pro Forma Adjustments (2)	Adjusted TY 2003 (3)	2003 TY Excluding Pro Forma CAP (5)	Used Portion Of CAP (6)	Adjusted TY 2003 Revised-Base (7)	
Operating Revenues:								
1.	Residential	335,261	(21,784)	313,477	313,477	313,477	313,477	313,477
2.	Commercial	101,974	(6,052)	95,922	95,922	95,922	95,922	95,922
3.	Industrial	0	0	0	0	0	0	0
4.	Private Fire Service	0	0	0	0	0	0	0
5.	Other	2,944	(140)	2,804	2,804	2,804	2,804	2,804
6.	Total Operating Revenues	440,179	(27,976)	412,203	412,203	412,203	412,203	412,203
Operating Expenses:								
Source of Supply Expenses:								
7.	Purchased Water	156,881	5,233	162,114	162,114	162,114	162,114	162,114
8.	Other	316	0	316	316	316	316	316
Pumping Expenses:								
9.	Purchased Power	3,059	(83)	2,976	2,976	2,976	2,976	2,976
10.	Purchased Gas	0	0	0	0	0	0	0
11.	Other	14,594	0	14,594	14,594	14,594	14,594	14,594
12.	Water Treatment Expenses	4,066	(623)	3,443	3,443	3,443	3,443	3,443
13.	Transmission and Distribution Expenses	35,227	3,460	38,687	38,687	38,687	38,687	38,687
14.	Customer Account Expenses	27,775	(162)	27,613	27,613	27,613	27,613	27,613
15.	Sales Expenses & Payroll	142	0	142	142	142	142	142
16.	Administrative and General Expenses	39,497	6,120	45,617	45,617	45,617	45,617	45,617
17.	Total Operation and Maintenance	281,557	13,945	295,502	295,502	295,502	295,502	295,502
18.	Depreciation and Amortization Expenses	42,864	(2,863)	39,981	39,981	39,981	39,981	39,981
19.	Taxes: Federal Income	14,604	(4,848)	9,756	9,756	9,756	9,756	9,756
20.	State Income	2,477	(1,068)	1,409	1,409	1,409	1,409	1,409
21.	Ad Valorem (Property)	26,707	392	27,099	27,099	27,099	27,099	27,099
22.	Other	27,943	(24,194)	3,759	3,759	3,759	3,759	3,759
23.	Total Operating Expenses	396,152	(18,646)	377,506	377,506	377,506	377,506	377,506
24.	Operating Income	44,027	(9,330)	34,697	34,697	34,697	34,697	34,697

Schedule C-1 Revised
Pro Forma Operating Income Statements
Test year 2003
Coolidge - Summary

Exhibit SLH-R3 (Revised)

Line No.	Description	Direct Case - As Filed		Rejoinder						
		TY 2003 As Filed (1)	Pro Forma Adjustments (2)	Adjusted TY 2003 (3)	Remove All Pro Forma CAP Charges (4)	2003 TY Excluding Pro Forma CAP (5)	Used Portion Of CAP (6)	2003 Revised-Base (7)	Unused Portion Of CAP (8)	Adjusted TY 2003 Revised-Total (9)
Operating Revenues:										
1.	Residential	1,163,780	(108,362)	1,055,418	0	1,055,418	0	1,055,418	0	1,055,418
2.	Commercial	341,177	(34,500)	306,677	0	306,677	0	306,677	0	306,677
3.	Industrial	7,519	(969)	6,550	0	6,550	0	6,550	0	6,550
4.	Private Fire Service	1,305	0	1,305	0	1,305	0	1,305	0	1,305
5.	Other	62,931	(5,986)	56,935	0	56,935	0	56,935	0	56,935
6.	Total Operating Revenues	1,576,712	(149,427)	1,427,285	0	1,427,285	0	1,427,285	0	1,427,285
Operating Expenses:										
Source of Supply Expenses:										
7.	Purchased Water	0	56,000	56,000	56,000 (a)	0	0	0	56,000 (a)	56,000
8.	Other	7,883	31	7,914	0	7,914	0	7,914	0	7,914
Pumping Expenses:										
9.	Purchased Power	102,891	(5,483)	97,408	0	97,408	0	97,408	0	97,408
10.	Purchased Gas	603	0	603	0	603	0	603	0	603
11.	Other	37,838	0	37,838	0	37,838	0	37,838	0	37,838
12.	Water Treatment Expenses	23,654	(10,387)	13,267	0	13,267	0	13,267	0	13,267
13.	Transmission and Distribution Expenses	186,376	10,305	196,681	0	196,681	0	196,681	0	196,681
14.	Customer Account Expenses	190,130	940	191,070	0	191,070	0	191,070	0	191,070
15.	Sales Expenses & Payroll	259	0	259	0	259	0	259	0	259
16.	Administrative and General Expenses	206,771	28,815	235,586	0	235,586	0	235,586	0	235,586
17.	Total Operation and Maintenance	756,405	80,221	836,626	56,000	780,626	0	780,626	56,000	836,626
18.	Depreciation and Amortization Expenses	147,125	127,997	275,122	104,601 (b)	170,521	0 (c)	170,521	104,601 (d)	275,122
19.	Taxes: Federal Income	93,227	(37,638)	55,589	(17,672)	73,261	0	73,261	(50,680)	22,580
20.	State Income	15,616	(6,292)	9,324	(3,863)	11,417	0	11,417	(11,164)	252
21.	Ad Valorem (Property)	111,397	15,713	127,110	0	127,110	0	127,110	0	127,110
22.	Other	172,419	(147,842)	24,577	0	24,577	0	24,577	0	24,577
23.	Total Operating Expenses	1,256,389	30,159	1,286,548	139,036	1,167,512	0	1,167,512	96,756	1,286,268
24.	Operating Income	280,323	(179,586)	100,737	(139,036)	239,773	0	239,773	(96,756)	141,017

(a) - WIP C2-9b Page 4 of 4
 (b) - WIP C2-9c
 (c) - \$104,601 X (0 AF/2,000 AF)
 (d) - \$104,601 X (2,000 AF/2,000 AF) if proposed hook-up fee is not approved

ARIZONA WATER COMPANY
 PROPOSED CAP COST RECOVERY - CASA GRANDE & COOLIDGE
 TOTAL CAP ALLOCATION AND DEFERRED M&I BALANCE

INPUTS:	
CAP ALLOCATION (ACRE FEET (AF))	10,884
Estimated Annual Growth	1986-CG/1000-CL in 2006; 2202-CG/1000-CL thereafter
Proposed Hook-Up Fee	\$289

Line	Description	Cost per AF	Customer Projection	Amount
	Balance @ 12/31/2003			4,571,813
2004	M&I Charges at \$28/AF			328,520 ²
	NP-260 Tariff M&I Charges			(98,370)
	AFUDC-estimated based on 2004 rate			241,634
	Balance @ 12/31/2004			5,041,586
2005	M&I Charges at \$28/AF	\$28		304,752
	NP-260 Tariff M&I Charges			(83,812)
	AFUDC-estimated based on 2004 rate			270,875
	Balance @ 12/31/05			5,553,212
2006	M&I Charges at \$24/AF	\$24		261,216
	NP-260 Tariff M&I Charges			(54,896)
	AFUDC-estimated based on 2004 rate			296,203
	Hook-Up Fees Collected		2986	(862,954)
	Taxes on Hook-Up Fees			0
	Balance @ 12/31/06			5,192,980
2007	M&I Charges at \$21/AF	\$21		228,564
	NP-260 Tariff M&I Charges			(47,859)
	AFUDC-estimated based on 2004 rate			276,579
	Hook-Up Fees Collected		3202	(925,378)
	Taxes on Hook-Up Fees			0
	Balance @ 12/31/07			4,724,887
2008	M&I Charges at \$21/AF	\$21		228,564 ¹
	NP-260 Tariff M&I Charges			(47,859)
	AFUDC-estimated based on 2004 rate			252,185
	Hook-Up Fees Collected		3202	(925,378) ¹
	Taxes on Hook-Up Fees			0
	Balance @ 12/31/08			4,232,399
2009	M&I Charges at \$21/AF	\$21		228,564
	NP-260 Tariff M&I Charges			(47,859)
	AFUDC-estimated based on 2004 rate			226,520
	Hook-Up Fees Collected		3202	(925,378)
	Taxes on Hook-Up Fees			0
	Balance @ 12/31/09			3,714,246
2010	M&I Charges at \$21/AF	\$21		228,564
	NP-260 Tariff M&I Charges			(47,859)
	AFUDC-estimated based on 2004 rate			199,517
	Hook-Up Fees Collected		3202	(925,378)
	Taxes on Hook-Up Fees			0
	Balance @ 12/31/10			3,169,090
2011	M&I Charges at \$21/AF	\$21		228,564
	NP-260 Tariff M&I Charges			(47,859)
	AFUDC-estimated based on 2004 rate			171,107
	Hook-Up Fees Collected		3202	(925,378)
	Taxes on Hook-Up Fees			0
	Balance @ 12/31/11			2,595,524
2012	M&I Charges at \$21/AF	\$21		228,564
	NP-260 Tariff M&I Charges			(47,859)
	AFUDC-estimated based on 2004 rate			141,217
	Hook-Up Fees Collected		3202	(925,378)
	Taxes on Hook-Up Fees			0
	Balance @ 12/31/12			1,992,069
2013	M&I Charges at \$21/AF	\$21		228,564
	NP-260 Tariff M&I Charges			(47,859)
	AFUDC-estimated based on 2004 rate			109,789
	Hook-Up Fees Collected		3202	(925,378)
	Taxes on Hook-Up Fees			0
	Balance @ 12/31/13			1,357,164
2014	M&I Charges at \$21/AF	\$21		228,564
	NP-260 Tariff M&I Charges			(47,859)
	AFUDC-estimated based on 2004 rate			76,882
	Hook-Up Fees Collected		3202	(925,378)
	Taxes on Hook-Up Fees			0
	2 6months @ \$32 and 6 months @ \$28			689,173
2015	M&I Charges at \$21/AF	\$21		228,564
	NP-260 Tariff M&I Charges			(47,859)
	AFUDC-estimated based on 2004 rate			41,871
	Hook-Up Fees Collected		3202	(925,378)
	Taxes on Hook-Up Fees			0
	Balance @ 12/31/15			(13,629)

¹ Customer growth projections, hook-up fee and M&I rate may be adjusted in rate case filed in 2007.

² 6months @ \$32 and 6 months @ \$28

ARIZONA WATER COMPANY
 PROPOSED CAP COST RECOVERY - WHITE TANK
 UNUSED CAP ALLOCATIONS

INPUTS:	
CAP ALLOCATION (ACRE FEET (AF))	968
Estimated Annual Growth	141 new customers in 2006; 153 thereafter
Proposed Hook-Up Fee	\$674

Line	Description	Cost per AF	Customer Projection	Amount
	Balance @ 12/31/2003			506,268
2004	M&I Charges at \$28/AF			29,040 ²
	AFUDC-estimated based on 2004 rate			26,726
	Balance @ 12/31/2004			562,034
2005	M&I Charges at \$28/AF	\$28		27,104
	AFUDC-estimated based on 2004 rate			29,538
	Balance @ 12/31/05			618,676
2006	M&I Charges at \$24/AF	\$24		23,232
	AFUDC-estimated based on 2004 rate			32,346
	Hook-Up Fees Collected		141	(95,034)
	Taxes on Hook-Up Fees			0
	Balance @ 12/31/06			579,220
2007	M&I Charges at \$21/AF	\$21		20,328
	AFUDC-estimated based on 2004 rate			30,248
	Hook-Up Fees Collected		153	(103,122)
	Taxes on Hook-Up Fees			0
	Balance @ 12/31/07			526,672
2008	M&I Charges at \$21/AF	\$21		20,328 ¹
	AFUDC-estimated based on 2004 rate			27,550
	Hook-Up Fees Collected		153	(103,122) ¹
	Taxes on Hook-Up Fees			0
	Balance @ 12/31/08			471,427
2009	M&I Charges at \$21/AF	\$21		20,328
	AFUDC-estimated based on 2004 rate			24,714
	Hook-Up Fees Collected		153	(103,122)
	Taxes on Hook-Up Fees			0
	Balance @ 12/31/09			413,348
2010	M&I Charges at \$21/AF	\$21		20,328
	AFUDC-estimated based on 2004 rate			21,734
	Hook-Up Fees Collected		153	(103,122)
	Taxes on Hook-Up Fees			0
	Balance @ 12/31/10			352,288
2011	M&I Charges at \$21/AF	\$21		20,328
	AFUDC-estimated based on 2004 rate			18,600
	Hook-Up Fees Collected		153	(103,122)
	Taxes on Hook-Up Fees			0
	Balance @ 12/31/11			288,094
2012	M&I Charges at \$21/AF	\$21		20,328
	AFUDC-estimated based on 2004 rate			15,306
	Hook-Up Fees Collected		153	(103,122)
	Taxes on Hook-Up Fees			0
	Balance @ 12/31/12			220,607
2013	M&I Charges at \$21/AF	\$21		20,328
	AFUDC-estimated based on 2004 rate			11,843
	Hook-Up Fees Collected		153	(103,122)
	Taxes on Hook-Up Fees			0
	Balance @ 12/31/13			149,655
2014	M&I Charges at \$21/AF	\$21		20,328
	AFUDC-estimated based on 2004 rate			8,202
	Hook-Up Fees Collected		153	(103,122)
	Taxes on Hook-Up Fees			0
	Balance @ 12/31/14			75,063
2015	M&I Charges at \$21/AF	\$21		20,328
	AFUDC-estimated based on 2004 rate			4,374
	Hook-Up Fees Collected		153	(103,122)
	Taxes on Hook-Up Fees			0
	Balance @ 12/31/15			(3,357)

¹ Customer growth projections, hook-up fee and M&I rate may be adjusted in rate case filed in 2007.
² 6 months @ \$32 and 6 months @ \$28

Ralph J. Kennedy

ARIZONA WATER COMPANY



Docket No. W-01445A-04-0650

2004 RATE HEARING EXHIBIT NO. _____

For Test Year Ending 12/31/03

**PREPARED
REJOINDER TESTIMONY
OF
Ralph J. Kennedy**

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15 **BEFORE THE ARIZONA CORPORATION COMMISSION**

16 IN THE MATTER OF THE APPLICATION)
17 OF ARIZONA WATER COMPANY, AN) **DOCKET NO. W-01445A-04-0650**
18 ARIZONA CORPORATION, FOR)
19 ADJUSTMENTS TO ITS RATES AND)
20 CHARGES FOR UTILITY SERVICE)
21 FURNISHED BY ITS WESTERN GROUP)
22 AND FOR CERTAIN RELATED)
23 APPROVALS)

24 **REJOINDER TESTIMONY OF**
25 **RALPH J. KENNEDY**

1 **ARIZONA WATER COMPANY**

2
3 **Rejoinder Testimony of**
4 **Ralph J. Kennedy**

5
6 **I. Introduction And Purpose Of Testimony**

7 **Q. WHAT IS YOUR NAME, EMPLOYER AND OCCUPATION?**

8 **A.** My Name is Ralph J. Kennedy. I am employed by Arizona Water Company (the
9 "Company") as Vice President and Treasurer.

10 **Q. ARE YOU THE SAME RALPH J. KENNEDY THAT PREVIOUSLY PROVIDED**
11 **DIRECT AND REBUTTAL TESTIMONY ON THIS MATTER?**

12 **A.** Yes I am.

13 **Q. WHAT IS THE PURPOSE OF YOUR REJOINDER TESTIMONY IN THIS**
14 **PROCEEDING?**

15 **A.** The purpose of my rejoinder testimony is to respond to certain surrebuttal
16 testimony submitted by the Arizona Corporation Commission's (the
17 "Commission") Utilities Division ("Staff"), the Residential Utility Consumer Office
18 ("RUCO"), and the City of Casa Grande (the "City") in this rate proceeding.

19 Specifically, I will address:

- 20 • Purchased Power and Purchased Water Adjustor Mechanisms
21 • Rate Design

22 **II. Purchased Power And Purchased Water Adjustment Mechanisms**

23 **Q. HAVE BOTH THE STAFF AND RUCO CONTINUED TO RECOMMEND THAT**
24 **THE WESTERN GROUP POWER AND WATER ADJUSTMENT MECHANISMS**
25 **BE ELIMINATED?**

26 **A.** Yes, as well as the witness for the City.
27
28

1 Q. HOW DID STAFF AND RUCO ADDRESS THE ARGUMENT IN YOUR
2 REBUTTAL TESTIMONY ABOUT STAFF'S RECOMMENDATION BEING
3 INCONSISTENT WITH PUBLIC POLICY?

4 A. Staff did not address the public policy issue. Instead Staff opined that the law
5 was unconstitutional and didn't have to be followed by the Commission.
6 Obviously the Company is not usurping the Commission's authority to approve or
7 disapprove adjustor mechanisms or it would not be urging the Commission to
8 maintain the Company's current, longstanding adjustor mechanisms. The point is
9 that A.R.S. § 40-370 clearly demonstrates that the Executive and Legislative
10 branches of the State have stated, as a matter of public policy, that water utilities
11 should have more, not fewer adjustor mechanisms to help maintain financial
12 stability. RUCO did not address the legal issue directly but referred to the
13 Commission's authority to approve or disapprove any adjustor mechanism. Of
14 course, the Commission has long since established the Company's adjustor
15 mechanisms and nothing RUCO nor any other party has shown that the
16 Commission should change that policy.

17 Q. DID STAFF DISAGREE WITH OTHER ASPECTS OF YOUR REBUTTAL
18 TESTIMONY CONCERNING THE ADJUSTOR MECHANISMS?

19 A. Yes. Mr. Ludders continued to assert that the most relevant comparison in
20 evaluating the significance of purchased power or purchased water expense is
21 their percentage of total operating expense rather than the relationship between
22 those expenses and the utility's net operating income. He also concluded that the
23 Company's power and water expenses do not meet his "volatility" requirements,
24 and therefore all Western Group adjustor mechanisms should be eliminated.

25 In 2004 the Commission authorized a rate increase for Ajo Improvement
26 Company, the Company's sole supplier of water for the Ajo system. The
27 Company intervened in the case and obtained a special wholesale rate of \$3.14
28 per 1,000 gallons. This was a 24% increase that triggered a purchased water

1 adjustment filing by the Company to recover \$34,773 in additional costs. This
2 amount is slightly larger than the Company's adjusted test year operating income
3 of \$34,696. Without the PWAM the Company would have had to prepare an
4 emergency rate filing, incur legal expenses that may have exceeded the increase
5 in water costs, and suffered a delay in collecting the necessary increase. The
6 administrative burden on the Staff and Commission is much greater to process
7 an emergency rate filing than a purchased water adjustment mechanism
8 ("PWAM"). It is nonsensical to eliminate existing adjustor mechanisms resulting
9 in more work for the Staff and Company by requiring more rate case applications
10 and boost the ultimate costs that need to be recovered through the rates.

11 The existing Western Group adjustor mechanisms should be maintained
12 as the Commission did in the Company's Northern Group rate case, Decision No.
13 64282 (December 28, 2001).

14 **Q. WHAT EXPLANATION DID THE CITY PROVIDE TO SUPPORT ITS**
15 **RECOMMENDATION THAT THE ADJUSTOR MECHANISMS BE**
16 **ELIMINATED??**

17 **A.** The City concluded they should be eliminated because the cost increases are not
18 out of the Company's control.

19 "For a cost to be out of the Company's control, that would suggest that
20 there are no alternatives, that there is one and only one supplier or
21 resource and the potential for great price fluctuation. The Company has
22 not proven that this is the case."

23 Since Mr. Harvey is not from Arizona, perhaps he doesn't realize that there are
24 not multiple sources of electric power in any one area of Arizona, and that the
25 Company does not have a PWAM for the Casa Grande system and has not
26 requested one.

27 **III. Rate Design**

28

1 Q. HAS MR. LUDDERS ADDRESSED THE PROBLEMS WITH STAFF'S RATE
2 DESIGN POINTED OUT IN YOUR REBUTTAL TESTIMONY?

3 A. No, he has not. I identified four notable shortcomings with Staff's three-tier
4 inverted block rate design in my rebuttal testimony.

- 5 • Staff fails to recognize and adjust rates for price elasticity.
- 6 • Staff fails to provide any protection to the Company for the increased
7 revenue volatility that results from the tiered rate design.
- 8 • Staff fails to justify an intentional subsidy in pricing the first block of water
9 for the 5/8" x 3/4" meter size, well below the existing commodity rate.
- 10 • Staff's rate design is inequitable rates for the larger meter sizes.

11 Mr. Ludders does not have an open mind on this issue. It is undisputed
12 that the Eastern Group, with the three-tier inverted block rate design that became
13 effective in late March 2004, was the only group whose consumption decreased
14 for the 12 months ending March 31, 2005. However, Mr. Ludders focuses his
15 surrebuttal on disputing the Company's specific Eastern Group price elasticity
16 calculation. He implies that the reduction in consumption was due to heavy rain
17 during January through March 2005, but he fails to acknowledge that the first
18 nine months of the period, i.e. April 2004 through December 2004 would have
19 normally experienced above average consumption due to the serious long-term
20 drought conditions in Arizona. He also makes the unusual assertion that
21 "...gallongage per customer could also have been affected by customer growth."
22 (Ludders SR P.7, L23)

23 Obviously, a change in the number of customers would not affect use per
24 customer. The Company's price elasticity calculation was offered to support the
25 ranges summarized by Beecher and demonstrate that higher prices do indeed
26 cause customers to reduce consumption. The Company did not propose that its
27 specific value of price elasticity should be used. "The Company's actual
28

1 experienced price elasticity is within the ranges predicted by Beecher."
2 (Kennedy RT at page 18)

3 Ludders ignores the recommendations of the American Water Works
4 Association ("AWWA") and the National Regulatory Research Institute and the
5 100 studies reviewed by Beecher showing the most likely values for residential
6 price elasticity is -.20 to -.40 and for industrial price elasticity is -.50 to -.80.
7 Having dismissed the Company's study, which produced a price elasticity value
8 of -.57, Ludders goes on to ignore the AWWA recommendation cited in my
9 rebuttal testimony.

10 "If a rate change is anticipated, the water utility must consider its effect on
11 usage and revenues. Where it is not cost effective for water utilities to
12 conduct demand studies, **results of existing research can be used to**
13 **develop benchmarks for estimating the usage effects of rate**
14 **changes."** (Kennedy RT at page 16)

15 If Mr. Ludders truly rejected the Company price elasticity study, he should use
16 the results of other existing research, as recommended by AWWA, to make a
17 price elasticity adjustment. The Commission's stated objective for tiered rates is
18 to reduce water consumption. If customers' water use patterns are not
19 influenced by inverted rates, then there is no legitimate reason to use them.

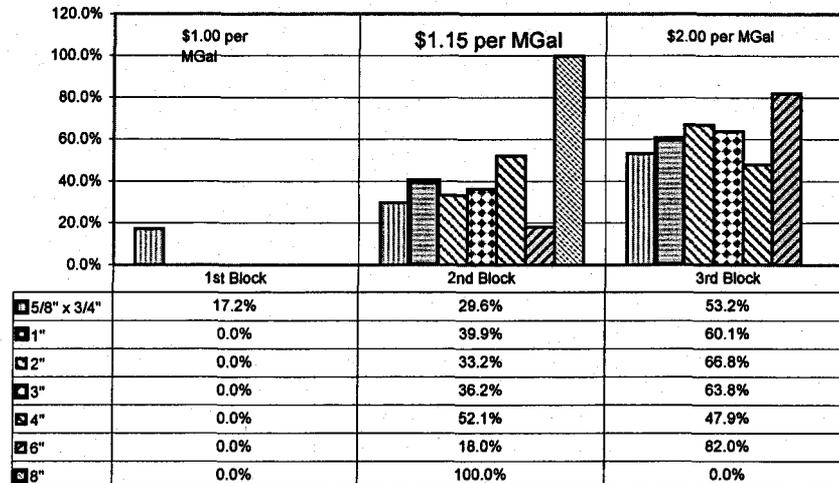
20 The Company has shown that even in the midst of a serious long-term
21 drought there was a significant price elasticity effect with the tiered rate design
22 imposed on the Company's Eastern group customers. If the Staff and RUCO do
23 not believe that higher prices will reduce consumption there is no reason for
24 either a two or three-tier inverted block rate design. If such a rate design will
25 reduce consumption as the Commission, AWWA and the NRRRI state, then there
26 must be a price elasticity adjustment.

27 **Q. CAN YOU PROVIDE MORE GRAPHIC EVIDENCE OF THE SHORTCOMINGS**
28 **OF STAFF'S THREE-TIER INVERTED BLOCK RATE DESIGN?**

1 A. Yes. The following chart and table is a reduced size version of Exhibit RJK-RJ1.

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**Percent of Revenue in Each Tier By Meter Size
Casa Grande**



This chart is based on the Staff's proposed Casa Grande rate design. It clearly shows the discriminatory subsidy for the 5/8" x 3/4" meters that Staff is proposing for all Western Group systems. Casa Grande customers with this meter size receive the discounted rate of \$1.00 per 1,000 gallons for 17.2% of their consumption. This discounted rate will not encourage conservation, and will instead cause the larger size meters to subsidize this level of consumption.

This rate design will increase revenue volatility. Except for the water use by 8" meter size consumption which all priced in the rate second block, approximately 60% of water use by each meter is priced at the highest third block rate of \$2.00 per 1,000 gallons. Increases or decreases in consumption caused by variations in seasonal weather conditions as well as the sharply higher unit pricing in the third rate block will result in a much more volatile revenue pattern than exists under the existing uniform block rate pricing structure.

Q. **WHAT ABOUT RUCO'S RECOMMENDED RATE DESIGN?**

1 A. RUCO's rate design is more seriously flawed than the Staff's. It applies the same
2 blocking factors to all meter sizes. As a result, it is even more discriminatory than
3

4 Casa Grande System

<u>Meter Size</u>	<u>Average Bill</u>	<u>Percent Of Use Paying High Second Block Rate</u>
5/8"	10,666	62.5%
1"	31,339	87.2%
2"	170,216	97.7%
3"	353,507	98.9%
4"	1,177,280	99.7%
6"	2,780,484	99.9%
8"	394,083	99.0%
10"	N.A.	

11 Staff's rate design.

12
13 As the foregoing shows, because the lower block cut- off point is a smaller
14 percentage of each larger meter size's consumption, RUCO's rate design shifts
15 revenue recovery to the larger size meters. It mimics the design the Staff
16 proposed two years ago in the Company's Eastern Group proceeding and it
17 suffers from the same shortcomings of that earlier design. RUCO has proposed
18 similar "one-size-fits-all" rate designs in the past, which are, in reality, simply a
19 way to shift revenue responsibility from residential customers to commercial and
20 industrial customers. A similar rate design was rejected by the Commission, for
21 example, in the recent Rio Rico Utilities rate proceeding. Decision No. 67279
22 (Oct. 5, 2004) at pages 18-19 (rejecting RUCO's rate design because it "does not
23 create an equitable sharing of the rate increase").

24 As the above table illustrates, uniform blocking for all meter sizes ignores
25 the actual usage pattern of the different meter sizes. Only the first 4,000 gallons
26 of use is priced at the lower first block rate. The same rate blocking is also
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applied to each system thereby ignoring the specific demand and usage characteristics of the individual systems.

Q. WHAT IS YOUR CONCLUSION ABOUT THE RATE DESIGNS PROPOSED BY STAFF AND RUCO?

A. Staff and RUCO continue to ignore the short-comings of their rate design proposals, exposing the Company to the likelihood that it won't receive all of its revenue requirement, more volatile net operating income, increased risk and eroding financial health. Their rate designs, which are unsupported by a cost of service study or similar analysis of their impact and ignore the impact of price elasticity, should be rejected.

Q. DOES THIS CONCLUDE YOUR REJOINDER TESTIMONY MR. KENNEDY?

A. Yes, it does. However, my silence on any issue raised or recommendation made by Staff, RUCO, or the City should not be taken as the Company's acceptance of such issue or recommendation.

Thomas M. Zepp

ARIZONA WATER COMPANY



Docket No. W-01445A-04-0650

2004 RATE HEARING EXHIBIT NO. _____

For Test Year Ending 12/31/03

**PREPARED
REJOINDER TESTIMONY & EXHIBITS
OF
Thomas M. Zepp**

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BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION)
OF ARIZONA WATER COMPANY, AN)
ARIZONA CORPORATION, FOR)
ADJUSTMENTS TO ITS RATES AND)
CHARGES FOR UTILITY SERVICE)
FURNISHED BY ITS WESTERN GROUP)
AND FOR CERTAIN RELATED)
APPROVALS)

DOCKET NO. W-01445A-04-0650

REJOINDER TESTIMONY OF

Thomas M. Zepp

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ARIZONA WATER COMPANY

Rejoinder Testimony of

Thomas M. Zepp

I. INTRODUCTION, SUMMARY AND CONCLUSIONS

Q. PLEASE STATE YOUR NAME.

A. Thomas M. Zepp.

Q. DID YOU PREPARE DIRECT AND REBUTTAL TESTIMONY ON BEHALF OF ARIZONA WATER COMPANY IN THIS CASE?

A. Yes, I provided testimony on the cost of equity.

Q. WHAT IS THE PURPOSE OF THIS TESTIMONY?

A. Arizona Water Company ("Arizona Water" or "the Company") asked me to review and to respond as appropriate to the May 25, 2005 surrebuttal testimonies of Mr. Alejandro Ramirez on behalf of the Arizona Corporation Commission ("ACC" or "Commission") Staff and Mr. William A. Rigsby on behalf of the Residential Utility Consumer Office ("RUCO").

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. In this Section I of my testimony, I summarize my testimony.

In Section II, I provide an update of my direct testimony to put my responses to Mr. Rigsby and Mr. Ramirez in perspective.

In Section III, I respond to Mr. Ramirez, and in Section IV I respond to Mr. Rigsby.

Q. DO YOU SPONSOR ANY TABLES AND EXHIBITS TO ACCOMPANY THIS REBUTTAL TESTIMONY?

A. Yes. I sponsor 11 rejoinder tables and five exhibits, which are attached to this

1 testimony and labeled TMZ-1 through TMZ-5.

2 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

3 **A.** I find the following:

4 (1) An update of the Federal Energy Regulatory Commission's 1-Step and 2-Step
5 DCF methods with current estimates of analysts' forecasts of growth and
6 sustainable growth indicates the cost of equity for a benchmark water utility
7 currently falls in a range of 10.2% to 10.4%. This is the same range I estimated In
8 June 2004 (Table 15 of my direct testimony).

9 (2) An update of the California Office of Ratepayer Advocate Staff's Risk
10 Premium model indicates the cost of equity for a benchmark water utility currently
11 falls in a range of 10.4% to 10.6%. At the time my direct testimony was prepared,
12 this range was 10.6% to 10.9%.

13 (3) The critical issue in this case is that methods and inputs to the equity cost
14 models Mr. Ramirez inherited from Staff members who are no longer at the
15 Commission produce equity cost estimates that are substantially lower than the
16 10.2% to 10.4% and 10.4% to 10.6% equity cost ranges made with methods used
17 by the federal and California government agencies. Those inputs and methods
18 bias downward reasonable equity cost estimates and should no longer be
19 accepted by the ACC.

20 (4) If Mr. Ramirez had based his DCF constant growth equity cost estimate on
21 the conceptually correct estimates of forward-looking growth he reports in
22 Surrebuttal Schedule AXR-6, the indicated cost of equity for a benchmark water
23 utility would be no less than 10.5%.

24 (5) It is incorrect to base forward-looking estimates of growth on past geometric
25 annual average growth rates. That choice biases downward equity cost
26 estimates.

(6) If Mr. Ramirez had included his own estimate of intrinsic growth (from
Surrebuttal Schedule AXR-4) in his multi-stage DCF analysis for 2007, 2008 and
2009 and used the conceptually correct measure of terminal growth computed
from his own data, his multi-stage DCF analysis would indicate the cost of equity
for a benchmark water utility is 9.9%.

(7) The average beta has increased from .68 to .71 since Mr. Ramirez prepared
his testimony. Even if Staff's DCF estimates are unchanged, the change in beta
estimates alone indicates Staff's overall estimate of Arizona Water's cost of equity
has increased from 9.1% to 9.3%.

(8) If the mismatch of interest rates in his current CAPM analysis is eliminated,
the indicated cost of equity based on the current cost of Treasury bonds is 10.1%.
If conceptually correct forecasts of Treasury bonds are relied upon, the indicated
cost of equity is 11.3%.

(9) The best available forecast of interest rates during the period new rates will

1 be in effect should be used to set rates for Arizona. The California PUC and I
2 agree published forecasts of interest rates provide better forecasts of future
interest rates than do stale rates that exist in April and May of 2005.

3 (10) If either Mr. Rigsby's estimate of "vs" growth is corrected (as I did in my
4 rebuttal testimony) or if an average of analysts' growth rates are combined with
Mr. Rigsby's dividend yield to estimate the DCF equity cost, Mr. Rigsby's DCF
5 equity cost increases. When an average of analyst's forecasts of growth are
relied upon, the indicated cost of equity is 10.5%.

6 (11) At page 33 of his surrebuttal testimony, Mr. Rigsby states the CAPM cost of
7 equity based on a current 4.52% long-term Treasury bond rate is 10.3%. It would
be higher if a conceptually correct forecast of Treasury bond rates were used to
8 make the estimate.

9 (12) The June 2005 AUS Monthly Utility Report reports that the average return on
equity of the six publicly traded water utilities used by Mr. Ramirez is 10.5%,
10 based on data at March 31, 2005. See Rejoinder Exhibit TMZ-5.

11 (13) Arizona Water is more risky than the benchmark water utility and should be
authorized a 50 basis point risk premium.

12 (14) Rejoinder Table 11 provides a summary of my updates of the FERC and
13 Risk Premium approaches and various equity cost estimates resulting from
restatements of equity cost estimates presented by Mr. Ramirez and Mr. Rigsby
in their direct and surrebuttal testimonies.

14 **Q. BASED ON YOUR UPDATED ESTIMATES OF THE COST OF EQUITY AND**
15 **YOUR RESTATEMENTS OF THE STAFF AND RUCO ESTIMATES, IS IT STILL**
16 **YOUR OPINION THAT 11.25% IS A REASONABLE RETURN ON EQUITY FOR**
17 **ARIZONA WATER?**

18 **A. Yes.**

19 **II. UPDATES OF EQUITY COSTS MADE WITH THE FERC AND CPUC**
20 **METHODS**

21 **A. The Critical ROE Estimation Issue in This Proceeding.**

22 **Q. AT PAGE 16 OF HIS SURREBUTTAL TESTIMONY, MR. RAMIREZ STATES**
23 **"THE METHODS EMPLOYED BY THE FERC AND THE CPUC ARE INFERIOR**
24 **TO STAFF'S." DO YOU HAVE A RESPONSE?**

25 **A. Yes. This is the critical ROE issue I wanted to place before the Arizona**
26 **Corporation Commission. Mr. Ramirez has inherited the methods he has used**

1 from ACC Staff members no longer at the Commission. *It is not the models, but*
2 *the choice of reasonable inputs for those models that produce reasonable equity*
3 *costs.* In presenting my testimony, I have deliberately used models and inputs the
4 Federal Energy Regulatory Commission ("FERC") and the California Public Utility
5 Commission ("CPUC") Staff would use, *not* the methods I prefer. I have
6 presented the FERC and CPUC models to bring out in the open the issue that
7 methods and inputs used by the ACC Staff produce unreasonable equity cost
8 estimates.

9 Throughout this rejoinder testimony and my rebuttal, I show that if more
10 reasonable inputs are used in the ACC Staff models, the equity costs estimates
11 are higher and close to the equity costs produced with the methods used by the
12 FERC and the California PUC. All of the "evidence" Mr. Ramirez talks about at
13 pages 16-17 of his testimony does not negate the fact that his ultimate equity cost
14 estimates are substantially lower than would be produced by the government
15 agency models I relied upon.

16 **B. Update of the FERC 1-Step Method.**

17 **Q. HAVE YOU UPDATED THE COST OF EQUITY ESTIMATES YOU MADE WITH**
18 **THE EQUITY COST ESTIMATION APPROACHES USED BY THE FEDERAL**
19 **ENERGY REGULATORY COMMISSION?**

20 **A.** Yes, I have.

21 **Q. PLEASE PROVIDE YOUR UPDATE OF THE FERC 1-STEP METHOD.**

22 **A.** The FERC 1-Step Method requires data on high and low average dividend yields
23 during the last 6 months, analysts' forecasts of growth and estimates of
24 sustainable growth (growth ACC Staff has called intrinsic growth). I have based
25 my update on high and low prices during period December 2004 to May 2005 and
26 current dividend yields.

1 Rejoinder Table 1 provides an update of analysts' forecasts of earnings per
2 share ("EPS") growth. I rely on four different investment services, *Zacks*,
3 *Thompson First Call*, *Standard & Poor's* and *Value Line Investment Services*,
4 which are widely followed by investors and therefore influence investor
5 expectations. This information provides one of the two measures of growth the
6 FERC uses to determine growth in its 1-Step method.

7 The other estimate of growth used by the FERC is sustainable growth. It is
8 found by adding together estimates of expected future growth from retained
9 earnings (called "br" growth by the FERC) and expected future growth from sales
10 of stock above book value (called "sv" growth by the FERC). Rejoinder Table 2
11 provides updates of the estimates of sustainable growth.

12 All of this information is combined in Rejoinder Table 3 to update the FERC
13 1-Step DCF analysis. Putting this information together, the indicated range of
14 equity costs for the water utilities sample is 9.6% to 11.2% and the average cost
15 of equity estimate is of 10.4%. Arizona Water is more risky than the water utilities
16 sample, and thus this evidence indicates the Company requires an ROE of no
17 less than 10.9%.

18 **Q. IN DOCKET W-02113A-04-0616 (CHAPARRAL CITY WATER), YOU ADOPTED**
19 **MR. RAMIREZ'S SPOT PRICES FOR YOUR UPDATE OF THE FERC 1-STEP**
20 **METHOD, WHY DIDN'T YOU DO THAT IN THIS CASE?**

21 **A.** In the Chaparral City case, the spot estimates of prices were approximately the
22 same as the average of prices during the last 6 months and thus I adopted Mr.
23 Ramirez's prices to avoid an issue with ACC Staff. In this docket, however, Mr.
24 Ramirez appears to have selected prices to depress his DCF ROE estimates. I
25 recently pointed out during cross examination during the Chaparral City case that
26 when analysts are permitted to use "spot" prices in DCF analyses, it is easy to

1 choose prices that bias equity costs up or down. The analyst can review prices
2 over a two week or three week period and choose relatively high (or low) prices to
3 push down (or up) dividend yields and claim he/she is simply taking the
4 "conceptually correct approach" to make his/her DCF estimate. It appears Mr.
5 Ramirez has done that in this docket. In the Chapparral City case, he chose
6 "spot" prices that produced an average dividend yield of 3.3% (Ramirez Schedule
7 AXR-8, Docket W-02113A-04-0616, dated May 5, 2005). That dividend yield is
8 slightly below the average of the dividend yields I compute with the correct FERC
9 approach. In this docket, however, only 20 days later, he has chosen "spot"
10 prices that produce an average dividend yield of only 3.0%, near the bottom of the
11 range of dividend yields. This choice is blatantly unfair to Arizona Water. It
12 appears to be designed to produce the same equity cost (9.1%) as he
13 recommended in his direct testimony, even though he now agrees that a negative
14 20 basis point ROE adjustment should not be made. To avoid this negative bias,
15 I have gone back to the method used by the FERC and have used an average of
16 6-month dividend yields in my update.

17 **C. Update of the FERC 2-Step Method.**

18 **Q. PLEASE PROVIDE YOUR UPDATE OF THE FEDERAL ENERGY**
19 **REGULATORY COMMISSION'S 2-STEP METHOD.**

20 **A.** My update of the FERC 2-Step method is provided in Rejoinder Table 4. I have
21 used an average of prices during the last six months to determine the prices in
22 column (a). Initial growth is the average of analysts' growth rates from Rejoinder
23 Table 1. The expected long-term average terminal growth is assumed to be equal
24 to the past arithmetic average growth rate in GDP of 6.8%. This arithmetic
25 average growth rate is computed from data in Mr. Ramirez's work papers. Below,
26 in response to Mr. Ramirez, I provide some examples that demonstrate why the

1 appropriate concept to use when determining future expected growth is the
2 *arithmetic* average, and not the past geometric average of 6.5% relied upon by
3 Mr. Ramirez.

4 **Q. WHAT EQUITY COST IS INDICATED BY THE UPDATE OF THE FERC 2-STEP**
5 **METHOD?**

6 A. The updated FERC 2-Step method indicates the cost of equity for the water
7 utilities sample is 10.2%. Arizona Water is more risky than the water utilities
8 sample and thus its equity cost is higher than 10.2%.

9 **D. Update of the California PUC Staff Risk Premium Method.**

10 **Q. PLEASE PROVIDE YOUR UPDATE OF THE RISK PREMIUM EQUITY COST**
11 **ESTIMATION APPROACH USED BY THE CALIFORNIA PUC OFFICE OF**
12 **RATEPAYER ADVOCATES.**

13 A. I provide that update in Rejoinder Table 6 based on current forecasts of interest
14 rates for 2006 presented in Rejoinder Table 5. The Office of Ratepayer
15 Advocates Staff of the California PUC has determined (1) that a good proxy for
16 the average cost of equity for the water utilities sample is an average of earned
17 ROEs for those companies and (2) that forecasts of interest rates should be used
18 to forecast the cost of equity when new rates will be in effect. Based on this
19 update, the indicated average cost of equity for the benchmark water utility is
20 10.5% and the indicated cost of equity for Arizona Water is not less than 11.0%.

21 I have already explained why I do not agree with the California PUC Staff
22 choice of realized ROEs as equity cost proxies. In theory, if utilities are
23 authorized rates and rate-adjustment mechanisms that give utilities a reasonable
24 opportunity to earn their costs of equity, on average, realized returns for a sample
25 of companies might provide a good proxy for the average cost of equity.
26 Unfortunately, in recent years, on average, water utilities have not made their

1 authorized ROEs and thus this measure of the cost of equity understates the
2 average authorized ROE. If all authorized returns were the result of litigated
3 cases in which the commissions gave appropriate weight to the evidence
4 presented to them, on average, those authorized ROEs would reflect market
5 costs of equity determined with various models by various stakeholders.
6 Authorized ROEs might understate the cost of equity because some of those
7 authorized ROEs may be the result of settlements in which utilities accept a lower
8 ROE in exchange for settlement of other issues. In this update, I also update
9 Table 11 in my direct testimony as Rejoinder Table 7 in which the cost of equity is
10 based on this proxy. This update indicates the average cost of equity for the
11 benchmark water utilities sample is 10.9% and Arizona Water's cost of equity is
12 no less than 11.4%.

13 The California PUC approach also recognizes that the relevant cost of
14 equity is the expected cost of equity when new rates will be in place, not the cost
15 of equity in April or May of 2005. California PUC Staff typically uses forecasts of
16 interest rates for the three years following the year in which the case is litigated.
17 For my analyses in Rejoinder Tables 6 and 7, I have used interest rate forecasts
18 for the first full year (2006) new rates will be in effect for Arizona Water. ACC
19 Staff has correctly pointed out that it is difficult to predict future interest rates.
20 However, using current rates to predict future rates, as Staff apparently says
21 should be done, does not avoid the problem of predicting interest rates in 2006.
22 Staff's use of today's interest rates effectively assumes that those interest rates
23 will remain unchanged in 2006 and subsequent years. The cost of equity should
24 be determined for the period when new rates will be in effect, not the cost of
25 equity prior to new rates being established. I have already addressed this issue in
26 my rebuttal testimony at pages 22-24.

1 California PUC Staff addresses the problem by using forecasts of interest
2 rates for the future years in which those new rates will be in place. In my opinion,
3 this is a more reasonable approach than putting one's head in the sand and
4 saying interest rates in 2006 will be the same as interest rates in May 2005 (as is
5 done by Mr. Ramirez), especially when investors generally expect future interest
6 rates to be higher. The crucial point, however, is that the California PUC Staff use
7 forecasts of interest rates to determine costs of equity. Therefore, an equity cost
8 based on the California PUC method must be based on forecasted rates.

9 **III. RESPONSE TO MR. RAMIREZ**

10 **Q. DO YOU HAVE A GENERAL RESPONSE TO MR. RAMIREZ?**

11 A. Yes. The DCF and Risk Premium/CAPM approaches Mr. Ramirez and I rely
12 upon to determine equity costs are much like empty mixing bowls used by cooks
13 to combine ingredients, mix batter and ultimately bake cakes. It is not the mixing
14 bowls, but the ingredients that are put into those bowls that determine if the cake
15 batter rises and, ultimately, if the cake is edible. I have presented equity costs
16 determined with the ingredients a federal agency (the FERC) and a large state
17 agency (the California PUC) put into those mixing bowls because I know it is an
18 uphill fight to challenge the "ingredients" used by ACC Staff. Unfortunately, Mr.
19 Ramirez has relied on ingredients suggested by John Thornton, a former
20 employee of the ACC Staff, to prepare his equity cost estimates. Those
21 ingredients are substantially different than the ones used by the FERC and the
22 CPUC to implement the models and bias downward the equity cost estimates. I
23 address seven of the inappropriate choices below:

24
25 (1) Mr. Ramirez has looked backward to determine the future when he had
26 useful evidence about what investors think will happen in the future. This choice
biases downward his equity cost estimates.

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(2) Mr. Ramirez relies on geometric averages instead of conceptually correct arithmetic averages. This choice biases downward both of his DCF equity cost estimates.

(3) Mr. Ramirez ignores his own estimates of future growth for 2007-2009 in his multi-stage DCF analysis and thus introduces a negative bias in his equity cost estimates.

(4) Mr. Ramirez mismatches interest rates in his CAPM approach and that mismatch biases downward the equity cost estimates.

(5) Mr. Ramirez ignores known empirical studies of the CAPM and used a measure of the risk free rate that is too low and thus biases downward his equity costs.

(6) Mr. Ramirez is unwilling to adopt unbiased measures of interest rates expected when new rates will be in effect for Arizona Water. When interest rates are expected to increase, this choice biases downward the cost of equity estimates.

(7) Mr. Ramirez no longer proposes a negative ROE adjustment for the Company, but is unwilling to acknowledge that Arizona Water is more risky than his sample of water utilities and thus further biases downward his equity cost estimates.

It is these choices of the wrong "ingredients" that make Mr. Ramirez's DCF equity cost estimates so much lower than DCF equity costs that are produced with the FERC 1-Step and 2-Step methods and make his CAPM estimates so much lower than equity cost estimates made with the Risk Premium method used by the California PUC Staff.

A. Mr. Ramirez Does Not Rely on Available Forward-Looking Estimates of Growth.

Q. DOES MR. RAMIREZ RELY ON FORWARD-LOOKING ESTIMATES OF GROWTH TO DETERMINE HIS CONSTANT GROWTH DCF EQUITY COST ESTIMATE?

A. No. In Surrebuttal Schedule AXR-6, he gives a 50% weight to historical growth and a 50% weight to forward-looking estimates of growth to determine his growth estimate of 5.8% for the constant growth DCF model.

1 Q. DOES THE FERC DO THAT?

2 A. No. The FERC correctly gives a 100% weight to forward-looking estimates of
3 growth in its 1-Step (constant growth) DCF method. This difference in
4 "ingredients" goes a long way to explain why methods used by the FERC produce
5 higher equity costs for the water utilities sample than is estimated by Mr. Ramirez.

6 Q. WHAT WOULD MR. RAMIREZ'S CONSTANT GROWTH DCF EQUITY COST
7 BE IF HE RELIED ONLY ON HIS FORWARD-LOOKING ESTIMATES OF
8 GROWTH?

9 A. The equity cost estimate would be no less than 10.5%. That estimate is based on
10 Mr. Ramirez's unadjusted dividend yield of 3.0% (Surrebuttal Schedule AXR-8)
11 and his average of projected growth rates of 7.5% (an average of 3.4% DPS
12 growth, 10.4% EPS growth and 8.8% intrinsic growth from Surrebuttal Schedule
13 AXR-6). Rejoinder Table 3 shows the FERC 1-Step (constant growth) method
14 indicates virtually the same equity cost estimate of 10.4%. Mr. Ramirez's
15 negatively biased constant growth DCF equity cost estimate of only 8.8%
16 (Surrebuttal Schedule AXR-8) is the result of choosing different ingredients (both
17 dividend yields and growth rates) than would be used by the FERC.

18 B. Mr. Ramirez Relies on Incorrect Geometric Averages to Determine
19 Growth Rates.

20 Q. AT PAGES 8 AND 9 OF HIS SURREBUTTAL TESTIMONY, MR. RAMIREZ
21 PRESENTS AN EXAMPLE TO SUPPORT HIS CHOICE OF GEOMETRIC
22 ANNUAL AVERAGES TO DETERMINE FORWARD-LOOKING ESTIMATES OF
23 GROWTH IN HIS DCF MODELS. WHAT IS THE RESULT OF THIS CHOICE?

24 A. Geometric annual averages bias downward the equity cost estimates. Mr.
25 Ramirez calculates geometric annual averages to determine forward-looking
26 estimates of growth from past growth in dividends per share ("DPS"), earnings per

1 share ("EPS") (Surrebuttal Schedule AXR-3), and stage 2 growth in his multi-
2 stage growth analysis (Surrebuttal Schedule AXR-7). These choices depress his
3 DCF equity cost estimates.

4 A geometric annual average is the correct method to express what has
5 happened in the *past*. It compares the ending value of an asset with the value of
6 the asset at the beginning of a period and converts the total return over several
7 years into an annual average return. If, however, an investor expects growth and
8 variability in growth that occurred in the past to continue into the future, the
9 required ROE must be based on the arithmetic annual average. If the ROE is set
10 to earn only the geometric average annual growth rate, the expected growth
11 cannot be achieved if there is any variability in annual growth. I have prepared
12 Rejoinder Tables 8 and 9 to demonstrate that the correct ingredient to use in both
13 of the DCF approaches is the arithmetic annual average.

14 The geometric annual average is computed by comparing the ending and
15 beginning value of an asset. Rebuttal Table 8 shows an obvious problem with
16 using this concept to reflect the return investors require in the future. In this table,
17 the asset in Mr. Ramirez's example at page 9 and a lower risk asset have the
18 same beginning and ending values and thus each of the assets has the same
19 geometric annual average return of 0.0%. But the lower risk asset is far less risky
20 than the asset in Mr. Ramirez's example. Going forward, a risk-averse investor
21 would certainly prefer an asset that has a potential return of +25% or -20% far
22 more than an asset with a potential annual return of +100% or -50%. Additionally,
23 it should be obvious that an expected (forward-looking) return of only 0.0% is not
24 satisfactory for investors holding either risky asset. Not only is there a time value
25 of money that demands expected compensation, but also the uncertainty of future
26 outcomes indicated by past variability in returns requires compensation.

1 Something is missing in Mr. Ramirez's example.

2 Rejoinder Table 9 demonstrates that if this past data is to be used to
3 estimate future required returns, both the variability in growth as well as the
4 difference between beginning and ending values of assets must be recognized.

5 **Q. HOW IS REJOINDER TABLE 9 DIFFERENT FROM MR. RAMIREZ'S**
6 **EXAMPLE?**

7 **A.** In Mr. Ramirez's example, he shows that an asset which had past returns of
8 +100% and -50% has a terminal value that is the same as the beginning value.
9 Rejoinder Table 9 assumes investors would take that information into account
10 when they determined what return they required from such an asset in the future.
11 Assuming investors expect either a -50% return or a +100% return in all future
12 years, investors could expect a 25% chance that \$10 investment would yield a
13 value as high as \$40 in two years, a 50% chance it will provide a zero return and
14 a 25% chance that the \$10 investment would be worth only \$2.50. Rejoinder
15 Table 9 demonstrates these 4 possible expected end-of-period asset values after
16 two years. Mr. Ramirez's example assumes that out of four possible outcomes,
17 only one would be expected by investors. Prudent investors would determine the
18 expected *future* value of the asset by taking into account all four of the possible
19 outcomes. In contrast to Mr. Ramirez's incomplete example, the weighted
20 average expected ending value of the asset that is relevant to the investor is
21 \$15.625, *not* \$10. Thus, the expected annual required return is 25%, not 0%. If
22 this were a utility and a return less than 25% were authorized for the utility, it
23 could not expect to achieve the ending value of \$15.625 and investors would not
24 pay \$10 for the stock at the beginning of the period.

25 Rejoinder Table 9 also shows the various expected outcomes for a
26 Treasury bond. In this case, however, investors expect the same return year after

1 year and the geometric average annual return (6%) is the same as the arithmetic
2 average annual return (6%). The only time the two annual average returns are
3 the same is when the same exact return is expected every year. Since investors
4 will expect there will be year-to-year variation in returns for utility stocks, the
5 arithmetic average annual return (the required return) will always be greater than
6 the geometric average annual return.

7 **Q. ARE YOU AWARE OF AUTHORITIES WHO HAVE CONCLUDED ARITHMETIC**
8 **ANNUAL AVERAGES SHOULD BE USED?**

9 A. Yes. Professors Brealey and Myers, in the Seventh Edition of their widely-used
10 finance textbook, *Principles of Corporate Finance* (2003), at 156-157, and
11 Ibbotson Associates in the *2005 SBBI Valuation Edition Yearbook*, at pages 75-
12 77, provide further discussion of this issue and present examples similar to the
13 example I provide in Rejoinder Table 9. I have attached copies of these materials
14 as Rejoinder Exhibits TMZ-1 and TMZ-2, respectively. Both indicate Mr.
15 Ramirez's approach is incorrect and will bias the return downward.

16 **Q. WHAT IS YOUR CONCLUSION ABOUT MR. RAMIREZ'S USE OF**
17 **GEOMETRIC AVERAGE ANNUAL RETURNS TO ESTIMATE HIS DCF EQUITY**
18 **COSTS?**

19 A. It is one of several ways his choice of "ingredients" depress his equity cost
20 estimates.

21 **C. By Ignoring Known Information About Future Growth, Mr. Ramirez**
22 **Has Biased Downward His Multi-Stage DCF Estimate.**

23 **Q. HAS MR. RAMIREZ IGNORED ANY KNOWN INFORMATION THAT**
24 **PRODUCES A BIAS IN HIS MULTI-STAGE DCF EQUITY COST ESTIMATE?**

25 A. Yes, he has. In Surrebuttal Schedule AXR-4, Mr. Ramirez provides projected
26 intrinsic growth rate estimates for each of the water utilities in his water utilities

1 sample that average 8.8%. Based on his work papers, this is growth that Mr.
2 Ramirez has determined is expected to occur for those utilities during the period
3 2007 to 2009. But instead of including that information in his multi-stage DCF
4 analysis, he assumes average growth will initially be only 3.7%, and after 2008
5 will be 6.5%. His projected growth of 8.8% for 2007 to 2009 is totally ignored.
6 Obviously, if the projected 8.8% growth had somehow been taken into account,
7 his DCF equity cost estimate would be higher because 8.8% is larger than either
8 3.7% or 6.5%.

9 At page 10 of his surrebuttal, Mr. Ramirez criticizes me for modifying his
10 multi-stage DCF analysis to take this known, projected growth into account and
11 for assuming such growth would continue for several years past 2009. Mr.
12 Ramirez, however, doesn't take that growth rate into account at all. Had Mr.
13 Ramirez assumed such growth would have continued during even the three-year
14 period Mr. Ramirez indicates is expected by investors, the multistage DCF equity
15 cost would increase from 9.3% to 9.6%. Furthermore, if he had used the correct
16 terminal growth rate of 6.8% (again, based on *arithmetic* average annual growth,
17 as discussed above), his multi-stage DCF equity cost estimate would be 9.9%.
18 This estimate would be higher if he had used more representative stock prices
19 (and thus a dividend yield above 3.0%) to conduct his DCF analysis. The 9.9%
20 ROE estimate is just 30 basis points below the FERC 2-step (multi-stage growth)
21 equity cost estimate of 10.2% (see Rejoinder Table 4). In this case, it is negative
22 bias from three inappropriate choices of "ingredients" (a biased choice of
23 representative stock prices, no recognition of higher growth expected during
24 2007-2009, and biased terminal growth) that Mr. Ramirez has used to determine
25 his equity costs that depress his equity cost estimates.
26

1 D. The Mismatch of Interest Rates Mr. Ramirez Uses to Determine His
2 "Current" Market Risk Premium for His CAPM Approach Biases
3 Downward His Equity Cost Estimate.

4 Q. AS A PRELIMINARY ISSUE, HAVE BETAS FOR THE WATER UTILITIES
5 CHANGED SINCE MR. RAMIREZ PREPARED HIS TESTIMONY?

6 A. Yes. *Value Line* updates beta estimates every thirteen weeks. In its most recent
7 update, betas for four of the six water utilities in Mr. Ramirez's sample increased.
8 The average beta for the water utilities' sample is now .71 instead of .68. This
9 update alone increases Mr. Ramirez's CAPM estimate from 9.2% to 9.5%. Even
10 if his DCF estimate of 9.0% is unchanged, based on this new information on
11 betas, his overall equity cost estimate for Arizona Water increases from 9.1% to
12 9.3%.

13 Q. PLEASE EXPLAIN THE MISMATCH ISSUE?

14 A. The CAPM requires a choice of the measure of the "risk free" rate, "Rf." The
15 formula is

$$\text{Equity cost} = R_f + \text{beta} \times [E(R_m) - R_f]$$

16 where the E(R_m) is the expected return for the market portfolio. Mr. Ramirez
17 uses the term "Rp" (an abbreviation for "risk premium") in place of the term
18 [E(R_m) - R_f]. Mr. Ramirez states he has used an average of intermediate term
19 Treasury rates as his measure of the risk free rate to make his CAPM estimates.
20 However, that is not true.

21 I examined his work papers and discovered he has indeed used an
22 average of intermediate-term Treasury rates to determine his measure of R_f (the
23 risk free rate), but has used an estimate of the *long-term Treasury rate* to
24 determine the estimate of the risk premium (Rp). This mismatch is another way
25 Mr. Ramirez depresses his cost of equity estimates. If either the long-term
26 Treasury rate (4.55%) or the intermediate-term Treasury rate (4.0%) were used to

1 make estimates of *both* the risk premium and the risk free rate, Mr. Ramirez's
2 CAPM equity cost would be higher. In Surrebuttal Schedule AXR-8, he reports
3 the current risk premium is 7.8% when the long-term Treasury rate is used to
4 estimate the risk premium. If the long-term Treasury rate were also the choice for
5 risk free rate, the cost of equity estimate would increase from 9.3% to 9.9%, as is
6 shown below:

7
$$\text{Equity cost} = 4.55\% + .68 \times 7.82\% = 9.9\%$$

8 With the updated average beta, the revised equity cost is 10.1%, found as follows:

9
$$\text{Equity cost} = 4.55\% + .71 \times 7.82\% = 10.1\%.$$

10 Alternatively, if Mr. Ramirez had estimated the current risk premium as the
11 difference in expected market returns and the intermediate term Treasury rate of
12 4.0%, his equity cost estimate would increase from 9.3% to 9.7% as shown
13 below:

14
$$R_p = E(R_m) - R_f = 12.37\% - 4.0\% = 8.4\%,$$

15 and, thus

16
$$\text{Equity cost} = 4.0\% + .68 \times 8.4\% = 9.7\%.$$

17 With the updated average beta, the revised equity cost is 10.0%, found as follows:

18
$$\text{Equity cost} = 4.0\% + .71 \times 8.4\% = 10.0\%.$$

19 In short, had Mr. Ramirez used the *same* Treasury rate to estimate both
20 the risk free rate and the risk premium, his current CAPM equity cost estimate
21 would increase by either 40 or 60 basis points. In my rebuttal testimony, at pages
22 18 – 21, I have explained why the correct measure of the risk free rate is no less
23 than the long-term Treasury rate and thus a correct restatement of the CAPM
24 equity cost is no less than 9.9%. This mismatch in Treasury rates creates a very
25 serious negative bias in Mr. Ramirez's current CAPM equity cost estimate.

26 Q. DO YOU HAVE ANY OTHER COMMENTS ABOUT THIS CAPM COST OF

1 **EQUITY ESTIMATE?**

2 A. Yes. I pointed out in my rebuttal testimony, at page 25, that this method of
3 determining the cost of equity is extremely unstable.¹ For example, if Mr.
4 Ramirez had updated this risk premium estimate with data provided by *Value Line*
5 on May 6, 2005 instead of May 11, 2005, the method Mr. Ramirez relies upon to
6 determine the current risk premium would indicate the current market risk
7 premium is 8.72%. When Mr. Ramirez prepared his direct testimony in this case,
8 this method indicated the current risk premium was 6.47%. By May 6, 2005, the
9 current risk premium had increased by 225 basis points and, because the beta
10 and Rf had not changed, the indicated cost of equity had increased by 153 basis
11 points. Mr. Ramirez, however, has chosen to use data from May 11 instead of
12 May 6. But even with that choice, the risk premium has increased by 135 basis
13 points and the indicated cost of equity for the water utilities sample has increased
14 by 92 basis points. Because the method is so unstable, it allows ACC Staff to
15 pick and choose the *Value Line* data used in the analysis and depress the equity
16 cost estimate if it chooses to do so. In this case, by choosing data published on
17 May 11 instead of May 6, Mr. Ramirez depresses the cost of equity estimate by
18 43 basis points (135 – 92).

19 **Q. WHAT WOULD THE CURRENT CAPM COST OF EQUITY BE IF IT IS BASED**
20 **ON MR. RAMIREZ'S DATA, THE UPDATED AVERAGE BETA AND**
21 **FORECASTED TREASURY BOND RATES?**

22 A. It would be 11.3%, found as follows:

23 Equity Cost = 5.73% + .71 x 7.82% = 11.0%

24 Moreover, the cost of equity estimate would be 11.9% if Mr. Ramirez had relied

25 _____

26 ¹ I offered an alternative approach based on various DCF studies of the *Value Line* Industrial Composite which provides a more stable estimation approach.

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upon data *Value Line* published May 6th to determine his risk premium (5.73% + .71 x 8.72%).

Q. DO YOU HAVE ANY OTHER COMMENTS ABOUT STAFF'S CURRENT CAPM COST OF EQUITY ESTIMATE?

A. Yes. At page 7 of his surrebuttal testimony, Mr. Ramirez challenges my comparison of Staff's estimate of a 9.2% ROE in Arizona-American Water Company's last rate case, Docket No. WS-01303A-02-0867 *et al.*, when the Staff measure of the risk free rate was only 3.3%, with Staff's current estimates of the cost of equity by saying the estimate in the Arizona-American Water case was "mainly influenced by a current market risk premium of 13.1%." He does not, however, explain why the 13.1% market risk premium was less valid for setting rates than was the 7.6% updated market risk premium that pushed Staff's updated CAPM estimate downward by 60 basis points less than two months later.

In that case (and in Arizona Water's prior rate case for its Eastern Group), Staff used the same *method* to determine the "current" market risk premium. In this proceeding, Staff's "current" market risk premium has ranged from 6.47% to 8.72% and may be higher by the time this case goes to hearing.

Q. USING MR. RAMIREZ'S TWO CAPM METHODS, THE UPDATED BETA OF .71, THE LONG-HORIZON MARKET RISK PREMIUM OF 7.2% AND HIS CURRENT LONG-TERM TREASURY BOND RATE OF 4.55%, WHAT IS THE RESULTING AVERAGE CAPM EQUITY COST ESTIMATE?

A. Mr. Ramirez's CAPM cost estimate is 9.9%, 70 basis points higher than he reports:

CAPM Historic Market Risk Premium	9.7%
CAPM Current Market Risk Premium	<u>10.1%</u>
Average	<u>9.9%</u>

1 The average would increase to 11.1% if conceptually appropriate forecasts of
2 interest rates were used in the analysis.

3 **E. Mr. Ramirez Has Ignored Known Empirical Studies of the CAPM and**
4 **Used a Measure of the Risk Free Rate That Is Too Low.**

5 **Q. IN THE PRIOR SECTION OF YOUR REJOINDER TESTIMONY YOU MADE MR.**
6 **RAMIREZ'S CAPM ESTIMATES INTERNALLY CONSISTENT BY USING**
7 **LONG-TERM TREASURY RATES TO ESTIMATE BOTH THE R_f AND R_p . IS**
8 **THERE EMPIRICAL SUPPORT FOR USING LONG-TERM TREASURY RATES**
9 **IN THE CAPM?**

10 A. Yes, there is. Years before Mr. Ramirez graduated from business school, there
11 were numerous studies that showed the required return for the "zero-beta" asset
12 (the risk free rate) was not less than the rate on long-term Treasury bonds. For
13 example, Professor Sharpe, one of the scholars who developed the CAPM,
14 reported that the return for the zero beta asset was significantly higher than
15 average returns for short-term, intermediate-term and long-term Treasury
16 securities (William Sharpe, *Investments*, (3rd ed. 1985) at page 401). Other
17 studies have similarly indicated that the returns predicted by the standard CAPM
18 for low beta stocks, like the sample water utilities, are too low relative to required
19 returns for average risk stocks.²

20 By choosing intermediate term Treasury securities for his CAPM analysis,
21 Mr. Ramirez has ignored empirical studies of CAPM. He apparently adopted an
22 approach used by Mr. Thornton, a former employee of the ACC Staff, who also
23 ignored those empirical studies in testimony he presented in various states. Mr.

24 ² A summary of these empirical studies and the shortcomings of the CAPM is
25 found in Eugene F. Fama and Kenneth R. French, "The Capital Asset Pricing
26 Model: Theory and Evidence," *Journal of Economic Perspectives*, 18:2 (Summer
2004), page 25 – 46. The authors conclude that the CAPM's empirical problems
invalidate its use in most applications.

1 Ramirez has apparently chosen not to recognize this deficiency in Mr. Thornton's
2 approach and thus continues to use "ingredients" that depress the ACC Staff
3 equity cost estimates.

4 **Q. AT PAGE 11, MR. RAMIREZ SAYS THE CAPM IS A HOLDING PERIOD**
5 **MODEL THAT JUSTIFIES NOT USING LONG-TERM TREASURY SECURITIES**
6 **IN THE ANALYSIS. DO YOU HAVE A RESPONSE?**

7 A. Yes, I have two responses. First, as pointed out above, Mr. Ramirez *did* use
8 long-term Treasury securities in its CAPM analysis. Either this choice was made
9 because Staff believed it was appropriate to do so or it was done to depress its
10 equity cost estimates. Second, as I explained in my rebuttal testimony at pages
11 21-22, the horizon of the chosen security should match the horizon of what is
12 being valued, not the investor's holding period. I provided a quotation from
13 *Ibbotson Associates 2005 Valuation Edition Yearbook* supporting this point. If

14 investors are interested in a return for a 5-10 year period, they will be concerned
15 about the value of the asset at the end of the period when they expect to sell it.
16 And, that value *for a common stock* will *unavoidably* depend on the present value
17 of expected future earnings of the company at the end of that holding period. If
18 investors have 5-10 year holding periods, it does not change the fact that the
19 expected value of the stock at the end of the period will be a major factor
20 determining the expected holding period return.

21 **Q. WHEN THE COMMISSION CONSIDERS THE ACC STAFF'S CAPM**
22 **ESTIMATES WHAT SHOULD IT DO?**

23 A. I recommend that the CAPM not be used. Instead, I recommend the Commission
24 base its risk premium equity cost estimate on a method that estimates the risk
25 premium directly. The CAPM estimates the risk premium indirectly and requires
26 numerous assumptions to implement. But if the CAPM is to be used, the

1 Commission should first make the CAPM estimates internally consistent by using
2 the *same* value for the risk free rate for Rf and the market risk premium (Rp).
3 Second, given the known empirical evidence, it should determine those CAPM
4 estimates with the long-term Treasury rate. Third, as I have explained in both my
5 direct and rebuttal testimony, it should use forecasts of long-term Treasury rates
6 for the period in which new rates for Arizona Water will be in place, not stale
7 information on interest rates in February, April or May 2005.

8 **F. Mr. Ramirez Is Unwilling To Adopt Unbiased Measures Of Interest**
9 **Rates Expected When New Rates Will Be In Effect For Arizona.**

10 **Q. PLEASE CONTINUE WITH YOUR LAST POINT. WHY IS IT IMPORTANT TO**
11 **ADOPT FORECASTED INTEREST RATES?**

12 A. It is important because future rates for Arizona Water should be based on its cost
13 of capital when new rates are in place, not interest rates that existed many
14 months before those rates will be set. This is especially important when interest
15 rates are expected to increase.

16 **Q. AT PAGE 12, MR. RAMIREZ OFFERS AN EXAMPLE HE CLAIMS SUPPORTS**
17 **THE REJECTION OF INTEREST RATE FORECASTS. DO YOU HAVE A**
18 **RESPONSE?**

19 A. Yes. Mr. Ramirez compares *Blue Chip* interest rate forecasts made in June 2002
20 with an average of actual interest rates for 2003 and 2004 and found the
21 forecasts were higher than the rates that actually occurred. That was just one
22 forecast made in 2002. However, he fails to point out that the ACC Staff in 2003
23 provided evidence that shows if forecasts for a number of years are considered,
24 the average of the forecasts is not biased. At page 49 of his direct testimony,
25 dated September 5, 2003, filed in Arizona-American Water Company's recent rate
26 case, in Docket No. WS-01303A-02-0867, *et al.*, Staff witness Joel Reiker

1 presented Chart 4 that compared *Blue Chip Financial Forecasts* consensus
2 forecasts of Aaa corporate bond rates to actual rates for the period 1999 to 2003.

3 The data underlying the chart are provided below:

4

<u>Year</u>	<u>Projected Rate</u>	<u>Actual Rate</u>	<u>Difference</u>
1999	6.9%	7.05%	-0.15%
2000	6.8%	7.62%	-0.82%
2001	6.6%	7.08%	-0.48%
2002	6.6%	6.49%	0.11%
2003	6.6%	5.94%	0.66%

5
6
7

8 These data show that in three years the projected *Blue Chip* interest rates were
9 lower than actual rates and in the other two years projected rates were higher
10 than subsequently occurred. This earlier ACC Staff study found that when five
11 years of forecasts are considered (instead of just one period examined by Mr.
12 Ramirez), on average the *Blue Chip* projections of future rates were slightly below
13 the rates that actually occurred. This evidence provides strong support for the
14 consensus forecasts being unbiased, and certainly not working against the
15 interests of ratepayers.

16 But Mr. Ramirez's focus on the fact that it is difficult to forecast interest
17 rates (which I do not dispute) ignores the real issue. That issue is what is the best
18 available evidence to forecast what interest rates will be when new rates are in
19 effect for Arizona Water. Is it a forecast of the future interest rate expected when
20 new rates are established or is it stale interest rates that exist many months
21 before the new rates go into effect? The California PUC has determined it is the
22 former and uses interest rate forecasts to determine costs of equity for periods
23 when new rates will be in place. I agree that interest rate forecasts provide the
24 best evidence about what those future interest rates will be. This is especially
25 true in a period following the lowest interest rates since 1963. Relying on "actual"
26 market interest rates in early 2005 does not solve the problem of uncertainty

1 about what the interest rates will be in 2006 and later, when Arizona Water's new
2 rates will be in effect. When interest rates are generally expected to increase, the
3 Staff approach depresses the cost of equity estimates.

4 **G. Mr. Ramirez Is Unwilling To Acknowledge That Arizona Water Is More**
5 **Risky Than His Sample Of Water Utilities.**

6 **Q. DO YOU HAVE A RESPONSE TO MR. RAMIREZ'S TESTIMONY STARTING**
7 **AT PAGE 13 REGARDING ARIZONA'S ABOVE AVERAGE RISKS?**

8 A. Yes. Mr. Ramirez relies solely on beta risk as his measure of risk. He is unwilling
9 to consider two factors. One is that it is far more likely that the "unique" risks he
10 assumes are "non-market risks" could increase the unknown beta risk for Arizona
11 Water than that they can simply be diversified away. The other is that a number
12 of studies show beta risk is not the only risk that is priced by investors and thus
13 there are "systematic risks" other than beta that are important to investors. I have
14 already addressed these issue at page 25 of my rebuttal testimony and do not
15 repeat that testimony again.

16 **Q. STARTING AT PAGE 19, MR. RAMIREZ OFFERS A NUMBER OF POINTS HE**
17 **CONTENDS SHOWS THE ISSUE OF ARIZONA WATER'S SERIES K BONDS**
18 **DO NOT SUPPORT THE NEED FOR A RISK PREMIUM OF AT LEAST 37 TO**
19 **49 BASIS POINTS. DO YOU HAVE A RESPONSE?**

20 A. Yes. First, it is important to note that Mr. Ramirez is no longer recommending a
21 negative risk premium for Arizona Water. He now recommends Arizona Water
22 be authorized the same ROE as the water utilities sample he uses to determine
23 equity costs. But undoubtedly Arizona water is more risky, and the 37 to 49 basis
24 point risk premium required to place its series K bonds shows it also requires at
25 least a 37 to 49 basis point risk premium for common equity. Mr. Ramirez offers
26 two incorrect reasons the risk premium revealed by the bond issue should be

1 ignored.

2 **Q. WHAT IS THE FIRST CONTENTION?**

3 A. Mr. Ramirez contends that because corporate bonds contain some default risk—
4 and the default risk can be diversified away—the risk premium revealed by the
5 bonds is not relevant. That's nonsense. A study I presented to this Commission
6 in Arizona Water's 2002 rate case (W-1445A-02-0619) shows that rates on
7 corporate bonds with default risk provide a better explanation of the equity costs
8 of a wide cross section of utility common stocks than do Treasury rates which
9 have no default risk. Even if (as Mr. Ramirez speculates) there are differences in
10 default risk for the various utilities, the corporate bonds still provide the better
11 explanation of the cost of equity. The results of my study are shown in Rejoinder
12 Table 10. I found that for both the period 1982 to 2002 and the period 1999 to
13 2002, Baa corporate bond rates provide a better explanation of equity costs than
14 do 10-year Treasury rates. The higher R²'s indicate the corporate bonds provide
15 the better explanation. In the more recent four-year period, the relative
16 performance of Baa rates compared to 10-year Treasury securities was much
17 stronger. Though both measures of interest rates still provided statistically
18 significant explanations of the cost of equity, Baa rates are clearly preferred.

19 Mr. Ramirez makes an interesting point about default risk, but the results in
20 Rejoinder Table 10 show that even though that default risk is present, equity costs
21 are expected to increase when bond rates increase. The result in Rejoinder
22 Table 10 as well as common sense tell us that, contrary to Mr. Ramirez
23 speculation at page 19, a comparison of bond rates and equity costs is
24 meaningful and thus higher bond rates indicate higher costs of equity. Arizona
25 Water has a higher cost of bonds than do the utilities in the benchmark sample
26 and thus it requires an equity risk premium of at least 37 to 49 basis points.

1 **Q. WHAT IS MR. RAMIREZ SECOND CONTENTION?**

2 A. Mr. Ramirez second contention is that the higher cost of bonds is the result of
3 "liquidity risk" that results from a private placement of bonds. The quotation Mr.
4 Ramirez presents at page 20 of his testimony implies the higher cost of the
5 private placement is partly the result of Arizona Water passing along part of the
6 cost-savings from a private issue to the institution that bought the bonds. This
7 statement applies to utilities that are large enough to have a choice of going
8 public with bond issues or making private placements. I doubt Arizona Water
9 could make a public bond issue offering. But even if it could, Mr. Ramirez offers
10 no evidence that the interest rate required by investors in such a bond issue
11 would be any less than Arizona Water obtained with the series K bond placement.
12 Realizing the cost of such a hypothetical public bond issue would be higher than
13 the cost of the series K bonds, it is clear that the quotation about "liquidity risk"
14 does not apply. With either the series K bonds or the hypothetical bond issue,
15 Arizona Water was unable (or would be unable) to issue bonds at a rate as low as
16 A-rated utilities or AA-rated utilities.

17 **Q. AT PAGE 18, MR. RAMIREZ ALSO CONTENDS YOU HAVE NOT**
18 **ACCOUNTED FOR HIGHER FINANCIAL RISK OF ARIZONA WATER. DO**
19 **YOU HAVE A RESPONSE?**

20 A. Yes, I have three responses. First, Mr. Ramirez has wisely removed his negative
21 risk adjustment for Arizona Water that he initially based on a consideration of
22 financial risk. As a result, the leverage adjustment is no longer an issue.

23 Second, it is nonsense to suggest there should be a negative ROE
24 adjustment for leverage when a utility is unable to issue bonds at a cost as low as
25 the benchmark sample utilities. Clearly, Arizona Water has more business risk
26 than the sample and that business risk overwhelms any benefit from lower

1 leverage.

2 Third, any such adjustment must be based on the *market* values of equity
3 and debt, *not* book values of equity and debt. Staff has incorrectly based its
4 leverage adjustment on book values. Also, a correct analysis would have to
5 recognize that the market value of equity for a privately-held utility is lower than
6 the market value of equity for that same utility if it were publicly traded.
7 Professional appraisers routinely value minority interests in privately held firms by
8 reducing the value of the firm by a factor that accounts for a "lack of
9 marketability." One appraisal I reviewed made such an adjustment by noting
10 sales of equity of privately-held companies were in the range of 26% to 36% less
11 than the values of common equity of those companies at the time of subsequent
12 initial public offerings. Mr. Ramirez does not know what the common stock for
13 Arizona Water would sell for if it were publicly traded. But whatever that price
14 would be, the value of the equity would also need to be reduced by 26% to 35%
15 to account for a lack of marketability. Contrary to Staff's incomplete approach, an
16 appropriate specification of the market value of Arizona Water's capital structure
17 components may well indicate the need for a *positive* risk premium once
18 discounts for a lack-of-marketability were recognized.

19 **IV. RESPONSE TO MR. RIGSBY**

20 **Q. AT PAGE 30, MR. RIGSBY CLAIMS THAT BECAUSE ARIZONA WATER WAS**
21 **ABLE TO ISSUE THE SERIES K BONDS THERE IS NO NEED TO PROVIDE A**
22 **RISK PREMIUM OF AT LEAST 37 TO 49 BASIS POINTS. DO YOU HAVE A**
23 **RESPONSE?**

24 **A.** Yes. Mr. Rigsby is ignoring the real issue. The issue is not that Arizona Water
25 was ultimately able to place the bonds. The issue is that even after many months
26 of seeking a buyer, the best interest rate the Company was able to get was 37 to

1 49 basis points higher than the rates utilities in the water utilities sample could
2 obtain. This is a known fact, which indicates Arizona Water requires a positive
3 equity cost risk premium of at least 37 to 49 basis points above the cost of equity
4 for the benchmark sample.

5 **Q. DO YOU HAVE A RESPONSE TO MR. RIGSBY'S COMMENTS ABOUT YOUR**
6 **RESTATEMENT OF HIS DCF ESTIMATES?**

7 A. Yes. I replaced his personal opinion about future share growth ("s") with data he
8 reported for past and future expected growth in shares (reported in Schedule
9 WAR-5) and revised his estimate of "vs" growth. I also restated his "br" growth
10 estimates with the FERC method to recognize that *Value Line* reports ROEs
11 based on year-end equity. With this revision in "vs" growth and small revision in
12 "br" growth, his DCF equity cost increased to 10.9%. At page 31, Mr. Rigsby
13 dismisses my restatement of his estimates of "vs" growth and "br" growth rates by
14 comparing the growth rates he relied upon to analysts' forecasts of growth. He
15 says this check on his estimate of growth shows no increase in the estimate of
16 sustainable growth is merited. Rejoinder Table 1 shows the current average of
17 analysts' forecasts for the three water utilities in his sample is 7.6%. The average
18 of dividend yields reported by Mr. Rigsby for his sample is 2.94% (Rigsby
19 Schedule WAR-3).³ Combining Mr. Rigsby's average dividend yield with the
20 average of analysts' forecasts of growth indicates a cost of equity of 10.54%, 110
21 basis points above his recommended ROE of 9.44% and just above the range of
22 updated equity costs of 10.2% to 10.4% made with the FERC 1-Step and 2-Step
23 models. Using analysts' forecasts of growth for his sample to determine the DCF
24 cost of equity estimate produces an estimate that is only 36 basis points less than

25
26 ³ Recent prices for his water utilities sample are comparable to prices he relied upon.

1 I reported in my Rebuttal Table 16. A reasonable cost of equity estimate for his
2 sample based on his DCF model is no less than 10.5%.

3 **Q. AT PAGE 32, MR. RIGSBY STATES THAT A STUDY HE MADE SHOWS**
4 **MARKET-TO-BOOK RATIOS ARE MOVING TOWARD 1.0 AND THUS HIS**
5 **ADJUSTMENT TO vs GROWTH IS MERITED. IS HE CORRECT?**

6 A. No, he is not. I have attached as Rejoinder Exhibit TMZ-3 a chart that shows an
7 average of market-to-book ratios for his sample utilities for the period 1991 to
8 2004. It clearly shows market-to-book ratios are not moving back toward 1.0. I
9 reviewed Mr. Rigsby's work papers supporting his Attachment E and found he
10 had not properly recognized stock splits in his study. This error led to the error in
11 his Attachment E chart.

12 **Q. DO YOU HAVE A RESPONSE TO HIS COMMENTS ABOUT YOUR**
13 **RESTATEMENT OF HIS CAPM EQUITY COST ESTIMATE?**

14 A. Yes. I explained above why arithmetic average annual returns are required to
15 make correct equity cost estimates, and have attached as Rejoinder Exhibits
16 TMZ-1 and TMZ-2 excerpts from two texts supporting the use of arithmetic
17 average annual returns. In his direct testimony, Mr. Rigsby correctly says he
18 believes "that the consensus among financial analysts appears to be that the
19 arithmetic mean is the better of the two [geometric and arithmetic] averages."
20 (Rigsby Dt. at page 26.) At page 33 of his surrebuttal testimony, Mr. Rigsby notes
21 the CAPM cost of equity based on a 4.52% long-term Treasury bond rate is
22 10.3% based on the arithmetic mean. His estimate is slightly below the updated
23 cost of equity range I made in Rejoinder Table 6 of 10.4% to 10.6% with the
24 California ORA Staff risk premium model.

25 **Q. DOES MR. RIGSBY ARGUE IN FAVOR OF RATES FOR LONG-TERM**
26 **TREASURY BONDS AS THE MEASURE OF THE RISK FREE RATE?**

1 A. No, he does not. He continues to argue in favor of 91-day Treasury rates as the
2 appropriate measure of the risk free rate, even though there is substantial
3 evidence it is not. The use of a 91-day Treasury rate in the CAPM creates a
4 severe downward bias in the model. I addressed this issue on pages 39-40 of my
5 rebuttal testimony and do not again restate the reasons short-term rates should
6 not be used.

7 **Q. DO YOU HAVE OTHER INFORMATION THAT PUTS YOUR RESTATEMENTS**
8 **OF MR. RIGSBY'S EQUITY COST ESTIMATES IN PERSPECTIVE?**

9 A. Yes, I do. In the April 29, 2005 reports for the water utilities in Mr. Rigsby's
10 sample, *Value Line* projects American State Water will earn 12.0%, Aqua
11 American will earn 13.0%, and California Water Service will earn 11.0% during
12 2008-2010, an average ROE of 12.0%. Copies of *Value Line's* April 29, 2005
13 reports for the Water Utility Industry are attached as Rejoinder Exhibit TMZ-4.

14 These expected returns indicate an equity return as low as 11.25% requested by
15 Arizona Water is conservative because it is for a utility more risky than Mr.
16 Rigsby's sample utilities.

17 **Q. HAVE YOU PREPARED A TABLE THAT SUMMARIZES YOUR UPDATED**
18 **ESTIMATES OF EQUITY COSTS AND RESTATEMENTS EQUITY COSTS**
19 **PRESENTED BY MR. RIGSBY AND MR. RAMIREZ?**

20 A. Yes, it is Rejoinder Table 11.

21 **Q. DOES THIS COMPLETE YOUR PREFILED REJOINDER TESTIMONY?**

22 A. Yes.

23
24
25
26

EXHIBITS

THOMAS M. ZEPP

REJOINDER TABLES

Arizona Water Company

Rejoinder Table 1

Analysts' Forecasts of Future Earnings Growth for the Water Utilities Sample

	Zacks ^{-a/}	Thomson First Call ^{-a/}	S&P ^{-b/}	Value Line ^{-c/}	Average
1 American States Water Co.	-	3.00%	3.00%	8.00%	4.7%
2 Aqua America Inc.	9.30%	10.50%	10.00%	9.00%	9.7%
3 California Water Service Group	7.70%	6.50%	7.00%	9.50%	7.7%
4 Connecticut Water Service	-	-	-	-	7.3%
5 Middlesex Water Company	6.00%	6.00%	6.00%	-	6.0%
6 SJW Corp.					7.3%
Overall average ^{-d/} :					7.3%
Average of estimates for American States, Aqua America and California Water Service					7.6%

Sources and Notes:

- a/ Reported on the Internet 05/05/05
- b/ Standard and Poor's Earnings Guide May 2005.
- c/ Value Line reported April 29, 2005.
- d/ Average of all reported estimates.

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Arizona Water Company
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Rejoinder Table 2

Estimates of Sustainable Growth for the Water Utilities Sample

	Retention Ratios	Estimated Future ROE	Forecast of br ^{b/} Growth	sv Growth ^{c/}	Average Sustainable Growth
1 American States Water Co.	0.54	12.0%	6.7%	1.6%	8.3%
2 Aqua America Inc.	0.46	13.0%	6.1%	1.6%	7.7%
3 California Water Service Group	0.42	11.0%	4.8%	3.2%	7.9%
4 Connecticut Water Service ^{d/}					8.0%
5 Middlesex Water Company ^{d/}					8.0%
6 SJW Corp. ^{d/}					8.0%
Average					8.0%

Sources and Notes:

a/ FERC method: br growth based on *Value Line* forecasts of DPS, EPS and ROE for the period 2008-2010 published April 29, 2005.

b/ FERC method: br growth adjusted for year-end ROE forecast by Value Line.

c/ Estimated sv growth derived from Value Line's forecasts of growth in shares from 2002 to 2009 and current market-to-book ratio.

d/ Growth estimates are average for other water utilities.

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Arizona Water Company

Rejoinder Table 3
 FERC 1-Step Discounted Cash Flow Model

	6 Mo. Div. Yield		Adjusted Div. Yield		Growth Rates			Indicated Cost of Equity	
	a	b	(D _t /P ₀)	br+sv	Analysts' Forecasts	Low	High		
1 American States Water Co.	3.2%	3.3%	4.0%	8.3%	4.7%	7.9%	-	11.6%	
2 Aqua America Inc.	1.9%	1.9%	2.4%	7.7%	9.7%	9.7%	-	11.6%	
3 California Water Service Group	3.0%	3.1%	3.8%	7.9%	7.7%	10.8%	-	11.1%	
4 Connecticut Water Service	2.9%	3.0%	4.0%	8.0%	7.3%	10.3%	-	11.0%	
5 Middlesex Water Company	3.2%	3.4%	4.1%	8.0%	6.0%	9.4%	-	11.3%	
6 SJW Corp.	2.5%	2.6%	3.5%	8.0%	7.3%	9.9%	-	10.6%	
Range of equity cost estimates	2.8%	2.9%	3.6%			9.6%		11.2%	
Midpoint of range								10.4%	

Sources and Notes:

- a/ Six-month average dividend yields for December 2004 to May 2005.
- b/ Six-month dividend yield adjusted for one-half years' growth.
- c/ Based on averages of projections made by Value Line Investment Survey (April 30, 2004) if available. See Rejoinder Table 2. use ACC Staff method and adopt the average for the utilities that are available.
- d/ Average of analysts' forecasts for growth. See Rejoinder Table 1.
- e/ Sum of lowest growth rate and lowest adjusted dividend yield.
- f/ Sum of highest growth rate and highest adjusted dividend yield.

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Arizona Water Company

Rejoinder Table 4

FERC 2-Step (Multi-Stage Growth) Discounted Cash Flow Model

	Average Price ^{a/}	Current D ₀ ^{a/}	FERC Yield D ₁ /P ₀	Growth Rates			Indicated Cost of Equity (c+ f)	
				a	b	c		Near Term ^{c/}
1	American States Water Co.	\$25.76	\$0.90	3.6%	4.7%	6.8%	5.4%	8.9%
2	Aqua America Inc.	\$25.50	\$0.52	2.1%	9.7%	6.8%	8.7%	10.9%
3	California Water Service Group	\$34.54	\$1.14	3.4%	7.7%	6.8%	7.4%	10.8%
4	Connecticut Water Service	\$25.45	\$0.84	3.4%	7.3%	6.8%	7.1%	10.5%
5	Middlesex Water Company	\$18.90	\$0.67	3.7%	6.0%	6.8%	6.3%	9.9%
6	SJW Corp.	\$37.35	\$1.07	3.0%	7.3%	6.8%	7.1%	10.1%
	Average			3.2%	7.1%	6.8%	7.0%	10.2%

Sources and Notes:

a/ Average of prices for six month period ending in May 2005.

b/ Annualized current quarterly dividend.

c/ Average of analysts' forecasts of growth or the average of available forecasts of growth.

d/ Arithmetic average GDP growth reported by ACC Staff.

e/ Weight given to short-term growth rate is 67%. Source: FERC Opinion 445, note 19, Attachment 3.

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Arizona Water Company

Rejoinder Table 5

Forecasts of Treasury Securities Rates for 2006

10-Year Treasury Notes	
DRI ^{a/}	5.51%
Blue Chip Consensus Forecasts ^{b/}	5.50%
Value Line ^{c/}	4.80%
Average	5.27%
Long-term Treasury Bonds	
DRI ^{a/}	5.89%
Blue Chip Consensus Forecasts ^{b/}	6.00%
Value Line ^{c/}	5.30%
Average	5.73%

Sources and Notes:

a/ DRI forecast of interest rates reported for April 2005.

b/ Blue Chip long-term consensus forecasts, December 2004.

c/ Value Line Quarterly forecast, May 27, 2005.

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Arizona Water Company

Rejoinder Table 7

Risk Premium Equity Cost Analysis
Authorized ROEs Adopted as Equity Cost Proxies

	Authorized Returns on Equity ^{-a/}	Annual Averages		Risk Premiums	
		30-Year Treasury ^{-f}	10-Year Treasury ^{-b/}	30-Year Treasury	10-Year Treasury
1993	12.13%	6.60%	5.87%	5.53%	6.26%
1994	12.13%	7.35%	7.09%	4.78%	5.04%
1995	11.51%	6.88%	6.57%	4.63%	4.94%
1996	11.58%	6.70%	6.44%	4.88%	5.14%
1997	11.18%	6.60%	6.35%	4.58%	4.83%
1998	11.06%	5.58%	5.26%	5.48%	5.80%
1999	11.12%	5.87%	5.65%	5.25%	5.47%
2000	11.12%	5.94%	6.03%	5.18%	5.09%
2001	10.86%	5.49%	5.02%	5.37%	5.84%
2002	10.62%	5.41%	4.61%	5.21%	6.01%
10-Year Average Premium				5.09%	5.44%
5-year Average Premium				5.30%	5.64%
Forecasted Interest Rates for 2005-2006 ^{-c/}				5.73%	5.27%
Projected Returns on Equity					
10-Year Average				10.8%	10.7%
5-Year Average				11.0%	10.9%
Average				10.9%	

Sources and Notes:

_a/ CA Turner *Utility Reports*, issues for December for various years.

_b/ CPUC Staff Cost of Capital Report, Table 2-7, A.03-07-036, January 2004.

_c/ Source is Table 9.

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Arizona Water Company

Rejoinder Table 8

Geometric Annual Average Returns are Used to Determine
 What Happened Between the Beginning and End
 of the Past Period of Time -- Not Risk of the Security

	Starting Value	Value at End of Year 1	Value at End of Year 2	Arithmetic Average Return	Geometric Average Return
1 Mr. Ramirez Example					
Value of Asset	\$10.0	\$5.0	\$10.0		
Percent Change		-50.0%	100.0%	25.0%	0.0%
2 Lower Risk Asset					
Value of Asset	\$10.0	\$8.0	\$10.0		
Percent Change		-20.0%	25.0%	2.5%	0.0%

Conclusion: The average geometric return is the appropriate measure of what happened during a prior period but tells the analyst nothing about the risk and growth the investor will expect if the past is a guide for the future

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Arizona Water Company

Rejoinder Table 9

Demonstration^{a/} That Arithmetic Average Return is Required to Obtain Expected Ending Value of Asset

	Starting Value	Annual Return	Annual Returns ^{a/} Percentage	Value at End of Future Year 1	Value at End of Future Year 2	Equal ^{b/} Chance of Each Outcome	Expected Ending Value	Return Required to Achieve Expected Ending Value	
1	Mr. Ramirez's example	\$10	High	100.0%	\$20	\$40.00	\$10.00	\$15.63	25.0%
			Low	-50.0%	\$5	\$10.00	\$2.50		
						\$2.50	\$0.63		
2	Treasury bond	\$10	Same	6.0%	\$11	\$11.24	\$2.81	\$11.24	6.0%
			Same	6.0%	\$11	\$11.24	\$2.81		
						\$11.24	\$2.81		
						\$11.24	\$2.81		

Sources and Notes:

a/ Demonstration assumes either the high return or the low return is expected.

b/ Each potential outcome is given a weight of 25%.

6/2/05

Arizona Water Company

Rejoinder Table 10

Regression Results^{a/} and the Ability of Baa Rates
and 10 Year Treasury Rates to Explain Equity Costs

Period	Regression Results		Number of Observations	R ²
	Intercept	Slope		
<u>Baa rates explaining equity costs</u>				
1999 to 2002	0.062	0.614 (0.2258) ^{b/}	35	18.3%
1982 to 2002	0.074	0.492 (0.0098) ^{b/}	464	84.5%
<u>10yr Treasury Rates explaining equity costs</u>				
1999 to 2002	0.096	0.279 (0.1552) ^{b/}	35	8.9%
1982 to 2002	0.080	0.553 (0.0121) ^{b/}	464	82.0%

Sources and Notes:

a/ Equity cost data is updated data for sample adopted in Table 23.
Interest rates reported by the Federal Reserve.

b/ Standard error of slope coefficients in parentheses. All slope
estimates statistically different from zero at .05 level.

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Arizona Water Company

Rejoinder Table 11

Summary of Rejoinder Equity Cost Estimates for Water
Utilities Sample and Arizona Water Company

	Water Utilities Sample	Indicated Cost of Equity for Arizona Water
<u>Updates of Zepp Equity Cost Estimates</u>		
FERC 1-Step	10.4%	10.9%
FERC 2-Step	10.2%	10.7%
California RP Analysis	10.5%	11.0%
Modified CPUC Analysis	10.9%	11.4%
<u>Equity Costs Determined in Rebuttal Testimony</u>		
Average of Currently Authorized ROEs	10.4%	10.9%
Average of ROEs Earned in 2004	10.0%	10.5%
Equity Cost based on Average Risk Premium Determined by ACC Prior to 2001		
• Based on Forecasted Rates	10.7%	11.2%
• Based on Rates in March 2005	10.0%	10.5%
FERC 1-Step w/ Mr. Ramirez's data	11.5%	12.0%
FERC 2-Step w/ Mr. Ramirez's data	11.2%	11.7%
Average of Mr. Ramirez's Equity Cost Estimates Restated in Rebuttal Table 12	10.6%	11.1%
Average of Mr. Ramirez's Equity Cost Estimates but with Methods used by the CPUC Staff	10.5%	11.0%
Restatement of Mr. Rigsby's Equity Cost Estimates		
• DCF	10.9%	11.4%
• CAPM	11.0%	11.5%
<u>Equity Costs Determined in Rejoinder Testimony</u>		
Response to Mr. Ramirez		
• Constant Growth DCF with Mr. Ramirez's Projections of DPS, EPS and Intrinsic Growth	10.5%	11.0%
• Mr. Ramirez's Multi-stage growth with Intrinsic growth included in his analysis for 2007-2009 and corrected terminal growth rate	9.9%	10.4%
• Updated CAPM with the same measure of Rf used to determine Rp and Rf	10.1%	10.4%
Response to Mr. Rigsby		
• Mr. Rigsby's DCF analysis but using analysts' forecasts of growth instead of br+sv growth	10.5%	11.0%
• Mr. Rigsby's CAPM based on current long-term Treasury rate of 4.52%	10.3%	10.8%
• Average ROE Projected for Mr. Rigsby's Water Utilities Sample by Value Line for 2008-2010	12.0%	12.5%

REJOINDER EXHIBIT

TMZ-1

PRINCIPLES^{OF} CORPORATE FINANCE

SEVENTH EDITION

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much that averages taken over short periods are meaningless. Our only hope of gaining insights from historical rates of return is to look at a very long period.³

Arithmetic Averages and Compound Annual Returns

Notice that the average returns shown in Table 7.1 are arithmetic averages. In other words, Ibbotson Associates simply added the 75 annual returns and divided by 75. The arithmetic average is higher than the compound annual return over the period. The 75-year compound annual return for the S&P index was 11.0 percent.⁴

The proper uses of arithmetic and compound rates of return from past investments are often misunderstood. Therefore, we call a brief time-out for a clarifying example.

Suppose that the price of Big Oil's common stock is \$100. There is an equal chance that at the end of the year the stock will be worth \$90, \$110, or \$130. Therefore, the return could be -10 percent, +10 percent, or +30 percent (we assume that Big Oil does not pay a dividend). The *expected* return is $\frac{1}{3}(-10 + 10 + 30) = +10$ percent.

If we run the process in reverse and discount the expected cash flow by the expected rate of return, we obtain the value of Big Oil's stock:

$$PV = \frac{110}{1.10} = \$100$$

The expected return of 10 percent is therefore the correct rate at which to discount the expected cash flow from Big Oil's stock. It is also the opportunity cost of capital for investments that have the same degree of risk as Big Oil.

Now suppose that we observe the returns on Big Oil stock over a large number of years. If the odds are unchanged, the return will be -10 percent in a third of the years, +10 percent in a further third, and +30 percent in the remaining years. The arithmetic average of these yearly returns is

$$\frac{-10 + 10 + 30}{3} = +10\%$$

Thus the arithmetic average of the returns correctly measures the opportunity cost of capital for investments of similar risk to Big Oil stock.

The average compound annual return on Big Oil stock would be

$$(.9 \times 1.1 \times 1.3)^{1/3} - 1 = .088, \text{ or } 8.8\%,$$

³We cannot be sure that this period is truly representative and that the average is not distorted by a few unusually high or low returns. The reliability of an estimate of the average is usually measured by its *standard error*. For example, the standard error of our estimate of the average risk premium on common stocks is 2.3 percent. There is a 95 percent chance that the *true* average is within plus or minus 2 standard errors of the 9.1 percent estimate. In other words, if you said that the true average was between 4.5 and 13.7 percent, you would have a 95 percent chance of being right. (*Technical note:* The standard error of the average is equal to the standard deviation divided by the square root of the number of observations. In our case the standard deviation is 20.2 percent, and therefore the standard error is $20.2/\sqrt{75} = 2.3$.)

⁴This was calculated from $(1 + r)^{75} = 2,586.5$, which implies $r = .11$. *Technical note:* For lognormally distributed returns the annual compound return is equal to the arithmetic average return minus half the variance. For example, the annual standard deviation of returns on the U.S. market was about .20, or 20 percent. Variance was therefore $.20^2$, or .04. The compound annual return is $.04/2 = .02$, or 2 percentage points less than the arithmetic average.

less than the opportunity cost of capital. Investors would not be willing to invest in a project that offered an 8.8 percent expected return if they could get an expected return of 10 percent in the capital markets. The net present value of such a project would be

$$NPV = -100 + \frac{108.8}{1.1} = -1.1$$

Moral: If the cost of capital is estimated from historical returns or risk premiums, use arithmetic averages, not compound annual rates of return.

Using Historical Evidence to Evaluate Today's Cost of Capital

Suppose there is an investment project which you *know*—don't ask how—has the same risk as Standard and Poor's Composite Index. We will say that it has the same degree of risk as the *market portfolio*, although this is speaking somewhat loosely, because the index does not include all risky securities. What rate should you use to discount this project's forecasted cash flows?

Clearly you should use the currently expected rate of return on the market portfolio; that is the return investors would forgo by investing in the proposed project. Let us call this market return r_m . One way to estimate r_m is to assume that the future will be like the past and that today's investors expect to receive the same "normal" rates of return revealed by the averages shown in Table 7.1. In this case, you would set r_m at 13 percent, the average of past market returns.

Unfortunately, this is *not* the way to do it; r_m is not likely to be stable over time. Remember that it is the sum of the risk-free interest rate r_f and a premium for risk. We know that r_f varies. For example, in 1981 the interest rate on Treasury bills was about 15 percent. It is difficult to believe that investors in that year were content to hold common stocks offering an expected return of only 13 percent.

If you need to estimate the return that investors expect to receive, a more sensible procedure is to take the interest rate on Treasury bills and add 9.1 percent, the average *risk premium* shown in Table 7.1. For example, as we write this in mid-2001 the interest rate on Treasury bills is about 3.5 percent. Adding on the average risk premium, therefore, gives

$$\begin{aligned} r_m(2001) &= r_f(2001) + \text{normal risk premium} \\ &= .035 + .091 = .126, \text{ or about } 12.5\% \end{aligned}$$

The crucial assumption here is that there is a normal, stable risk premium on the market portfolio, so that the expected *future* risk premium can be measured by the average past risk premium.

Even with 75 years of data, we can't estimate the market risk premium exactly; nor can we be sure that investors today are demanding the same reward for risk that they were 60 or 70 years ago. All this leaves plenty of room for argument about what the risk premium *really* is.⁵

Many financial managers and economists believe that long-run historical returns are the best measure available. Others have a gut instinct that investors

⁵Some of the disagreements simply reflect the fact that the risk premium is sometimes defined in different ways. Some measure the average difference between stock returns and the returns (or yields) on long-term bonds. Others measure the difference between the compound rate of growth on stocks and the interest rate. As we explained above, this is not an appropriate measure of the cost of capital.

REJOINDER EXHIBIT

TMZ-2

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For example, if bond yields rise unexpectedly, investors can receive a higher coupon payment from a newly issued bond than from the purchase of an outstanding bond with the former lower-coupon payment. The outstanding lower-coupon bond will thus fail to attract buyers, and its price will decrease, causing its yield to increase correspondingly, as its coupon payment remains the same. The newly priced outstanding bond will subsequently attract purchasers who will benefit from the shift in price and yield; however, those investors who already held the bond will suffer a capital loss due to the fall in price.

Anticipated changes in yields are assessed by the market and figured into the price of a bond. Future changes in yields that are not anticipated will cause the price of the bond to adjust accordingly. Price changes in bonds due to unanticipated changes in yields introduce price risk into the total return. Therefore, the total return on the bond series does not represent the riskless rate of return. The income return better represents the unbiased estimate of the purely riskless rate of return, since an investor can hold a bond to maturity and be entitled to the income return with no capital loss.

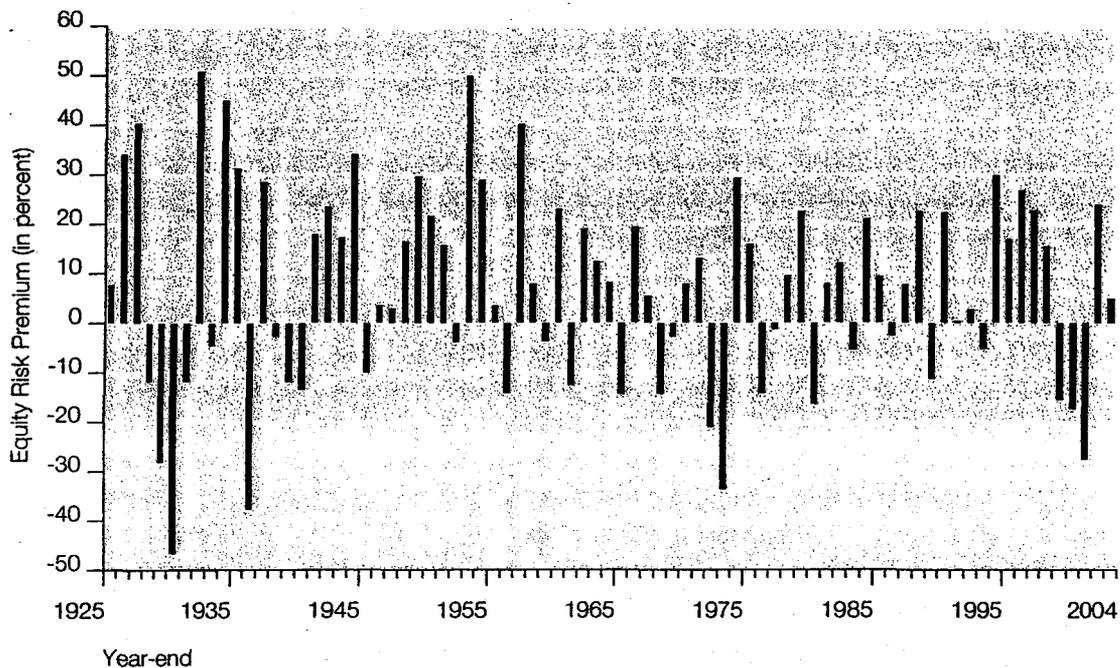
Arithmetic versus Geometric Means

The equity risk premium data presented in this book are arithmetic average risk premia as opposed to geometric average risk premia. The arithmetic average equity risk premium can be demonstrated to be most appropriate when discounting future cash flows. For use as the expected equity risk premium in either the CAPM or the building block approach, the arithmetic mean or the simple difference of the arithmetic means of stock market returns and riskless rates is the relevant number. This is because both the CAPM and the building block approach are additive models, in which the cost of capital is the sum of its parts. The geometric average is more appropriate for reporting past performance, since it represents the compound average return.

The argument for using the arithmetic average is quite straightforward. In looking at projected cash flows, the equity risk premium that should be employed is the equity risk premium that is expected to actually be incurred over the future time periods. Graph 5-3 shows the realized equity risk premium for each year based on the returns of the S&P 500 and the income return on long-term government bonds. (The actual, observed difference between the return on the stock market and the riskless rate is known as the realized equity risk premium.) There is considerable volatility in the year-by-year statistics. At times the realized equity risk premium is even negative.

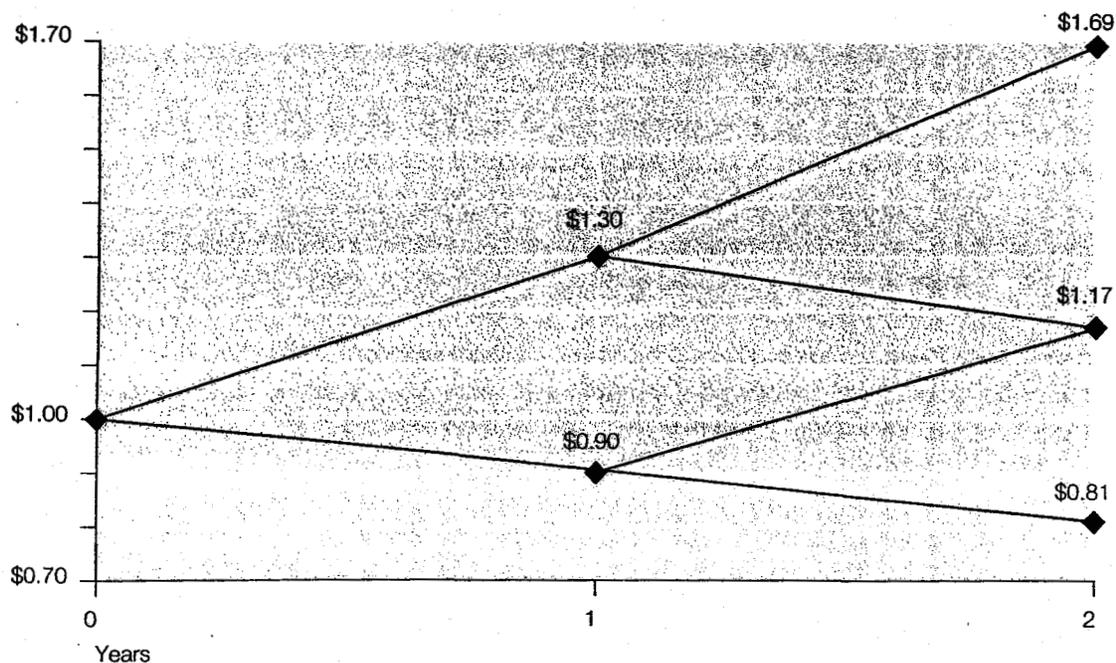
Graph 5-3

Realized Equity Risk Premium Per Year
1926-2004



To illustrate how the arithmetic mean is more appropriate than the geometric mean in discounting cash flows, suppose the expected return on a stock is 10 percent per year with a standard deviation of 20 percent. Also assume that only two outcomes are possible each year— +30 percent and -10 percent (i.e., the mean plus or minus one standard deviation). The probability of occurrence for each outcome is equal. The growth of wealth over a two-year period is illustrated in Graph 5-4.

Graph 5-4
Growth of Wealth Example



The most common outcome of \$1.17 is given by the geometric mean of 8.2 percent. Compounding the possible outcomes as follows derives the geometric mean:

$$[(1 + 0.30) \times (1 - 0.10)]^{1/2} - 1 = 0.082$$

However, the expected value is predicted by compounding the arithmetic, not the geometric, mean. To illustrate this, we need to look at the probability-weighted average of all possible outcomes:

(0.25 × \$1.69) =	\$0.4225
+ (0.50 × \$1.17) =	\$0.5850
+ (0.25 × \$0.81) =	\$0.2025
Total	\$1.2100

Therefore, \$1.21 is the probability-weighted expected value. The rate that must be compounded to achieve the terminal value of \$1.21 after 2 years is 10 percent, the arithmetic mean:

$$\$1 \times (1 + 0.10)^2 = \$1.21$$

The geometric mean, when compounded, results in the median of the distribution:

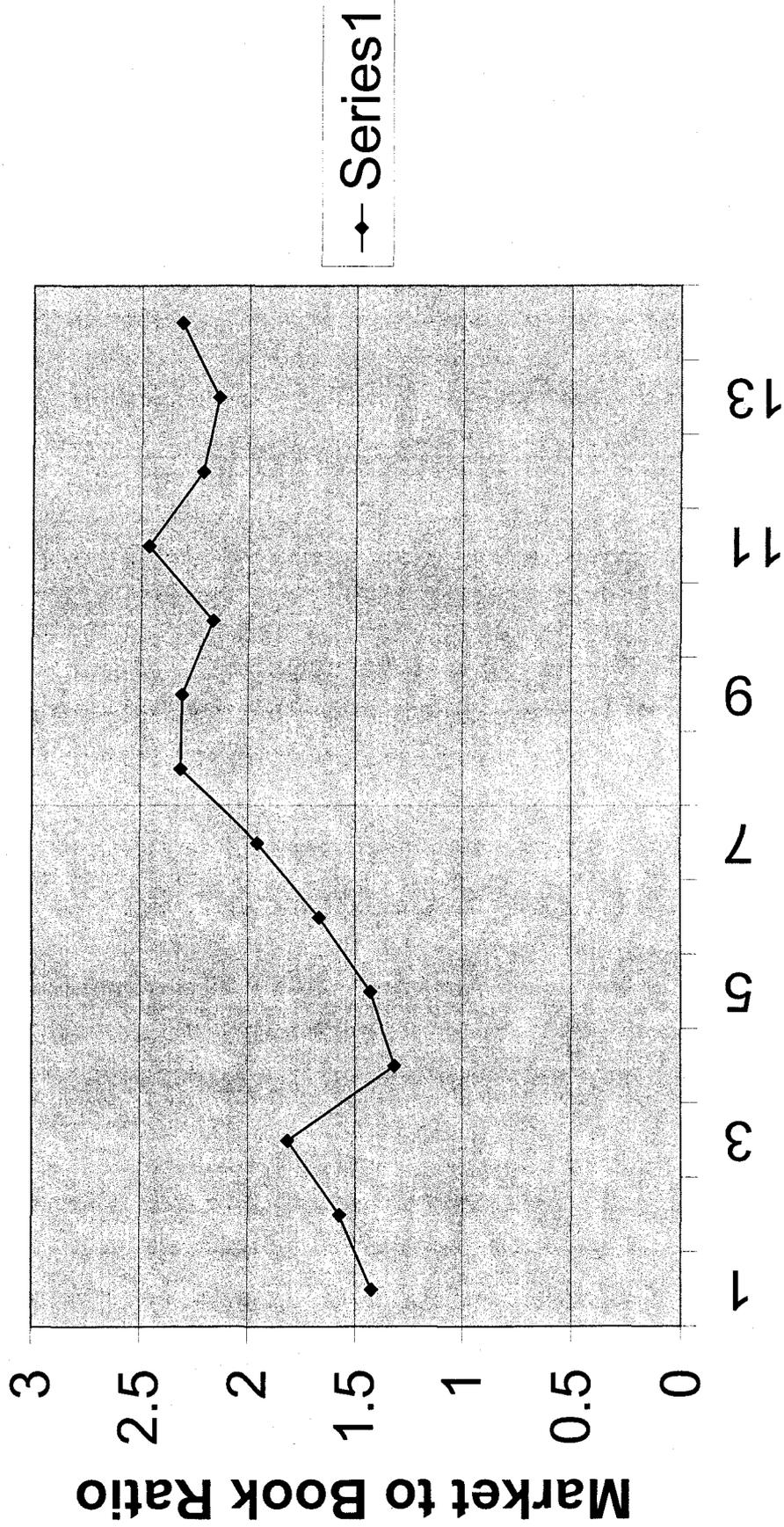
$$\$1 \times (1 + 0.082)^2 = \$1.17$$

The arithmetic mean equates the expected future value with the present value; it is therefore the appropriate discount rate.

REJOINDER EXHIBIT

TMZ-3

Mr. Rigsby's Sample



Years 1991 to 2004

Series1

REJOINDER EXHIBIT

TMZ-4

INDUSTRY TIMELINESS: 92 (of 98)

A perennial laggard, the Water Utility Industry continues to rank near the bottom of the *Value Line* universe. In fact, not one of the stocks covered in the next few pages is ranked better than 4 (Below Average) for Timeliness for the coming six to 12 months, given our momentum-driven ranking system. The industry, as a whole, has been hampered by unseasonably wet weather and continually intensifying infrastructure costs.

We expect more favorable weather conditions, along with an improving regulatory environment (discussed below) going forward, but we remain concerned that rising infrastructure costs will continue to be a headache for the industry going forward. As a result, the companies in the industry offer below-average price appreciation potential out to 2008-2010.

California Dreaming

California water utility companies are overseen by the California Public Utilities Commission (CPUC), which is responsible for making sure that water suppliers remain in compliance with regulatory laws and certain drinking water levels. But, the CPUC is also in charge of ruling on general rate case requests, primarily allowing companies to receive more adequate rates of return. However, the CPUC has long been a thorn in the side of California water companies, handing down unfavorable decisions. Cases were seemingly put on the shelves, with rulings taking up to two years at times. But, things look as though they are changing. Due to the urging of Governor Schwarzenegger, the CPUC has been handing down more-favorable and timely decisions in recent months. And, the governor is making sure that this is not just a passing fad. He recently replaced two commission members, considered to be antagonists of rate relief with more-business-friendly members. The change in the landscape provides a healthy backdrop going forward for the two California-operated water companies in our survey, *American States Water Co.* and *California Water Service Group*.

Higher Infrastructure Costs

Many of our nation's water systems are more than a century old. And as time passes they grow more obsolete and out of date. They require maintenance and in some cases massive renovations and rebuilding. With the

threat of bioterrorism now, these costs are likely to grow even greater. Infrastructure repair costs are expected to climb in the hundreds of millions of dollars over the next two decades. However, many water companies are struggling to keep up with these escalating expenses. Most companies will have to take on the burden by themselves, though, as local and federal funds appear to be depleted. Therefore, many have been, and will likely continue to be, forced to issue shares of stock and/or debt to keep up with requirements. Others, unable to meet upkeep costs, are being forced to sell, resulting in a great deal of consolidation.

But, while this trend is painting a bleak picture for many of the smaller utilities, it is providing a new growth avenue for others. Larger companies with the flexibility and capital to withstand the onslaught are taking advantage of the consolidation trend to fuel growth. *Aqua America*, the largest water utility in our survey, is a prime example of such measures, making approximately 30 acquisitions annually in recent years. And the company is intent on maintaining its strategy. Management expects to add another 25 or so by year-end. As such, *Aqua America* offers the highest return on equity rate of the stocks in this industry.

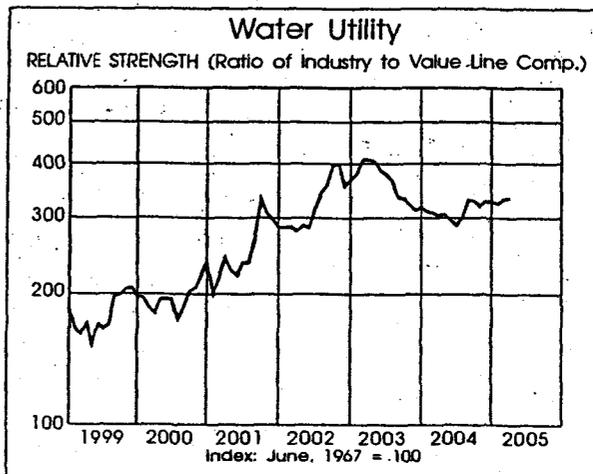
Investment Advice

That said, the water utility stocks are not typically known for appreciation potential. Each of the stocks covered in our survey is untimely and is expected to lag the broad market out to late decade. Therefore, growth-minded investors will probably want to take a pass and look elsewhere.

Income-minded investors may want to have a closer look, though. Each stock offers an above-average dividend yield, with *American States Water* and *California Water* offering the highest payout ratios. The latter holds some additional appeal for risk-averse individuals, given its 2 (Above Average) rank for Safety. Nevertheless, as is always the case, we believe that potential investors would be best served to carefully look at each of the individual reports in the following pages before making investments.

Andre J. Costanza

2001	2002	2003	2004	2005	2006		08-10
751.8	794.4	857.0	985.6	1070	1155	Revenues (\$bill)	1475
95.4	106.6	98.6	122.4	150	170	Net Profit (\$bill)	220
40.2%	38.8%	40.0%	39.4%	40.0%	40.0%	Income Tax Rate	40.0%
				NR	NI	AFUDC % to Net Profit	NI
52.4%	53.9%	51.2%	50.0%	52.0%	51.0%	Long-Term Debt Ratio	48.0%
47.2%	45.9%	48.8%	50.0%	48.0%	49.0%	Common Equity Ratio	52.0%
1840.7	1973.6	2296.4	2543.6	2660	2870	Total Capital (\$bill)	3250
2532.2	2751.1	3186.1	3532.5	3685	3605	Net Plant (\$bill)	4290
6.8%	7.0%	5.9%	6.7%	7.0%	7.5%	Return on Total Cap'l	7.0%
10.6%	11.2%	8.8%	10.7%	11.0%	11.5%	Return on Shr. Equity	12.0%
10.7%	11.2%	8.8%	10.7%	11.0%	11.5%	Return on Com Equity	12.0%
3.3%	3.8%	2.5%	4.6%	5.0%	5.5%	Retained to Com Eq	5.5%
69%	66%	72%	57%	62%	58%	All Div'ds to Net Prof	51%
22.6	21.5	26.0	25.5			Avg Ann'l P/E Ratio	18.0
1.16	1.17	1.48	1.36			Relative P/E Ratio	1.20
3.1%	3.1%	2.8%	2.2%			Avg Ann'l Div'd Yield	3.4%

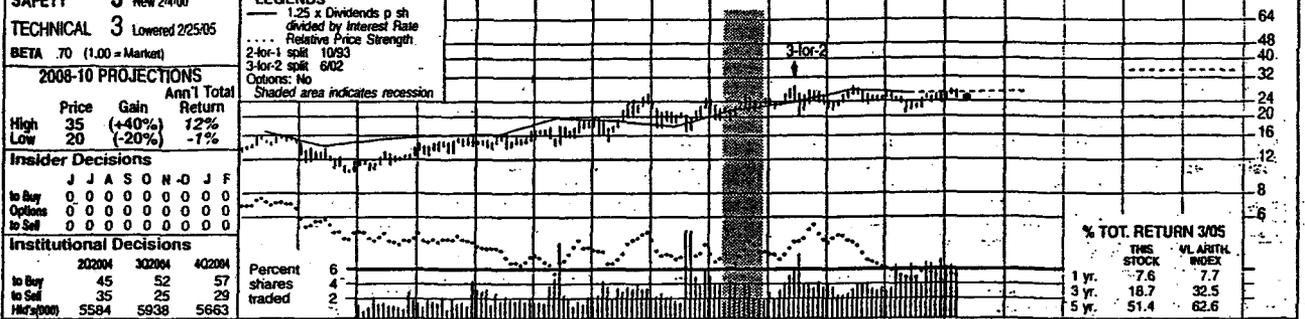


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AMER. STATES WATER NYSE-AWR

RECENT PRICE **24.96** P/E RATIO **19.8** (Trailing: 20.8 Median: 16.0) RELATIVE P/E RATIO **1.11** DIV YLD **3.6%** VALUE LINE **1421**



Year	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Value Line Pub. Inc.	08-10	
Price	9.12	9.58	9.15	10.10	9.27	10.43	11.03	11.37	11.44	11.02	12.91	12.17	13.06	13.78	13.98	13.60	14.20	14.70	14.70	Revenues per sh	16.00
Gain	1.44	1.49	1.78	1.81	1.67	1.68	1.75	1.75	1.85	2.04	2.26	2.20	2.53	2.54	2.08	2.22	2.65	2.95	2.95	"Cash Flow" per sh	3.70
Loss	.92	.94	1.19	1.15	1.11	.95	1.03	1.13	1.04	1.08	1.19	1.28	1.35	1.34	.78	1.05	1.35	1.55	1.55	Earnings per sh	2.10
High	.69	.72	.73	.77	.79	.80	.81	.82	.83	.84	.85	.86	.87	.87	.87	.89	.90	.91	.91	Div'd Decl'd per sh	.96
Low	2.46	2.53	2.77	2.31	1.90	2.43	2.19	2.40	2.58	3.11	4.30	3.03	3.18	2.68	3.76	5.02	5.15	5.25	5.25	Cap'l Spending per sh	5.50
Price	7.31	7.54	8.39	8.85	9.95	10.07	10.29	11.01	11.24	11.48	11.82	12.74	13.22	14.05	13.97	14.98	15.20	15.35	15.35	Book Value per sh	17.65
Gain	9.39	9.43	9.91	9.86	11.71	11.77	11.77	13.33	13.44	13.44	13.44	15.12	15.12	15.18	15.21	16.77	17.25	18.00	18.00	Common Shs Outst'g	20.00
Loss	9.7	10.2	8.8	10.6	13.4	12.8	11.6	12.6	14.5	15.5	17.1	15.9	16.7	18.3	31.9	23.2	24.5	26.5	26.5	Revenues (\$mill)	320
High	.73	.76	.56	.64	.79	.84	.78	.79	.84	.81	.97	1.03	.86	1.00	1.82	1.23	1.23	1.23	1.23	Net Profit (\$mill)	42.0
Low	7.7%	7.5%	7.0%	6.3%	5.3%	6.6%	6.7%	5.8%	5.5%	5.0%	4.2%	4.2%	3.9%	3.6%	3.5%	3.7%	4.0%	4.0%	4.0%	Income Tax Rate	40.0%
Price	129.8	151.5	153.8	148.1	173.4	184.0	173.4	184.0	197.5	209.2	209.2	212.7	228.0	245	265	265	265	265	265	AFUDC % to Net Profit	Nil
Gain	41.9%	43.3%	41.1%	40.9%	46.0%	45.7%	43.0%	38.9%	43.5%	37.7%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	Long-Term Debt Ratio	52.0%
Loss	46.6%	41.9%	43.0%	43.6%	51.0%	47.5%	54.9%	52.0%	52.0%	47.7%	51.0%	51.0%	51.0%	51.0%	51.0%	51.0%	51.0%	51.0%	51.0%	Common Equity Ratio	48.0%
High	129.8	151.5	153.8	148.1	173.4	184.0	173.4	184.0	197.5	209.2	209.2	212.7	228.0	245	265	265	265	265	265	Total Capital (\$mill)	735
Low	335.0	357.8	383.6	414.8	449.6	509.1	539.8	563.3	602.3	664.2	710	770	770	770	770	770	770	770	770	Net Plant (\$mill)	915
Price	7.2%	6.9%	6.9%	7.0%	6.6%	6.4%	6.1%	6.5%	4.6%	4.9%	7.5%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	Return on Total Cap'l	7.5%
Gain	9.9%	9.0%	9.2%	9.4%	10.0%	9.2%	10.1%	9.5%	5.6%	6.5%	9.0%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	Return on Shr. Equity	12.0%
Loss	10.0%	9.0%	9.2%	9.4%	10.1%	9.3%	10.1%	9.5%	5.6%	6.5%	9.0%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	9.5%	Return on Com Equity	12.0%
High	2.1%	2.4%	1.8%	2.1%	2.9%	3.0%	3.6%	3.3%	NMF	NMF	2.5%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	Retained to Com Eq.	6.5%
Low	7.9%	7.3%	8.0%	7.8%	7.2%	6.8%	6.5%	6.5%	11.3%	9.1%	6.8%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	All Div'ds to Net Prof	46%

CAPITAL STRUCTURE as of 12/31/04
 Total Debt \$274.8 mill. Due in 5 Yrs \$65.0 mill.
 LT Debt \$228.9 mill. LT Interest \$18.0 mill.
 (Total interest coverage: 2.6x)

Leases, Uncapitalized: None
 Pension Assets-12/04 \$51.3 mill.
 Oblig. \$70.3 mill.
 Pfd Stock None. Pfd Div'd None.

Common Stock 16,768,396 shs.
 as of 3/11/05
 MARKET CAP: \$425 million (Small Cap)

CURRENT POSITION (\$MILL)	2002	2003	12/31/04
Cash Assets	18.4	12.8	4.3
Receivables	10.8	11.8	14.3
Inventory (Avg Cst)	.9	1.4	1.5
Other	21.7	32.4	32.9
Current Assets	51.8	58.4	53.0
Accts Payable	11.6	18.8	18.2
Debt Due	48.3	56.8	45.9
Other	19.6	20.3	22.2
Current Liab.	79.5	95.90	86.3
Fix. Chg. Cov.	285%	255%	200%

ANNUAL RATES of change (per sh)	Past 10 Yrs	Past 5 Yrs	Est'd '02-'04 to '08-'10
Revenues	3.5%	4.0%	2.0%
"Cash Flow"	3.0%	5.0%	5.0%
Earnings	1.5%	1.5%	8.0%
Dividends	1.5%	1.0%	1.5%
Book Value	4.5%	4.0%	3.5%

Cal-endar	QUARTERLY REVENUES (\$ mill.)				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
2002	44.5	52.8	61.6	50.3	209.2
2003	46.7	51.8	63.7	50.5	212.7
2004	46.7	59.3	69.0	53.0	228.0
2005	50.0	63.0	73.0	59.0	245
2006	55.0	68.0	78.0	64.0	265

Cal-endar	EARNINGS PER SHARE ^A				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
2002	.25	.36	.50	.23	1.34
2003	.20	.19	.51	.12	.78
2004	.08	.30	.52	.16	1.05
2005	.20	.35	.55	.25	1.35
2006	.25	.40	.60	.30	1.55

Cal-endar	QUARTERLY DIVIDENDS PAID ^B				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
2001	.217	.217	.217	.217	.87
2002	.217	.217	.217	.221	.87
2003	.221	.221	.221	.221	.88
2004	.221	.221	.221	.225	.89
2005	.225	.225	.225	.225	.89

BUSINESS: American States Water Co. operates as a holding company. Through its principal subsidiary, Southern California Water Company, it supplies water to 75 communities in 10 counties. Service areas include the greater metropolitan areas of Los Angeles and Orange Counties. The company also provides electric utility services to approximately 22,000 customers in the city

An improving regulatory environment is painting a positive backdrop for American States Water. Indeed, more favorable and timely rate request decisions by the California Public Utility Commission (CPUC) helped the company post \$0.16 share net in the fourth quarter, versus a loss of \$0.12 last year, despite unseasonably rainy weather. We look for the current regulatory landscape to get even better at the urging of Governor Schwarzenegger. He recently replaced two regulatory commissioners, considered to be antagonists of rate relief for utilities, with more business friendly members. The CPUC has already approved rate increases for Region I and II customer areas, which should boost AWR's top line by more than \$5 million. This relief along with more normal weather ought to fuel better-than 25% earnings growth this year. **Earnings growth should tail off a bit in 2006.** We are concerned that the company's strapped financials will become a hindrance to growth. Infrastructure costs are growing higher everyday and do not look as though they will be receding anytime soon. With only minimal cash on

of Big Bear Lake and in areas of San Bernardino County. Acquired Chaparral City Water of Arizona (10/00); 11,400 customers. Has roughly 525 employees. Off: & dir. own 2.4% of common stock (4/05 Proxy). Chairman: Lloyd Ross. President & CEO: Floyd Wicks. Incorporated: CA. Add: 630 East Foothill Boulevard, San Dimas, CA 91773. Tel.: 909-394-3600. Web: www.aswater.com.

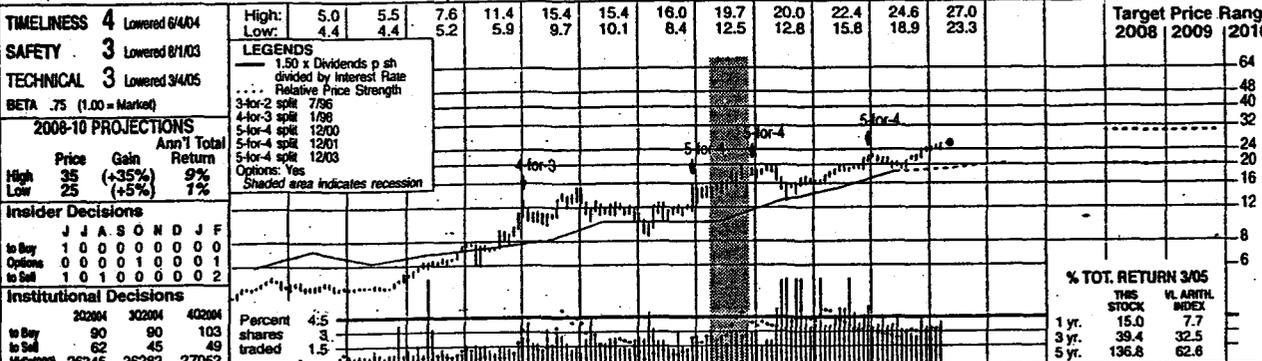
hand, AWR will likely be forced to sell stock and debt to fund these expenditures. Such a development would undoubtedly dilute earnings, despite brighter top-line prospects. We, therefore, look for American's earnings growth rate to slow to 15% in 2006. However, there might be a catalyst on the horizon. The utility filed a general rate case for region III during the first quarter. Region III is its largest service area with roughly 40% of AWR's customer base. The company is requesting a 24% revenue increase, effective January 2006. If a favorable ruling is handed down, our share-net figure would probably prove too conservative.

Most investors will want to look elsewhere. AWR stock offers minimal appreciation potential to 2008-2010 and is ranked 4 (Below Average) for Timeliness. Although consolidating industry trends could provide some opportunities for the company, a dearth of funds limits the likelihood of such measures. That said, income-oriented investors might want to consider the issue because AWR offers an above average dividend yield. *Andre J. Costanza* April 29, 2005

(A) Primary earnings. Excludes nonrecurring gains: '91, '73c; '92, '13c; '04, '14c. Next earnings report due late July. Quarterly earnings may not sum due to change in share count. (B) Dividends historically paid in early-March, June, September, December. = Div'd reinvestment plan available. (C) In millions, adjusted for splits.

AQUA AMERICA NYSE-WTR

RECENT PRICE **25.90** P/E RATIO **27.8** (Trailing: 30.1; Median: 21.0) RELATIVE P/E RATIO **1.55** DIVD YLD **2.0%** VALUE LINE **1422**



Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010							
Revenues per sh	4.53	2.70	2.85	2.43	2.27	2.42	2.45	2.48	2.69	2.79	3.21	3.29	3.59	3.79	3.97	4.63	5.00	5.30	6.50
"Cash Flow" per sh	.65	.58	.59	.52	.56	.56	.63	.67	.74	.81	.96	1.01	1.15	1.26	1.28	1.46	1.55	1.65	1.90
Earnings per sh ^A	.27	.33	.33	.31	.33	.35	.39	.40	.46	.53	.56	.62	.68	.72	.76	.85	.95	1.05	1.25
Div'd Dec'd per sh ^B	.24	.26	.26	.27	.27	.28	.29	.30	.32	.34	.36	.38	.40	.43	.46	.49	.52	.56	.68
Cap'l Spending per sh	1.15	1.01	.72	.80	.63	.61	.69	.64	.77	1.09	1.20	1.55	1.45	1.60	1.76	2.05	1.85	1.80	1.85
Book Value per sh	2.92	2.80	2.76	2.79	3.05	3.21	3.28	3.59	3.79	4.26	4.57	5.13	5.53	5.81	7.12	7.85	8.05	8.45	9.70
Common Shs Outst'g ^C	29.45	30.48	31.06	38.40	44.55	44.83	47.81	49.31	50.60	54.15	60.10	83.87	85.48	84.90	92.59	95.38	98.00	98.00	100.00
Avg Ann'l P/E Ratio	12.9	10.2	10.8	12.5	14.4	13.5	12.0	15.6	17.8	22.5	21.2	18.2	23.6	23.6	24.5	25.1	25.0	25.0	23.0
Relative P/E Ratio	.98	.76	.69	.76	.85	.89	.80	.98	1.03	1.17	1.21	1.18	1.21	1.29	1.40	1.34	1.34	1.34	1.55
Ann'l Div'd Yield	6.9%	7.7%	7.2%	6.8%	5.9%	6.0%	6.2%	4.9%	3.9%	2.9%	3.0%	3.3%	2.5%	2.5%	2.3%	2.3%	2.3%	2.3%	2.4%

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Revenues (\$mil)	117.0	122.5	136.2	151.0	257.3	275.5	307.3	322.0	367.2	442.0	490	525
Net Profit (\$mil)	19.0	19.8	23.2	28.8	45.0	50.7	58.5	62.7	67.3	80.0	95.0	105.0
Income Tax Rate	40.4%	41.4%	40.6%	40.5%	38.4%	38.9%	39.3%	38.5%	39.3%	39.4%	40.0%	40.0%
AFUDC % to Net Profit	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
Long-Term Debt Ratio	51.9%	54.1%	54.4%	52.7%	52.9%	52.0%	52.2%	54.2%	51.4%	50.0%	48.0%	46.0%
Common Equity Ratio	46.4%	44.0%	44.8%	46.6%	46.7%	47.8%	47.7%	45.8%	48.6%	50.0%	52.0%	54.0%
Total Capital (\$mil)	338.0	401.7	427.2	496.6	782.7	901.1	990.4	1076.2	1355.7	1497.3	1525	1550
Net Plant (\$mil)	436.9	502.9	534.5	609.8	1135.4	1251.4	1368.1	1490.8	1824.3	2069.8	2125	2175
Return on Total Cap'l	7.7%	6.8%	7.4%	7.6%	7.6%	7.4%	7.8%	7.6%	6.4%	6.7%	7.5%	8.0%
Return on Shr. Equity	11.7%	10.7%	11.9%	12.3%	12.2%	11.7%	12.3%	12.7%	10.2%	10.7%	12.5%	12.5%
Return on Com Equity	11.7%	11.2%	12.0%	12.4%	12.3%	11.7%	12.4%	12.7%	10.2%	10.7%	12.0%	12.5%
Retained to Com Eq	3.5%	2.8%	3.6%	4.5%	4.3%	4.7%	5.1%	5.2%	4.2%	4.6%	5.5%	6.0%
All Div's to Net Prof	71%	75%	70%	64%	65%	60%	59%	59%	59%	57%	55%	53%

CAPITAL STRUCTURE as of 12/31/04
 Total Debt \$894.2 mil. Due in 5 Yrs \$221.6 mil.
 LT Debt \$748.9 mil. LT Interest \$40.0 mil.
 (Total interest coverage: 3.7x)

Pension Assets-12/04 \$115.3 mil.
 Oblig. \$171.1 mil.

Pfd Stock None

Common Stock 95,475,161 shares as of 2/18/05

MARKET CAP: \$2.5 billion (Mid Cap)

CURRENT POSITION (SMILL)

2002	2003	12/31/04
49.7	39.2	64.1
57.7	62.3	13.5
-4.6	5.8	6.9
2.7	5.1	5.6
114.7	112.4	90.1
31.1	32.3	23.5
149.4	135.8	135.3
46.0	63.9	58.6
226.5	232.0	217.4
347%	344%	364%

ANNUAL RATES of change (per sh)

Past 10 Yrs	Past 5 Yrs	Past Est'd '02-'04	'06-'10
5.5%	7.5%	8.0%	8.0%
9.5%	9.5%	7.0%	7.0%
9.0%	8.5%	9.0%	9.0%
5.5%	6.5%	7.0%	7.0%
8.5%	10.5%	6.0%	6.0%

Cal-endar	QUARTERLY REVENUES (\$ mil.)	Full Year			
Mar.31	Jun.30	Sep.30	Dec.31	Year	
2002	71.7	76.6	91.9	81.8	322.0
2003	80.5	83.4	102.1	101.2	367.2
2004	99.8	106.5	120.3	115.4	442.0
2005	110	120	130	130	490
2006	120	130	140	135	525

Cal-endar	EARNINGS PER SHARE ^A	Full Year			
Mar.31	Jun.30	Sep.30	Dec.31	Year	
2002	.14	.16	.25	.17	.72
2003	.15	.18	.24	.19	.76
2004	.17	.19	.26	.24	.85
2005	.19	.23	.27	.26	.95
2006	.21	.25	.30	.29	1.05

Cal-endar	QUARTERLY DIVIDENDS PAID ^B	Full Year			
Mar.31	Jun.30	Sep.30	Dec.31	Year	
2001	.099	.099	.099	.106	.40
2002	.106	.106	.106	.112	.43
2003	.112	.112	.112	.12	.46
2004	.12	.12	.12	.13	.49
2005	.13				

Business: Aqua America, Inc. is the holding company for water and wastewater utilities that serve approximately 2.5 million residents in Pennsylvania, Ohio, New Jersey, Illinois, Maine, North Carolina, Texas, Florida, Kentucky, and five other states. Divested three of four non-water businesses in '91; telemarketing group in '93; and others. Acquired Consumers Water, 4/99; AquaSource, 7/03; and others. Water supply revenues '04: residential, 60%; commercial, 15%; industrial & other, 25%. Officers and directors own 1.5% of the common stock (4/05 Proxy). Chairman & Chief Executive Officer: Nicholas DeBenedictis. Incorporated: Pennsylvania. Address: 762 West Lancaster Avenue, Bryn Mawr, Pennsylvania 19010. Telephone: 610-525-1400. Internet: www.aquaamerica.com.

We look for Aqua America to realize an earnings gain of about 12% in the current year, following similar increases in 2004. Continued growth will likely stem from further acquisitions and some rate increases. The company could also benefit from a long hot summer, as reservoirs in the Northeast are at or near capacity thanks to a wet winter, which will enable the utility to meet customer demand from its own facilities.

Management has been fairly successful in securing rate increases. A pending North Carolina case will yield a \$3.2 million increase if granted in full. We believe a realistic decision will be reached, based on previous outcomes in that state. Utility commissions are more apt to award increases due to rising capital costs rather than operating expenses. Its ability to lower the ratio of expenses to revenues impresses the commission.

The company is further expanding through acquisitions. WTR completed eight purchases in the first quarter of 2005. We expect a similar rate of expansion throughout the year. Most of these operations are located in Pennsylvania and New Jersey, areas in which the company already has a strong presence. It is likely to file for additional rate hikes, reflecting the cost of those acquisitions. Also, three of these purchases represent Aqua's first venture into the specialized area of wastewater treatment. It will enable the company to provide internal sludge hauling and collection system maintenance for its own treatment facilities in south-eastern Pennsylvania. If this allows tighter cost control, it may be applied to other geographic regions as opportunity allows, perhaps providing a new source of earnings.

This stock's Price/Earnings ratio is somewhat above its 15-year median. Consequently, despite decent earnings growth prospects, this equity's appreciation potential to 2008-2010 is unattractive. But acquisitions of additional small water utilities will likely continue. The company has typically been able to increase returns on those operations, due to its larger size and lower capital costs. Accordingly, our projections might well prove conservative.

Marc Denton April 29, 2005

(A) Primary shares outstanding through '96; diluted thereafter. Excl. nonrec. gains (losses): '90, (38c); '91, (34c); '92, (38c); '99, (11c); '00, 2c; '01, 2c; '02, 5c; '03, 4c. Excl. gain from disc. operations: '96, 2c. Next earnings report due early May. (B) Dividends historically paid in early March, June, Sept. & Dec. = Div'd. reinvestment plan available (5% discount). (C) In millions, adjusted for stock splits. (D) May not sum due to rounding.

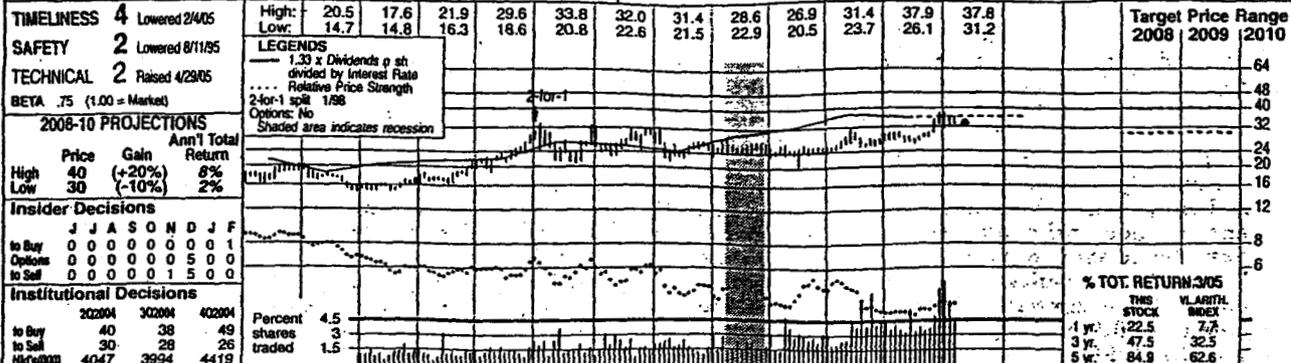
Company's Financial Strength 8+
 Stock's Price Stability 85
 Price Growth Persistence 95
 Earnings Predictability 100

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CALIFORNIA WATER NYSE-CWT

RECENT PRICE **33.30** P/E RATIO **21.5** (Trailing: 22.8 Median: 17.8) RELATIVE P/E RATIO **1.20** DIV'D YLD **3.4%** VALUE LINE **1423**



Year	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Value Line Pub. Inc.	08-10
Price	10.33	10.93	11.18	12.29	13.34	12.59	13.17	14.48	15.48	14.76	15.96	16.16	16.26	17.33	16.37	17.18	18.15	18.85	Revenues per sh	21.75
Gain	1.89	1.97	1.98	1.92	2.25	2.02	2.07	2.50	2.92	2.60	2.75	2.52	2.20	2.65	2.51	2.84	3.10	3.40	"Cash Flow" per sh	4.10
Return	1.20	1.25	1.21	1.09	1.35	1.22	1.17	1.51	1.83	1.45	1.53	1.31	.94	1.25	1.21	1.46	1.80	1.75	Earnings per sh ^A	2.15
High	.84	.87	.90	.93	.96	.99	1.02	1.04	1.06	1.07	1.09	1.10	1.12	1.12	1.12	1.13	1.14	1.15	Div'd Decl'd per sh ^B	1.24
Low	2.40	2.36	3.03	-3.09	2.53	2.26	2.17	2.83	2.61	2.74	3.44	2.45	4.09	5.82	4.39	3.73	3.85	3.95	Cap'l Spending per sh	4.15
Price	9.66	10.04	10.35	10.51	10.90	11.56	11.72	12.22	13.00	13.38	13.43	12.90	12.95	13.12	14.44	15.65	16.00	16.90	Book Value per sh ^C	19.55
Gain	11.38	11.38	11.38	11.38	11.38	12.49	12.54	12.62	12.62	12.62	12.94	15.15	15.18	15.18	16.93	18.37	18.75	19.25	Common Shs Outst'g ^D	23.00
Return	10.6	10.4	11.2	-14.1	13.6	14.1	13.7	11.9	12.6	17.8	17.8	19.6	27.1	19.8	22.1	20.1	20.1	20.1	Avg Ann'l P/E Ratio	16.0
High	.80	.77	.72	.86	.80	.92	.92	.75	.73	.93	1.01	1.27	1.39	1.08	1.26	1.06	1.06	1.06	Relative P/E Ratio	1.05
Low	6.6%	6.7%	6.6%	6.1%	5.2%	5.8%	6.4%	5.8%	4.6%	4.2%	4.0%	4.3%	4.4%	4.5%	4.2%	5.0%	5.0%	5.0%	Avg Ann'l Div'd Yield	3.5%

2008-10 PROJECTIONS
 Price: High 40, Low 30
 Gain: +20%
 Return: 8%
Insider Decisions
 J J A S O N D J F
 to Buy: 0 0 0 0 0 0 0 0 1
 Options: 0 0 0 0 0 0 5 0 0
 to Sell: 0 0 0 0 0 1 5 0 0

Institutional Decisions
 3Q2004 3Q2004 3Q2004
 to Buy: 40 38 49
 to Sell: 30 28 26
 Net Buy: 10 10 23

CAPITAL STRUCTURE as of 12/31/04
 Total Debt \$274.8 mill. Due in 5 Yrs \$11.0 mill.
 LT Debt \$274.8 mill. LT Interest \$18.5 mill.
 (LT interest earned: 3.8x; total int. cov.: 3.4x)

Pension Assets-12/04 \$75.1 mill.
 Oblig. \$87.6 mill.
 Pfd Stock \$3.5 mill. Pfd Div'd \$1.5 mill.
 139,000 shares, 4.4% cumulative (\$25 par).

Common Stock 18,372,496 shs.
 as of 3/4/05

MARKET CAP: \$600 million (Small Cap)

Current Position	2002	2003	12/31/04
Cash Assets	1.1	2.9	18.8
Other	41.9	40.6	51.6
Current Assets	43.0	43.5	70.4
Accts Payable	23.7	23.8	19.8
Debt Due	24.8	7.3	-
Other	43.0	32.5	36.4
Current Liab.	91.5	63.6	57.2
Fix. Chg. Cov.	250%	218%	200%

ANNUAL RATES of change (per sh)

Past 10 Yrs	Past 5 Yrs	Est'd '02-'04 to '08-'10
Revenues	3.0%	2.0%
"Cash Flow"	2.0%	-1.5%
Earnings	-0.5%	-6.5%
Dividends	2.0%	1.0%
Book Value	2.5%	1.0%

QUARTERLY REVENUES (\$ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2002	51.7	69.2	81.4	60.9	263.2
2003	51.3	68.0	88.2	69.6	277.1
2004	60.2	88.9	97.1	69.4	315.6
2005	65.0	90.0	105	80.0	340
2006	75.0	95.0	110	85.0	365

EARNINGS PER SHARE^{A E}

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2002	.12	.43	.50	.20	1.25
2003	.05	.30	.53	.41	1.21
2004	.08	.59	.59	.20	1.46
2005	.10	.60	.65	.25	1.60
2006	.15	.63	.67	.30	1.75

QUARTERLY DIVIDENDS PAID^B

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2001	.279	.279	.279	.279	1.12
2002	.28	.28	.28	.28	1.12
2003	.281	.281	.281	.281	1.12
2004	.283	.283	.283	.283	1.13
2005	.285				

BUSINESS: California Water Service Group provides regulated and nonregulated water service to over 2 million people (451,800 customers) in 75 communities in California, Washington, and New Mexico. Main service areas: San Francisco Bay area, Sacramento Valley, Salinas Valley, San Joaquin Valley & parts of Los Angeles. Acquired National Utility Company (5/04); Rio Grande Corp.

Changes within the California Public Utility Commission (CPUC) paint a brighter picture for California Water Service Group going forward. The company has been forced to deal with regulatory delays from the board for years, as general rate case requests often remained in limbo for up to two years. However, two of the main adversaries to rate increase requests stepped down earlier this year and were replaced with more business-friendly candidates. The landscape has already improved, as CWT received approval to increase rates on an annual basis by \$4.1 million effective January, 2005. The company is currently awaiting a decision on its 2004 general rate case for eight districts, totaling \$26.5 million.

However, there are some concerns looming. Earlier this year, the Office of Ratepayer Advocates (ORA) took issue with CWT's land sale program. The CPUC branch, responsible for looking out for ratepayers, charged that CWT violated the California Water Utility Infrastructure Improvement Act of 1995, challenging its land sales since 1996. It recommended that the company pay a small fine and

that an unspecified portion of the \$19.2 million in gains from these sales be allocated for the benefit of the ratepayers. The company denies the charges. The CPUC does not have to take the ORA's advice, but this is the first case of this nature, making timeline and outcome of a resolution difficult to pin down. We expect the claim to slow earnings growth until the matter is concluded, though. As a result, we have lowered our 2005 earnings estimate by a dime, to \$1.60 a share.

Growth-minded investors will want to look elsewhere. These untimely shares are likely to underperform the broad market out to late decade. Besides the uncertainty surrounding the motion by the ORA, profits will likely be thwarted by ongoing share and debt issuances, a product of rising infrastructure costs.

However, Cal may interest those looking for some income. The company offers an above-average dividend yield. And the recent dividend hike marks the 38th consecutive year that it has increased its payout. Risk-averse investors should like the stock's 2 (Above Average) Safety rank.

Andre J. Costanza
 April 29, 2005

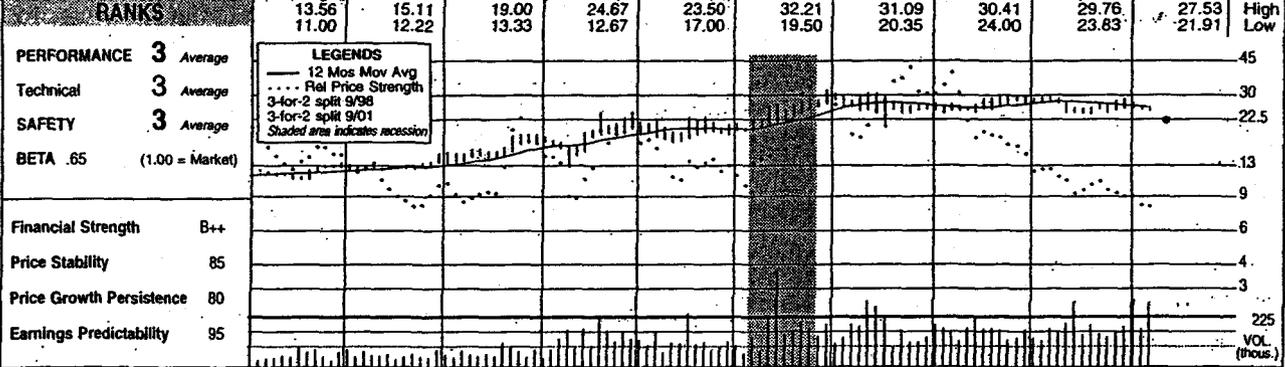
(A) Basic EPS. Excl. nonrecurring gain (loss): '00, (7c); '01, 4c; '02, 8c. Next earnings report due late July.

(B) Dividends historically paid in mid-Feb., May, Aug., Nov. = Div'd reinvestment plan available.

(C) Incl. deferred charges. In '04: \$54.3 mill., \$2.96/sh.
 (D) In millions, adjusted for split.
 (E) May not total due to change in shares.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	95
Earnings Predictability	65

CONN. WATER SERVICES NDQ-CTWS



© VALUE LINE PUBLISHING, INC.	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005/2006
SALES PER SH	5.69	5.67	5.58	5.87	5.70	5.93	5.77	5.91	6.04	
"CASH FLOW" PER SH	1.46	1.51	1.59	1.65	1.73	1.78	1.78	1.89	1.91	
EARNINGS PER SH	.97	1.00	1.02	1.03	1.09	1.13	1.12	1.15	1.16	N/A
DIV'DS DECL'D PER SH	.76	.77	.78	.79	.79	.80	.81	.83	.84	
CAP'L SPENDING PER SH	1.62	1.99	1.12	1.42	1.43	1.86	1.98	1.49	1.58	
BOOK VALUE PER SH	8.03	8.26	8.52	8.61	8.92	9.25	10.06	10.46	10.94	
COMMON SHS OUTST'G (MILL)	6.78	6.79	6.80	7.26	7.28	7.65	7.94	7.97	8.04	
AVG ANN'L P/E RATIO	12.5	12.9	15.5	18.2	18.2	21.5	24.3	23.5	22.9	N/A
RELATIVE P/E RATIO	.78	.74	.81	1.04	1.18	1.10	1.33	1.34	1.20	
AVG ANN'L DIV'D YIELD	6.2%	6.0%	4.9%	4.2%	4.0%	3.3%	3.0%	3.0%	3.1%	
SALES (\$MILL)	38.6	38.5	37.9	42.6	41.5	45.4	45.8	47.1	48.5	<i>Bold figures are consensus earnings estimates and, using the recent prices, P/E ratios.</i>
OPERATING MARGIN	44.9%	45.5%	46.2%	48.7%	48.8%	56.1%	57.7%	52.1%	51.0%	
DEPRECIATION (\$MILL)	3.3	3.5	3.9	4.5	4.7	5.0	5.4	5.9	6.0	
NET PROFIT (\$MILL)	6.6	6.8	7.0	7.5	8.0	8.7	8.8	9.2	9.4	
INCOME TAX RATE	37.0%	35.1%	34.3%	40.1%	35.7%	36.1%	33.8%	17.9%	22.9%	
NET PROFIT MARGIN	17.1%	17.7%	18.4%	17.6%	19.2%	19.1%	19.2%	19.5%	19.4%	
WORKING CAP'L (\$MILL)	d7.9	d10.4	d3.7	d3.8	.3	d3.3	d5.1	d3.9	d.7	
LONG-TERM DEBT (\$MILL)	54.4	54.5	62.5	85.4	64.7	64.0	64.8	64.8	66.4	
SHR. EQUITY (\$MILL)	55.2	56.8	58.7	63.3	65.7	71.6	80.7	84.2	88.7	
RETURN ON TOTAL CAP'L	7.6%	7.7%	7.3%	7.4%	7.6%	7.9%	7.4%	7.5%	7.0%	
RETURN ON SHR. EQUITY	12.0%	12.0%	11.9%	11.8%	12.1%	12.1%	10.9%	10.9%	10.6%	
RETAINED TO COM EQ	2.7%	2.8%	2.8%	3.1%	3.2%	3.6%	3.1%	3.2%	3.1%	
ALL DIV'DS TO NET PROF	78%	77%	76%	74%	74%	71%	72%	71%	71%	

Note: No analyst estimates available.

ANNUAL RATES				
of change (per share)	5 Yrs.	1 Yr.		
Sales	0.5%	2.0%		
"Cash Flow"	3.5%	1.5%		
Earnings	2.5%	1.0%		
Dividends	1.0%	1.0%		
Book Value	4.5%	4.5%		

Fiscal Year	QUARTERLY SALES (\$mill.)				Full Year
	1Q	2Q	3Q	4Q	
12/31/02	10.3	10.7	13.8	11.0	45.8
12/31/03	10.9	10.8	13.7	11.7	47.1
12/31/04	10.9	12.0	13.9	11.7	48.5

Fiscal Year	EARNINGS PER SHARE				Full Year
	1Q	2Q	3Q	4Q	
12/31/01	.30	.25	.38	.20	1.13
12/31/02	.19	.24	.50	.19	1.12
12/31/03	.26	.15	.48	.26	1.15
12/31/04	.24	.26	.47	.19	1.16

Cal-endar	QUARTERLY DIVIDENDS PAID				Full Year
	1Q	2Q	3Q	4Q	
2002	.202	.202	.205	.205	.81
2003	.205	.205	.208	.208	.83
2004	.208	.208	.21	.21	.84
2005	.21				

ASSETS (\$mill.)				
Cash Assets	2002	2003	12/31/04	
Receivables	.5	1.1	.7	
Inventory (Avg cost)	8.8	8.9	9.8	
Other	1.0	.9	.9	
Current Assets	10.4	11.2	15.3	

LIABILITIES (\$mill.)				
Property, Plant & Equip, at cost	321.5	331.5	344.5	
Accum Depreciation	88.8	92.6	98.4	
Net Property	232.7	238.9	246.1	
Other	21.7	27.4	29.5	
Total Assets	264.8	277.5	290.9	

LONG-TERM DEBT AND EQUITY as of 12/31/04				
Total Debt \$72.4 mill.	Due in 5 Yrs. \$7.4 mill.			
LT Debt \$66.4 mill.				
Including Cap. Leases None				
Leases, Uncapitalized Annual rentals \$4 mill.				
Pension Liability None in '04 vs. None in '03				

INDUSTRY: Water Utility

BUSINESS: Connecticut Water Services, Inc. acts as the parent company of The Connecticut Water Co. and other subsidiaries, which supply water for residential, commercial, industrial, and municipal purposes in Connecticut. Sales and distributions are affected by seasonal weather fluctuations throughout the year. Profitability is dependent on numerous factors, such as the quantity of rainfall and temperature in a given period of time, industrial demand, prevailing rates of interest for short-term and long-term borrowings, energy rates, and compliance with environmental and water-quality regulations. Connecticut Water owns and operates 10 water filtration treatment plants, including the Guilford Well, Rockville, Westbrook Well, MacKenzie, Hunt Well Field, Stafford Springs, and Reynolds Bridge. In March, the company agreed to sell the assets of BWC and Barlaco to the town of Barnstable for \$11 million. Has 193 employees. Chairman, C.E.O. & President: Marshall T. Chiaraluce, Inc.: CT. Address: 93 West Main Street, Clinton, CT 06413. Tel.: (860) 669-8636. Internet: <http://www.ctwater.com>.

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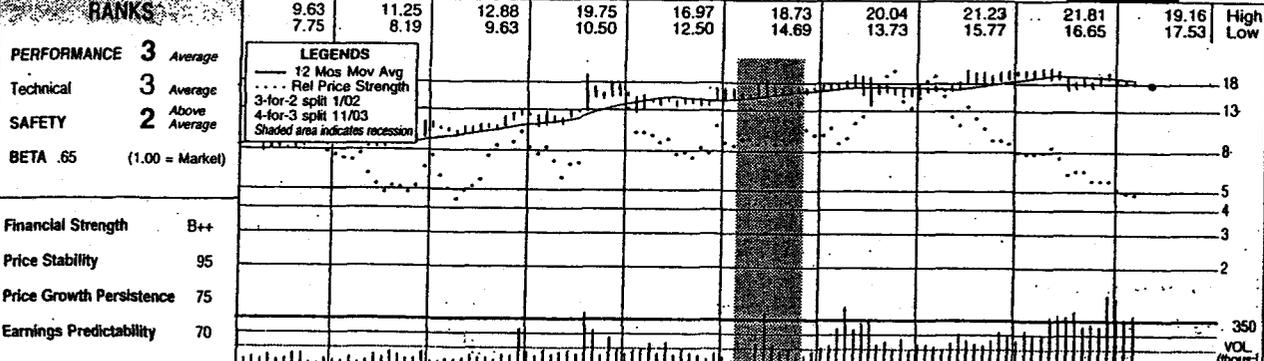
April 29, 2005

INSTITUTIONAL DECISIONS				
	2Q'04	3Q'04	4Q'04	
to Buy	18	14	14	
to Sell	15	13	15	
Hld's(000)	1375	1417	1431	

TOTAL SHAREHOLDER RETURN				
Dividends plus appreciation as of 3/31/2005				
3 Mos.	6 Mos.	1 Yr.	3 Yrs.	5 Yrs.
-5.08%	-4.19%	-9.34%	-0.05%	53.89%

MIDDLESEX WATER NDQ-MSEX

RECENT PRICE **17.68** TRAILING P/E RATIO **24.2** RELATIVE P/E RATIO **1.27** DIV'D YLD **3.8%** VALUE LINE **4705**



© VALUE LINE PUBLISHING, INC.	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005/2006
SALES PER SH	4.52	4.72	4.39	5.35	5.39	5.87	5.98	6.12	6.25	
"CASH FLOW" PER SH	.94	1.02	1.02	1.19	.99	1.18	1.20	1.15	1.28	
EARNINGS PER SH	.60	.67	.71	.76	.51	.66	.73	.61	.73	.79 A.O./NA
DIV'DS DECL'D PER SH	.55	.57	.58	.60	.61	.62	.63	.65	.66	
CAP'L SPENDING PER SH.	.73	1.20	2.68	2.33	1.32	1.25	1.59	1.87	2.63	
BOOK VALUE PER SH	5.85	6.00	6.80	6.95	6.98	7.11	7.39	7.60	8.38	
COMMON SHS OUTST'G (MILL)	8.41	8.54	9.82	10.00	10.11	10.17	10.36	10.48	11.36	
AVG ANN'L P/E RATIO	14.4	13.4	15.2	17.6	28.7	24.6	23.5	30.0	26.4	22.4/NA
RELATIVE P/E RATIO	.90	.77	.79	1.00	1.87	1.26	1.28	1.71	1.39	
AVG ANN'L DIV'D YIELD	6.4%	6.3%	5.4%	4.4%	4.2%	3.8%	3.7%	3.5%	3.4%	
SALES (\$MILL)	38.0	40.3	43.1	53.5	54.5	59.6	61.9	64.1	71.0	Bold figures are consensus earnings estimates and, using the recent prices, P/E ratios.
OPERATING MARGIN	36.0%	37.2%	37.0%	33.9%	32.2%	47.2%	47.1%	44.0%	44.4%	
DEPRECIATION (\$MILL)	2.9	3.1	3.8	4.3	4.9	5.3	5.0	5.6	6.4	
NET PROFIT (\$MILL)	5.2	5.9	6.5	7.9	5.3	7.0	7.8	6.6	8.4	
INCOME TAX RATE	32.8%	34.9%	31.5%	28.8%	33.1%	34.8%	33.3%	32.8%	31.1%	
NET PROFIT MARGIN	13.6%	14.5%	15.1%	14.7%	9.7%	11.7%	12.5%	10.3%	11.9%	
WORKING CAP'L (\$MILL)	2.0	d2.9	14.6	6.8	d2.7	d.9	d9.3	d13.3	d11.8	
LONG-TERM DEBT (\$MILL)	53.0	52.9	78.0	82.3	81.1	88.1	87.5	97.4	115.3	
SHR. EQUITY (\$MILL)	51.9	56.2	71.7	74.6	74.7	76.4	80.6	83.7	99.2	
RETURN ON TOTAL CAP'L	6.4%	6.8%	5.7%	6.4%	4.9%	5.6%	6.0%	5.0%	5.1%	
RETURN ON SHR. EQUITY	10.0%	10.4%	9.1%	10.6%	7.1%	9.1%	9.6%	7.9%	8.5%	
RETAINED TO COM EQ	.8%	1.7%	1.8%	2.5%	NMF	.5%	1.3%	NMF	.9%	
ALL DIV'DS TO NET PROF	92%	85%	81%	78%	121%	94%	87%	106%	90%	

No. of analysts changing earn. est. in last 16 days: 0 up, 0 down, consensus 5-year earnings growth 6.0% per year. Based upon one analyst's estimate.

ANNUAL RATES		
of change (per share)	5 Yrs.	1 Yr.
Sales	5.0%	2.0%
"Cash Flow"	2.5%	12.0%
Earnings	-0.5%	19.5%
Dividends	2.5%	2.0%
Book Value	3.5%	10.0%

ASSETS (\$mill.)	2002	2003	12/31/04
Cash Assets	2.9	3.0	4.0
Receivables	9.2	5.7	9.9
Inventory (Avg cost)	1.2	1.4	1.2
Other	7.0	4.3	.9
Current Assets	20.3	14.4	16.0
Property, Plant & Equip, at cost	259.3	278.4	308.4
Accum Depreciation	47.9	47.5	52.0
Net Property	211.4	230.9	256.4
Other	12.9	17.9	26.7
Total Assets	244.6	263.2	299.1

INDUSTRY: Water Utility

BUSINESS: Middlesex Water Company, through its subsidiaries, engages in the ownership and operation of regulated water utility systems in central and southern New Jersey, and in Delaware, as well as a regulated wastewater utility in southern New Jersey. Its New Jersey water utility system (the Middlesex System) provides water services to retail customers in central New Jersey. The Middlesex System also provides water service under contract to municipalities in central New Jersey. The company operates the water supply system and wastewater system for the city of Perth Amboy in New Jersey in partnership with its subsidiary, Utility Service Associates (Perth Amboy), Inc. Its other New Jersey subsidiaries provide water and wastewater services to residents in Southampton Township. The company's Delaware subsidiaries, comprising Tidewater Utilities, Inc. and Southern Shores Water Company, LLC, offer water services to retail customers in New Castle, Kent, and Sussex Counties. Has 220 employees. Chairman: J. Richard Tompkins, Inc. NJ. Address: 1500 Ronson Road, Iselin, NJ 08830. Tel.: (732) 634-1500. Internet: <http://www.middlesexwater.com>. A.O.

April 29, 2005

Fiscal Year	QUARTERLY SALES (\$mill.)				Full Year
	1Q	2Q	3Q	4Q	
12/31/02	14.3	15.5	17.0	15.1	61.9
12/31/03	15.0	16.0	17.6	15.5	64.1
12/31/04	15.9	17.8	19.8	17.5	71.0
12/31/05					

LIABILITIES (\$mill.)	2002	2003	12/31/04
Accts Payable	2.1	4.8	6.0
Debt Due	18.3	13.6	12.1
Other	9.2	9.3	9.7
Current Liab	29.6	27.7	27.8

Cal-ender	QUARTERLY DIVIDENDS PAID				Full Year
	1Q	2Q	3Q	4Q	
2002	.158	.158	.158	.161	.64
2003	.161	.161	.161	.165	.65
2004	.165	.165	.165	.168	.66
2005	.168				

LONG-TERM DEBT AND EQUITY as of 12/31/04

Total Debt \$127.4 mill. Due in 5 Yrs. \$19.4 mill.
 LT Debt \$115.3 mill.
 Including Cap. Leases None (54% of Cap'l)
 Leases, Uncapitalized Annual rentals None

INSTITUTIONAL DECISIONS			
	2Q'04	3Q'04	4Q'04
to Buy	19	12	16
to Sell	13	17	12
Hld's(000)	1911	1882	1881

Pension Liability \$5.5 mill. in '04 vs. \$5.1 mill. in '03

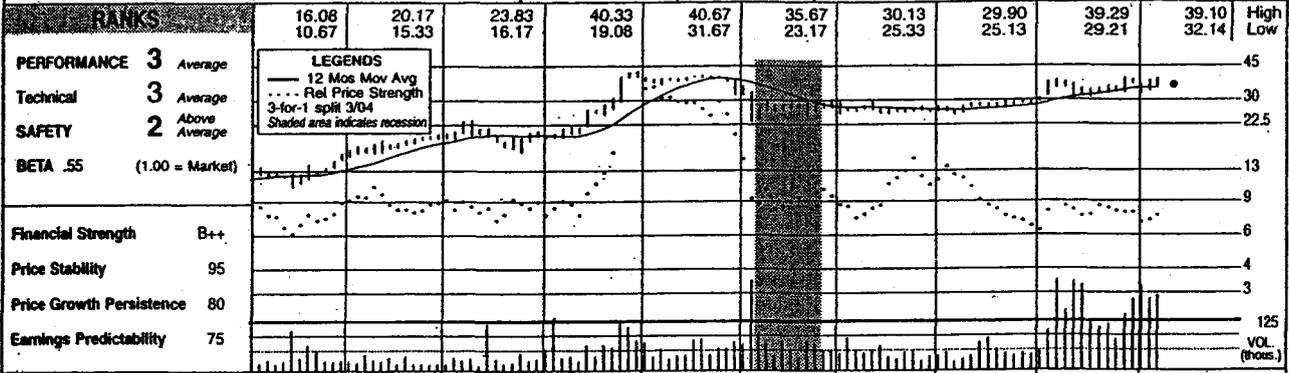
Pfd Stock \$4.1 mill. Pfd Div'd Paid \$3 mill. (2% of Cap'l)

Common Stock 11,358,772 shares (44% of Cap'l)

TOTAL SHAREHOLDER RETURN

Dividends plus appreciation as of 3/31/2005				
3 Mos.	6 Mos.	1 Yr.	3 Yrs.	5 Yrs.
-3.31%	3.09%	-9.13%	15.07%	48.21%

SJW CORP. AMEX-SJW RECENT PRICE **35.80** TRAILING P/E RATIO **20.6** RELATIVE P/E RATIO **1.08** DIV'D YLD **3.0%** VALUE LINE **4706**



6 VALUE LINE PUBLISHING, INC.	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005/2006
SALES PER SH	10.79	11.57	11.16	12.81	13.48	14.90	15.94	16.39	18.27	
"CASH FLOW" PER SH	2.86	2.53	2.52	2.86	2.46	2.98	3.09	3.50	3.78	
EARNINGS PER SH	1.92	1.60	1.51	1.73	1.17	1.53	1.56	1.83	1.74	NANA
DIV'D DECL'D PER SH	.74	.76	.78	.80	.82	.86	.92	.97	1.02	
CAP'L SPENDING PER SH	2.11	2.54	3.62	3.53	3.77	5.25	4.12	6.82	4.63	
BOOK VALUE PER SH	12.62	14.04	15.06	15.75	15.80	16.35	16.80	18.21	20.22	
COMMON SHS OUTST'G (MILL)	9.51	9.51	9.50	9.14	9.14	9.14	9.14	9.14	9.14	
AVG ANNL P/E RATIO	6.8	11.2	13.1	15.5	33.1	18.5	17.3	15.4	19.6	NANA
RELATIVE P/E RATIO	.43	.65	.68	.88	2.15	.95	.94	.88	1.03	
AVG ANNL DIV'D YIELD	5.7%	4.3%	3.9%	3.0%	2.1%	3.0%	3.4%	3.5%	3.0%	
SALES (\$MILL)	102.6	110.1	106.0	117.0	123.2	136.1	145.7	149.7	166.9	<i>Bold figures are consensus earnings estimates and, using the recent prices, P/E ratios.</i>
OPERATING MARGIN	34.4%	34.8%	36.0%	33.2%	30.2%	64.4%	63.7%	56.0%	56.4%	
DEPRECIATION (\$MILL)	8.7	8.9	9.6	10.2	11.9	13.2	14.0	15.2	18.5	
NET PROFIT (\$MILL)	18.6	15.2	14.4	15.9	10.7	14.0	14.2	16.7	16.0	
INCOME TAX RATE	32.8%	39.9%	40.2%	35.9%	41.0%	34.5%	40.4%	36.2%	42.1%	
NET PROFIT MARGIN	18.1%	13.8%	13.6%	13.6%	8.7%	10.3%	9.8%	11.2%	9.6%	
WORKING CAP'L (\$MILL)	11.9	7.0	9.4	13.0	11.4	13.8	14.9	12.0	13.0	
LONG-TERM DEBT (\$MILL)	75.0	75.0	90.0	90.0	90.0	110.0	110.0	139.6	143.6	
SHR. EQUITY (\$MILL)	120.0	133.6	143.2	143.9	144.3	149.4	153.5	166.4	184.7	
RETURN ON TOTAL CAP'L	11.0%	8.7%	7.4%	8.2%	5.9%	6.7%	6.9%	6.9%	6.5%	
RETURN ON SHR. EQUITY	15.5%	11.4%	10.1%	11.0%	7.4%	9.4%	9.3%	10.0%	8.7%	
RETAINED TO COM EQ	9.5%	6.0%	4.9%	5.9%	2.2%	4.1%	3.8%	4.7%	3.6%	
ALL DIV'DS TO NET PROF	39%	48%	52%	46%	70%	56%	59%	53%	58%	

Note: No analyst estimates available.

ANNUAL RATES				
of change (per share)	5 Yrs.	1 Yr.		
Sales	7.5%	11.5%		
"Cash Flow"	5.5%	8.0%		
Earnings	1.0%	-4.5%		
Dividends	4.5%	5.0%		
Book Value	4.0%	11.0%		

Fiscal Year	QUARTERLY SALES (\$MILL)	Full Year
	1Q 2Q 3Q 4Q	
12/31/02	27.7 38.7 46.2 33.1	145.7
12/31/03	27.8 38.0 49.3 34.6	149.7
12/31/04	31.1 45.6 52.3 37.9	166.9
12/31/05		

Fiscal Year	EARNINGS PER SHARE	Full Year
	1Q 2Q 3Q 4Q	
12/31/01	.07 .46 .70 .30	1.53
12/31/02	.19 .44 .63 .30	1.56
12/31/03	.37 .48 .65 .33	1.83
12/31/04	.19 .53 .60 .42	1.74
12/31/05		

Cal-ender	QUARTERLY DIVIDENDS PAID	Full Year
	1Q 2Q 3Q 4Q	
2002	.23 .23 .23 .23	.92
2003	.243 .243 .243 .243	.97
2004	.255 .255 .255 .255	1.02
2005	.268	

INSTITUTIONAL DECISIONS			
	2Q'04	3Q'04	4Q'04
to Buy	17	19	23
to Sell	23	15	10
HK's(000)	2222	2214	2214

ASSETS (\$MILL)		
	2002	2003
Cash Assets	.3	10.0
Receivables	13.9	13.7
Inventory	.5	.5
Other	4.0	2.9
Current Assets	18.7	27.1
Property, Plant & Equip, at cost	552.4	603.5
Accum Depreciation	161.6	175.0
Net Property	390.8	428.5
Other	43.7	56.1
Total Assets	453.2	511.7

LIABILITIES (\$MILL)		
	2002	2003
Accts Payable	.4	2.2
Debt Due	11.5	.2
Other	11.7	12.7
Current Liab	23.6	15.1

LONG-TERM DEBT AND EQUITY as of 12/31/04	
Total Debt \$143.9 mill.	Due in 5 Yrs. \$1.6 mill.
LT Debt \$143.6 mill.	
Including Cap. Leases None	(44% of Cap'l)
Leases, Uncapitalized Annual rentals None	
Pension Liability \$9.4 mill. in '04 vs. None in '03	
Pfd Stock None	Pfd Div'd Paid None
Common Stock 9,135,441 shares	(56% of Cap'l)

INDUSTRY: Water Utility

BUSINESS: SJW Corp. operates as the holding company of San Jose Water Company, SJW Land Company, and Crystal Choice Water Service, LLC. San Jose Water provides water service to a population of approximately one million people in an area comprising 138 square miles in the metropolitan San Jose area. Its principal business consists of the production, purchase, storage, purification, distribution, and retail sale of water. It also provides nonregulated water-related services under agreements with municipalities. SJW Land owns and operates parking facilities, which are located adjacent to San Jose Water's headquarters and the HP Pavilion in San Jose, California. It also owns commercial buildings and other undeveloped land, primarily in the metropolitan San Jose area; and a 70% limited partnership interest in 444 West Santa Clara Street, L.P., a real estate limited partnership that owns and operates an office building. Has 302 employees. Chairman: Drew Gibson. Inc.: CA. Address: 374 West Santa Clara Street, San Jose, CA 95196. Tel.: (408) 279-7800. Internet: <http://www.sjwater.com>.

A.O.

April 29, 2005

TOTAL SHAREHOLDER RETURN					
Dividends plus appreciation as of 3/31/2005					
3 Mos.	6 Mos.	1 Yr.	3 Yrs.	5 Yrs.	
-2.74%	8.04%	3.74%	41.00%	3.41%	

REJOINDER EXHIBIT

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WATER

COMPANY	PER SHARE	
	LATEST 12 MONTHS EARNINGS AVAILABLE	CURRENT ANNUAL DIVIDEND
American States Water Co. (NYSE-AWR)	1.32	0.90
Aqua America, Inc. (NYSE-WTR)	0.89	0.53
Artesian Resources Corp. (NDQ-ARTNA)	1.13	0.85
California Water Service Group (NYSE-CWT)	1.41	1.14
Connecticut Water Service, Inc. (NDQ-CTWS)	1.15	0.83
Middlesex Water Company (NDQ-MSEX)	0.77	0.66
Pennichuck Corporation (NDQ-PNNW)	0.44	0.55
SJW Corporation (ASE-SJW)	2.25	1.07
Southwest Water Company (NDQ-SWWC)	0.25	0.20
York Water Company (NDQ-YORW)	0.73	0.55
AVERAGE		

COMPANIES

BOOK VALUE (1)	STOCK PRICE 5/75	COMMON SHARES O/S MILL	PERCENT (2)			DIV/ BOOK (2)	PRICE EARN MULT
			DIV PAYOUT	DIV YIELD	MKT/ BOOK		
15.02	27.32	16.8	6.8	3.3	1.8	6.0	2.0
7.97	25.18	95.4	5.8	1.9	1.1	6.5	3.0
13.98	34.02	4.0	7.5	2.7	1.9	6.1	3.3
15.41	33.03	18.4	8.1	3.3	2.6	7.4	2.1
11.02	24.54	8.1	7.1	3.4	2.6	7.6	2.1
8.34	24.04	11.4	5.2	3.5	1.8	8.0	2.3
9.08	19.11	3.2	5.2	3.4	1.0	7.3	2.3
19.99	41.63	9.1	9.1	2.6	2.0	5.4	1.8
6.46	10.58	19.4	6.6	1.9	1.6	3.1	1.8
7.03	20.19	6.9	8.8	3.0	2.6	8.9	2.5
				2.9		6.6	

WATER

COMPANY	TOTAL REV \$ MILL (I)	REG WATER REV \$ MILL	NET PLANT REV \$ MILL	NET PLANT REV PER \$ (J)
American States Water Co. (NYSE-AWR)		88	2.60	
Aqua America, Inc. (NYSE-WTR)		84	3.96	
Artesian Resources Corp. (NDQ-ARTNA)		95	4.47	
California Water Service Group (NYSE-CWT)		96	2.26	
Connecticut Water Service, Inc. (NDQ-CTWS)		91	3.54	
Middlesex Water Company (NDQ-MSEX)		86	3.31	
Pennichuck Corporation (NDQ-PNNW)		85	2.90	
SJW Corporation (ASE-SJW)		97	2.58	
Southwest Water Company (NDQ-SWWC)		37	1.11	
York Water Company (NDQ-YORW)		95	6.06	
AVERAGE				

COMPANIES

S&P BOND RATING	MOODY'S BOND RATING	COMMON EQUITY RATIO (3)	% RETURN ON BOOK VALUE		REGULATION ORDER DATE
			COMMON EQUITY (4)	TOTAL CAPITAL	
	A2	43	9.1	10.00	10-89
	NR	45	11.7	10.08	
	NR	37	8.6	-	11-90
	A2	50	9.6	9.70	
	NR	54	10.9	12.70	
	NR	45	9.8	10.04	
	NR	45	4.7	10.00	11-90
	NR	36	11.8	9.90	08-91
	NR	49	3.8	9.84	05-90
	NR	41	11.2	-	11-91
		48	9.1	10.28	

