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ORIGINAL

BEFORE THE ARIZONA CORPORATION COMMISSION

- 2 KRISTIN K. MAYES
CHAIRMAN
- 3 GARY PIERCE
COMMISSIONER
- 4 SANDRA D. KENNEDY
COMMISSIONER
- 5 PAUL NEWMAN
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COMMISSIONER

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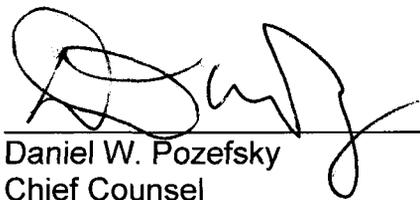
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8 IN THE MATTER OF THE APPLICATION OF
9 JOHNSON UTILITIES, LLC FOR AN
10 INCREASE IN ITS WATER AND
11 WASTEWATER RATES FOR CUSTOMERS
12 WITHIN PINAL COUNTY, ARIZONA.

Docket No. WS-02987A-08-0180

NOTICE OF FILING

13 The Residential Utility Consumer Office ("RUCO") hereby provides notice of filing
14 the Surrebuttal Testimony of William A. Rigsby, CRRA and Rodney L. Moore in the above-
15 referenced matter.

16
17 RESPECTFULLY SUBMITTED this 31st day of March, 2009.

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19
20 
Daniel W. Pozefsky
Chief Counsel

Arizona Corporation Commission
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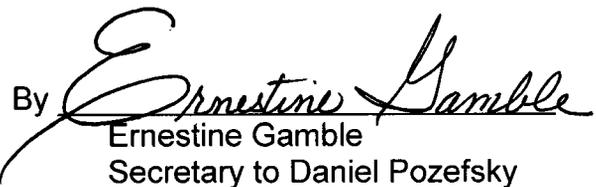
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JOHNSON UTILITIES, L.L.C.

DOCKET NO. WS-02987A-08-0180

SURREBUTTAL TESTIMONY

OF

RODNEY L. MOORE

ON BEHALF OF

THE

RESIDENTIAL UTILITY CONSUMER OFFICE

MARCH 31, 2009

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1 **INTRODUCTION**

2 Q. Please state your name for the record.

3 A. My name is Rodney Lane Moore.

4

5 Q. Have you previously filed testimony regarding this docket?

6 A. Yes, I have. I filed direct testimony in this docket on February 4, 2009.

7

8 Q. What is the purpose of your surrebuttal testimony?

9 A. My surrebuttal testimony will address Company's rebuttal comments
10 pertaining to adjustments I sponsored in my direct testimony. I also
11 accept adjustments identified by the Engineering Section of the Arizona
12 Corporation Commission ("ACC").

13

14 **SUMMARY OF ADJUSTMENTS**

15 Q. What areas will you address in your surrebuttal testimony?

16 A. My surrebuttal testimony will address the following RUCO proposed
17 adjustments:

18 **RATE BASE ADJUSTMENTS**

19 1. (WATER DISTRICT ONLY) Rate Base Adjustment No. 1 – Gross
20 Plant In Service;

21 2. (WASTEWATER DISTRICT ONLY) Rate Base Adjustment No. 1 –
22 Direct Post Test-Year Plant;

23

- 1 3. (WATER DISTRICT ONLY) Rate Base Adjustment No. 2 –
- 2 Accumulated Depreciation;
- 3 4. (WASTEWATER DISTRICT ONLY) Rate Base Adjustment No. 2 –
- 4 Accumulated Amortization Of CIAC;
- 5 5. (WASTEWATER DISTRICT ONLY) Rate Base Adjustment No. 4 –
- 6 Gross Plant In Service;
- 7 6. (WATER DISTRICT ONLY) Rate Base Adjustment No. 5 –
- 8 Materials and Supplies;
- 9 7. (WASTEWATER DISTRICT ONLY) Rate Base Adjustment No. 5 –
- 10 Accumulated Depreciation;
- 11 8. (WATER DISTRICT ONLY) Rate Base Adjustment No. 6 – Service
- 12 Line and Meter Charges;
- 13 9. (WATER DISTRICT ONLY) Rate Base Adjustment No. 7 –
- 14 Customer Security Deposits;

15

16 **OPERATING INCOME ADJUSTMENTS**

- 17 1. Operating Income Adjustment No. 1 – Depreciation Expense;
- 18 2. Operating Income Adjustment No. 2 – Property Tax Computation;
- 19 3. (WATER DISTRICT ONLY) Operating Income Adjustment No. 3 –
- 20 Outside Services;
- 21 4. (WASTEWATER DISTRICT ONLY) Operating Income Adjustment
- 22 No. 5 – Sludge Removal Expenses;
- 23 5. Operating Income Adjustment No. 6 – Miscellaneous Expenses;

- 1 6. Operating Income Adjustment No. 7 – Purchased Power Expenses;
- 2 7. Rate Design and Proof of Recommended Revenue; and
- 3 8. Typical Residential Bill Analysis.

4

5 To support the adjustments in my surrebuttal testimony, I prepared eleven
6 Surrebuttal Schedules for each Division, which is filed concurrently in my
7 surrebuttal testimony.

8

9 **RATE BASE**

10 **Rate Base Adjustment No. 1 – Surrebuttal Adjustment To Gross Plant In**
11 **Service**

12 Q. Please explain your surrebuttal adjustment to gross plant in service.

13 A. This adjustment is consistent with the analysis and conclusions reached
14 by the Engineering Section of the ACC as stated in the direct testimony of
15 Staff witness Marlin Scott, Jr.. RUCO accepts Mr. Scott's findings with
16 respect to his analysis of the Company's infrastructure and his conclusion
17 that the Company has requested inclusion of plant into rate base that is
18 not used and useful, provides unnecessary excess capacity and/or is not
19 properly classified to the correct account codes.

20

21

22

23

1 Therefore, as shown on Schedule SURR RLM-3, and supporting Schedule
2 SURR RLM-6, this adjustment reflects the plant decreases as
3 recommended by Staff Engineering for each District:
4 Water District by (\$5,254,084); and
5 Wastewater District by (\$10,038,359).

6
7 **(WASTEWATER DISTRICT ONLY) Rate Base Adjustment No. 1 – Revised**
8 **Direct Post Test-Year Plant**

9 Q. Please explain your surrebuttal adjustment to post test-year plant.

10 A. This is a conforming adjustment to correct the calculation of post test-year
11 plant based on revised data outlined in the Company's rebuttal testimony.

12
13 Therefore, as shown on (WASTEWATER DISTRICT ONLY) Schedule
14 SURR RLM-3, I revised my original direct testimony to reflect the correct
15 level of post test-year plant with an adjustment to the Wastewater District
16 for:
17 \$490,896.

18
19 **(WATER DISTRICT ONLY) Rate Base Adjustment No. 2 – Revised Direct**
20 **Accumulated Depreciation**

21 Q. Please explain your surrebuttal adjustment to accumulated depreciation.

22 A. This adjustment reflects, in part, RUCO's acceptance of several Staff
23 Engineering adjustments associated with reclassified plant, excess

1 capacity and plant not deemed used and useful plant, and also in part for
2 my revision to the level of post test-year plant (as described above).

3
4 Therefore, as shown on Schedule SURR RLM-3, my revised adjustment
5 to accumulated depreciated for the Water District by:

6 \$436,975.

7
8 **(WASTEWATER DISTRICT ONLY) Rate Base Adjustment No. 2 –**
9 **Accumulated Amortization Of Contributions In Aid of Construction**
10 **(“CIAC”)**

11 Q. Please explain your surrebuttal adjustment to the accumulated
12 amortization of CIAC.

13 A. My adjustment corrects RUCO's original direct testimony calculation. I
14 discovered my companion adjustment to CIAC was not reflected in this
15 adjustment. My work papers for the CIAC amortization adjustment did not
16 include the increase to CIAC as recommended in my direct testimony
17 Rate Base Adjustment No. 3.

18
19 Therefore, as shown on (WASTEWATER DISTRICT ONLY) Schedule
20 SURR RLM-3, and on supporting Schedule SURR RLM-5, this adjustment
21 increases the total rate base of the Wastewater District by:

22 \$1,058,281.

23

1 **(WATER DISTRICT ONLY) Rate Base Adjustment No. 4 – Surrebuttal**
2 **Adjustment To Material and Supplies**

3 Q. Please explain your surrebuttal adjustment to Material and Supplies.

4 A. My original adjustment was based on the premise of accepting the
5 Company's proposal but with amendments to reflect RUCO's
6 recommended level of O & M expenses. However, after further analysis, I
7 determined it's RUCO's historical position not to allow a utility to pick and
8 choose which of the elements will comprise the working capital allowance.
9 Since the Company did not perform a complete working capital analysis to
10 compute the test-year level of all the elements (i.e. working cash capital,
11 materials, supplies and prepayments) there should be a disallowance of
12 the Company's proposed recovery of just the materials and supplies
13 elements.

14
15 Therefore, as shown on (WATER DISTRICT ONLY) Schedule SURR
16 RLM-3, I have reduced the Company's total allowance for working capital
17 to zero by an adjustment to the Water District for:
18 (\$348,852).

1 **(WATER DISTRICT ONLY) Rate Base Adjustment No. 6– Surrebuttal**
2 **Adjustment To Service Line and Meter Charges**

3 Q. Please explain your surrebuttal adjustment to service line and meter
4 charges.

5 A. This adjustment is a companion adjustment to (WATER DISTRICT ONLY)
6 Rate Base Adjustment No. 7 below and corrects an accounting error in
7 which the Company recorded \$6,779,771 in costs incurred for “service line
8 and meter advances costs” as “customer security deposits”.

9
10 As shown on (WATER DISTRICT ONLY) Schedule SURR RLM-3, this
11 adjustment, in conjunction the following adjustment, moves \$6,779,771
12 from “customer security deposits” to “service line and meter charges”.

13
14 **(WATER DISTRICT ONLY) Rate Base Adjustment No. 8– Surrebuttal**
15 **Adjustment To Customer Security Deposits**

16 Q. Please explain your surrebuttal adjustment to customer security deposits.

17 A. This adjustment is a companion adjustment to (WATER DISTRICT ONLY)
18 Rate Base Adjustment No. 6 above and corrects an accounting error in
19 which the Company recorded \$6,779,771 in costs incurred for “service line
20 and meter advances costs” as “customer security deposits”.

21
22 As shown on (WATER DISTRICT ONLY) Schedule SURR RLM-3, this
23 adjustment, in conjunction the preceding adjustment, moves \$6,779,771

1 from "customer security deposits" to "service line and meter charges".

2 This adjustment also recognizes the test year-end customer security
3 deposit balance of \$378,138; therefore the net transfer from the customer
4 security deposit is $\$6,779,771 - \$378,138 = \$6,401,633$.

5
6 **OPERATING INCOME**

7 **Operating Income Adjustment No. 1 – Surrebuttal Adjustment To**

8 **Depreciation Expense**

9 Q. Please explain your surrebuttal adjustment to the test-year depreciation
10 expense.

11 A. This adjustment reflects RUCO's end of test year gross plant in service.
12 The adjustment is driven by the disallowance of several plant additions as
13 explained previously in my testimony.

14
15 As shown on Schedule SURR RLM-8, and supporting Schedule SURR
16 RLM-9, this adjustment decreases adjusted test-year operating expenses
17 of each District:

18 Water District by (\$398,648); and

19 Wastewater District by (\$362,533).

20

21

22

23

1 **Operating Income Adjustment No. 2 – Surrebuttal Adjustment To**

2 **Property Taxes**

3 Q. Please explain your surrebuttal adjustment to the test-year property tax
4 expense.

5 A. This adjustment reflects RUCO's recommended proposed annual
6 revenue.

7
8 As shown on Schedule SURR RLM-8, and supporting Schedule SURR
9 RLM-10, this adjustment changes adjusted test-year operating expenses
10 of each District:

11 Water District by an increase of \$15,946; and

12 Wastewater District by decrease of (\$54,330).

13
14 **(WASTEWATER DISTRICT ONLY) Operating Income Adjustment No. 5 –**

15 **Surrebuttal Adjustment To Sludge Removal Expense**

16 Q. Please explain your surrebuttal adjustment to the test-year sludge removal
17 expense.

18 A. This is a conforming adjustment to reflects the Company's adoption of
19 Staff's wastewater district operating income adjustment 2, which disallows
20 sludge removal expenses that occurred outside the test year in 2008.

21

22

23

1 As shown on (WASTEWATER DISTRICT ONLY) Schedule SURR RLM-8,
2 this adjustment decreases adjusted test-year operating expenses for the
3 Wastewater District by:
4 (\$7,688).

5

6 **Operating Income Adjustment No. 6 – Surrebuttal Adjustment To**
7 **Miscellaneous Expenses**

8 Q. Please explain your surrebuttal adjustment to the test-year miscellaneous
9 expense.

10 A. As shown on Schedule SURR RLM-8, this is a conforming adjustment to
11 reflect the Company's adoption of both RUCO's and Staff's direct
12 testimony recommendation which decreases adjusted test-year operating
13 expenses for each District:
14 Water District by (\$31,192); and
15 Wastewater District by (\$993).

16

17 **Operating Income Adjustment No. 7 – Surrebuttal Adjustment To**
18 **Purchased Power Expenses**

19 Q. Please explain your surrebuttal adjustment to the test-year purchased
20 power expense.

21 A. This is a conforming adjustment to reflect the Company's adoption of both
22 RUCO's and Staff's reinstatement of purchased power costs to include:

23

- 1 1. An accounting error by the Company where it had credited meter
2 deposit refunds to the purchased power account;
- 3 2. A reduction for purchased power costs of an affiliate; and
- 4 3. An increase in purchased power costs for a known and measurable
5 contractual agreement.

6

7 As shown on Schedule SURR RLM-8, this adjustment increases adjusted
8 test-year operating expenses for each District:

9 Water District by \$2,631; and

10 Wastewater District by \$26,003.

11

12 **OPERATING MARGIN (WATER DISTRICT ONLY)**

13 Q. Is RUCO proposing a surrebuttal adjustment to the Company proposed
14 rate of return?

15 A. Yes, it is. Since RUCO's adjusted rate base is now negative, the revenue
16 requirement will be determined by an operating margin. RUCO
17 recommends an operating margin equal to RUCO's recommended
18 weighted average cost of capital of 8.18 percent.

19

20 RUCO's cost of capital determination is fully explained in the testimonies
21 of RUCO witness William A. Rigsby.

22

23

1 **COST OF CAPITAL**

2 Q. Is RUCO proposing any surrebuttal adjustments to its proposed cost of
3 capital?

4 A. No.

5

6 This adjustment is fully explained in the testimony of RUCO witness
7 William A. Rigsby.

8

9 **RATE DESIGN AND PROOF OF RECOMMENDED REVENUE**

10 Q. Have you revised your Schedule presenting your recommended rate
11 designs?

12 A. Yes, as shown on Schedule SURR RLM-14, I am recommending a rate
13 design that is consistent with RUCO's recommended revenue allocations
14 and requirement as revised in my surrebuttal testimony.

15

16 The Water District's rate design provides for an 11.25 percent decrease
17 equally across all classes of service, which is an increase of 5.71 percent
18 over the Company's requested 16.96 percent decrease. However, if you
19 impute the Company's proposed CAGR tax surcharge, the Company's
20 request decrease is reduced to 12.03 percent; which is 0.78 percent
21 higher than RUCO's overall proposal.

22

23

1 The Wastewater District's rate design provides for a 4.52 percent
2 decrease equally across all classes of service, which is a decrease of
3 24.36 percent over the Company's requested 19.84 percent increase.

4

5 Q. Have you revised your Schedule presenting proof of your recommended
6 revenue?

7 A. Yes, I have. As shown on Schedule SURR RLM-14, my recommended
8 rate design will produce the recommended required revenue as revised in
9 my surrebuttal testimony.

10

11 **TYPICAL RESIDENTIAL BILL ANALYSIS**

12 Q. Has RUCO prepared a Schedule representing the financial impact of
13 RUCO's recommended rate design on the typical residential customer?

14 A. Yes. A typical bill analysis for residential customers with various levels of
15 usage is presented on Schedule SURR RLM-15.

16

17 Q. Does this conclude your surrebuttal testimony?

18 A. Yes, it does.

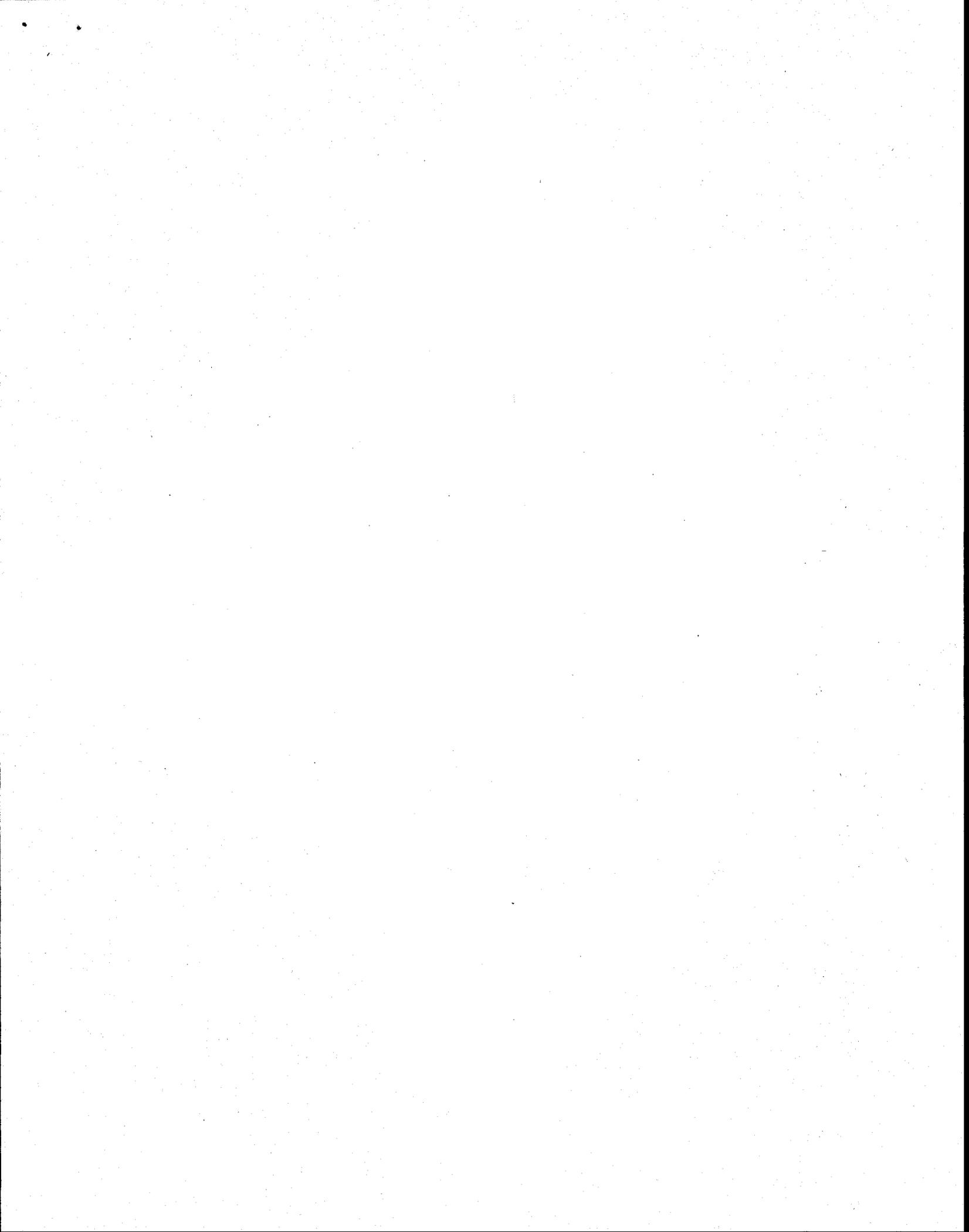


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TESTIMONY		RATE BASE ADJUSTMENT NO. 2 - SURREBUTTAL ADJUSTED ACCUMULATED DEPRECIATION
TESTIMONY		RATE BASE ADJUSTMENT NO. 5 - SURREBUTTAL ADJUSTED MATERIALS AND SUPPLIES
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SURREBUTTAL REVENUE REQUIREMENT

LINE NO.	DESCRIPTION	(A) COMPANY OCRB/FVRB COST	(B) RUCO OCRB/FVRB COST
1	Original Cost Rate Base	\$ 6,607,841	\$ (5,556,766)
2	Adjusted Operating Income (Loss)	\$ 2,118,161	\$ 2,438,370
3	Recommended Operating Income (8.18% Operating Margin) (L11 X 10%)	N/A	\$ 956,311
4	Current Rate Of Return (L2 / L1)	32.06%	N/A
5	Required Operating Income (L5 X L1)	\$ 689,198	N/A
6	Required Rate Of Return On Fair Value Rate Base	10.43%	N/A
7	Operating Income Deficiency (L4 - L2)	\$ (1,428,963)	N/A
8	Gross Revenue Conversion Factor	<u>1.5630</u>	N/A
9	Increase In Gross Revenue Requirement (L7 X L6)	\$ (2,233,480)	\$ (1,482,059)
10	Adjusted Test Year Revenue	\$ 13,172,899	\$ 13,172,899
11	Proposed Annual Revenue (L8 + L9)	\$ 10,939,419	\$ 11,690,840
12	Required Percentage Increase In Revenue (L8 / L9)	-16.96%	-11.25%
13	Rate Of Return On Common Equity	10.50%	N/A
14	Required Operating Margin	N/A	8.18%

References:

Column (A): Company Schedules A-1 and C-1
Column (B): RUCO Schedule SURR RLM-2, SURR RLM-7 And RLM-13

SURREBUTTAL RATE BASE - ORIGINAL COST

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED OCRB/FVRB	(B) RUCO OCRB/FVRB ADJUSTMENTS	(C) RUCO ADJ'TED OCRB/FVRB
1	Gross Utility Plant In Service	\$ 79,591,151	\$ (5,254,084)	\$ 74,337,067
2	Accumulated Depreciation	(6,199,124)	436,975	(5,762,149)
3	Net Utility Plant In Service (Sum L1 & L2)	<u>\$ 73,392,027</u>	<u>\$ (4,817,109)</u>	<u>\$ 68,574,918</u>
4	Advances In Aid Of Const.	\$ (37,840,520)	\$ -	\$ (37,840,520)
5	Service Line And Meter Advances	\$ -	\$ (6,779,771)	\$ (6,779,771)
6	Contribution In Aid Of Const.	\$ (25,004,821)	\$ (6,931,078)	\$ (31,935,899)
7	Accumulated Amortization Of CIAC	1,858,537	\$ 310,570	2,169,107
8	NET CIAC (L6 + L7)	<u>\$ (23,146,284)</u>	<u>\$ (6,620,508)</u>	<u>\$ (29,766,792)</u>
9	Customer Meter Deposits	\$ (6,779,771)	\$ 6,401,633	\$ (378,138)
10	Deferred Income Taxes And Credits	\$ -	\$ -	\$ -
11	Investment Tax Credits	\$ -	\$ -	\$ -
12	Shared Gain On Well	\$ -	\$ -	\$ -
13	Prepayments	\$ -	\$ -	\$ -
14	Materials And Supplies	\$ 348,852	\$ (348,852)	\$ -
15	Deferred Assets	\$ 633,537	\$ -	\$ 633,537
16	Allowance For Working Capital	\$ -	\$ -	\$ -
17	TOTAL RATE BASE (Sum L's 3, 4, 5, & 8 Thru 16)	<u>\$ 6,607,841</u>	<u>\$ (12,164,607)</u>	<u>\$ (5,556,766)</u>

References:

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

SURREBTAL SUMMARY OF ORIGINAL COST RATE BASE ADJUSTMENTS

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED OCRB/FVRB	(B) SURR'B TAL ADJMT NO. 1 GROSS PLANT OCRB/FVRB	(C) SURR'B TAL ADJMT NO. 2 ACCUMULT'D DEPRECTN ON	(D) ADJMT NO. 3 ACC AMORT ON (HUF) CIAC	(E) ADJMT NO. 4 REINSTATE (HUF) CIAC	(F) SURR'B TAL ADJMT NO. 5 MATERIALS & SUPPLIES	(G) SURR'B TAL ADJMT NO. 6 RECLASSIFY SERVICE LINE	(H) SURR'B TAL ADJMT NO. 7 RECLASSIFY CUST DEPOSIT	(I) RUCO ADJUTED OCRB/FVRB
1	Gross Utility Plant In Service	\$ 79,591,151	\$ (5,254,084)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (5,254,084)
2	Accumulated Depreciation	(6,199,124)	436,975	436,975	-	-	-	-	-	436,975
3	Net Utility Plant In Service (Sum L1 & L2)	\$ 73,392,027	\$ (5,254,084)	\$ 436,975	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (4,817,109)
4	Advances In Aid Of Const.	\$ (37,840,520)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5	Service Line And Meter Advances	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (6,779,771)	\$ -	\$ -	\$ (6,779,771)
6	Contribution In Aid Of Const.	\$ (25,004,821)	\$ -	\$ -	\$ -	\$ (6,931,078)	\$ -	\$ -	\$ -	\$ (6,931,078)
7	Accumulated Amortization Of CIAC	1,858,537	-	310,570	-	-	-	-	-	310,570
8	NET CIAC (L6 + L7)	\$ (23,146,284)	\$ -	\$ 310,570	\$ (6,931,078)	\$ -	\$ (6,779,771)	\$ -	\$ -	\$ (6,620,508)
9	Customer Meter Deposits	\$ (6,779,771)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,401,633	\$ -	\$ 6,401,633
10	Deferred Income Taxes And Credits	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
11	Investment Tax Credits	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
12	Shared Gain On Well	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13	Prepayments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14	Materials And Supplies	\$ 348,852	\$ -	\$ -	\$ -	\$ -	\$ (348,852)	\$ -	\$ -	\$ (348,852)
15	Deferred Assets	\$ 633,537	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16	Allowance For Working Capital	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17	TOTAL RATE BASE (Sum Ls 3, 4, 5 & 7 Thru 16)	\$ 6,607,841	\$ (5,254,084)	\$ 436,975	\$ 310,570	\$ (6,931,078)	\$ (348,852)	\$ (13,569,542)	\$ 6,401,633	\$ (12,164,607)

References:
Column (A): Company Schedule B-2
Column (B): Adjustment No. 1 - Surrebital Adjustment To Gross Plant In Service (See SURR RLM-6 And Surrebital Testimony, RLM)
Column (C): Adjustment No. 2 - Surrebital Adjustment To Accumulated Depreciation (See Surrebital Testimony, RLM)
Column (D): Adjustment No. 3 - Direct Testimony To Reverse Company's Adjustment To Remove The CIAC's Accumulated Amortization (See Direct Testimony, RLM)
Column (E): Adjustment No. 4 - Direct Testimony To Reverse Company's Adjustment To Remove The CIAC Associated With Unexpended Hook-Up Fees (See Direct Testimony, RLM)
Column (F): Adjustment No. 5 - Surrebital Adjustment To Deferred Assets (See Surrebital Testimony, RLM)
Column (G): Adjustment No. 6 - Surrebital Adjustment To Material And Supplies (See Surrebital Testimony, RLM)
Column (H): Adjustment No. 7 - Surrebital Adjustment To Reclassify Customer Deposits (See Surrebital Testimony, RLM)
Column (I): Sum Of Columns (A) Thru (H)

SURREBUTTAL GROSS PLANT ADJUSTMENTS

LINE NO.	ACCT NO.	ACCOUNT NAME	(A) DIRECT TEST-YEAR TY PLANT	(B) ADJMT NO.1 NOT USED AND USEFUL PLANT	(C) ADJMT NO.2 EXCESS CAPACITY	(D) ADJMT NO.3 RECLASSIFIED PLANT	(E) LEFT BLANK	(F) LEFT BLANK	(G) LEFT BLANK	(H) ADJUSTED TEST-YEAR PLANT
1	2	3	4	5	6	7	8	9	10	11
		Organization Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2	301	Franchises	-	-	-	-	-	-	-	-
3	302	Land and Land Rights	272,438	-	-	-	-	-	-	272,438
4	303	Structures And Improvements	9,482,165	-	-	(6,657,837)	-	-	-	2,824,328
5	304	Collecting And Impounding Reservoirs	-	-	-	-	-	-	-	-
6	305	Lake, River And Other Intakes	-	-	-	-	-	-	-	-
7	306	Wells And Springs	5,226,030	(2,052,564)	(433,238)	-	-	-	-	2,740,228
8	307	Infiltration Galleries And Tunnels	-	-	-	-	-	-	-	-
9	308	Supply Mains	-	-	-	-	-	-	-	-
10	309	Power Generation Equipment	-	-	-	-	-	-	-	-
11	310	Electric Pumping Equipment	764,112	-	-	-	-	-	-	764,112
12	311	Water Treatment Plant	21,856	-	-	-	-	-	-	21,856
13	320	Distribution Reservoirs And Standpipes	248,272	-	-	-	-	-	-	248,272
14	330	Transmission And Distribution Lines	53,432,585	(2,074,455)	(693,827)	7,529,449	-	-	-	58,193,752
15	331	Services	527,473	-	-	(871,612)	-	-	-	(344,139)
16	333	Meters And Meter Installations	6,068,504	-	-	-	-	-	-	6,068,504
17	334	Hydrants	3,547,718	-	-	-	-	-	-	3,547,718
18	335	Backflow Prevention Devices	-	-	-	-	-	-	-	-
19	336	Other Plant And Miscellaneous Equipment	-	-	-	-	-	-	-	-
20	339	Office Furniture And Equipment	-	-	-	-	-	-	-	-
21	340	Transportation Equipment	-	-	-	-	-	-	-	-
22	341	Stores Equipment	-	-	-	-	-	-	-	-
23	342	Tools And Equipment	-	-	-	-	-	-	-	-
24	343	Laboratory Equipment	-	-	-	-	-	-	-	-
25	344	Power Operated Equipment	-	-	-	-	-	-	-	-
26	345	Communication Equipment	-	-	-	-	-	-	-	-
27	346	Miscellaneous Equipment	-	-	-	-	-	-	-	-
28	347	Other Tangible Plant	-	-	-	-	-	-	-	-
29	348	TOTAL WATER PLANT	\$ 79,591,153	\$ (4,127,019)	\$ (1,127,065)	\$ -	\$ -	\$ -	\$ -	\$ 74,337,069
30		Company As Filed (Column (A), Line 29)								\$ 79,591,153
31		Difference (Line 29 - Line 30)								\$ (5,254,084)
32		RUCO Adjustment (Line 31) (See SURR RLM-3, Page 1, Column (F))								\$ (5,254,084)

References:
 Column (A): Company Schedules B-2
 Column (B) Thru (D): Staff Schedule JMM-WWV3
 Column (E): Intentionally Left Blank
 Column (F): Intentionally Left Blank
 Column (G): Intentionally Left Blank
 Column (H): Sum Of Columns (A) Thru (G)

SURREBUTTAL OPERATING INCOME

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) RUCO TEST YEAR ADJ'M'TS	(C) RUCO TEST YEAR AS ADJ'TED	(D) RUCO PROP'D CHANGES	(E) RUCO AS RECOMM'D
Revenues:						
1	Metered Water Revenues	\$ 12,843,604	\$ -	\$ 12,843,604	\$ (1,482,059)	\$ 11,361,545
2	Unmetered Water Revenues	-	-	-	-	-
3	Other Water Revenues	329,295	-	329,295	-	329,295
4	TOTAL OPERATING REVENUE	\$ 13,172,899	\$ -	\$ 13,172,899	\$ (1,482,059)	\$ 11,690,840
Operating Expenses:						
5	Salaries And Wages	\$ -	\$ -	\$ -	\$ -	\$ -
6	Purchased Water	334,948	1,295,865	1,630,813	-	1,630,813
7	Purchased Power	828,900	2,631	831,531	-	831,531
8	Chemicals	16,189	-	16,189	-	16,189
9	Repairs And Maintenance	14,333	-	14,333	-	14,333
10	Office Supplies And Expenses	1,119	-	1,119	-	1,119
11	Outside Services	5,877,591	(5,799)	5,871,792	-	5,871,792
12	Water Testing	55,007	-	55,007	-	55,007
13	Rents	53,444	-	53,444	-	53,444
14	Transportation Expenses	-	-	-	-	-
15	Insurance - General Liability	21,565	-	21,565	-	21,565
16	Insurance - Health And Life	-	-	-	-	-
17	Regulatory Comm. Exp. - Rate Case	33,333	(13,333)	20,000	-	20,000
18	Miscellaneous Expense	286,747	(31,192)	255,555	-	255,555
19	Depreciation Expense	1,548,515	(398,648)	1,149,867	-	1,149,867
20	Taxes Other Than Income	-	-	-	-	-
21	Property Taxes	797,368	15,946	813,314	-	813,314
22	Income Tax	1,185,679	(1,185,679)	-	-	-
23	Rounding	-	-	-	-	-
24	TOTAL OPERATING EXPENSES	\$ 11,054,738	\$ (320,209)	\$ 10,734,529	\$ -	\$ 10,734,529
25	OPERATING INCOME (LOSS)	\$ 2,118,161	\$ 320,209	\$ 2,438,370	\$ (1,482,059)	\$ 956,311

References:

- Column (A): Company Schedule C-1
- Column (B): SURR RLM-8, Columns (B) Thru (I)
- Column (C): Column (A) + Column (B)
- Column (D): SURR RLM-1
- Column (E): Column (C) + Column (D)

**SURREBUTTAL SUMMARY OF OPERATING INCOME ADJUSTMENTS
TEST YEAR AS FILED AND ADJUSTMENTS**

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) REVISED ADJMT NO. 1 DEPRECIATN & AMORTIZN	(C) REVISED ADJMT NO. 2 PROPERTY TAX	(D) SURREBTAL ADJMT NO. 3 OUTSIDE SERVICES	(E) ADJMT NO. 4 RATE CASE EXPENSE	(F) ADJMT NO. 5 CAGR D TAX EXPENSE	(G) REVISED ADJMT NO. 6 UNNECESSY EXPENSES	(H) REVISED ADJMT NO. 7 ANNUAL/ZD POWER EXP.	(I) ADJMT NO. 8 INCOME TAX	(J) RUCO AS ADJTD
Revenues:											
1	Metered Water Revenues	\$ 12,843,604	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,843,604
2	Unmetered Water Revenues	329,295	-	-	-	-	-	-	-	-	329,295
3	Other Water Revenues	-	-	-	-	-	-	-	-	-	-
4	TOTAL OPERATING REV.	\$ 13,172,899	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 13,172,899
Operating Expenses:											
5	Salaries And Wages	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6	Purchased Water	334,948	-	-	-	-	1,295,865	-	-	-	1,630,813
7	Purchased Power	828,900	-	-	-	-	-	-	2,631	-	831,531
8	Chemicals	16,189	-	-	-	-	-	-	-	-	16,189
9	Repairs And Maintenance	14,333	-	-	-	-	-	-	-	-	14,333
10	Office Supplies And Expenses	1,119	-	-	-	-	-	-	-	-	1,119
11	Outside Services	5,877,591	-	-	(5,799)	-	-	-	-	-	5,871,792
12	Water Testing	55,007	-	-	-	-	-	-	-	-	55,007
13	Rents	53,444	-	-	-	-	-	-	-	-	53,444
14	Transportation Expenses	-	-	-	-	-	-	-	-	-	-
15	Insurance - General Liability	21,565	-	-	-	-	-	-	-	-	21,565
16	Insurance - Health And Life	-	-	-	-	-	-	-	-	-	-
17	Regulatory Comm. Exp. - Rate Case	33,333	-	-	-	(13,333)	-	-	-	-	20,000
18	Miscellaneous Expense	286,747	-	-	-	-	-	(31,192)	-	-	255,555
19	Depreciation Expense	1,548,515	(398,648)	-	-	-	-	-	-	-	1,149,867
20	Taxes Other Than Income	-	-	-	-	-	-	-	-	-	-
21	Property Taxes	797,368	-	15,946	-	-	-	-	-	-	813,314
22	Income Tax	1,185,679	-	-	-	-	-	-	-	(1,185,679)	-
23	Rounding	-	-	-	-	-	-	-	-	-	-
24	TOTAL OPERATING EXP.	\$ 11,054,738	\$ (398,648)	\$ 15,946	\$ (5,799)	\$ (13,333)	\$ 1,295,865	\$ (31,192)	\$ 2,631	\$ (1,185,679)	\$ 10,734,529
25	OPERATING INC. (LOSS)	\$ 2,118,161	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,438,370

ADJUSTMENTS:
1 Depreciation And Amortization Expense
2 Property Tax Computation
3 Contractual Outside Services
4 Rate Case Expense
5 CAGR D Tax Expense
6 Unnecessary Expenses
7 Annualize Power Expenses
8 Income Tax

REFERENCE:
Surrebuttal Testimony, RLM And Schedule SURR RLM-9
Surrebuttal Testimony, RLM And Schedule SURR RLM-10
Surrebuttal Testimony, RLM
Testimony, RLM And Schedule RLM-11
Testimony, RLM
Testimony, RLM And Schedule RLM-12
Testimony, RLM

**SURREBUTTAL EXPLANATION OF OPERATING INCOME ADJUSTMENT NO. 1
TEST YEAR DEPRECIATION EXPENSE**

LINE NO.	ACCOUNT NO.	ACCOUNT NAME	(A) TOTAL PLANT VALUE	(B) COMPANY PROPOSED DEP. RATES	(C) TEST YEAR DEPRECIATION EXPENSE
1	301	Organization Costs	\$ -	0.00%	\$ -
2	302	Franchises	-	0.00%	-
3	303	Land and Land Rights	272,438	0.00%	-
4	304	Structures And Improvements	2,824,328	3.33%	94,050
5	305	Collecting And Impounding Reservoirs	-	2.50%	-
6	306	Lake, River And Other Intakes	-	2.50%	-
7	307	Wells And Springs	2,740,228	3.33%	91,250
8	308	Infiltration Galleries And Tunnels	-	6.67%	-
9	309	Supply Mains	-	2.00%	-
10	310	Power Generation Equipment	-	5.00%	-
11	311	Electric Pumping Equipment	764,112	12.50%	95,514
12	320	Water Treatment Plant	21,856	3.33%	728
13	330	Distribution Reservoirs And Standpipes	248,272	2.22%	5,512
14	331	Transmission And Distribution Lines	58,193,752	2.00%	1,163,875
15	333	Services	(344,139)	3.33%	(11,460)
16	334	Meters And Meter Installations	6,068,504	8.33%	505,506
17	335	Hydrants	3,547,718	2.00%	70,954
18	336	Backflow Prevention Devices	-	6.67%	-
19	339	Other Plant And Miscellaneous Equipment	-	6.67%	-
20	340	Office Furniture And Equipment	-	6.67%	-
21	341	Transportation Equipment	-	20.00%	-
22	342	Stores Equipment	-	4.00%	-
23	343	Tools And Equipment	-	5.00%	-
24	344	Laboratory Equipment	-	10.00%	-
25	345	Power Operated Equipment	-	5.00%	-
26	346	Communication Equipment	-	10.00%	-
27	347	Miscellaneous Equipment	-	10.00%	-
28	348	Other Tangible Plant	-	10.00%	-
29		TEST YEAR GROSS PLANT AND DEPRECIATION EXPENSE	<u>\$ 74,337,069</u>		<u>\$ 2,015,929</u>
48		AMORTIZATION OF CONTRIBUTIONS	(31,935,899)	2.7119%	(866,062)
50		Rounding			-
51		TOTAL DEPRECIATION EXPENSE			<u>\$ 1,149,867</u>
52		Company As Filed			1,548,515
53		Difference			<u>\$ (398,648)</u>
54		RUCO Adjustment (See SURR RLM-8, Column (B))			<u>\$ (398,648)</u>

References:

Column (A): SURR RLM-4, Page 11, Column (E)
Column (B): Company Workpapers
Column (C): Column (A) X Column (B)

**SURREBUTTAL EXPLANATION OF OPERATING INCOME ADJUSTMENT NO. 2
PROPERTY TAX COMPUTATION**

LINE NO.	DESCRIPTION	REFERENCE	(A)	(B)
Calculation Of The Company's Full Cash Value:				
Annual Operating Revenues:				
1	Adjusted Revenues In Year Ended December 2007	SURR RLM-6, Col (C), Ln 4	\$ 13,172,899	
2	Adjusted Revenues In Year Ended December 2007	SURR RLM-6, Col (C), Ln 4	13,172,899	
3	Proposed Revenues	SURR RLM-6, Col (D), Ln 4	11,690,840	
4	Total Three Year Operating Revenues	Sum Of Lines 1, 2 & 3	\$ 38,036,637	
5	Average Annual Operating Revenues	Line 4 / 3	12,678,879	
6	Two Times Three Year Average Operating Revenues	Line 5 X 2		\$ 25,357,758
ADD:				
10% Of Construction Work In Progress ("CWIP"):				
7	Test Year CWIP	Company Workpapers	\$ -	
8	10% Of CWIP	Line 7 X 10%		\$ -
SUBTRACT:				
Transportation At Book Value:				
9	Original Cost Of Transportation Equipment	Company Workpapers	\$ -	
10	Acc. Dep. Of Transportation Equipment	Company Workpapers	-	
11	Book Value Of Transportation Equipment	Line 9 + Line 10		\$ -
12	Company's Full Cash Value ("FCV")	Sum Of Lines 6, 8 & 11		\$ 25,357,758
Calculation Of The Company's Tax Liability:				
MULTIPLY:				
FCV X Valuation Assessment Ratio X Property Tax Rates:				
13	Assessment Ratio	House Bill 2779	23.0%	
14	Assessed Value	Line 12 X Line 13	\$ 5,832,284	
Property Tax Rates:				
15	Primary Tax Rate	Company Workpapers	13.93%	
16	Secondary Tax Rate	Company Workpapers	0.00%	
17	Estimated Tax Rate Liability	Line 15 + Line 16	13.93%	
	Property Tax			\$ 812,227
	Tax On Parcel			1,184
18	Company's Total Tax Liability - Based On Full Cash Value	Line 14 X Line 17		\$ 813,411
19	Test Year Adjusted Property Tax Expense As Filed	Co. Sch. C-1		797,466
20	Decrease In Property Tax Expense	Line 18 - Line 19		\$ 15,946
21	RUCO Adjustment (See SURR RLM-8, Column (C))	Line 20		\$ 15,946

SURREBUTTAL RATE DESIGN AND PROOF OF RECOMMENDED REVENUE
PROPOSED REVENUE

LINE NO.	DESCRIPTION	(A)	(B)	(C)	(D)	(E)	(F)
		TEST YEAR DETERMIN'TS Gallons in Thousands	ANN'ZED ADJUSTM'TS	TEST YEAR ADJUSTED DETERMIN'TS	PRESENT CHARGES & USAGE FEES	TEST YEAR ADJUSTED REVENUES	TOTAL REVENUES
1	RESIDENTIAL CUSTOMERS						
	3/4" Meter	15,212	1,132	16,344	\$ 24.06	\$ 4,719,198	\$ 4,719,198
	Commodity Usage						
2	First Tier - First 4,000 Gals.	157,703	54,312	212,015	\$ 1.5902	\$ 337,153	
3	Second Tier - Next 6,000 Gals.	575,393	35,724	611,117	\$ 2.0721	\$ 1,266,306	
4	Third Tier - Over 10,000Gals.	668,195	-	668,195	\$ 2.6611	\$ 1,778,129	
5	1" Meter	280	5	285	\$ 40.10	\$ 127,695	\$ 3,381,588
	Commodity Usage						\$ 127,695
6	First Tier - First 25,000 Gals.	20,873	867	21,340	\$ 2.0721	\$ 44,218	
7	Second Tier - Over 25,000 Gals.	22,591	-	22,591	\$ 2.6611	\$ 60,117	
8	2" Meter	1	(0)	1	\$ 128.33	\$ 1,069	\$ 104,335
	Commodity Usage						\$ 1,069
9	First Tier - First 80,000 Gals.	79	-	79	\$ 2.0721	\$ 164	
10	Second Tier - Over 80,000 Gals.	3,762	(406)	3,356	\$ 2.6611	\$ 8,931	
11	3" Meter	0	(0)	-	\$ 256.66	\$ -	\$ 9,095
	Commodity Usage						\$ -
12	First Tier - First 160,000 Gals.	-	-	-	\$ 2.0721	\$ -	
13	Second Tier - Over 160,000 Gals.	-	-	-	\$ 2.6611	\$ -	
14	Total Residential Customers	<u>15,473</u>	<u>1,137</u>	<u>16,610</u>			\$ -
15	Total Residential Usage	<u>1,448,397</u>	<u>90,296</u>	<u>1,538,693</u>			
16	TOTAL RESIDENTIAL CUSTOMERS REVENUE						<u>\$ 8,342,980</u>
	COMMERCIAL CUSTOMERS						
17	3/4" Meter	4	0	5	\$ 24.06	\$ 1,350	\$ 1,350
	Commodity Usage						
18	First Tier - First 10,000 Gals.	86	(74)	12	\$ 2.0721	\$ 25	
19	Second Tier - Over 10,000 Gals.	607	-	607	\$ 2.6611	\$ 1,615	\$ 1,640
20	1" Meter	6	1	7	\$ 40.10	\$ 3,156	\$ 3,156
	Commodity Usage						
21	First Tier - First 25,000 Gals.	409	63	472	\$ 2.0721	\$ 978	
22	Second Tier - Over 25,000 Gals.	2,192	213	2,405	\$ 2.6611	\$ 6,401	\$ 7,379
23	1-1/2" Meter	18	(2)	17	\$ 80.21	\$ 15,921	\$ 15,921
	Commodity Usage						
24	First Tier - First 50,000 Gals.	1,605	(63)	1,542	\$ 2.0721	\$ 3,195	
25	Second Tier - Over 50,000 Gals.	5,515	(429)	5,086	\$ 2.6611	\$ 13,534	\$ 16,729
26	2" Meter	26	5	31	\$ 128.33	\$ 48,136	\$ 48,136
	Commodity Usage						
27	First Tier - First 80,000 Gals.	3,499	420	3,919	\$ 2.0721	\$ 8,121	
28	Second Tier - Over 80,000 Gals.	43,206	6,673	49,879	\$ 2.6611	\$ 132,732	\$ 140,853
29	3" Meter	2	-	2	\$ 256.66	\$ 6,181	\$ 6,181
	Commodity Usage						
30	First Tier - First 160,000 Gals.	-	-	-	\$ 2.0721	\$ -	
31	Second Tier - Over 160,000 Gals.	6,359	-	6,359	\$ 2.6611	\$ 16,921	\$ 16,921
32	4" Meter	2	-	2	\$ 401.04	\$ 9,036	\$ 9,036
	Commodity Usage						
33	First Tier - First 250,000 Gals.	360	-	360	\$ 2.0721	\$ 745	
34	Second Tier - Over 250,000 Gals.	2,649	-	2,649	\$ 2.6611	\$ 7,049	\$ 7,794
35	Total Commercial Customers	<u>59</u>	<u>4</u>	<u>63</u>			\$ -
36	Total Commercial Usage	<u>66,486</u>	<u>6,804</u>	<u>73,290</u>			
37	TOTAL COMMERCIAL CUSTOMERS REVENUE						<u>\$ 275,097</u>

SURREBUTTAL RATE DESIGN AND PROOF OF RECOMMENDED REVENUE
PROPOSED REVENUE

LINE NO.	DESCRIPTION	(A)	(B)	(C)	(D)	(E)	(F)
		TEST YEAR DETERMINANTS Gallons In Thousands	ANN'ZED ADJUSTM'TS	TEST YEAR ADJUSTED DETERMINANTS	PRESENT CHARGES & USAGE FEES	TEST YEAR ADJUSTED REVENUES	TOTAL REVENUES
PUBLIC AUTHORITY CUSTOMERS							
38	3/4" Meter	-	-	-	\$ 24.06	\$ -	\$ -
	Commodity Usage						
39	First Tier - First 10,000 Gals.	-	-	-	\$ 2.0721	\$ -	
40	Second Tier - Over 10,000 Gals.	-	-	-	\$ 2.6611	\$ -	
41	1" Meter	-	-	-	\$ 40.10	\$ -	\$ -
	Commodity Usage						
42	First Tier - First 10,000 Gals.	-	-	-	\$ 2.0721	\$ -	
43	Second Tier - Over 10,000 Gals.	-	-	-	\$ 2.6611	\$ -	
44	1-1/2" Meter	-	-	-	\$ 80.21	\$ -	\$ -
	Commodity Usage						
45	First Tier - First 50,000 Gals.	-	-	-	\$ 2.0721	\$ -	
46	Second Tier - Over 50,000 Gals.	-	-	-	\$ 2.6611	\$ -	
47	2" Meter	8	1	9	\$ 128.33	\$ 13,458	\$ 13,458
	Commodity Usage						
48	First Tier - First 80,000 Gals.	1,869	-	1,869	\$ 2.0721	\$ 3,873	
49	Second Tier - Over 80,000 Gals.	1,636	201	1,837	\$ 2.6611	\$ 4,887	
50	3" Meter	1	-	1	\$ 256.66	\$ 2,986	\$ 2,986
	Commodity Usage						
51	First Tier - First 160,000 Gals.	265	-	265	\$ 2.0721	\$ 549	
52	Second Tier - Over 160,000 Gals.	922	-	922	\$ 2.6611	\$ 2,454	
53	4" Meter	1	-	1	\$ 401.04	\$ 4,421	\$ 3,003
	Commodity Usage						
54	First Tier - First 250,000 Gals.	1,110	-	1,110	\$ 2.0721	\$ 2,300	
55	Second Tier - Over 250,000 Gals.	1,420	-	1,420	\$ 2.6611	\$ 3,779	
56	Total Public Authority Customers	<u>10</u>	<u>1</u>	<u>11</u>			\$ 6,079
57	Total Public Authority Usage	<u>7,222</u>	<u>201</u>	<u>7,423</u>			
58	TOTAL PUBLIC AUTHORITY CUSTOMERS REVENUE						<u>\$ 38,708</u>
IRRIGATION CUSTOMERS							
59	3/4" Meter	41	1	42	\$ 24.06	\$ 12,050	\$ 12,050
	Commodity Usage						
60	First Tier - First 10,000 Gals.	940	(98)	844	\$ 2.0721	\$ 1,749	
61	Second Tier - Over 10,000 Gals.	9,595	-	9,595	\$ 2.6611	\$ 25,533	
62	1" Meter	50	4	55	\$ 40.10	\$ 26,298	\$ 26,298
	Commodity Usage						
63	First Tier - First 25,000 Gals.	3,087	266	3,353	\$ 2.0721	\$ 6,948	
64	Second Tier - Over 25,000 Gals.	36,814	896	37,510	\$ 2.6611	\$ 99,816	
65	1-1/2" Meter	83	9	92	\$ 80.21	\$ 88,568	\$ 106,764
	Commodity Usage						
66	First Tier - First 50,000 Gals.	8,071	784	8,855	\$ 2.0721	\$ 18,349	
67	Second Tier - Over 50,000 Gals.	151,856	8,871	160,727	\$ 2.6611	\$ 427,709	\$ 446,057
68	2" Meter	77	8	85	\$ 128.33	\$ 130,428	\$ 130,428
	Commodity Usage						
69	First Tier - First 80,000 Gals.	8,681	658	9,339	\$ 2.0721	\$ 19,352	
70	Second Tier - Over 80,000 Gals.	381,324	24,772	406,096	\$ 2.6611	\$ 1,080,659	\$ 1,100,010
71	3" Meter	0	1	2	\$ 256.66	\$ 4,814	\$ 4,814
	Commodity Usage						
72	First Tier - First 160,000 Gals.	-	-	-	\$ 2.0721	\$ -	
73	Second Tier - Over 160,000 Gals.	-	-	-	\$ 2.6611	\$ -	
74	4" Meter	2	-	2	\$ 401.04	\$ 8,445	\$ 8,445
	Commodity Usage						
75	First Tier - First 250,000 Gals.	2,113	-	2,113	\$ 2.0721	\$ 4,378	
76	Second Tier - Over 250,000 Gals.	7,919	-	7,919	\$ 2.6611	\$ 21,073	\$ 25,452
77	6" Meter	1	-	1	\$ 802.08	\$ 9,625	\$ 9,625
	Commodity Usage						
78	First Tier - First 500,000 Gals.	1,653	-	1,653	\$ 2.0721	\$ 3,425	
79	Second Tier - Over 500,000 Gals.	-	-	-	\$ 2.6611	\$ -	
80	Total Irrigation Customers	<u>254</u>	<u>24</u>	<u>277</u>			\$ 3,425
81	Total Irrigation Usage	<u>612,053</u>	<u>35,951</u>	<u>648,003</u>			
82	TOTAL IRRIGATION CUSTOMERS REVENUE						<u>\$ 1,989,220</u>

SURREBUTTAL RATE DESIGN AND PROOF OF RECOMMENDED REVENUE
PROPOSED REVENUE

LINE NO.	DESCRIPTION	(A)	(B)	(C)	(D)	(E)	(F)
		TEST YEAR DETERMINANTS Gallons in Thousands	ANN'ZED ADJUSTMNTS	TEST YEAR ADJUSTED DETERMINANTS	PRESENT CHARGES & USAGE FEES	TEST YEAR ADJUSTED REVENUES	TOTAL REVENUES
CONSTRUCTION CUSTOMERS							
83	3/4" Meter	-	-	-	\$ 24.06	\$ -	\$ -
84	Commodity Usage	-	-	-	\$ 2.6611	\$ -	\$ -
86	1" Meter	-	-	-	\$ 40.10	\$ -	\$ -
87	Commodity Usage	-	-	-	\$ 2.6611	\$ -	\$ -
89	1-1/2" Meter	-	-	-	\$ 80.21	\$ -	\$ -
90	Commodity Usage	-	-	-	\$ 2.6611	\$ -	\$ -
92	2" Meter	-	-	-	\$ 128.33	\$ -	\$ -
93	Commodity Usage	-	-	-	\$ 2.6611	\$ -	\$ -
95	3" Meter	13	-	13	\$ 256.66	\$ 41,065	\$ 41,065
96	Commodity Usage	39,930	-	39,930	\$ 2.6611	\$ 106,257	\$ 106,257
98	4" Meter	-	-	-	\$ 401.04	\$ -	\$ -
99	Commodity Usage	-	-	-	\$ 2.6611	\$ -	\$ -
101	6" Meter	12	-	12	\$ 802.08	\$ 120,311	\$ 120,311
102	Commodity Usage	154,446	-	154,446	\$ 2.6611	\$ 411,000	\$ 411,000
104	Total Construction Customers	<u>26</u>	<u>-</u>	<u>26</u>			
105	Total Construction Usage	<u>194,378</u>	<u>-</u>	<u>194,378</u>			
106	TOTAL CONSTRUCTION CUSTOMERS REVENUE						<u>\$ 678,634</u>
CAP CUSTOMERS							
107	6" Meter	1	-	1	\$ 963.78	\$ 7,219	\$ 7,219
108	Commodity Usage	32,016	-	32,016	\$ 0.83	\$ 26,503	\$ 26,503
109	Total CAP Customers	<u>1</u>	<u>-</u>	<u>1</u>			
110	Total CAP Usage	<u>32,016</u>	<u>-</u>	<u>32,016</u>			
111	TOTAL CAP CUSTOMERS REVENUE						<u>\$ 33,722</u>
112	TOTAL COMPANY CUSTOMER COUNT	<u>15,796</u>	<u>1,165</u>	<u>16,961</u>			
113	TOTAL COMPANY COMMODITY USAGE	<u>1,746,499</u>	<u>97,300</u>	<u>1,845,799</u>			
114	TOTAL RUCO PROPOSED REVENUE PER BILL COUNT						<u>\$ 11,358,359</u>
115	Unreconciled Difference vs. Billed Revenues						3,186
116	Other Revenues						329,295
117	TOTAL REVENUE						<u>\$ 11,690,840</u>
118	PROPOSED REVENUE PER RUCO						<u>\$ 11,690,840</u>
119	Difference						\$ 0
120	Percentage Difference						0.00%

SURREBUTTAL TYPICAL RESIDENTIAL BILL ANALYSIS

LINE NO.	DESCRIPTION	(A) PRESENT	(B) %	(C) COMPANY PROPOSED	(D) %	(E) RUCO PROPOSED	(F) %
REVENUE ALLOCATION							
1	RESIDENTIAL	\$ 8,986,698	74.13%	\$ 7,790,904	73.44%	\$ 8,342,980	73.45%
2	OTHER	\$ 3,135,896	25.87%	\$ 2,817,595	26.56%	\$ 3,015,379	26.55%
3	TOTAL	\$ 12,122,594	100.00%	\$ 10,608,499	100.00%	\$ 11,358,359	100.00%
ALLOCATION RATIOS							
4	FIX REVENUE	6,438,743	53.11%	\$ 5,044,004	47.55%	\$ 5,401,431	47.55%
5	VARIABLE REVENUE	5,683,851	46.89%	\$ 5,564,495	52.45%	\$ 5,956,928	52.45%
6	TOTAL	12,122,594	100.00%	\$ 10,608,499	100.00%	\$ 11,358,359	100.00%
RESIDENTIAL (5/8" X 3/4") RATE DESIGN							
		PRESENT		COMPANY PROPOSED		RUCO PROPOSED	
7	BASIC MONTHLY CHARGE	\$ 27.00		\$ 22.47		\$ 24.06	
		COMMODITY CHARGE					
		PRESENT	PROPOSED				
8	First Tier - First 7,000 Gals.	\$ 2,2500	First Tier - First 4,000 Gals.	\$ 1,4850		\$ 1,5902	
9	Second Tier - Over 7,000 Gals.	\$ 2,5000	Second Tier - Next 6,000 Gals.	\$ 1,9350		\$ 2,0721	
10			Third Tier - Over 10,000 Gals.	\$ 2,4850		\$ 2,6611	
RESIDENTIAL BILL COMPARISONS							
COST OF WATER SERVICE AT DIFFERENT LEVELS OF USAGE WITH PERCENTAGE INCREASE IN BILL			% OF AVERAGE MONTH USAGE OF 6,931 Gal.	PRESENT MONTHLY WATER COST	RUCO PROP'D MONTHLY WATER COST	RUCO PROP'D MONTHLY INCREASE	RUCO PROP'D MONTHLY % INCREASE
11		1,733	25.00%	\$ 30.90	\$ 26.82	\$ (4.08)	-13.21%
12		3,466	50.00%	\$ 34.80	\$ 29.57	\$ (5.22)	-15.01%
13		6,931	100.00%	\$ 42.59	\$ 36.50	\$ (6.10)	-14.32%
14		10,397	150.00%	\$ 51.24	\$ 43.91	\$ (7.33)	-14.30%
15		13,862	200.00%	\$ 59.91	\$ 53.13	\$ (6.77)	-11.30%

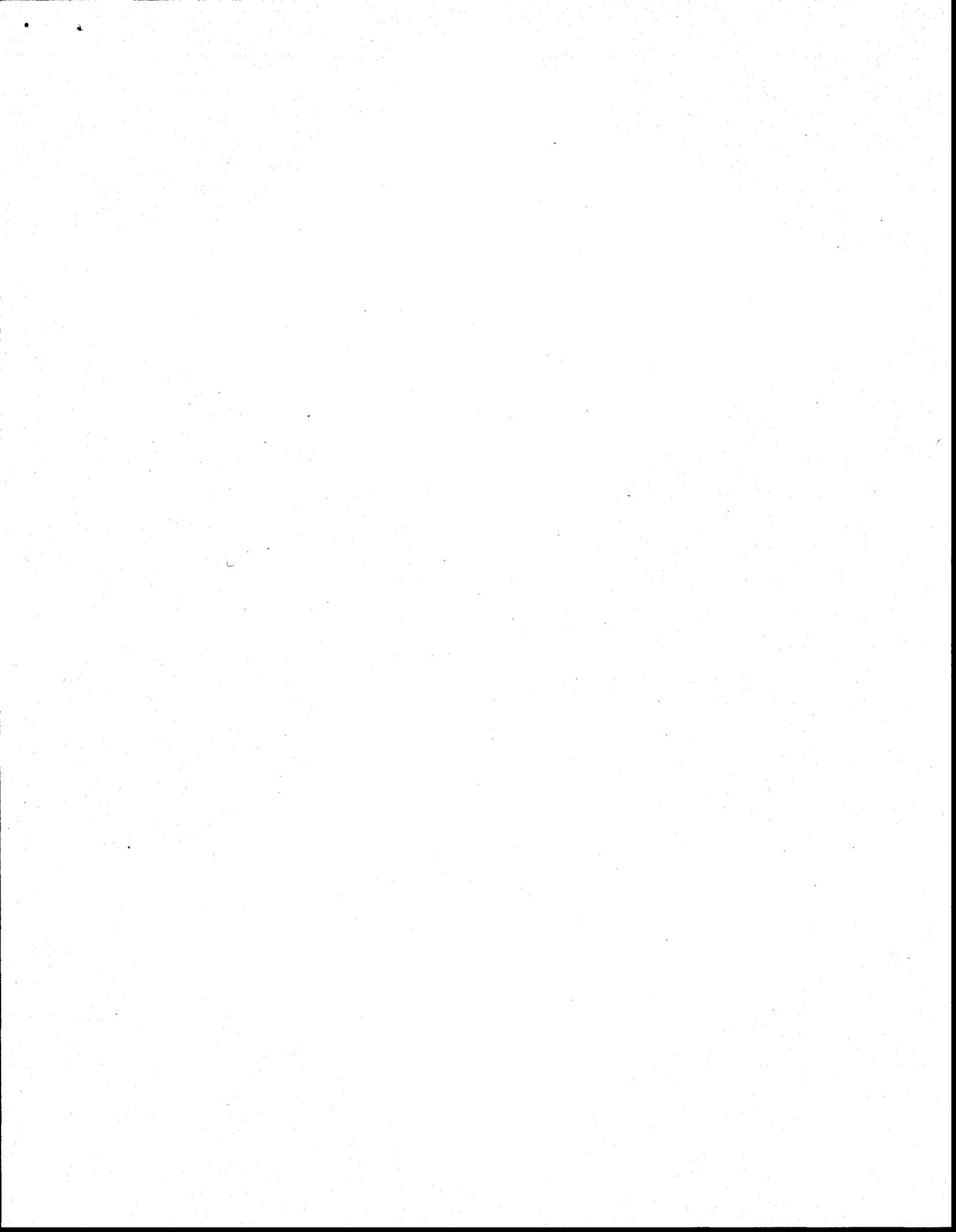


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SURREBUTTAL REVENUE REQUIREMENT

LINE NO.	DESCRIPTION	(A) COMPANY OCRB/FVRB COST	(B) RUCO OCRB/FVRB COST
1	Original Cost Rate Base	\$ 19,149,173	\$ 11,252,776
2	Adjusted Operating Income (Loss)	\$ 592,491	\$ 1,401,240
3	Current Rate Of Return (L2 / L1)	3.09%	12.45%
4	Required Operating Income (L5 X L1)	\$ 1,997,259	\$ 920,953
5	Required Rate Of Return On Fair Value Rate Base	10.43%	8.18%
6	Operating Income Deficiency (L4 - L2)	\$ 1,404,768	\$ (480,287)
7	Gross Revenue Conversion Factor	1.5944	1.0000
8	Increase In Gross Revenue Requirement (L6 X L7)	\$ 2,239,804	\$ (480,287)
9	Adjusted Test Year Revenue	\$ 11,288,663	\$ 11,354,014
10	Proposed Annual Revenue (L8 + L9)	\$ 13,528,467	\$ 10,873,727
11	Required Percentage Increase In Revenue (L8 / L9)	19.84%	-4.23%
12	Rate Of Return On Common Equity	10.50%	8.31%

References:

Column (A): Company Schedules A-1 and C-1
Column (B): RUCO Schedule SURR RLM-2, SURR RLM-7 And SURR RLM-13

SURREBUTTAL RATE BASE - ORIGINAL COST

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED OCRB/FVRB	(B) RUCO OCRB/FVRB ADJUSTMENTS	(C) RUCO ADJ'TED OCRB/FVRB
1	Gross Utility Plant In Service	\$ 126,534,592	\$ (9,547,463)	\$ 116,987,129
2	Accumulated Depreciation	(7,923,684)	609,288	(7,314,396)
3	Net Utility Plant In Service (Sum L1 & L2)	<u>\$ 118,610,908</u>	<u>\$ (8,938,175)</u>	<u>\$ 109,672,733</u>
4	Advances In Aid Of Const.	\$ (54,440,657)	\$ -	\$ (54,440,657)
5	Contribution In Aid Of Const.	\$ (46,007,904)	\$ (16,505)	\$ (46,024,409)
6	Accumulated Amortization Of CIAC	-	1,058,281	1,058,281
7	NET CIAC (L5 + L6)	<u>\$ (46,007,904)</u>	<u>\$ 1,041,776</u>	<u>\$ (44,966,128)</u>
8	Customer Meter Deposits	\$ -	\$ -	\$ -
9	Deferred Income Taxes And Credits	\$ -	\$ -	\$ -
10	Investment Tax Credits	\$ -	\$ -	\$ -
11	Shared Gain On Well	\$ -	\$ -	\$ -
12	Prepayments	\$ -	\$ -	\$ -
13	Materials And Supplies	\$ -	\$ -	\$ -
14	Deferred Assets	\$ 986,826	\$ -	\$ 986,826
15	Allowance For Working Capital	\$ -	\$ -	\$ -
16	Rounding	\$ -	\$ 2	\$ 2
17	TOTAL RATE BASE (Sum L's 3, 4, & 7 Thru 16)	<u>\$ 19,149,173</u>	<u>\$ (7,896,397)</u>	<u>\$ 11,252,776</u>

References:

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

SURREBTAL SUMMARY OF ORIGINAL COST RATE BASE ADJUSTMENTS

LINE NO.	(A) DESCRIPTION	(B) REVISED ADJMT NO. 1 POST TEST YEAR PLANT ON	(C) REVISED ADJMT NO. 2 ACC AMORT ON (HUF) CIAC	(D) ADJMT NO. 3 REINSTATE (HUF) CIAC	(E) SURR'B TAL GROSS PLANT	(F) SURR'B TAL ADJMT NO. 4 ACCUMULT'D DEPRECTN	(G) LEFT BLANK	(H) LEFT BLANK	(I) RUCO ADJ'TED OCRB/FVRB
1	Gross Utility Plant In Service	\$ 126,534,592	\$ -	\$ -	\$(10,038,359)	\$ -	\$ -	\$ -	\$ 116,987,129
2	Accumulated Depreciation	(7,923,684)	-	-	-	609,288	-	-	(7,314,396)
3	Net Utility Plant In Service (Sum L1 & L3)	\$ 118,610,908	\$ -	\$ -	\$(10,038,359)	\$ 609,288	\$ -	\$ -	\$ 109,672,733
4	Advances In Aid Of Const.	\$ (54,440,657)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (54,440,657)
5	Contribution In Aid Of Const.	\$ (48,915,085)	\$ -	\$ (16,505)	\$ -	\$ -	\$ -	\$ -	\$ (48,931,590)
6	Accumulated Amortization Of CIAC	2,907,181	1,058,281	-	-	-	-	-	3,965,462
7	NET CIAC (L5 + L6)	\$ (46,007,903)	\$ 1,058,281	\$ (16,505)	\$ -	\$ -	\$ -	\$ -	\$ (44,966,128)
8	Customer Meter Deposits	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9	Deferred Income Taxes And Credits	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	Investment Tax Credits	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
11	Shared Gain On Well	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
12	Prepayments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13	Materials And Supplies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14	Deferred Assets	\$ 986,826	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 986,826
15	Allowance For Working Capital	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16	Rounding	\$ (1)	-	-	-	-	-	-	-
17	TOTAL RATE BASE (Sum L's 3, 4, & 7 Thru 16)	\$ 19,149,173	\$ 1,058,281	\$ (16,505)	\$(10,038,359)	\$ 609,288	\$ -	\$ -	\$ 11,252,776

References:

- Column (A): Company Schedule B-2
- Column (B): Adjustment No. 1 - Revised Direct Adjustment To Post Test-Year Plant (See Surreburtal Testimony, RLM)
- Column (C): Adjustment No. 2 - Revised Direct Adjustment To Reverse Company's Adjustment To Remove The CIAC's Accumulated Amortization (See SURR RLM-5 And Surreburtal Testimony, RLM)
- Column (D): Adjustment No. 3 - Reverse Company's Adjustment To Remove The CIAC Associated With Unexpended Hook-Up Fees (See Direct Testimony, RLM)
- Column (E): Adjustment No. 4 - Surreburtal Adjusted Gross Plant In Service Plant (See SURR RLM-6 And Surreburtal Testimony, RLM)
- Column (F): Adjustment No. 5 - Surreburtal Adjusted Accumulated Depreciation (See Surreburtal Testimony, RLM)
- Column (G): Intentionally Left Blank
- Column (H): Intentionally Left Blank
- Column (I): Sum Of Columns (A), (B), (C), (D), (E), (F), (G) & (H)

**EXPLANATION OF RATE BASE ADJUSTMENT NO. 2
COMPUTATION OF ACCUMULATED AMORTIZATION ON CIAC BALANCES**

LINE NO.	DESCRIPTION	(A) AMOUNT RECORDED	(B) UNEXP'D CASH	(C) AMORT BALANCE	(D) AMORT RATE	(E) AMORTIZ'N	(F) YEAR	(G) TOTAL AMORTIZ'N	(H) ACC AMORTIZ'N
1	Balance at 12/31/1997	\$ -		-	0.00%	\$ -		\$ -	\$ -
2	Additions 1998	35,000							
3	Balance at 12/31/1998	35,000		35,000	2.50%	875	1998	875	875
4	Additions 1999	303,000							
5	Balance at 12/31/1999	338,000		338,000	2.50%	8,450	1999	8,450	9,325
6	Additions 2000	1,067,352							
7	Balance at 12/31/2000	1,405,352		1,405,352	2.50%	35,134	2000	35,134	44,459
8	Additions 2001	893,800							
9	Balance at 12/31/2001	2,299,152		2,299,152	2.50%	57,479	2001	57,479	101,938
10	Additions 2002	2,909,170							
11	Balance at 12/31/2002	5,208,322		5,208,322	2.50%	130,208	2002	130,208	232,146
12	Additions 2003	6,455,300							
13	Balance at 12/31/2003	11,663,622		11,663,622	2.50%	291,591	2003	291,591	523,736
14	Additions 2004	8,679,970							
15	Balance at 12/31/2004	20,343,592		20,343,592	2.50%	508,590	2004	508,590	1,032,326
16	Additions 2005	8,119,350							
17	Balance at 12/31/2005	28,462,942		28,462,942	2.50%	711,574	2005	711,574	1,743,900
18	Additions 2006	11,467,949							
19	Balance at 12/31/2006	39,930,891		39,930,891	2.50%	998,272	2006	998,272	2,742,172
20	Additions 2007	9,000,699							
21	Balance at 12/31/2007	48,931,590		48,931,590	2.50%	1,223,290	2007	1,223,290	3,965,462
22	RUCO As Calculated								\$ 3,965,462
23	Company As Filed								2,907,181
24	Difference								<u>\$ 1,058,281</u>
25	RUCO Adjustment (See SURR RLM-3, Column (C))								<u>\$ 1,058,281</u>

References:

SURREBUTTAL PRO FORMA PLANT ADJUSTMENTS

LINE NO.	ACCT NO.	ACCOUNT NAME	(A) COMPANY ADJUSTED TY PLANT	(B) ADJMT NO. 1 POST TEST YEAR PLANT	(C) ADJMT NO. 2 NOT USED AND USEFUL PLANT	(D) ADJMT NO. 3 EXCESS CAPACITY	(E) LEFT BLANK	(F) LEFT BLANK	(G) LEFT BLANK	(H) ADJUSTED TEST-YEAR PLANT
			\$	\$	\$	\$	\$	\$	\$	\$
1	351	Organization	-	-	-	-	-	-	-	-
2	352	Franchises	-	-	-	-	-	-	-	-
3	353	Land and Land Rights	4,122,800	-	-	-	-	-	-	4,122,800
4	354	Structures And Improvements	453,663	-	(14,491)	-	-	-	-	439,172
5	355	Power Generation Equipment	-	-	-	-	-	-	-	-
6	360	Collection Sewers - Force	22,821,129	-	(1,579,593)	-	-	-	-	21,241,536
7	361	Collection Sewers - Gravity	24,287,592	-	-	-	-	-	-	24,287,592
8	362	Special Collecting Structures	-	-	-	-	-	-	-	-
9	363	Services To Customers	-	-	-	-	-	-	-	-
10	364	Flow Measuring Devices	-	-	-	-	-	-	-	-
11	365	Flow Measuring Installations	-	-	-	-	-	-	-	-
12	370	Receiving Wells	-	-	-	-	-	-	-	-
13	371	Pumping Equipment	7,613,724	-	-	-	-	-	-	7,613,724
14	375	Reuse T & D	958,645	-	-	-	-	-	-	958,645
15	380	Treatment And Disposal Equipment	-	-	-	(5,443,062)	-	-	-	-
16	381	Plant Sewers	66,277,037	-	(3,001,214)	-	-	-	-	57,832,761
17	382	Outfall Sewer Lines	-	-	-	-	-	-	-	-
18	389	Other Plant And Miscellaneous Equipment	-	-	-	-	-	-	-	-
19	390	Office Furniture And Equipment	-	-	-	-	-	-	-	-
20	391	Transportation Equipment	-	-	-	-	-	-	-	-
21	393	Tools, Shop And Garage Equipment	-	-	-	-	-	-	-	-
22	394	Laboratory Equipment	-	-	-	-	-	-	-	-
23	395	Power Operated Equipment	-	-	-	-	-	-	-	-
24	398	Other Tangible Plant	-	-	-	-	-	-	-	-
29		TOTAL WATER PLANT	\$ 126,534,591	\$ -	\$ (4,595,298)	\$ (5,443,062)	\$ -	\$ -	\$ -	\$ 116,496,232
		Rounding								2
30		Company As Filed (Column (A), Line 29)								\$ 126,534,591
31		Difference (Line 29 - Line 30)								<u>\$ (10,038,359)</u>
32		RUCO Adjustment (Line 31) (See SURR RLM-3, Page 1, Column (F))								<u>\$ (10,038,359)</u>

References:

- Column (A): Company Schedules B-2
- Column (B): Intentionally Left Blank
- Column (C) & (D): Staff Schedule JMM-WW3
- Column (E): Intentionally Left Blank
- Column (F): Intentionally Left Blank
- Column (G): Intentionally Left Blank
- Column (H): Sum Of Columns (A) Thru (G)

SURREBUTTAL OPERATING INCOME

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) RUCO TEST YEAR ADJ'M'TS	(C) RUCO TEST YEAR AS ADJ'TED	(D) RUCO PROP'D CHANGES	(E) RUCO AS RECOMM'D
Revenues:						
1	Flate Rate Revenues	\$ 10,786,457	\$ 65,351	\$ 10,851,808	\$ (480,287)	\$ 10,371,521
2	Misc. Service Revenues	-	-	-	-	-
3	Other Wastewater Revenues	502,206	-	502,206	-	502,206
4	TOTAL OPERATING REVENUE	\$ 11,288,663	\$ 65,351	\$ 11,354,014	\$ (480,287)	\$ 10,873,727
Operating Expenses:						
5	Salaries And Wages	\$ -	\$ -	\$ -	\$ -	\$ -
6	Purchased Wastewater Treatment	-	-	-	-	-
7	Sludge Removal Expense	286,429	(7,688)	278,741	-	278,741
8	Purchased Power	688,557	26,003	714,560	-	714,560
9	Fuel For Power Production	-	-	-	-	-
10	Chemicals	147,196	-	147,196	-	147,196
11	Materials And Supplies	32,762	-	32,762	-	32,762
12	Contractual Services	4,826,240	-	4,826,240	-	4,826,240
13	Repairs And Maintenance	116,474	-	116,474	-	116,474
14	Rents	48,151	-	48,151	-	48,151
15	Transportation Expenses	-	-	-	-	-
16	Insurance	21,039	-	21,039	-	21,039
18	Regulatory Comm. Exp. - Rate Case	33,333	(13,333)	20,000	-	20,000
19	Miscellaneous Expense	231,593	(993)	230,600	-	230,600
20	Depreciation Expense	3,142,068	(362,533)	2,779,535	-	2,779,535
21	Taxes Other Than Income	6,525	-	6,525	-	6,525
22	Property Taxes	785,281	(54,330)	730,951	-	730,951
23	Income Tax	330,522	(330,522)	-	-	-
24	Rounding	2	-	-	-	-
25	TOTAL OPERATING EXPENSES	\$ 10,696,172	\$ (743,396)	\$ 9,952,774	\$ -	\$ 9,952,774
26	OPERATING INCOME (LOSS)	\$ 592,491	\$ 808,747	\$ 1,401,240	\$ (480,287)	\$ 920,953

References:

- Column (A): Company Schedule C-1
- Column (B): SURR RLM-8, Columns (B) Thru (I)
- Column (C): Column (A) + Column (B)
- Column (D): SURR RLM-1
- Column (E): Column (C) + Column (D)

**SURREBITTAL SUMMARY OF OPERATING INCOME ADJUSTMENTS
TEST YEAR AS FILED AND ADJUSTMENTS**

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) REVISED DEPRECIATION & AMORTIZATION	(C) REVISED PROPERTY TAX	(D) ADJMT NO. 2 REVENUE ADJUSTMENT	(E) ADJMT NO. 3 RATE CASE EXPENSE	(F) SURRBTAL ADJMT NO. 4 SLUDGE REMOVAL	(G) REVISED ADJMT NO. 5 UNNECESSARY EXPENSE	(H) SURRBTAL ADJMT NO. 6 PURCHASED POWER	(I) LEFT BLANK	(J) ADJMT NO. 9 INCOME TAX	(K) RUCO AS ADJTD
1	Revenues:											
2	Flat Rate Revenues	\$ 10,786,457			\$ 65,351							\$ 10,851,808
3	Misc. Service Revenues											
4	Other Wastewater Revenues	502,206										502,206
	TOTAL OPERATING REV.	\$ 11,288,663			\$ 65,351							\$ 11,354,014
5	Operating Expenses:											
6	Salaries And Wages											
7	Purchased Wastewater Treatment	286,429										278,741
8	Sludge Removal Expense	688,557				(7,688)			26,003			714,560
9	Fuel For Power Production											
10	Chemicals	147,196										147,196
11	Materials And Supplies	32,762										32,762
12	Contractual Services	4,826,240										4,826,240
13	Repairs And Maintenance	118,474										118,474
14	Rents	46,151										46,151
15	Transportation Expenses											
16	Insurance	21,039										21,039
17	Regulatory Comm. Exp. - Rate Case	33,333				(13,333)						20,000
18	Miscellaneous Expense	231,593						(993)				230,600
19	Depreciation Expense	3,142,068	(362,533)									2,779,535
20	Taxes Other Than Income	6,525										6,525
21	Property Taxes	785,281		(54,330)								730,951
22	Income Tax	330,522									(330,522)	
23	Rounding											
24												
25	TOTAL OPERATING EXP.	\$ 10,696,172	\$ (362,533)	\$ (54,330)	\$ -	\$ (13,333)	\$ (7,688)	\$ (993)	\$ 26,003	\$ -	\$ (330,522)	\$ 9,962,774
26	OPERATING INC. (LOSS)	\$ 592,491										\$ 1,401,240

ADJUSTMENTS:

- 1 Depreciation And Amortization Expense
- 2 Property Tax Computation
- 3 Revenue Adjustment
- 4 Rate Case Expense
- 5 Sludge Removal
- 6 Unnecessary Expenses
- 7 Purchased Power
- 8 Intentionally Left Blank
- 9 Income Tax

REFERENCE:

- Surrebuttal Testimony, RLM And Schedule SURR RLM-9
- Surrebuttal Testimony, RLM And Schedule SURR RLM-10
- Direct Testimony, RLM
- Direct Testimony, RLM And Schedule RLM-11
- Surrebuttal Testimony, RLM
- Direct Testimony, RLM And Schedule RLM-12
- Surrebuttal Testimony, RLM
- Testimony, RLM And Schedule RLM-13

**SURREBUTTAL EXPLANATION OF OPERATING INCOME ADJUSTMENT NO. 1
TEST YEAR DEPRECIATION EXPENSE**

LINE NO.	ACCOUNT NO.	ACCOUNT NAME	(A) TOTAL PLANT VALUE	(B) COMPANY PROPOSED DEP. RATES	(C) TEST YEAR DEPRECIATION EXPENSE
1	351	Organization	\$ -	0.00%	\$ -
2	352	Franchises	-	0.00%	-
3	353	Land and Land Rights	4,122,800	0.00%	-
4	354	Structures And Improvements	439,172	3.33%	14,624
5	355	Power Generation Equipment	-	5.00%	-
6	360	Collection Sewers - Force	21,241,536	2.00%	424,831
7	361	Collection Sewers - Gravity	24,287,592	2.00%	485,752
8	362	Special Collecting Structures	-	2.00%	-
9	363	Services To Customers	-	2.00%	-
10	364	Flow Measuring Devices	-	10.00%	-
11	365	Flow Measuring Installations	-	10.00%	-
12	370	Receiving Wells	-	3.33%	-
13	371	Pumping Equipment	7,613,724	12.50%	951,716
14	375	Reuse T & D	958,645	2.50%	23,966
15	380	Treatment And Disposal Equipment	-	5.00%	-
16	381	Plant Sewers	57,832,761	5.00%	2,891,638
17	382	Outfall Sewer Lines	-	3.33%	-
18	389	Other Plant And Miscellaneous Equipment	-	6.67%	-
19	390	Office Furniture And Equipment	-	20.00%	-
20	391	Transportation Equipment	-	20.00%	-
21	393	Tools, Shop And Garage Equipment	-	5.00%	-
22	394	Laboratory Equipment	-	10.00%	-
23	395	Power Operated Equipment	-	5.00%	-
24	398	Other Tangible Plant	-	10.00%	-
25		TOTAL TEST-YEAR GROSS PLANT AND DEPRECIATION EXPENSE	<u>\$ 116,496,230</u>		<u>\$ 4,792,527</u>
26		AMORTIZATION OF CONTRIBUTIONS	(48,931,590)	4.11%	(2,012,992)
27		Rounding			-
28		TOTAL DEPRECIATION EXPENSE			<u>\$ 2,779,535</u>
29		Company As Filed			3,142,068
30		Difference			<u>\$ (362,533)</u>
31		RUCO Adjustment (See SURR RLM-8, Column (B))			<u>\$ (362,533)</u>

References:

Column (A): SURR RLM-6, Column (H)
Column (B): Company Workpapers
Column (C): Column (A) X Column (B)

**SURREBUTTAL EXPLANATION OF OPERATING INCOME ADJUSTMENT NO. 2
PROPERTY TAX COMPUTATION**

LINE NO.	DESCRIPTION	REFERENCE	(A)	(B)
Calculation Of The Company's Full Cash Value:				
Annual Operating Revenues:				
1	Adjusted Revenues In Year Ended December 2007	Sch. RLM-6, Col (C), Ln 4	\$ 11,354,014	
2	Adjusted Revenues In Year Ended December 2007	Sch. RLM-6, Col (C), Ln 4	11,354,014	
3	Proposed Revenues	Sch. RLM-6, Col (D), Ln 4	<u>10,873,727</u>	
4	Total Three Year Operating Revenues	Sum Of Lines 1, 2 & 3	\$ 33,581,755	
5	Average Annual Operating Revenues	Line 4 / 3	<u>11,193,918</u>	
6	Two Times Three Year Average Operating Revenues	Line 5 X 2		\$ 22,387,837
ADD:				
10% Of Construction Work In Progress ("CWIP"):				
7	Test Year CWIP	Company Workpapers	\$ -	
8	10% Of CWIP	Line 7 X 10%		\$ -
SUBTRACT:				
Transportation At Book Value:				
9	Original Cost Of Transportation Equipment	Company Workpapers	\$ -	
10	Acc. Dep. Of Transportation Equipment	Company Workpapers	-	
11	Book Value Of Transportation Equipment	Line 9 + Line 10		\$ -
12	Company's Full Cash Value ("FCV")	Sum Of Lines 6, 8 & 11		<u>\$ 22,387,837</u>
Calculation Of The Company's Tax Liability:				
MULTIPLY:				
FCV X Valuation Assessment Ratio X Property Tax Rates:				
13	Assessment Ratio	House Bill 2779	23.0%	
14	Assessed Value	Line 12 X Line 13	\$ 5,149,202	
Property Tax Rates:				
15	Primary Tax Rate	Company Workpapers	14.04%	
16	Secondary Tax Rate	Company Workpapers	<u>0.00%</u>	
17	Estimated Tax Rate Liability	Line 15 + Line 16	14.04%	
	Property Tax			\$ 722,843
	Tax On Parcel			8,108
18	Company's Total Tax Liability - Based On Full Cash Value	Line 14 X Line 17		<u>\$ 730,951</u>
19	Test Year Adjusted Property Tax Expense As Filed	Co. Sch. C-1		785,281
20	Decrease In Property Tax Expense	Line 18 - Line 19		\$ (54,330)
21	RUCO Adjustment (See SURR RLM-8, Column (C))	Line 20		<u>\$ (54,330)</u>

COST OF CAPITAL

LINE NO.	DESCRIPTION	(A) CAPITAL RATIO	(B) COST	(C) WEIGHTED COST RATE
1	Long -Term Debt	40.00%	8.00%	3.20%
2	Common Equity	<u>60.00%</u>	8.31%	<u>4.98%</u>
3	Total Capitalization	<u>100.00%</u>		
4	WEIGHTED AVERAGE COST OF CAPITAL			<u>8.18%</u>

References:

Columns (A) Thru (C): Testimony, WAR

SURREBUTTAL RATE DESIGN AND PROOF OF RECOMMENDED REVENUE
PROPOSED REVENUE

LINE NO.	DESCRIPTION	(A) TEST YEAR DETERMIN'TS	(B) ANNZED ADJUSTM'TS	(C) TEST YEAR ADJUSTED DETERMIN'TS	PRESENT CHARGES & USAGE FEES	(E) TEST YEAR ADJUSTED REVENUES	(F) TOTAL REVENUES
RESIDENTIAL CUSTOMERS							
1	3/4" Meter	21,448	1,476	22,924	\$ 37.02	\$ 10,184,753	\$ 10,184,753
2	1" Meter	77	6	83	\$ 47.13	\$ 46,940	\$ 46,940
3	2" Meter	0	0	0	\$ 97.62	\$ -	\$ -
4	3" Meter	0	1	1	\$ 370.28	\$ 4,443	\$ 4,443
5	Total Residential Customers	<u>21,525</u>	<u>1,483</u>	<u>23,008</u>			
6	TOTAL RESIDENTIAL CUSTOMERS REVENUE						<u>\$ 10,236,136</u>
COMMERCIAL CUSTOMERS							
7	3/4" Meter	5	1	5	\$ 37.02	\$ 2,221	\$ 2,221
8	1" Meter	5	1	6	\$ 47.13	\$ 3,393	\$ 3,393
9	1-1/2" Meter	30	-4	26	\$ 60.59	\$ 18,905	\$ 18,905
10	2" Meter	25	5	30	\$ 97.62	\$ 35,142	\$ 35,142
11	3" Meter	1	0	1	\$ 370.28	\$ 4,443	\$ 4,443
12	4" Meter	2	0	2	\$ 706.89	\$ 16,965	\$ 16,965
13	Total Commercial Customers	<u>68</u>	<u>2</u>	<u>70</u>			
14	TOTAL COMMERCIAL CUSTOMERS REVENUE						<u>\$ 81,070</u>
PUBLIC AUTHORITY CUSTOMERS							
15	3/4" Meter	1	0	1	\$ 37.02	\$ 444	\$ 444
16	1" Meter	0	0	0	\$ 47.13	\$ -	\$ -
17	1-1/2" Meter	0	0	0	\$ 60.59	\$ -	\$ -
18	2" Meter	7	0	7	\$ 97.62	\$ 8,590	\$ 8,590
19	3" Meter	1	0	1	\$ 370.28	\$ 4,443	\$ 4,443
20	4" Meter	1	0	1	\$ 706.89	\$ 8,483	\$ 8,483
21	Total Public Authority Customers	<u>10</u>	<u>0</u>	<u>10</u>			
22	TOTAL PUBLIC AUTHORITY CUSTOMERS REVENUE						<u>\$ 21,960</u>
EFFLUENT CUSTOMERS							
23	6" Meter	0	0	0	\$ -	\$ -	\$ -
24	Commodity Usage	53,489	0	53,489	\$ 0.62	\$ 33,163	\$ 33,163
25	Total Effluent Customers	<u>0</u>	<u>0</u>	<u>0</u>			
26	Total Effluent Usage	<u>53,489</u>	<u>0</u>	<u>53,489</u>			
27	TOTAL COMPANY CUSTOMER COUNT	<u>21,603</u>	<u>1,485</u>	<u>23,088</u>			
28	TOTAL COMPANY EFFLUENT SALES	<u>53,489</u>	<u>0</u>	<u>53,489</u>			
29	TOTAL EFFLUENT CUSTOMERS REVENUE						<u>\$ 33,163</u>
30	TOTAL RUCO PROPOSED REVENUE PER BILL COUNT						<u>\$ 10,372,329</u>
31	Unreconciled Difference vs. Billed Revenues						(809)
32	Other Revenues						502,206
33	TOTAL REVENUE						<u>\$ 10,873,727</u>
34	PROPOSED REVENUE PER RUCO						<u>\$ 10,873,727</u>
35	Difference						\$ (0)
36	Percentage Difference						0.00%

SURREBUTTAL TYPICAL RESIDENTIAL BILL ANALYSIS

LINE NO.	DESCRIPTION	(A) PRESENT	(B)	(C) COMPANY PROPOSED	(D)	(E) RUCO PROPOSED	(F)
REVENUE ALLOCATION							
1	RESIDENTIAL	\$ 9,955,813	98.65%	\$ 12,864,422	98.75%	\$ 10,236,136	98.69%
2	OTHER	136,707	1.35%	162,648	1.25%	136,193	1.31%
3	TOTAL	<u>\$ 10,092,520</u>	<u>100.00%</u>	<u>\$ 13,027,070</u>	<u>100.00%</u>	<u>\$ 10,372,329</u>	<u>100.00%</u>
ALLOCATION RATIOS							
4	FIX REVENUE	\$ 10,059,357	99.67%	\$ 12,993,907	99.75%	\$ 10,339,166	99.68%
5	VARIABLE REVENUE	33,163	0.33%	33,163	0.25%	33,163	0.32%
6	TOTAL	<u>\$ 10,092,520</u>	<u>100.00%</u>	<u>\$ 13,027,070</u>	<u>100.00%</u>	<u>\$ 10,372,329</u>	<u>100.00%</u>
RESIDENTIAL (5/8" X 3/4") RATE DESIGN							
		<u>PRESENT</u>		<u>COMPANY PROPOSED</u>		<u>RUCO PROPOSED</u>	
7	BASIC MONTHLY CHARGE	\$ 38.50		\$ 46.53		\$ 37.02	
COMMODITY CHARGE							
		<u>PRESENT</u>		<u>PROPOSED</u>			
8	Flat Rate	Flat Rate	\$ -	\$ -		\$ -	
9	Effluent - Per 1,00 Gallons	Effluent - Per 1,00 Gallons	\$ 0.62	\$ 0.62		\$ 0.62	
RESIDENTIAL BILL COMPARISONS							
		<u>MONTHLY CONSUMPTION</u>		<u>PRESENT MONTHLY WATER COST</u>	<u>RUCO PROP'D MONTHLY WATER COST</u>	<u>RUCO PROP'D MONTHLY INCREASE</u>	<u>RUCO PROP'D MONTHLY % INCREASE</u>
10	Flat Rate			\$ 38.50	\$ 37.02	(1.48)	-3.83%

JOHNSON UTILITIES, L.L.C.

DOCKET NO. WS-02987A-08-0180

**SURREBUTTAL TESTIMONY
ON COST OF CAPITAL**

OF

WILLIAM A. RIGSBY

ON BEHALF OF

THE

RESIDENTIAL UTILITY CONSUMER OFFICE

MARCH 31, 2009

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1 **INTRODUCTION**

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

3 A. My name is William A. Rigsby. I am a Public Utilities Analyst V employed
4 by the Residential Utility Consumer Office ("RUCO") located at 1110 W.
5 Washington, Suite 220, Phoenix, Arizona 85007.

6
7 Q. Please state the purpose of your surrebuttal testimony.

8 A. The purpose of my testimony is to respond to Johnson Utilities, LLC's
9 ("Johnson Utilities" or "Company") rebuttal testimony on RUCO's
10 recommended rate of return on invested capital (which includes RUCO's
11 recommended capital structure, cost of long-term debt and cost of
12 common equity) for the Company's water and wastewater operations in
13 Pinal County, Arizona.

14
15 Q. Have you filed any prior testimony in this case on behalf of RUCO?

16 A. Yes, on February 4, 2009, I filed direct testimony with the Arizona
17 Corporation Commission ("ACC" or "Commission") on the cost of capital
18 issues associated with this case.

19
20 Q. How is your surrebuttal testimony on cost of capital organized?

21 A. My surrebuttal testimony contains five parts: the introduction that I have
22 just presented; a summary of Johnson Utilities' rebuttal testimony; a

1 section on capital structure; a section on the cost of debt; and, a section
2 on the cost of equity capital.

3
4 **SUMMARY OF JOHNSON UTILITIES' REBUTTAL TESTIMONY**

5 Q. Have you reviewed Johnson Utilities' rebuttal testimony?

6 A. Yes. I have reviewed the rebuttal testimony of Company witness Thomas
7 J. Bourassa, filed on March 9, 2009, which addresses the cost of capital
8 issues in this case.

9
10 Q. Please summarize Mr. Bourassa's rebuttal testimony.

11 A. In his rebuttal testimony, Mr. Bourassa argues that my cost of equity figure
12 should not be adopted by the Commission. Mr. Bourassa is critical of both
13 the discounted cash flow ("DCF") and CAPM analyses that I conducted in
14 order to arrive at my recommended cost of common equity for Johnson
15 Utilities in this case. Mr. Bourassa takes issue with the growth estimate of
16 my DCF model, my reliance on geometric means, and various inputs that I
17 used in my CAPM model. He also takes issue with my recommended
18 hypothetical capital structure.

19
20
21
22
23

1 **CAPITAL STRUCTURE**

2 Q. Briefly summarize the positions of the parties to the case regarding capital
3 structure.

4 A. A comparison of the Company and RUCO's capital structures are as
5 follows:

	<u>Company</u>	<u>RUCO</u>
7 Long-Term Debt	2.79%	40.00%
8 Common Equity	97.21%	60.00%

9
10 Because ACC Staff witness Jeffery M. Michlik is recommending negative
11 rate bases for both the Company's Water and Wastewater Divisions, Mr.
12 Michlik is recommending that a 10.0 percent operating margin be adopted
13 by the Commission. I have not made any changes to my recommended
14 hypothetical capital structure comprised of 40.0 percent long-term debt
15 and 60.0 percent equity for the Company's Wastewater Division. In
16 regard to Johnson Utilities' Water Division, RUCO witness Rodney L.
17 Moore is also recommending a negative rate base. Consequently, like
18 ACC Staff, I am recommending that the Commission adopt an operating
19 margin for the Company's Water Division. However, my recommendation
20 is for an 8.18 percent operating margin.

1 **COST OF DEBT**

2 Q. Please compare the costs of debt being recommended by the Company
3 and RUCO for Johnson Utilities' Water Division.

4 A. The Company and RUCO are in agreement on Johnson Utilities' cost of
5 long-term debt and continue to recommend the following:

6		
7	Johnson Utilities	8.00%
8	RUCO	8.00%

9

10 **COST OF EQUITY CAPITAL**

11 Q. What costs of equity capital are the parties to the case recommending?

12 A. The costs of common equity presently being recommended by the
13 Company and RUCO are as follows:

14		
15	Johnson Utilities	12.00%
16	RUCO	8.31%

17

18 Q. What are the weighted costs of capital presently recommended by the
19 Company and RUCO?

20 A. The weighted costs of capital presently recommended by the Company
21 and RUCO are as follows:

22
23

1	Johnson Utilities	11.89%
2	RUCO	8.18%

3

4 As can be seen above, there is presently a 371 basis point difference
5 between the Company-proposed 11.89 percent weighted cost of capital
6 and RUCO's recommended weighted cost of capital of 8.18 percent.

7

8 Q. Has there been any recent activity in regard to interest rates?

9 A. Yes. On March 18, 2009, the Federal Reserve decided not to increase or
10 decrease the federal funds rate and kept it between zero and 0.25
11 percent. According to an article¹ that appeared in The Wall Street Journal
12 on March 19, 2009, the Fed's intent to purchase \$300 billion in longer-
13 term Treasury securities over the next six months is an effort to improve
14 the conditions in the private credit markets. According to the Fed's
15 statement that was released after the decision was made to sit still on
16 rates, all of the members of the Federal Open Market Committee believed
17 that the continued deterioration of the U.S. economy warranted that no
18 change be made in the key interest rate. The Fed also stated that it
19 intended to keep the federal funds rate low for an extended period.

20

21 ...

22

¹ Levine, Deborah, "Treasury surge on Fed move," The Wall Street Journal, March 19, 2009.

1 Q. Have you made any changes to the 8.31 percent cost of common equity
2 that you recommended in your direct testimony?

3 A. No.

4
5 Q. Has Mr. Bourassa made any changes to his recommended cost of equity
6 capital?

7 A. Yes. Mr. Bourassa has increased his original recommended return on
8 common equity from 10.50 percent to 12.00 percent despite the fact that
9 interest rates have declined since his original testimony was filed during
10 the first quarter of 2008.

11
12 Q. Please address Mr. Bourassa's position that your method of averaging
13 your DCF and CAPM estimates for both your water utility and LDC sample
14 companies has produced a depressed cost of equity capital.

15 A. The mean averaging method that I have used to arrive at my final cost of
16 equity estimate has been adopted by the Commission in a number of rate
17 case proceedings. It is identical to the mean averaging method that has
18 been used by ACC Staff to arrive at final cost of equity estimates. This
19 being the case, I see no reason to change or modify my recommended
20 cost of equity that was derived by averaging the results of my DCF and
21 CAPM results.

22

23

1 Q. Do you still believe that your use of a sample of natural gas LDC's is
2 appropriate despite Mr. Bourassa's arguments to the contrary?

3 Y. Yes.
4

5 Q. Have other analysts used natural gas LDC's as proxies in water utility rate
6 case proceedings before the ACC?

7 A. Yes, in the Arizona-American Water Company (Arizona-American) rate
8 case that is now pending before the Commission, the cost of capital
9 witness for Arizona-American also relied on a sample group of natural gas
10 LDCs.
11

12 Q. Please explain why you believe it is appropriate to use a sample group of
13 natural gas LDC's to estimate the cost of equity capital in a water utility
14 rate case proceeding.

15 A. For the most part, natural gas LDC's have very similar operating
16 characteristics with water companies such as Johnson Utilities and are
17 therefore a good proxy for water and wastewater utility cost of capital
18 studies. Their inclusion also provides a larger sample to obtain an
19 estimate from. In the recent Arizona-American Water Company ("Arizona-
20 American") Sun City West Wastewater District Case, Arizona-American's
21 cost of capital consultant also used a sample of LDC's to arrive at her final
22 cost of equity estimate. In fact, in its initial closing brief in that case,
23 Arizona-American criticized RUCO for relying on its water utility sample

1 DCF results, and for failing to give more weight to the results of RUCO's
2 LDC sample results². Arizona-American stated the following:

3 "Mr. Rigsby's base calculation is also flawed. His DCF recommendation
4 equally weighted his DCF evaluations for his water utility samples and
5 his gas utility samples.¹⁵² Unfortunately, his water utility sample only
6 contained four companies.¹⁵³ Mr. Rigsby conceded that he "would like to
7 see a broader sample.¹⁵⁴ However, he went ahead and weighted this
8 sample equally with his gas utility sample, which contained 10
9 companies.¹⁵⁵

10
11 Mr. Rigsby should have excluded the results of his DCF analysis for
12 water utilities. Four companies are just not enough, as he admits.
13 Unusual events at just one company can unduly affect the entire sample,
14 a risk that is smoothed when a larger sample is used. If we just exclude
15 the DCF results for the water-utility sample, Mr. Rigsby's ROE estimate
16 would increase significantly....."
17

18 Q. Do you believe that an upward adjustment is needed for your
19 recommended cost of equity given your use of a sample group of LDC's
20 that have a lower average beta than the one calculated for your sample
21 group of water utilities?

22 A. No. Given the current state of the economy (an issue which Mr. Bourassa
23 also believes justifies higher rates of return) I believe that my
24 recommended 8.31 percent cost of equity is actually generous.

25
26 Q. Please explain why you believe that your recommended 8.31 percent cost
27 of equity is actually generous.

28 A. It is no secret that since the current downturn in the economy has
29 occurred there has been a "flight to quality" by investors who have pulled
30 their funds out of the equity markets and have put them into U.S. Treasury

² Initial Closing Brief of Arizona-American Water Company, Docket No. WS-01303A-06-0491

1 instruments, which are yielding next to nothing, in order to avoid any
2 further loss of capital. If investors are willing to accept lower yields on
3 Treasury instruments that are ranging from 0.20 percent, on a 91-day T-
4 bill, to 3.53 percent, on a long-term 30-year Treasury bond (Attachment
5 A), then Mr. Bourassa's proposed 12.00 percent cost of equity figure is
6 clearly excessive given that water utilities and natural gas LDC's are
7 currently being viewed as safe investments.

8
9 Q. Can you back up your statement that water utilities and natural gas LDC's
10 are currently being viewed as safe investments

11 A. Yes. In the most recent Value Line update on the water utility industry,
12 dated January 23, 2009, Value Line analyst Andre J. Costanza had this to
13 say:

14 "Not much has changed in the Water Utility Industry since our
15 October report. Stocks here have held their ground for the most
16 part, whereas the broader market continued to struggle with
17 ongoing economic uncertainty. Although an improving regulatory
18 environment has played a hand, the industry is really benefiting
19 from the its perceived safety, stemming from the necessity of water
20 itself as well as the steady stream of income that the stocks here
21 generate. The group as a whole ranks near the top of the Value
22 Line Investment Survey for Timeliness and should continue to do
23 well over the next six to 12 months, as investors look for a place to
24 ride out the economic turbulence that is likely to persist."
25

26 Mr. Costanza further stated:

27 "Now more than ever we believe that initiating a position in the
28 Water Utility industry may be prudent. Although the 3- to 5-year
29 prospects of these stocks pale in comparison to the *Value Line*
30 median, projections for many outside the industry are counting on
31 an economic recovery. However, there is no turnaround in sight and
32 a timeline for such a scenario continues to elude Wall Street. That
33 said, water utility stocks are likely to continue to do well regardless
34 of the economic backdrop because water is and will always be a

1 necessity. Even still, it is important to remember that the individual
2 reports of each stock should be carefully reviewed before making a
3 financial commitment. On that note, however, we believe that
4 *California Water Services* is an interesting candidate, given its
5 Above Average (2) ranking for Timeliness. *American Water Works*
6 continues to intrigue us, too, but its short trading history makes it a
7 speculative play. Meanwhile, *Aqua America's* M&A strategy gives it
8 the most upside in our opinion, despite adding more risk."
9

10 Q. What is Value Line's view on natural gas LDC's?

11 A. Value Line analyst Richard Gallagher had this to say in the March 13,
12 natural gas utility update:

13 "The global economy continues to struggle. Tight credit and a
14 slumping real estate market are among the main factors
15 contributing to the recessionary environment. Furthermore, these
16 conditions continue to weigh on results in this sector. Indeed,
17 usage continues to decline as customers have become more cost
18 conscious. Moreover, bill collection has become increasingly
19 difficult as unemployment and foreclosures continue to rise.
20 Despite the aforementioned conditions, investors should note that
21 this group is an interesting defensive play. While these factors will
22 likely continue to impact the utilities, this industry should perform
23 well compared to the rest of the market in the months ahead.
24 Natural Gas Utilities generally have solid balance sheets and
25 predictable cash flows, which is appealing given the weakness in
26 the economy."
27

28 Mr. Gallagher went on to state:

29 "The Natural Gas Utility sector has climbed near the top of our
30 industry spectrum in recent months. Indeed, it features numerous
31 timely stocks. In fact, UGI holds our highest rank (1) for Timeliness.
32 However, various other companies are ranked to outperform the
33 market over the coming six to 12 months. What's more, the majority
34 of the equities in this industry offer above-average yields. Most
35 notably, Nicor, AGL Resources and Atmos Energy all offer attractive
36 payouts supported by steady cash flows. Therefore, investors
37 looking for a good play in the year ahead should consider some of
38 the names in this group."
39

40
41 ...

1 Q. Are there other reasons you can cite as to why you think that a higher
2 return is not needed to attract investors?

3 A. Yes. One has to take into consideration that the investment community at
4 large is well aware of the fact that regulated utilities, such as Arizona-
5 American, are indeed different from non-regulated entities in terms of how
6 they recover their costs. This information is taken into account when
7 institutions and individual investors make their decisions on where to place
8 their funds. The best example of this can be seen in an MSN
9 Money/CNBC article³ authored by Jon D. Markman, a weekly columnist for
10 CNBC (Attachment B). In his article, Mr. Markman pitched his suggestions
11 for investing in what some believe to be a coming global water shortage.
12 In regard to domestic utilities, Markman had this to say:

13
14 "Virtually all of the U.S. water utility stocks are regulated by states
15 and counties, which makes them pretty dull. Governmental entities
16 typically give utilities a monopoly in a geographic region, then set
17 their profit margin a smidge above costs. Just about the only
18 distinguishing factor among them are the growth rates of their
19 regions and their ability to efficiently manage their underground pipe
20 and pumping infrastructure."
21
22

23 Q. Is Mr. Bourassa correct in his assertion that you did not use the
24 appropriate inputs to calculate a market risk premium in your CAPM
25 model?

26 A. No. Despite Mr. Bourassa's assertion, I have used an appropriate
27 Treasury instrument to calculate the risk premium in my CAPM model.

³ Markman, Jon D, "Invest in the Coming Global Water Shortage," MSN.com, January 12, 2005,
<http://moneycentral.msn.com/content/P102152.asp>.

1 The risk premium that I have calculated has also been calculated in the
2 same manner by both ACC Staff and other cost of capital witnesses
3 whose cost of capital recommendations have been adopted by the
4 Commission.

5
6 Q. Please respond to Mr. Bourassa's criticism of your reliance on geometric
7 means in the CAPM model.

8 A. As I stated in my direct testimony there is an on-going debate over which
9 is the better average to rely on. However, it is important to recognize that
10 the information on both means, published by Morningstar, is widely
11 available to the investment community. For this reason alone I believe
12 that the use of both means in a CAPM analysis is appropriate.

13 The best argument in favor of the geometric mean is that it provides a
14 truer picture of the effects of compounding on the value of an investment
15 when return variability exists. This is particularly relevant in the case of
16 the return on the stock market, which has had its share of ups and downs
17 over the 1926 to 2007 observation period used in my CAPM analysis.

18
19 Q. Can you provide an example to illustrate the differences between the two
20 averages?

21 A. Yes. The following example may help. Suppose you invest \$100 and
22 realize a 20.0 percent return over the course of a year. So at the end of
23 year 1, your original \$100 investment is now worth \$120. Now let's say

1 that over the course of a second year you are not as fortunate and the
2 value of your investment falls by 20.0 percent. As a result of this, the
3 \$120 value of your original \$100 investment falls to \$96. An arithmetic
4 mean of the return on your investment over the two-year period is zero
5 percent calculated as follows:

$$\begin{aligned} & (\text{year 1 return} + \text{year 2 return}) \div \text{number of periods} = \\ & (20.0\% + -20.0\%) \div 2 = \\ & (0.0\%) \div 2 = \underline{0.0\%} \end{aligned}$$

6
7
8
9
10 The arithmetic mean calculated above would lead you to believe that you
11 didn't gain or lose anything over the two-year investment period and that
12 your original \$100 investment is still worth \$100. But in reality, your
13 original \$100 investment is only worth \$96. A geometric mean on the
14 other hand calculates a compound return of negative 2.02 percent as
15 follows:

$$\begin{aligned} & (\text{year 2 value} \div \text{original value})^{1/\text{number of periods}} - 1 = \\ & (\$96 \div \$100)^{1/2} - 1 = \\ & (0.96)^{1/2} - 1 = \\ & (0.9798) - 1 = \\ & -0.0202 = \underline{-2.02\%} \end{aligned}$$

1 The geometric mean calculation illustrated above provides a truer picture
2 of what happened to your original \$100 over the two-year investment
3 period.

4 As can be seen in the preceding example, in a situation where return
5 variability exists, a geometric mean will always be lower than an arithmetic
6 mean, which probably explains why utility consultants typically put up a
7 strenuous argument against the use of a geometric mean.

8
9 Q. Can you cite any other evidence that supports your use of both a
10 geometric and an arithmetic mean?

11 A. Yes. In the third edition of their book, Valuation: Measuring and Managing
12 the Value of Companies, authors Tom Copeland, Tim Koller and Jack
13 Murrin ("CKM") make the point that, while the arithmetic mean has been
14 regarded as being more forward-looking in determining market risk
15 premiums, a true market risk premium may lie somewhere between the
16 arithmetic and geometric averages published in Morningstar's SBBI
17 yearbook.

18
19 Q. Please explain.

20 A. In order to believe that the results produced by the arithmetic mean are
21 appropriate, you have to believe that each return possibility included in the
22 calculation is an independent draw. However, research conducted by
23 CKM demonstrates that year-to-year returns are not independent and are

1 actually auto correlated (i.e. a relationship that exists between two or more
2 returns, such that when one return changes, the other, or others, also
3 change), meaning that the arithmetic mean has less credence. CKM also
4 explains two other factors that would make the Morningstar arithmetic
5 mean too high. The first factor deals with the holding period. The
6 arithmetic mean depends on the length of the holding period and there is
7 no "law" that says that holding periods of one year are the "correct"
8 measure. When longer periods (e.g. 2 years, 3 years etc.) are observed,
9 the arithmetic mean drops about 100 basis points. The second factor
10 deals with a situation known as survivor bias. According to CKM, this is a
11 well-documented problem with the Morningstar historical return series in
12 that it only measures the returns of successful firms. That is, those firms
13 that are listed on stock exchanges. The Morningstar historical return
14 series does not measure the failures, of which there are many. Therefore,
15 the return expectations in the future are likely to be lower than the
16 Morningstar historical averages. After conducting their analysis, CKM
17 conclude that 4.0 percent to 5.5 percent is a reasonable forward-looking
18 market risk premium. Adding my 1.60 percent risk free yield on a 5-year
19 Treasury instrument to these two estimates indicate a cost of equity of
20 5.60 percent to 7.10 percent which is 271 to 121 basis points less than my
21 recommended cost of equity of 8.31 percent. Given the fact that utilities
22 generally exhibit less risk than industrials, a return in the low end of this
23 range could be considered reasonable.

1 Q. Can you name any other sources that support CKM's conclusion that 4.0
2 percent to 5.5 percent is a reasonable market risk premium on a forward-
3 looking basis?

4 A. Yes. During the 39th annual Financial Forum of the Society of Utility and
5 Regulatory Financial Analysts, which was held at Georgetown University
6 in Washington D.C. on April 19 and 20, 2007, I had the opportunity to hear
7 the views of Aswarth Damodaran, Ph. D. and Felicia C. Marston, Ph. D.,
8 professors of finance from New York University and the University of
9 Virginia respectively, who have conducted empirical research on this
10 subject. Dr. Damodaran and Dr. Marston supported CKM's 4.0 to 5.5
11 percent estimates during a panel discussion that provided both professors
12 with the opportunity to explain their research on the equity risk premium
13 and to answer questions from other financial analysts in attendance. Each
14 of the panelists⁴ stated that they believed that a reasonable market risk
15 premium fell between 4.0 percent and 5.0 percent when asked to provide
16 estimates based on their research.

17

18

19

20 ...

21

⁴ Other analysts taking part in the panel discussion included Stephen G. Hill, CRRA, Principal, Hill Associates and moderator Farris M. Maddox, Principal Financial Analyst, Virginia State Corporation Commission.

1 Q. If market risk premiums of 4.0 percent to 5.0 percent were used in your
2 CAPM model what would the results be?

3 A. Using market risk premiums ($r_m - r_f$) of 4.0 percent to 5.0 percent in my
4 CAPM model, using a proxy of water companies, produces the following
5 expected returns (k):

6
7 Water Company Sample using 4.0 percent

8
$$k = r_f + [\beta (r_m - r_f)]$$

9
$$k = 1.60\% + [0.97 (4.0\%)]$$

10
$$k = 5.48\%$$

11
12 Water Company Sample using 5.0 percent

13
$$k = r_f + [\beta (r_m - r_f)]$$

14
$$k = 1.60\% + [0.97 (5.0\%)]$$

15
$$k = 6.45\%$$

16
17 As can be seen above, my CAPM model, using a water company sample
18 average beta (β) of 0.97 and the yield on a 5-year Treasury instrument of
19 1.60 percent for the risk free rate of return (r_f), produces an expected
20 return (k) of 5.48 percent to 6.45 percent. My LDC sample, using an
21 average beta of 0.70, produces expected returns of 4.40 percent to 5.10
22 percent. All of which makes my revised recommended 8.31 percent cost
23 of common equity appear to be more than generous.

1 Q. Please address Mr. Bourassa's statements regarding your method of
2 calculating an internal growth (br) estimate for the growth component (g)
3 of your DCF model.

4 A. My direct testimony contained a full explanation as to how I arrived at both
5 the internal and external growth estimates that comprise the g component
6 of my DCF model. Mr. Bourassa was also provided with my work papers
7 which described how I arrived at each of the estimates for all of the water
8 utilities and LDC's that were used in my sample groups. Mr. Bourassa
9 has been involved in a number of rate proceedings that I have provided
10 testimony on and in all of those cases my method for calculating the
11 growth component in the DCF model has never changed.

12
13 Q. Do you still believe that your average DCF growth rate estimate of 6.40
14 percent, based on your respective water and natural gas average DCF
15 growth estimates of 6.51 percent and 6.29, percent is reasonable?

16 A. Yes. In his rebuttal testimony, Mr. Bourassa cites Dr. Roger Morin's text
17 New Regulatory Finance to support his geometric mean arguments. On
18 page 308 of his text, Dr. Morin provides a DCF growth rate check
19 (Attachment C). The reasonableness test offered by Dr. Morin is
20 expressed as follows:

21

22 Dividend Growth = Risk Free Return + Risk Premium – Dividend Yield

23

1 Under the above formula the dividend yield element of the DCF ("D₁/P₀") is
2 subtracted from results of a CAPM calculation ("r_f + [β (r_m - r_f)]").

3
4 Q. How do your DCF growth estimates compare to the results obtained from
5 the reasonableness test offered by Dr. Morin?

6 A Using the CAPM results presented above using my CAPM inputs, with the
7 higher arithmetic mean, and the average 2.88 percent (for Water) and
8 4.43 percent (for natural gas) DCF dividend yield estimates presented in
9 my direct testimony, the following growth rate check results are obtained:

10
11 Water using an Arithmetic Mean

12
$$g = r_f + [\beta (r_m - r_f)] - (D_1/P_0)$$

13
$$g = 1.60\% + [0.97 (6.80\%)] - 2.88\%$$

14
$$g = 1.60\% + 6.60\% - 2.88\%$$

15
$$g = \underline{5.32\%}$$

16
17 Gas using an Arithmetic Mean

18
$$g = r_f + [\beta (r_m - r_f)] - (D_1/P_0)$$

19
$$g = 1.60\% + [0.70 (6.80\%)] - 4.43\%$$

20
$$g = 1.60\% + 4.76\% - 4.43\%$$

21
$$g = \underline{1.93\%}$$

22
23 As can be seen above, the growth rate check results, obtained from Dr.
24 Morin's reasonableness test, range from 1.93 percent for the LDC's to

1 5.32 percent for the water utilities or an average of 3.63 percent which is
2 277 basis points lower than my average DCF growth estimate of 6.40
3 percent DCF growth rate estimate.

4
5 Q. Has the Commission ever adopted a cost of capital recommendation that
6 was derived from the same method that you have used in this case?

7 A. Yes. As I stated in my direct testimony, the Commission adopted the
8 recommendations of ACC Staff cost of capital witness Stephen Hill in a
9 prior Southwest Gas Corporation rate case⁵. Mr. Hill used the same
10 methods that I have used in arriving at the inputs for the DCF model.

11
12 Q. Do you agree with Mr. Bourassa's use of the Hamada Adjustment in
13 response to your hypothetical capital structure?

14 A. No, I do not. There is no need for the use of the Hamada adjustment
15 because my recommended hypothetical capital structure provides the
16 Company with an appropriate rate of return.

17
18
19
20
21 ...

22

⁵ Decision No. 68487, dated February 23, 2006 (Docket No. G-01551A-04-0876)

1 Q. Has the Commission ever adopted a weighted cost of capital that was
2 derived from a similar hypothetical capital structure that you
3 recommended?

4 A. Yes. In the Gold Canyon Sewer⁶ rehearing proceeding, the Commission
5 adopted my recommended weighted average cost of capital of 8.54
6 percent (which was derived from market data prior to the current economic
7 downturn). In that case the Commission rejected the use of the Hamada
8 methodology in favor of RUCO's recommended hypothetical capital
9 structure of 40.0 percent debt and 60.0 percent equity. This is the same
10 capital structure that I am recommending in this case.

11
12 Q. Please address Mr. Bourassa's position that your recommended cost of
13 equity is too low based on the yields of investment grade Baa bonds.

14 A. Mr. Bourassa's analysis fails to take into consideration the most recent
15 yields on utility bond yields. As can be seen in the Selected Yields section
16 of Value Line's Selection & Opinion publication dated March 27, 2009, the
17 yields of A-rated and Baa/BBB-rated utility bonds are currently at 5.90
18 percent and 7.51 percent respectively. My recommended 8.31 percent
19 cost of common equity is a full 80 to 241 basis points higher than the
20 aforementioned yields.

21

22

⁶ Decision No. 70662, dated December 23, 2008 (Docket No. SW-02519A-06-0015)

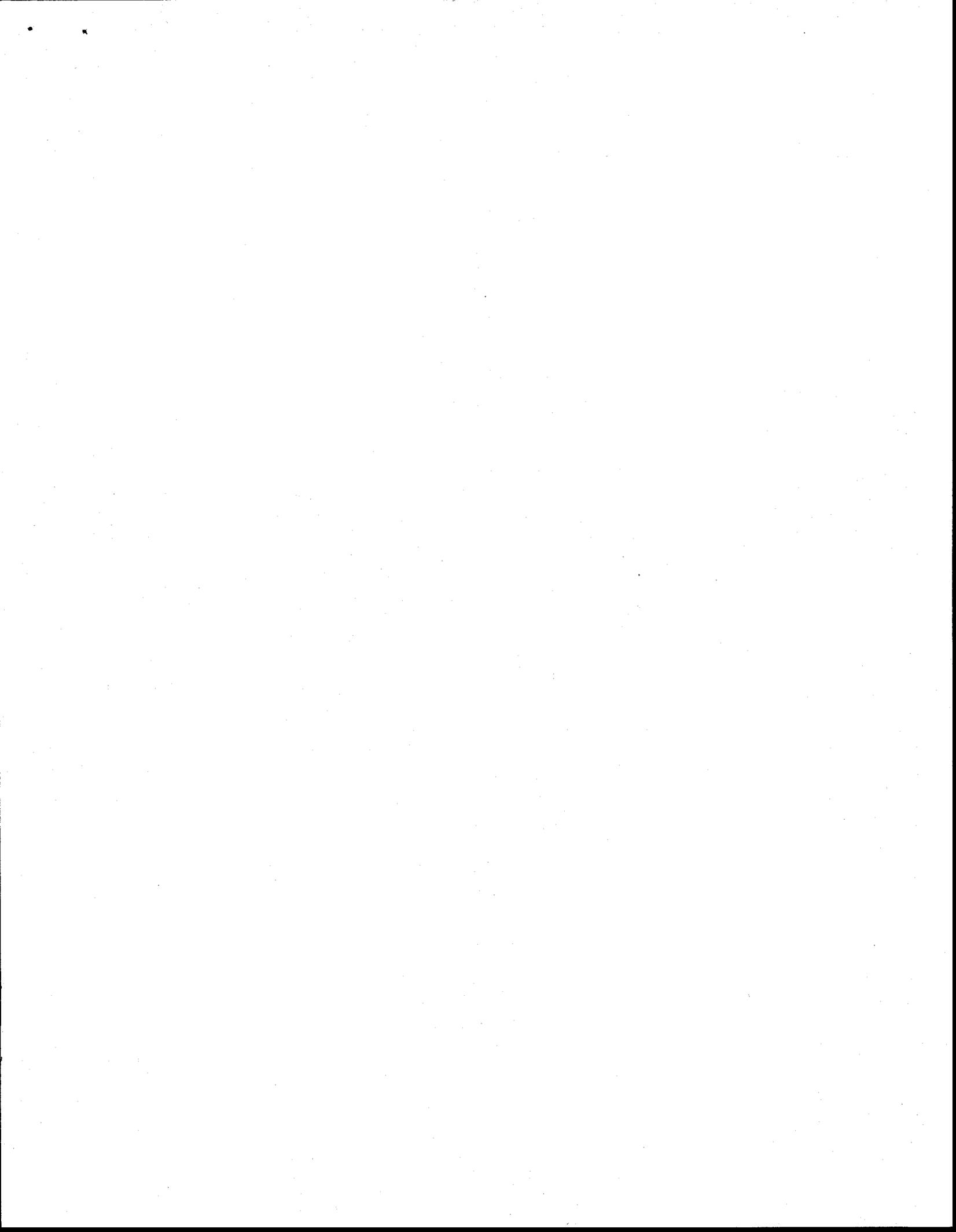
1 Q. Does your silence on any of the issues or positions addressed in the
2 rebuttal testimony of the Mr. Bourassa or any of the Company's other
3 witnesses constitute acceptance?

4 A. No, it does not.

5

6 Q. Does this conclude your surrebuttal testimony on Johnson Utilities?

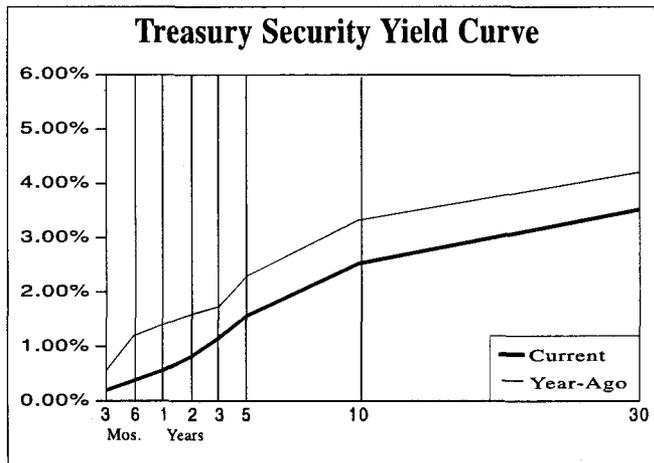
7 A. Yes, it does.



ATTACHMENT A

Selected Yields

	Recent (3/18/09)	3 Months Ago (12/17/08)	Year Ago (3/19/08)		Recent (3/18/09)	3 Months Ago (12/17/08)	Year Ago (3/19/08)
TAXABLE							
Market Rates							
Discount Rate	0.50	0.50	2.50				
Federal Funds	0.00-0.25	0.00-0.25	2.25				
Prime Rate	3.25	3.25	5.25				
30-day CP (A1/P1)	0.49	0.27	2.65				
3-month LIBOR	1.29	1.58	2.60				
Bank CDs							
6-month	0.84	1.46	2.15				
1-year	1.05	1.89	2.16				
5-year	2.07	2.96	3.12				
U.S. Treasury Securities							
3-month	0.20	0.01	0.56				
6-month	0.38	0.18	1.20				
1-year	0.56	0.45	1.40				
5-year	1.57	1.37	2.30				
10-year	2.53	2.19	3.33				
10-year (inflation-protected)	1.31	2.39	0.90				
30-year	3.53	2.65	4.21				
30-year Zero	3.54	2.69	4.35				
Mortgage-Backed Securities							
GNMA 6.5%	3.59	4.40	4.70				
FHLMC 6.5% (Gold)	3.15	4.40	4.96				
FNMA 6.5%	3.28	4.04	4.62				
FNMA ARM	3.60	4.23	5.07				
Corporate Bonds							
Financial (10-year) A	7.52	7.50	5.89				
Industrial (25/30-year) A	6.07	6.18	5.87				
Utility (25/30-year) A	5.90	6.26	5.96				
Utility (25/30-year) Baa/BBB	7.51	7.09	6.14				
Foreign Bonds (10-Year)							
Canada	2.70	2.87	3.45				
Germany	3.22	2.99	3.76				
Japan	1.31	1.30	1.28				
United Kingdom	3.11	3.23	4.31				
Preferred Stocks							
Utility A	6.25	6.50	6.34				
Financial A	9.76	8.23	7.91				
Financial Adjustable A	5.47	5.47	5.47				



TAX-EXEMPT							
Bond Buyer Indexes							
20-Bond Index (GOs)	5.03	5.85	4.94				
25-Bond Index (Revs)	5.83	6.39	5.15				
General Obligation Bonds (GOs)							
1-year Aaa	0.57	0.95	1.80				
1-year A	0.67	1.05	1.90				
5-year Aaa	2.39	2.86	2.87				
5-year A	2.99	2.96	3.17				
10-year Aaa	3.45	4.03	3.73				
10-year A	3.95	4.23	4.02				
25/30-year Aaa	4.98	5.51	4.92				
25/30-year A	5.98	5.91	5.05				
Revenue Bonds (Revs) (25/30-Year)							
Education AA	6.00	6.10	5.10				
Electric AA	6.10	6.15	5.10				
Housing AA	6.35	6.30	5.40				
Hospital AA	6.30	6.25	5.50				
Toll Road Aaa	6.15	6.20	5.10				

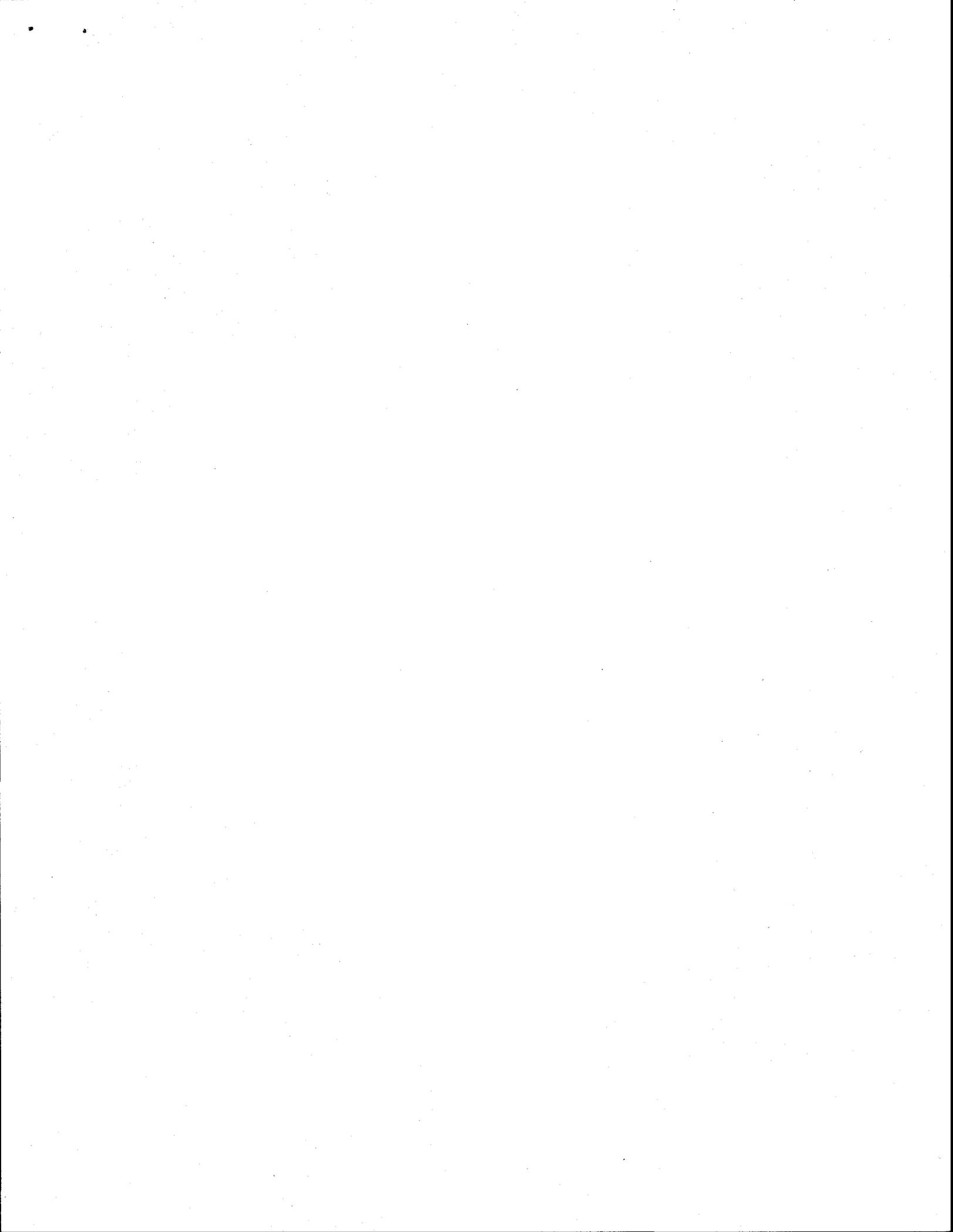
Federal Reserve Data

BANK RESERVES (Two-Week Period; in Millions, Not Seasonally Adjusted)

	Recent Levels			Average Levels Over the Last...		
	3/11/09	2/25/09	Change	12 Wks.	26 Wks.	52 Wks.
Excess Reserves	621517	673431	-51914	730878	511645	266367
Borrowed Reserves	630177	588910	41267	601461	568436	365508
Net Free/Borrowed Reserves	-8660	84521	-93181	129418	-56791	-99141

MONEY SUPPLY (One-Week Period; in Billions, Seasonally Adjusted)

	Recent Levels			Growth Rates Over the Last...		
	3/2/09	2/23/09	Change	3 Mos.	6 Mos.	12 Mos.
M1 (Currency+demand deposits)	1562.3	1544.8	17.5	8.2%	26.0%	12.6%
M2 (M1+savings+small time deposits)	8304.0	8274.2	29.8	13.6%	16.3%	9.8%



ATTACHMENT B



Jon Markman

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Posted 1/12/2005

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SuperModels

Invest in the coming global water shortage

Fresh water's getting scarce, and it has no substitutes. For investors in companies that can supply our increasingly thirsty planet, that spells opportunity.

By [Jon D. Markman](#)

Ten years ago next Monday, a massive earthquake rolled under the Japanese city of Kobe at dawn, toppling 140,000 buildings, causing 300 major fires, killing more than 5,000 people and leaving 300,000 homeless.

To help cover the story for the L.A. Times, I left my wife to care for our 10-day-old daughter and 2-year-old son and flew into the city with a small team of Los Angeles-based trauma doctors and nurses. We found a surreal, smoking ruin of a city with roads twisted like coils of rope, high-rises tilted at Dr. Seuss angles and thousands of middle-class families jammed into dingy, ice-cold rooms in the few public buildings left standing.

Just as in the tsunami zone of South Asia this month, the immediate health danger, besides a possible outbreak of disease, was a lack of fresh water. More than 75% of the city's water supply was destroyed when underground pipes fractured. As much as they desired pallets of drugs, food, blankets and tents sent from throughout Japan and abroad, the Kobe survivors coveted -- and needed -- clean, bottled water for cooking, drinking and bathing.

Both incidents are a stark reminder that water is our most precious resource. Because it is seemingly ubiquitous in the United States, it is taken for granted.

Massive snowstorms in California this month have loaded up the snowpack that provides water there, and rains in the Southeast are filling reservoirs in that part of the country.

The rest of the world, however, is not so fortunate.

Not making any more water

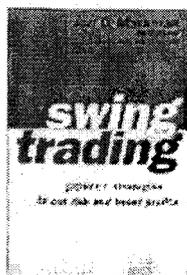
There is no more fresh water on Earth today than there was a million years ago. Yet today, 6 billion people share it. Since 1950, the world population has doubled, but water use has tripled, notes John Dickerson, an analyst and fund manager based in San Diego. Unlike petroleum, he adds, no technological innovation can ever replace water.

China, which is undergoing a vast rural-to-urban population migration, is emblematic of the places where water has become scarce. It has about as much

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water as Canada but 100 times more people. Per-capita water reserves are only about a fourth the global average, according to experts. Of its 669 cities, 440 regularly suffer moderate to critical water shortages.

Although not widely appreciated, water has been recognized by conservative investors as an investment opportunity -- and it has rewarded them. Over the past 10 years, the Media General water utilities index is up 133%, double the return of the **Dow Jones Utilities Index** (\$UTIL). Over the past five years, water utilities are up 32% -- clobbering the flat returns of both the Dow Jones Utilities and the **Dow Industrials** (\$INDU). One of water's key long-term value drivers as an investment, according to Dickerson: Demand is not affected by inflation, recession, interest rates or changing tastes.

Virtually all of the U.S. water utility stocks are regulated by states and counties, which makes them pretty dull. Governmental entities typically give utilities a monopoly in a geographic region, then set their profit margin a smidge above costs. Just about the only distinguishing factor among them are the growth rates of their regions and their ability to efficiently manage their underground pipe and pumping infrastructure. Among the best are **Aqua America** (WTR, [news](#), [msgs](#)) of Philadelphia, **Southwest Water** (SWWC, [news](#), [msgs](#)) of Los Angeles; **California Water Service Group** (CWT, [news](#), [msgs](#)), based in San Jose, Calif.; and **American States Water** (AWR, [news](#), [msgs](#)) of San Dimas, Calif.

In a moment, I'll offer a couple of potentially more impactful ways to invest in water, but first let's look a little more broadly at world demand.

Aquifers in India are being sucked dry

The tsunami has focused attention on water demand in South Asia -- and it's a good thing, as it was already reaching critical status in rural areas. Several decades ago, farmers in the Indian state of Gujarat used oxen to haul water in buckets from a few feet below the surface. Now they pump it from 1,000 feet below the surface. That may sound good, but they have been drawing water from the earth to feed a mushrooming population at such a terrific rate that ancient aquifers have been sucked dry -- turning once-fertile fields slowly into sand.

According to New Scientist magazine, farmers using crude oilfield technology in India have drilled 21 million "tube wells" into the strata beneath the fields, and every year millions more wells throughout the region -- all the way to Vietnam -- are being dug to service water-needy crops like rice and sugar cane. The magazine quoted research from the annual Stockholm Water Symposium that the pumps that transformed Indian farming are drawing 200 cubic kilometers of water to the surface each year, while only a fraction is replaced by monsoon

rains. At this rate, the research suggested, groundwater supplies in some areas will be exhausted in five to 10 years, and millions of Indians will see their farmland turned to desert.

In China, the magazine reported, 30 cubic kilometers more water is being pumped to the surface each year than is replaced by rain -- one of the reasons that the country has become dependent on grain imports from the West. This is not just an issue for agriculture. Earlier this year, the Indian state of Kerala ordered the **PepsiCo** (PEP, news, msgs) and **Coca-Cola** (KO, news, msgs) bottling plants closed due to water shortages, costing the companies millions of dollars.

In this country, shareholder activists already are lobbying companies to share water-dependency concerns worldwide with their stakeholders in their financial statements.

Water, water everywhere, but . . .

The central problem is that less than 2% of the world's ample store of water is fresh. And that amount is bombarded by industrial pollution, disease and cyclical shifts in rain patterns. Its increasing scarcity has impelled private companies and countries to attempt to lock up rights to key sources. In an article last month, the Christian Science Monitor suggested that the next decade may see a cartel of water-exporting countries rivaling the Organization of Petroleum Exporting Countries for dominance in the world economy.

"Water is blue gold; it's terribly precious," Maude Barlow, chair of the Council of Canadians, told the Monitor. "Not too far in the future, we're going to see a move to surround and commodify the world's fresh water. Just as they've divvied up the world's oil, in the coming century, there's going to be a grab."

Besides the domestic water utilities listed above -- and similarly plodding foreign utilities such as **United Utilities** (UU, news, msgs) of the United Kingdom, which sports a 6.9% dividend yield, and **Suez** (SZE, news, msgs) of France -- investors interested in the sector can consider a number of variant plays. None are extremely exciting, but my guess is that, over the next few years, some more interesting purification technologies will emerge, along with, perhaps, a vibrant attempt at worldwide industry consolidation.

One current idea is Tennessee-based copper pipe and valve maker **Mueller Industries** (MLI, news, msgs), a \$1 billion business with a trailing price/earnings multiple of 15 that is still not expensive despite a 47% run-up in the past year. Its leading outside investor is **Berkshire Hathaway** (BRK.A, news, msgs), the

investment vehicle of legendary investor Warren Buffett.

Another is flow-control products maker **Watts Water**

Technologies (WTS, news, msgs), which is a little richer at a \$975 million market cap and a trailing P/E multiple of 19, but is still owned by several leading value managers, including Mario Gabelli.

And possibly the most interesting is **Consolidated Water** (CWCO, news, msgs), a \$160 million company based in the Cayman Islands that specializes in developing and operating ocean-water desalinization plants and water-distribution systems in areas where natural supplies of drinking water are scarce, such as the Caribbean and South America. It currently supplies water to Belize, Barbados, the British Virgin Islands and the Bahamas, and it has expansion plans. It is the most expensive, but it may also have the greatest growth prospects. Of all of these, it is up the most over the past five years, a relatively steady 355%.

Of course, there is one other benefit to water investing: When these companies say they're going to do a dilutive deal, it's not something to worry about.

Fine Print

Dickerson runs a hedge fund in San Diego strictly focused on water investing, the Summit Water Equity Fund. . . To learn more about Southwest Water, [click here](#). . . . To learn more about California Water Service Group, which runs systems in New Mexico, Hawaii and Washington State, as well as California, [click here](#). . . . To learn more about American States Water, [click here](#). . . To learn more about Mueller, [click here](#), and, for Consolidated Water, [click here](#). . . Seems like talk is cheap. Since mid-December, the value of the company radio personality Howard Stern is leaving, **Viacom** (VIA.B, news, msgs), has risen 9% while the value of the company he's headed to, **Sirius Satellite Radio** (SIRI, news, msgs), is down 13.5%. . . . For background on the Kobe earthquake, approaching its 10th anniversary, [click here](#) and [here](#).

Jon D. Markman is publisher of StockTactics Advisor, an independent weekly investment newsletter, as well as senior strategist and portfolio manager at Pinnacle Investment Advisors. While he cannot provide personalized investment advice or recommendations, he welcomes column critiques and comments at jon.markman@gmail.com; put COMMENT in the subject line. At the time of publication he held positions in the following stocks mentioned in this column: Coca-Cola.

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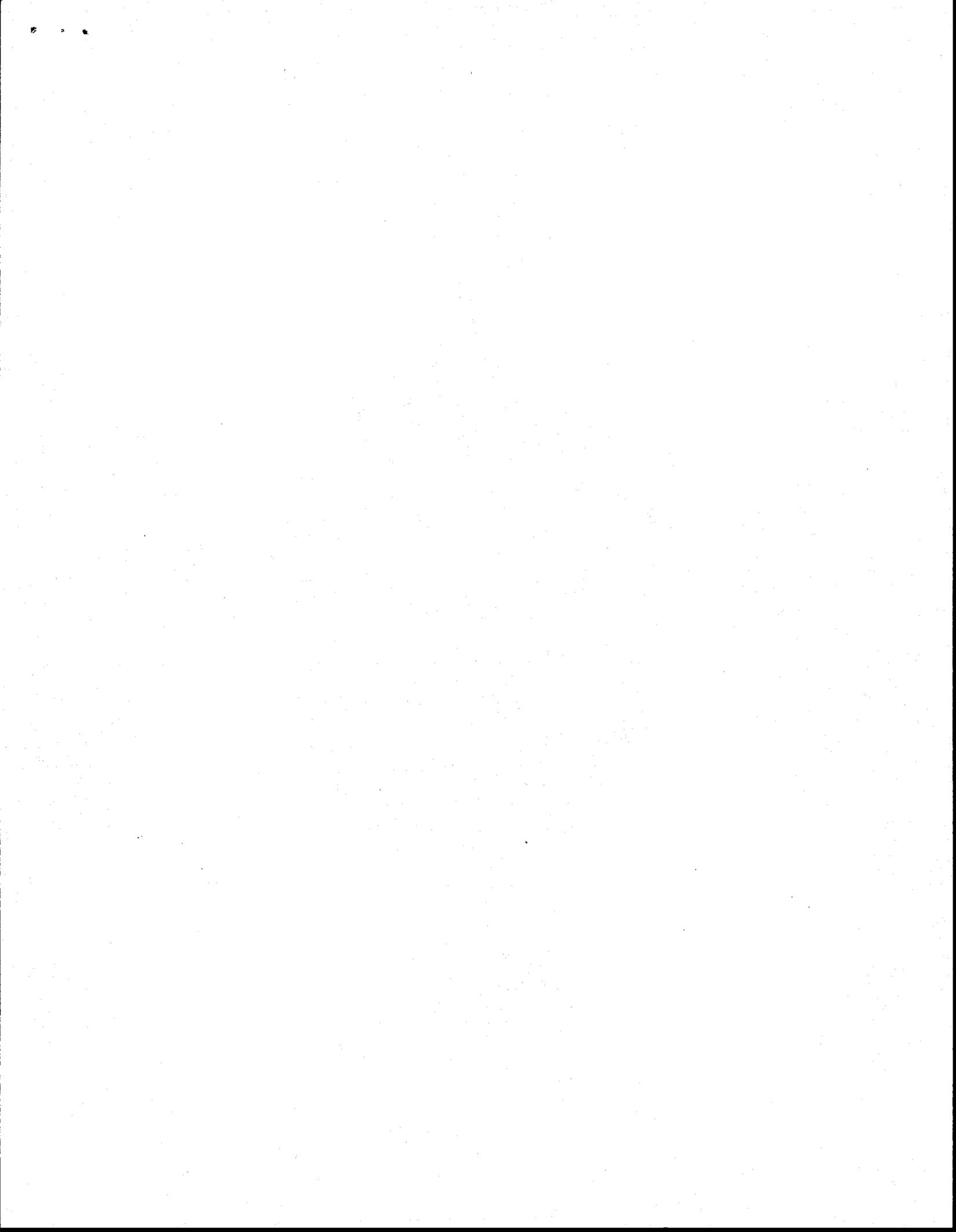
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ATTACHMENT C

Roger A. Morin, PhD

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DCF Growth Rate Check

As a reasonableness check on the DCF growth rate, the growth rate in dividends can be verified using the following relationship:¹⁶

$$\text{Dividend Growth} = \text{Risk-free Return} + \text{Risk Premium} - \text{Dividend Yield}$$

For example, let us say that the yield on Treasury bonds as a proxy for the risk-free return is 5%, the utility risk premium is 5.5% derived from a Capital Asset Pricing Model (CAPM) analysis discussed in earlier chapters, and the expected dividend yield for the utility industry is 4.5%. Substituting these values in the above relationship, we obtain a dividend growth expectation of 6.0% as follows:

$$\text{Dividend Growth} = 5.0\% + 5.5\% - 4.5\% = 6.0\%$$

9.6 Growth in the Non-Constant DCF Model

Although the constant growth DCF model does have a long history, analysts, practitioners, and academics have come to recognize that it is not applicable in many situations. A multiple-stage DCF model that better mirrors the pattern of future dividend growth is preferable. There is a growing consensus and ample empirical support that the best place to start is with security analysts' forecasts, that is, assume that dividend policy is relatively constant and use analyst forecasts of earnings growth as a proxy for dividend forecasts. The problem is that from the standpoint of the DCF model that extends into perpetuity, analysts' horizons are too short, typically five years. It is often unrealistic for such growth to continue into perpetuity. A transition must occur between the first stage of growth forecast by analysts for the first five years and the company's long-term sustainable growth rate. Accordingly, multiple-stage DCF models of this transition are available and were described in Chapter 8. It is useful to remember that eventually all company growth rates, especially utility services growth rates, converge to a level consistent with the growth rate of the aggregate economy.

A reasonable alternative to the constant growth DCF model is to use a multiple-stage DCF model that more appropriately captures the path of future dividend

¹⁶ Equating the expected return from the standard DCF equation and the required return from the CAPM equation:

$$K = D_1/P + g = R_f + \text{Risk Premium}$$

$$K = D_1/P + g = R_f + \beta(R_m - R_f) \text{ from the CAPM}$$

Solving for g:

$$g = R_f + \beta(R_m - R_f) - D_1/P$$